



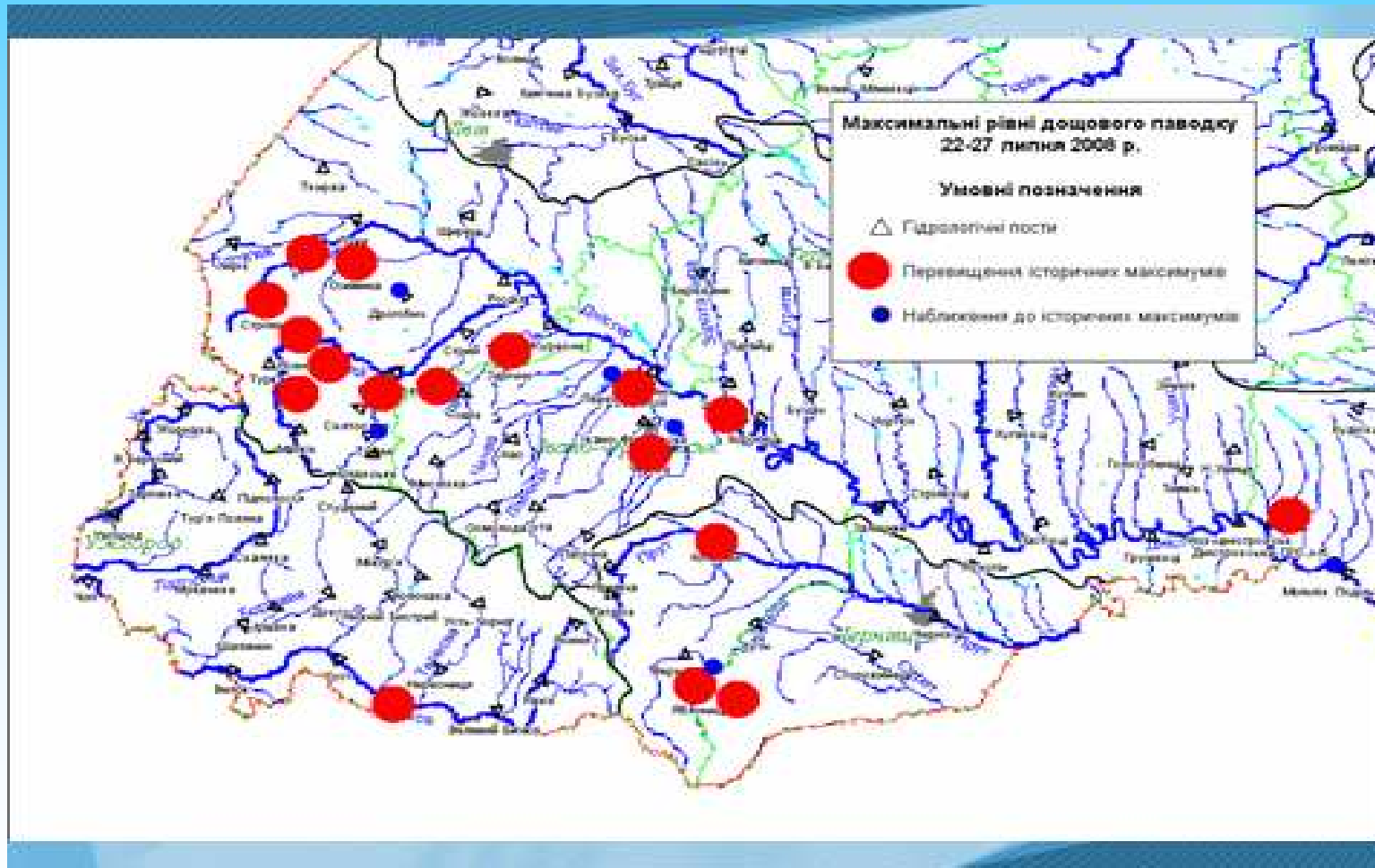
**ACTIVITIES OF UKRAINE IN THE
DEVELOPMENT OF FLOOD
MANAGEMENT IN CARPATHIANS
RIVER BASINS ON LOCAL,
NATIONAL AND INTERNATIONAL
LEVELS**

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AIM OF PRESENTATION:

consider the present state and new challenges in the development of flood management in Dnister, Prut and Tisza river basins

DRAINAGE NETWORK OF CARPATHIANS RIVER BASINS



CHARACTERISTICS OF RIVER BASINS:

(WITHIN UKRAINE/TOTAL)

RIVER BASIN	LENGTH, KM	AREA, SQ KM	POPULATION IN BASIN, MLN PEOPLES
DNISTER	925 / 1362	52690 / 72100	3,79
PRUT	299 / 967	17400 / 27500	1,24
TISZA	201 / 966	11300 / 153000	0,76

MAIN REASONS OF VERY HIGH FLOODS IN REGION

- **LONG RAINSTORMS – 55%**
- **SNOW MELT AND RAINS - 40%**
- **SNOW MELT - 5%**

DAMAGES FROM VERY HIGH FLOODS IN CARPATIANS RIVER BASINS

RIVER BASIN	YEAR	ECONOMIC LOSSES, million USD	LIFE LOSS, PEOPLES
DNISTER	2006	15,5	2
	2008	185,5	36
PRUT	2006	5,2	
	2008	37,0	4
TISZA	1998	120,5	18
	2001	87,5	9





WHAT ARE MAIN CAUSES OF INCREASING FLOOD LOSSES ?

Causes	Chosen by(%)
Clearance of forest	40
Building permits issued in high flood-risk areas	24
Weakened water management	14
Unsufficient warning system	12
Global climate changes	4
River regulation	3
Others	3

DISTRIBUTION OF THE RESPONSIBILITY IN THE AREA OF FLOOD MANAGEMENT AMONG DIFFERENT AUTHORITIES ON THE NATIONAL LEVEL

- ***CABINET OF MINISTERS: COORDINATION OF ACTIVITIES OF ALL STATE AND LOCAL AUTHORITIES***
- ***STATE COMMITTEE ON WATER MANAGEMENT: ORGANIZATION OF GENERAL FLOOD MANAGEMENT, MAINTENANCE AND DEVELOPMENT OF FLOOD PROTECTION CONSTRUCTION***
- ***STATE HYDROMETEOROLOGICAL SERVICE: HYDROMETEOROLOGICAL OBSERVATIONS, FORECASTS AND WARNINGS***
- ***MINISTRY OF EMERGENCY: FLOOD CONTROL COMBAT, PREVENTIVE PROTECTION, EVACUATION OF POPULATION AND PROPERTIES***
- ***MINISTRY OF HEALTH: PREVENTION OF DISEASES AND MEDICAL ASSISTANCE***

DISTRIBUTION OF THE RESPONSIBILITY IN THE AREA OF FLOOD MANAGEMENT AMONG DIFFERENT AUTHORITIES ON THE LOCAL LEVEL

- ***LOCAL GOVERNMENTS IN LVIV, IVANO-FRANKIVSK, TRANS-CHARPATHIANS AND CHERNIVTSI REGIONS: COORDINATION OF ACTIVITIES OF ALL LOCAL BRANCHES OF STATE GOVERNMENTAL BODIES AND LOCAL COMMUNITIES***
- ***LOCAL BRANCHES OF THE STATE COMMITTEE ON WATER MANAGEMENT, THE STATE HYDROMETEOROLOGICAL SERVICE, THE MINISTRY OF EMERGENCY, THE MINISTRY OF HEALTH: IMPLEMENTATION OF THE POLICY OF STATE GOVERNMENTAL BODIES IN THE AREA OF FLOOD MANAGEMENT***

REGULATION OF THE INTERNATIONAL ACTIVITIES ON TRANSBOUNDARY RIVERS IN THE AREA OF FLOOD MANAGEMENT

- **CONVENTION ON THE PROTECTION AND USE OF TRANSBOUNDARY WATERCOURSES AND INTERNATIONAL LAKES**
- **DECLARATION ON COOPERATION IN THE FIELD OF WATER - RELATED ISSUES**
- **PROGRAM ON HYDROLOGY AND WATER RESOURCES OF THE WORLD METEOROLOGICAL ORGANIZATION**
- **COOPERATION IN THE FRAMES OF THE INTERNATIONAL HYDROLOGICAL PROGRAM OF UNESCO**
- **TISZA RIVER BASIN FORUM**
- **BILATERAL AND MULTILATERAL AGREEMENTS**

PROBLEMS IN THE FLOOD MANAGEMENT

- **DIFFERENT ASPECTS OF THE FLOOD MANAGEMENT ARE SHARED BY A NUMBER OF STATE AND LOCAL BODIES**
- **THERE OFTEN NOT EFFECTIVE COMMUNICATION BETWEEN STATE AND LOCAL AUTHORITIES DURING FLOODS**
- **SCARCITY OF THE BUDGET FUNDS TO PROVIDE WITH SUSTAINABLE FLOOD MANAGEMENT**
- **SEPARATED PLANNING AND MANAGEMENT OF SOCIAL, ECOLOGICAL AND ECONOMICAL ASPECTS OF FLOOD MANAGEMENT**
- **LACK OF MODERN TECHNICAL EQUIPMENT AND TECHNOLOGY OF HYDROMETEOROLOGICAL OBSERVATION, FORECASTING AND WARNINGS**
- **LOW LEVEL OF PUBLIC PARTICIPATION IN THE WATER-RELATED ACTIVITIES**

DIRECTIONS OF THE DEVELOPMENT OF THE FLOOD MANAGEMENT

- **ELABORATION AND REALIZATION OF THE NATIONAL AND LOCAL PROGRAMS AND ACTION PLANS:**
PROGRAM OF DEVELOPMENT OF WATER RESOURCES OF UKRAINE; PROGRAM OF PREVENTION OF FLOODS IN THE TISZA RIVER BASIN;
PROGRAM OF DEVELOPMENT OF HYDROMETEOROLOGICAL SERVICE;
PROGRAM OF PREVENTION OF FLOODS IN DNISTER, PRUT AND SIRET RIVERS
- **DEVELOPMENT OF INSTITUTIONS ARRANGEMENTS:**
CREATION OF THE INTERDEPARTMENT COUNCIL;
STRNGTHENING OF THE PARTICIPATION OF THE NGO'S REPRESENTATIVES IN THE FLOOD MANAGEMENT AND PROTECTION ACTIVITIES
- **IMPROVEMENT OF THE MANAGEMENT PLANNING FOR FLOOD DISASTER REDUCTION**

PLANNING FOR DISASTER REDUCTION

1. Pre-disaster activities:

- **preparedness:**

risk analysis, public awareness, education and training, regulatory measures, spatial planning;

- **minimizing loss life, property and environment:**

monitoring and forecasting, Prediction and warning, evacuation and sheltering

PLANNING FOR DISASTER REDUCTION (continuation)

2. Past disaster activities:

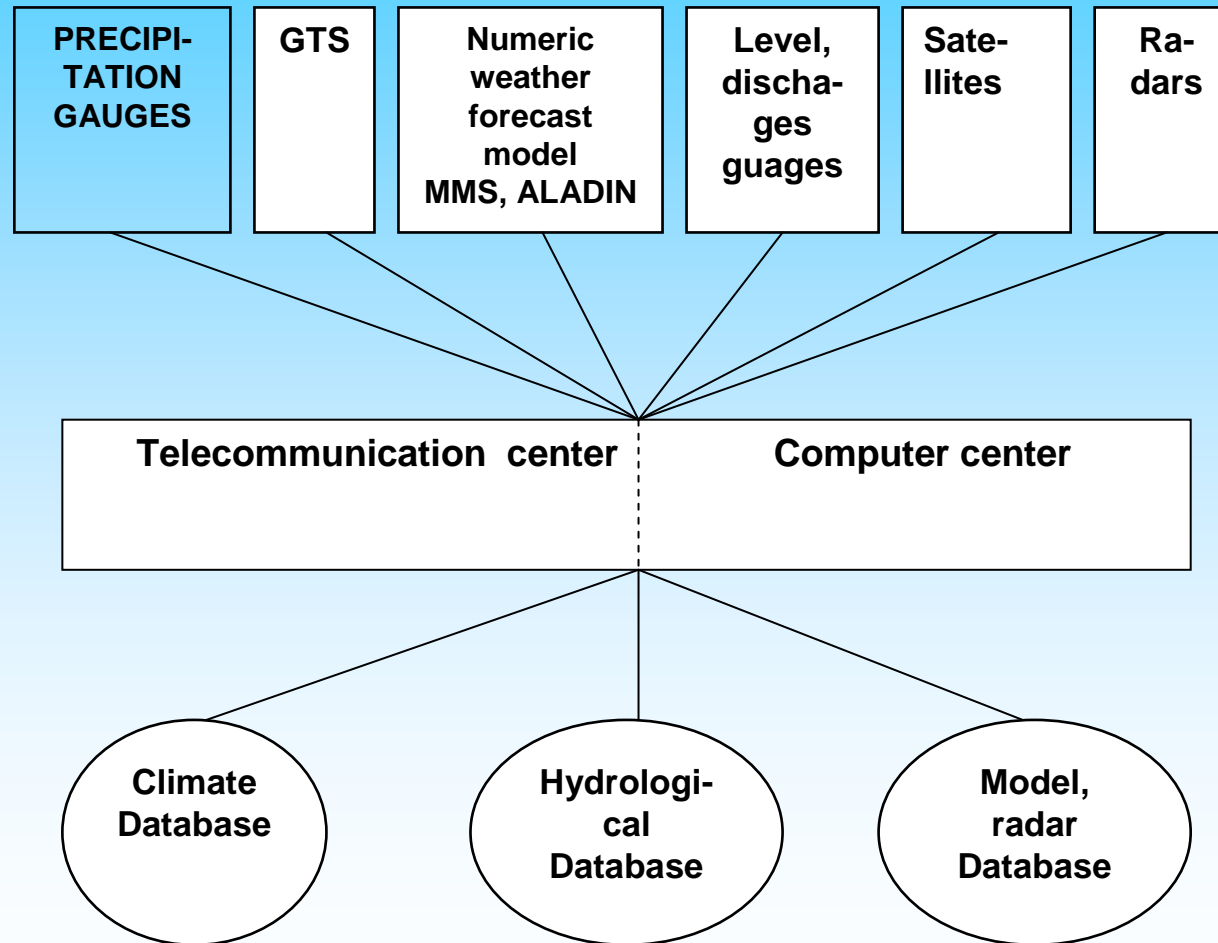
- **emergency operations:**

**search and rescue, rapid damageS
assessment**

- **recovery and reconstruction:**

**planning in general, reconstruction,
rehabilitation (economic, environmental,
social)**

INTEGRATED FLOOD OBSERVATION, FORECASTING AND WARNING SYSTEM



CONCLUSIONS AND RECOMMANDATIONS

- **FLOODS ARE INEVITABLE**
- **THEIR IMPACTS CAN BE REDUCED THROUGH AN ADEQUATE PLANNING OF MITIGATION AND PREVENTION MEASURES**
- **UKRAINE IS DEVELOPING ITS FLOOD MANAGEMENT POLICY ON LOCAL, NATIONAL AND INTERNATIONAL LEVELS**
- **MUCH ATTENTION SHOULD BE GIVEN TO REFORMATION AND DEVELOPMENT OF INSTITUTIONAL BECKGRAUND, FLOOD MONITORING, FORECASTING AND WARNING, EMERGENCY OPERATIONS**



**Thank you very much
for attention !**