

MONITOR2020

**VOLUNTARY MONITORING
HAS CHANGED**

**Juhani Kettunen and Jari Silander
SYKE**



SYKE

BACKGROUND

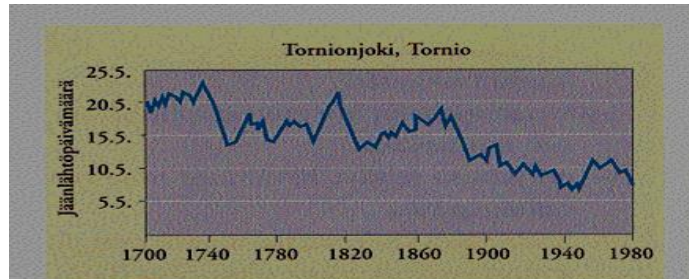
A chapter in:

Capineri, C., Haklay, M., Purves, R., Kettunen, J., Antoniou, V. and Huang H., (2015):

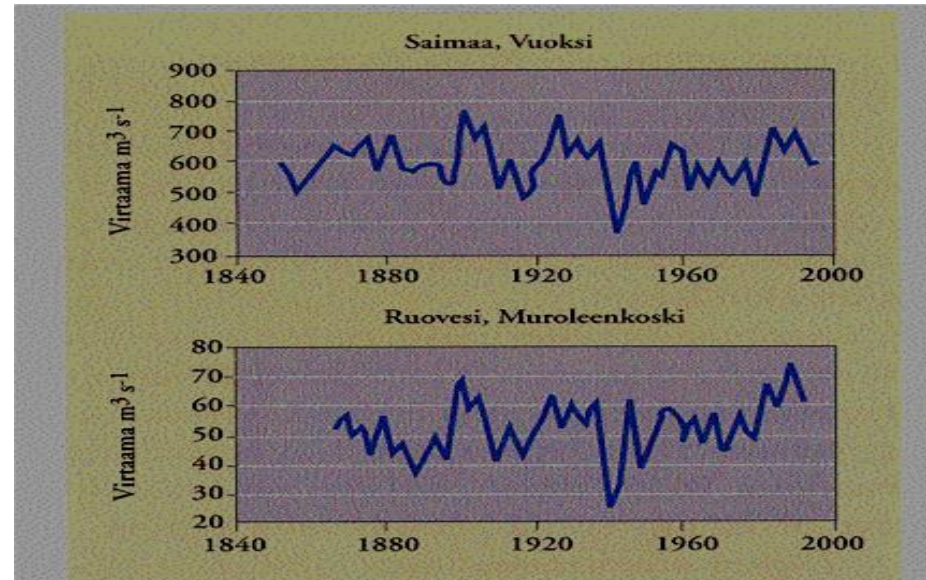
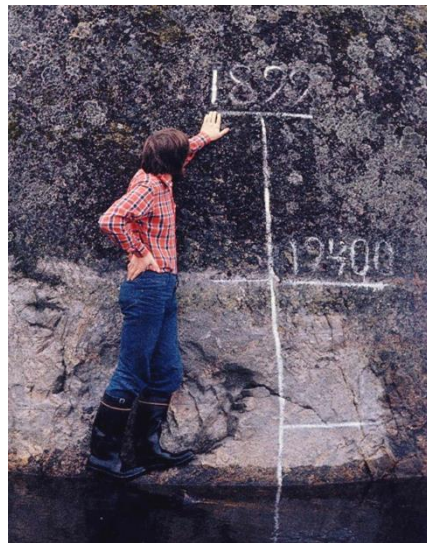
European handbook of crowdsourced geographic information,
Ubiquity Press, London (In process)



"CITIZEN MONITORING" IS NOT NEW



Ice-break-up, Tornionjoki from 1693
(here: 15-year averages)



Hydrology from 1910's
Birds from 1910's
Forests from 1920's
Water quality 1910's–1930's, 1960's-

EARLIER EVERYTHING WAS EASY & STRAIGHTFORWARD

- MONITORING WAS DESIGNED AND PROGRAMMED BY RESEARCH INSTITUTES
- DATA WAS COLLECTED BY **SKILLED** VOLUNTEERS OBEYING
 - STRICT FIELD DESIGNS
 - WRITTEN PROTOCOLS
- DATA ANALYSIS WAS DONE BY THE INSTITUTES
- POSSIBLY, SMALL PREMIUMS WERE PAID TO EITHER ASSOCIATIONS OR INDIVIDUALS
- THE WHOLE OF THE COUNTRY WAS COVERED

GRADUAL DECAY OF OLD SYSTEMS (FROM LATE 1970'S)

- DIFFICULTIES TO FIND VOLUNTEERS
 - Hydrology, Birds, Animal abundance, Butterflies
- LACK OF LONG TERM COMMITMENT/STANDBY
 - All fields of monitoring
- LACK OF WILLINGNESS TO OBEY STRICT DESIGNS AND PROTOCOLS
 - All fields of monitoring

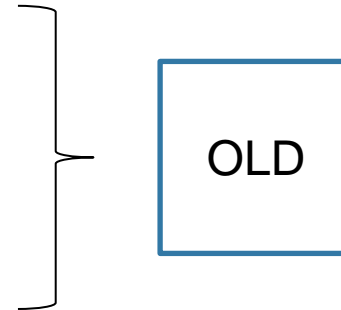
WHAT CAUSED THE CHANGE

- URBANIZATION
 - No new recruits in the countryside
 - No more 100-year histories
- AGEING
 - Gradual decrease in number of volunteers
 - Up to 1970's birdwatchers were male amateur naturalists
- GLOBALIZATION
 - Local, regional or national was not sufficient
 - The number of obligations grow too high
- TECHNOLOGY
 - Voluntary information needed to complement other sources (remote sensing, automation,
 - Citizen science is born around the new technology
- EDUCATION

COMPARISON OF TRADITIONAL AND NEW SYSTEMS

Analysis of 8 case studies

- Hydrological monitoring
- Bird watch
- Butterfly watch
- Abundance of game animals



- Algal watch
- Lake&SeaWiki
- JellyFishWatch
- BeachLitterWatch



CHEERING UP OF OLD SYSTEMS AND BIRTH OF NEW

- VOLUNTEERS ARE BACK AGAIN
 - CAMPAIGNS (e.g. Big garden watch)
- NUMBER OF VOLUNTEERS BIGGER THAN EVER
 - Birds and butterflies are a family thing
 - Gamification (e.g. Battle of bird towers, Geocaching)
- NEW GROUPS APPEAR FREQUENTLY
 - JellyFish (sailing clubs)
- SOCIAL MEDIA IS EFFICIENT



THE WIKI ABOUT FINNISH LAKES AND SEA AREAS

Check out what's in here about your nearby waters

AND COMPLEMENT WITH KNOWLEDGE YOU HAVE

Search

lake or marine area



Suomi Svenska English

Page Discussion View source History

Main page

What is Järviwiki?

Lakes by

Sea areas

Plants and animals

Observations

Interaction

Toolbar

Järviwiki is about Finnish lakes and sea areas

Järviwiki (Lakewiki) is a web service which is built and maintained in cooperation by authorities and common people. In Järviwiki there is basic information of each Finnish lake over 1 ha in extent and tools for sharing ie. observations and pictures.

In addition to the Finnish lakes, the different parts of the **Baltic Sea** are also present. You might as well upload observations and other information for marine areas as for lakes. [More >](#)

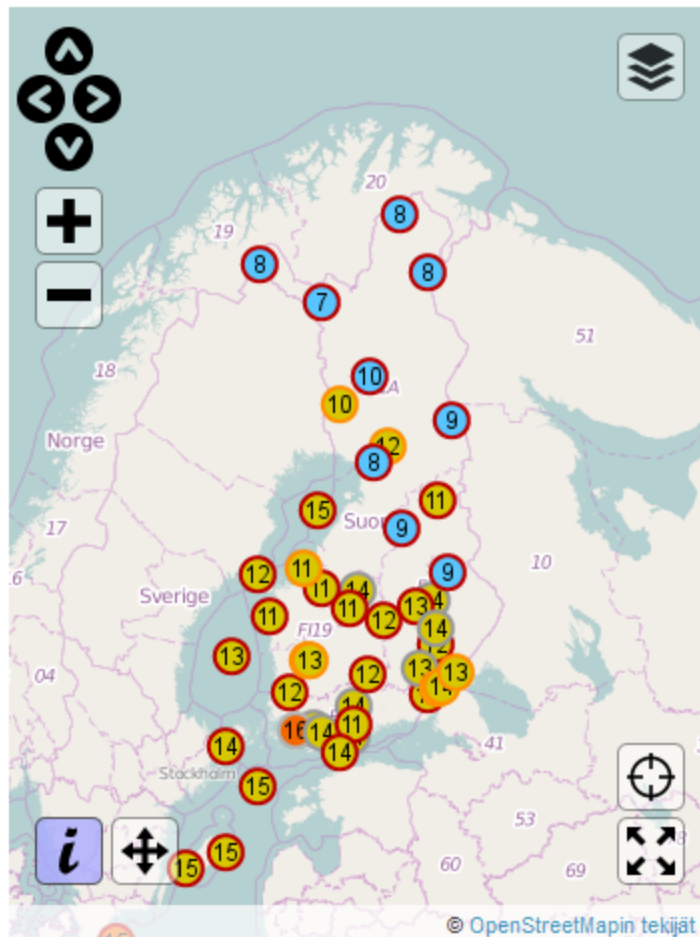
Water temperature



Algal blooms

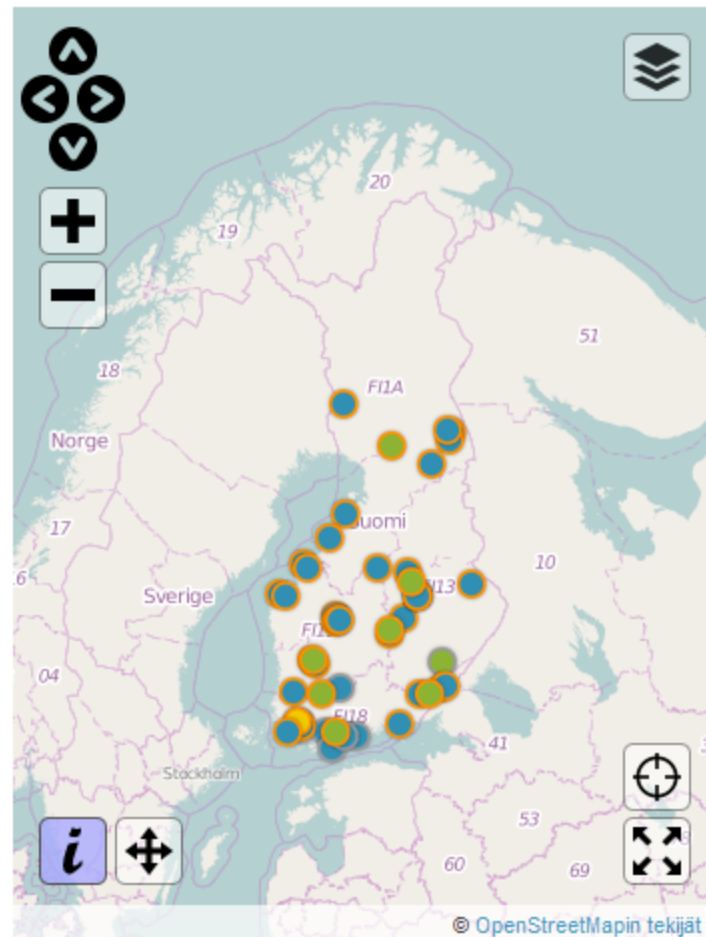


Water temperature



● < 10 °C ● 10-15 °C
● 15-20 °C ● > 20 °C

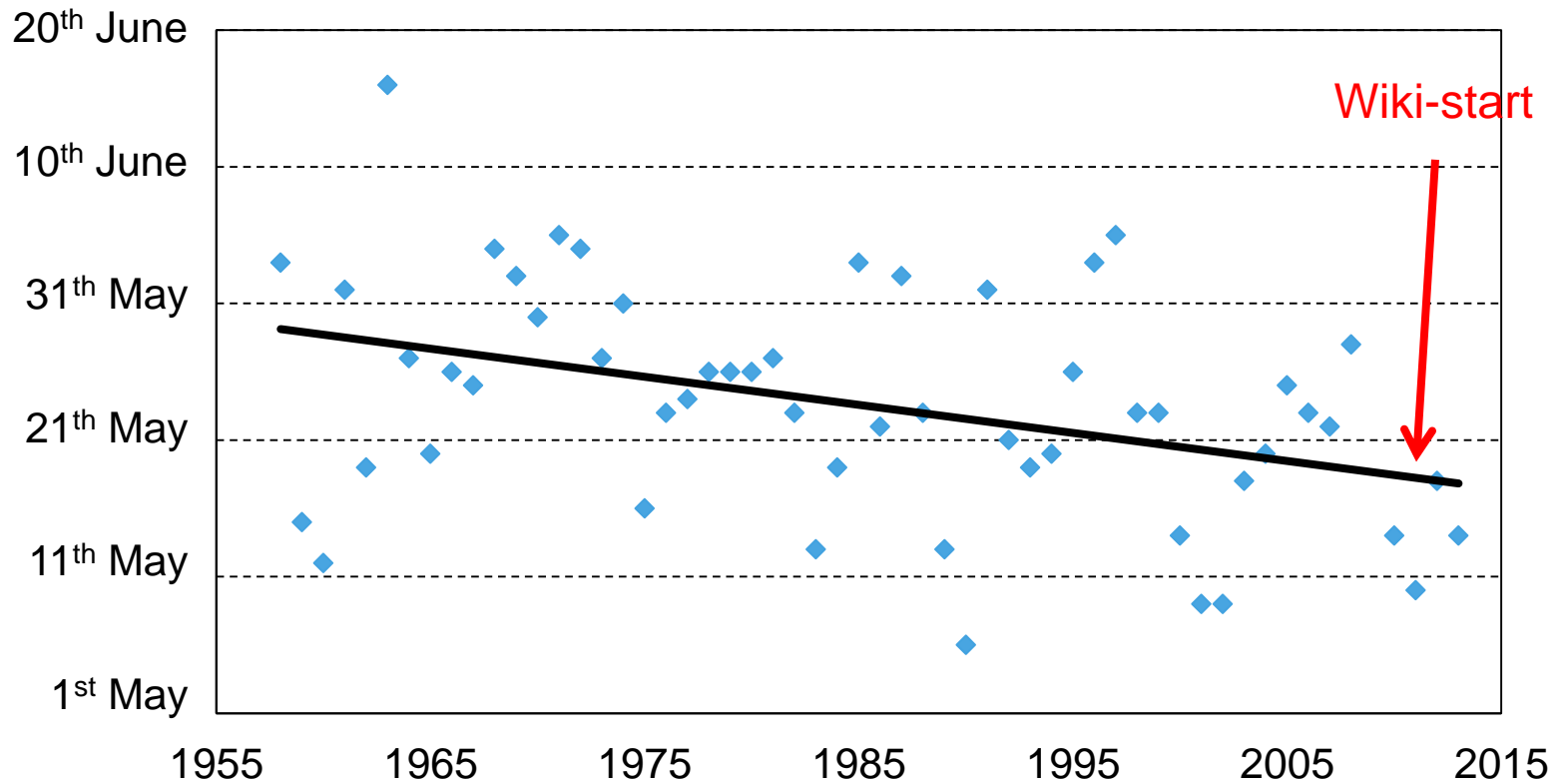
Algal blooms



● Ei levää ● Hieman ● Runsaasti
● Erit. runsaasti



A fisherman's/descendants observation site : a lake's ice break-ups since 1958



From :

[http://www.jarviwiki.fi/wiki/Torankijärvi_\(74.031.1.023\)/Haapanantien_ranta](http://www.jarviwiki.fi/wiki/Torankijärvi_(74.031.1.023)/Haapanantien_ranta)

Thank you