

EUROPEAN ALLIANCE GROUP STUDY VISIT:
INNOVATION AND ENVIRONMENT: WATER MANAGEMENT
IN ESTONIA
15-16 September 2011

Innovation and Environment: Water Management in Estonia

Uno Silberg, Dr (Econ)

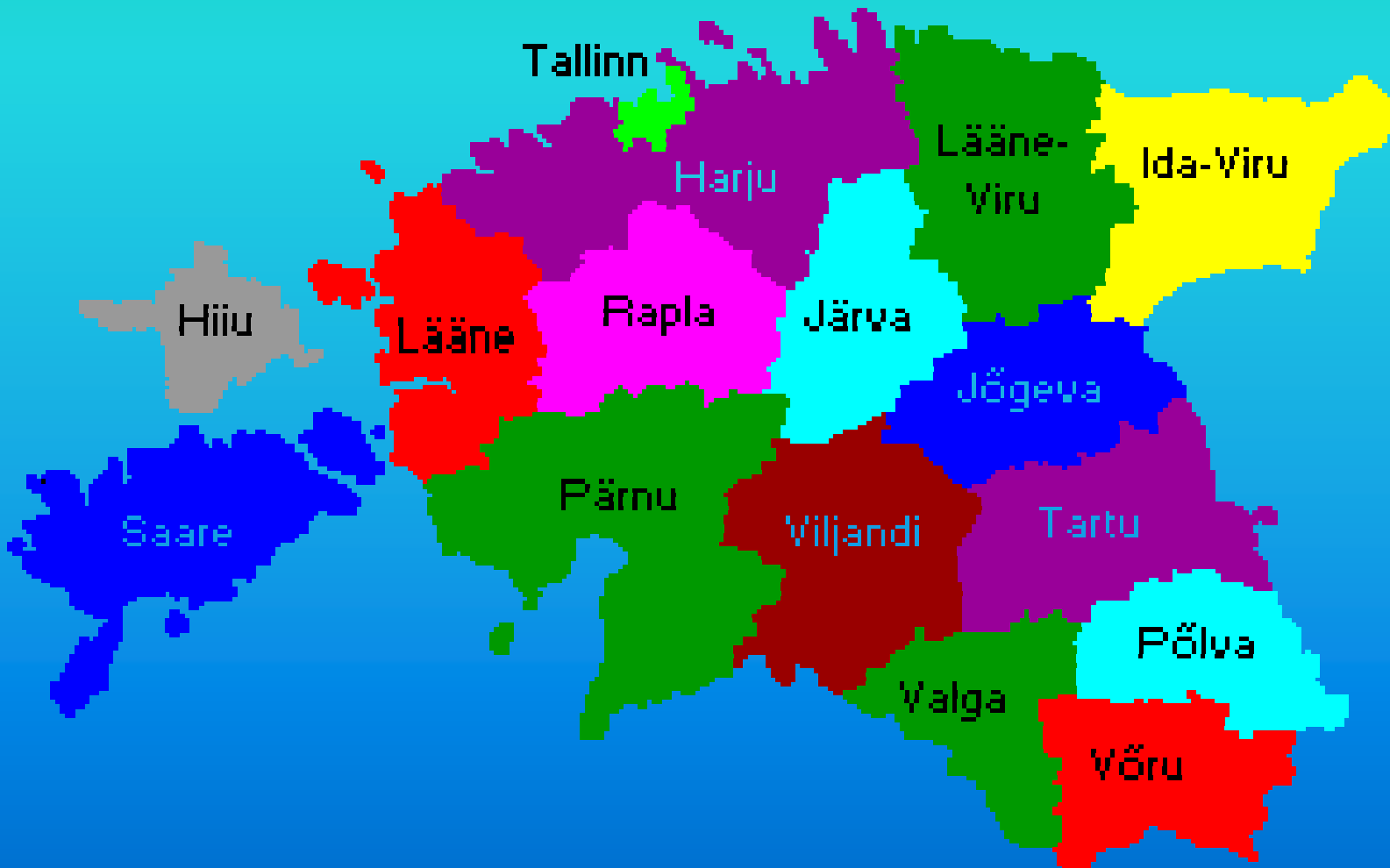
Contents

- 1. Estonian counties and local authorities**
- 2. Water Management in Estonia**
- 3. Water Management in Kose Municipality**

REPUBLIC OF ESTONIA

- **Area:** 45 227 sq / km
- **Population:** 1 347 000
- **Population density:** 31,2
- **Capital:** Tallinn
- Member of the EU since 2004
- **Type:** Parliamentary democracy
- **Head of State:** President: Toomas Hendrik Ilves
- **Head of Government:** Prime Minister: Andrus Ansip
- **Legislature:** Unicameral Riigikogu
- **High court:** Supreme Court
- **Suffrage:** Universal for citizens who have attained 18 years of age for national elections.
 - All legal residents, regardless of citizenship, who have attained 18 years of age can vote in local elections
- **Administrative regions:** 15 counties
- **226 local authorities**

ESTONIAN COUNTIES (15)





Source: LOCAL GOVERNMENT IN ESTONIA 2006, Ministry of the Interior Department of Local Government and Regional Administration

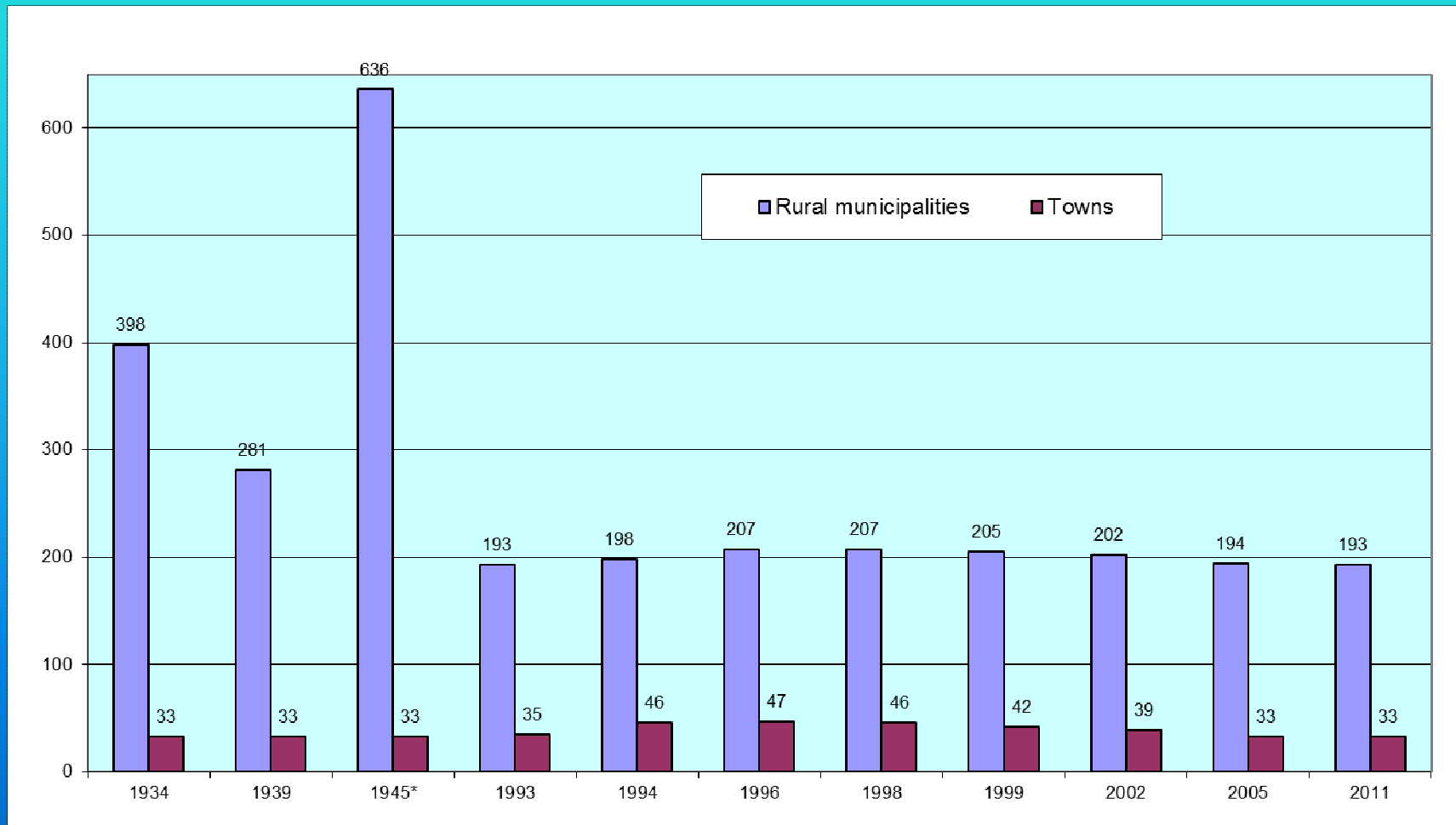
Estonia and local authorities

- Estonia is the smallest country of the Baltic States.
- Estonia restored its independence in 1991.
- The basic provisions concerning local government are laid down by the Constitution of 1992.
- The Constitution (Art. 154) recognises the principle of local government stating that:

“All local issues shall be resolved and managed by local authorities, which shall operate independently pursuant to law”.

- According to the Local Government Organisation Act and the Law governing the administrative division of Estonia's territory:
 - Estonia is divided into 15 counties and
 - 226 local authorities
(33 towns and 193 rural municipalities).
 - All local authorities have the same legal status.

Municipalities and cities in Estonia 1934-2011



Number of local authorities by population

Populatsion	Cities	Municipalities	Total
0-1 000	1	39	40
1001-1500	2	47	49
1 501-2 000	2	29	31
2 001-3 000	1	30	31
3 001-4 000	4	13	17
4 001-5 000	3	12	15
5 001-7 500	5	14	19
7 501-10 000	2	4	6
10 001-20 000	8	5	13
20 001 - 50 000	2	-	2
50 001-100 000	2	-	2
100 001-	1		1
Kokku	33	193	226

The most important laws are:

- Local Government Council Election Act
 - regulates the procedure for local elections.
- Local Government Organisation Act
 - determining the functions, responsibilities and organisation of local authorities and the relations of municipalities with one another and with central government.
- Territory of Estonia Administrative Division Act
 - which determines the division of the territory of Estonia into counties, cities and rural municipalities regulating also the procedure for the alteration of boundaries, the change of the name, etc.
- Municipality and City Budgets Act
 - determine the procedure for the preparation, passage and implementation of rural municipality and city budgets.
- Local Taxes Act
 - enumerates local taxes providing the procedure to impose and collect them.
- Local Authorities Associations Act

The internal structure of local authorities

- *Local Government Organisation Act* determines the general principles of the institutional structure and administration of local authorities.
- **The statute** of each local authority prescribes the institutional structure and rules of procedure of the specific local authority.
- As the acts define the area quite broadly local authorities are practising different rules of procedure.
- The **council** and the **government** are the bodies of local government in each municipality.

Municipal council

- **The municipal council is the legislative body of a local authority.** The council is elected at general, uniform and direct elections by secret ballot for a term of four years.
 - The number of members depends on the population of a local authority (min 7 members).
- **The council may form both standing and *ad hoc* committees** as determined in the statute of a local authority. Law prescribes only the formation of an audit committee. The chairmen of all committees and all members of the audit committee must be elected from among the council members.
- **Chairman is the head of the council.** The majority of the council elects the chairman of the council by secret ballot. The chairman organises the work of the council, represents the council and fulfils other duties imposed by law or municipal statute.
- There are **political fractions** within many municipal councils.

The exclusive competence of the municipal council:

- decisions related to **the budget, taxes, fees and duties, loans, tax**
- **incentives**, foundations of the local government;
- decisions related to **municipal property**;
- approval of the **development plan** and **the statute** of the local government;
- alteration of **the boundaries** of a local government, formation of municipal districts;
- decisions on general issues concerning municipal council and government (**election of the chairman of the council and the mayor**, confirmation of a new municipality, determination of the wage conditions for the council and government etc);
- approval of **building regulations**, drafting comprehensive plans and detailed plans.

Municipal government

- **The government is the collegial executive body** of the local authority. The government is appointed to office for the period of the authorities of the municipal council.
- **The head of a government is the Mayor**, who is elected and released by council.
- The members of the government are confirmed to office on the proposal of the municipal mayor. The mayor is leading the government according to law. The government may include municipal employees or political appointees.
- **Members of the council cannot be members of the government.**
- The council has the right not to confirm the members of the government but it may not, however, make alterations to the membership of the government at its own initiative.

Municipal administration

- The mayor is the head of the municipal administration.
 - Usually the administration consists of departments and the office.
- Organisational structure of municipal administration is determined by municipal council.
 - Municipal staff is employed by the mayor.
- The town or rural municipality secretary is the head of the office.
 - The main tasks of the secretary are to prepare the materials for the sessions of the government and the council.
 - The secretary is also responsible for the regulations that are being passed to be legally correct.
 - In Tallinn and in other larger local authorities council office is separated from government office.

Local Self-Government: Functions

- **Education** (Preschool, primary, secondary)
- **Social welfare**
- **Health** (Primary health care, public health)
- **Culture**
- **Environment, public sanitation** (Refuse collection and disposal, street cleaning, cemeteries, environmental protection)
- **Traffic, Transport** (Streets, public lighting and transport)
- **Public utilities** (Water supply, sewage, central heating)
- **Housing**

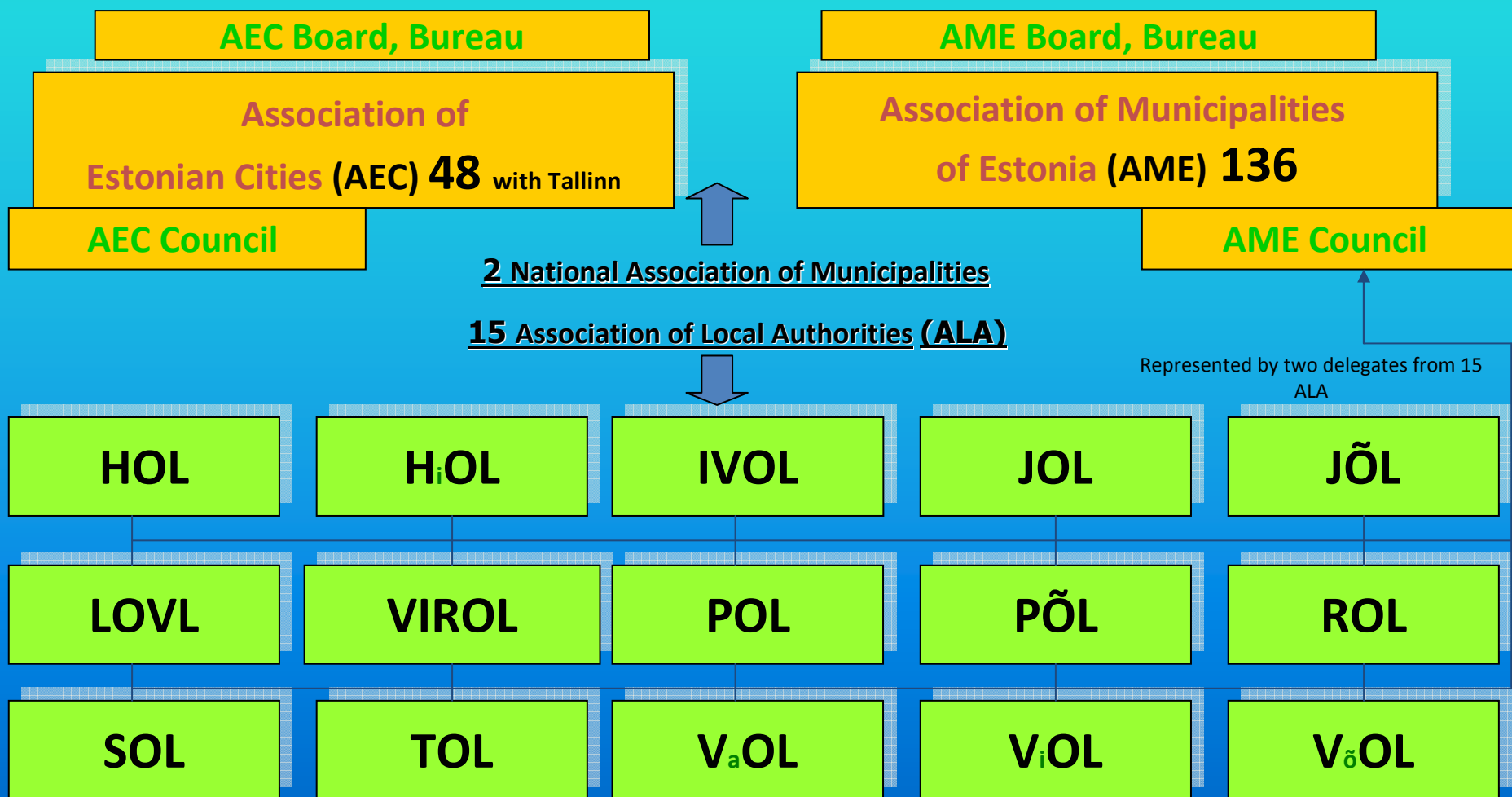
National- and county (regional) associations of local authorities

By *Local Government Association Act*

- A **County Association** (Association of Local Authorities) may be founded jointly by more than:
 - one half of the local governments in that county.
- A **National Association** may be founded jointly by more than:
 - One half of the local governments in Estonia,
 - Or by local governments whose combined population, according to the data in the population register, constitutes more than one half of the population on Estonia.

A local government may simultaneously belong to one county association and one national association.

National Associations and Association of Local Authorities



Finance of local governments:

- Local government budgets are separated from the state budget.
- Pursuant to law, the revenues and the expenditures of the municipal budgets must be in balance.
- About half of the total local revenues come from personal income tax, which is a centrally imposed and collected tax. At the moment (2011), local authorities' share in this tax revenues is 11,4% from personal income tax.
- Land tax is also a national tax, but all its revenues are paid into local budgets.
- The amount of central grants are calculated on an automatic formula using a number of data (number of population, revenues in the previous year, etc.).

- Taxes

- on individual income:

- 56 % from income tax (old system) before 2004
 - 11,4 % from personal income tax 2004
 - 11,93 % from personal income tax 2009
 - 11,4 % from personal income tax 2011

- on immovable property (land tax – 100%)

- tax on natural resources

- shale utilization (20%)
 - construction materials (70%)
 - water utilization (20%)

- on individual net wealth (motor vehicle tax, boat tax, cattle tax)

- sales tax

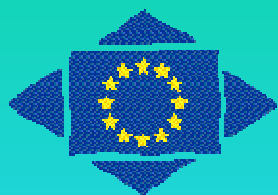
- advertising tax

- State allocations

- Loans

ESTONIA and the EU Integration

Relation between National Associations of Municipalities and the EU Committee of the Regions



Estonian delegation in the Committee of the Regions

- Estonia had since 1. May 2004 in CoR 7 members and 7 alternate members.
- **Assembly of cooperation of National Associations decided that:** AEC have 4 full members and 3 alternate members and AME have 3 full members and 4 alternate members in CoR.

**Estonian Delegation
Members**

**Estonian Delegation
Alternates**

Association of Estonian Cities



4

Association of Estonian Cities

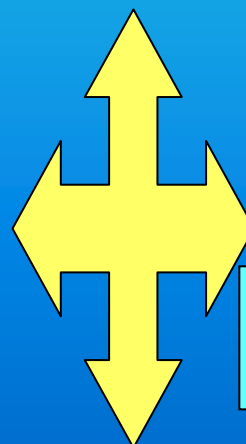
3



**Association of Municipalities of
Estonia 3**



**Association of Municipalities of
Estonia 4**



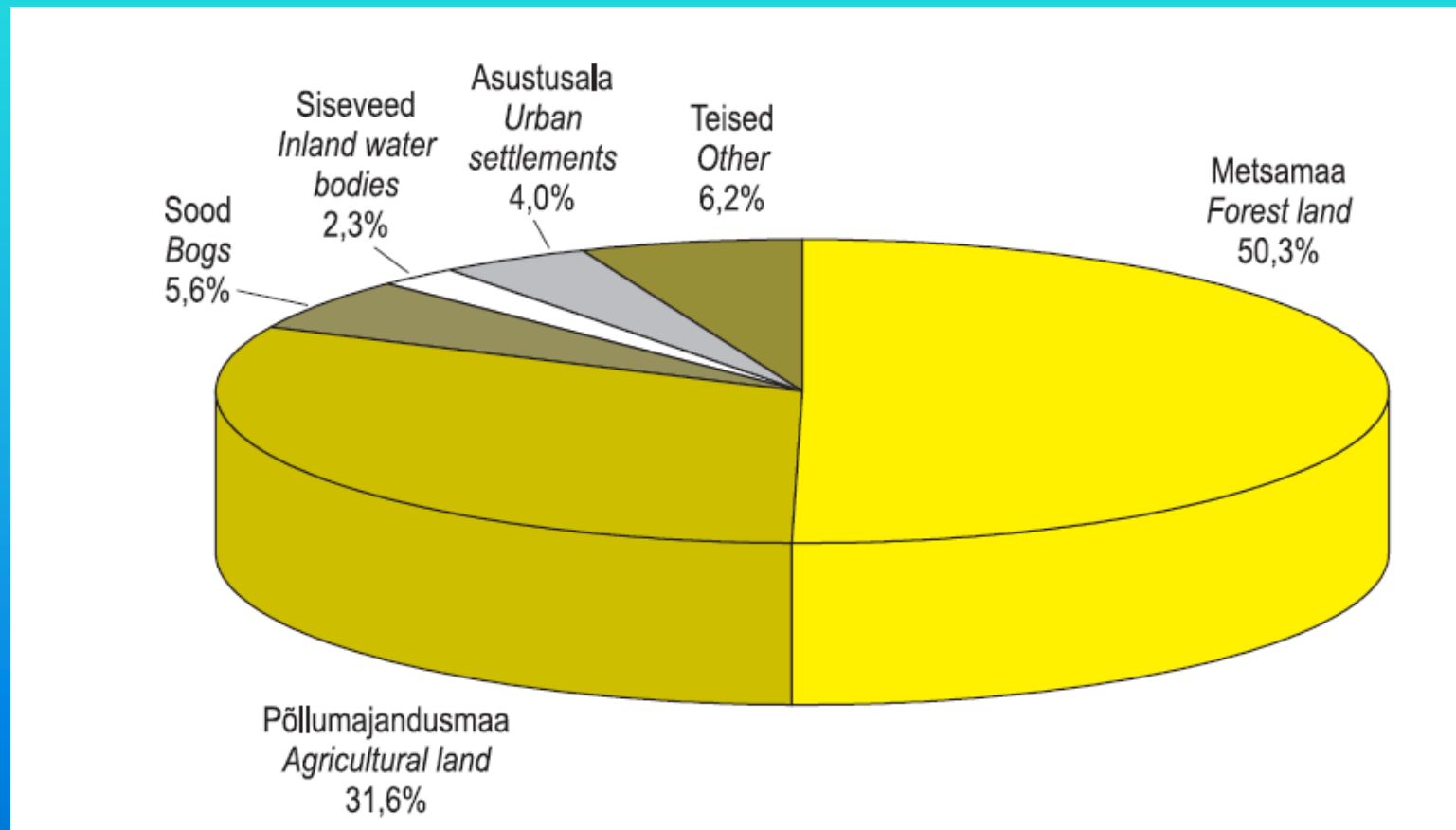
- **Legal Basis:**
- No legal basis exists for the nomination of the Estonian CoR delegation.
- **Procedure for Nomination:**
- The Estonian Ministry of Internal Affairs asks the Association of Estonian Cities and the Association of Municipalities of Estonia to propose:
 - a list of 4 and 3 candidates respectively and
 - in the same way 3 and 4 alternates.
 - Each association makes its proposal on the basis of geographical/territorial and political criteria.
 - Equal representation of men and women is also sought.
- The national government takes a decision on the basis of the proposed list of members and submits it to the Council of Ministers, which appoints the CoR members.
- All Estonian members and alternates are directly elected members of a municipal council or are politically accountable to a directly elected municipal council.

Water Management in Estonia

General information

- Lakes – 5% of territory, 1200 lakes over 1 ha, generally shallow
- Rivers – Divided into 4 watersheds, the longest 162 km, in 13 rivers the flow rate 10 m³/s, others less.
- Wetlands – cover 22% of the territory
- Forests - ~48% of the territory
- Agricultural land – 10% of the territory
- The average water price 1,0-1,5 EUR (including water and sewage services)
- 83% connected with water supply systems, 73% connected with sewerage systems
- Domestic water consumption 100-150 L/day per person (depending a lot on the price of water services)

Share of water environment in Estonia

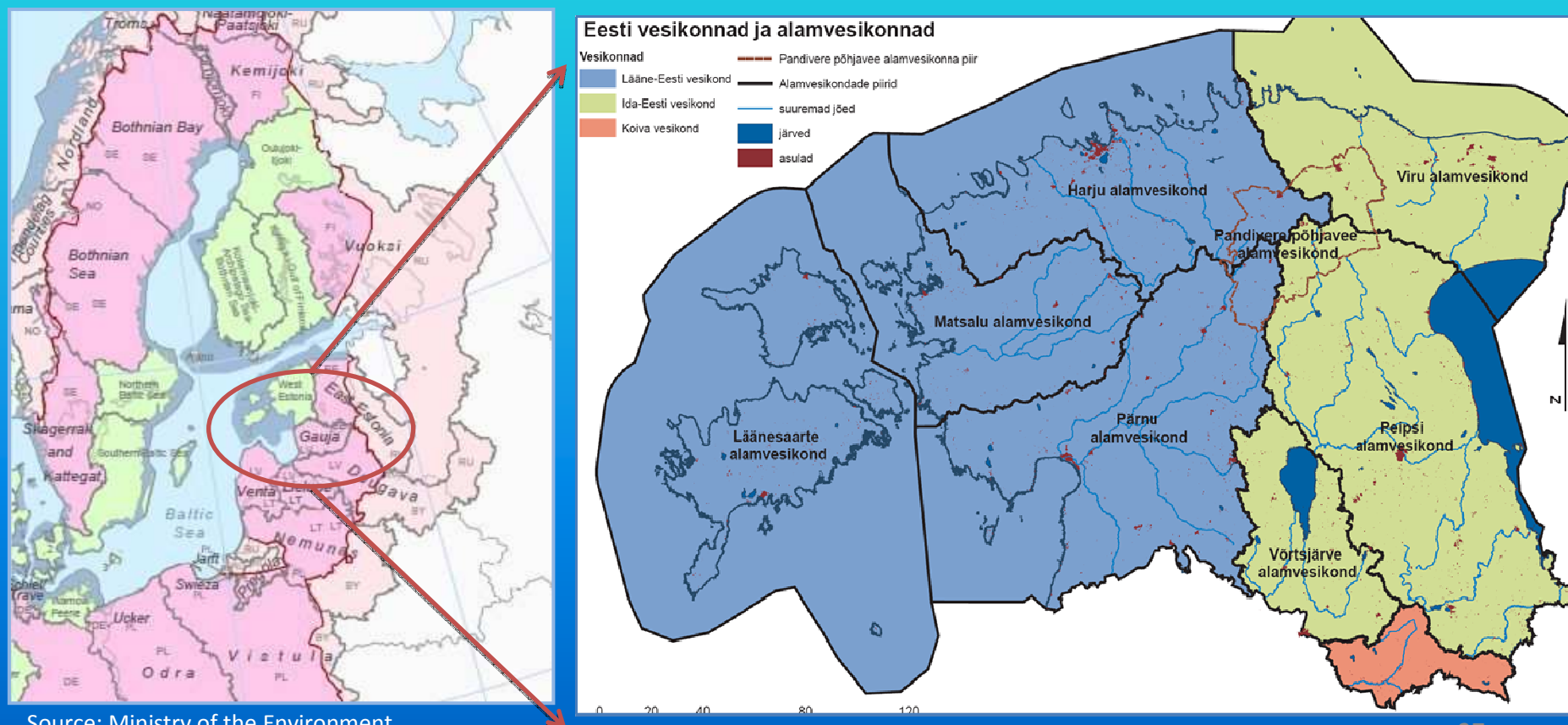


Source: Ministry of the Environment
Water Department 2011

Water management

History of river basin management:

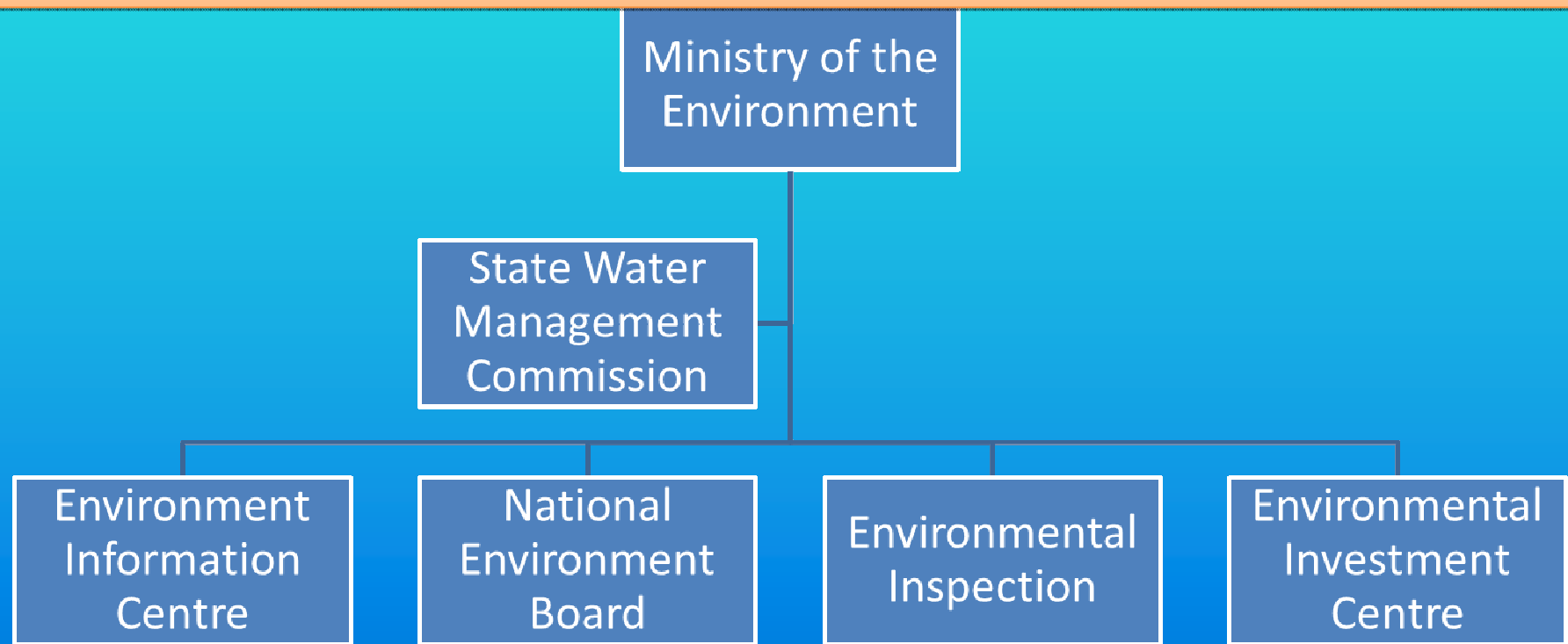
- 1965 – 4 river basin districts
- 1984 – 2 river basin districts
- 1999 - 9 river basin districts
- 2000 - 1 river basin district and 9 sub-units (districts)
- 2003 - 3 river basin districts and 8 sub-units
- 2006 - 3 river basin districts and 9 sub-units
- 2009 - 3 river basin districts



Source: Ministry of the Environment
Water Department 2011

Administrative arrangements

Within past 10 years approximately after every 2-3 years major organisational change, driven by the internal needs (save costs, better communication) and external needs (new tasks and international commitments)



Water users

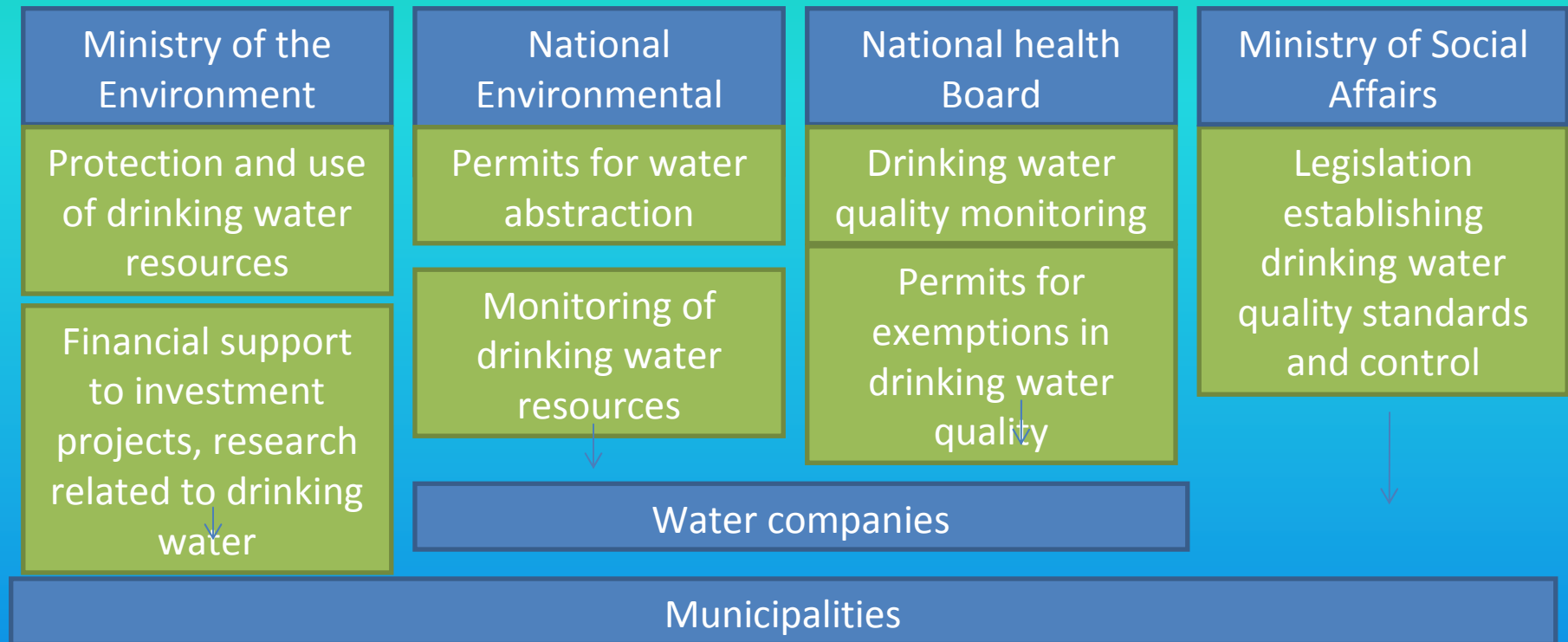
Public organisations

Private organisations

Private persons

Drinking water management









Source: Ministry of the Environment
Water Department 2011



Legislation

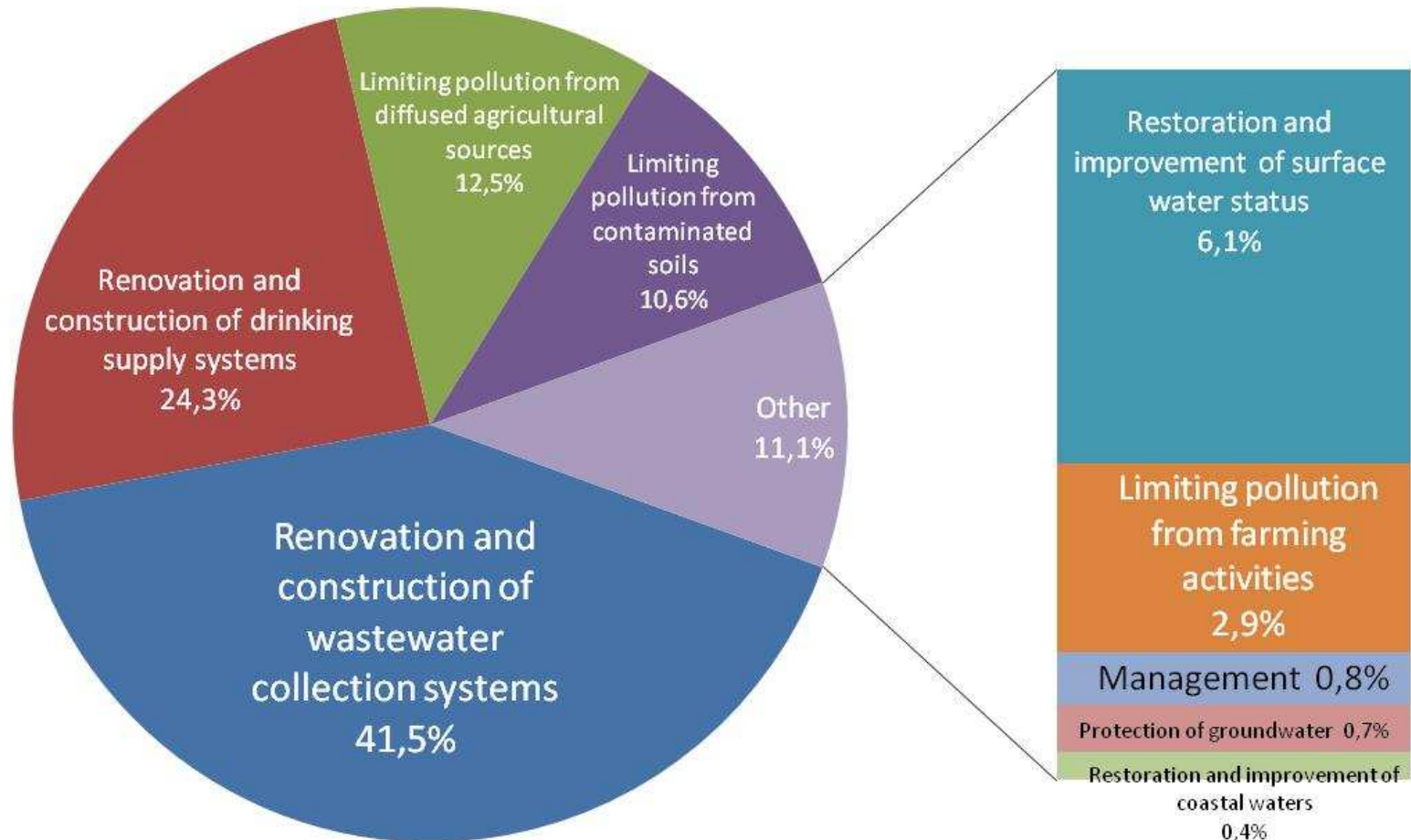
- Water Act
- Public Health Act
- Public water supply and sewerage act
- Regulation on requirements for drinking water quality and control, methods for analyses
- Regulation on selling drinking water which does not comply with requirements and has no risk to health
- Regulation on requirements for surface or groundwaters used or intended to be used for drinking water²⁹

Significant water issues in Estonia

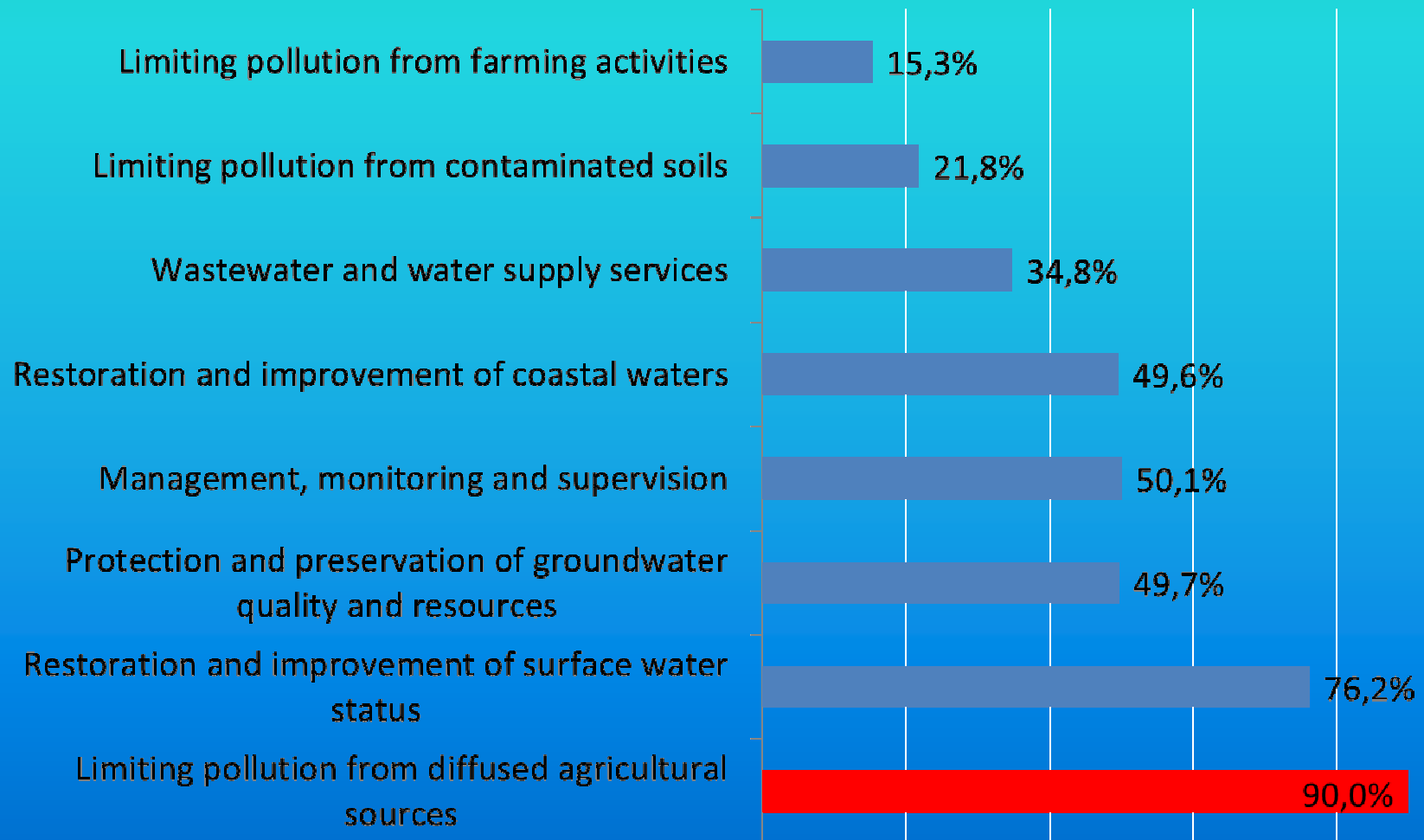
Pressure	Trend
Wastewater, sewage (wastewater treatment plants, industrial wastewater, private treatment facilities) in agglomerations	
Wastewater from non-agglomerations	
Contaminated soil, past pollutions, pollution in deserted military areas, old gas stations, oil collection and treatment facilities, storages	
Agriculture (farming, land use, manure storages, use of fertilizers)	
Land reclamation, drainage (pollution, hydro morphological impact on small rivers and streams)	
Water reservoirs, impoundments (collection of water for hydro energy, irrigation, recreation, landscape)	
Mining of minerals (calcareous rocks, oil shale)	
Internal pollution load from water bodies	

Source: Ministry of the Environment

Priorities and costs

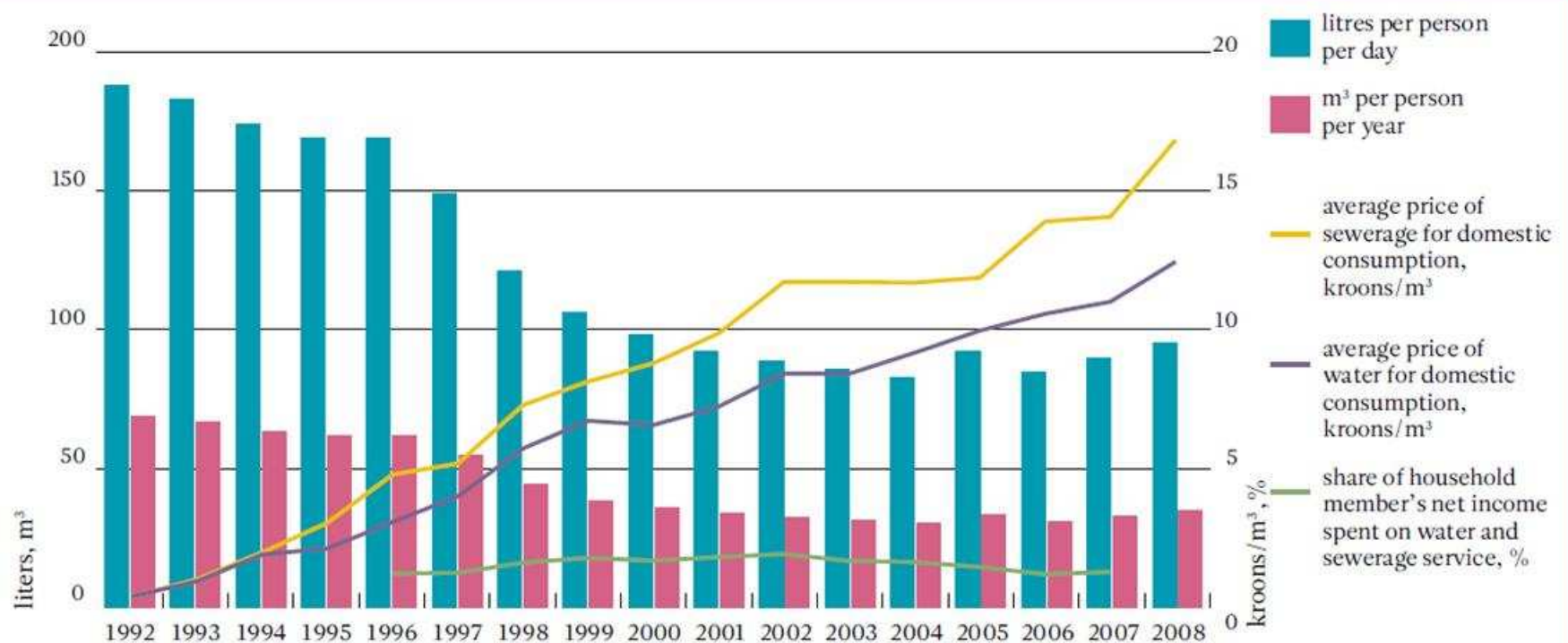


Costs not covered



Cost of water services

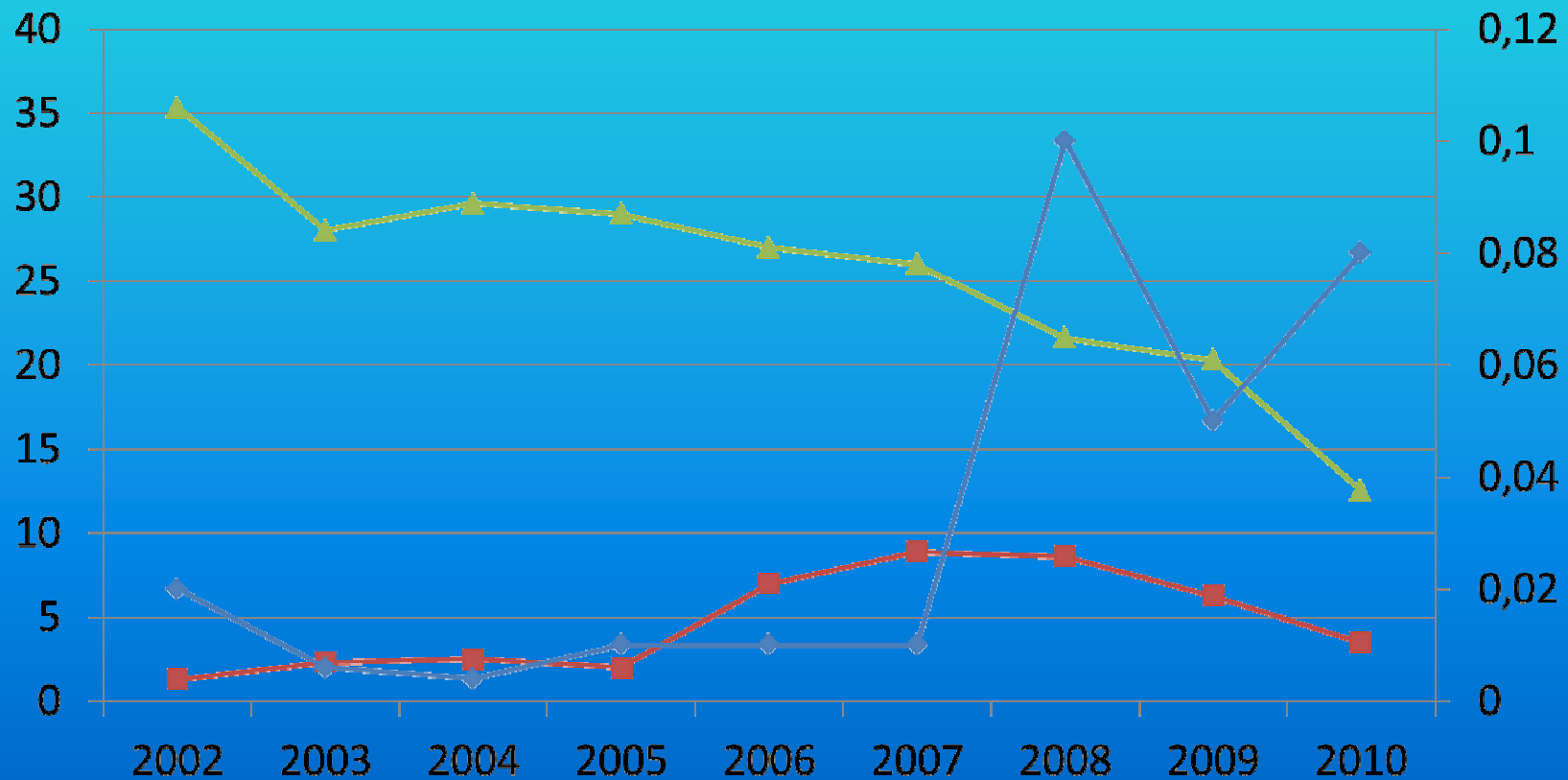
Average water price (sewage + drinking water) 2 euros



Price of water with respect to use of water and net income of household members. Data: EEIC.

Drinking water quality in Estonia

- Incompliance with chemical parameters (%)
- ▲ Incompliance with indicator parameters (%)
- ◆ Incompliance with microbiological parameters (%)



Source: Ministry of the Environment
Water Department 2011

Quality of drinking water

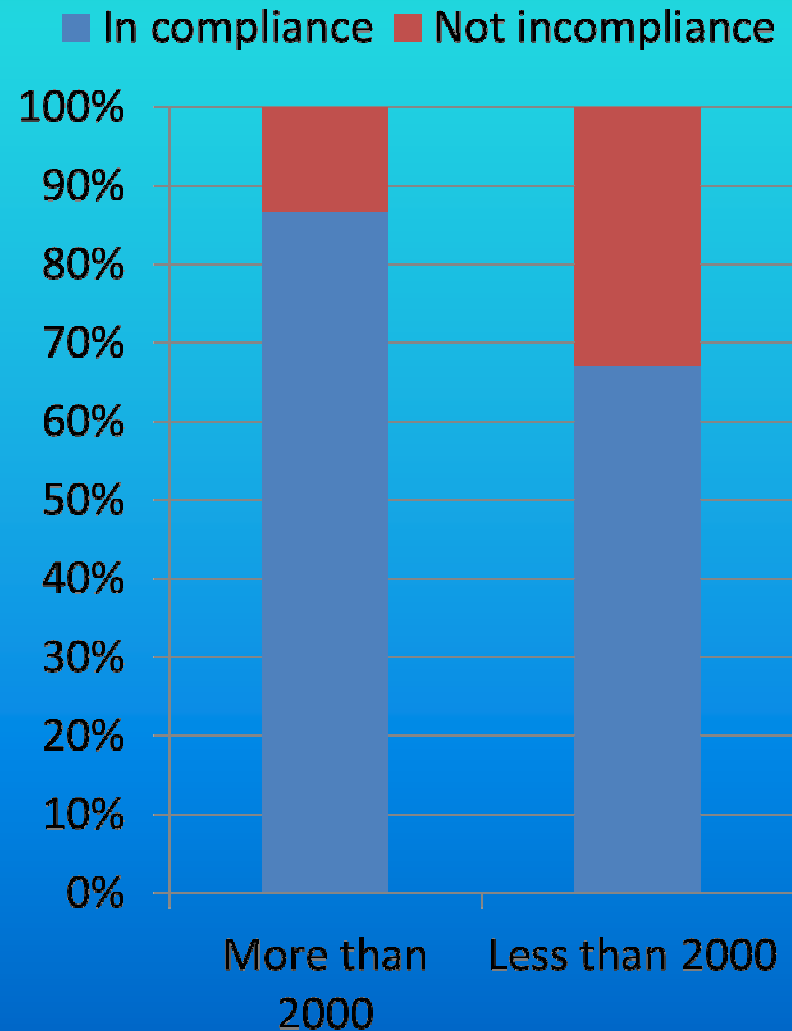
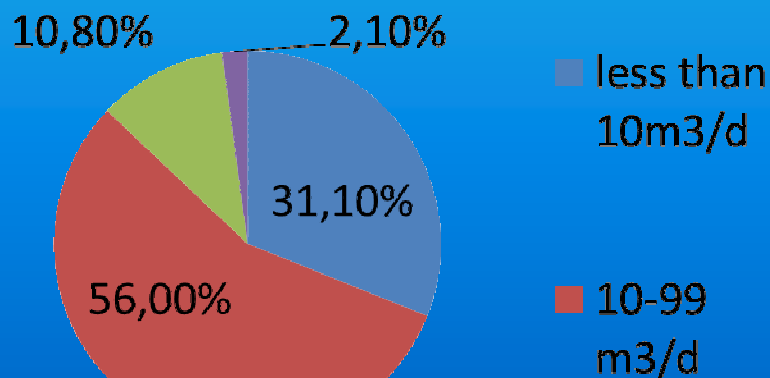
- ~83% of people connected with water supply systems
- Poor quality of drinking water is caused by:
 - Natural bad characteristics of groundwater
 - Old treatment plants and pipe systems
 - Contamination near industrial areas
 - Poor quality of surface waters used for drinking water production

Water supply networks

1154 waterworks:

- 52 with more than 2000 consumers
 - 7 (13%) do not comply with the requirements
- 1102 with less than 2000 consumers
 - 364 (33%) do not comply with the requirements

Capacity of waterworks in Estonia:

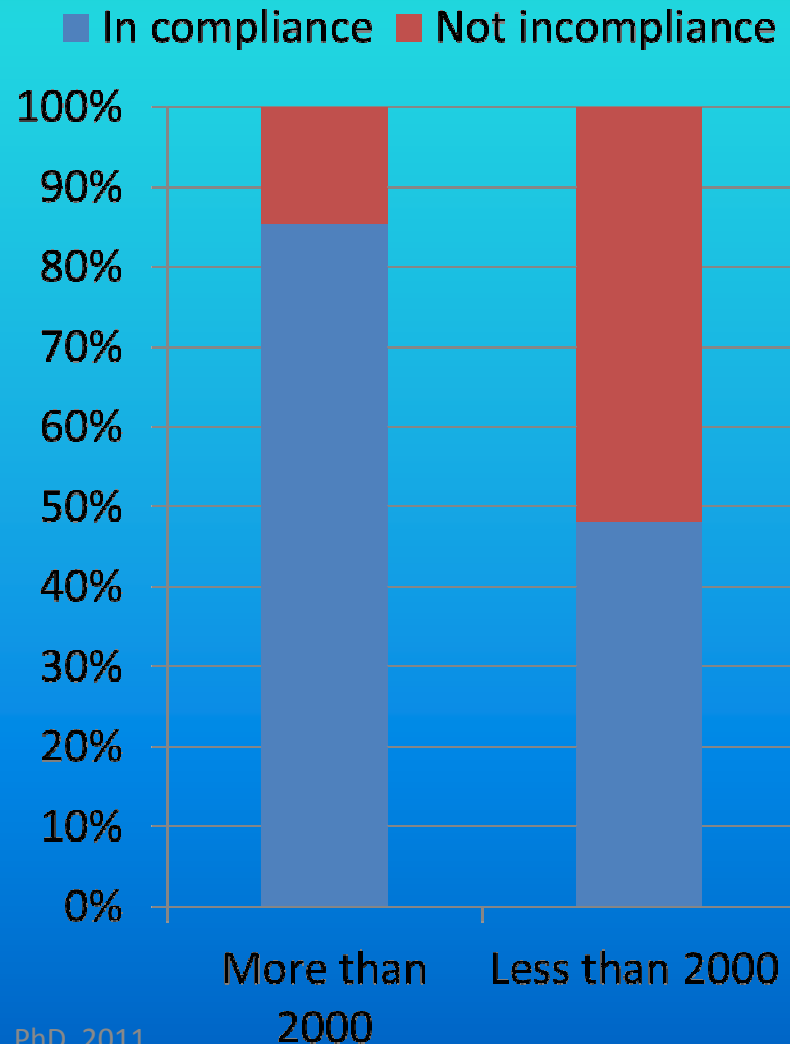


Water use

- Most of the water is used by the energy sector for cooling or for mining
- ~ 80% groundwater used in Estonia is the water pumped out from minings
- ~ 88% total water (groundwater + surfacewater) is used for energy
- Most of the surface water consumption takes place in the cooling processes of energy turbines

Water consumers

- 1 077 693 water consumers:
 - 907 595 with systems of more than 2000 consumers
 - 132840 (15%) not in compliance
 - 170 098 with systems of less than 2000 consumers
 - 81 647 (48%) not in compliance



Sewage and effluents

- In total 850 wastewater treatment plants
- Treatment plants **must comply** with treatment requirements
- Most of treatment plants:
 - Too small
 - Have not enough regular maintenance
 - Old technologies and constructions
 - Do not comply with requirements
 - In total give 1/3 of the P and N pollution
 - Clearly linked with the eutrophication of small water courses

Source: Ministry of the Environment
Water Department 2011

Water management in local level

- Every municipality must have its own public water supply and sewerage plan
- The public water supply and sewerage plan must consider the river basin management plans
- Surface water bodies are either privately owned or belong to the municipality – the task to take care of water bodies is on the owner
- The main regulator of the local level water management is the county environmental department

Water Management in Kose Municipality





Population and ... 01.01.2011

	Population	Total Area (km ²)	Population density
Estonia	1 340194	43 432	30,8
Harju County	528 468	4 333	121,9
Municipalities of Harju County	89 396	4 074	21,9
Kose Municipality	5 752	237	24,2

The project of reconstructon of the public water supply of the town of Kose

- 5.5 km of water pipes were reconstructed and 9.3 of km new water pipes were built
- 4.7 km of sewage pipelines were reconstructed and 10.6 km of new sewage pipelines were built
- 12 new waste water sub-pump rooms were built
- A new water treatment plant was built on the basis of the pumping station in Kodu street Kose water treatment plant is being reconstructed

The project of reconstructon of the public water supply of the town of Kose

- About 700 people will have access to the common water supply and sewage system
- The water from public water supply will be brought in conformity with the requirements of the EU Directive and the Estonian legislation
- Water losses in piping systems will be reduced
- The issue of supplying Kose town with fire water will be solved
- The quality of the waste water will comply with environmental requirements The issues of discharging and processing of technological sludge will be solved

The project of reconstructon of the public water supply of the town of Kose

- In the funding request, the financial forecast of the total project cost was 8.4 million euro, of which 6.1 million had to come from the EU Cohesion Fund
- The total cost of the project will be about 5.6 million euro
- For own contribution to the project, OÜ Kose Vesi must take a loan of EUR 1.1 million and Kose municipality must take a loan of 0.5 million euro

The project of reconstructon of the public water supply of the town of Kose

- Status of the project:
- Construction of all the piping is completed
- Construction of Kose water treatment plant is completed Reconstruction of Kose sewage treatment plant is under way, to be completed in the first quarter of 2012













Thank you for your attention!

