


# Comenius project

The history of water usage  
systems in Estonia.



# Contents

- data
  - Water in Estonian mythology
  - The saunas
  - Water medicine (medical qualities)
  - The beauty and charm of water in Estonia
  - Usage of water in economy
  - wells
- 

# Data

- Estonia is situated in North Europe on the coast of the Baltic Sea.
- The climate of Estonia is moderate, transferring from continental to maritime.
- The average annual temperatures around +5 °C or a bit higher. The coldest months usually February when the average temperature drops to -5 °C. In winter months the average temperature is from -4...-5°C. July is considered to be the warmest month with the average temperature of +18 °C. From June to September the average temperature is from 15...18°C.
- [Contents](#)

- The network of rivers in Estonia is relatively dense:
- There are over 7000 bodies of flowing water with the total length of circa 31 000 km.
- The network of bodies of flowing water is the sparsest in central Estonia and the coasts of the islands, the densest in North Estonia.



- There are over one thousand lakes in Estonia. The biggest is Lake Peipsi which separates Estonia from Russia. The deepest is Lake Rõuge Suurjärv (38 m).



# Water in Estonian mythology

## ➤ Contents



# Supernatural creatures of water world

- **Fish fairy was the protector spirit of the fish who could reveal himself to people as a man or a fish. When he stepped on earth, he did it in the form of a man. When it happened, he could not protect the fish in the water and the fisherman's catch of the day was bigger than usual.**



# Fish fairy



- **Water fairy was the protective spirit of the bodies of water. Every lake, sea, river, spring, well and other body of water had its own fairy.**
- **Water fairies were usually kind but strictly punished the contaminators of water.**



- **Water goddess or Mother of Waters is what people in South Estonia call the protective spirit of water.**
- Water Goddess is alive and powerful who sleeps under ice in winter. In spring when she wakes up she breaks the ice with big rumble.
- When people bring sacrifices to her, she allows them to catch big fish, saves them from storms and doesn't break their nets.


# Nixie

- **Nixie or nix was an evil water spirit.**
- His task was to allure people into water and drown them or to give them diseases but also predict accidents, illnesses and death.
- Nixies appear either as men, beautiful girls or pretty animals like horses. People used to think nixies had come from drowned people who envied the living ones and wanted them to share their sad fate.
- **NB!** Parents often told their children nixie stories to keep them away from bodies of water.

# Mermaid



# Holy springs

- Spring water was used to cure all kinds of skin and eye troubles.
  - People believed that spring water made blind eyes see and even help you to get rid of freckles.
  - Some springs were so famous that people came there from far off to take water home to the family.
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# The sauna

## ➤ Contents





# Traditions from olden days

People of old times believed that at midnight before 2 November (the spirits 'day) the spirits of our predecessors visit our homes.

People used to heat the sauna and make good food for them. The food was left in the sauna or at a special place.

When the found in the morning that the food had been eaten, they believed that the spirits were satisfied and the household will prosper in the future.

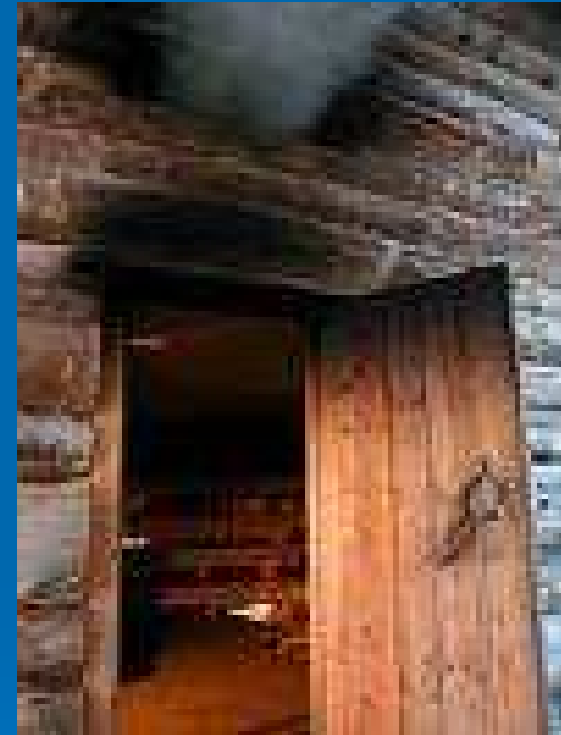
# Finnish sauna

- Finnish sauna is very simple.
- The air in the sauna is hot and dry, short-time moistening is achieved by pouring water onto hot stones.
- The temperature in the sauna is about 65-95°C.



# Smoke sauna

- Smoke sauna is also called original sauna. It was a place where children were born hundreds of years ago.
- A smoke sauna does not have a chimney and there 's no need for one.
- The stove in the sauna is heated for 4-5 hours. The smoke stays in the room at first and is let out later through the sauna door.



- On the stove there is a kettle from where people can take hot water for washing themselves. People take steam, swish with birch twigs and wash in the same room.
- You can't enter a smoke sauna until all the live coals in the stove have burnt down to ashes and the smoke has been let out.
- You must always remember not to lean against the wall in a smoke sauna, otherwise you may come out even dirtier than before.



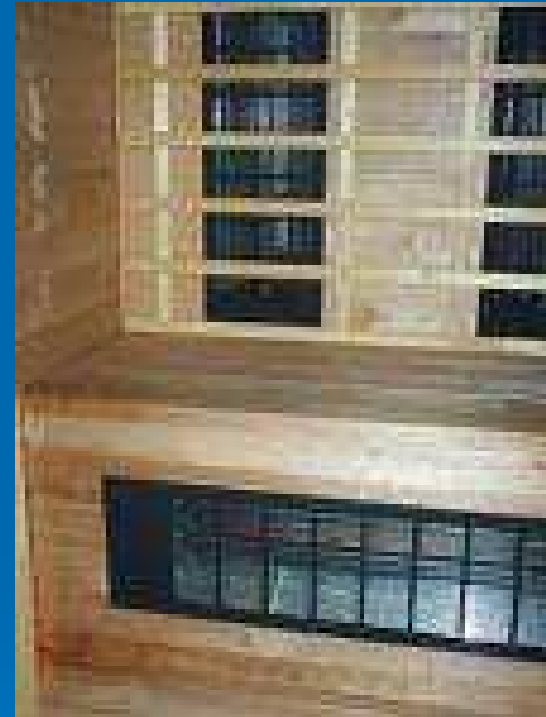
# Russian sauna or steam sauna

- Russian sauna or steam sauna or banyan is a wooden hut like the Finnish sauna. Compared to the Finnish sauna it is not so very hot but a lot damper.
- The procedure of going to the sauna is similar – the body is heated by steaming and cooled down in cool water, air or snow
- You may repeat the procedure several times.



# Infra-red sauna

- Heating your body in an infra-red sauna stimulates sweating and separation of toxic substances. Going to an infra-red sauna may be looked at as a part of a diet which is a program for deep cleaning of our organism.
- The duration of one session is 30 minutes at the temperature of 45-50°C.
- Infra-red waves heat your body 4 cm deep and stimulate natural sweating.



# Sauna bus

- In Estonia people have built a unique sauna bus where you can enjoy the pleasures of sauna during the ride.
- There is room for 4 – 5 people in the steam room at the back of the bus.
- There is also a gas cooker, a sink, a TV, the toilet, a DVD player, a shower and 800 liters of hot water in the gas boiler.
- Read for more at [www.saunabuss.ee](http://www.saunabuss.ee)



# Water medicine

## ➤ Contents





# Mineral water and curative mud

- Mineral water in Värška contains useful substances for the whole organism.
- There are three types of water in Värška – two types of drinking water and one type of bath water.
- The most popular mineral water in Värška - Värška Original – is crystal clear, without a scent and sediment which comes from a drilled well at the depth of 470 meters.
- Each liter of this mineral water contains 2,2 grams of minerals useful for our organisms.



# Mineral water



- Health mud or peloid or curative mud is an even plastic mass, consisting of water and atomized particles of mineral and organic substances which has laid itself at the bottoms of water bodies, in swamps (peat mud) and marshes or come into being after volcanic activity | (fango).

# Curative mud



# The beauty and charm of water in Estonia

## ➤ Contents



# Fountains

## ➤ Kissing students



## ➤ Kadrioru park



➤ Toila-Oru park





# Fountains in Pärnu (West Estonia)







# Usage of water economy

## ➤ Contents



# Water mill

- Water mill is a device for grinding grain using the power of water.



➤ Kohila water mill



# Water power station

- **Water power station (WPS for short) is a power station which produces electricity with the help of running water as a source of energy.**



- The renovated water power station at Keila-Joa





# Valaste waterfall

- Valaste waterfall gets its water from the Valaste stream. As the streambed has repeatedly been widened for the purpose of diverting excessive masses of water in spring, we may say that the highest waterfall in Estonia is practically man-made.



# Wells

- When people moved away from the big bodies of water around 3000 years BC, they had to learn how to dig wells. The earliest wells in Estonia originate from the end of the Iron Age. Before that and a lot later water was taken from springs, streams, rivers, lakes by bucket.
- [Contents](#)

➤ Shaft-well



➤ Heaving well



# Witch's well at Tuhala

- Scientists think that the Witch's well at Tuhala is one of the most unique wonders of nature in Europe. It is not an artesian well where the pressure is caused by groundwater. The depth of it is 2.4 meters and the water is a bit brownish because it comes from the marsh through openings in the ground. Water starts bursting out when all the space under it is already full of water. At the highest point the well expulses about 100 liters of water per second. What makes the well "boil" is the Tuhala River which flows under ground for 1.5 kilometers not far from the well. So. We may call the witch's well unique spring as well.

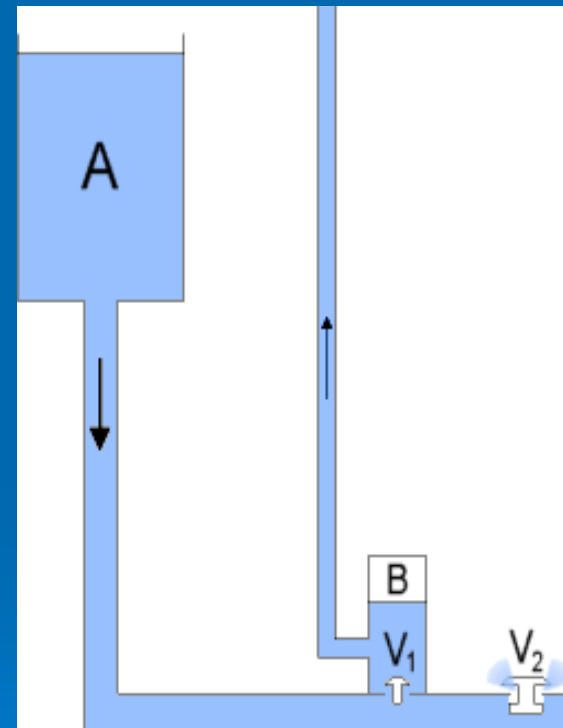


# “Water Ram”

- “Water Ram” is a device in which the hydraulic strike is used for raising water more than 50 meters.
- Such devices are mainly used in agriculture, for example supplying small houses with water.
- The pump was invented in 1780 by a Frenchman Joseph Michel Montgolfier.



- From the vessel A water flows along the pipe until the valve V2 and out of it. As soon as the water flow is big enough, the valve V2 shuts and because of the pressure of the water in the pipe the valve V1 opens. Water gets to the air reservoir B, air is pressed together and water in the pipe is risen upwards with a strike. After the strike the valve V1 automatically closes, the valve V2 opens again and a new strike follows.



# Artesian water

- Artesian water is underground pressure water which lies between two waterproof layers called series.
- It has got its name after a region in France, Artois , the Latin name of which was *Artesia*.
- An artesian well is a well in which water comes to the earth by itself.
- The cause of this phenomenon is the fact that at places the reservoir feeding the well with water is situated higher in the ground than the well itself. According to the principle of united vessels water gets to the ground by itself. There are some artesian wells in Estonia, too .



- 1. Artesian water
- 2. Waterproof layer
- 3. Precipitation
- 4. Artesian well
- 5. Level of groundwater
- 6. Well
- 7. Spring

