# Svēte River in Jelgava:

# WATERDRIVE Case Area in Latvia

**Ingars Rozitis**
Jelgava Local Municipality

# River eutrophication

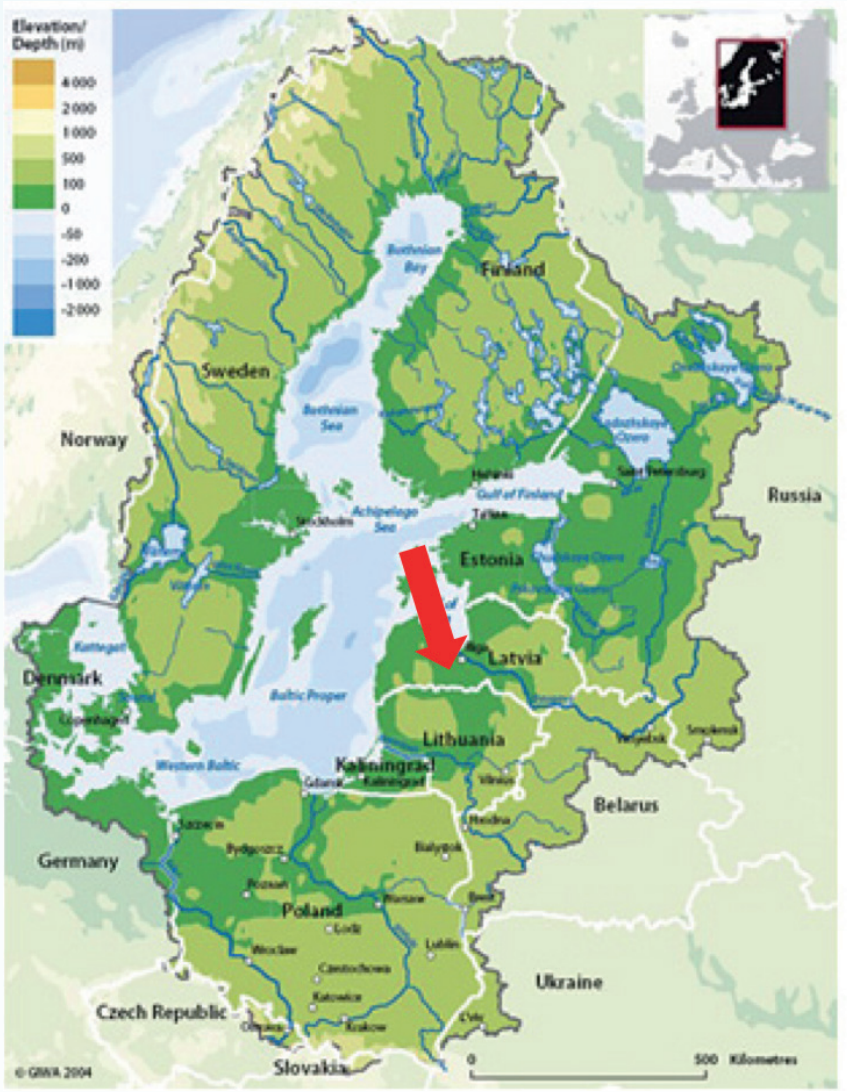
Rivers in Jelgava Local Municipality are under stress, affected by high nutrient loadings and eutrophication which leads to rivers' overgrowth.

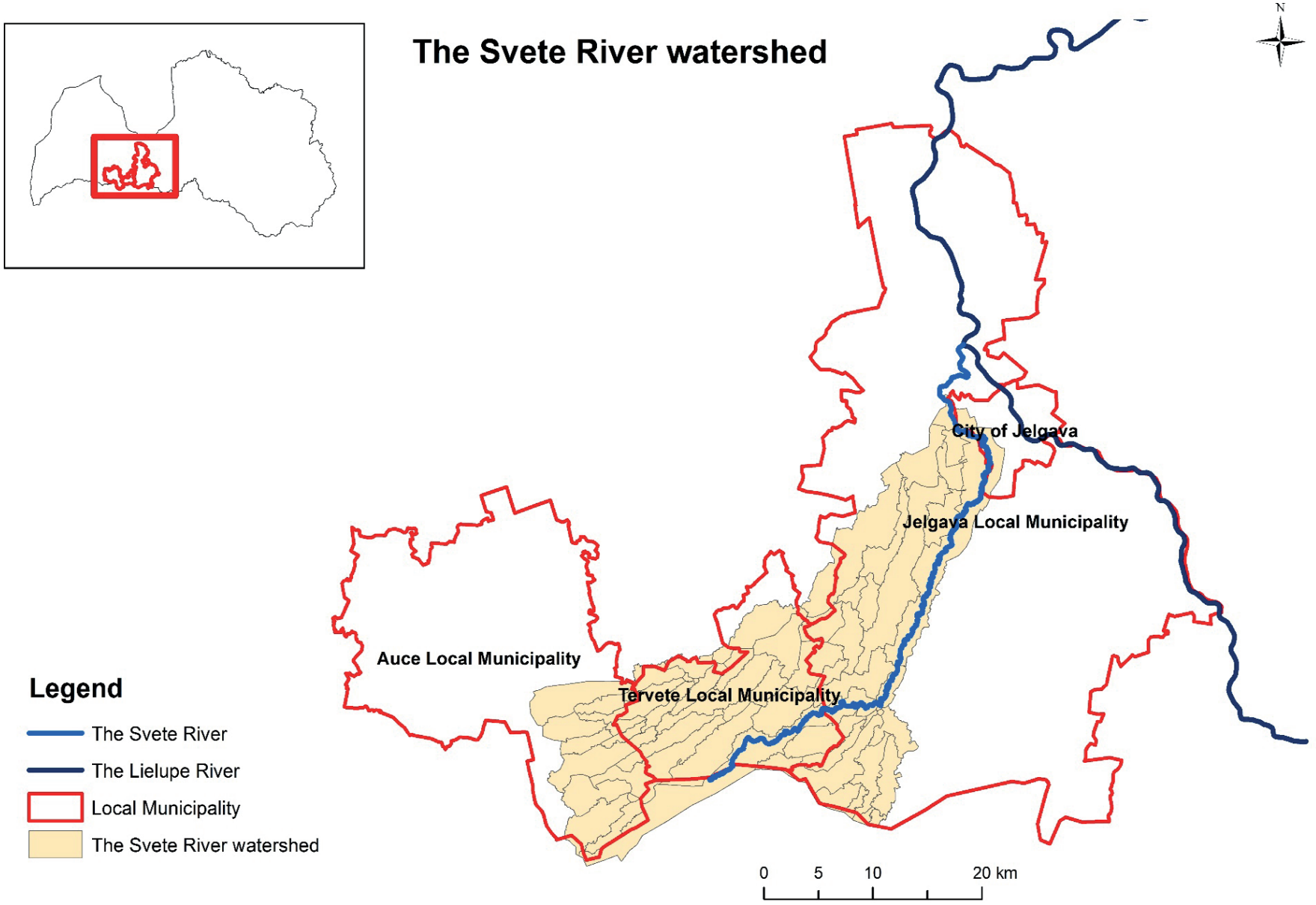
Leaching of nutrients from agricultural lands contributes to the growth of aquatic plants, the management on floodplain meadows is insufficient, biomass accumulation in the river bed results in disturbed natural river flow.

Also the natural processes of rivers are additionally influenced by relatively warm winters due to climate change, which do not form a thick layer of ice that is able to naturally clean the river bed and shoreline during spring floods.

# Svēte River in Jelgava in The Baltic Sea Region

- Svete river is a tributary of the left bank of the Lielupe river – the biggest river in Jelgava Local Municipality.
- The total Svēte River length is 123 km of which 75 km are in the territory of Latvia and 65,4 km in Jelgava Local Municipality.
- In the territory of Latvia, Svēte River catchment area is 1873 km2.
- The Svēte River catchment was choosen by high amount of agricultural crop production land in catchment area and mainly drained by subsurface drainage system.




The Svete River watershed
N
City of Jelgava
Jelgava Local Municipality
Auce Local Municipality
Tervete Local Municipality
Legend
The Svete River
The Lielupe River
Local Municipality
The Svete River watershed
0
5
10
20 km

# Main Actors to be involved and their roles

- National, regional and local authorities;
- Research institutions, experts:
  - on water management and quality
  - on biological diversity
  - on economical, rural development and management aspects.
- Farmers and local land owners in selected area and around selected area – main role in case study, possible input for design, implimentation of actions and methods
- Socially active local population representatives/ “mind leaders“
- Possible/ potencial municipal land (flood area) tenants – agricultural landscape, grazing etc.

In the Svete River catchment the local “test catchment officer” has focus on theoretical implementation of wetlands restauration, two stage ditches, phosphorus dams, constructed wetlands and intelligent buffer-zones.

# Potential locations for environmental measures in case area

Sedimentation pond
Catchment - 234ha

# Potential locations for environmental measures in case area

Inteligent buffer zone:
Catchment- 34ha, Ditch lenght -210m

# Lessons learned:

- Young farmers in this particular case area have demonstrated their interest in developing local leadership groups. This case illustrates the potential for establishing local action group leaders as a link between landowners and catchment officer.
- A lack of experience in monitoring the effectiveness of environmental measures in different regions of the country is a major factor in the search for greater knowledge and for implementing the right measures in the right place.
- Good water quality targets for freshwater bodies is essential as production on farmland areas increases.
- The value of productive farming comprises many agro-economic aspects, including agro-technical benefits. Water quality improvement requires more specific knowledge and skills on the part of farmers and private/government advisory service.
- The municipality does not have a strong impact on farmers or catchment officers under government legisation. The catchment officer service should be connected to the Rural Development Programme's implementation supervisory services.
- An increase in students in the Drainage Engineering Program in Latvia is essential for better water quality management. Latvia University of Life Sciences and Technologies offers the onlystudy programme under the Faculty of Life Science and Technologies.
- As a catchment officer, I have identified a lack of knowledge about the work of farmers from an agrotechical perspective. The problem is that there are no agricultural advisory experts in holistic water water management

# Suggestions to the future:

- Lack of experience in monitoring the effectiveness of environmental measures
- Potential for the formation of a local action group leader in the case area
- No experts in holistic water management, but there are agricultural advisory experts in production
- The catchment officer service should be linked to the Rural Development Programme
- The water quality improvement perspective requires more specific knowledge and skills and needs to be improved for both farmers and (private/government) advisory services.
- Increase the number of students in drainage engineering programmes

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