

CASE: LAKELAND - HOW TO DEVELOP INDUSTRIAL DISTRICT TO LAKELAND DISTRICT

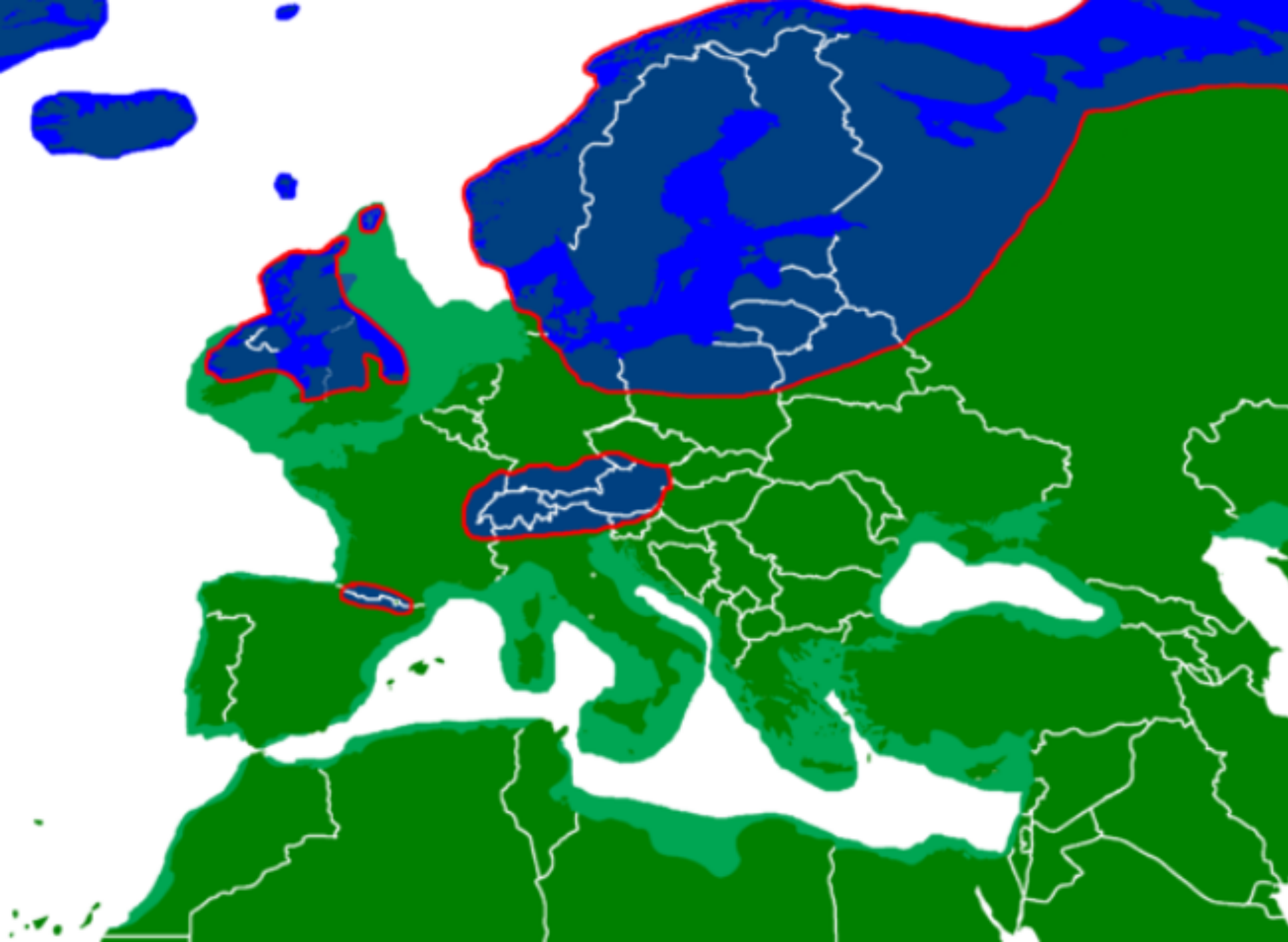
HEIKKI MÄKINEN

CEO

LAKE VESIJÄRVI FOUNDATION

LATEST GLASIAL PERIOD

116 000 -
10 000
YEARS AGO



THE LAND OF WATERS

187 888 lakes

total area 33 350 km²

314 000 km of shoreline

178 947 islands

22 085 springs

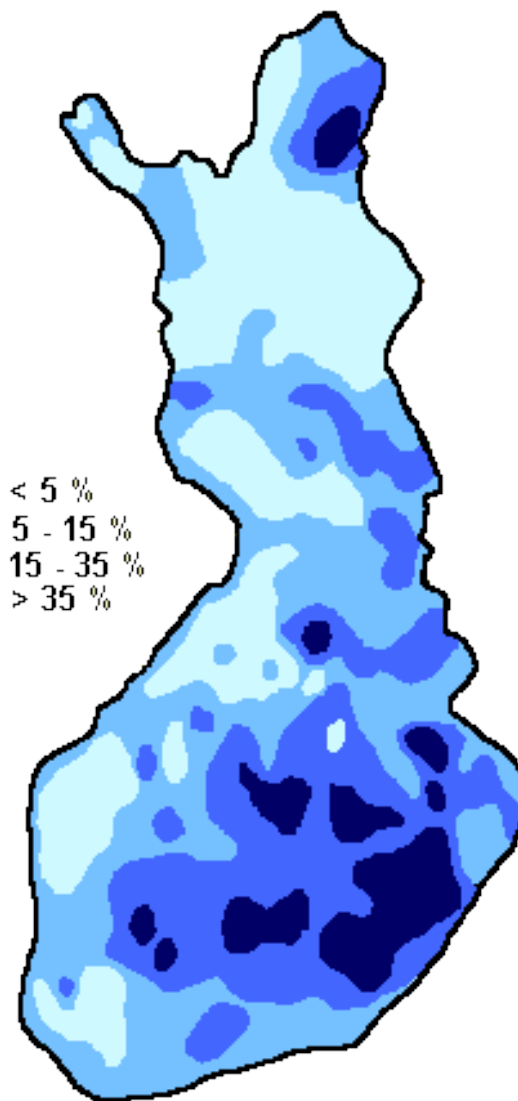
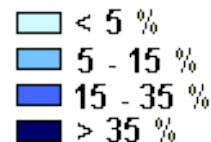
647 rivers

Freshwater reserves:

108 000 Mm³/a

21 000 m³/a capita

57 000 liter/d/person



Proportion of water in the area



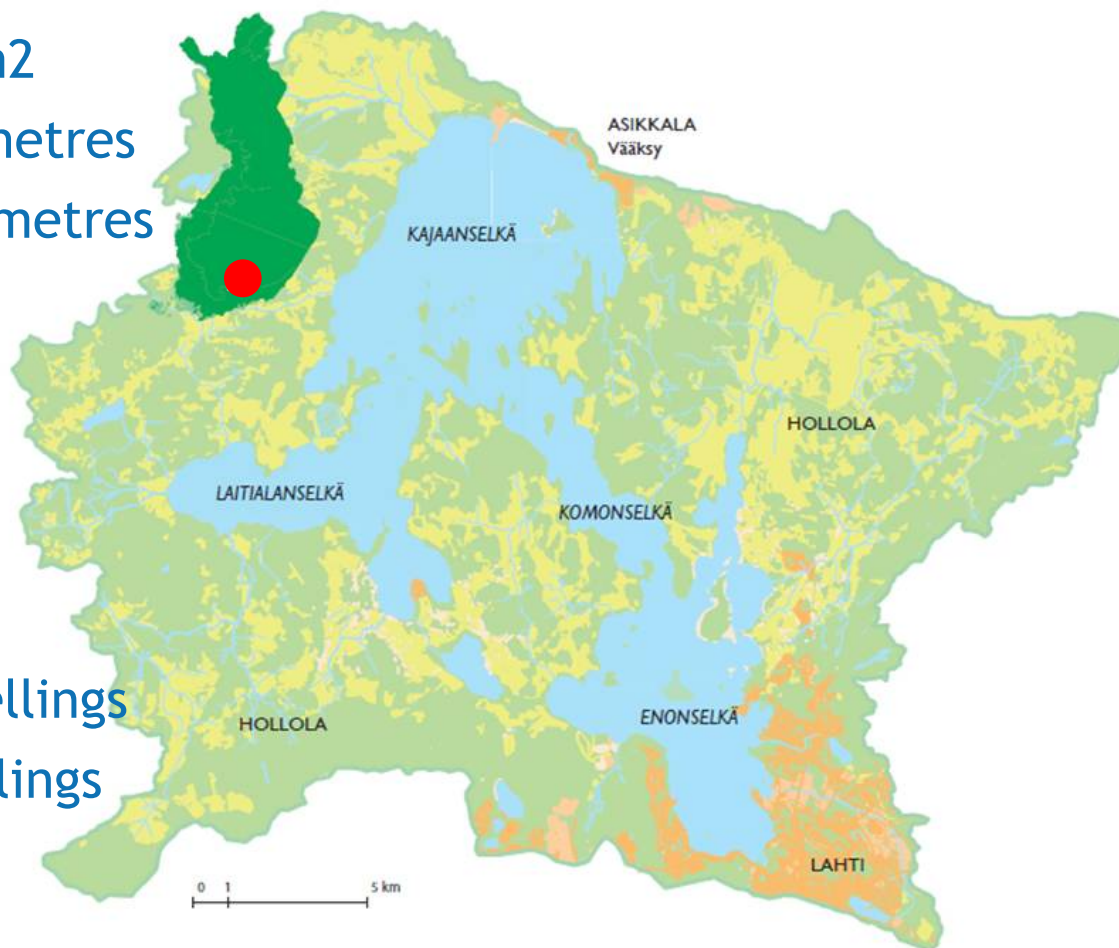
I  Vesijärvi

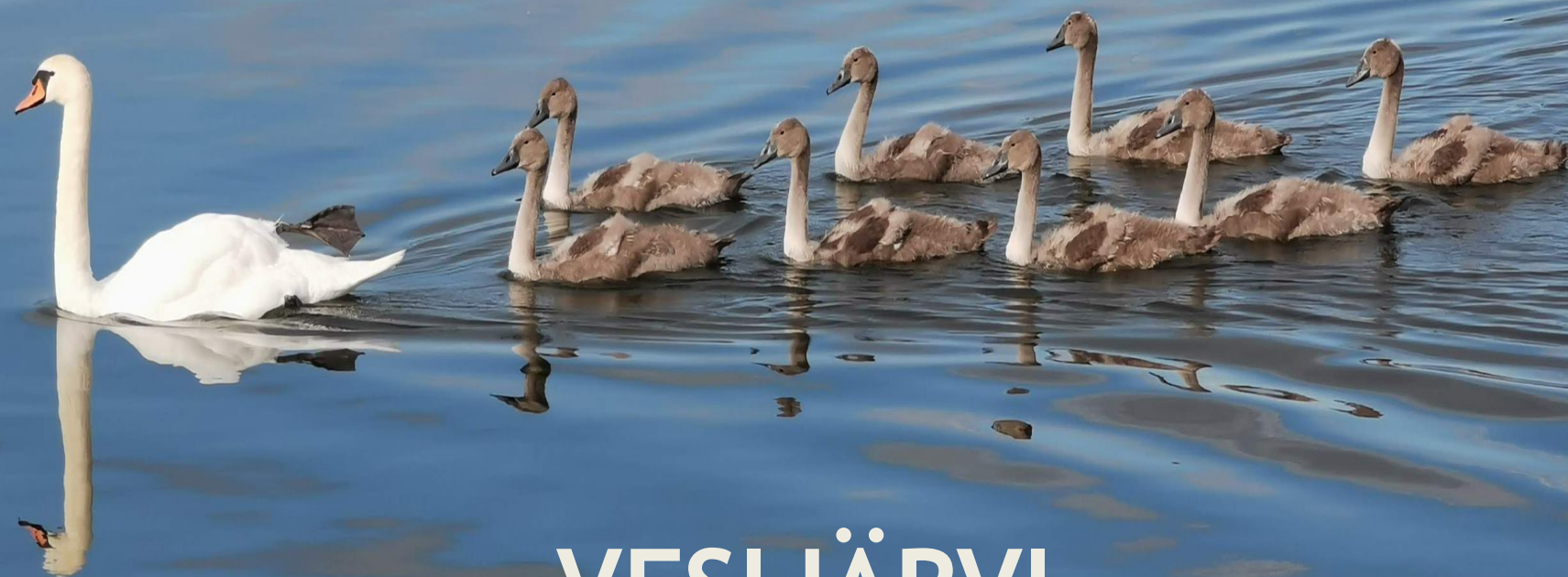
LAKELAND FINLAND

LAKE VESIJÄRVI

- 💧 The 44th largest lake in Finland
- 💧 Surface area of 109 km²
- 💧 Average depth of 6.0 metres
- 💧 Maximum depth of 42 metres

- 💧 181 km of shoreline:
 - 💧 45% forestry
 - 💧 33% seasonal dwellings
 - 💧 12.5% other dwellings
 - 💧 9.5% agriculture





VESIJÄRVI - A STORY OF A LUCKY LAKE

Photo: Matti Varis

100 YEARS OF WATER POLLUTION

Lumber is loaded onto the train from barges in Lahti Harbour in the beginning of the 20th century

Photo from the book ***Lake Vesijärvi Daughter of the Salpausselkä Ridges:***
Antti Pekkarinen, History of Lake Vesijärvi, p. 24.

Passagers hurrying
to the departing
boats.

I  Vesijärvi



Photo from the book ***Lake Vesijärvi Daughter of the Salpausselkä Ridges:***
Antti Pekkarinen, *History of Lake Vesijärvi*, p. 28.

VESIJÄRVI

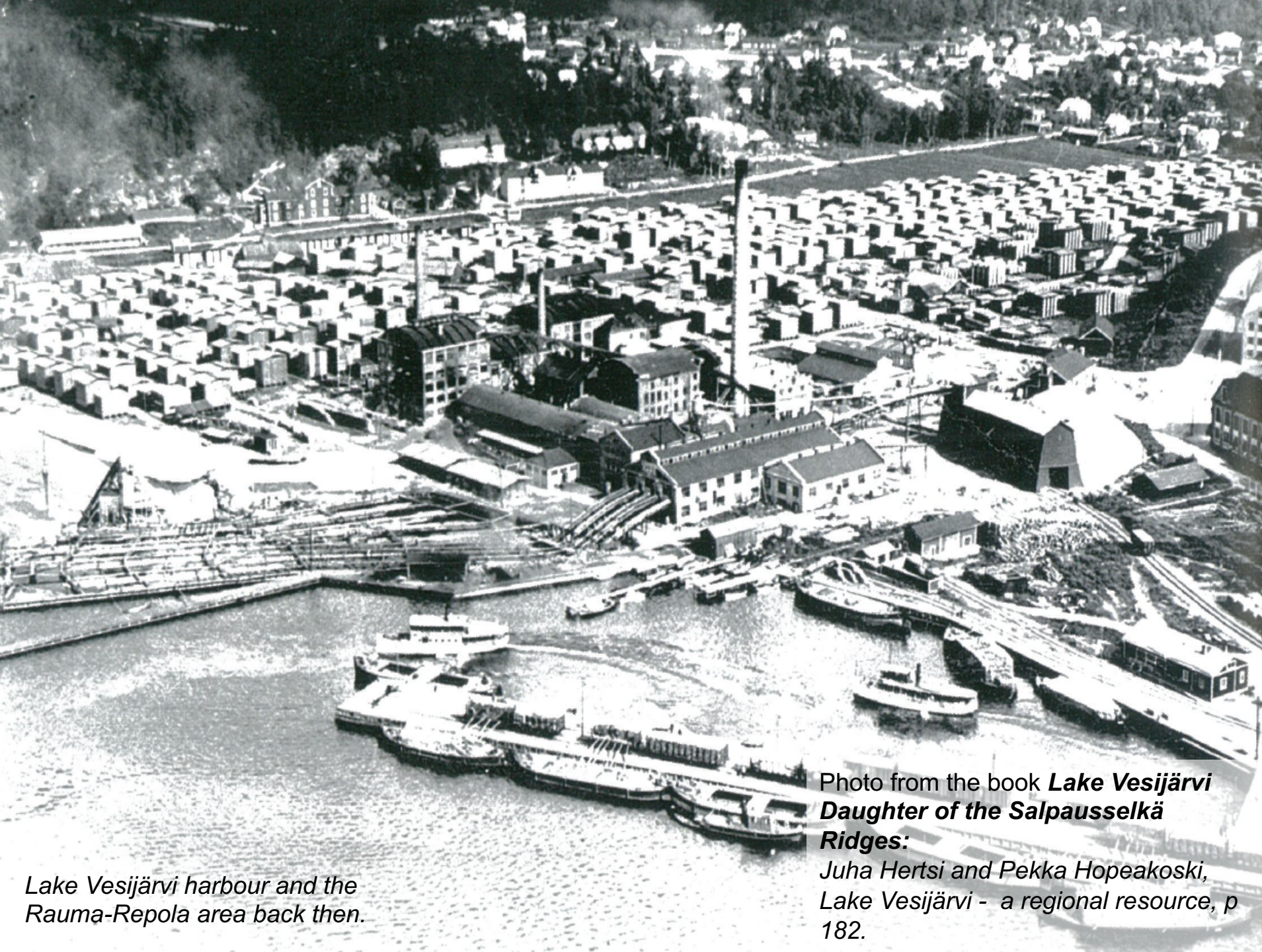
Fennia Faneri plywood mill in 1920s

INDUSTRY

Industry on the shore of
Lake Vesijärvi from
1869

Pulp, saw products,
furniture, matches etc.,





Lake Vesijärvi harbour and the Rauma-Repola area back then.

Photo from the book ***Lake Vesijärvi Daughter of the Salpausselkä Ridges:***
Juha Hertsi and Pekka Hopeakoski,
Lake Vesijärvi - a regional resource, p 182.

GROWTH OF THE CITY

- People in the Vesijärvi region since prehistoric times
- Lahti: township in 1878
- Lahti: independent city in 1905 (population < 3000)
- Population grew fast, especially after the Second World War

Sewage:

- First waterworks in 1908 (with sewage drains)
- First sewage treatment plant for 5000 persons on the shore of Pikku-Vesijärvi in 1910.
 - Modern at that time, but Pikku-Vesijärvi got polluted
- New biological treatment plant for 10 000 persons was built on the shore of Teivaala in 1931.
 - Soon too small!
 - Sewage load discharge close to swimming place, which had to be closed in early 1940...
- Kariniemi treatment plant in 1975 as well as tunnel under the city leading the sewage load to Porvoonjoki instead of Vesijärvi.
 - The sewage loading from the city to Lake Vesijärvi ended in April 1976.




Photo from the book ***Lake Vesijärvi Daughter of the Salpausselkä Ridges:***

Juha Hertsi and Pekka Hopeakoski, Lake Vesijärvi – a regional resource, p. 181.

- *Heikki Järnefelt in 1925-1927: Clear signs of cultural eutrophication in the southern end of Lake Vesijärvi (especially the pulp mill effluents, sewage from the town of Lahti)*
- *Nils Hagman 1945: amount of phytoplankton has increased. Impact of the waste waters expanded to the entire region*
- *Harry Cajander 1950s: no fundamental deterioration*
- *Paavo Seppänen 1960s: Deep areas of the lake have 10 m thick layer of black, anoxic water.*
- *Reino Ryhänen: According to the biological and chemical observations Lake Vesijärvi had deteriorated substantially during the period 1925-1960.*
- *In 1960-75: Large scale oxygen deficiency in deep areas, supersaturation in surface water: pH rose even up to 9.*
- *Eutrophication proceeded fast also in the northern parts of the lake in 1960s*

During 1970s Lake Vesijärvi was the most polluted large lake in Finland

**WHAT DID
ALL THIS DO
TO THE LAKE?**

Photo from the book *Lake Vesijärvi Daughter of the Salpausselkä Ridges:*
Juha Keto, Fishing in the old days, p. 39.

1960`S -1970`S



SHORT HISTORY OF WATER PROTECTION IN FINLAND I

- 💧 Efficient treatment of industrial and municipal waste waters started in 1970`s
- 💧 Integrated water resources management plans in the 1970`s and 1980`s
- 💧 Ministry of Environment was established in the 1980's
- 💧 Four national Water Protection Programmes since 1974, the latest adopted in 2006

Mukkula 1988



Enonsaari 1989



Paimelanlahti 1992

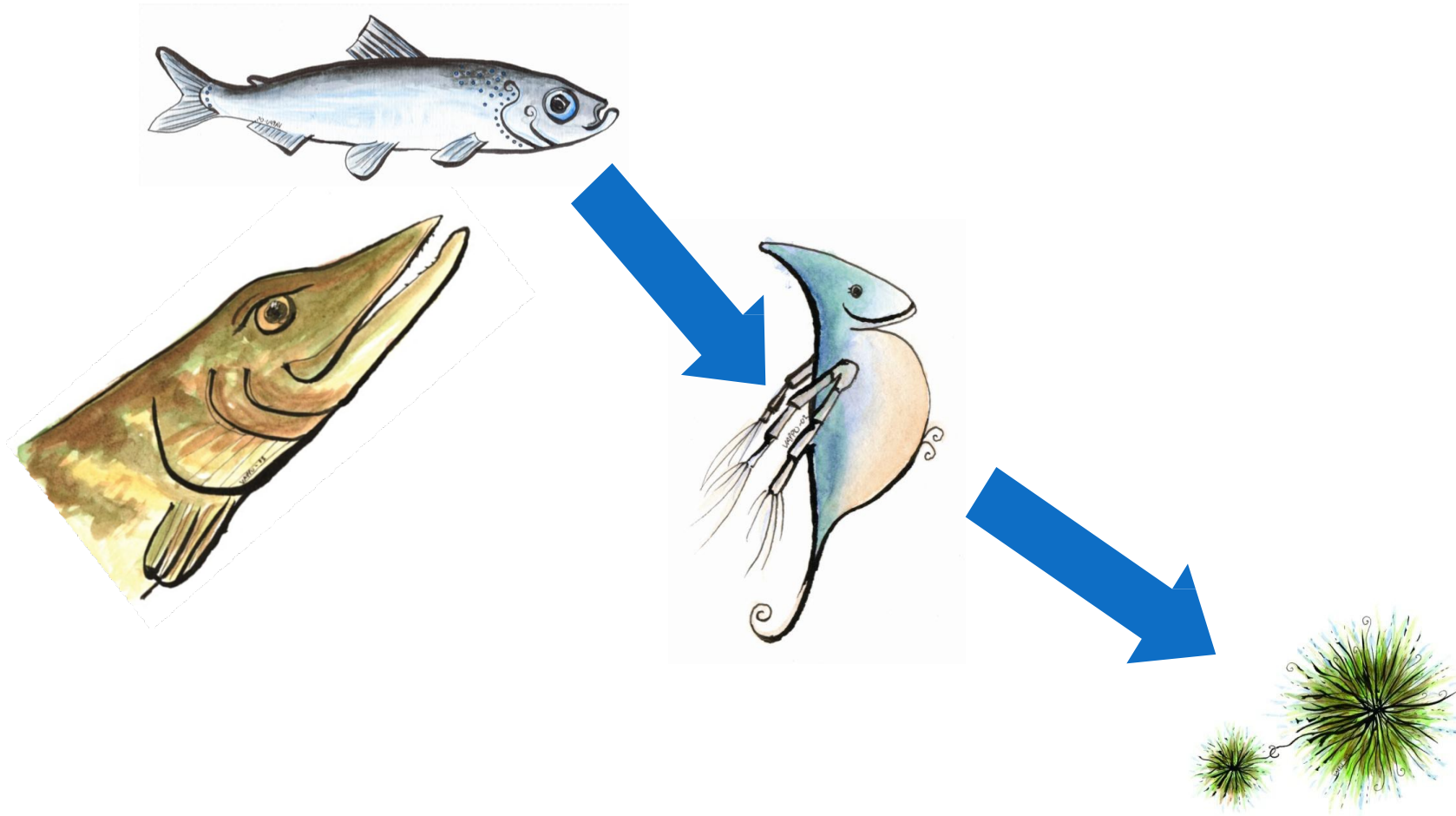


BIOMANIPULATION (MANAGEMENT FISHING)



FOOD WEB

I  Vesijärvi



SHORT HISTORY OF WATER PROTECTION IN FINLAND II

- 💧 In the 21st century, EU directives have provide framework for the water pollution prevention and management: Water Framework, Marine Strategy Framework, Nitrate, Groundwater, EQS, Urban Waste Water etc.
- 💧 River Basin Management Plans covering all surface and groundwater areas

CYANOBACTERIAL BLOOMS IN A CITY HARBOUR 2006



LAKE VESIJÄRVI FOUNDATION

Established 2007

Combination of public and private resources

Secure funding for research, maintenance and management efforts

Improve the awareness of Lake Vesijärvi

Promote efforts to improve water quality in Lake Vesijärvi

FOUNDER BODIES OF LAKE VESIJÄRVI FOUNDATION

City of Lahti
Municipality of Hollola
Municipality of Asikkala
Society of Industrial Enterprises in Lahti,
Press company Esan kirjapaino Ltd and a
Welding company Kemppi

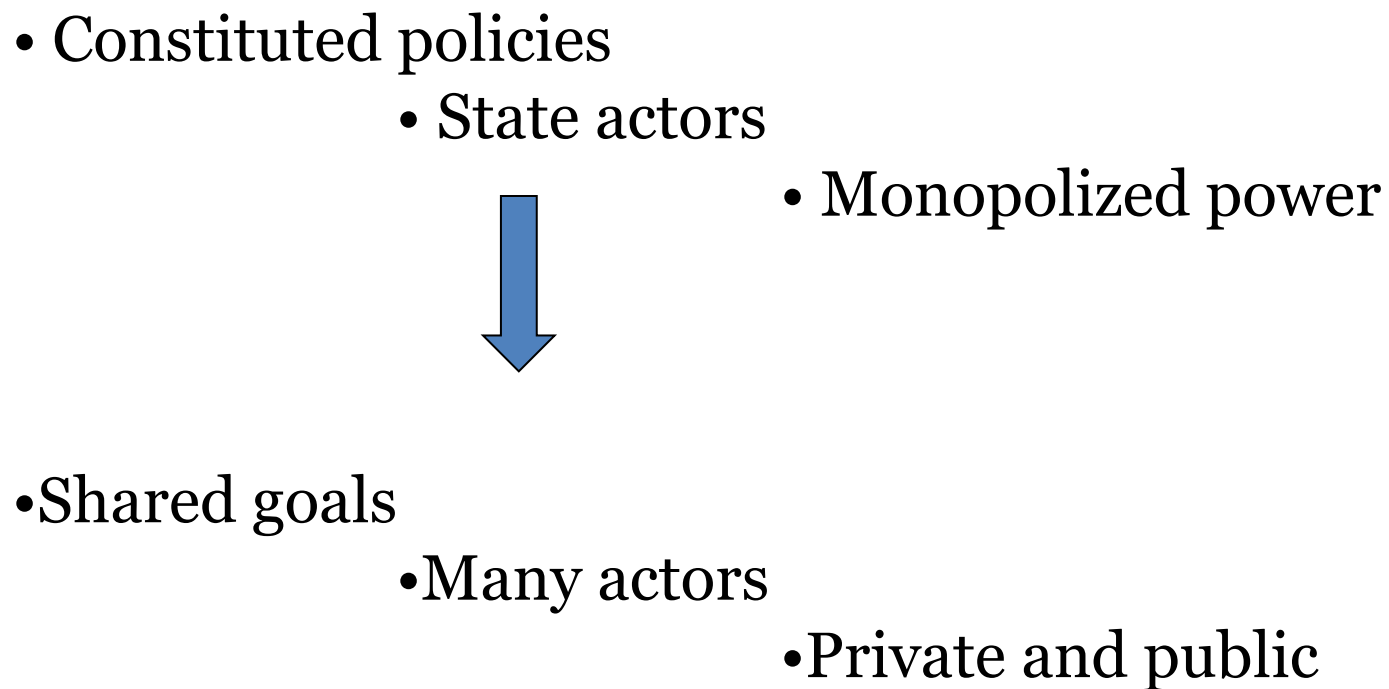
FROM GOVERNING TO GOVERNANCE

GOVERNANCE HAS MANY MEANINGS

- 💧 Good governance/ La bonne gouvernance
- 💧 Global governance
- 💧 Corporative governance
- 💧 Governance/ New public management
- 💧 Societal governance

(Pierre 2000)

SOCIETAL GOVERNANCE



NEW PLAYERS IN THE FIELD - MORE RESOURCES

Private enterprises
Lions Clubs, Rotary Clubs
Hunters organizations
Musicians
Artists
Local media



Illustration: Learning together to manage
together/ HarmoniCOP- project

PRIVATE ENTERPRISES AND COMPANIES SUPPORTING THE WORK

ETELÄ-SUOMEN SANOMAT



 HÄMEENMAA



HARTWALL



DO YOU WANT TO SEE UNDER THE WATER?



I  Vesijärvi

Haluatko nähdä pinnan alle?


Vesijärvi on muutakin kuin kaunista pintaa. Auta Vesijärveä pysymään puhtaana osallistumalla keräykseen. Lähettämällä tekstiviestin brädi2 lahjoitat 2 € tai brädi5 lahjoitat 5 €. Lähetä viesti numeroon 16155.

PAIKITTUUN KÄYTTÖÖN
Päij Hänen
LÄHETÄ
uponor
KEMPI
ilme
Fazer
BE GROUP
BUSINESS

UUTISSET SPORT VIHDE LIFESTYLE +

Tangokuningatar poseeraa sensuellina hyvän asian puolesta kuva

VIHDE / AKAASIA 25.09.2013 17:13 (PÄIVITTY 25.09.2013 17:15)



Tangokuningatar Heidi Pakarinen

Tangokuningatar Heidi Pakarinen, hiihtäjä Aino-Kaisa Saarinen ja räppäri Brädi poseeraavat ylösottamiseksi hyvän asian puolesta.

ILTA-SANOMAT **MAASTOHIIHTO**

Etusivu Uutiset Viihde Urheilu Sää ISTV Talous Lifesty

Jääkiekko Jalkapallo Formula 1 Ralli Yleisurheilu Ravit Pesäpallo Tennis Pokeri Tulospalvelu

Mäkihyppy **Maastohiihto** Yhdistetty Ampumahiihto Alppihiihto Lumilautailu Freestyle

Aino-Kaisa Saarinen riisuutui Vesijärven puolesta



Julkaistu: 24.9.2013 15:12

Suosittelu Jaa 397

Hiihtäjä Aino-Kaisa Saarinen on mukana rohkeassa kampanjassa Vesijärven suojelemiseksi.

Saarinen poseeraa Vesijärvisäätiön mainoksessa Lahden seudun suurimmassa järvessä seisten.

Mainostoimisto Ilmeen suunnittelemassa kampanjassa on mukana kaksi muutakin tunnettua päijätähämäläistä, tangokuningatar **Heidi Pakarinen** ja räppäri **Brädi**.

Google-mainokset

Woodsman.fi
Metsä- ja puutarhakoneiden erikoisliike. Tutustu valikoimaan!
www.woodsman.fi

Rosebikes online
Suuri valikoima pyöriä, tarvikkeita Huippulaatu. Nopea & varma toimitus
rosebikes.fi/bikeshop

MANAGEMENT ACTIVITIES

LAKE VESIJÄRVI MANAGEMENT PLAN

- Communication activities
- Lake restoration measures
- Operations on drainage basin
- Research activities
- Thematic programs and plans
- Monitoring activities

OBJECTIVE OF LAKE VESIJÄRVI PROGRAMME

Reaching **good status** (as specified in the EU Water Framework Directive)

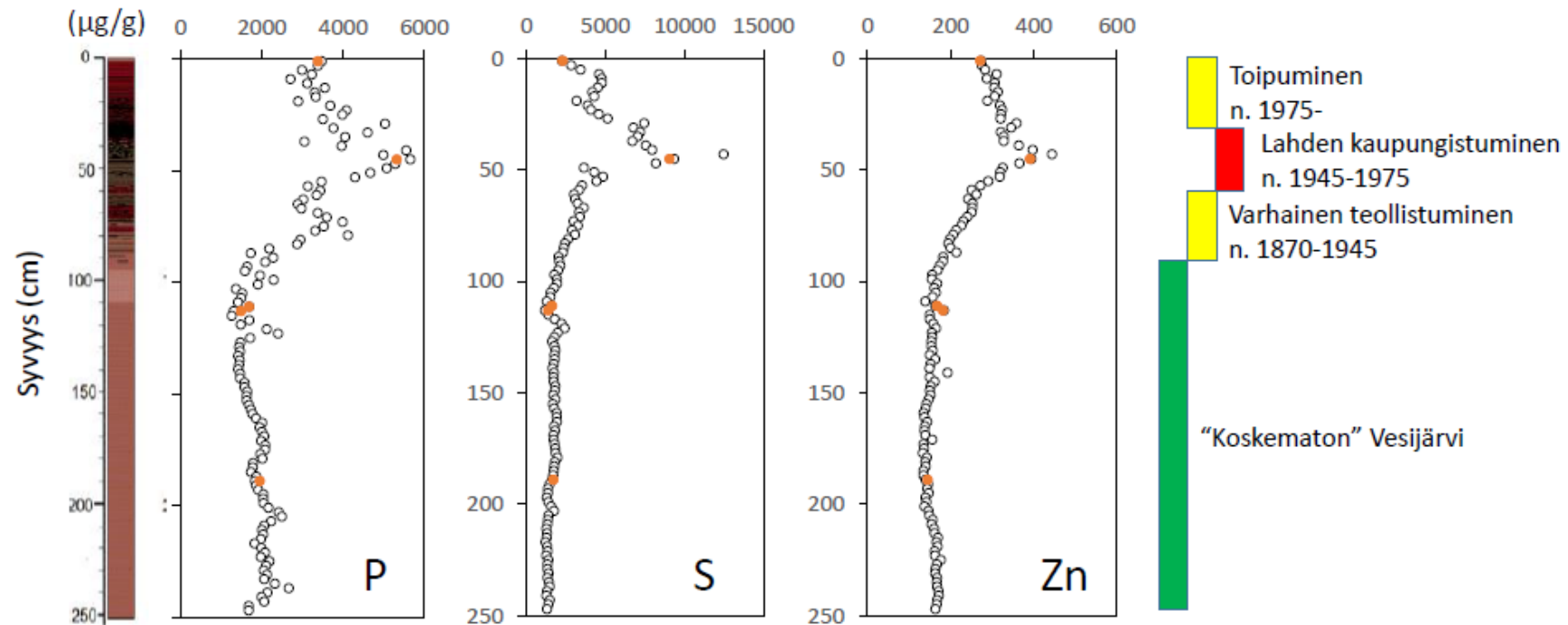
Making sure the lakes within the Lake Vesijärvi Foundation's region are versatile in recreational value:

- ◆ water is clean and clear
- ◆ no extensive algae bloomings
- ◆ diverse fishstock
- ◆ large populations of fish good for recreational fishing
- ◆ enough water plants in the right places
- ◆ beaches good for swimming

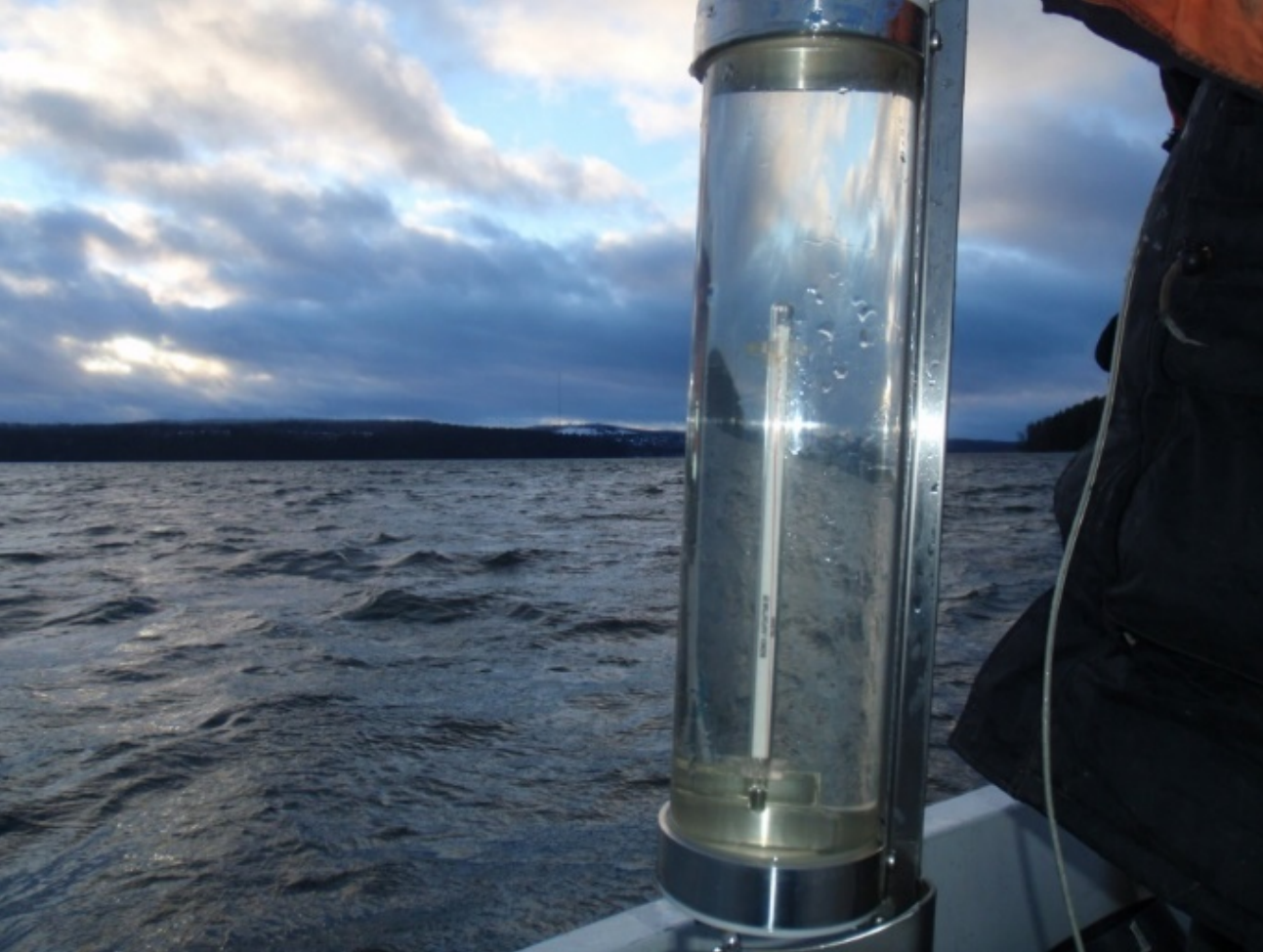


**WE HAVE ACHIEVED A
LOT...**

WHERE ARE WE NOW?



Tom Jillbert/ Helsinki University



I  Vesijärvi



www.vesijarvi.fi



[\(111\) Vesijärvi-kuvakooste 2018 - YouTube](#)

LESSONS LEARNED

- 💧 Water management requires the efforts of a large number of various operators
- 💧 Local sense of environmental responsibility is needed and it can be raised by
 - 💧 Co-operating actively with people having long history with Lake Vesijärvi
 - 💧 Emphasizing mitigation measures which connect local people together
 - 💧 Providing interesting and motivating environmental education

Collating public and private funding requires

- Large effort on networking and dissemination

- Long term targets which will be achieved step by step

Proper scientific and technical know how requires

- Long and successful co-operation with universities and research organisations

- Right people in right places

Organizations like the Lake Vesijärvi Foundation can be a way to organise the manifestation and actualisation of collective environmental responsibility

Experiences gained in this framework can be utilised in European water policy framework and worldwide

A wide-angle photograph of a calm lake at dawn or dusk. The water is a deep blue, reflecting the clear sky and the surrounding landscape. In the middle ground, a small, rocky island is covered with a dense forest of tall, green trees. The island's reflection is clearly visible in the water. To the left, a layer of white mist or fog hangs over the water, partially obscuring the distant shoreline. The sky is a pale, clear blue. The overall mood is peaceful and quiet.

Thank you!



Ask, comment and share your thoughts
Website screen.io/visitlahti

Twitter #sdc21

