

**WATER RESOURCES OF
UKRAINE.
STATE AND PERSPECTS
OF USE**

Peter Kovalenko

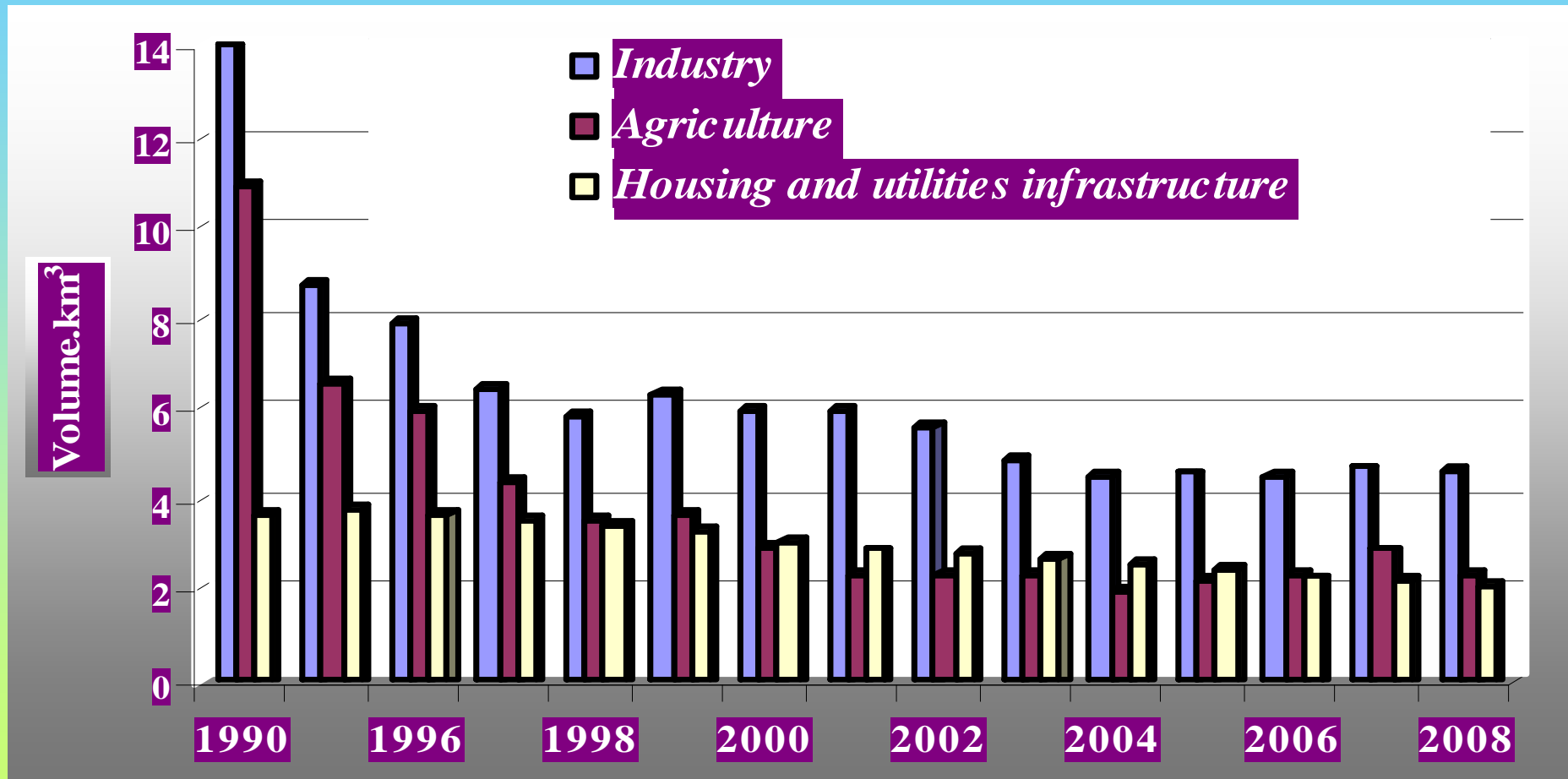
**Director of Institute of Hydraulic
Engineering and Land Reclamation of
UNAAS, vice-president of ICID**

Water resources availability and use

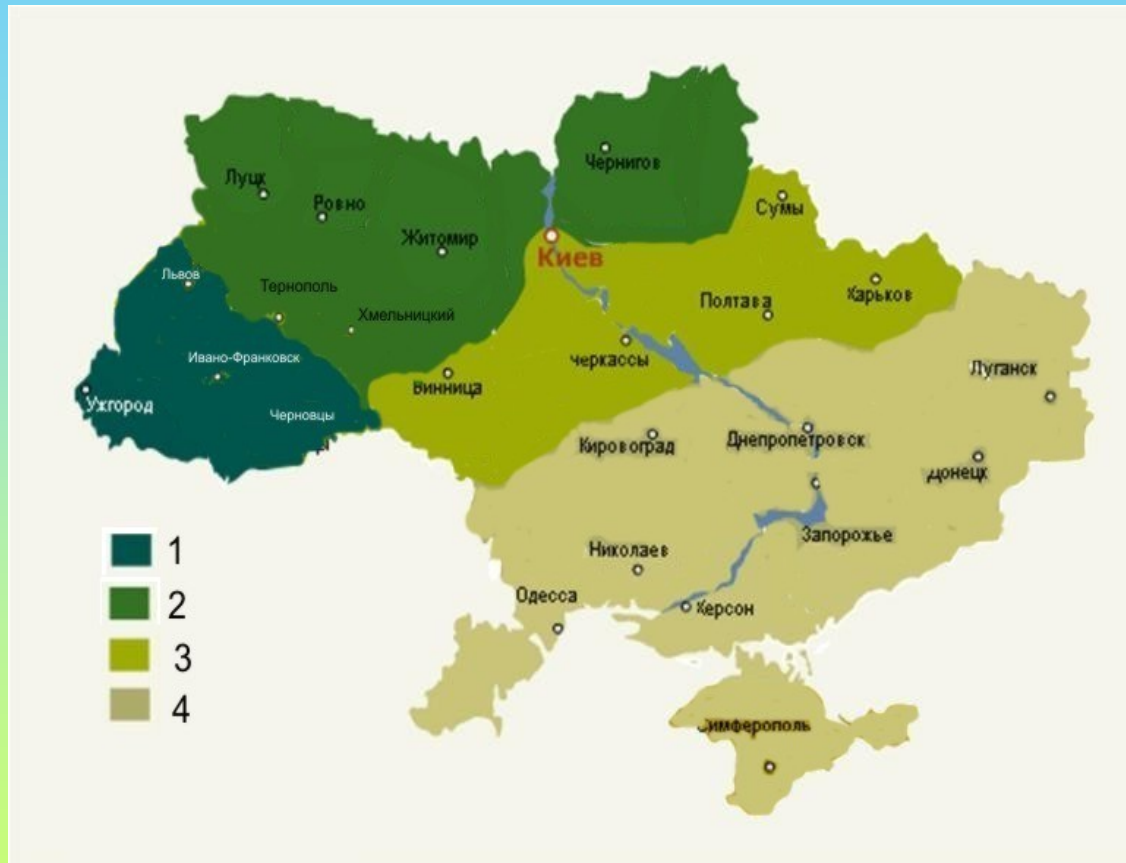
- **Potential resources of river waters of Ukraine are 210 cbkm, of which only 25% are formed in Ukraine while the rest comes from Russia, Belorussia and Romania**
- **Total water withdrawal for population and economy is ~ 15 billion cbm per year (industry- 49.4%; agriculture – 25.8% ; domestic water supply – 22.6%;other -2.2%)**
- **Ukraine is the 111th among 152 countries by the amount of domestic water resources available per capita (World Bank statistic)**
- **8 billion cbm of waste water per year is discharged into surface waters**



Fresh water consumption



Zoning of pressures and drivers for water management



**1. Carpathian region
(incl. fore mountain)**

**2. Polissya region
(Forest zone)**

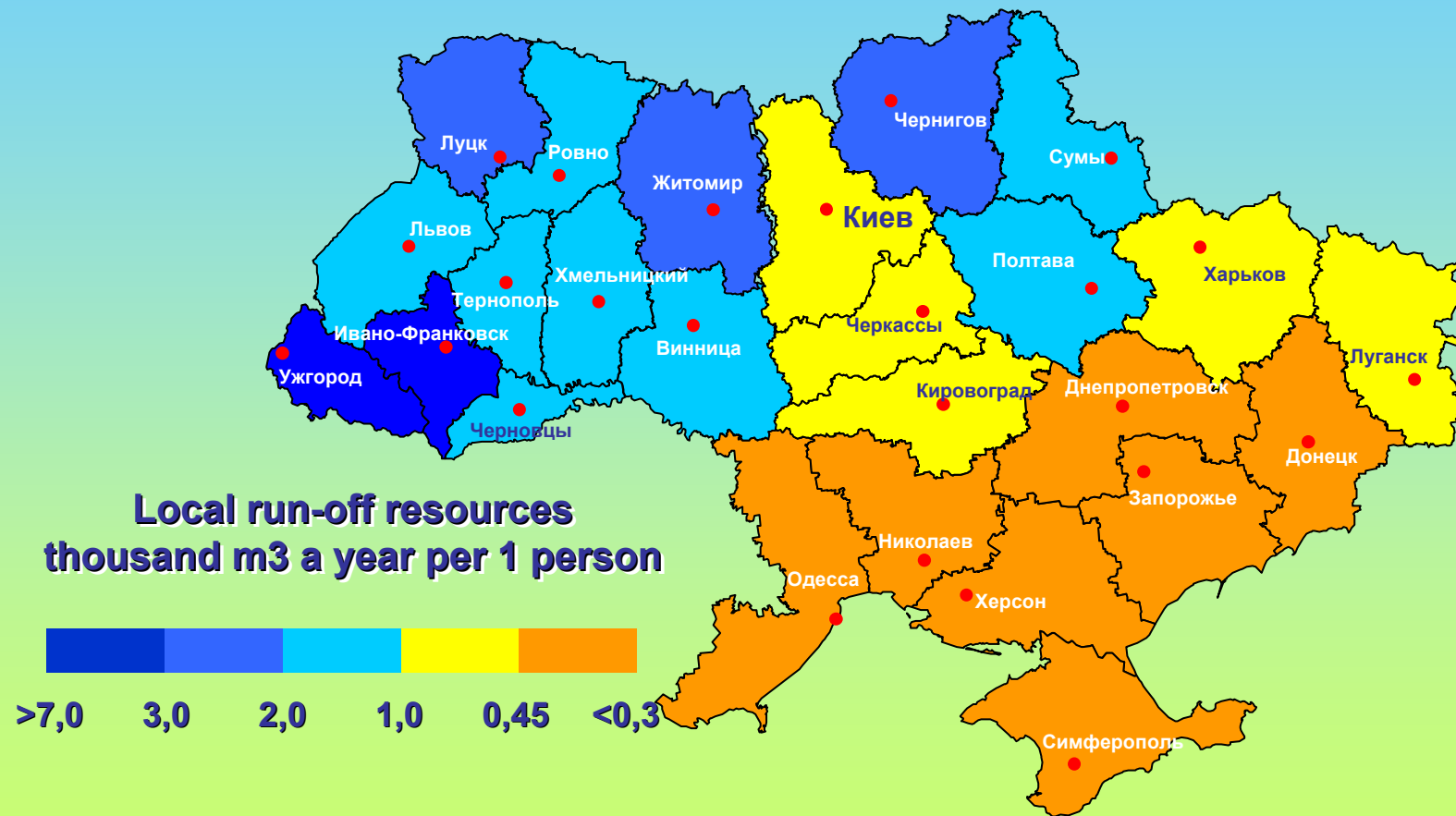
**3. Centre-West region
(Forest-step zone)**

**4. South- West region
(step zone)**

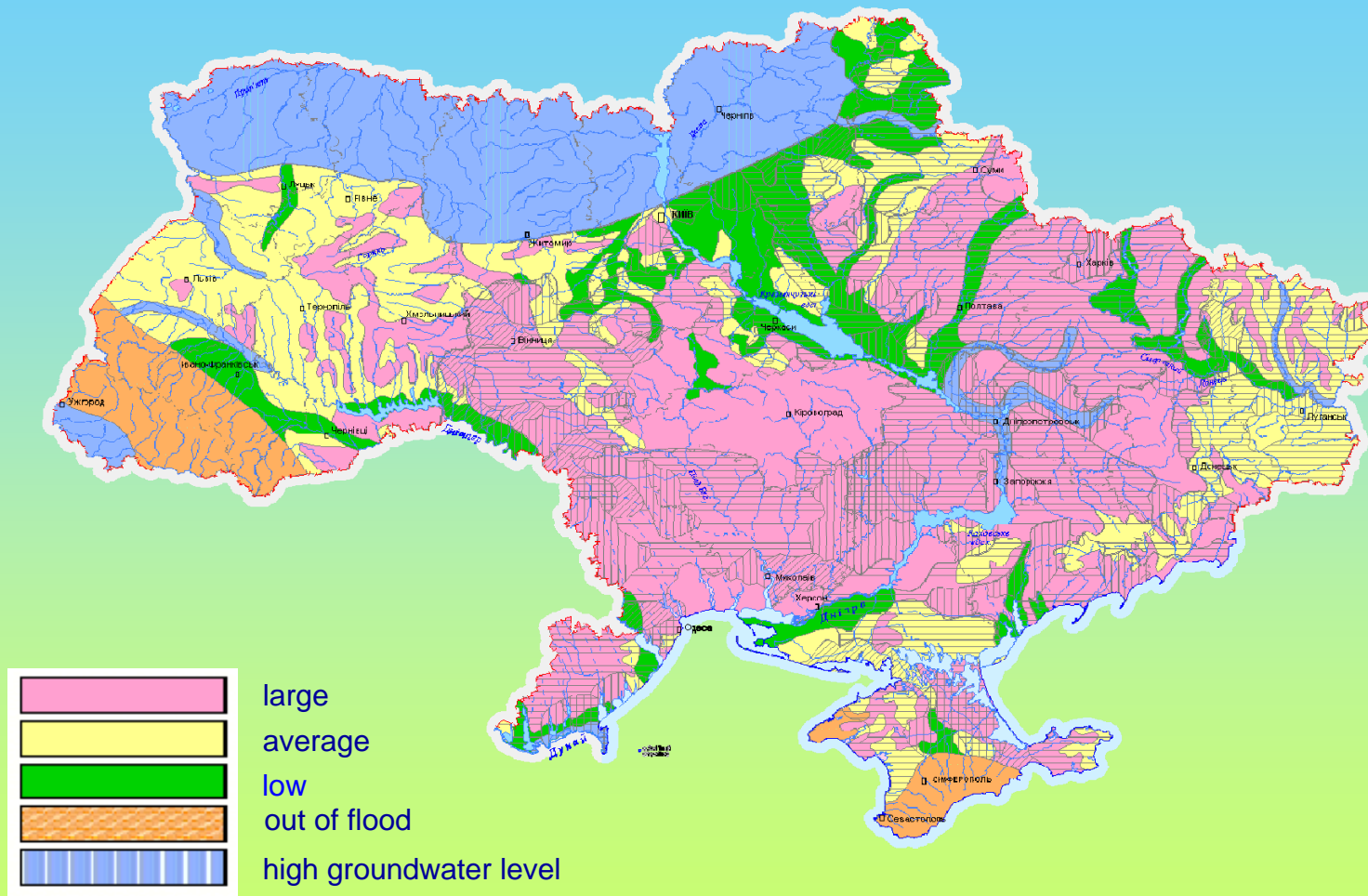
Regional particularities on water and land resources management

Regions and zones	Pressure	Main sectors	Drivers
1. Carpathian region	Floods from the mountain rivers, erosion, High ground water table	Tourism Nature protection Agriculture (drainage)	Climate change, development of eco-tourism & recreation and extensive agriculture
2. Polissya region (Forest zone)	Floods Soil contamination High ground water table + short dry periods	Agriculture (drainage) Nature protection	Transfer of agricultural lands to nature, eco-tourism, extensive agriculture (dairy farms)
3. Centre-West region (Forest-step zone)	Water and soil contamination Erosion	Agriculture (drainage & irrigation) Industry Water supply Nature protection	Climate change Intensive and extensive (organic farming) agriculture, ecotourism
4. South- West region (step zone)	Water scarcity, droughts Floods by rising ground water, water and soil contamination	Agriculture (irrigation) Tourism & recreation Water supply Industry Nature protection	Climate change Intensive (irrigated) agriculture Industry, tourism, nature protection

REGIONALIZED WATER SUPPLY



WATER ADVERSE EFFECT SUSCEPTIBILITY OF THE TERRITORY OF UKRAINE (flood, underflooding)



Current water problems and challenges

- **Insufficient natural water resources**
- **Increasing frequency of nature disasters linked to climate change and anthropogenic activities**
- **High water consumption rate in all sectors of economy**
- **Unsatisfactory water quality**
- **Negative impacts on ecosystems**
- **Low level of awareness of population in area of water use and water resources protection**
- **Not enough developed groundwater use for drinking water supply**
- **Outdated water infrastructure and management technologies**
- **Uncompleted and insufficient water policy and legislation**
- **Undeveloped and insufficient public participation**
- **Lack of finances from the state and private sector for modernisation and rehabilitation of infrastructures, irrigation and drainage systems**

Stakeholders participation National seminar

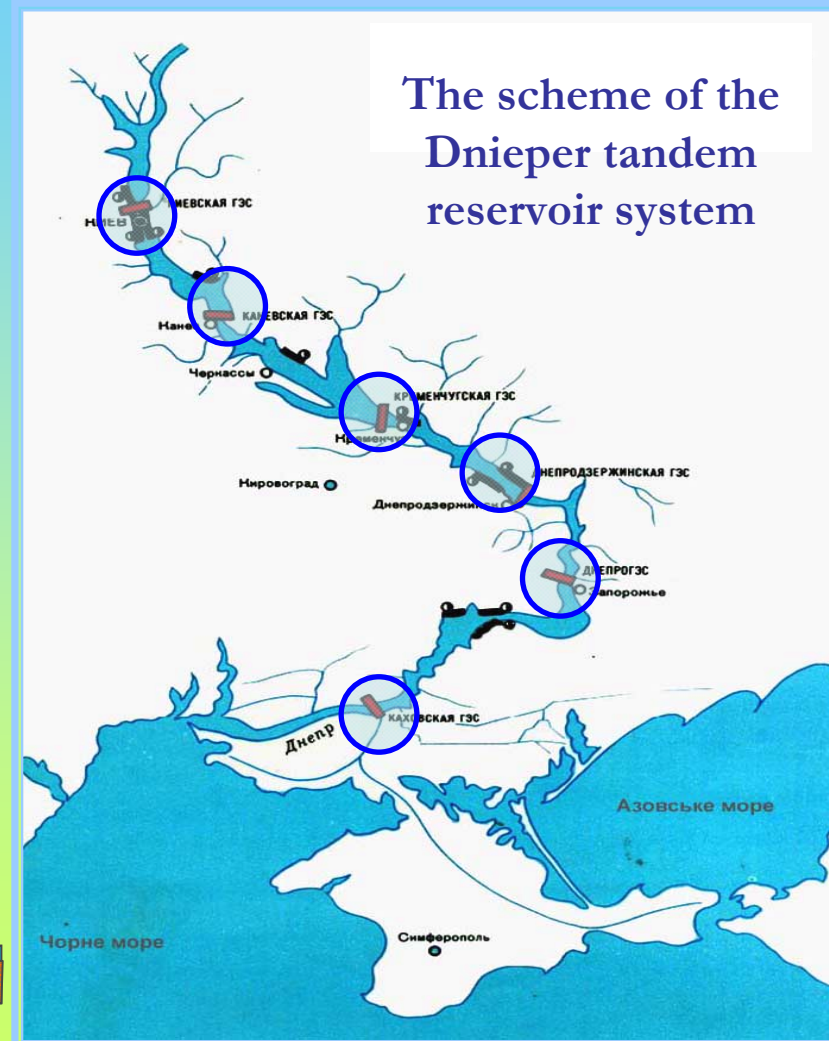
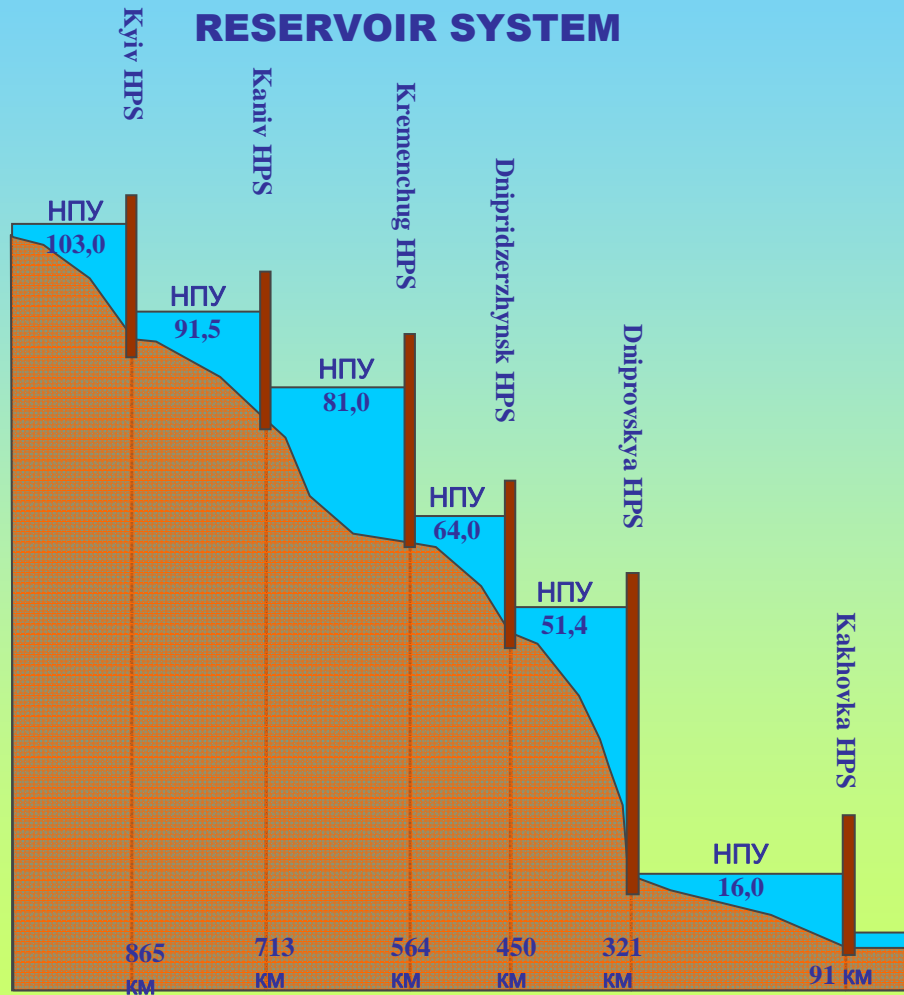
**Principles: transparency, open mind,
interactive process, integrity**

**30 Participants from Ministries, State
Committees, Research institutes,
Universities, regional river basin management
departments, NGOs**



AUTONATED CONTROL SYSTEM FOR THE DNIEPER RIVER BASIN /ACSB-DNIEPER/ SINCE 1986

THE DNIEPER TANDEM RESERVOIR SYSTEM

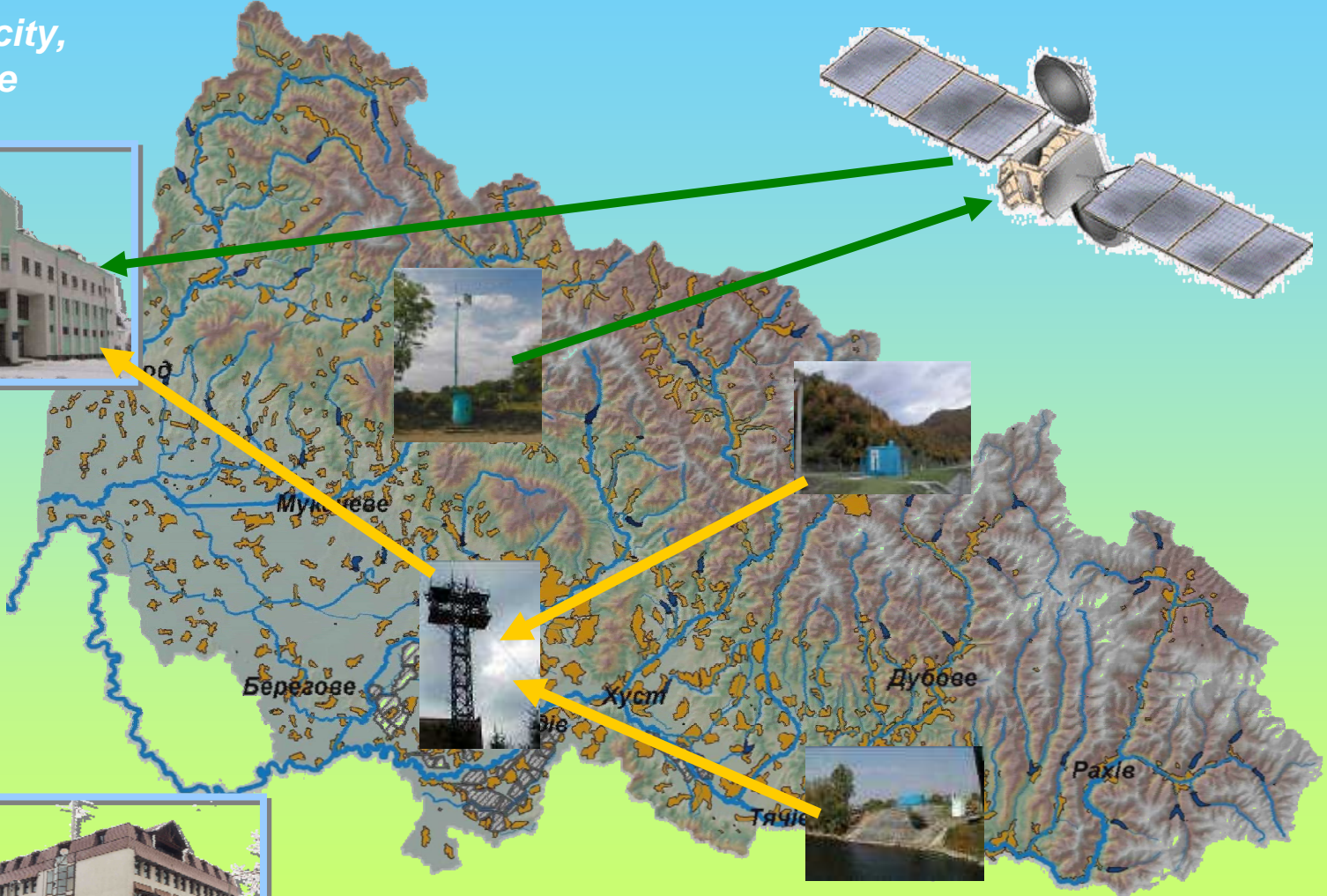


TRANSMITTED-DATA CIRCUIT IN THE AUTOMATED INFORMATION-MEASURING SYSTEM OF FLOOD FORECAST IN THE RIVER TYSA BASIN (AIMS "TYSA")

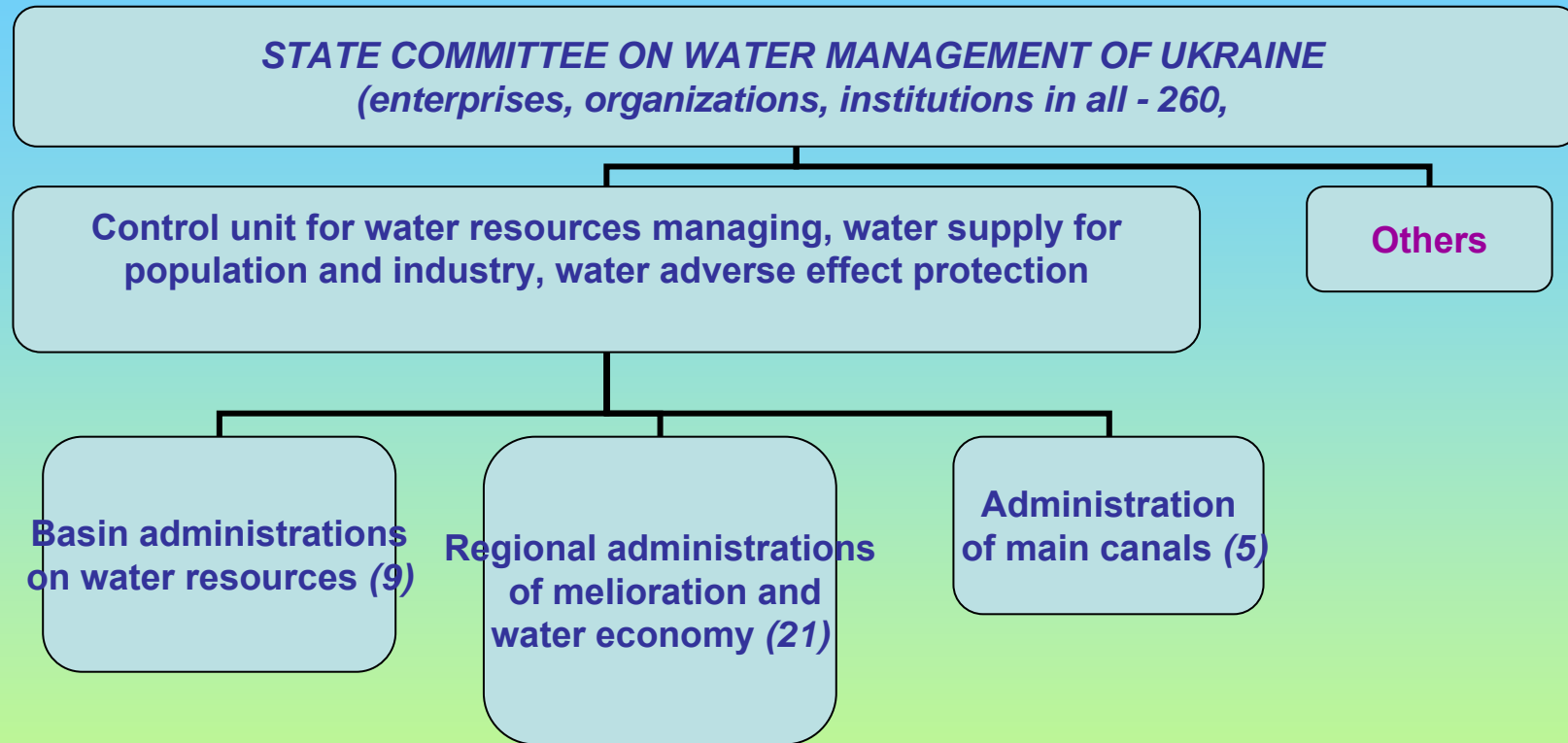
Uzhorod city,
Ukraine



Niredgaza city, Hungary



COMMITTEE ORGANIZATIONAL STRUCTURE



Policy recommendations

- **Improving *water code* and *land code* a.o.**
- **Harmonisation with European legislation and standards**
- **National dialogue incl. stakeholders**
- **Implementation of the WFD in UA**
- **Law for basin management organisation and responsibilities**
- **Supporting government to prescribe water saving technologies**
- **To develop a state program for climate change adaptations**
- **To develop a state and a independent system of water laws enforcements**
- **Improve investment security in the water sector**
- **Introduction of polluter pays principle**
- **Create transparency in water policy and rise public awareness**

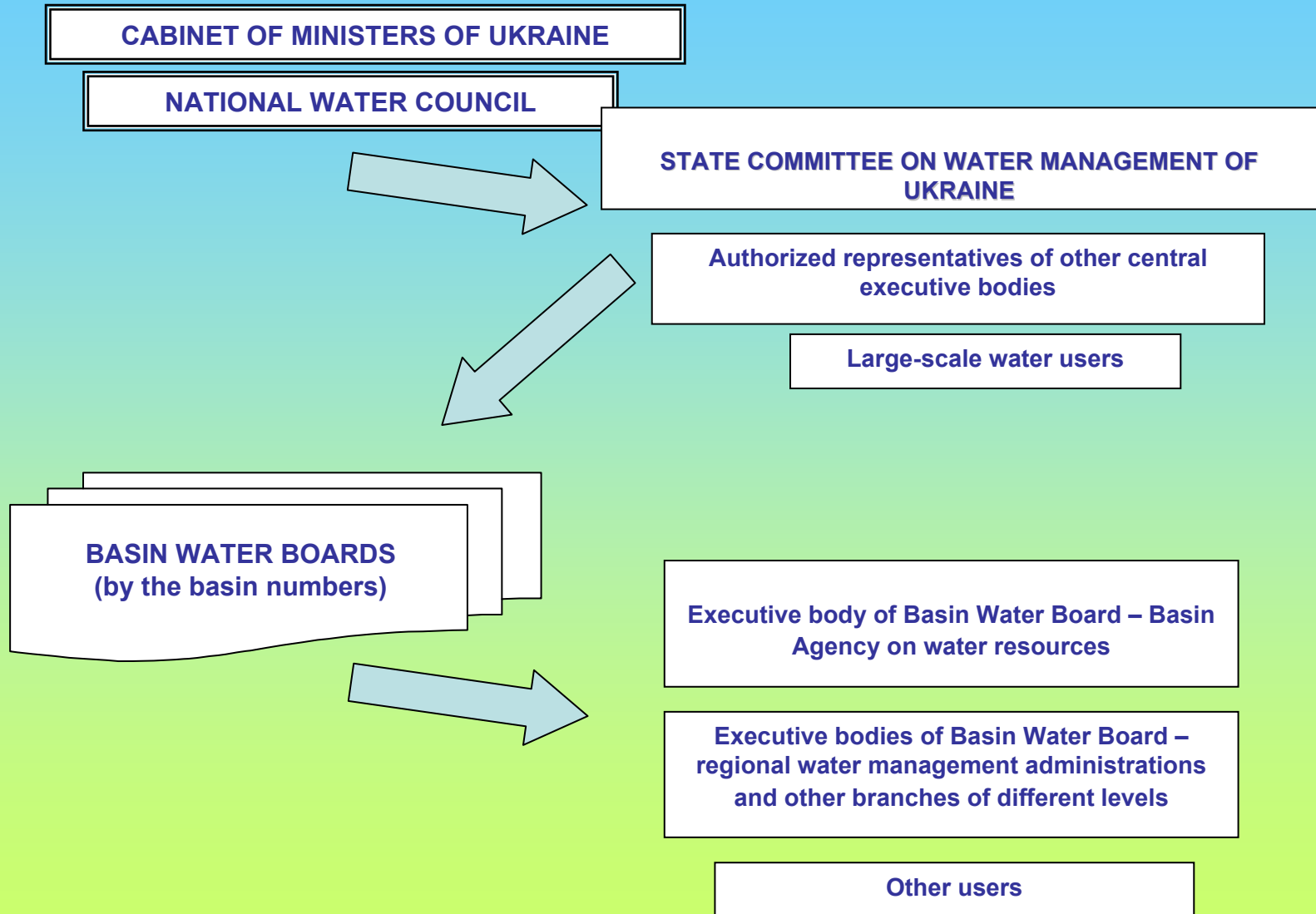
EFFECTS OF REFORMS: **(2007-2015)**



Water management system reforming **will provide with:**

- ***state water policy implementation;***
- ***financial expenditure optimization;***
- ***efficient monitoring system forming;***
- ***improvement of transboundary cooperation;***
- ***attracting investments, technical and legal assistance from EU countries, investment climate improvement .***

PROSPECTS OF SECTOR REFORMING



**THANK YOU
FOR ATTENTION!**