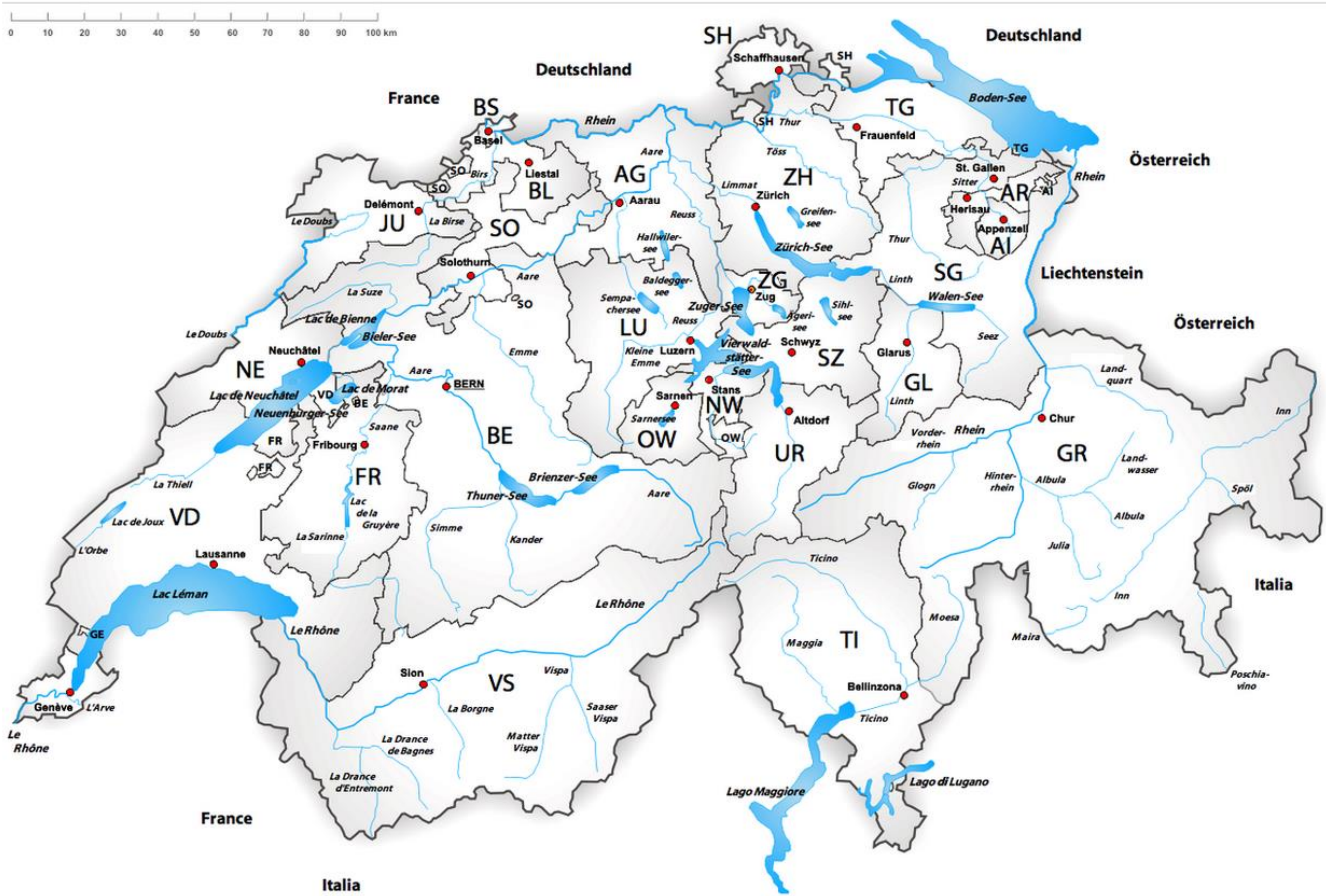
River Mapping and Monitoring for People and Clean Energy

Project from Voluntary People

Daniele Scopece
(living in Zurich)
GovTech Hackathon, Bern, 2023-03-23/24

Context

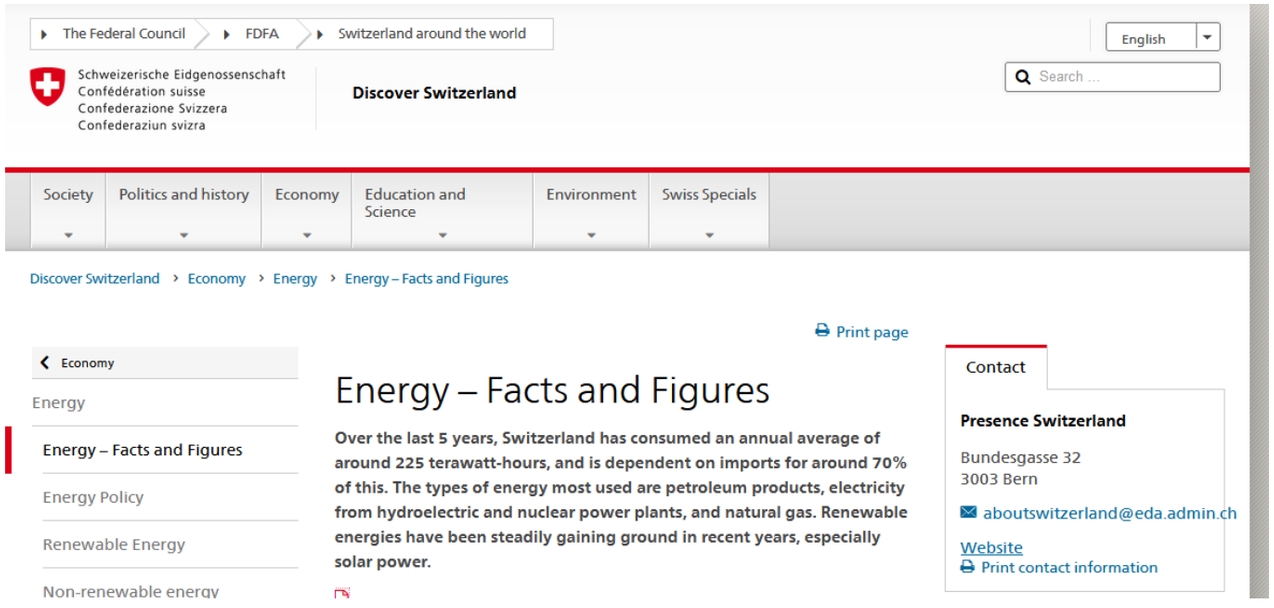


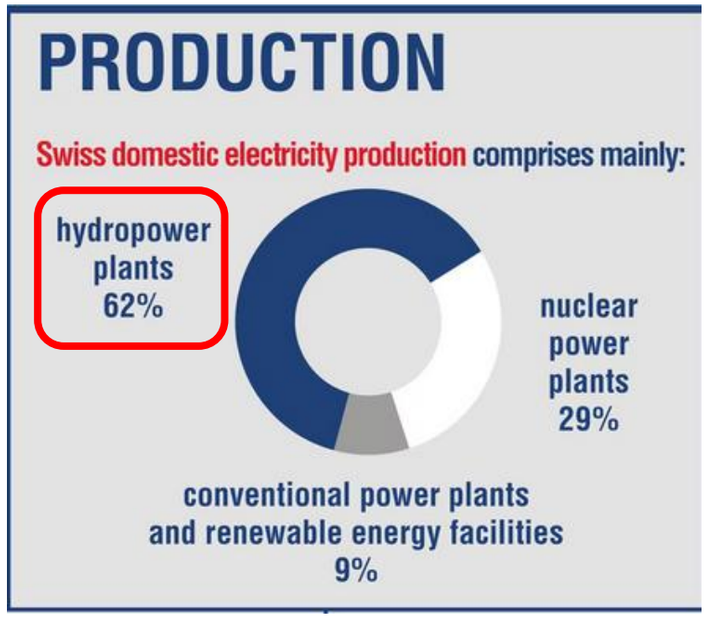
0 10 20 30 40 50 60 70 80 90 100 km
Deutschland
France
Österreich
Liechtenstein
Italia
SH
Schaffhausen
BS
Basel
BL
Liestal
AG
Aarau
ZH
Zürich
TG
Frauenfeld
JU
Delémont
SO
Solothurn
St. Gallen
Herisau
Appenzell
AR
AI
SG
ZG
Zug
LU
Luzern
SZ
Schwyz
GL
Glarus
NE
Neuchâtel
BERN
BE
NW
Stans
OW
Sarnen
UR
Altdorf
FR
Fribourg
GR
Chur
VD
Lausanne
GE
Genève
VS
Sion
TI
Bellinzona
Rhein
Aare
Reuss
Limmat
Thur
Töss
Emme
Boden-See
Zürich-See
Walen-See
Zuger-See
Vierwald-stätter-See
Bieler-See
Lac de Bienne
Lac de Neuchâtel
Neuenburger-See
Lac de Morat
Brienzer-See
Thuner-See
Lac Léman
Le Rhône
Lago Maggiore
Lago di Lugano
Ticino
Maggia
Inn
Albula

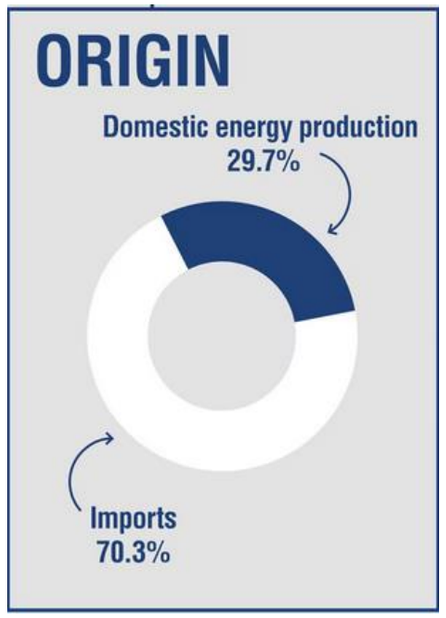
Rivers for People

Rivers for Clean Energy

https://www.eda.admin.ch/aboutswitzerland/en/home/wirtschaft/energie/energie---fakten-und-zahlen.html







Rivers for Clean Energy

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

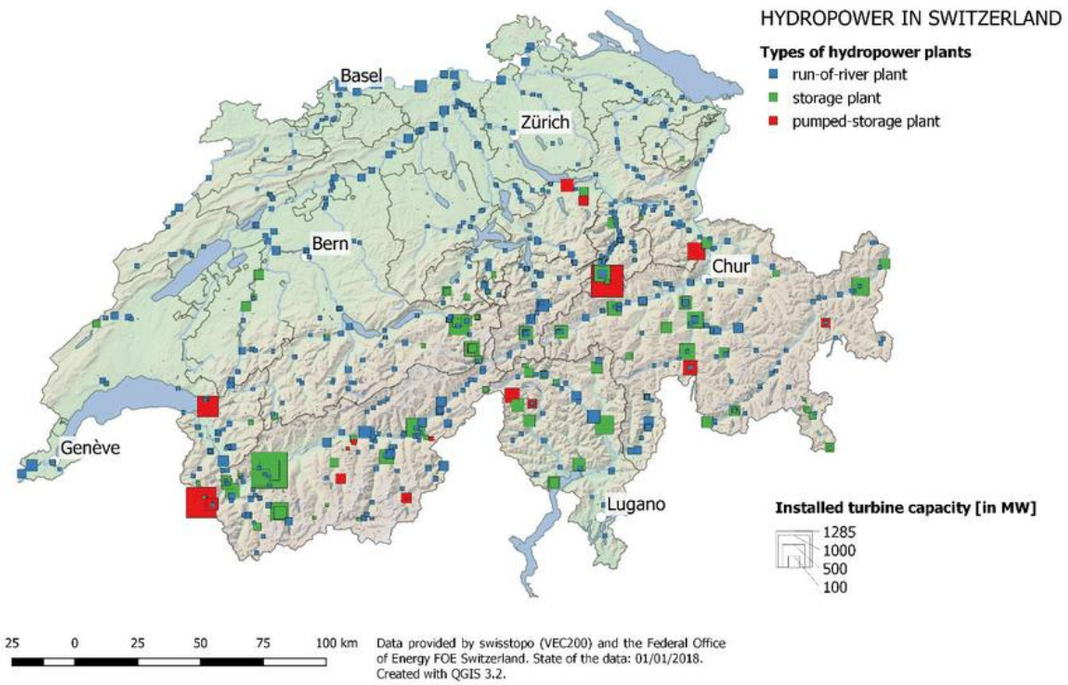
Swiss Federal Office of Energy

Context sidebar

Energy Strategy 2050

Expand the Hydroelectric production

Hydro power in Switzerland as of 2018



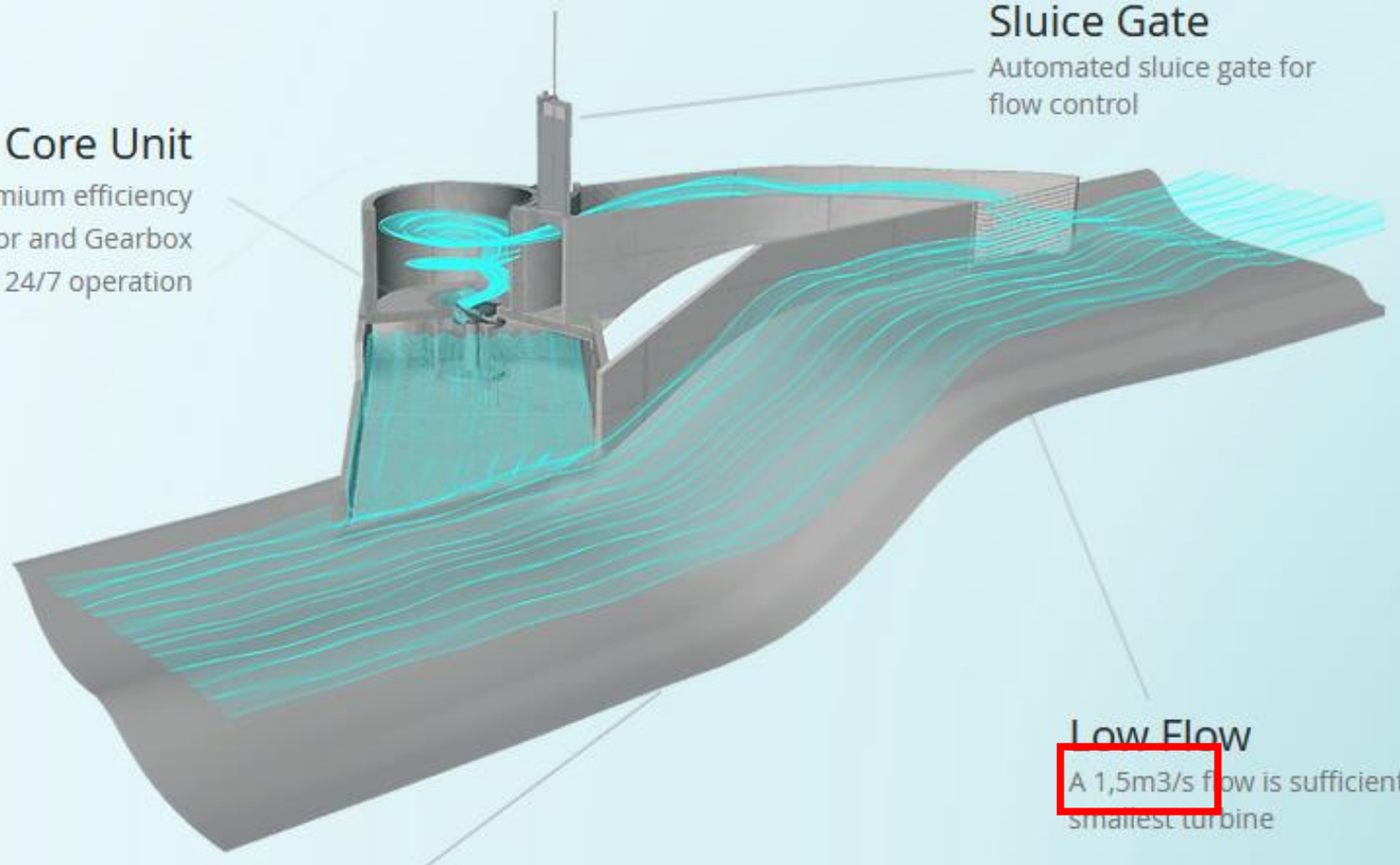
$$$

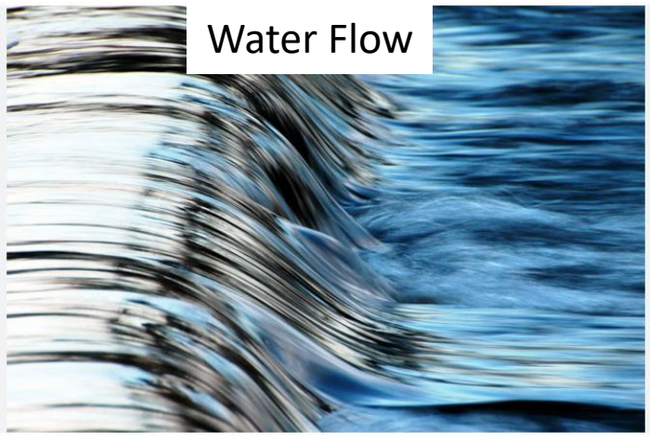
Rivers for Clean Energy Everywhere

https://www.turbulent.be/

The Vortex Turbine

An eco-friendly way to harness energy from rivers and canals with a low height difference, as a standalone project or a cluster of turbines powering entire regions. A single turbine can generate from 15 to 70 kW of constant energy around the clock.



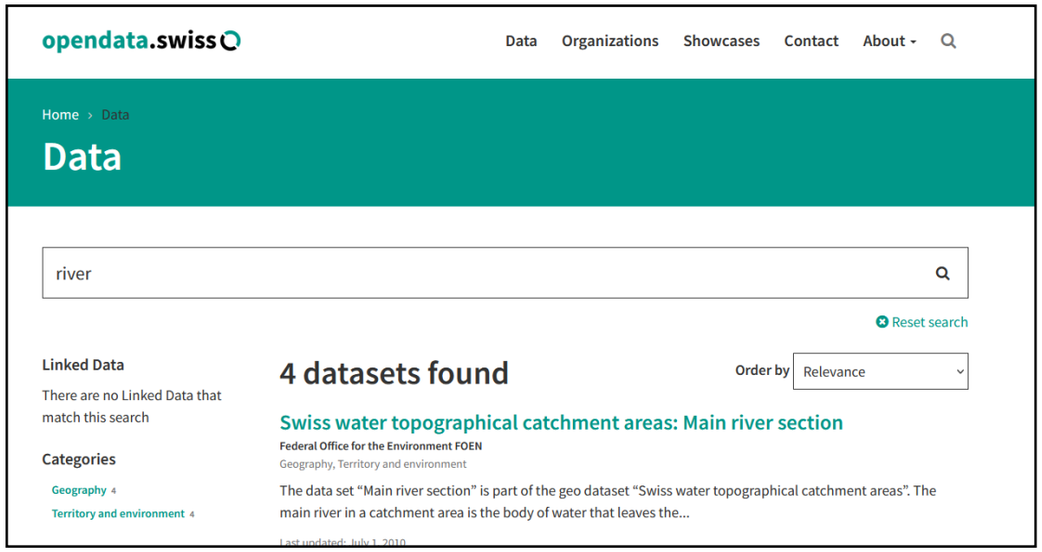


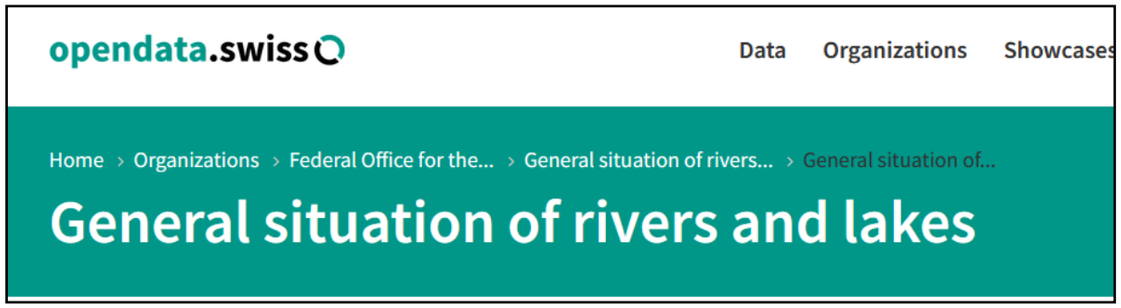
Problems

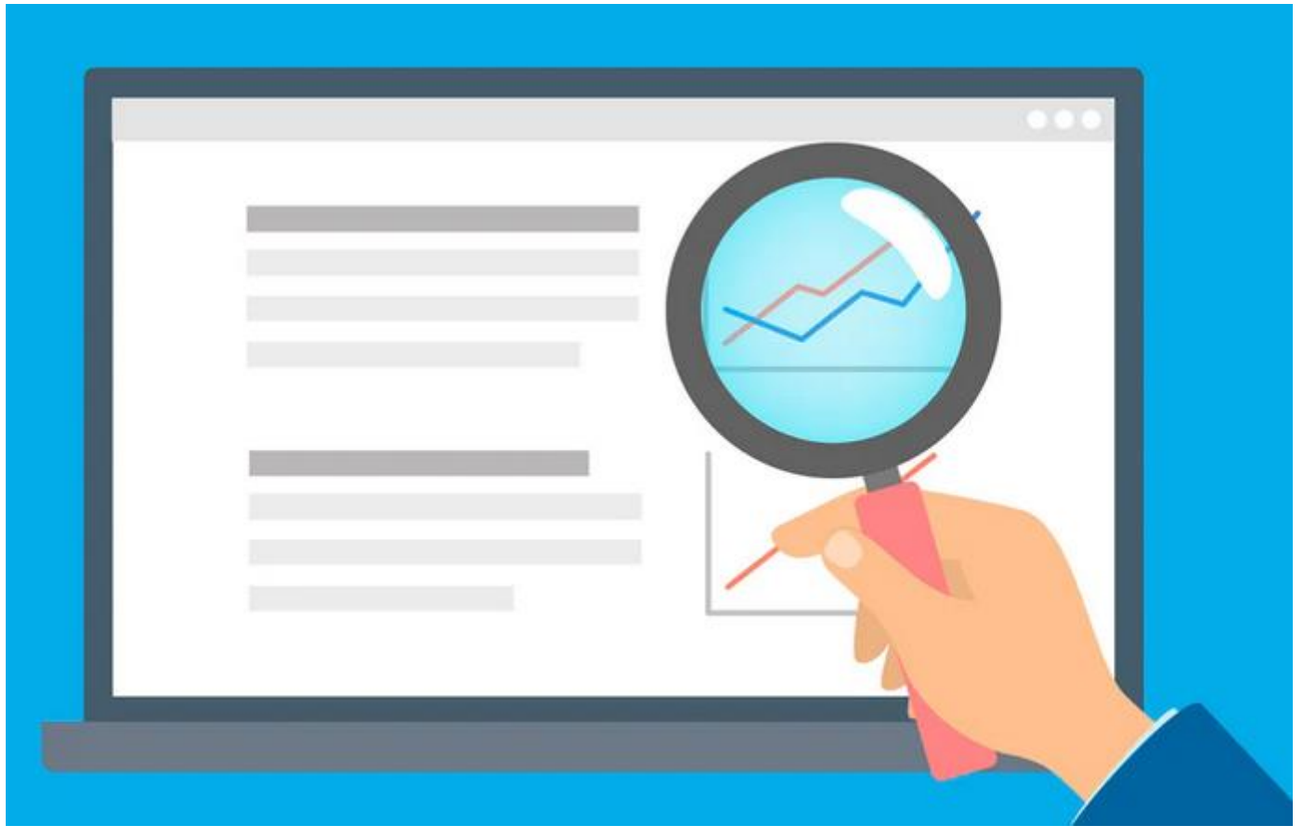
Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Bundesamt für Umwelt BAFU - Hydrologische Daten und Vorhersagen

eawag
aquatic research







Purpose of the Hackathon

Purpose of the Hackathon

Explore available Data Sets

Definition of the features to save

Create a unique and complete Source of Truth

Publish Open Data
➔ available via API

Energy Route

Select the locations for a potential installation of the Vortex technology

Instruct the Communes and Cantons on how to use these data

Collaborate with local entities to evaluate costs and benefits of Vortex technology

People Route

Create an online application
➔ is the river balneable?
➔ speed of the water flow?
➔ Quality of water?

Future Developments

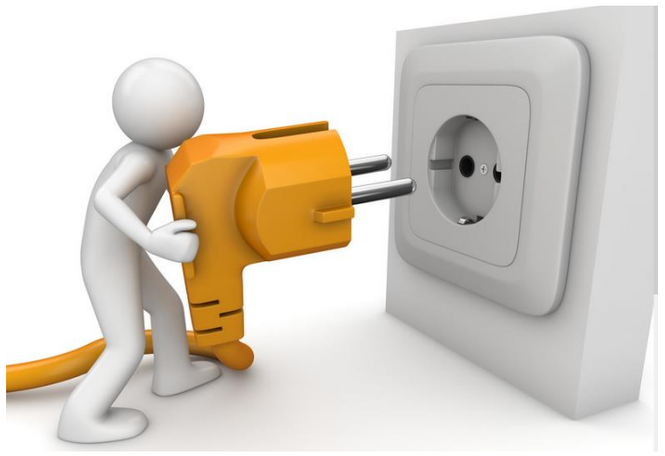
Join us if …

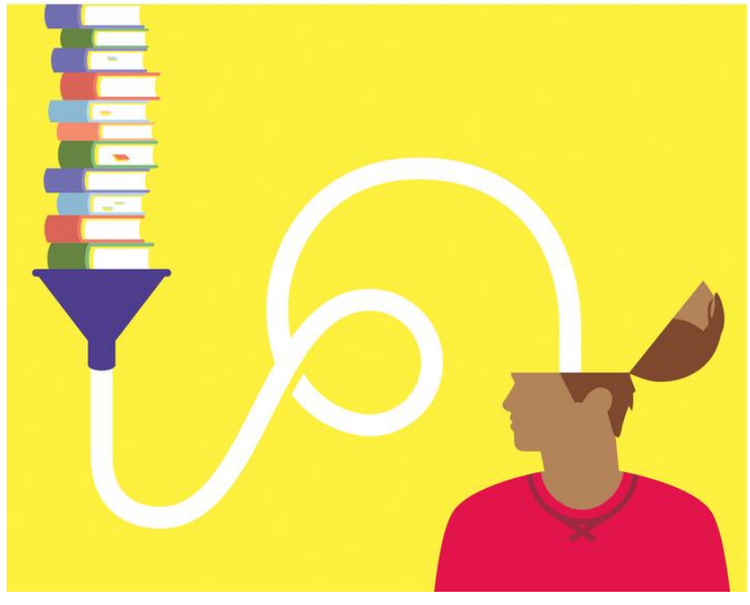

API


PA
MI
SSION


Geospatial
GIS
tools
resources
Census
Environment
atlas
health
BRFSS
indicators
data
tools
place
community


DRINK
WATER!






HAVE
FUN