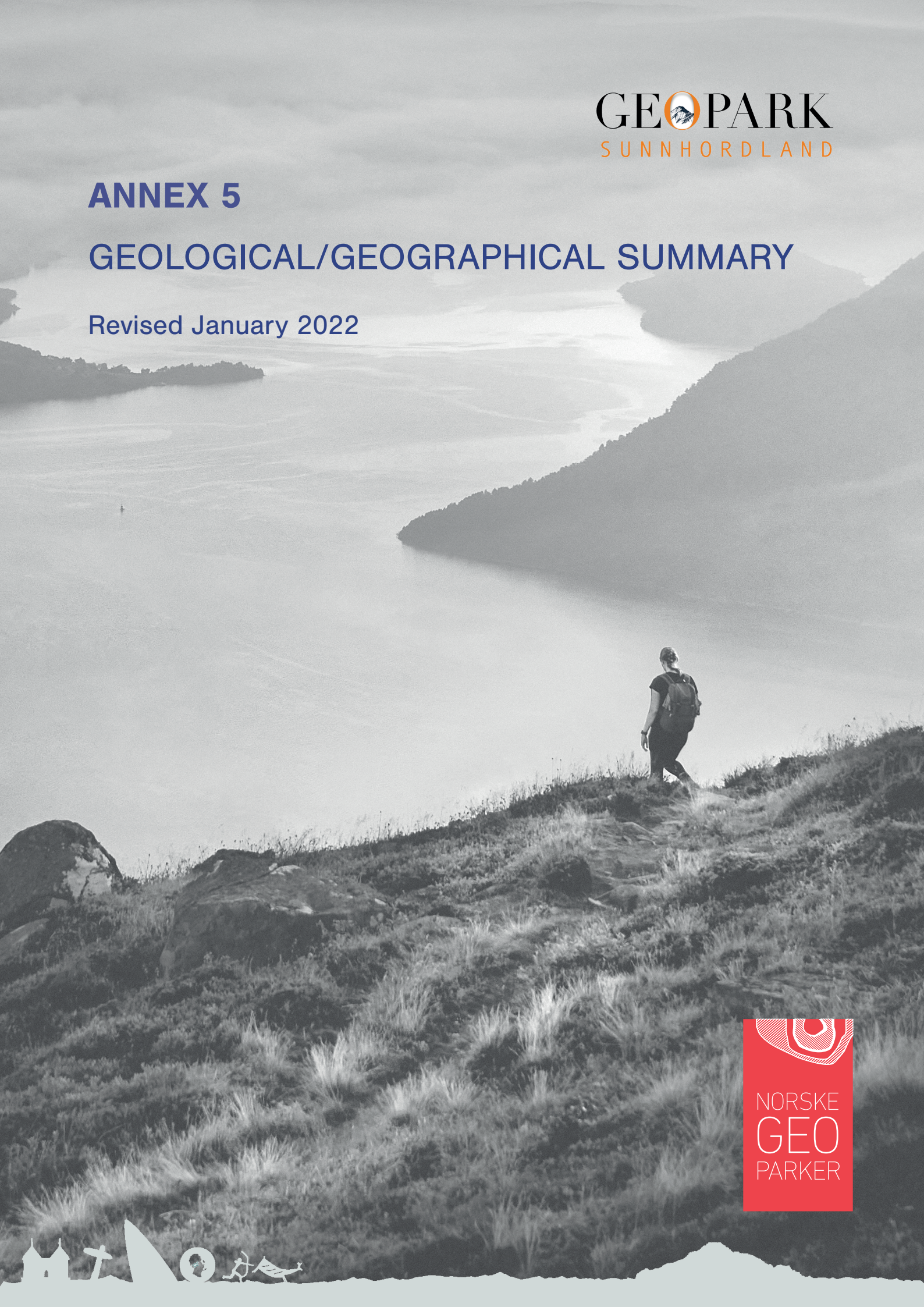
GEOPARK
SUNNHORDLAND

ANNEX 5

GEOLOGICAL/GEOGRAPHICAL SUMMARY

Revised January 2022



NORSKE GEO PARKER

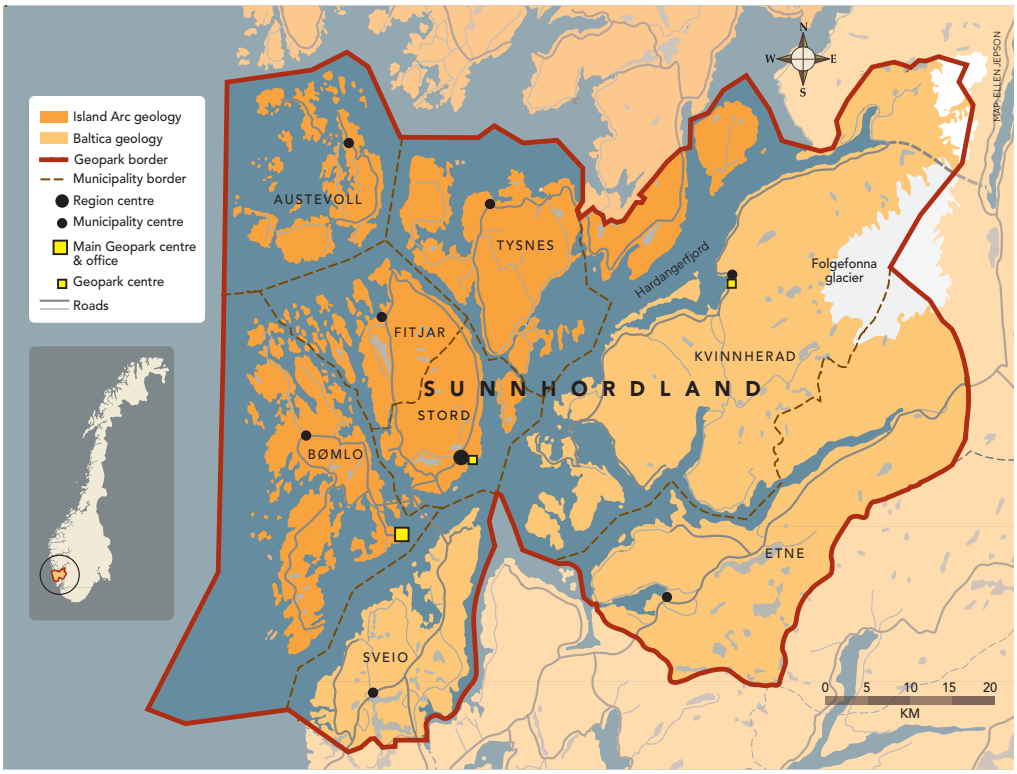
United Nations
ational, Scientific and
Cultural Organization

UNESCO
Global
Geoparks

Applicant UNESCO Global Geopark

Geopark Sunnhordland, NORWAY

Geographical and Geological Summary



BUILDING CONTINENTS AND SOCIETIES

Geopark Sunnhordland consists of the 8 municipalities in the region of Sunnhordland, in Vestland County on the west coast of Norway. Most of the current growth of continents are related to magmatism associated with island arcs and continental arcs. Today, this growth takes mainly place along subduction zones within and along the margins of the Pacific Ocean. Old mountain ranges represent ancient growth zones, and within Sunnhordland Geopark two of the major ancient growth zones on Earth are juxtaposed. Whereas the oldest zone formed by continental arc magmatism, the younger formed by island-arc magmatism and by arc-continent and continent-continent collision. The variety of plutonic and volcanic rock complexes that are exposed within these contrasting terrains display the rock types that make up the crust. The geology of the geopark is unusually varied. Within a small area a wide range of magmatic, metamorphic, and sedimentary rocks give insight into the deep crustal and surface processes that build continents.

This geology is exceptionally well exposed in spectacular and contrasting landscapes shaped by glaciers. The eastern part the territory is composed of an alpine and partly glaciated terraiCn that is crosscut by deep fjords. Westwards the landscape transforms into a low-relief archipelago composed of several thousand smaller and larger islands. A wide diversity of rock types, landscapes and climate zones result in habitats that range from the harsh environments of the glaciated mountains and the wave-washed skerries - to the rich boreal rain forests. A national park covers the glacier and the surrounding mountainous areas, and more than 50 natural reserves have been established within the archipelago.

This landscape became exposed as the ice rapidly retreated around 11.000 years ago. The territory then became colonized by life and inhabited by humans. Stone age settlements started mining of the raw materials, and greenstone from the area became a valued commodity spread widely along the Norwegian coast. Numerous mines were later established as the demands for building materials, industrial minerals and metals developed. Today the landscape continues to sustain the society. The archipelago harbours fish farming, the glaciated mountainous areas support hydroelectric power production and aluminium production plants, and the sheltered deep fjords enables the construction of platforms for offshore petroleum industry and for the harvesting of wind energy. The diversity and quality of the exposures in the territory was recognized as a gift for teaching and training almost hundred years ago: The landscape is so distinct in its form, and so varied in display, that in many ways it can be viewed as a lecture book in geology. Since then, the area has been extensively used as a training-ground for students. Several thousand geology students enrolled at University of Bergen have had their first eye-opening field experiences in this area. The territory continues to be a key area both for elementary and more advanced training, as well as for research in geology, archaeology and botany.