



This project is funded  
by the European Union



A project is implemented by a Consortium  
led by Hulla& Co. Human Dynamics KG

***Environmental Protection of International River Basins***

**DEVELOPMENT OF DRAFT RIVER BASIN MANAGEMENT PLAN  
FOR SELECTED PILOT BASIN IN UKRAINE -  
THE UPPER DNIEPER BASIN**



**DRAFT INCEPTION REPORT**

Prepared by

UNENGO "MAMA 86", Ukraine

**April 2014**

## CONTENTS

<b>LIST OF ABBREVIATIONS.....</b>	<b>3</b>
<b>INTRODUCTION.....</b>	<b>4</b>
<b>1. IMPLEMENTATION METHODOLOGY.....</b>	<b>6</b>
<b>1.1. General approach.....</b>	<b>6</b>
<b>1.2. Identification of Pressures/Impacts and Water Bodies at Risk.....</b>	<b>7</b>
<b>1.3. Identification Program of Measures.....</b>	<b>9</b>
<b>1.4. Compilation of the Draft River Basin Management Plan.....</b>	<b>10</b>
<b>2. INPUT AND OUTPUT COMPONENTS OF THE UPPER DNIEPER MANAGEMENT PLAN DRAFTING PROCESS IN UKRAINE.....</b>	<b>12</b>
<b>ANNEX 1. IMPLEMENTATION TIMELINE OF THE DEVELOPMENT OF DRAFT UPPER DNIEPER MANAGEMENT PLAN IN UKRAINE.....</b>	<b>13</b>
<b>ANNEX 2. STAFFING OF DEVELOPMENT OF DRAFT UPPER DNIEPER RIVER BASIN MANAGEMENT PLAN IN UKRAINE.....</b>	<b>15</b>
<b>ANNEX 3. UPDATED WORK SCHEDULE AND DELIVERABLES..... FOR UPPER DNIEPER BASIN RBMP - UKRAINE</b>	<b>16</b>

## LIST OF ABBREVIATIONS

AWB	Artificial water body
DBA	Dnieper Basin Authority
CSCP	Communication Strategy and Communication Plan for Upper Dnieper Basin
EPIRB	EU-funded project “Environmental Protection of International River Basins”
EU	European Union
IWRM	Integrated Water Resource Management
GWB	Groundwater body
HMWB	Heavily modified water body
MENR	Ministry of Ecology and Natural Resources of Ukraine
NGO	Nongovernmental organization
PoM	Program of Measures
RBMP	River Basin Management Plan
REC	Regional Environmental Center for Central and Eastern Europe
SWA	State Water Agency of Ukraine
SWB	Surface water body
UNENGO “MAMA 86”	Ukrainian National Environmental NGO “MAMA 86”
Water Convention	United Nations Economic Commission for Europe (UNECE) – Convention on the protection and use of transboundary watercourses and international lakes
WBR	Water body at risk
WFD	Directive 2000/60/EC of the European Parliament and the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (EU Water Framework Directive)

## INTRODUCTION

The present inception report has been prepared by UNENGO “MAMA 86” within the signed contract for Development of draft River Basin Management Plan (RBMP) for a selected pilot basin in Ukraine (Upper Dnieper Basin) in the scope of EU funded project “Environmental Protection of International River Basins” (EPIRB). The draft of RBMP for Upper Dnieper Sub-Basin (Ukraine) has to be prepared according to the requirements of the EU WFD and the legislation and regulations of Ukraine.

The signing of the political part of Association Agreement between Ukraine and EU on 21 of March 2014 made step forward implementation of the results of 10 years work of Ukraine on harmonization / approximation of environmental legislation<sup>1</sup> 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, 1995. Due to the administrative reforms and political instability they were not adopted yet.

From other hand, according to the Law of Ukraine “On Fundamental Principles (Strategy) of the State Environmental Policy of Ukraine for the Period until 2020 (“the EcoStrategy Law”)<sup>2</sup>, in the field of water resources management the goals are to reform the state governance system by implementation of the IWRM and River Management principles by 2015 and to develop the RBMP for six Ukrainian river basins during the period 2015 - 2020. According to the task #64 of the National Environment Action Plan for 2011-2015<sup>3</sup> the preparation of the research studies for development of the RBMP for six Ukrainian river basins was planned for 2012-2013.

The State Targeted Programme on the Water Management Development and Environmental Restoration of the Dnieper River Basin until 2021 (approved by the Supreme Rada of Ukraine #4836-17 on 24.05.2012) requires a shift towards river basin approach and the use of river basin management plans as an operational tool.

A draft decision of the Cabinet of Ministers of Ukraine on river basin planning was elaborated in the framework of Transboundary River Basin Management projects, but it never was approved.

It has to be mentioned that in Ukraine a technical document on methodology for the elaboration of river basin management plans was adopted by SWA Order No. 56 on 28 February, 2008. The Order sets the principles underlying the preparation of river basin management plans based on the EU WFD principles, application of the existing and developing new financing mechanisms and implementation of the reforms gradually and in coordination, and on a pilot basis in two or three river basin districts first. The Order does not set any time

---

<sup>1</sup> Law on the State programme of adaptation of Ukraine legislation to the EU legislation No1629-IV of 18 March 2004

<sup>2</sup> No 2818-VI of 21.12.2010

<sup>3</sup> Cabinet of Ministers of Ukraine, Order No. 577-p from 25.05.2011

targets; it calls for improvements of the status of water and of the state of the environment and public health within river basins. Furthermore, it provides the content of river basin management plans, as shown in Table below.

**Table 1. Content of river basin management plans according to Order No. 56**

<b>Analysis of river basin district</b>	
Surface water	mapping of the location & boundaries of surface water bodies
	mapping of ecoregions and types of water bodies within each river basin
	mapping of reference conditions for the water bodies defined
Groundwater	mapping of the location & boundaries of groundwater bodies
<b>List of different kinds of anthropogenic impact</b>	
surface water and groundwater	assessment of point-source pollution
	assessment of diffused pollution, including information on land use
	assessment of pressures on the quantitative status of water, including abstractions
	analysis of other anthropogenic impacts on water status
<b>Identification and mapping of protected areas</b>	
<b>Map of monitoring network and information on results of monitoring programme</b>	
Surface water	Ecological and chemical
Groundwater	Chemical and quantitative
Protected areas	
<b>List of environmental objectives for surface water, groundwater and protected areas</b>	
<b>Summary of feasibility analysis of water use</b>	
<b>Summary of programmes of measures</b>	
-	summary of the measures required to implement EU legislation on water protection
-	measures taken to apply the principle of recovery of the costs of water use
-	summary of the measures taken to protect drinking water sources
-	summary of measures to control water abstraction and impoundment
-	summary of measures to control point-source discharges & other activities with an impact on the water status
-	identification of the cases where direct discharges to groundwater were authorized
-	summary of the measures taken to reduce discharge of priority substances and thereafter
-	summary of the measures taken to prevent or reduce the impact of accidental pollution
-	summary of the measures taken for water bodies which are unlikely to achieve the environmental objectives
-	details of additional measures aimed at attaining the environmental objectives established
-	details of the measures taken to avoid increase in pollution of sea waters
<b>Register of any detailed programmes and RBMP for a river basin district dealing with particular sub-basins, sectors, issues or water types, including a summary of their contents</b>	
<b>List of competent authorities</b>	
<b>Contact sources and procedures for obtaining background documents, information and monitoring data</b>	

According to the Order the river basin management plan has to be developed two years before the planning period for a 10-15-year cycle. The Order contains a methodology of RBMP and PoM preparation. Amongst other things, it calls for the establishment of river basin councils comprising of representatives of state and local governments, water users and NGOs. The River Basin Authorities are expected to act as secretariats to the councils.

There is no progress in implementation of the Order since the Water Code amendments still are not approved and reforms in water management sector are slow

The inception report highlights outlines of the implementation / operational plan, including approach, inputs and outputs, methodology, detailed time-schedule and staffing plan.

## **1. IMPLEMENTATION METHODOLOGY**

### **1.1 General approach**

The key aim regarding the development of the draft RBMP for the Upper Dnieper pilot sub-basin is to improve understanding of stakeholders on key elements of the WFD and river basin planning process and to integrate management of water resources (surface water and ground water) within the pilot basin district to achieve environmental objectives.

The main steps of river basin planning according to the EU WFD are:

1. Characterization of the basin and identification of the water quality problems (water bodies at risk) to be addressed in the RBMP;
2. Design of a WFD compliant monitoring programme based on the characterization;
3. Implementation of the monitoring according to the WFD compliant monitoring programme;
4. Revision of the characterization based upon the information from the data collected during the monitoring in line with the WFD compliant monitoring program;
5. Setting the environmental objectives for water bodies and the ways to implement them;
6. Design of the program of measures (PoM) and calculating cost for implementation of the measures. If the costs of achieving the objectives are considered disproportionate, the objectives could be revised. The setting of objectives, the design of the measures and the cost estimate for their implementation should be conducted as an iterative process with stakeholders' participation;
7. Implementation of the measures;
8. Monitoring and assessment of the effect of the measures by the WFD compliant monitoring programme.

The planning process is starting with the characterization of the river basins, including: (1) description of natural conditions; (2) description of human activity; (3) analysis of human pressures and identification of significant pressures and impacts; (4) identification of water bodies at risk; and (5) delineation of all water bodies in the basin.

Most of this work has already been completed and the results are presented in the following reports: (1) “Upper Dnieper River Basin Assessment (Ukraine)”, (2) “Surface water bodies delineation report of Upper Dnieper pilot basin (Ukraine)”, and (3) “Identification, characterization and delineation of groundwater bodies in Upper Dnieper basin” and “Classification of groundwater bodies in Upper Dnieper basin”.

Nevertheless, an initial River Basin Assessment needs to detail the analyses, particularly the pressure impact analysis to complete the WFD requirement for RBA as well as to review further the typology and water body delineation in the pilot basin of water bodies by aggregating/merging them into groups of water bodies.

The following steps will be necessary for development of draft RBMP for the Upper Dnieper:

I. Identification of Pressures/Impacts and Water Bodies at Risk:

- Analysis of the significant anthropogenic pressures, driving the impacts on ecological water status of each water body (both surface and ground water resources) and significant water management issues;
- Identifying water bodies at risk of failing to achieve its environmental objectives with risk criteria, environmental objectives in short/medium and long term and mapping of water bodies at risk.

II. Identification of Program of Measures:

- Definition of environmental objectives for surface water, groundwater and protected areas;
- Development of Programme of Measures covering basic and supplementary measures to achieve the environmental objectives;
- Economic analysis and definition of prioritized measures with costing of measures and cost-effectiveness analysis of the proposed measures.

III. Compilation of the draft river basin management plan including update of previously developed river basin documents.

## **1.2. Identification of Pressures/Impacts and Water Bodies at Risk**

Experts of UNENGO “MAMA-86” will use adapted DPSIR (drivers-pressure-state-impact-response) methodology of environmental assessment reports (used by Eurostat and European Environmental Agency) for Identification of Pressures and Impacts, as well as water bodies at risk. It should be carried out according to the following documents: EU WFD CIS Guidance Documents: No.2 Identification of Water Bodies, No.4- Identification and Designation of Heavily Modified and Artificial Water Bodies, and No.3: Analysis of Pressures and Impacts:

**Identifying driving forces and pressures.** Gathering and checking of information and data on impacts on the surface and groundwater bodies relating to anthropogenic pressures (hydromorphological alterations, abstraction, artificial recharge, point/diffuse source pollution from agriculture/irrigation, food processing, water supply, industry, solid waste, wastewater, energy generation, pollution by hazardous substance etc.) at the water body level, including:

- Identification of significant point and non-point sources of pollution for pilot basin of the Upper Dnieper River bas There is no progress in implementation of the Order since the Water

Code amendments still are not approved and reforms in water management sector are slow in (in Ukraine);

- Identification of significant hydromorphological alterations;
- Identification of significant water management issues and basin wide threats to achieve good ecological and chemical status for surface and ground water bodies.

Screening data for point and non-point sources of pollution, driving forces is quantified by aggregated data, simple to obtain, for example: number of hectares of arable land, population density, etc., for a certain area. Comparing these driving forces data with appropriate aggregated monitoring information quickly allows assessment of the likelihood that the considered driving forces is related to environmental pressures. In that case, only the expected pressures should be investigated in greater details.

**Identifying significant pressures.** Next, in the process of characterization, the description of human activities in the basin will be the basis for the evaluation of their impact on surface waters. Pressures, which could be significant, will be selected based upon the description of human activities. The EU WFD Common Implementation Strategy guidance defines significant pressure as “any pressure that on its own, or in combination with other pressures, may lead to a failure to achieve the specified objective” for one or more water bodies. Stressors resulting from human activity impact the surface water ecosystems and the quality and quantity of groundwater bodies. A stressor can impact the water quality (e.g.: discharge of pollutants), the water quantity (e.g.: water abstraction) or the morphology (e.g.: channelization of a river). All stressors on surface water ecosystems will impact the species composition and the function of the ecosystem. The size of the stress is quantified during the WFD compliant monitoring and “translated” to the five WFD ecological quality status classes: High, Good, Moderate, Poor and Bad.

For each significant pressure one or more WBR of failure to achieve the specified objective will be identified. This requires an understanding of the nature of the impact that may result from a pressure, and appropriate methods to monitor or assess the relationship between impact and pressure. It will base the identification of WBRs on two sources of information: (a) existing information about the rivers, lakes and aquifers gathered from monitoring data, maps, aerial photos, knowledge about the geology etc.; and (b) existing information on pressures, and evaluation of their impact.

**Assessing the impacts resulting from the pressure.**

For assessing the impact from pressure possible to use the observed data. In situations where data are available for the water body itself, it may be possible to make a direct assessment of the impact. Data itself is not enough to assess a possible impact: a correct indicator of the expected impact must be constructed. Moreover, it must be kept in mind that most pressures do not create a clear-cut impact, but substantially change the probability of adverse conditions. Method for assessing will be determined after the analysis of the available information and the preliminary results of EPIRB project investigations.

**Evaluation of the likelihood of failing to meet the objective.**

For establishment of risk criteria to assess/estimate the possible risk to achieve the WFD environmental objectives will be used both information from the review of pressures, and any other information, for example environmental monitoring data, to determine the likelihood that the surface and ground water bodies of Upper Dnieper basin will fail to meet its

environmental quality objectives. For bodies at risk of failing their specified objectives, it will be necessary to consider the implementation of additional monitoring and a programme of measures.

Above-mentioned steps will provide two deliverables under the Terms of Reference for development of draft RBMP for Upper Dnieper River Basin: (a) pressure - impact analysis, and (b) water bodies at risk.

GIS mapping of water bodies and water body groups at risk will present as Deliverable 2 under the Terms of Reference: Pressures and Impacts report and Deliverable 3: Water bodies at risk report.

Design of surveillance and operational monitoring programmes and networks based on the risk assessments (to be led by EPIRB project team).

Also, it will be done identification of data gaps and proposals for investigatory monitoring for inclusion in Joint Field Surveys 2014 (to be led by EPIRB project team).

Gaps in information about the environmental situation and the human activities in Upper Dnieper RBMP will be identified, and information from the joint field surveys of SW and GW bodies (conducted in the basin in 2013 -2014 within the framework of EPIRB) will be used to cover as many gaps identified during the characterization as possible and to revise of the characterization in line with the WFD compliant monitoring program.

Pressures and impact analysis for groundwater bodies will be based on two EPIRB reports - 1) on identification, characterisation and delineation of groundwater bodies in Upper Dnieper basin and 2) classification of groundwater bodies in Upper Dnieper basin in Ukraine. The reports provide identification, initial characterisation, and preliminary classification of quality and quantity status and preliminary risk assessment of groundwater bodies in the Upper Dnieper river basin in Ukraine.

### **1.3. Identification of Program of Measures**

#### ***Environmental objectives***

Article 4 WFD sets out the "environmental objectives" mainly in Article 4.1. The main environmental objectives in the WFD are manifold and include the following elements, (a) surface waters, (b) ground waters and (c) protected areas:

- No deterioration of status for surface and ground waters and the protection, enhancement and restoration of all water bodies;
- Achievement of good status by 2015, i.e. good ecological status (or Potential) and good chemical status for surface waters and good chemical and good quantitative status for ground waters;
- Progressive reduction of pollution of priority substances and phase-out of priority hazardous substances in surface waters and prevention and limitation of input of pollutants in ground waters;
- Reversal of any significant, upward trend of pollutants in ground waters;
- Achievement of Standards and objectives set for protected areas in Community legislation.

It is important to note that where more than one of the objectives relates to a given body of water, the most stringent shall apply, irrespective of the fact that all objectives must be achieved.

In order to achieve the specific objectives for heavily modified and artificial water bodies (i.e. good ecological potential and good chemical status), the provisions for designation, contain elements of comparing the consequences of achieving the 'good ecological status' to a number of aspects including economic considerations. Moreover, the assessment of "good ecological potential" is linked to the possible mitigation measures.

Experts of UNENGO "MAMA 86" will plan to set ecological objectives for all water bodies in Upper Dnieper river basin after consultations with MENR, SWA, DBA and others stakeholders. In consideration to the existence of heavily modified bodies (rectified rivers for melioration) and the big artificial Kyiv`s reservoir in pilot basin the task of setting objectives for these bodies will be complicate and the measures will be very expensive. To make a decision a deep economic analysis will be needed as well as consultations with beneficiaries.

### ***Program of Measures***

The programme of measures will consist of defining the regulatory provisions or basic measures to be implemented in order to achieve the objectives defined by the RBMP in accordance with national laws (e.g. extension of sensitive or vulnerable areas, reporting and authorization system, definition of resource protection areas, discharge control etc.). These measures also include pricing measures taken to provide users with incentives to manage water more efficiently. Measures may be decided at the national level. The WFD provides a non-exclusive list of such measures, which are aimed at either reinforcing the previous provisions or setting up new provisions such as good practices codes, voluntary agreements, economic and tax instruments etc. Additional measures have also been defined.

The programme of measures for the pilot basin will include the "basic" measures and, where necessary, "supplementary" measures for SWB and GWB. The basic measures to be included into PoM will cover technical and institutional measures. To provide a realistic and achievable implementation of PoM these measures have to correspond with the current environmental laws and regulations, ongoing programs (for example, State Targeted Programme on the Water Management Development and environmental restoration of the Dnieper River Basin until 2021). Such measures will be considered as short-term (6 years) measures. The technically and financially expensive measures, which can need the implementation of additional regulations and investments, will be considered as middle-term (6-12 years) measures. In any case the identified measures will be prioritized after economic analysis in accordance with WFD Article 5 and Annex III.

### ***Economic analysis and prioritization of measures***

The economic analysis shall contain enough information in sufficient detail (taking account of the costs associated with collection of the relevant data) in order to (Article 5 and Annex III WFD):

(a) make the relevant calculations necessary for taking into account under Article 9 the principle of recovery of the costs of water services, taking account of long term forecasts of supply and demand for water in the river basin district and, where necessary:

- estimates of the volume, prices and costs associated with water services, and
  - estimates of relevant investment including forecasts of such investments;
- (b) make judgments about the most cost-effective combination of measures in respect of water uses to be included in the programme of measures under Article 11 based on estimates of the potential costs of such measures.

Experts of “MAMA 86” will carry out economic analysis using the following steps:

- economic analysis of water uses in Upper Dnieper Basin;
- assessment of the main trends in water supply, water demand and investments;
- designate heavily modified water bodies based on the assessment of changes to such water bodies and of the impact (including economic impact) on existing uses and costs of alternatives for providing the same beneficial objective;
- assess current levels of cost-recovery;
- selection of a PoM on the basis of cost effectiveness criteria;
- assess the potential role of pricing in these programmes of measures – implications on cost-recovery.

Key outputs of Economic Analysis will be: estimation of total costs of Programme of Measures; economic justification for possible derogation; financial and budgetary implications of selected programmes; assessment of cost-recovery levels with proposed measures.

#### **1.4. Compilation of the draft River Basin Management Plan**

According to the WFD the RBMP shall include the information detailed in Annex VII.

Content of the draft Upper Dnieper RBMP will be in accordance to WFD requirements:

- Chapter 1. A general description of the characteristics of the river basin district required under Article 5 and Annex II.
- 1.1 for surface waters:
- mapping and delineation of water bodies,
  - mapping of the ecoregions and surface water body type within the river basin,
  - identification of reference conditions for the surface water body types;
- 1.2 for groundwater:
- mapping of the location and boundaries of groundwater bodies;
- Chapter 2. A summary of significant pressures and impact of human activity on the status of surface water and groundwater, including:
- 2.1 estimation of point source pollution,
- 2.2 estimation of diffuse source pollution, including a summary of land use,
- 2.3 estimation of pressures on the quantitative status of water including abstractions,
- 2.4 analysis of other impacts of human activity on the status of water;
- Chapter 3. Identification and mapping of protected areas as required by Article 6 and Annex IV;
- Chapter 4. A map of the monitoring programmes and networks established for the purposes of Article 8 and Annex V, and a presentation in map form of the results of the monitoring programmes carried out for the status of:
- 4.1 surface water (ecological and chemical);
- 4.2 groundwater (chemical and quantitative);
- 4.3 protected areas;

- Chapter 5. A list of the environmental objectives established under Article 4 for surface waters, groundwater and protected areas, including in particular identification of instances where use has been made of Article 4(4), (5), (6) and (7), and the associated information required under that Article;
- Chapter 6. A summary of the economic analysis of water use as required by Article 5 and Annex III;
- 6.1. Description of relevant water uses and economic meaning
- 6.2. The economic analysis of water use
- 6.3. Economic control tools
- 6.4. Cost-effectiveness as a criterion for selecting measures to achieve targets
- Chapter 7. A summary of the programme or programmes of measures adopted under Article 1, including the ways in which the objectives established under Article 4 are thereby to be achieved;
- Chapter 8. A register of any associated plans for the river basin dealing with particular sub-basins, sectors, issues or water types, together with a summary of their contents;
- Chapter 9. A summary of the public information and consultation measures taken, their results and the changes to the plan made as a consequence;
- Chapter 10. A list of competent authorities in accordance with Annex I;
- Chapter 11. The contact points and procedures for obtaining the background documentation and information referred to in Article 14(1).

As a pilot district for the development of RBMP selected by Ukraine is the most upper part of the Dnieper Basin - from the border with the Republic of Belarus to the headwater of the Kanev Reservoir (metro bridge in Kiev), it is not possible to develop a strategic basin wide comprehensive plan for the river basin within Ukraine. In this case, we will work on one district that will be served as a demonstration district for the rest of the Dnieper basin. Moreover, the planning process will be limited due to the fact that the main focus will be on local environmental issues. Therefore, the planning should be implemented with involvement of local stakeholders and authorities and with the obligatory participation of central executive bodies. General guidance of the RBMP development will be provided by the RBMP experts of EPIRB project and in close cooperation with the project beneficiary in Ukraine – the Ministry of Ecology and Natural Resources, the Dnieper Basin Authority.

The Public involvement will be carry out in coordination and cooperation with REC and in accordance with the Communication Strategy and Plan for the Upper Dnieper pilot basin.

## **2. INPUT AND OUTPUT COMPONENTS OF THE UPPER DNIPER DEVELOPMENT PROCESS IN UKRAINE**

The reports “Upper Dnieper RBA (Ukraine)”, “Surface water bodies delineation report of Upper Dnieper pilot basin (Ukraine)”, and “Identification, characterisation and delineation of groundwater bodies in Ukraine” is substantial input for the RBMP development, which was collected in the EPIRB project during the previous phase (1,5 year). The significant data have been collected on economics and anthropogenic impacts on water bodies in Upper Dnieper Basin Management Area, including data on:

- Regulated flow;
- Municipal and domestic wastewater discharge;
- Industrial and drainage wastewater discharge;

- Unregulated abstraction of water for municipal/domestic purposes;
- Unregulated solid waste disposals;
- Cultivation of agriculture crops and use of fertilizers;
- Abstraction of groundwater for fish farming.

Also, surface and groundwater quantity and quality monitoring data, together with water user permit data has been collected. In addition, data obtained from the surface and groundwater joint field survey within the EPIRB project in 2013 provides a quite substantial data input.

The missing information is on diffusion pollution sources, as well as other water bodies at risk. Our experts, together with the representatives of DBA will work on bridging these data gaps, and all of the above mentioned datasets and information will serve as main input for the work.

Also, for each WBR site and pressure specific data is needed, since aggregated data is of limited value. Moreover, all significant pressures have to be quantified (as far as possible) and the need for load reduction should be calculated or estimated. In case such data is not available, we will propose the corresponding sites for the upcoming gap filling Joint Field Survey within the EPIRB project in May-June 2014.

In the same time, meetings and interviews with experts and representatives of main stakeholder groups will be organized to discuss in details and get specific disaggregated information for pressure-impact gap filling and information mapping and get feedback on the proposed program of measures. This will help to conduct expert analysis and form corresponding conclusion for all deliverables to be prepared within this assignment, taking into consideration the real situation in the terrain.

As for the methodological input, in addition to the above mentioned data, in the course of development of different components of the plan we will heavily rely on different articles and annexes of EU WFD, and Guidance Documents of the Common Implementation Strategy (CIS), particularly: No. 1 "Economics and the Environment The Implementation Challenge of the Water Framework Directive", No. 2 "Identification of Water Bodies", No. 3 "Analysis of Pressures and Impacts", No. 4 "Identification and Designation of Heavily Modified and Artificial Water Bodies", No. 8 "Public Participation in Relation to the Water Framework Directive", and No. 11 "Planning Processes".

## IMPLEMENTATION TIMELINE OF THE DEVELOPMENT OF DRAFT UPPER DNIEPER MANAGEMENT PLAN IN UKRAINE

RBMP Drafting Phase	2014												2015					
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar						
<b><u>Inception Phase</u></b>																		
Draft Deliverable 1: Inception report																		
Finalization of the report																		
<b><u>Phase 1 Identification of Pressures/Impacts and water bodies at risk</u></b>																		
Analysis of human activities																		
Analysis of pressures and impacts																		
Identification of significant water management issues																		
<b>Draft Deliverable 2: Pressures and impacts report</b>																		
Finalization of the report																		
Identification of the surface water bodies at risk																		
Revision of the delineation of HMWBs, AWBs, natural water bodies and groundwater bodies																		
GIS mapping of delineated surface and groundwater bodies																		
<b>Draft Deliverable 3: Water bodies at risk report</b>																		
Finalization of the report																		
<b><u>Phase 2 Establishment of environmental objectives and identification of National and Basin Wide PoM</u></b>																		
Specification of good ecological status and chemical status of SWBs																		
Specification of good chemical and quantitative status of GWBs																		

RBMP Drafting Phase	2014												2015						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar							
Setting environmental objectives for protected areas Jan																			
<b>Draft Deliverable 4: Environmental objectives report</b>																			
Finalizationofthereport																			
Development of basic measures to meet the environmental objectives																			
Development of supplementary measures to meet the environmental objectives																			
<b>Draft Delivery. 5: Program of measures report</b>																			
Finalization of the report																			
Cost-benefit analysis of the program of measures																			
Prioritization of measures																			
<b>Draft Deliverable 6: Economic analysis and prioritized measures report</b>																			
Finalization of the report																			
<b>Phase 3 Draft River Basin Management Plan</b>																			
Update the previous activities (river basin assessment, pressures/impacts, water bodies status classification)																			
Compilation of draft RBMP																			
<b>Draft Deliverable 7: draft RBMP</b>																			
Finalization of draft RBMP																			

## STAFFING OF DEVELOPMENT OF DRAFT DNIEPER RIVER BASIN MANAGEMENT PLAN IN UKRAINE

UNENGO “MAMA-86” is a leading partner who set a team of local experts on water management and environmental protection. Team of experts has practical experience in development of national water management documents and also familiar with WFR requirements and planning process.

The core experts that will be leading in preparation of deliverables under the contract are presented in following table:

Name	Organization	Related activities	Contacts
Anna Tsvietkova	UNENGO “MAMA-86”	Administration / water safety , water quality, hydroecosystems, water - wastewater, management / Program of measures, WFD Overall coordination, Editorial work	atsvet@mama-86.org.ua
Natalia Chizhmakova	UNENGO “MAMA-86”	hydrology, hydrogeology, WFD Program of measures / economic analyses	Chizhmakova@ma-86.org.ua
Marta Korchemlyuk	UNENGO “MAMA-86”	water management / water quality hydromorphological alterations , ecosystems protection,	mama86yaremche@meta.ua martakor@yahoo.com
Mykola Pryhodko	Ivano-Frankivsk National Tech. University of Oil and Gas	WFD, natural resources management RBPlanning, environmental security, Pressures – Impact analysis Water management. GIS	admin@nung.edu.ua
Igor Buksha	Expert of UNENGO “MAMA-86I	Water management / pressures and impact analyses / protected areas, GIS support	buksha@ukr.net, buksha@uriffm.org.ua;
Mykhailo Zaharchenko	Expert of UNENGO “MAMA-86”	surface water and groundwater quality assessment, Water wastewater management, cost analysis, Program of measures	

For implementation of all steps of the Upper Dnieper RBMP development UNENGO “MAMA-86” will work in close cooperation and coordination with the local experts and representatives of Dnieper River Basin Authority, SWA and MENR as well as in consultations with EPIRB experts.

## Updated Summary of Work Schedule and Deliverables for the Upper Dnieper Basin RBMP - UKRAINE

<b>Deliverable</b>	<b>Max. No. of pages excl. Appendices</b>	<b>Language of deliverable</b>	<b>Start date</b>	<b>Due date for draft report</b>	<b>Finalization</b>
<b>Deliverable- 1:</b> Inception Report	15	English	<u>02.04.2014</u>	14.04.2014	<b>21.04.2014</b>
<b>Deliverable- 2:</b> Pressures and Impacts report	45	Russian / English	14.04.2014	20.05.2014	<b>07.06.2014</b>
<b>Deliverable 3:</b> Water bodies at risk report	45	Russian / English	07.05.2014	23.06.2013	<b>14.07.2014</b>
<b>Deliverable 4:</b> Environmental objectives	10	Russian / English	14.07.2014	25.08.2014	<b>05.09.2014</b>
<b>Deliverable 5:</b> Programme of Measures	50	Russian / English	28.07.2014	30.09.2013	<b>14.10.2014</b>
<b>Deliverable-6:</b> Economic Analysis and prioritised measures report	35	Russian / English	04.08.2014	01.10.2014	<b>31.10.2014</b>
<b>Deliverable-7:</b> Draft River Basin Management Plan	150	Russian / English	10.10.2014	20.01.2015	<u><b>09.03.2015</b></u>