

FEDERAL AGENCY OF WATER RESOURCES

**RUSSIAN RESEARCH INSTITUTE FOR INTEGRATED
WATER MANAGEMENT AND PROTECTION**

**Program-target Technologies in
Water Use Management in the River
Basin**

**MEGEVE (FRANCE)
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Specific features of the program- target technology:

- **system approach, solution of integrated problems;**
- **availability of resources at the stage of planning;**
- **integration of target water/economic and water/protective programs into the programs of the basin social/economic development;**
- **possibility of stage-by-stage attainment of the goals.**

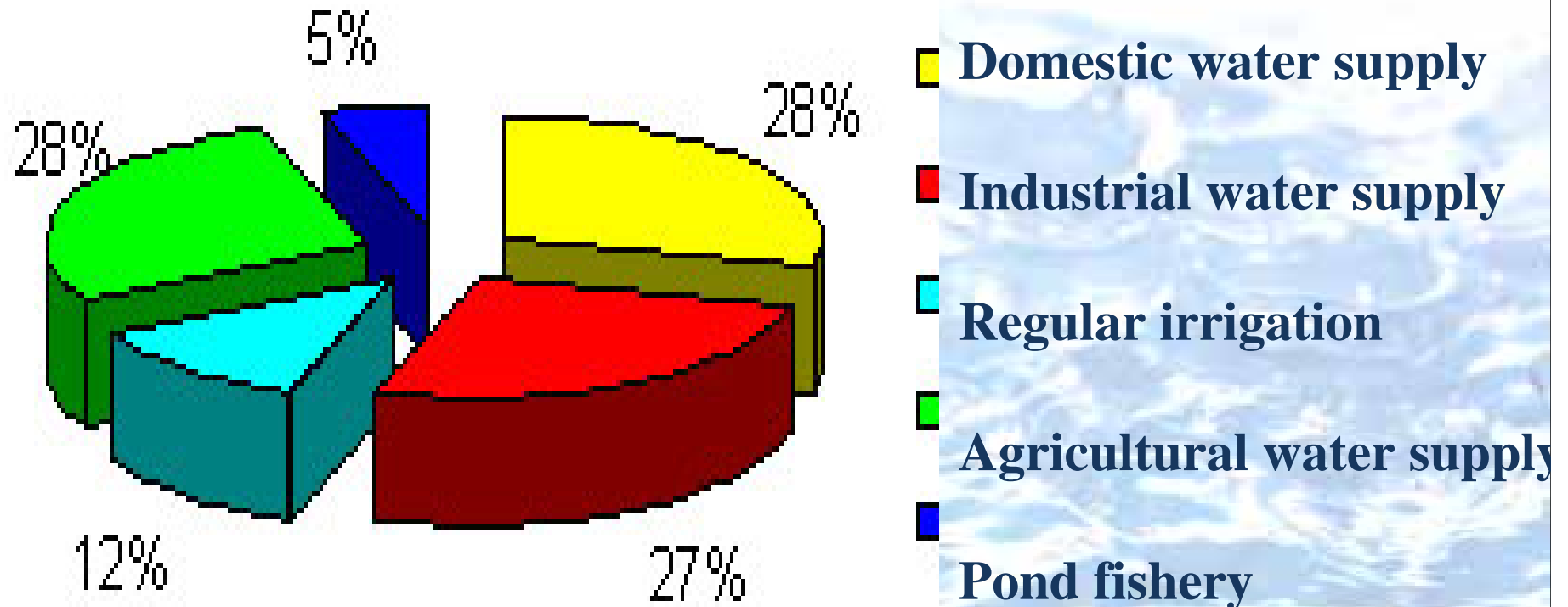


An aerial photograph of a river valley. The river flows through the center, surrounded by dense forest with trees in various shades of green and yellow, indicating autumn. The valley floor is a mix of forest and open fields. In the far distance, a long dam or bridge structure spans across the horizon under a clear sky.

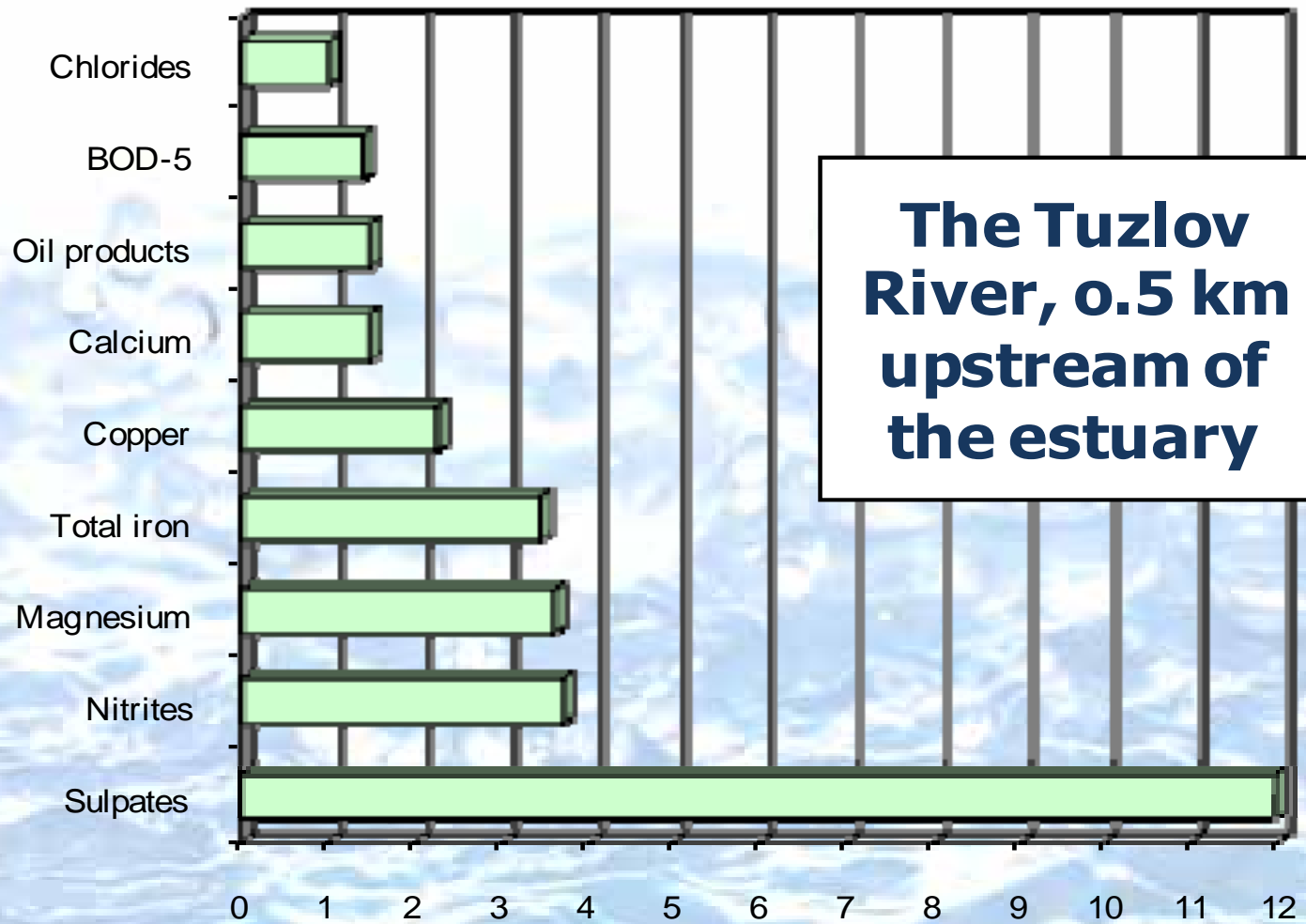
**Catchment area: 4680 km²,
including 92.7 % of the area
on the territory of the RF,
7.3 % of the area on the
territory of Ukraine.**

**Discharge volume
50 %, - 148 million m³,
95 % - 54 million m³.**

The structure of water intake in the Tuzlov River basin.

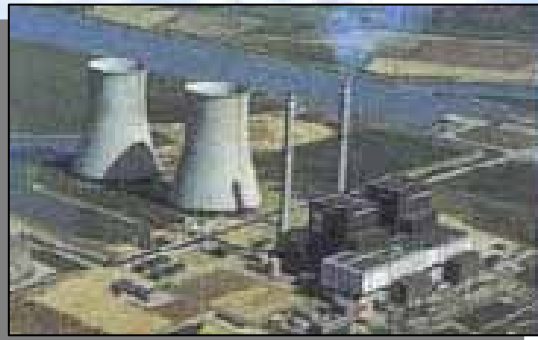


Presence of pollutants (in MPC fractions).



Problems of the Tuzlov River basin

- **low carrying capacity of the a channel bed;**
- **territories inundation due to floods and rains;**
- **presence of reservoirs;**
- **old water work facilities at ponds and reservoirs,**
- **ecologically dangerous ponds;**
- **high risk of hydrodynamic accidents;**
- **no owners of a great number of ponds;**
- **no maintenance service at ponds and reservoirs;**
- **multi-branch water use;**
- **pollution supply with waste waters;**
- **absence of water-protective zones.**



Objectives

- **water use objectives;**
- **water quality objectives;**
- **provisional regional norms of pollutants discharge with waste waters;**
- **ecological objectives.**

Program measures

Group I

- **cleaning of the silted portions of the beds;**
- **liquidation of old bridge piers and abutments that narrow the beds.**

Program measures

Group II.

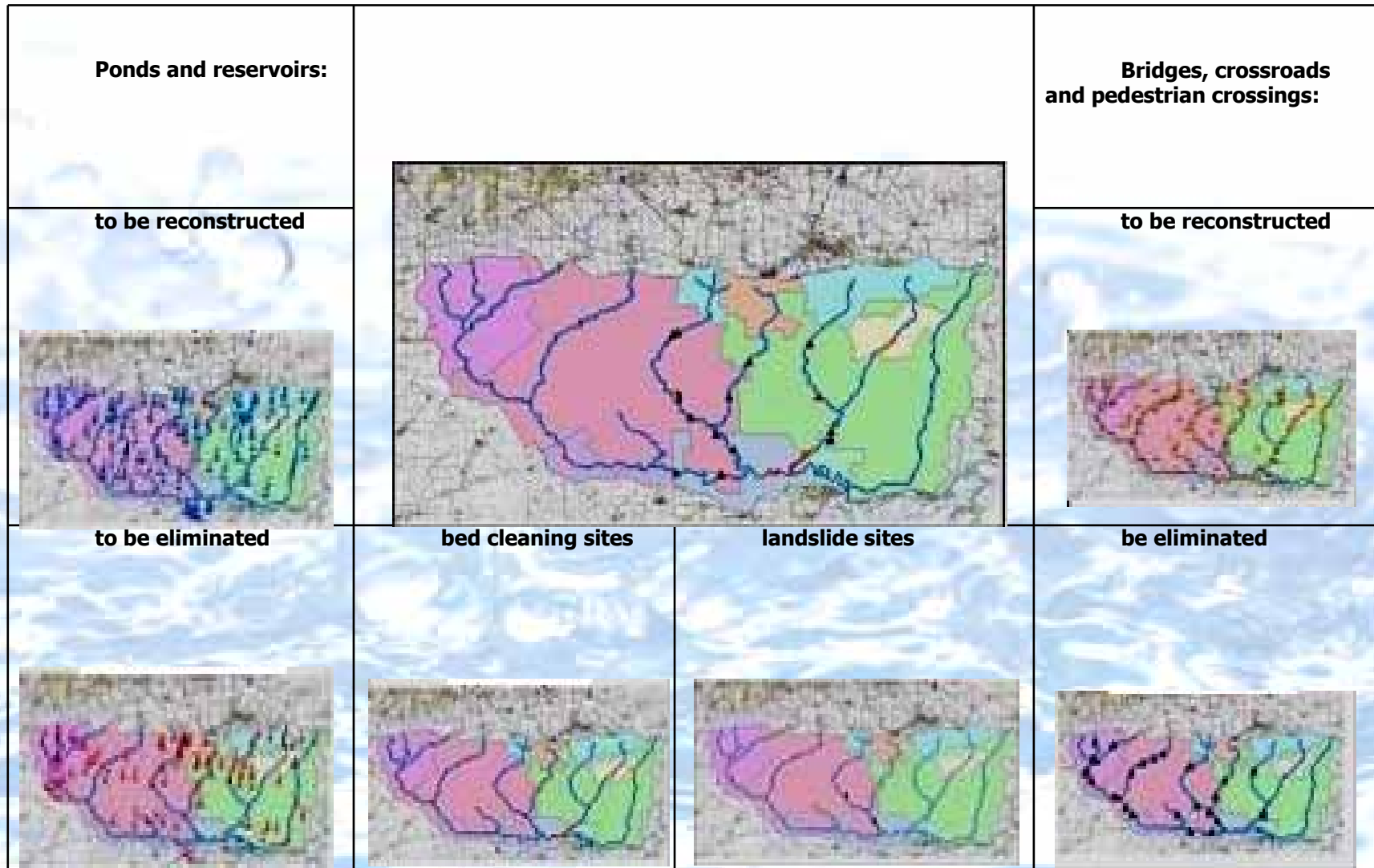
- **major repairs, reconstruction of water work facilities with unsatisfactory and hazardous level of safety;**
- **liquidation of the ponds that are out of use, or ponds that have no owners;**
- **liquidation of the closed water bodies in front of the road embankments;**
- **repair, reconstruction, and elimination of motor road bridges (crossings), pedestrian bridges (crossings) in order to increase water carrying capacity of the bed in the facilities' reaches.**

Program measures

Group III.

- reconstruction and liquidation of ecologically hazardous ponds and storage reservoirs;**
- repair and reconstruction of waste water treatment facilities for**
- industrial enterprises and mines;**
- development of the water qualitative and quantitative indicators monitoring system, improvement of discharge forecasts' reliability.**

An example of the "Priority Measures" subject layer



THANK YOU FOR YOUR ATTENTION

