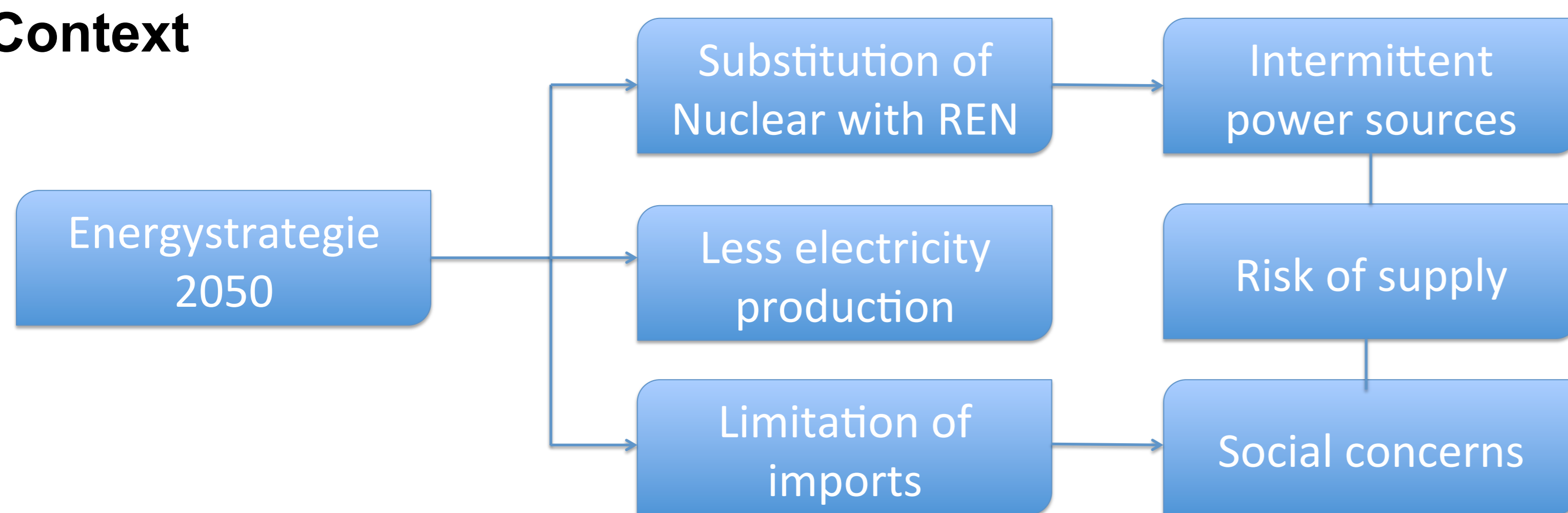


New risks: trade-offs in switching from nuclear electricity to renewables in Switzerland

Overview

Context



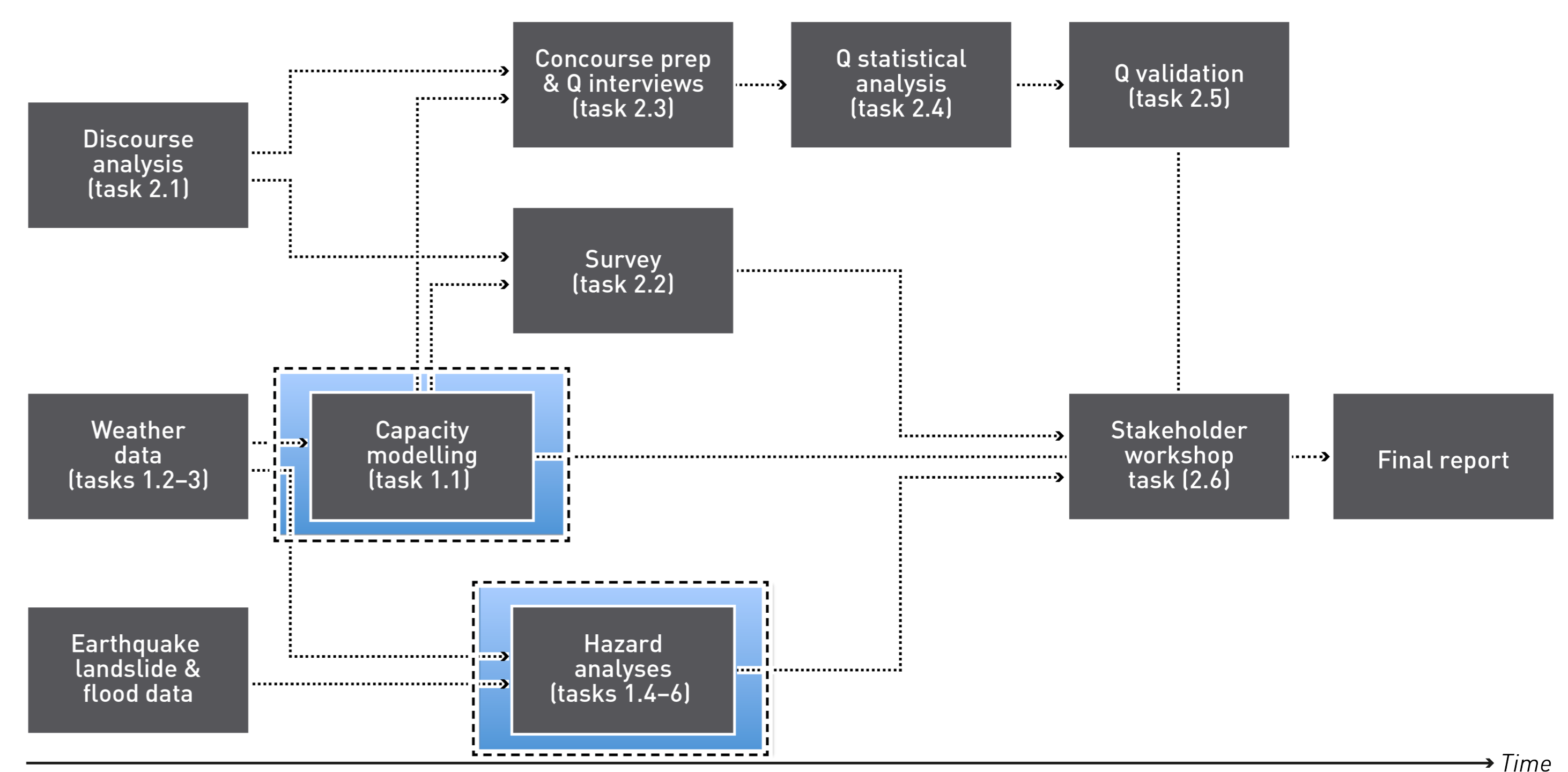
Objectives

Assessment of the Swiss Energiestrategie 2050 (ES 2050)

1. Quantify and compare the risks of electricity supply associated with different REN power sources: photovoltaic (PV), concentrating solar power (CSP), and Wind.
2. Evaluate how these risks, along with perceived negative environmental impacts of domestic renewable power systems, could affect the implementation of the ES 2050.

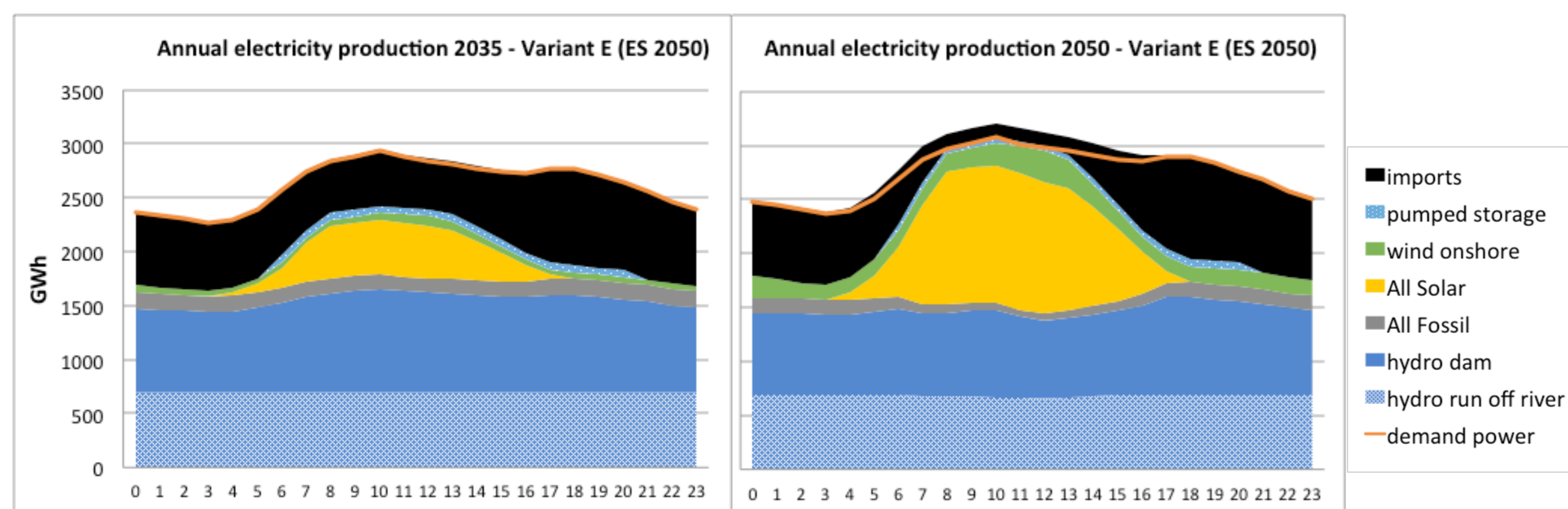
Research questions

1. How can we affordably minimise intermittency risks, given dispatch possibilities and potential (daily and seasonal) generation?
2. How vulnerable to natural hazards is the infrastructure for import of electricity?
3. Which supply options Swiss voters would find acceptable and how strong their opinions are?
4. Which are the dominant stakeholder perspectives on risks to electricity supply, in relation to development of renewable energy infrastructure?

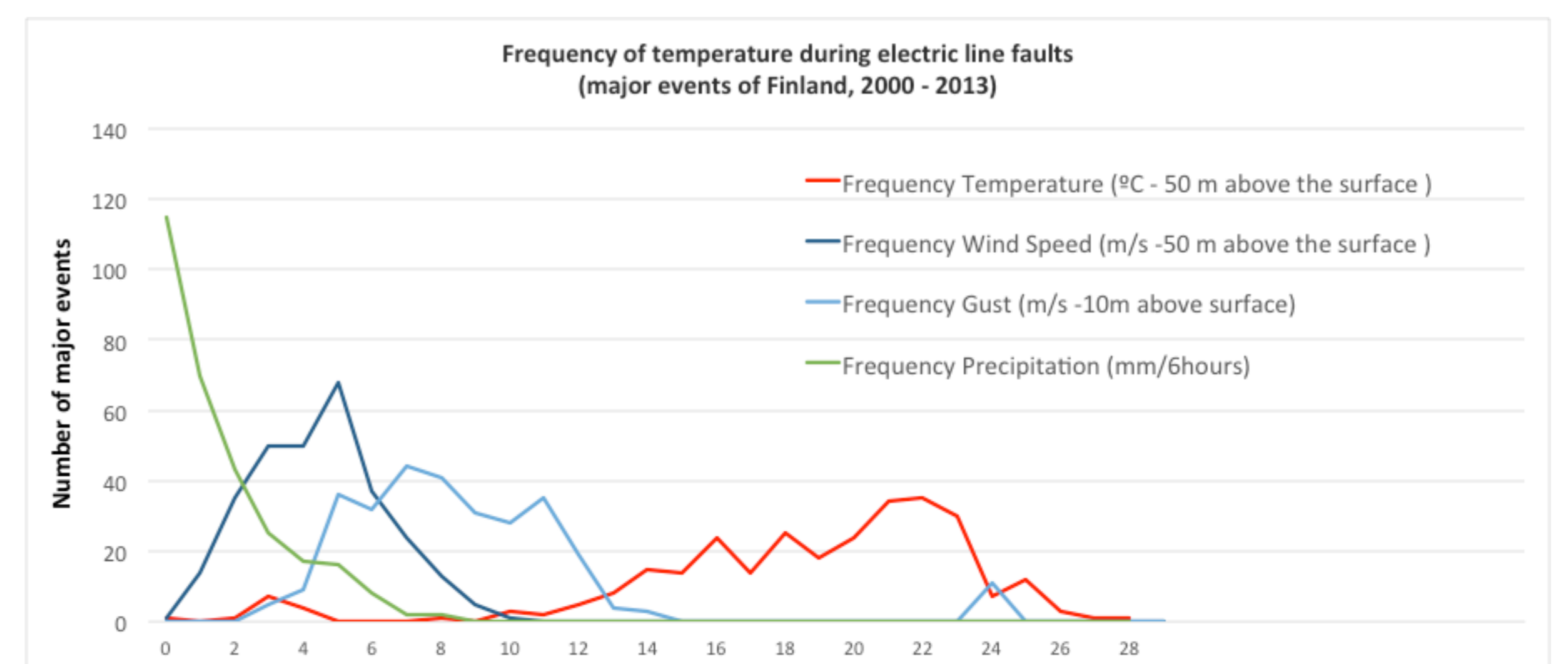


Preliminary results

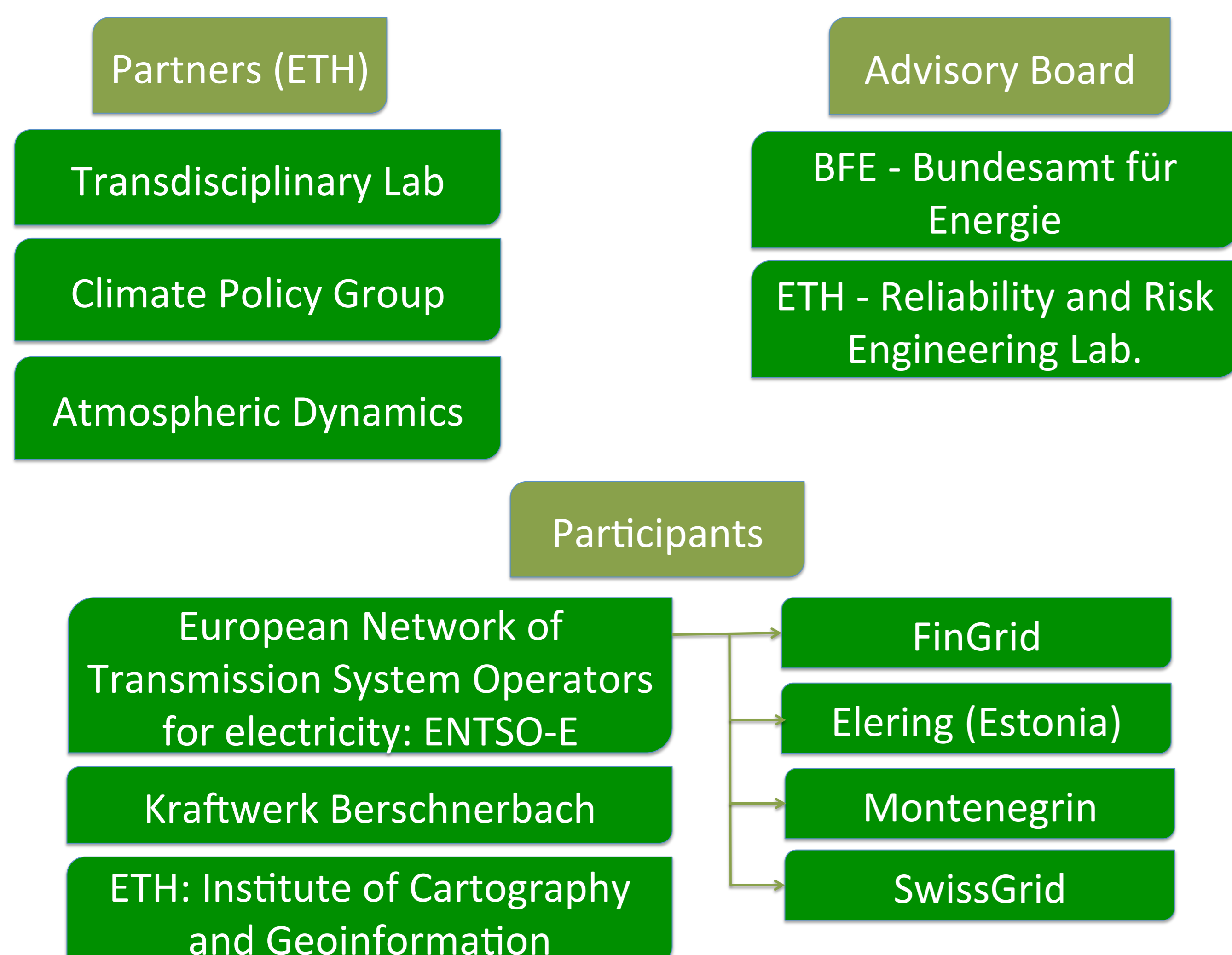
Research Question 1



Research Question 2



Partners and Collaboration



Energy Turnaround

Contributions:

- Quantify the impacts of the phase out of nuclear power plants on the electric supply in 2035 and 2050.
- Concretize the dispatchability of the supply in the electric system that increases the share of renewable sources to cover the future demand (variant C&E and variant E of the ES 2050).
- Find out what directions, and concrete infrastructures related to the development of renewable energy, of the ES 2050 have -or not- the support of both society and stakeholders.
- Make recommendations to Swiss authorities to direct funding and effort in order to make the ES 2050 more concrete, social and technically feasible.

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