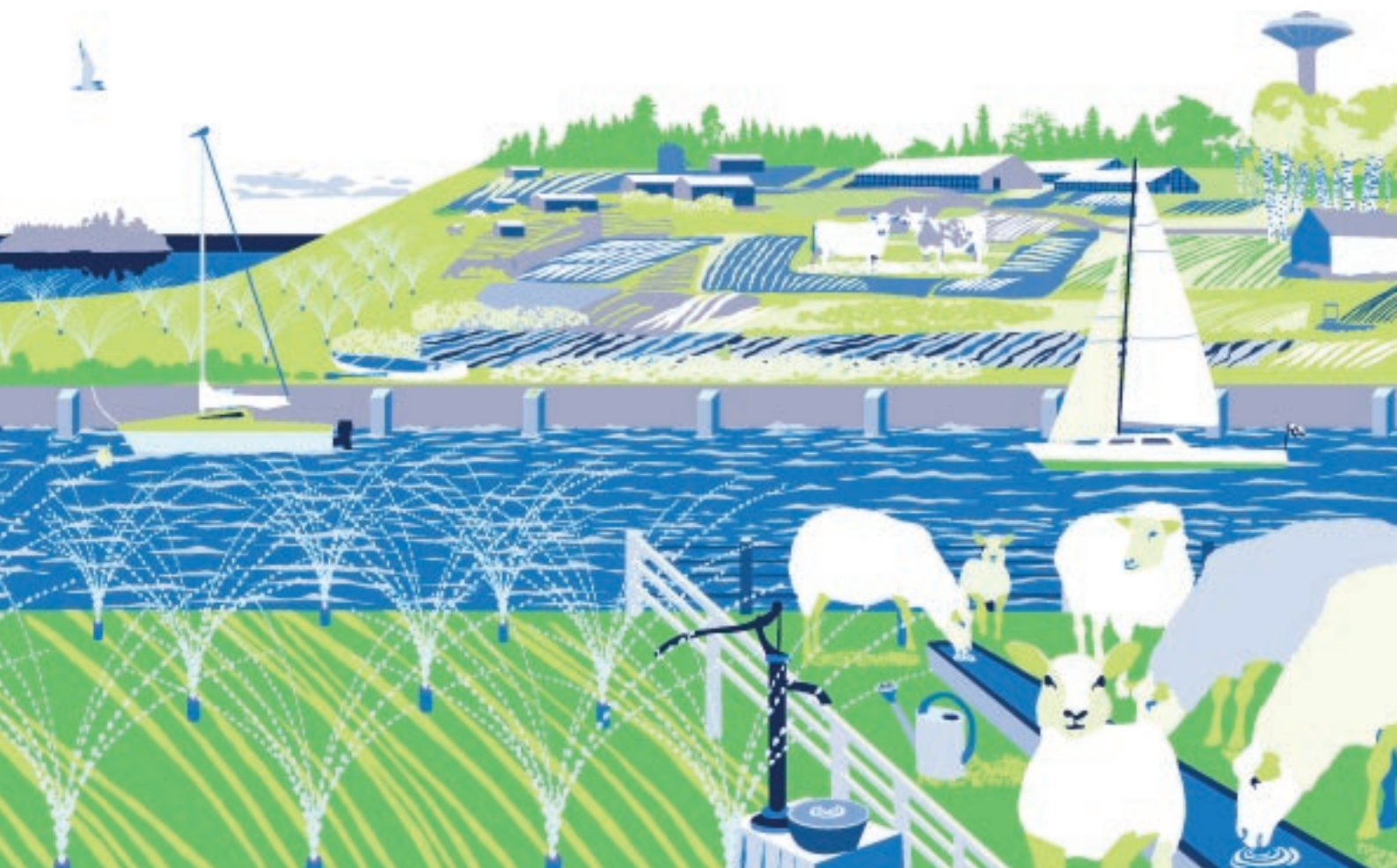




# USE AND MANAGEMENT OF WATER RESOURCES IN FINLAND

Ministry of Agriculture and Forestry



## LAND OF ABUNDANT WATER RESOURCES

Finland possesses water bodies in abundance. About 10 per cent of the total surface area is lakes, ponds, rivers and brooks. Regional variation in the quantity and supply of water is great. Water resources per inhabitant are the greatest in eastern and northern parts of the country, while in the coastal regions of western and southern Finland with the highest population density there are fewer sources for the abstraction of high-quality drinking water.

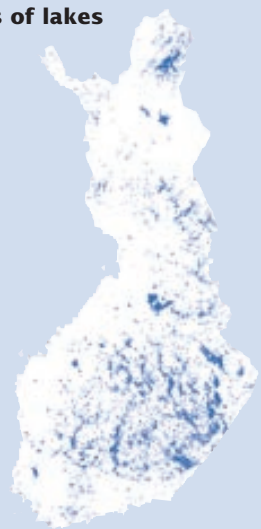


Finland is one of the northernmost countries in the world. About a quarter of the country lies to the north of the Arctic Circle. The land is covered by snow for a major part of the year and ice cover stays on the lakes for five to seven months. Considering the location of our country, however, the Finnish climate is mild.

Floods are quite common especially in western Finland. Measures are taken to prepare for exceptional weather conditions and water situations to protect both the water supply and health and safety of the population. Water is one of the elements through which the climate change touches upon the whole society.

### The country of thousands of lakes

Lake area km <sup>2</sup>	Number of lakes
>100	47
10–100	279
1–10	2 283
0.01–1	53 423





## SUSTAINABLE USE OF WATER RESOURCES

Finland is one of the top countries in the world as regards the amount and quality of water. We have enough water for the needs of all our citizens and functioning water services cover the whole country. Our success is founded on good administrative practices, legislation, research and follow-up. Most importantly, Finns are well aware of the value of water and use water resources in a responsible way.

The objective of the Ministry of Agriculture and Forestry is that the use of water resources is socially, economically and ecologically sustainable. One example of this is the regulation of waters to address multiple goals. This means that in most cases the regulation serves more than one purpose, including hydropower production, flood protection, water abstraction, water-borne traffic and recreational use of waters.



## CLEAN AND SAFE DRINKING WATER

In Finland we have enough clean drinking water for the whole population. Water supply plants deliver high-quality drinking water to the majority of Finns, while most of the wastewater is purified. The largest cities and towns use surface water as raw water. In the whole country two-thirds of the public water service is today based on natural and artificial groundwater supplies, and their share is still growing.

The goal is to ensure high-quality drinking water for the whole population at a reasonable price, while protecting the environment from wastewater discharges. Fees are collected to cover the costs of water supply plants as set down in the Water Services Act. The State supports regional cooperation and partnerships to ensure functioning and reliable water services. Combined networks and emergency arrangements for water abstraction prepare for exceptional circumstances, such as floods, drought and environmental accidents.

The State subsidises water supply investments in the rural areas. Functioning water services are vital for the countryside and rural industries. However, there are extensive, sparsely populated regions in Finland where the construction of water supply networks is not a feasible option. Real estate owners are responsible for organising the water services outside the networks.

### Main river basins

Drainage area km <sup>2</sup>	No. of basins
>50 000	2
10 000–50 000	7
5 000–10 000	1
1 000–5 000	26
500–1 000	14
200–500	24





## PREPARING FOR EXCEPTIONAL CIRCUMSTANCES

Finland is also occasionally shaken by exceptional weather and water conditions, but so far large flood damages and other dramatic events have been avoided. According to the National Strategy for Adaptation to Climate Change adopted in 2005, we need to prepare for exceptional water conditions and changes in land use.

Primarily the adverse impacts of floods should be prevented in advance. Flood maps and general flood risk management plans are drawn up for regions that may be affected. Flood protection measures focus on protecting the communities. Land use and building is steered so that no new risk sites are being created.

The key issues to be addressed include the safety of water constructions and efficient protection and rescue operations during flood events. In Finland there are about 450 large-scale dams, of which 380 are water dams and the rest are waste dams. Advance prevention of any flood and dam damages is a high priority.



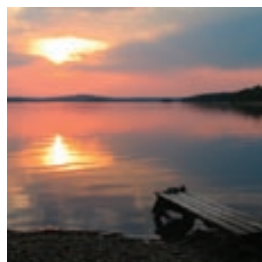
## WATER COOPERATION ACROSS THE BORDERS

Finland has concluded bilateral agreements on frontier waters with the neighbouring countries Sweden, Russia and Norway to ensure the management and sustainable use of the shared river systems. Frontier River Commissions set up under the agreements function as cooperation bodies in this work.

The European Union and its Member States participate in international water cooperation within the United Nations and other forums. To realise the UN Millennium Development Goals, Finland takes part in the work to solve the water problems in developing countries, Eastern Europe and Central Asia.

Finland is an active party to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki Convention) of the United Nations Economic Commission for Europe UNECE. We also participate actively in the preparation and implementation of the EU water legislation.





## WATER RESOURCES ADMINISTRATION IN FINLAND

The domain of the Ministry of Agriculture and Forestry comprises water supply and sewerage, regulation of water bodies, flood risk management, drainage and irrigation, dam safety and maintenance of water constructions, as well as State obligations as the permit holder under the Water Act.

The Ministry of Agriculture and Forestry steers the Centres for Economic Development, Transport and the Environment and the Finnish Environment Institute in tasks relating to the use and management of water resources. In water protection tasks these organisations are steered by the Ministry of the Environment. Municipalities and their environmental authorities are the local partners of the Centres for Economic Development, Transport and the Environment.

### Lakes

- number of lakes and ponds larger than 0.0005 sq km 188 000
- number of lakes larger than 0.01 sq km 56 000
- number of lakes larger than 100 sq km 47
- largest lake is Lake Saimaa with a surface area of 4 380 sq km

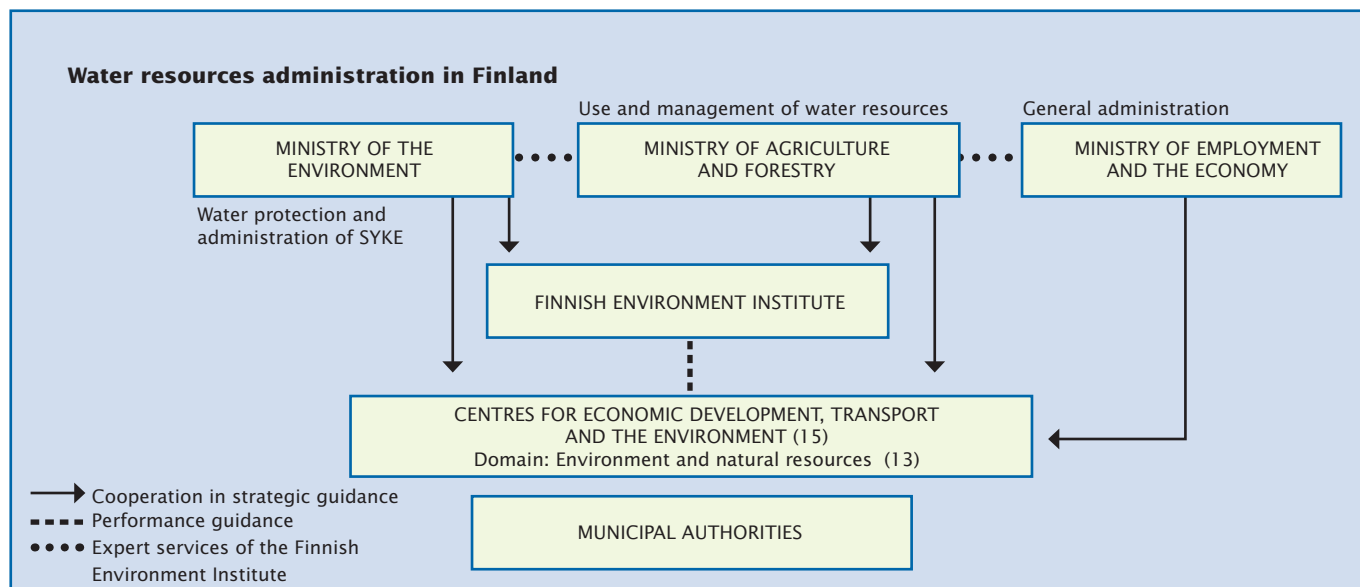
### Rivers

- total river flow 3 300 m<sup>3</sup>/s
- largest rivers are the Vuoksi and Kemijoki Rivers, average flow 610 m<sup>3</sup>/s

### Use of water

- amount of water pumped by water works 408 mill.m<sup>3</sup>/year
- water consumption of communities per hook-up 242 l/day
- water abstraction by the industrial sector 9 500 mill.m<sup>3</sup>/year

Sources: Finnish Water and Waste Water Works Association, Statistics Finland





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