SGU
Sveriges geologiska undersökning
Geological Survey of Sweden

Groundwater bodies in Sweden

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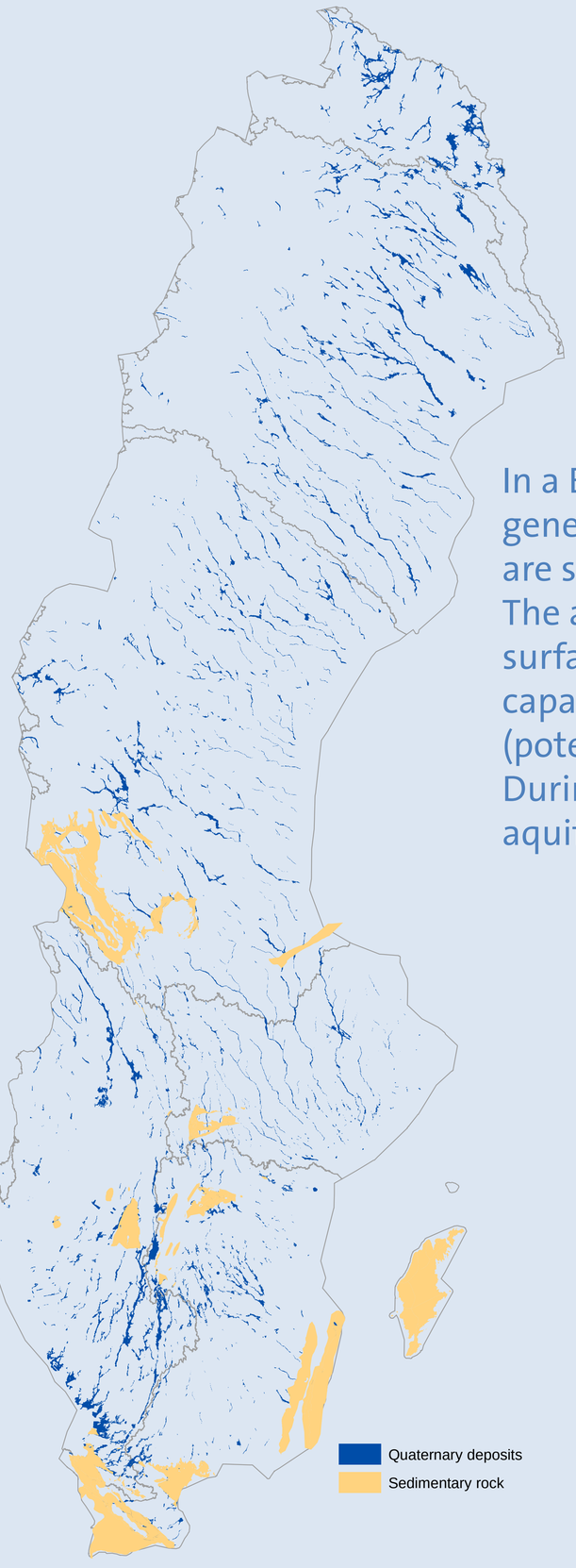
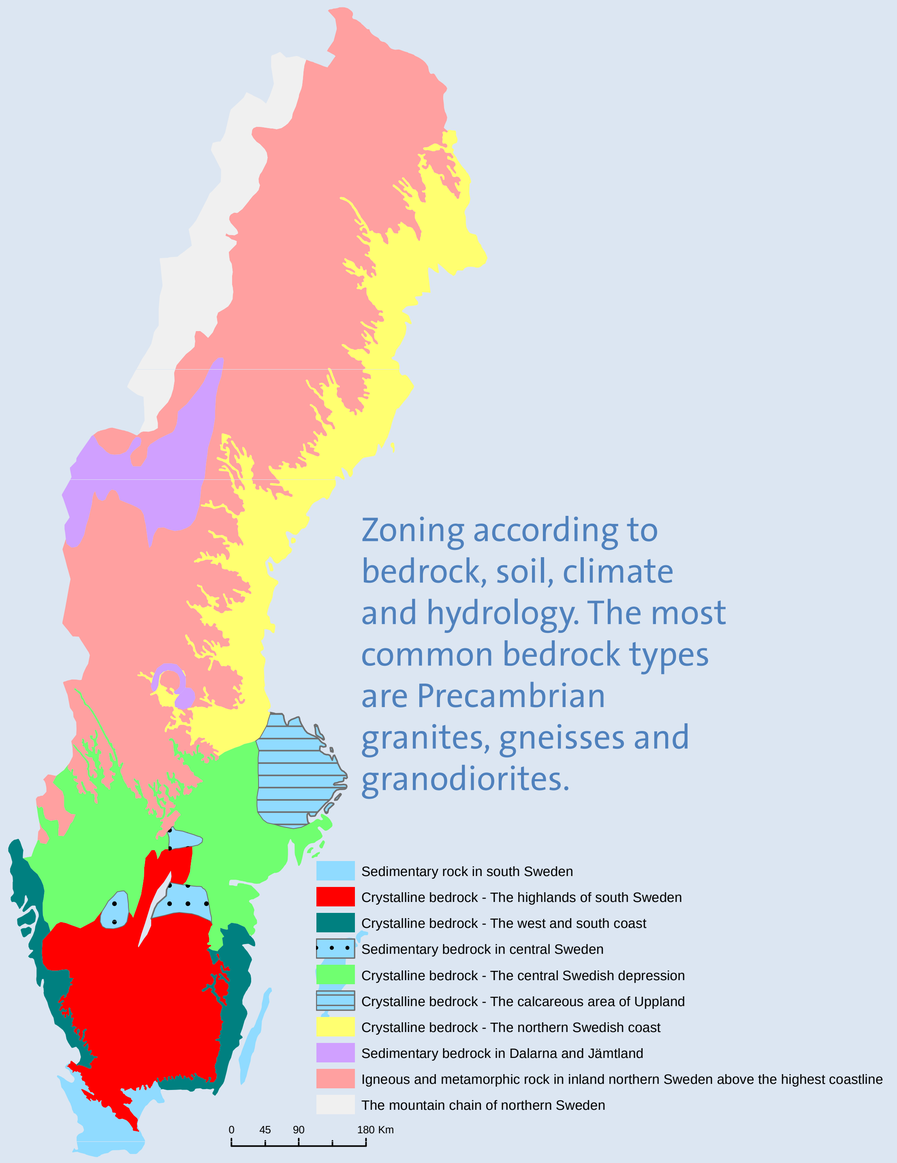
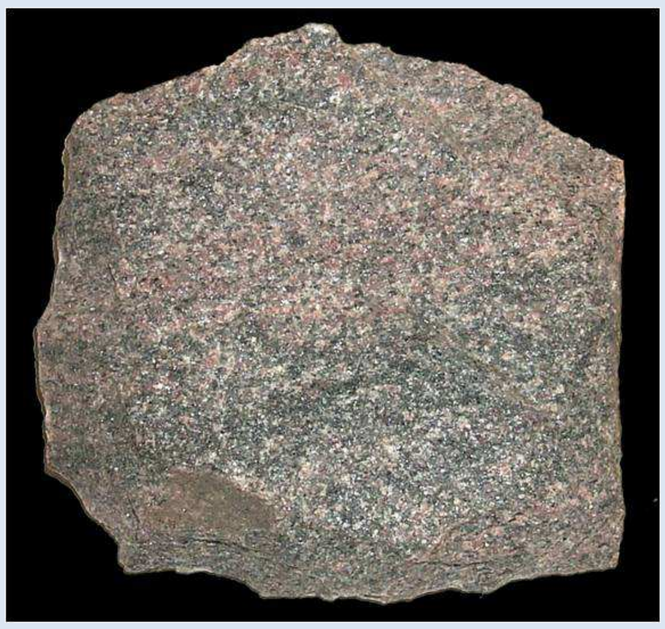


The great amount of groundwater bodies (~3 000) is a consequence of Swedish small scale Quaternary geology and poses challenges for the WFD implementation, concerning characterisation, risk and status assessment, monitoring and reporting.

In a European perspective Sweden has generous water resources. Our aquifers are small but has a very high capacity. The areal extent is only 4 % of the land surface, but the estimated total capacity for recharge is 175 000 l/s (potential supply for 75 million people). During winter or spring the shallow aquifers quickly recharge.



Zoning according to bedrock, soil, climate and hydrology. The most common bedrock types are Precambrian granites, gneisses and granodiorites.



Crystalline bedrock

We have characterised very few GWBs in crystalline bedrock. The Swedish crystalline bedrock is poorly weathered and water is only found in fractures. Swedish hydrogeological mapping has been driven by water resource needs, and the poor capacity of the crystalline bedrock in relation to the rich Quaternary deposits has not induced resource allocation. In a few areas around an abstraction well we have created small GWBs – resembling an extended drinking water protected area in character. To fulfil article 7 of the WFD we are presently discussing methods of delineation.

Approximate yield:
- Eskers 25 l/s
- Crystalline bedrock 0,25 l/s

Public water supply

Swedish groundwater is primarily abstracted from Quaternary deposits. Approximately 50 % of all groundwater abstraction for public water supply is based on artificial recharge.