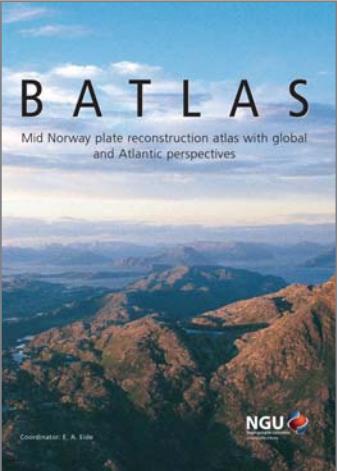


Contact information

Further information on the availability of books, maps and other materials published by the Survey may be found by contacting the NGU Publication Centre, 7491 Trondheim, Norway; telephone: (+47) 73 90 40 00, telefax: (47) 73 92 16 20. e-mail: bestillinger@ngu.no. Information is also found on the website: <http://www.ngu.no/>.



Recent books and maps published by NGU.

Further information regarding topics presented in this brochure may be obtained through the following persons at the Geological Survey of Norway:

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NGU is a governmental institute under the Norwegian Ministry of Trade and Industry and is a national institute for knowledge of:

- bedrock and mineral resources
- superficial deposits
- groundwater
- near-surface geology of the offshore continental shelf

Geology for a changing society

To meet the needs of society for geological knowledge, NGU has four principal goals during the strategy period 2001-2005.

These are organised as separate programme areas:

- Better knowledge of nature and the environment.
- Increased value creation in the mineral industry.
- Better planning and land management.
- Cost-effective development aid.

NGUs annual turnover was ca. 17 million EUR in 2002.

NGU has a staff of 213 of whom

- 60% have university education
- 64 have doctorates.
- 17% of the staff represent 17 nationalities in addition to Norway.



Coral (*Lophelia pertusa*) - Seafloor, deep sea



Sediments - Uppermost crust



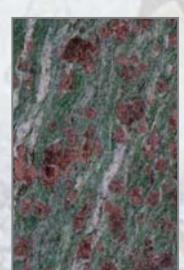
Sandstone - Upper crust



Trondjemite - Mid crust



Gneiss - Mid crust



Eclogite - Lower crust



Peridotite - Mantle rock

From the deep Earth...to sustainable resources

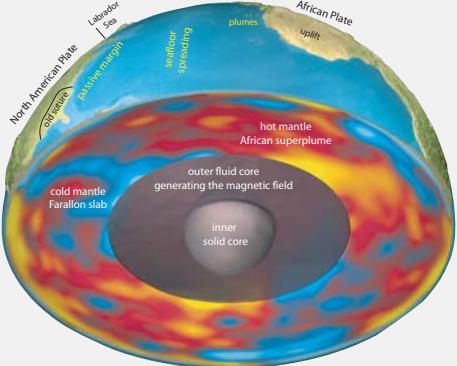


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Geodynamics

Geodynamics at NGU unites geology and geophysics in field, experimental and theoretical research to address topics of plate motions, isostacy, crust-mantle interaction, Earth's magnetic field, and passive and convergent margin development.



The primary processes occurring in Earth's interior are the convection of the liquid iron outer core, generation of Earth's magnetic field, and mantle convection; these processes are responsible for the continual reshaping of Earth's surface through plate tectonics. Picture adapted after M. Gurnis.

Methods

Our expertise lies in paleogeography/plate reconstructions, paleomagnetism, potential field methods, structural geology, tectonics, isotope geochronology, and computer programming. Plate modelling software and a Linux cluster for heavy computing are used to address basin evolution, mantle convection, crust-mantle interaction, and modern topography as related to glaciation and crustal uplift.



Products

Geodynamics research is presented through a variety of scientific, popular and applied media, including digital maps, databases, software, scientific publications, web-based learning modules, popular television programs and books. Specific themes include:

- assessment of fault development coupled to unroofing and erosion;
- assessment of plate spreading velocities and resulting stresses;
- models for basement structure and rift segmentation;
- quantitative age and thermal information for volcanic, sedimentary and fault-rocks.

Future

gPlates, an open-source software package now under development, is a plate reconstruction package designed to handle point, line, and gridded data. The package will couple traditional plate reconstruction facilities with features allowing deformation of tectonic plates and lithospheric extension and compression. The international gPlates consortium anticipates a Beta version on the Web in 2004.

Paleozoic-Mesozoic sedimentary packages of the Junggar Basin, north of the Tien Shan mountains, NW China.



Applied geophysics

NGU offers a wide range of geoscientific services to the petroleum and mineral industries and to governmental institutes, both in Norway and abroad. NGU has specialised in carrying out integrated regional interpretations of geophysical, petrophysical and geological data from Norwegian onland and offshore areas.

Methods

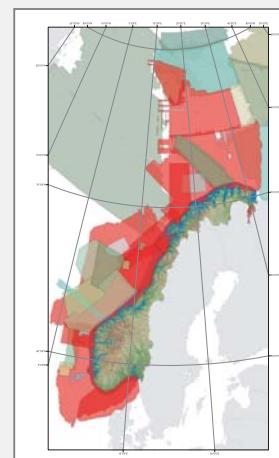
Within the fields of applied geophysics, NGU's services include airborne geophysics, gravity surveying, processing, archiving and interpretation, engineering geophysics, mineral exploration, and petrophysical laboratory studies in addition to mapping/monitoring radon hazard and radioactive fallout regions.

Products

Products from the surveys conducted by our group are distributed in form of both public and confidential materials. These include reports, publications, digital maps and original and processed geophysical data. A database for the Norwegian mainland and shelf is accessible through our website:
<http://www.ngu.no/dragon>

Future

A newly launched project, RA-3, the **Røst Basin Aeromagnetic Survey 2003**, is one of several new initiatives directed toward extracting deep structural and compositional information from frontier basin exploration areas. The RA-3 project is presently acquiring aeromagnetic data in the Røst Basin Area offshore the Lofoten margin.



Your primary source of potential field geophysical data for the Norwegian mainland and shelf is through our database:
Direct Access to Geophysics on the Net - DRAGON
<http://www.ngu.no/dragon>

Marine geology

Marine geology at NGU unites geology, geophysics and acoustics to continental margin and coastal shaping, seabed processes and environment.

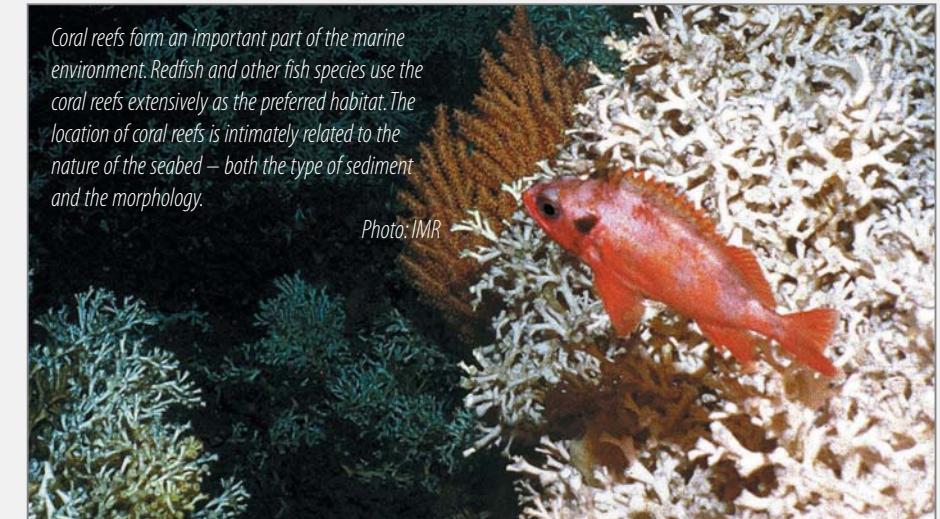


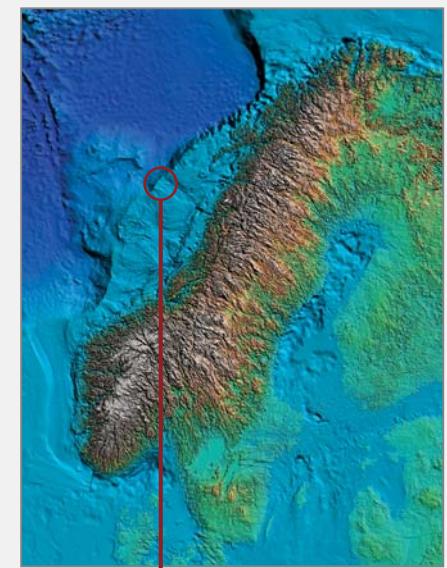
Photo: IMR

Methods

NGU's expertise covers seismic stratigraphy, geomorphology, sedimentology, geochemistry and acoustics. Strong emphasis is put on digital data treatment, particularly visualisation and integration of various geographically referenced data.

Products

The main products are maps, reports, scientific publications and popularised regional studies of quaternary stratigraphy, seabed sediments and processes, contamination, geohazards, CO₂ storage potential, the effects of glacial processes on deeper strata and environmental issues.



The back wall of the retrogressive Trenadjupet slide. Coral mounds – the Røst reef – growing on ridges formed by icebergs crossing the shelf more than 10.000 years ago are found frequently in the area.

Future

Focus is put on the build-up of marine databases. **The Mareano project** sketches a plan for multi-institutional, interdisciplinary mapping of Norwegian waters and the construction of a web-based, virtual marine database. Phase 1, Lofoten - Southern Barents Sea, will extend from 2004 - 2009 if funded.