

JOINT REPORT  
ON AUDITING IMPLEMENTATION OF FLOOD PROTECTION MEASURES ON TRANSBOUNDARY  
WATERS OF UKRAINE AND REPUBLIC OF POLAND

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According to Joint Action Plan between the Accounting Chamber of Ukraine and Supreme Chamber of Control of Republic of Poland for the years 2004-2005 and on execution of EUROSAI WGEA Working Plan for the year 2005, the Accounting Chamber of Ukraine and Regional Office of the Supreme Chamber of Control of Republic of Poland in Rzeszowie conducted parallel audit of implementation of programs for flood protection measures in the Carpathian region and level of international cooperation on transboundary waters of Ukraine and Republic of Poland.

Based on audit outcomes of both SAIs a Joint report on parallel audit of implementation of programs for flood protection measures in transboundary waters of Ukraine and Republic of Poland was developed (within the framework of implementing the Agreement between the Government of Ukraine and the Government of Republic of Poland on cooperation in the field of water management on transboundary waters). The Joint Report is structured into joint introduction and audit conclusions, recommendations to the Governments of Ukraine and Republic of Poland, audit findings of the Accounting Chamber of Ukraine and audit findings of the Supreme Chamber of Control of Republic of Poland.

The Governments of Ukraine and Republic of Poland were informed about the audit results.

## **INTRODUCTION**

The problem of flood protection provision has become very urgent for last years, especially after 1997-1998 floods. Those floods revealed imperfection of monitoring and prevention system of dangerous trends related to surface waters, as well as technically inadequate state of flood protection facilities, in particular dams, both in quantity and quality aspects. Ruining power of floods, especially in mountain and sub-mountain areas, results in major negative social-and-economic effects and casualties, and elimination of losses caused by the disaster rises necessity for annual mobilization of extra financial resources both of state and local budgets.

The biggest threat of floods in Ukraine is located in the Carpathian region which is the place for more than 30% of Ukrainian rivers. Each year more than 500 settlements with above 150 thousand inhabitants are founded under flooded area. At the same time flood and ecological situation of the Carpathian region spreads out not only nationally, but also internationally since it affects countries measuring with Ukraine - Byelorussia, Hungary, Moldova, Republic of Poland, Romania, Slovak Republic. To be more precise, territories totaling 30 thousand hectare in area with 18 thousand of people are under flood threat in this region from Polish side. 1997-1998 floods indicated importance of international cooperation in the field of flood protection on transboundary territories.

Transboundary waters on the border between Ukraine and Republic of Poland having distance of 282 km consist mainly of the Western Bug and Syan Rivers, which belong to the Visla River basin and thus to the Baltic Sea basin, and the Strvyazh River, which belongs to the Dniester River basin and thus to the Black Sea basin.

Considering topicality of this issue and continuing cooperation in the field of water management on transboundary waters, being guided by the Treaty of Friendship, Neighbourliness and Cooperation between Ukraine and Republic of Poland dated May 18, 1992, believing that transboundary protection, use and damage prevention are significant and immediate tasks which can be solved via close and agreed cooperation in the filed of water management and water protection, the Government of Ukraine and the Government of Republic of Poland concluded the Agreement on cooperation in the filed of water management on transboundary waters which was signed in Kyiv on October 10, 1996 and came into force in 1998. As one of their main tasks the parties undertook to implement measures aimed at elimination or decrease of flood-related danger, ice drifting and provision of efficient water protection from pollution on transboundary waters and their catchments areas. Mutual assistance while carrying our works on transboundary waters is to be provided on agreed conditions.

The Accounting Chamber of Ukraine and the Supreme Chamber of Control of Republic of Poland conducted the audit of above mentioned Agreement implementation and condition of flood protection on transboundary waters.

The audit objective was to assess the provision of flood protection in the Carpathian region by pubic authorities and local governments, as well as level of interstate cooperation on transboundary waters of Ukrainian-Polish border.

Parallel audit findings and joint conclusions and recommendations are highlighted in the Joint Report of the Accounting Chamber of Ukraine and Supreme Chamber of Control of Republic of Poland.

### **1. JOINT CONCLUSIONS OF PARALLEL AUDIT FINDINGS.**

- 1.1. The Accounting Chamber of Ukraine and the Supreme Chamber of Control of Republic of Poland (hereinafter SAIs) jointly concluded about positive assessment of interstate cooperation in the field of flood protection.

With the aim of implementation of the Agreement on cooperation in the field of water management on transboundary waters Ukrainian-Polish Commission for Transboundary Waters Issues was established. Five groups were formed within the Commission.

Development of Project Plan for joint actions regarding stabilization of the Western Bug river-bed has been initiated since 2002.

- 1.2. SAIs of Ukraine and Republic of Poland assess the state of financing and implementing measures of flood protection facilities construction, their maintenance, conducting erosion-preventive and bank-consolidated works on transboundary waters as unsatisfactory that doesn't provide effective and efficient cooperation as to problematic issues on transboundary waters.

The parties performed inventory of bank erosion of the Western Bug River and agreed to protect bank at their own expense in 2005.

- 1.3. SAIs came to conclusion that their Governments don't provide required works volume regarding prevention of territory expropriation and change of national Ukrainian-Polish border line. As a result there exists danger of territory loss from both sides. In particular, due to intensive side erosion of the bed in separate sections Ukraine can lose its territory of 98.7 hectare in total area. Similar situation can be observed in Republic of Poland where exists the danger of above 30 hectare territory's loss.

- 1.4. SAIs concluded uniquely that local governments and water management authorities of both countries don't provide establishment of material-and-technical inventories in case of flood. Their inventories don't exceed 30% of planned figures in both Ukrainian and Polish sides.

Polish auditors revealed that territorial water management plan was implemented in none of 6 controlled local governments. Much as mentioned above Ukrainian auditors revealed that 60% of planned flood protection measures were implemented in Lviv and Volyn regions.

- 1.5. SAIs concluded about insufficient level of cooperation between territorial communities and local governments on transboundary waters and non-existence of regulations (standard and legal acts) on such cooperation.

- 1.6. SAIs report about insufficient level of cooperation regarding information exchange about course of flooding sulfur pit of Yavorivskyi State Ore Mining and Processing Enterprise "Sulfur" and carrying capacity of the Shklo and Vyshnya Rivers.

Thus, insufficient financing of flood protection measures in both countries leads to gradual ruining of separate sections of flood protection facilities and relaxing of flood protection in the region in general. Under such circumstances both countries' material-and-technical support of flood protection measures seems inadequate that doesn't ensure people's safety during floods.

## **2. JOINT RECOMMENDATIONS TO THE GOVERNMENTS OF UKRAINE AND REPUBLIC OF POLAND**

Following reviews with the aim of considering audit findings and conclusions made, the Accounting Chamber of Ukraine and the Supreme Chamber of Control of Republic of Poland formulated their recommendations to the Governments and competent national authorities. Based on particular cooperation experience on transboundary waters and aiming at improvement of flood protection situation in the Carpathian region the SAIs recommend Governments of both countries to:

- 2.1. Facilitate activity of Plenipotentiaries of the Governments in the part of cooperation on transboundary waters pursuant to the Agreement and their commitment implementation pursuant to the legislation.
- 2.2. Intensify attention to practical implementation of Ukrainian-Polish Commission's decisions pursuant to the Agreement.
- 2.3. Conduct assessment of the condition of transboundary river-beds and level of measures implementation aimed at their proper maintenance for permanent provision of sign system

- and state border delineation pursuant to Article 7, paragraph 1 of the Agreement within the cooperation of the Transboundary Commission.
- 2.4. Negotiate state border delineation with the Transboundary Commission.
  - 2.5. Assist by execution of projects on transboundary waters worked out by investors and executors with the aim of stabilization of state border delineation.
  - 2.6. Elaborate financing mechanism for conducting joint scientific, project, research works, drafting cartographical materials and joint financing of nature-conservative and flood protection measures.
  - 2.7. Elaborate and implement single program for use, conservation, protection and rehabilitation of waters and territories in transboundary river basins.
  - 2.8. Elaborate negotiated system of measures, actions and early alarming as to transboundary effects on water regime of floods and emergency pollution of water resources, as well as cooperation regarding prevention and decrease of damages and provision of assistance by rehabilitated works according to the Framework Convention on Protection and Sustainable Development of the Carpathian Mts.
  - 2.9. Perform permanent information exchange about condition of flooding sulfur pit of Yavorivskiy State Ore Mining and Processing Enterprise "Sulfur" and carrying capacity of the Shklo and Vyshnya Rivers.
  - 2.10. Extend cooperation between territorial communities and local governments on transboundary waters and develop regulations of such cooperation.

### **3. AUDIT FINDINGS OF THE ACCOUNTING CHAMBER OF UKRAINE**

Subject: Condition of implementation of programs for flood protection measures in the Carpathian region, analysis of their efficiency and level of international cooperation on transboundary waters with Republic of Poland.

Audit objective is assessment of condition of flood protection provision by public authorities and local governments, level of international cooperation on transboundary waters of Ukrainian-Polish border from the perspective of legality, efficiency, expediency and economy of funds allocated from the State Budget of Ukraine for their implementation.

#### **3.1. Synthesis of audit findings**

##### **General assessment**

3.1.1. The Accounting Chamber positively assesses the condition of interstate cooperation with Republic of Poland in the field of flood protection on transboundary waters. At the same time it reports that executive authorities don't provide implementation of the tasks and measures of flood protection in the Carpathian region in full extent.

##### **Major conclusions based on audit findings**

3.1.2. The Accounting Chamber gives general positive assessment of the condition of legal provision of flood protection in the region.

In 2000 the Cabinet of Ministers of Ukraine (Government) approved Complex Program for protection of rural settlements and agricultural lands from detrimental water effects in Ukraine in the years 2001-2005 and forecast till the year 2010 (hereinafter Complex Program). It also includes assessment, tasks and measures of flood protection on transboundary territories with Republic of Poland. Similar regionally-scaled programs were developed by Regional Boards of State Water Management in Volyn and Lviv regions.

Specific measures on construction of water facilities, bank consolidation, dams and regulation of river-beds aiming at flood protection of population and territories were approved.

At the same time the Accounting Chamber reports that due to insufficient financing Regional Boards of Water Management in Volyn and Lviv regions didn't elaborate Scheme of complex

use and protection of water resources in catchment areas in regions as it was stipulated by the Complex Program.

3.1.3. The Accounting Chamber assesses positively the cooperation between Ukrainian and Polish parties on the issues of joint actions and action coordination on transboundary waters.

Especially within the framework of bilateral cooperation they have started development of the Project of Joint Action Plan regarding stabilization of the Western river-bed with the aim of non-allowing change of the State Ukrainian-Polish border line and territory expropriation since 2002. However while Polish party has already developed such Plan, Ukrainian counterpart started its negotiation only in the second half of the year 2005.

The parties performed inventory of bank erosion sections of the Western Bug River and agreed to make bank consolidation at their own expense in 2005.

At that the Accounting Chamber points out absence of efficient cooperation regarding the rest of problematic matters of Ukrainian-Polish collaboration on transboundary waters. It concerns particularly flooding sulfur pit of Yavorivskyi State Ore Mining and Processing Enterprise "Sulfur", creating recreation lake and providing carrying capacity of the Shklo and Vyshnya Rivers.

3.1.4. The Accounting Chamber notes about low level of financing, planning and execution of measures on flood protection facility construction, their maintenance, conducting erosion-preventive and bank-consolidated works on transboundary waters.

General financing level of the Complex Program measures in 2001-2005 in Volyn and Lviv regions equaled to UAH 1776.6 thousand or 39.6% of planned amount, including in Volyn - UAH 5065.6 thousand or 22.4% and Lviv - UAH 12711.0 thousand or 56.8% . Major funds were allocated from the State Budget totaling to UAH 17776.4 thousand or 98.9%. Local budgets' financing accounted only for 1.1% of all funds obtained. Generally funds of economic entities were not attracted.

Insufficient financing of the Complex Program results in gradual ruining of separate sections of flood protection facilities caused by intensive amortization (facilities are being operated on the river with rapid currents).

As a result total condition of the implementation of the Complex Program for protection of rural settlements and agricultural lands from detrimental water effects in Ukraine in the years 2001-2005 and forecast till the year 2010 remains low.

3.1.5. The Accounting Chamber reports about unsatisfactory state of creating and providing emergency material stock in the system of State Board of Water Management.

Analysis of the structure of available material stock, inventory and equipment of Volyn and Lviv Regional Boards of Water Management indicates that latter were undersupplied in comparison with demand calculated by State Board of Water Management as on 01.01.2006. Actual value of required emergency stock amounts to UAH 115.1 thousand of UAH 629.2 thousand approved.

Summarized emergency stock of the region accounts for 18.3% of the demand. The lowest indicator is for bank-consolidated and hydro-technical facilities that perform the main protection function.

In addition, the structure of emergency stock itself needs optimization.

3.1.6. The Accounting Chamber assesses positively organizational activity on creating crisis centers and analytical-control centers of the State Board of Water Management. Meanwhile it notes unsatisfactory level of organization and provision of activity of working groups under local governments in Volyn and Lviv regions.

State Board of Water Management approved Departmental system of prevention and responses to disasters, catastrophes and emergency situations, established analytical-control centers of the Regional Boards of Water Management aimed at preventing and responding emergency situations of man-caused and natural character in 1997.

However, due to insufficient flood forecasting the State Board of Water Management didn't provide establishment of flood prevention information system of high quality.

Annually executive committees by village councils create locally working groups empowered with rendering life-saving and immediate services in case of spring flood and emergency situations.

At the same time due to low financing material-and-technical support of these groups proves inadequate.

### **General conclusion**

3.1.7. The Government of Ukraine hasn't provided implementation of flood protection measures within the programs in the Carpathian region for last years. As a result the level of population and territories' protection from floods is decreasing. Capital investments into water management, which has direct impact on flood protection provision in the country, have been constantly decreased. It caused lifting of flood threat.

Contrary to the Law of Ukraine "*On protection of population and territories from emergency situations of man-caused and natural character*" dated 08.06.2000 No. 1809-III the State Board of Water Management didn't provided departmental stock of emergency materials at water management's entities. It can cause material-and-technical incapability to response and prevent detrimental flood effects in due time.

The Government doesn't provide sufficient financing of implementing provisions of international transboundary cooperation that affects the condition of transboundary waters and implies threat of state territory loss.

Lack of budget financing of international cooperation on transboundary waters, in particular conducting joint scientific, project, research works, drafting cartographical materials, uncertainty with mechanism of joint financing of nature-conservative and flood protection measures hinder bilateral cooperation from development and planned actions from practical realization.

The matter of practical realization of Ukrainian-Polish Commission's decisions is actually left to discretion of the State Board of Water Management depending on its financial capability and plans without relevant Government support. As a result, Ukrainian party doesn't provide implementation of flood protection measures on transboundary waters to the extent required within the execution of the Agreement between the Government of Ukraine and the Government of Republic of Poland on cooperation in the field of water management on transboundary waters.

### **3.2. Audit results**

#### **Description of legal condition, economic and organizational activity fundamentals of flood protection and international cooperation on transboundary territories.**

##### **3.2.1. Analysis of audited area**

The problem of flood protection provision has become very urgent for last years, especially after 1997-1998 floods.

Rivers of the Carpathian region belong to basins of 7 rivers, in particular the Dniester, Danube, Prut, Western Bug, Syan, Styr and Pryp'yat Rivers. So hydrographical network of the region has not only national, but also international meaning forming water transport corridors. Thus flood protection in the Carpathian region of Ukraine is one of socially and economically significant issues that need to be solved nationally.

The state border is crossed by 22 rivers and channels, including 2 rivers of border-founded nature, on the territory of Ukraine<sup>1</sup> and Republic of Poland. The longest watercourse of border-founded nature is the Western Bug River extended for 200 km.

Nowadays due to insufficient regulative and cleaning works being performed in the river-bed there takes place the change of its bed resulting in territory loss by both Ukraine and Republic of Poland.

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<sup>1</sup> Regional Boards of Water Management in Volyn and Lviv regions.

With the aim of cooperation in the field of water management on transboundary waters between the Government of Ukraine and the Government of Republic of Poland an intergovernmental Agreement was concluded on October 10, 1996. It stipulates the cooperation in the following ways:

- conducting hydrological, hydrometeorological researches, observations and measurements, assessment of their results, as well as data exchange in this field;
- regulating and conserving waters and protecting river-beds and interdam areas;
- protection from flood waters and detriment effect of ice calamities;
- negotiating technical conditions of construction of new and reconstruction of functioning bridges, flood protection and other hydrotechnical facilities, as well as pumping stations, water intakes, sewage discharges, melioration facilities, piping, transmission facilities, communication and other facilities;
- combined using facilities and equipment located on transboundary waters and their proper maintaining, as well as negotiating terms of their operation.

The parties undertook commitments to negotiate water-management and water-protective plans on transboundary waters and assist by each other while implementing these plans, take measures on prevention or decrease of dangers caused by floods, ice drifting, draught seasons on transboundary waters.

Each party decided to appoint Plenipotentiary of the Government and his deputy on the issues of transboundary water cooperation within the framework of the implementation of the Agreement. Following the decree of the Cabinet of Ministers of Ukraine dated 29.04.1999 No. 749 with amendments dated 29.04.2003 No. 599 the first Deputy Head of the State Board of Water Management was appointed as the Plenipotentiary of the Government of Ukraine on the issues of transboundary water cooperation and the Head of Lviv Regional Production Department of Melioration and Water Management was appointed as his deputy.

The Agreement stipulates that cooperation between the parties is carried out via Ukrainian-Polish Commission. It consists of Government Plenipotentiaries and their deputies, as well as invited representatives of competent authorities and organizations. In addition, such cooperation is also carried out directly by relevant national institutions and establishments.

Government Plenipotentiaries and their deputies address the matters related to implementation of Agreement provisions and Commission decrees and, should it be necessary, are entitled to establish working groups, attract experts and host their meetings. The first Commission meeting was held in 2000.

Regulations of the working group dealing with flood protection, regulation and melioration were approved at the second Commission meeting. According to approved Regulations of Ukrainian-Polish cooperation on the issues of flood protection, regulation and melioration the Commission empowered the working group with execution of the following tasks:

- development of proposals regarding carrying out economic, scientific and technical measures aimed at natural environment protection;
- designing new and if appropriate redesigning existing technical conditions for cooperation on the issues of transboundary water management;
- carrying out cooperation with organizations, executive authorities and local governments responsible for water resources and execution of the tasks related to water management and melioration of transboundary water nature;
- carrying out cooperation with other working groups operating within the Commission;
- implementation of other tasks on Commission instruction.

The Regulations stipulate that prior to flood commencing the issues of proper technical maintenance of drainage and water protection facilities, beds, in-beds creeks, dams and objects on them; satisfying demand in materials, machines, mechanisms, required tools and inventory are under permanent attention of the parties. The Regulations provide volumes and order of information exchange between the parties in case of high waters. After flood passing the parties specify independently loss amount and rehabilitating actions to be performed by each party pursuant to additional agreements.

The Agreement stipulates that each party performs independently water-related and water-protective measures on its territory at own expense. That is why the level of their carrying out, in particular by Ukrainian part depends directly on budget funding of flood protection programs.

### **3.2.2. Organization-and-administrative aspects of flood protection**

Water Code of Ukraine (Article 16) stipulates that public administration in the field of water management, carrying out actions related to prevention of detriment water effect and its mitigation including settlements and lands flood protection are in the powers of specially authorized central executive authority on water management issues.

Article 15 states that specially empowered central executive authority on ecology and natural resources issues is responsible for performing public control over water use and protection and public monitoring.

Pursuant to Article 14 the Cabinet of Ministers of Ukraine performs organization and coordination of the works related to preventing and eliminating effects of disaster, natural calamity, detriment water effect or degradation of water resources quality.

Article 107 stipulates that ruining flood effects are considered among detriment water effects, which should be taken into account while designing water-related and other objects and appropriate actions should be conducted while operating these objects. The following actions should be taken:

- meadow cultivation and forest plantations on riverside protective belts, slopes, beams and steep banks;
- construction of erosion-protective hydro-technical facilities, earth mound, dams, reservoir-regulators;
- drainage construction;
- bank consolidation.

Pursuant to Article 108 of Water Code specially empowered central executive authority on hydrometeorology issues supervises over development of natural calamities and provide executive authorities and local governments with required hydrological and hydrochemical information.

In case of disaster and natural calamity local boards should inform population about their scale, possible breach of ecological safety and actions taken to eliminate their effects.

Pursuant to Article 108 of Water Code public authorities of water management should provide accident-free operation of water objects during floods, forecast expansion of effects caused and take measures to provide population and economy with regular water supply in collaboration with relevant boards.

The State Committee on Water Management was determined as specially empowered central executive authority in the field of water management and pursuing state land development policy by the decree of the President of Ukraine dated 23.06.1998 No. 670 “*On measures regarding state support of water-related melioration complex*”.

### **3.2.3. Flood protection programs specified in legislative order**

In 2000 the State Board of Water Management developed Complex Program for protection of rural settlements and agricultural lands from detrimental water effects in Ukraine in the years 2001-2005 and forecast till the year 2010 (hereinafter Complex Program), which was approved by the Cabinet of Ministers of Ukraine via decree dated 26.07.2000 No. 1173.

General objective of the Complex Program is to ensure protection of population, settlements, production entities and agricultural lands from detriment water effect and minimize losses caused.

The Complex Program specifies the following flood protection actions:

- ~ basin regulation of rivers through construction of necessary bank consolidations and dams;
- ~ volume extension of erosion-protective measures on catchment areas; special attention should be drawn to forest conservation and only shelterwood cutting;

- ~ pursuing social-and-economic policy aimed at softening anthropogenic load in river basins on statutory basis;
- ~ provision of proper functioning of reservoirs and melioration works to accumulate sediment load and regulate flood waters;
- ~ regular monitoring of bed processes and water flows management.

The Verkhovna Rada of Ukraine (Parliament) in its Law dated 17.01.2002 No. 2988-III approved National Program of Water Management Development, which component was the Complex Program.

Approved Program provided designing the scheme of complex use and protection of water resources and regional schemes of preventing possible natural and man-caused unfavorable processes and eliminating their effects. Among others one expected to develop the scheme of complex use and protection of water resources in catchment areas of the Dnieper, Southern Bug and Dniester Rivers.

However state regional designing and exploration institute "Lvivdiprovdgosp" elaborated "*Scheme of flood protection in creek of the Dniester River in Lviv region*" and institute "Volynvodproect" elaborated "*Scheme of flood protection in the Pryp'yat River basin*" upon request of the Regional Board of Water Management in Lviv region.

Due to lack of financing, schemes of complex use and protection of water resources in catchment areas of given regions, as provided by the Law, were not elaborated.

#### **3.2.4. Level of cooperation on transboundary waters of Ukrainian-Polish border.**

Since the moment of creation of Ukrainian-Polish working group on flood protection, regulation and melioration nine working meeting took place: five on Polish territory and four on Ukrainian. In the course of the meetings group members investigated transboundary catchment areas with putting special attention to bank erosion processes and bed cleaning.

Within the cooperation framework since 2002 they have started development of Action Plan Project as to stabilization of the Western Bug river-bed not to allow a change of Ukrainian State border line and land expropriation belonging to both countries. According the Action Plan Project for the Western Bug River developed by Polish party 95 actions are expected to take place, including 46 - by Polish party, 30 - by Ukrainian, 2 - joint actions and the executor of the rest actions hasn't been determined yet.

However, Ukrainian party only in three years in July 2005 empowered Regional Board of Water Management in Volyn region with preparing action coordination and addition. Deputy Government Plenipotentiary on transboundary water issues was empowered with work coordination. Thus Ukrainian party hasn't worked out this Plan Project yet.

The parties performed inventory of bank erosion sections of the Western Bug River and agreed each to conduct their consolidation at own expense in 2005.

In addition, one of problematic issues of Ukrainian-Polish cooperation on transboundary waters remain to be flooding course of Yavorivskyi State Ore Mining and Processing Enterprise "Sulfur" and creating recreation lake.

Thus project elaborated by Institute OJSC "Girhimprom" and titled "*Ecological balance rehabilitation and revegetation of defaulted lands by mining of Yavorivskyi State Ore Mining and Processing Enterprise "Sulfur"*" stipulates pit abandonment through its flooding by river and groundwaters (the Shklo River). There will be created the Yavorivs'ke lake with recreational use of the territory. Mentioned above project was approved by decree of the Cabinet of Ministers of Ukraine dated 24.02.2003 No. 87 with budget of UAH 78.7 ml and water filling volume of 198 ml of cubic meters. Execution period amounts to 6 years. Filling the pit with water lasts for three years. As on 01.07.2005 water level in reservoir reached 223.5 meters that accounts for water volume of 142 ml cubic meters or 71.7% of planned volume.

One of main project objective is land revegetation of Yavorivskyi State Ore Mining and Processing Enterprise "Sulfur". As on 01.01.2005 revegetation works on riverside equaled to 80% of projected volume or 187 hectare of 238 hectare planned.

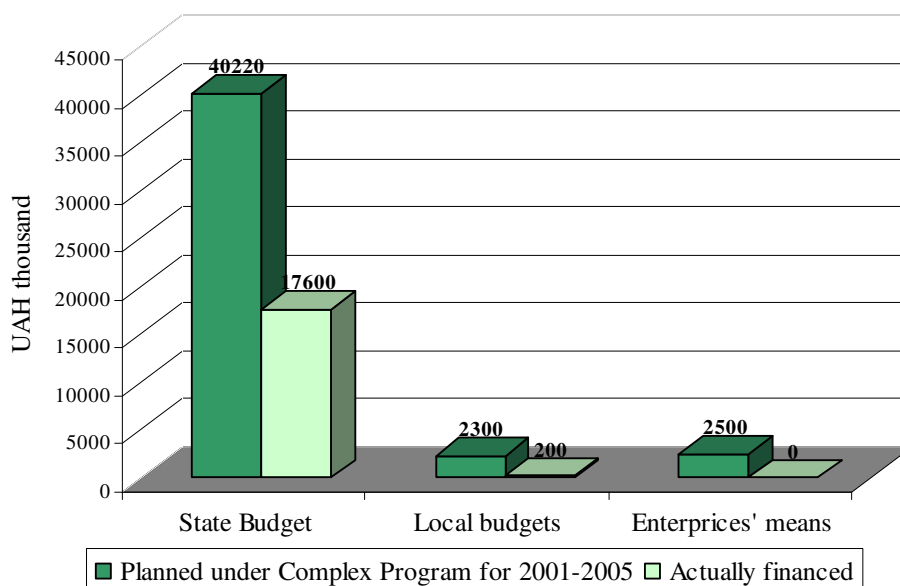
At the same time in connection with filling Yavorivs'ke lake, the quantity of the waters flowing from the Shklo River into Republic of Poland decreased significantly. As a result due to bush and other flora blocking carrying capacity of river-bed decreased as well. It was also the reason for decreasing carrying capacity of the Vyshnya River. Thus after final lake filling (first quarter of 2007) and increasing river waters subject to uncleared bed it seems possible that Shklo river-bed will change and major territories and settlements both in Ukraine and Republic of Poland will be flooded.

### 3.2.5 Financing of flood protection measures

Actual financing of flood protection measures was carried out at the expense of 2 sources, in particular of State and local budgets. At that the State Budget funds were allocated under three ways: budget programs of financing of flood protection programs, reserve fund and subventions to local funds.

Thus, total financing of flood protection programs in Volyn and Lviv regions for 2001-2005 amounted to UAH 17.8 ml.

#### Condition of financing of flood protection programs in Volyn and Lviv regions for 2001-2005



Following table figures total financing of program measures in 2001-2005 in mentioned regions accounted only for 39.6%, in particular in Volyn region - 22.4% and Lviv region - 56.8%.

Insufficient Program financing results in non-fulfillment of planned flood protection measures and gradual ruining of separate sections of flood protection facilities due to intensive amortization (facilities are being operated on the rivers with rapid current). Thus, the audit revealed that planned flood protection measures in Volyn and Lviv regions are carried out within 60%.

Analysis of Complex Program implementation in the context of its main indicators is made in Table 1.

Table 1

#### Condition of Complex Program implementation in the context of its main indicators

Name of works	Within the program for 2001-2005	Actual implementation	% of implementation
Bank consolidation (km)	23.9	7.0	29.3
Hydrotechnical facilities (units)	2.0	2.0	100
Flood protection dams (km)	27.0	17.2	63.7
Regulation of river-beds (km)	270.0	142.5	52.8

As it was stated in the decree of the President of Ukraine dated 15.03.2002 No. 243 “*On measures regarding provision of efficient flood forecasting and their effect elimination*” the Cabinet of Ministers of Ukraine was charged to assure till 2004 mapping of the territories that can be flooded as a result of floods and territories where it possible to activate dangerous geological processes. Starting from 2002 according to plans of implementation of nature-conservative measures within directions and objects financed from the State Budget the State Board of Water Management brought work contents to Regional Boards of Water Managements with defining possible flooded areas. Enterprises and organizations of the State Board of Water Management received appropriate licenses to perform mentioned works in 2003. However due to limited financing such works are not carried out fully.

### 3.2.6. Analysis of creating material reserves

The Cabinet of Ministers of Ukraine through its decree dated 29.03.2001 No. 308 approved the Order of establishing and using material storehouses to prevent, eliminate emergency situations of man-caused and natural character and their effects. The Order provides establishment of state (strategic), operational, departmental (in context of activity specific character), regional reserves and object storehouse based on maximum projected emergency situation typical for particular territory, branch, object, as well as provided work contents aimed at its effect elimination. Departmental reserve is used while eliminating effects of emergency situations at relevant economic entities<sup>2</sup> upon decision of executive authorities responsible for its establishment, maintenance and replenishment.

In order to implement mentioned decree the State Board of Water Management by instructions dated 20.09.2001 No. 201 approved departmental norms of emergency stock that were agreed earlier by the Ministry of Emergency Situations (order of establishment, financing and use of branch and object emergency stocks).

To be more precise, analysis of structure of available emergency stock of material, inventory and equipment located in Volyn and Lviv Regional Boards of Water Managements indicates that there was undersupply as on 01.01.2006. Actual value of required emergency stock amounted to UAH 115.1 thousand or 18.3 % of determined value of UAH 629.2 thousand.

Condition of emergency stock accumulating in the context of regions is presented in Table 2.

Table 2

#### Condition of emergency stock accumulating in the context of regions (UAH thousand)

Considered facility	Volyn region			Lviv region			Total		
	demand	actual	%	demand	actual	%	demand	actual	%
Water receiving and supply channel	95.5	8.9	9.3	160.0	31.1	19.5	255.5	40.0	15.7
Hydrotechnical facilities	87.9	8.6	9.8	101.0	11.9	11.7	188.9	20.5	10.9
Flood protection dams, dykes	6.9	0.7	10.1	21.5	13.6	67.3	28.4	14.3	50.4
Bank consolidation	0.6	0	0	79.4	8.5	11.7	80	8.5	10.7
Public buildings and settlements	6.1	2.2	36.1	10.9	2.5	23.0	17	4.7	27.7
Belongings	9.3	7.2	77.4	12.7	3.8	30.0	22	11.0	50.0
Water inventory and life saving equipment	9.2	4.7	51.1	28.2	11.4	40.5	37.4	16.1	43.1
<b>Total</b>	<b>215.5</b>	<b>32.3</b>	<b>15.0</b>	<b>413.7</b>	<b>82.8</b>	<b>20.1</b>	<b>629.2</b>	<b>115.1</b>	<b>18.3</b>

<sup>2</sup> Edition of the decree of the Cabinet of Ministers of Ukraine dated 29.03.2001 No. 308

Analysis indicates that summarized emergency stock of the territory equals to 18.3% of required. The lowest indicator is for bank consolidation and hydrotechnical facilities performing main protection function.

It was also revealed that structure of emergency stock needs to be optimized as well.

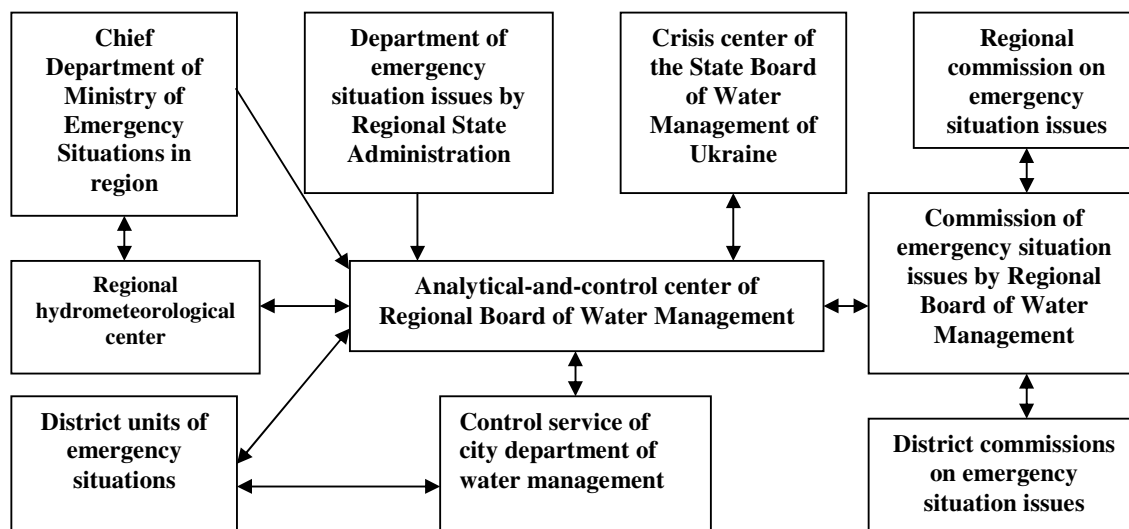
### 3.2.7. Organizational provision of flood protection measures

Aiming at provision of stable functioning of water-related complexes and their due implementation of actions related to prevention of disasters, catastrophes and emergency situations of flood nature, possible accidents on hydrotechnical facilities and other water objects that can cause flood or water pollution, the State Board of Water Management via its decree dated 28.11.1997 No. 108 approved Departmental system of prevention and response to disasters, catastrophes and emergency situations and established relevant analytical-and-control centers within regional water managements.

Regional Board of Water Managements via their decrees approved regulations about activity during floods which regulate function segregation between management of Regional Board of Water Management, its units and water-related organizations. In addition schemes of cooperation with executive authorities and organizations of other ministers and departments were developed and critical water levels to proclaim flood situation at state water stations functioning on main river were specified.

Annually executive committees of village councils via their decisions create locally working groups in case of spring flood. These groups are empowered with rendering life-saving and immediate services, should emergency situation take place.

Scheme of interaction between analytical-and-control center of Regional Boards of Water Management and relevant regional and local authorities



Prior spring flood commencing village councils inform regularly Regional Boards of Water Managements about a person responsible for provision of information about emergency situation and machinery, its technical status and inventory supply available in the village council.

At the same time audits disclosed that the issue of regions' material support required for people evacuation and carrying out immediate liquidation actions remains unsatisfactory.

## **4. AUDIT FINDINGS OF THE SUPREME CHAMBER OF CONTROL OF REPUBLIC OF POLAND**

Subject of the audit: Condition of flood protection in the Carpathian region.

Audit objective was to assess reliability of flood protection in the Carpathian region with particular consideration of transboundary waters on Polish-Ukrainian border and to assess reliability of international cooperation within this field. In addition audit aim was to assess reliability of implementation of flood protection measures imposed on government authorities and local governments within the scope of flood protection.

The audit covered the period of years 2002-2005.

### **4.1. Synthesis of audit findings**

#### **General assessment of audited activity**

4.1.1. The Supreme Chamber of Control assess positively, with minor irregularities:

- condition of flood protection in the Carpathian region with particular consideration of transboundary waters on the border between Republic of Poland and Ukraine;
- extent of interstate cooperation in the field of flood protection;
- condition of execution of tasks imposed on government authorities and local governments in the field of flood protection.

#### **Synthesis of audit findings**

4.1.2. The Supreme Chamber of Control positively, with minor irregularities, evaluates actions of state administration - directors of Regional Boards of Water Management in Krakow and Warsaw (RZGW) - related to flood protection in the Carpathian region, specified by law regulations in force. At that inadequate execution of separate tasks is stated.

In December 2004, Director of RZGW in Warsaw elaborated "*Analysis of flood protection condition in the water region of the Central Visla*", encompassing, among other things, evaluation of flood risk of the Bug on its transboundary section. The analysis also referred to transboundary waters with Ukraine.

Following requirements of Article 82, paragraph 2 of the Water Law Act, Director of RZGW in Warsaw prepared "*Study for non-embanked areas of the Bug threatened with flood*".

Directors of RZGW in Krakow and Warsaw failed to fulfill commitments stemming from Article 92, paragraph 3, subparagraphs 1&3 of the Water Law Act regarding preparing analysis of water resources and flood protection project plans in the water region with transboundary waters on the border between Poland and Ukraine till December 31, 2004.

4.1.3 The Supreme Chamber of Control assessed positively, with minor irregularities, condition of mutual cooperation between government authorities and local governments and coordination of flood protection actions in the Carpathian region, including cooperation with Ukrainian administration.

Cooperation between RZGW and Meteorology and Water Management Institute was conducted properly. Provincial Boards of Melioration and Water Management cooperated with Provincial Teams of Crisis Response.

Cooperation between RZGW and Ukrainian entities regarding coordination of joint actions of flood protection was mediated by Ukrainian-Polish Group of Flood Protection, Regulation and Melioration (hereinafter "OP Group").

RZGW participated in OP Group activities via its representatives, that are Director of RZGW in Warsaw (as a manager of Polish OP party) and 2 employees of RZGW in Warsaw and 2 of RZGW in Krakow.

While activity planning in the field of flood protection RZGW considered findings included in the minutes and reports of Ukrainian-Polish Group of Flood Protection.

Cooperation of Provincial Board of Melioration and Water Facilities (WZMiUW) in Lublin with its Ukrainian counterpart was based on implementation of the project “*Transboundary strategy against flood in the Bug River basin*”, executed under Phare Program CBS SPF “Euroregion BUG”.

Cooperation of Provincial Board of Melioration and Water Facilities (WZMiUW) in Rzeszow with its Ukrainian counterpart was limited to common transboundary rivers inspection.

District of Lubachov and Community of Lubachov made agreements with their Ukrainian counterparts on partnership and mutual aid in situation of direct danger in the transboundary areas of both regions.

Rest of local governments didn't conducted such cooperation with their Ukrainian counterpart.

4.1.4. The Supreme Chamber of Control assessed positively, with minor irregularities, implementation of the tasks by Regional Boards of Water Management in Warsaw and Krakow and Boards of Melioration and Water Facilities in the field of construction and maintenance of water facilities in administered areas of transboundary waters on the border with Ukraine.

Board of Melioration and Water Facilities in Rzeszow was prepared for investing. The Board had formed organizational bodies aimed at the investments: Division of Melioration Investment Preparation and Realization and Division of Contracts and Tenders with its own technical and engineering personnel possessing construction qualifications required for control execution.

The Board organized services of maintenance of melioration facilities in its Departments and Inspectorates.

Investment activities in the framework of Ukrainian-Polish OP Group cooperation were basically performed between 2002-2004 by Regional Board of Water Management in Warsaw – Inspectorate in Lublin. The activities included modernization of the bank line and protection of high slopes and eroded riversides of the Bug River.

4.1.5. The Supreme Chamber of Control assessed positively, with minor irregularities, actions of local governments aimed at creation and functioning of crisis response teams.

8 out of 9 local governments entities under control formed crisis response teams. Team in Vlodava was the only team that fully adjusted its structure and functionality to law requirements.

Community Administrator of Dorohusk did not complete his responsibilities imposed by the Act of April 18, 2002 “On state of natural disasters” and decree of the Council of Ministers of December 3, 2002, referring to formation method of community, district and province crisis response teams and government crisis coordination team and their functioning.

4.1.6. The Supreme Chamber of Control assessed negatively implementation of responsibilities as to equipment and maintenance of flood protection storehouses by territorial authorities of local governments.

Only one district of 3 (33%) inspected territorial authorities of local governments (Lubachov) and 3 out of 6 (50%) inspected communities (Vlodava, Lubachov, Stubno) created and equipped flood protection storehouses.

4.1.7. The Supreme Chamber of Control assessed positively elaboration of “*Study on conditions and areas of community development*”, taking into consideration areas of direct flood danger and areas of potential flood danger.

The studies were prepared in 5 out of 6 inspected communities. The Community of Dorohusk did not present such study.

#### **Final comments and conclusions.**

The Council of Ministry should:

4.1.8. Solve the problem of legal initiative in the scope of Water Law amendment via defining a director of Regional Board of Water Management that complies with requirements of developed plan for “*Flood protection in the region*”.

4.1.9. Guarantee allocation of the funds from the state budget necessary to conduct analysis of condition of water resources in the region as basic element for elaborating flood protection plan in the water region.

## 4.2. MAJOR AUDIT RESULTS

### 4.2.1. Description of legal status of economic and organizational conditions

Protection against flood issue has become crucial within the last years, particularly following the floods of 1997 to 1998. The floods revealed imperfections of systems of monitoring and warning against dangerous phenomena concerning surface waters, as well as poor condition of flood protection facilities, including dams, pumping stations, storage reservoirs etc., in the aspects of both quality and quantity.

The flood in the upper basin of the Odra River, including formation of a flooding wave at the Czech border, indicated necessity for closer international cooperation in this domain.

It must be considered that in excess of 1281 km of the state border run along transboundary waters, mainly rivers, which are about 42%. It is also important that, in majority cases transboundary waters flow into Republic of Poland from its neighbouring countries. It signifies necessity of international cooperation in the area of pollution as well as flood protection.

Existing bilateral agreements and inter-government arrangements specify that cooperation issues between Republic of Poland and its neighbours on transboundary waters refer to responsibilities of Plenipotentiary of the Government of Republic of Poland in the water management on transboundary waters. Such Plenipotentiary has not been appointed so far.

International cooperation in this field is being realized on the level of working groups appointed to solve emergency issues and issues requiring continuous cooperation.

Despite the fact that no flood, of such nature as on the Odra and the Nysa Luzycka, has been observed on transboundary waters of eastern border of Republic of Poland, such threat is still possible.

Transboundary waters on the border with Ukraine having distance of 282 km, consist mainly of the Bug and the Syan Rivers, which belong to the Visla River basin, and thus to the Baltic Sea basin. Another border river is the Stryazh, which is the only river beginning in Republic of Poland and belonging to the Dniester River basin and thus to the Black Sea basin.

The Agreement between the Government of Republic of Poland and the Government of Ukraine signed in Kiev on October 10, 1996 on cooperation in the field of water management on transboundary waters was the first step in establishing partnership in this scope.

One of their primary commitments the parties undertook to take measures on transboundary waters and their catchment areas aimed at prevention or decrease of dangers associated with floods, ice drifting, drought seasons and efficient water protection from pollution as well as aid in implementing arranged projects and covering their costs on agreed terms.

Execution of the Agreement implementation was entrusted to Ukrainian-Polish Commission on Transboundary Water Issues. In the framework of the Commission five Ukrainian-Polish working groups were established.

One of them is Ukrainian-Polish Group on Flood Protection, Regulation and Melioration, so called "OP Group", established during the first meeting of Ukrainian-Polish Commission on Transboundary Water Issues (Zamosc, May 29 – June 2, 2000). OP Group took a lot of efforts intending to prevent flood in the Carpathian region. Border sections of rivers and selected melioration facilities were inspected and primary problems with maintenance of border river-beds, border melioration and flood protection facilities were discussed.

OP Group reports of the years 2000 to 2003 cover major problems arising on transboundary waters, such as:

- the Bug riverside erosion on Polish-Ukrainian border in the area of Road Border Check Point Dorohusk – Yagodyn;
- the Bug riverside erosion near Ugrusk area, Community of Volya Ugruska;
- erosion of the high slope of the Bug depressed riverside near Svirzhi village, Community of Dorohusk;
- the Bug riverside erosion in Stryzhiv village,

- insufficient carrying capacity on the Shklo, Vyar and Vyshnya Rivers;
- problems with carrying capacity of Butsivskyi Channel.

#### **4.2.2. Organizational and administrative aspects of flood protection**

Flood protection system in Republic of Poland is divided in two sections.

First section concerns preventive efforts and deals with monitoring of hydrological phenomena and melioration, including construction and maintenance of flood protection facilities. Second section is a group of institutional and organizational response authorities in case of flood commencing to minimize danger of people's life and health, as well as their property loss. This section is comprised of Government Team of Crisis Response, provincial and district teams of crisis response, community response teams, as well as district and public flood protection storehouses.

In both sections tasks are shared between government authorities and territorial authorities of local governments.

Chairman of the State Board of Water Management is the central authority charged with water management pursuant to Article 89 of the Water Law Act. In accordance with transition provisions of the Act until December 31, 2005 his duties and powers were performed by the Minister being most appropriate for water management issues - currently Minister of Environment Protection, who performs his tasks via Water Management Office in Warsaw.

Monitoring of hydrological phenomena is the responsibility of Meteorology and Water Management Institute in Warsaw subordinated to the Minister of Environment Protection.

Following the 1997 flood, owing to the aid mainly of the World Bank, increased efforts have been made in order to implement modern Monitoring and Country Sheltering System (SMOK). Additionally, on the Polish section of the Bug River, there were implemented two modern hydrological modules (HD- undetermined water flow, and HBV- fall/thaw-drainage) enabling permanent hydrological events modeling and advanced flood waters warning.

Responsibilities in the field of melioration, including construction and maintenance of flood protection facilities are shared territorially between regional boards of water management (seven in the country) operated within government administration system and subordinated to Provincial Marshals – Boards of Melioration and Water Facilities. These units manage surface waters and provide construction and maintenance of flood protection dams, storage reservoirs, polders, pump stations etc.

Activities in the scope of response to floods and elimination of flood damages are carried out by relevant services (police department, army, fire department) coordinated by provincial, district and community teams of crisis response (depending on the territorial scale of natural disaster).

Their competence is regulated by the Act "On condition of natural disaster" and Acts on local governments - provincial, district and community ones.

Other local governments' responsibilities include maintenance of flood protection storehouses in appropriate quality and quantity condition of community, provincial and district nature (the latter are administered by the Boards of Melioration and Water Facilities).

#### **Sufficient audit results**

4.2.3. During the audit it was reported that in December 2004 Regional Board of Water Management in Warsaw elaborated "*Analysis of flood protection condition in the section of the Central Visla River*", including, among other things, evaluation of flood risk of the Bug River on its boundary section. The analysis was also related to boundary waters with Ukraine.

Elaborated evaluation of flood-related danger of the Bug River on its boundary distance of 363 km, including bordering part with Ukraine on the distance of 196.7 km, includes a division map of the level of flood-related danger, evaluation of flood-related danger on boundary section of the Bug River, endangered complexes profiles and suggested preventive measures.

In accordance with this evaluation total area endangered with water flooding with occurrence risk of 1% (once a hundred year) covers 29,827 thousand hectares, 24,950 thousand of which is agricultural lands. Additionally, there are 2931 farm buildings, 3000 settlements and 17770 inhabitants under threat.

11 km (19%) of the projected dams of 58 km in total was constructed. Approximately 7 km of existing dams require reconstructions due to either poor technical condition or inappropriate parameters of specified construction class.

According to presented assessment, condition of flood protection in the area of Province of Lublin is insufficient and areas being under flood-related threat will not be completely protected even in case of planned dam construction. It is related to economic and natural conditions.

Directors of Regional Boards of Water Management (RZGW) in Krakow and Warsaw did not fulfill commitments regarding elaboration till December 31, 2004 analysis of condition of flood protection in the regions (considering volumes of transboundary waters with Ukraine). Thus, they violated requirements of Article 92, paragraph 3, subparagraph 1 of the Water Law Act (in its terms binding by July 30, 2005) which entrusted Regional Board director with elaboration of such analysis.

According to Article 211, paragraph 3 of quoted Act, such analysis is to be conducted within 3 years since Act's entering into force, that is by the end of the year 2004.

Directors of RZGW in Krakow and Warsaw did not fulfill their responsibility stemming from Article 92, paragraph 3, subparagraph 3 of quoted Water Law Act regarding implementation of project plans of flood protection in the region considering the volumes of transboundary waters on the border between Republic of Poland and Ukraine. The main reason for non-fulfillment of flood protection project plans was lack of financing.

At the end of 2004, RZGW had one third of all required research documentation for flood protection of the territories where exists flood-related danger from 53 rivers.

According to requirements of Article 82, paragraph 2 of Water Law Act, RZGW in Warsaw developed "*Study for areas not protected with dams, exposed to flood-related danger for the Bug River*". The study specifies flooded area with flood risk of 1% to 5% (considering frequency of floods once a hundred year and once twenty years).

Because of insignificant flood-related danger and limited financial resources studies for rivers not protected with dams such as: the Rata, the Solokiya, the Svinorya, the Varenzhanka and the Bila Rivers, which have border points with Ukraine, have not been prepared. These rivers have relatively short spring sections in Republic Poland, with small flows.

*Water cadastres for water region* conducted by RZGW in Krakow and Warsaw did not contain some data required by Article 153 of quoted Water Law Act. They did not contain in particular: in Section 1: sources and characteristics of territory pollutions, biological state of natural water habitat and possible flooded lands and data related to water facilities; in Section 2: flood protection plans for water region.

According to Article 211, paragraph 4 of Water Law Act (in its terms binding by July 30, 2005), water cadastre should be prepared within 3 years since the enforcement of the Act, that is by the end of the year 2004.

4.2.4. In the course of the audit it was revealed that cooperation between RZGW and Ukrainian counterpart with the aim of joint actions coordination in the field of flood protection was mediated by Ukrainian-Polish Group of Flood Protection, Regulation and Melioration, so called "OP Group", created at the first meeting of Ukrainian-Polish Commission on Transboundary Waters Issues.

RZGW participated in OP Group activities through the mediation of its representatives, that are, Director of RZGW in Warsaw, 2 RZGW employees from Warsaw and 2 from Krakow.

OP Group decisions was documented in minutes issued in two copies in Polish and Ukrainian. Chair of OP Group submitted report on OP Group programs implementation to Ukrainian-Polish Commission of Transboundary Waters Issues.

In the period covered by the audit, selected sections of transboundary waters were inspected. Thus in 2002 they made 9 inspections, in 2003 - 13 inspections, in 2004 - 12.

Cooperation between RZGW and IMGW (Meteorology and Water Management Institute) was evaluated positively. Between 2002 and 2004 IMGW reported to RZGW Centre of Coordination and Flood Protection the information about: water condition forecast for the Central Visla basin, hydrological state of rivers, meteorological and hydrological phenomena in Republic of Poland. Reported information was published in bulletins according to requirements of Article 111, paragraph 1 of the Water Law Act.

Provincial Board of Melioration and Water Facilities in Lublin and Rzeszow cooperated with Provincial Teams of Crisis Response.

Provincial Board of Melioration and Water Facilities (WZMiUW) in Rzeszow cooperated with Provincial Team of Crisis Response appointed by the Governor of the Province. It took part in organizational team structures of Board Director and the Board representatives appointed by the Director.

Employees of the Board of Melioration and Water Facilities in Lublin were members of departments of monitoring, forecast, analyses and logistics of Provincial Team of Crisis Response.

WZMiUW employees were also delegated to District Teams of Crisis Response.

Representatives of Subcarpathian Board of Melioration and Water Facilities in Rzeszow under Ukrainian-Polish Commission on Transboundary Waters Issues participated in inspections of border rivers and Inspectorates implemented this Commission's recommendations.

In 2005 Board Director's Deputy was appointed to Ukrainian-Polish Working Group of Flood Protection, Regulation and Melioration.

In the years 2003-2004 under TACIS CBC ENACT Program "Promotion of sustainable development and regional environment protection policy in context of trans-border cooperation between Republic of Poland and Ukraine" the Project "Environment Investigation" was realized with participation of Polish party - represented by Regional Board of Water Management in Warsaw and Provincial Board of Melioration and Water Facilities in Lublin and Ukrainian party - represented by International Cooperation Department of city Lutsk and French party represented by University of Metz, Water Agency of Rhin-Whalz in Metz and International center of Water N.A.N.C.I.E.).

"Environment Investigation" Program objective was to establish informal consulting framework in the field of environmental protection strategy and regional policy (flood threats, operation of crisis centers, monitoring of transboundary rivers, information and information systems). Additionally, the Program aimed at establishing consulting team which will share its experience in developing effective policy and methodology.

In 2004 within the framework of water management cooperation a new project "*Transboundary strategy against flood in the Bug River basin*" was developed, with its realization based on Phare program CBS SPF "Euroregion BUG". Polish party was represented by Regional Board of Water Management in Warsaw and Provincial ZMiUW in Lublin and Ukrainian party was represented by Volyn Regional Water Management Board and Volyn Hydro-Meteorological Center.

Primary Project objective was to improve condition of flood protection in the area of the Bug River valley. This objective implementation will be possible through preparation of territorial authorities of local governments of Republic of Poland, Republic of Belarus and Ukraine to transboundary planning of water management. Coordination of transboundary planning is necessary to apply for available European Union's resources, for example in Interreg IIIA initiative. The project provides basis for action planning and coordination in border area and concentrates on specific environmental protection programs in the region (solving common natural environment problems, raising ecological awareness of the society and organization of trainings for melioration and water management services).

In the period covered by the audit, two units of local governments initiated direct cooperation with their Ukrainian counterparts. The cooperation resulted in agreements concluded between District of Lubachov in Republic of Poland and Yavoriv District in Ukraine on partnership in the filed of environment protection and mutual aid in flood case on boundary territories of both regions, and between Community of Lubachov in Republic of Poland and Community of Nemyrov in Ukraine

on mutual partnership encompassing exchange of information on natural disasters, pollution and contamination of natural environment and arrangement of common actions in emergency situations directly threatening human and animals lives and health.

4.2.5. Regional Board of Water Management (RZGW) in Krakow provided seasonal technical inspections of stabilized sections of the Syan River and its tributaries, as well as tributaries of the Dniester River on national territory. Technical condition of the river-beds was satisfactory since at the end of 2004 total length of sections not requiring any works amounted to 99.1% of its total length for the Syan River and its tributaries, and 97% of its length for the Strvyazh River and its tributaries. In this connection in the years 2002-2004 Regional Board of Water Management in Krakow did not plan or carry out any works on water facilities construction and/or repair or maintenance of existing facilities on administrative territory of Polish-Ukrainian border.

In 2002-2004 Regional Board of Water Management in Warsaw properly carried out tasks on repair of damaged bank of the Bug River in its Polish-Ukrainian border section by means of construction of 8 bank bands of the total value of PLN 1,968.9 thousand. The works were carried out on the basis of regulations of Public Orders Law Act. Final approval given by supervising inspector and representatives of Regional Board of Water Management and contractors was carried out correctly. The bands were also inspected on warranty account. In the period covered by the audit Regional Board of Water Management in Warsaw did not construct water facilities protecting against flood nor administered water facilities protecting against flood on the mentioned area of transboundary waters.

Total expenditure on flood protection investments made in the Bug River basin between 2002-2004 amounted to PLN 19035970.48 (23,16% of total expenditures on this purpose in the Province of Lublin) PLN 1979441.38 of which was spent in 2002 (20.84%), PLN 13120225.38 (29,91%) in 2003 and PLN 3936304.10 (13,66%) in 2004.

In the years 2002 -2004 expenditures on river and channel maintenance, dams, pumping stations and storage reservoirs (operation and maintenance) in Province of Lublin amounted to PLN 19169242.78 and PLN 7126720.21 of these funds were in the Bug River basin. In 2004 WZMIUW made one investment in the Bug river-bed not connected directly with basic melioration (protection from flood) worth of PLN 1264631.11. In Province of Lublin in the years 2002-2004, 8 such investments were carried out of total value PLN 2416916.38 which is 4,45% of funds spent on basic works at that time.

Governor and Marshal of Subcarpathian Province approved investment projects concerning flood protection for the years 2000 – 2006 and program of small water retention for 2000 – 2015, elaborated by Subcarpathian Board of Melioration and Water Facilities. The schemes were successively dependant on the availability of financial resources.

They included 17 tasks on rivers and streams stabilization, 24 tasks on construction and modernization of 28.8 km of dams protecting the lands neighboring with Ukraine.

In 2002 – 2004 on the area of the right basin of the Syan River one investment was implemented which concerned stabilization of Yasenitsa River in community of Stary Dzikov.

There were 21 tasks to be included in investment plans for 2002 – 2006 and 2000-2015 relating to the rivers in the areas of land neighbouring with Ukraine.

Approved program of small water retention in the part covering lands neighboring with Ukraine provides construction of 99 retention reservoirs of total capacity 11139.77 thousand cubic meters and surface of 644.8 hectare.

In the under-audit period, the Board collected financial resources of PLN 121.4 ml, only PLN 21.9 ml (18%) of which was allocated from the State Budget. The rest funding was obtained from reserves of European Investment Bank budget, Phare funds, National and Provincial Fund of Environmental Protection and Water Management.

Invested financial resources made up half of funds required for flood protection of the province and about 82% was spent on reconstruction and modernization of Visla River dams.

Radical improvement of flood protection in Subcarpathian Province requires PLN 70 ml worth investment annually.

The Board was prepared to invest and make melioration investments and formed organizational units aimed at the investments: Division of Melioration Investment Preparation and Realization and Division of Contracts and Tenders with its own technical and engineering personnel possessing construction qualification required for technical inspection.

Services of Melioration Facilities Maintenance were organized in Board's Departments and Inspectorates.

Auditors revealed that tasks related to provision of rivers, streams and melioration facilities maintenance were implemented only at 30% of planned funds to the extent of financial resources provided from the State Budget.

Additionally, financial resources intended for flood protection measures were limited by expenditures necessary to eliminate 2003 flood-related damages. PLN 982 thousand of PLN 7903 thousand planned State Budget's allocations was intended for flood protection facilities maintenance.

Non-provision of proper technical facilities condition leads to degradation of river-beds and melioration facilities and dams, reduces water flow and ice float movement increasing the risk of flood and flood-related damages.

4.2.6. Under the audit there were 8 of 9 units of local governments, which succeeded in forming Crisis Response Teams. However, District Team of Crisis Response in Vlodava was the only team that fully adjusted its structure and functioning to law requirements.

In the audited period District Teams of Crisis Response had meetings of complete working groups membership (permanent and temporary). Auditors assessed the flood alert of District Headquarters of Fire Department as satisfactory. Despite considerable exploitation of equipment, amphibious vehicle and boats were at headquarters disposal.

Technical support (resulting from decree of the Council of Ministers of December 3, 2002), enabling functionality of the team in emergency situations, was also provided. Equipment of District Centre of Crisis Management, located in District Headquarters of the District Fire Department enabled team tasks implementation, providing continuity of actions and parallel exchange of information and enabled work in case of power supply shortage, accident or breakdown of communication system.

Auditors reported about realization of actions specified by paragraph 7 of mentioned above decree, concerning development of annual action plans for the teams, processing schedule of team current works and actions in case of natural disaster alert or technical breakdown reaching the extent of natural disaster.

Community prepared Crisis Response Plan in 2004, taking into consideration issues specified by regulations of mentioned above decree. The Plan was agreed on with all managers of organizational units planned to be involved in action and with Provincial Team of Crisis Response. Simultaneously, it was underlined in the Plan, that floods pose potential threat to Vlodavski District. Actions in this field were outlined in detail in operation plan of flood protection. The plan includes, among other things, conditions for emergency situation and flood threat announcement (monitoring), flood protection infrastructure, efforts and measures expected to be taken, list of flood protection and civil defense storehouses on the territory of Vlodavski District (saving forces balance) and also procedures of action agreement in case of danger.

District Teams of Crisis Response in Lubachov and Peremyshl didn't have elaborated action and training plans. Additionally, they did not have adequate equipment of system of registering radio and telephone talks content and their archives and devices supplying power in emergency. Crisis Response Teams' meetings were not held on quarterly basis, which is contrary to the regulations. Annual training was not provided as well.

Community Administrator of Dorohusk did not fulfill his responsibilities specified in the decree of April 18, 2002 "On state of natural disaster", and decree of the Council of Ministers of December 3, 2002 "*On formation of community response team, district and provincial crisis response teams and Government Team of Crisis Coordination and their functioning*". The instruction on creation of community response team was issued by the Community Administrator on January 5, 2004, which

was over a year after its implementation. Members of the community response team were not specified personally in the document, neither were individual working groups. Only positions and name of institutions were determined. The team was not considered in the organizational regulations of Community Office amended in December 2004. The duties of employees occupying positions in response teams were not changed as well. The team and individual working groups have not started their activities and have not completed tasks specified in Article 12, paragraph 2 of April 18, 2002 Act "On state of natural disaster" and in December 3, 2002 decree of Council of Ministers. Consequently, since 2003 no annual team action plans, crisis response plans, training plans have been introduced. No premises have been provided and specified for the needs of community crisis response centre.

Other community Crisis Response Teams did not fulfill commitment regarding annual training launching (Stubno, Volya Uhruska, Peremyshl), their equipment did not meet requirements specified by the decree (Lubachov, Peremyshl) and/or they did not have elaborated action plans (Volya Uhruska).

4.2.7. The Supreme Chamber of Control assessed negatively implementation of responsibilities by units of local governments regarding providing and maintaining flood protection storehouses.

Melioration and Water Facilities Subcarpathian Board maintained 4 flood protection storehouses. In 2003 the Board handed 7 storehouses over to 7 communities, and part of storehouse equipment was passed to two districts.

Administered storehouses were maintained in good condition and the equipment was supplemented, following decisions of the Board's Director. Storehouses maintenance and inventories were carried out on internal instructions basis.

In November and December 2001, flood protection storehouses of WZMiUW in Lublin were supplemented with necessary equipment and materials worth of PLN 1500869.5 thousand. PLN 1498200.0 of this amount was received from the National Fund of Environment Protection and Water Management. The storehouses in Bila Podlaska and Vlodava (Bug River basin) were equipped with 100000 propylene bags, worth of PLN 61.0 thousand and the remaining equipment and materials were delivered to flood protection storehouses located on the Visla River.

Only one district of 3 (33%) inspected units of local governments (Lubachov) has created and equipped flood protection storehouses. 3 out of 6 (50%) inspected communities (Vlodava, Lubachov, Stubno) possessed equipped flood protection storehouses.

*Community of Volya Uhruska ran two flood protection storehouses. The storehouses were not equipped with primary materials such as sandbags and assisting equipment such as boathooks, wheelbarrows, spades, shovels, axes, crowbars and others.*

4.2.8. None of the 6 inspected communities implemented up-to-date management plan. 5 communities prepared *Study on conditions and areas of town and country development*. The studies contained text and graphic sections covering the areas of direct flood threat and areas of potential flood threat.

*Warsaw, April, 2006*