

WATER MANAGEMENT IN SERBIA

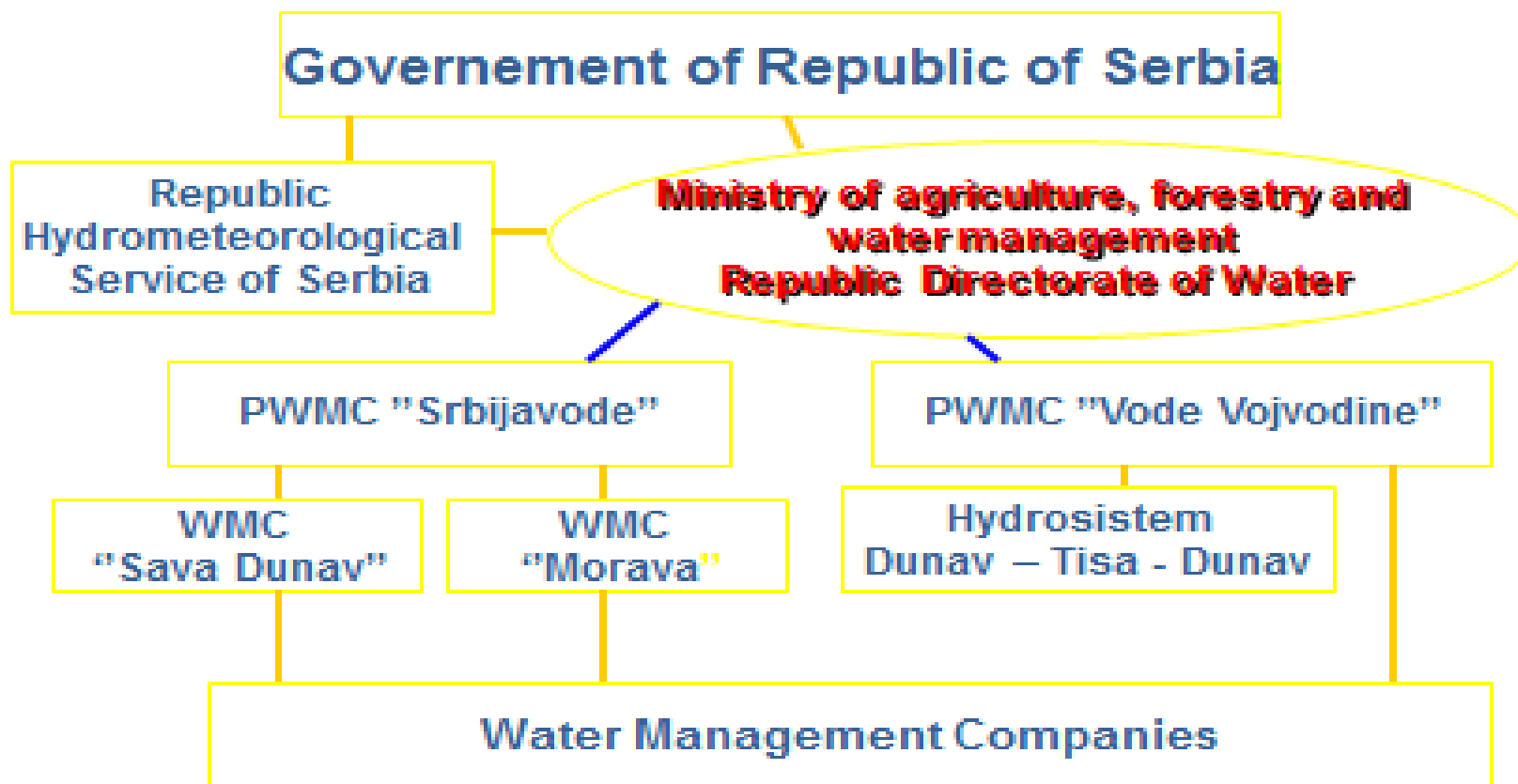
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Project: Development of master curricula in ecological monitoring and aquatic bioassessment for Western Balkans HEIs

ORGANISATION OF WATER MANAGEMENT IN SERBIA



RESPONSIBILITIES

According to Water Law and Law of Ministries

**Ministry of agriculture, forestry and
water management**

Republic Directorate of Water

is responsible for

Integrated water management in Serbia

Other ministries responsible for certain aspects of water management are:

- Ministry of environmental protection
- Ministry of Health
- Ministry of Construction, Transport and Infrastructure
- Ministry of Public Administration and Local Self-Government
- etc.

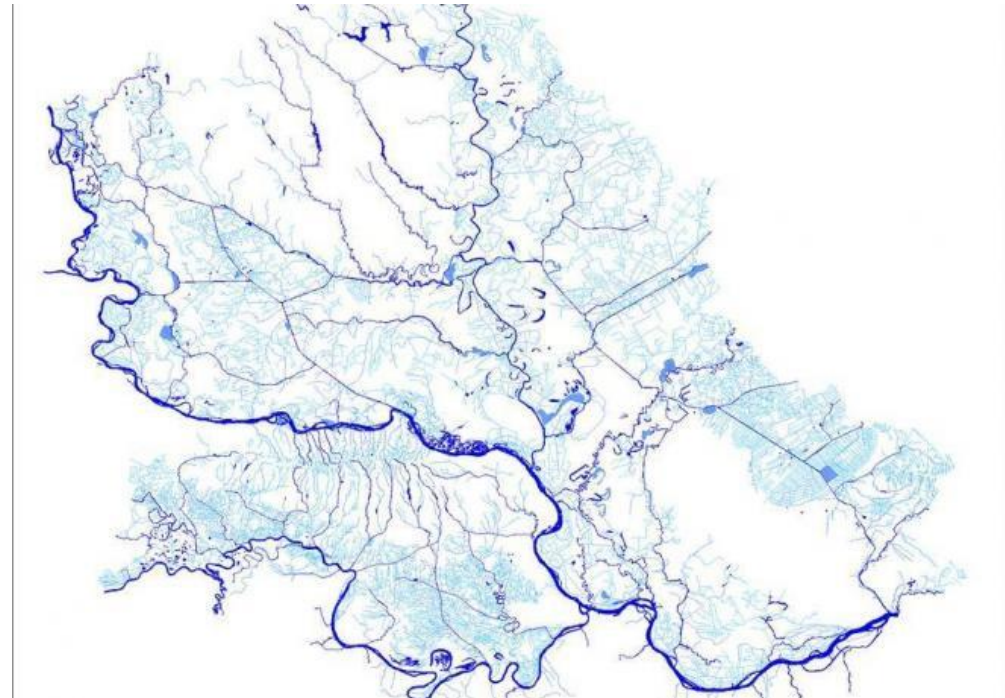
PUBLIC WATER MANAGEMENT COMPANY VODE VOJVODINE

PUBLIC WATER MANAGEMENT COMPANY VODE VOJVODINE WAS FOUNDED IN 2003 TO TAKE RESPONSIBILITY OVER WATER RESOURCES ON THE TERRITORY OF AP VOJVODINA

- Total area of 21,506 km²
- Population around 2,000,000

ACTIVITIES OF PWMC VODE VOJVODINE

- **FLOOD PROTECTION**
 - Flood control
 - Drainage
- **WATER USE**
 - Irrigation
 - Water supply
 - Navigation
 - Fishery
 - Recreation and tourism
- **WATER PROTECTION**



FLOOD PROTECTION

Threatened by 1% probability flood waters :

- 1,000,000 ha (45% of the total area)
- 260 settlements
- 1,200,000 inhabitants
- 3,480 km of roads and 150 km of railway
- 800 industrial plants and facilities

Total length of the embankments

1459,11 km

Danube 304,16 km

Tisza 290 km

Sava 120 km

Timiș 86 km

Old and New Bega 127,79 km

Border embankments 84,78 km

Other 446,94 km



PROTECTION OF VOJVODINA AGAINST INLAND WATERS – DRAINAGE

Over 80% of Vojvodina is threatened by inland waters

- directly threatened – 1,630,648 ha
- partially threatened – 209,423 ha

Drained areas

- Bačka and Banat District 1,423,076 ha
- Srem District 353,433 ha

Existing drainage systems:

- Total length of canals - 20,094 km
- Number of systems – 303
- Pumping stations -159 with capacity of 437 m³/s



IRRIGATION IN VOJVODINA

Area available for irrigation in Vojvodina:

- in Bačka 350,000 ha
- in Banat 402,000 ha
- in Srem 184,000 ha



THE DANUBE-TISZA-DANUBE HYDRO SYSTEM

- total length 960 km
of which 600 km navigable
- 25 sluices
- 17 ship locks
- 5 pumping stations
- 84 bridges



WATER PROTECTION

There are 497 registered water polluters on the territory of Vojvodina. Wastewater is treated by 71 of them

210 polluters in the DTD hydro system which annually discharge about 26,500,000 m³ of wastewater (approximately 10.5 million m³ is treated water)

According to our data, in the Danube, Sava and Tisza River flows about **61,417,430 m³** waste water per year, of which about **2,000,000 m³** is treated waste water



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- Ministry of Health
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- Ministry of Public Administration and Local Self-Government
- etc.

STRATEGIC PLANNING DOCUMENT OF THE WATER SECTOR

*Strategy of water management on the territory of the
Republic of Serbia until 2034*

was adopted by the Government of the Republic of Serbia,
published in the Official Gazette of RS, no. 3/2017

EVALUATION OF THE CURRENT SITUATION

Advantages:

- **Over 90%** of the territory of the Republic of Serbia has a share in the **Danube River Basin**.
- Serbian public water management companies **are willing** to facilitate the operational implementation of water management responsibilities and activities.
- A water infrastructure has been built up to a significant extent, estimated value of about **€ 14 billion**
- **Numerous technical and other faculties** provide a satisfactory level of knowledge and, with up-to-date programs and teaching methods, including postgraduate studies, can provide even better quality of professional and scientific staff

Disadvantages:

- Investments in the water sector have been significantly **reduced** (around **300-350 million euros**), which is several times lower than the required volume.
- Due to **lack of investments** the sector has been threatened in terms of:
 - flood protection: floods in plain and lowland areas, flash floods, erosion;
 - water quality for domestic use and water quality protection
 - water shortage, etc.
- **Inadequate maintenance** of water/hydro systems and structures
- Republic Directorate for Water does not have the capacity to meet all obligations stipulated by the Water Law and other regulations.
- **Insufficient number of projects** involved in finding and obtaining international funds.
- Surface and ground water **monitoring does not provide sufficient data** for rational and efficient water management with the objective to meet the EU water regulations.
- **Insufficient inclusion of scientific and research organizations into significant water management activities.**

THE CONCEPT OF INTEGRAL WATER MANAGEMENT

Achieving integral water management, that is, a coordinated water regime throughout the Republic of Serbia and ensuring that such water management includes fair implementation of financial and social aspects including the awareness regarding the environmental protection and ecosystem improvement while adhering to international agreements represents a long-term strategic goal which requires the following:

- **significant amount of time (over two decades, with an adequate approach)**
- **substantial investments (approximately EUR 1 billion annually).**
- **increased human resource capacity (operational and professional)**

GOALS, WATER USE

Water use - Water supply

- increasing the coverage of public water supply systems from the current 81% to 93% at the end of the planning period;
- ensuring a stable supply of water of required quality and reducing the risk of interruption of water supply in excessive and emergency conditions;
- reduction of unqualified water in public water supply systems to around 25%;
- the rational use of water, with the gradual achievement of the economic price of water;
- protection of sources (determination of sanitary protection zones), research, protection and conservation of water resources;

GOALS, WATER USE - IRRIGATION

Provision of sufficient quantities of water for irrigation of 250,000 to 350,000 ha of agricultural land from I and II part of the development group by the end of the planning period (revitalization of existing systems to about 100,000 ha and construction of new on the surface of 150,000 to 250,000 ha);

The rational use of water, the application of adequate consumption norms for individual seed cultures and the education of farmers on modern irrigation techniques, the possibilities of drought protection, the way of association and placement of products.

RESTORATION OF WATERCOURSES

- in accordance with environmental conditions i.e. with minimum of hydromorfological alterations
- the exploitation of the river deposits is primarily directed to the preservation and / or improvement of the water regime, and conditioned by the smallest disturbance of the aquatic and coastal ecosystems

GOALS, FLOOD PROTECTION

- reducing damage and flood risk
- upgrading, reconstruction and regular maintenance of protective water facilities
- active protection measures
- adequate use of aquatic land and potentially flooded zones;
- the most vulnerable facilities, plants and installations, which are of particular importance for the security of the population must be set up from the risk area

GOALS, WATER PROTECTION

OUR GOAL

Increasing the number and efficiency of waste water treatment plants

OUR MISSION

To protect and preserve surface water resources, to protect against polluters and provide a safe and reliable water use for population, agriculture and economy as well as recreational use of rivers and canals.

THE MOST IMPORTANT ACTIVITIES NEEDED FOR WATER MANAGEMENT

The precondition for achieving long-term and strategic goals in all water areas and branches is to establish an appropriate water management system, which includes:

- Completion of legal regulations, i.e. **adoption of bylaws** in accordance with the Law on Waters (including amendments to this document in the process of harmonization with EU regulations);
- **Planning documents** in the field of water management is required;
- **Strengthening the institutional capacity** of the water sector.



Thank you for your attention!