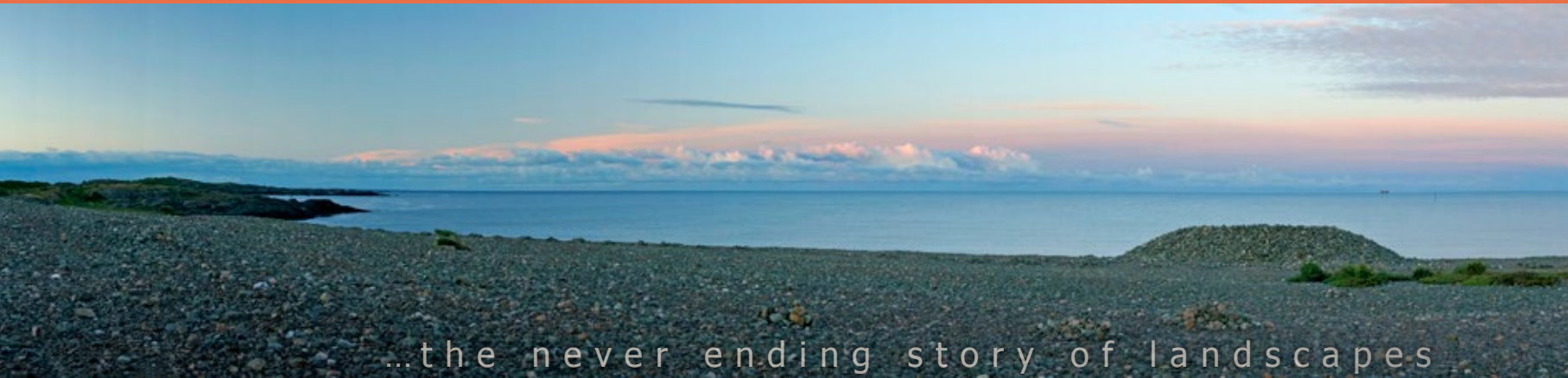


Gea Norvegica Geopark

NORWAY



...the never ending story of landscapes



United Nations
Educational, Scientific and
Cultural Organization



Gea Norvegica
UNESCO
Global Geopark



Gea Norvegica Geopark

Front cover photo: MØLEN. Larvik
Photo by Johannes Fredriksen



What is Gea Norvegica Geopark?

Gea Norvegica Geopark is located in southeastern Norway. You can visit the seaside; beautiful coastal landscapes with lots of islands, inlets and low-relief fiords. Or visit the inland, where mountainous landscapes are raising more than 800 m above sea level in the northern part of the Geopark. Between these two different areas, you will find rich agricultural land, small towns, river valleys and forests.

These diverse landscapes are also reflecting the unique geological history of Gea Norvegica Geopark; a story 1500 million years long, about impressive old mountain chains, today worn down, a large tropical sea with old forms of life, rifting continents, ancient volcanoes and several ice ages. But it is also the story of how man has used the geological resources, from Stone Age to present.

The beautiful and varied nature of southern Norway offers lots of activities, like hiking in the mountains, fishing, sailing at the coast and paddling along rivers and lakes. Or you can go shopping, visit local museums or one of the climbing parks. Our local Geopark partners are active in cultivating local culture and traditions.

Through guided tours or on your own, you can experience the unique landscapes of the Geopark. In addition, through leaflets, maps and digital information, you can get a deeper understanding of how the landscapes was formed through this long geological history and how society has developed based upon resources like soils, limestone, iron and other elements.

Gea Norvegica UNESCO Global Geopark is an open-air "museum" with a permanent exhibition – Nature itself – to marvel at and enjoy!

HOW TO GET HERE

The Geopark is located directly at the motorway E 18 going from Oslo to Kristiansand/Stavanger. From Oslo you'll reach the Geopark within 2 hours drive and from Kristiansand in about 3 hours drive. The harbours of Larvik and Langesund are located directly in the Geopark area.

Arrival by plane:

Closest airport to the Geopark is Sandefjord Airport/Oslo Torp Airport, (TRF), only 30 minutes drive to the Geopark.

Torp: www.torp.no

Arrival by boat:

From Sweden you can take the ferry from Strömstad to Sandefjord.

From Denmark you can take the ferry from Hirtshals to Larvik or Langesund.

The ferries are run by the companies Color Line and Fjordline, please check and order for tickets at:

www.colorline.no.

www.fjordline.com

Contact us at post@geanor.no
or write to: Gea Norvegica Geopark,
Porselensveien 6A, 3920 Porsgrunn,
Norway

To learn more about us visit: www.geoparken.no



The island of Jomfruland

In 2006, the Norwegian geopark Gea Norvegica became the first member of Global Geoparks Network in the Scandinavian countries. In 2015, UNESCO recognized this network and created UNESCO Global Geoparks, defined as geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education, research and sustainable development.

The geological heritage is used, in connection with all other aspects of the area's natural and cultural heritage, to enhance awareness and understanding of key issues facing society in the context of the dynamic planet we all live on.



Photo: Mona Holte

The coast

Islands, islets, small skerries, beaches, coastal trails and beautiful seascapes. The coastline represents diverse landscapes and you can enjoy it by foot or bicycle, by car or of course by boat.

Along the coast you will see small villages, busy ferry ports and quiet places for recreation and contemplation, all the year around. More busy in summer, as the area is among the most popular for summer houses.

Photo: Sven Dahlgren



The geology of the coastline

If you arrive Gea Norvegica Geopark by one of the ferries from Europe, you will probably first notice the barren islets with smooth surfaces and sometimes intricate patterns of geological features.

The western and the eastern coastlines are very different geologically, but they are both sculptured by the action of numerous glaciers over the last 2.6 million years.

Although looking a bit similar at first glance, the western part between Kragerø and Langesund is made up of really old rocks; 1500–1000 million years old, once formed and transformed in the deep, underneath huge mountains.

In the western area around Larvik, the rocks are much younger, about 300 million years old. A huge fissure through the continent was filled with rocks produced by gigantic volcanoes. Underneath some of these volcanoes the National rock of Norway, the Larvikite, was formed.

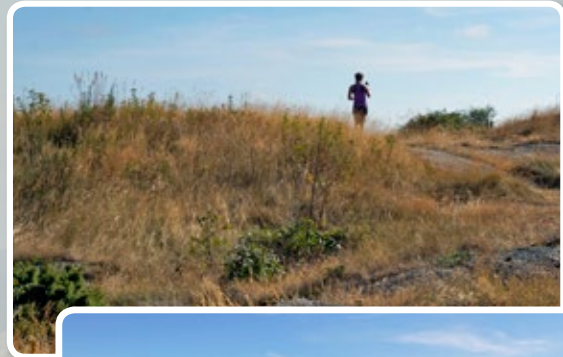
Between these two areas a third landscape appears. The layered rocks in the Langesund-Brevik area are telling a different story – a story about a tropical sea 450 million years ago and seawaters filled with strange life forms. But also corals and sea lilies, gastropods and sea shells similar to what can be found in tropical areas today.

How to get around the Geopark coast

The coastal trail system

By foot you can use the coastal trail, from Kragerø to Langsund and in the Larvik area. Healthy exercise and numerous impressions of great variety are the benefits.

See map on page 15.



Island hopping

Ferry service from Brevik, Langsund or Helgeroa will take you out to different islands, where you can go hiking and swimming.

Easy accessible ferry services will take you there.

Photos: Johannes Fredriksen





The outermost island in Kragerø is the characteristic Jomfruland. Mainly, the island looks like a long pile of rocks, collected and transported by glaciers during the last Ice Age. A diversity of rocks, representing the basement geology of Southeastern Norway, makes Jomfruland a unique place.



Svabergs of Jomfruland

Svaberg – the Norwegian word does not have its equivalent in English. These glacial forms can be found in front of retreating glaciers in alpine areas, but as we find them here, next to the sea, is a typical Scandinavian variety. At Jomfruland these old sculptured rocks make a natural playground.

Photo: Kristin Rangnes



Large photo: Ingeborg Klepp



THE ELONGATED BOULDER MOUND ALMOST IN THE CENTER OF PHOTO IS ONE OF SEVERAL IRON AGE BURIAL MOUNDS SITUATED ALONG THE BEACH.

Photo: Johannes Fredriksen

Mølen is a remarkable result of glaciers and glacial rivers picking up and transporting rock fragments, leaving them on the sea bottom and then, due to land uplift, leave the fragments to be rounded by wave actions.



The cobblestone beach of Molen



The urban and the rural

Gea Norvegica Geopark is among other things, an urban area, here represented by the city of Porsgrunn. Geological features have defined how landscapes have evolved, by nature's forces and by man. The river that makes a nearly 90 degrees turn is reflecting an old zone of earthquakes and geological movements. In other areas, rich soils have defined very good agricultural areas with more scattered population, here demonstrated by Lardal municipality, only 30 minutes drive from Porsgrunn.

Photo: Åsmund Tynning



Photo: Sven Dahlgren



Natural and cultural history

The long history of Gea Norvegica Geopark is a journey through mountain building, strange volcanoes, a tropical, shallow sea, a continent breaking up, extensive ice sheets and ice cold fiords stretching far inland.

But it is also about Stone Age people using hard rocks as tools and weapons, early farmers settling in naturally protected areas...

...and about Vikings preparing their boats for expeditions, bringing home new influences and customs...

...and about our forefathers building churches and other buildings of local rocks.

It is also about societies starting an industrial adventure based upon geological resources such as iron, copper, quartz, feldspar and limestone, making the area an important place for technological developments.

5 km



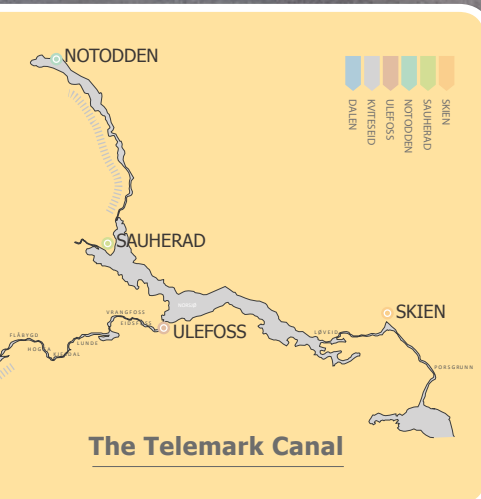
The Telemark Canal



The Canal is a combination between manmade locks and rivers and lakes following geological cracks and depressions, modified by glaciers and river actions.



Photos: Telemarkskanalen Regionalpark



The Telemark Canal

The canal, with locks carved into 1000 billion years old rocks, connects the coast to the inland of Telemark County. It actually consists of two waterways; Skien–Dalen and Skien–Notodden. The distance is 105 km and elevation is 72 meters. You can go by your own boat or even kayaks, but you might prefer going by the Canal Boats! It is an unforgettable journey in a historical landscape, among steep mountains, on large lakes and through narrow channels.

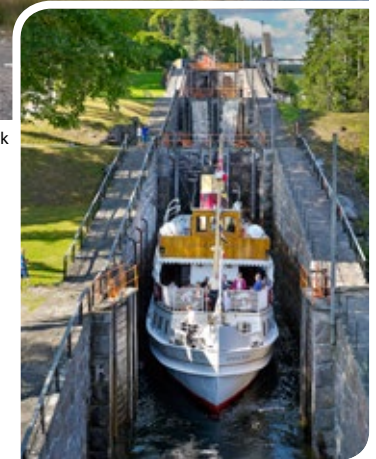
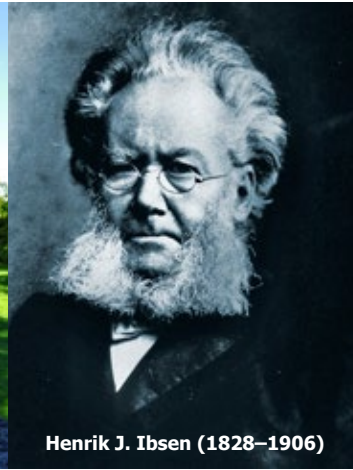




Photo: Henrik Heyer



Henrik J. Ibsen (1828–1906)

Ibsens Venstøp. The famous Norwegian novelist Henrik Ibsen was born in Skien in 1828. Years of his childhood he lived at Venstøp, close to the old iron works Fossum. Venstøp is part of Telemark Museum and from here you have a beautiful view of the geological landscape.



Photo: Johannes Fredriksen

Auen Urtegård

As Geopark partner, Auen urtegård in Siljan is producing ecological herbs and hosting cultural events. The oldest building, today a private museum, is from 1750 but people might have lived here since medieval times.

Kjærra Fossepark

Enjoy the magnificent area along the river Lågen, famous for still practicing old methods of catching wild Atlantic Salmon as well as for its sport fishing.

Towards the end of last Ice Age, cold marine waters followed the ice retreating northwards in the valley. Clayey layers were deposited on the bottom of this newly created fiord.

Later land uplift and river processes have modified these layers, mixed the clay with sand and made this a real fertile agricultural valley.

Kjærra Fossepark, a geopark site in Lågen valley, is a perfect combination of nature and culture and a place offering multiple activities during summer!



Enjoy the 90 meter long geological time line, explaining the 4.5 billion years long history our planet Earth, or join in and see if the fishing trap contains any salmon (pictures to the right).



Kjærøya Fossepark

The Lågen valley is the result of the intensive actions of glaciers over the last million years, cold, marine waters following the retreating ice, leaving fertile marine clays on the fjord bottom.



THE LÅGEN VALLEY IS THE RESULT OF THE INTENSIVE FORCES OF GLACIERS OVER THE LAST COUPLE OF MILLION YEARS AND THE MODIFYING ACTIONS OF THE ACTIVE RIVER.

Photos: Anne Aasmundsen

Large photo: Johannes Fredriksen

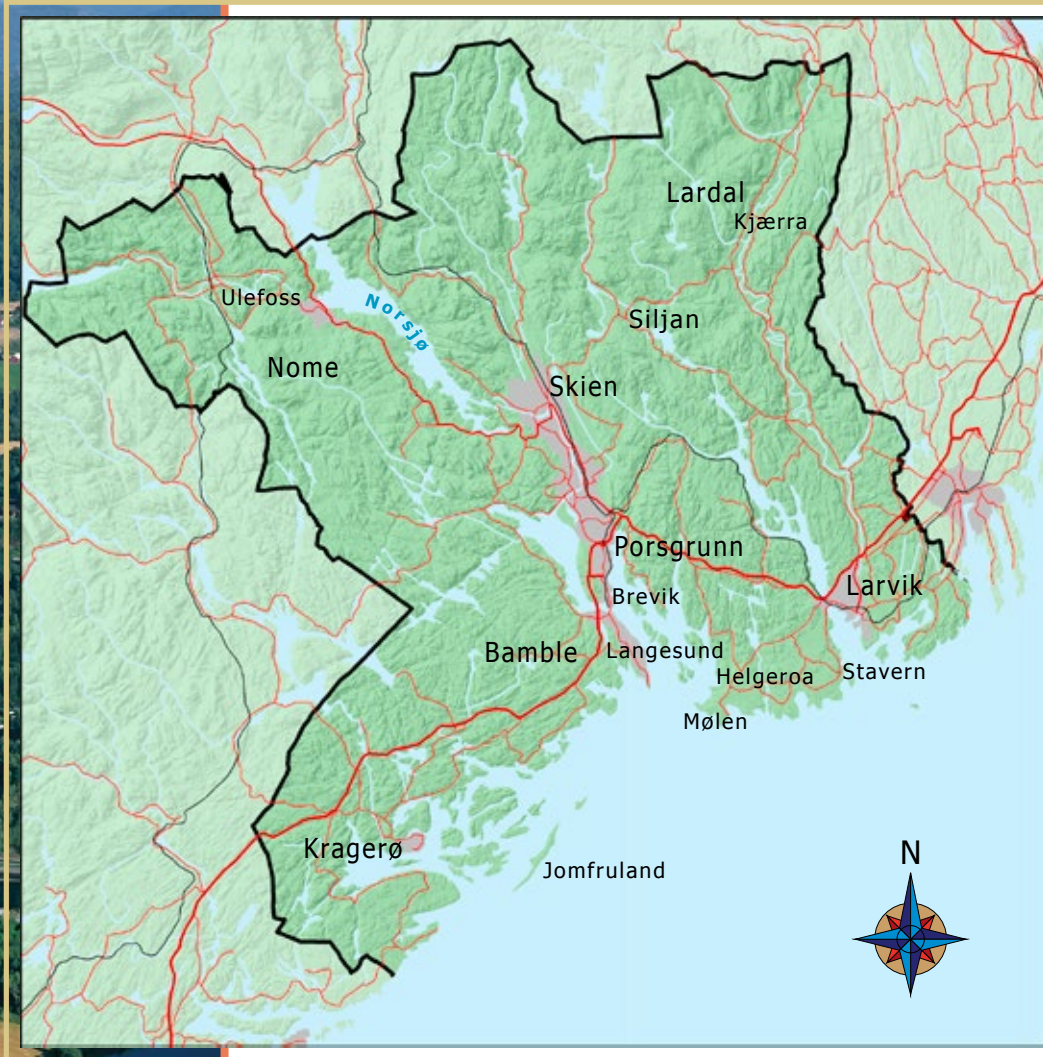


Fen at Ulefoss

Fen area close to Ulefoss is famous for its strange and complicated geology, with the remnants of a 580 million years old volcano. Volcanic activity laid the foundation for the famous Ulefos Iron works in 1657.



Photo: Åsmund Tynning



Visiting the Geopark area, you can experience many exciting things. Within eight municipalities, which cover the Geopark area, there are many activities throughout the year.

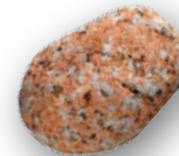
Contact the visit companies for accommodation, restaurants, arrangements and trips in the area or organize your own trip!

<http://visitlarvik.no/en/>

<http://www.visittelemark.com/>

<http://visitgrenland.no/en>

<http://en.visitkragero.no/>



Map of Gea Norvegica Geopark

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Photo by Johannes Fredriksen

experience

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