



Good practice

Mitigation Instruments For Water Supply and Waste Water Management in Tallinn (Estonia)

During the VII MiSRaR seminar Tallinn presented the Mitigation Instruments for Water Supply and Waste Water Management in Tallinn

AS Tallinna Vesi (Tallinn Water Supply Company) procedures that are important for vital services:

1. Collecting of the raw water
2. Cleaning of the raw water
3. Water supply network
4. Supplying clients with drinking water
5. Sewage water network
6. Collecting sewage water to the collector
7. Cleaning sewage water

Collecting the water from the ground water:

Lake of Ülemiste is the main source of water for Tallinn with the capacity of 17 million m³. Water is collected to the lake from a ground water on 2000 m². Water reservoirs are:

- Paunküla
- Soodla
- Raudoja
- Aavoja
- Kaunissaare

Deep ground water (10%):

Deep ground water wells in Tallinn (depth up to 140 m) with a capacity about 65 000 m³ per day and an average usage of 7 700 m³ per day.

Water cleaning at Ülemiste Lake:

Old and New water cleaning stations are situated close to the lake. Water cleaning stations are producing about 65 000 m³ per day.

Production of water has been reduced about three times in ten years due to the efficiency in industry and some industry has also moved out from Tallinn.

Drinking water has to be a 100% quality standard according to the quality acts. The quality of water is checked constantly in the internationally accredited laboratory of Tallinna Vesi AS. More than 80 000 samples of water is taken per year.



Risks in Water Cleaning Station:

1. Sharp fall of quality of water
2. Halt of cleaning processes at the Water cleaning station.
3. Halt of II level pump station of drinking water
4. Pandemia

Network of drinking water:

1. 99% of service area covered with drinking water supply.
2. Ca 920 km of water pipes.
3. Water is directed to the pipes from Ülemiste Lake.
4. Ground water is coming from the ground water wells and ground water pumping stations.
5. Also more than 4 000 fire security hydrants are kept in order.
6. Halts of water supply as little as possible.
7. To use water efficiently and to reduce costs the water leakages are corrected as quickly as possible.
8. Preemptive care of pipes, pressure washing of pipes, changing of old pipes to new ones and looking for leakages is carried out constantly.

Risks of the Network of Drinking Water (including usage of ground water):

1. Pollution of ground water.
2. Halt of electricity supply.
3. Destruction of buildings and facilities.
4. Lack of water of demanded quality, volume and pressure in pre-pipes – BIG EMERGENCY.
5. Non-functioning of communications
6. Pandemia

Risks – Waste Water Network:

1. Halt of electricity supply.
2. Destruction of buildings and facilities – destruction of collectors and pump stations.
3. Non-functioning of communications.
4. Extraordinary rain, snow etc., floods.
5. Pandemia

Risks – Waste Water Cleaning Station:

1. Halt of technological facilities and equipment.
2. Halt of electricity supply.
3. Abnormal rise of waste water inflow.
4. Pandeemia



Rain, snow fall and waste water cleaning at Paljassaare waste water cleaning station:

1. Waste water station is situated at Paljassaare põik 14.
2. The quality of waste water has to be in accordance with the environmental acts.
3. The quality of waste water is checked at the internationally accredited waste water quality laboratory of Tallinna Vesi AS.
4. More than 70 000 of waste water samples per year.
5. Cleaned water is directed 3 000 m away to the Baltic Sea.
6. The quantity of cleaned water is 120 000 m³ per day.
7. Important environmental project carried out: Nitrogen project, reuse of settings from waste water project, reuse of biogas emerging from the waste water cleaning process.

What is important for continuation of the water and waste water services:

1. Existence of educated personel
2. Existance of necessary resources
3. Daily preemptive actions to avoid emergency situations.

When the crises occurs:

1. Forming a crises team
2. Finding alternative solutions in crises situations.
3. Existance of necessary and right procedures for the crises situation.



The MiSRaR project

The MiSRaR project is about Mitigation of Spatial Relevant Risks in European Regions and Towns.

The project is a cooperation between seven partners in six EU member states:

- *the Safety Region South-Holland South, The Netherlands (lead partner)*
- *the city of Tallinn, Estonia*
- *the region of Epirus, Greece*
- *the province of Forlì-Cesena, Italy*
- *the municipality of Aveiro, Portugal*
- *the municipality of Mirandela, Portugal*
- *the Euro Perspectives Foundation (EPF), Bulgaria.*

The goal of the project is to exchange knowledge and experiences on risk mitigation in spatial policies. The project will result in a handbook in which the lessons on the mitigation process are described and the good practices from the partners are presented. The Risk Assessment and Mapping Guidelines for Disaster Management of the European Commission will be implemented in the handbook. The MiSRaR project is cofinanced by the European Regional Development Fund and made possible by the INTERREG IVC programme.

www.misrar.eu

Contact information

Nico van Os, general project manager MiSRaR, Safety Region South-Holland South, The Netherlands
n.van.os@vrzHz.nl

Jaan kuks, project manager MiSRaR of Tallinn,
jaan@procivitas.ee