

# The 2nd International Conference on Sustainability in Hydropower (SUSP 2023)

Ecological mitigation, best practises and governance

Trondheim, Norway, 13 – 15 June, 2023

Swedish Agency  
for Marine and  
Water Management



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Safer, Greener, Freer

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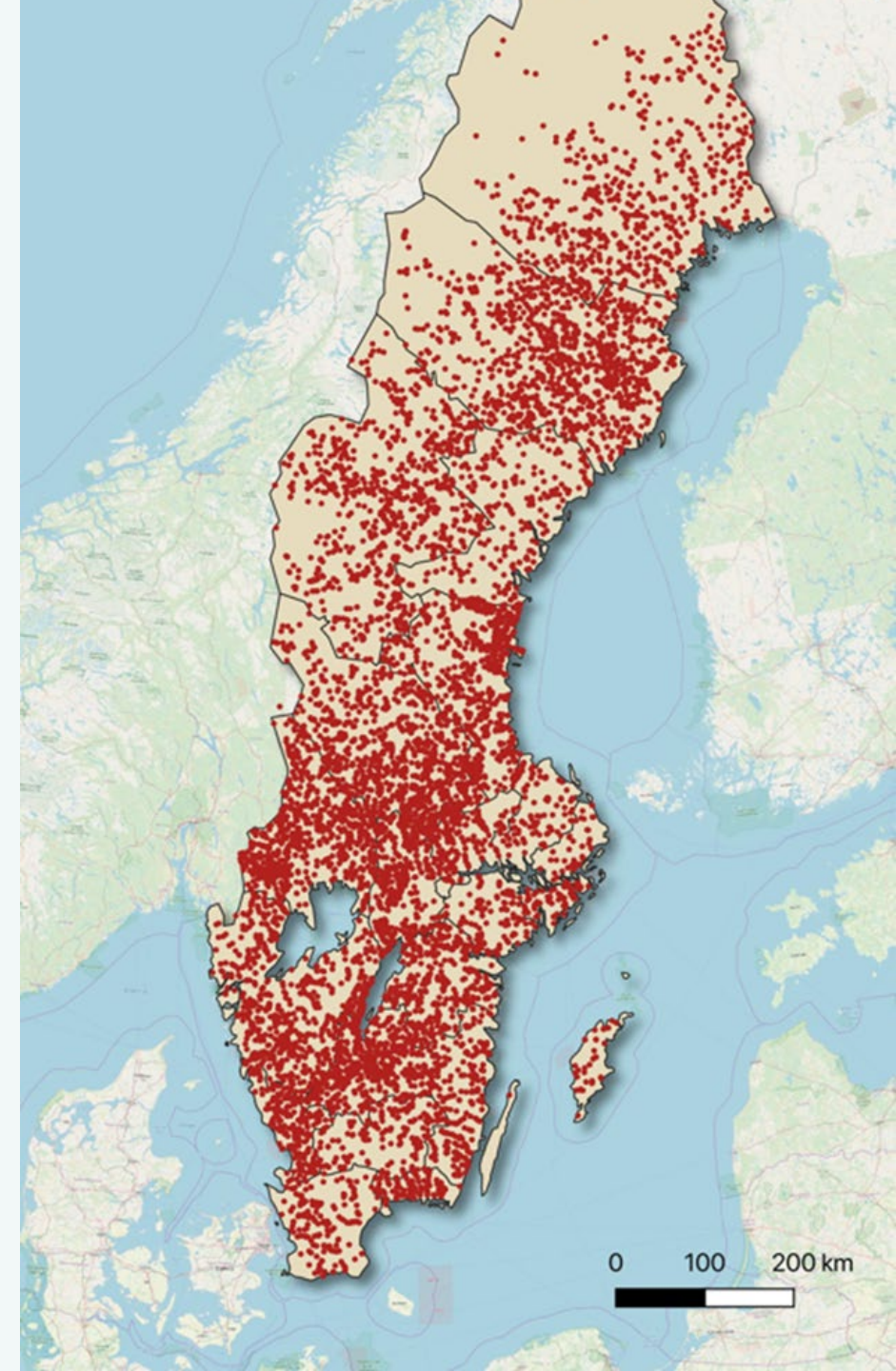
Swedish Presidency  
of the Council of the  
European Union



## One the one hand - impact of hydropower and dams on the environment & ecology

### Sweden

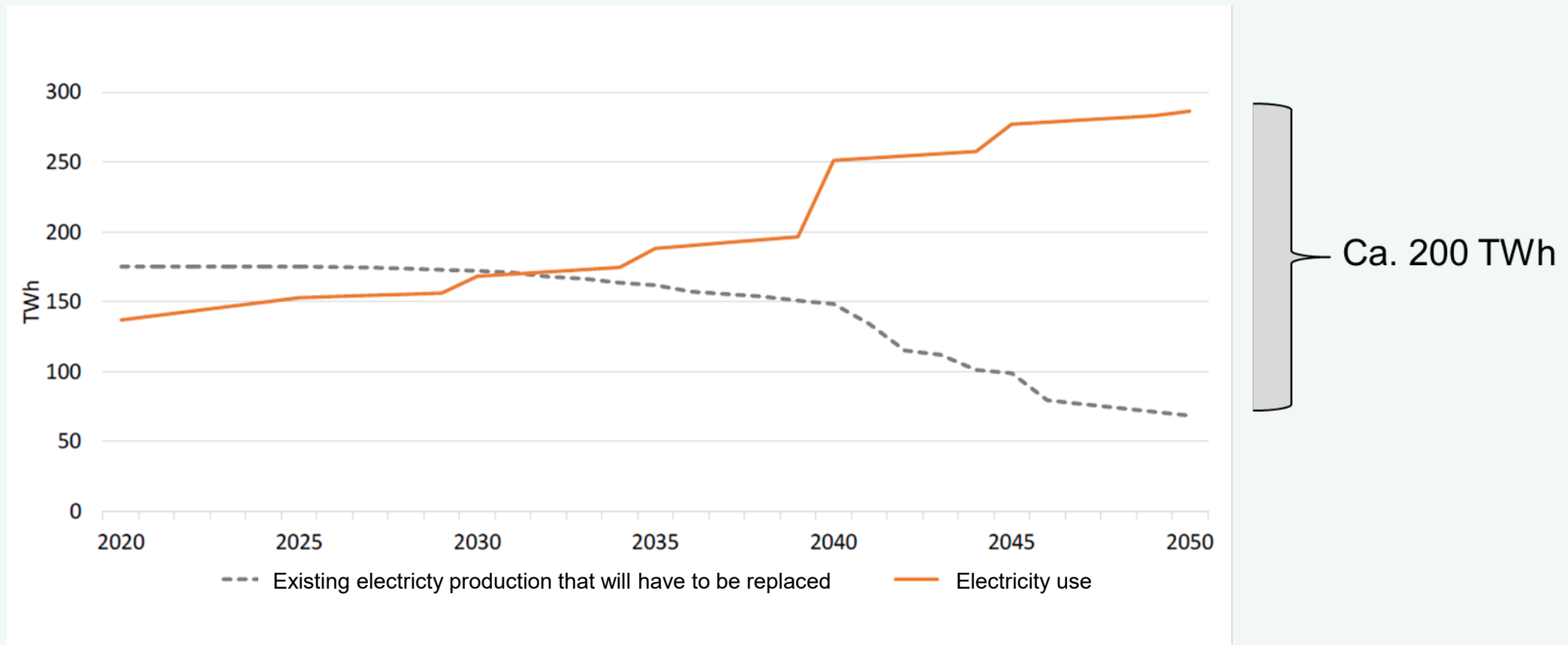
- About 2500 HEP dams and linked regulatory dams
- 40% of the river water bodies are impacted by water regulation
- 2/3 of total water lake surface area in Sweden is regulated
- 1 260 km depleted reaches downstream HEP dams
- 95% of HEP installations are barriers for migratory marine and freshwater species
- An additional 9000 – 15000 other dams exists in our water systems





# On the other hand – a planning target of 300 TWh per year by 2045 to meet electrification and climate targets

- Current Swedish electricity production is about 140 TWh/y



# How to strike the right balance between electricity power production and ecology?

- » 20 year plan to provide modern environmental permits for hydropower production, 2019
  - Temporary suspended due to the energy crises until February 2024
  - The new role of hydropower - its increasing value as regulating power
- » New marine spatial planning round to address more areas for offshore wind, 2022
  - Aim to quadruple the potential for offshore wind energy in the marine spatial plans (from 30 TWh to 120 TWh annually)
- » A green biobased economy requires integrated system planning and improved policy integration “from source to sea”
  - A nexus approach
- » Other measures, examples
  - Shared investment planning in particular related to cross border transmission grids & market mechanisms
  - The new nuclear agenda
  - Battery systems
  - Savings and efficiency measures





