



## Project Idea

**“Development of urban wastewater treatment plants  
in Transcarpathian region, Ukraine”**





## Main Priority Area

**PA 4.04 To continue boosting major investments in building and upgrading urban wastewater treatment facilities across the Danube Basin, including measures to build capacity at the regional and local level for the design of such infrastructure**



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## Project relevance

The quality and capacity of wastewater treatment facilities in three target cities of Uzhgorod, Mukachevo and Beregovo lay significantly behind other Danube cities.

In extreme case, a total of nearly 150,000 m<sup>3</sup> of insufficiently purified wastewater pollutes rivers Danube basin every day!

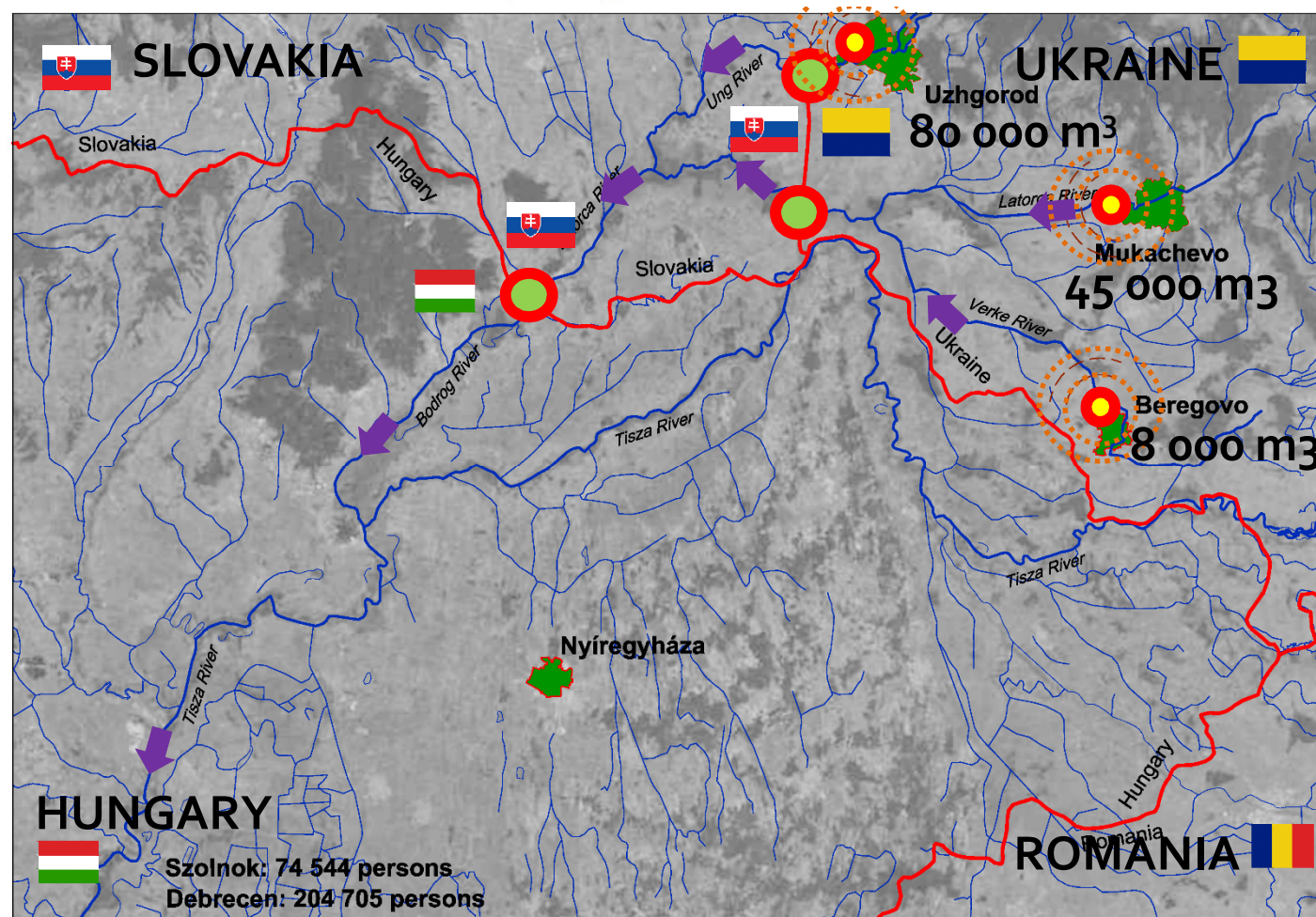


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## Direct risks in the region:

- River pollution;
- Groundwater pollution.





## Target groups

- Population of Uzhgorod: 117,600 persons.
- Population of Mukachevo: 81,600 persons.
- Population of Beregovo: 24,505 persons.
- Population of Hust: 28,438 persons.
- Inhabitants of Transcarpathia (Ukraine), Kosice region (Slovak Republic), Eastern part of Hungary (Borsod-Abaúj-Zemplén, Hajdú-Bihar, Jász-Nagykun-Szolnok, Szabolcs-Szatmár-Bereg, Bács-Kiskun, Békés, Csongrád) and North of Serbia (Vojvodina), - more than 6.8 million people.
- 1500 settlements in the water catchment area of the Tisza River and of the Danube river.





## Project general and specific objectives

### Overall objective:

- to improve the wastewater treatment facilities in Uzhgorod, Mukachevo and Beregovo and thus reduce pollution in Tisza river.

### Specific objectives:

- reconstruction of waste water plants and development of modern purification technologies;
- development of treatment facilities for waste and sludge (biogas plant and composting stations).



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## Current conditions

- Hydraulically surcharged;
- Critical technical conditions;
- Exceeding equipment capacity;
- Possibility of groundwater pollution;
- No waste and sludge usage.

### Uzhgorod



### Mukachevo



### Beregovo





## Proposed project activities and their locations

**Activity 1:** Estimation of building costs and design for 4 cities (Uzhgorod, Mukachevo, Beregovo and Hust);

**Activity 2:** Construction of mechanical and biological treatment facilities in 4 cities;

**Activity 3:** Construction of nutrient removal facilities in 4 cities;

**Activity 4:** Sewage sludge treatment, construction of composting facilities and rainwater reservoir.

**Activity 5:** Reconstruction of the most critical elements of canal network.

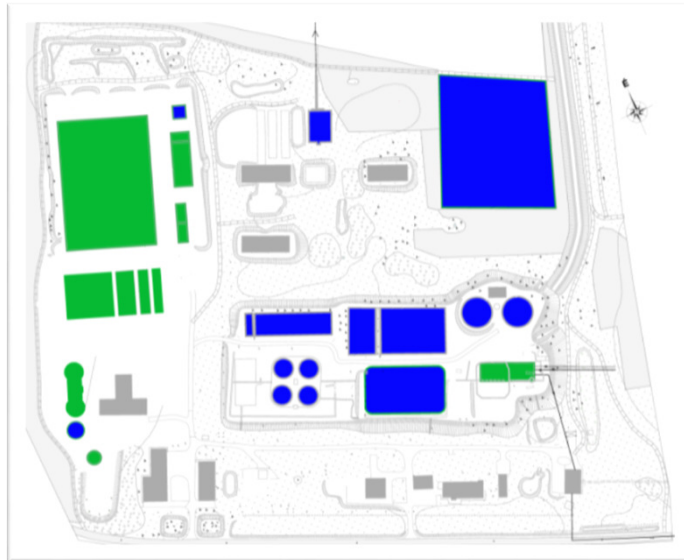


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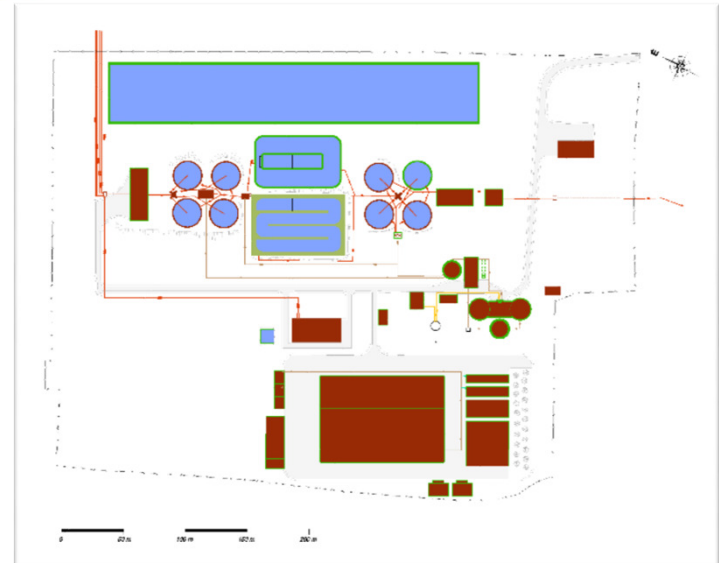




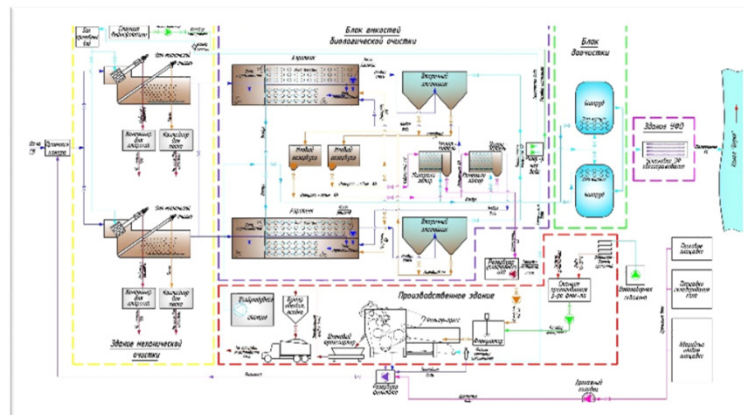
# Mukachevo



# Uzhgorod



# Beregovo



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## Project timeframe

06.2016 - 06.2019

**Approximate total project budget** (in million EUR) = 54,6 EUR

Preparation and measuring total = 4,6 EUR:

Uzhgorod 1,5 EUR, Munachevo 1,1 EUR, Beregovo 1,0 EUR, Hust 1,0 EUR;

Project of WWT total = 42,0 EUR:

Uzhgorod 15,5 EUR, Mukachevo 11,5 EUR, Beregovo 7,5 EUR, Hust 7,5 EUR;

Project of canal network total = 8,0 EUR:

Uzhgorod 2,0 EUR, Mukachevo 2,0 EUR, Beregovo 2,0 EUR, Hust 2,0 EUR.



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## Project Partners

- Municipality of Nyíregyháza, Hungary;
- Uzhgorod City Council, Ukraine;
- Mukachevo City Council, Ukraine;
- Berehovo City Council, Ukraine;
- NGO Transcarpathian Agency for Investments, Innovations and Development, Ukraine;
- NYÍRSÉGVÍZ Nyíregyháza, Hungary.



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## Potential sources of funding

- European Investment Bank;
- ENPI CBC HUSKROUA 2014-2020;
- Danube Transnational Programme 2014-2020.





## Construction documentation available:

Development study, preliminary building estimation and designs (for Uzghorod and Munkachevo) have been prepared in the frame of Project

**“The development of environmental protection in the cities of Mukachevo and Uzhgorod through assessing the status of existing, polluting water utility systems (water and waste water), additionally, design of a development programme for these systems”** HUSKROUA/1101/068 funded from ENPI CBC Programme Hungary-Slovakia-Romania-Ukraine 2007-2013.



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## Other relevant information

Other major source of Tisza river pollution is solid waste, generated in the mountain areas of Transcarpathian Region, Ukraine.





## Other relevant information

The problem of waste management has to be solved in the Transcarpathian region through implementation of an organized system and construction of infrastructure for collecting, processing and recycling of waste in the areas of Tisza basin.

Waste energy use can be implemented through the construction of biogas production facilities and an incineration plant.

This will ensure sustainability and a long-term effect towards environmental protection.



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**Thank you for attention!**

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