



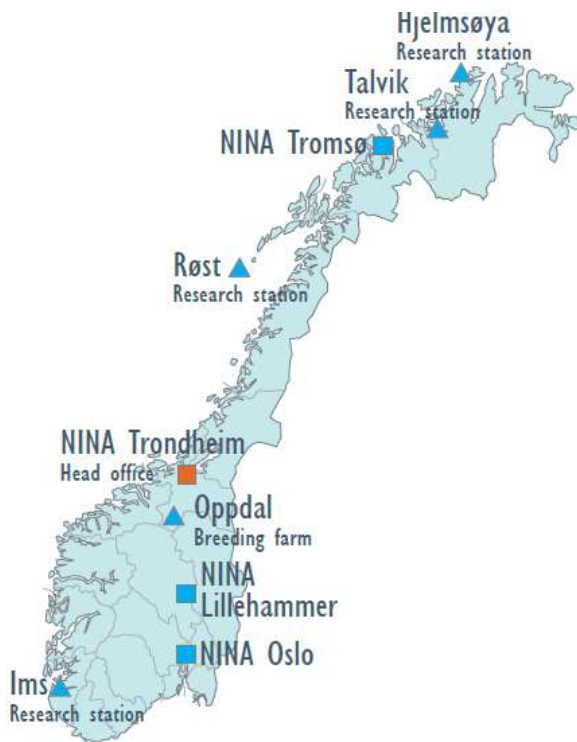
The Norwegian Institute for Nature
Research (**NINA**) and EEA Programmes
BG02 Integrated Marine and Inland Water
Management and **BG03** Biodiversity and
Ecosystem Services

Inga E. Bruteig
Research Director

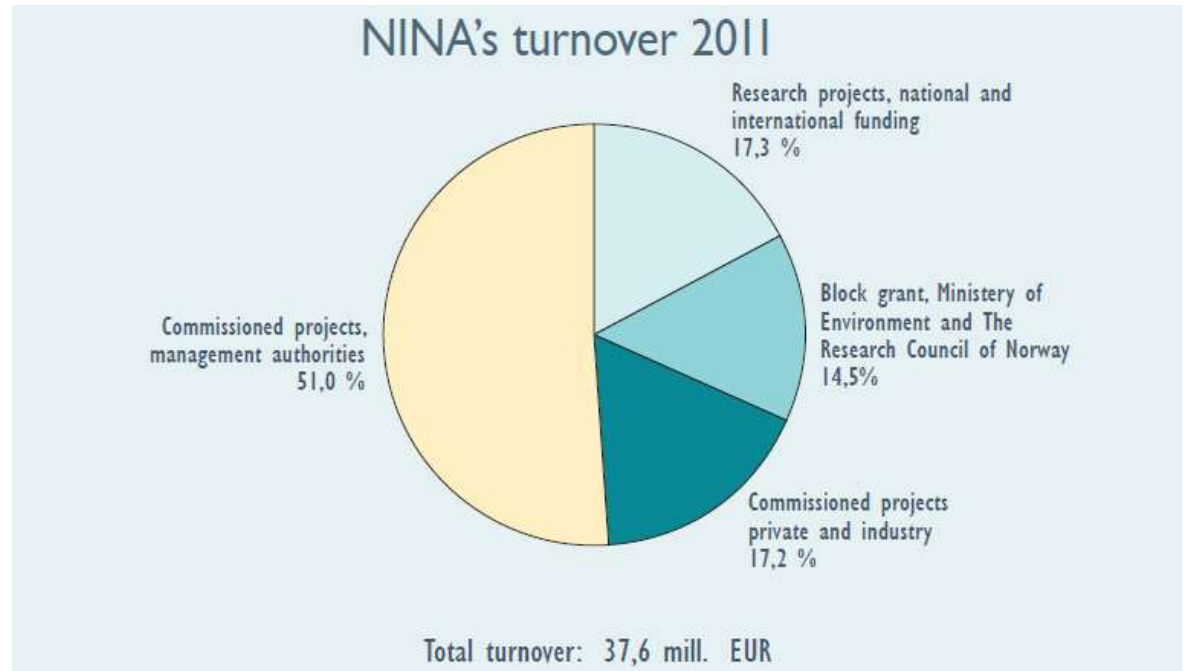


[NINA website](http://www.nina.no)
(English)

[NINA brochure](#)
(English)

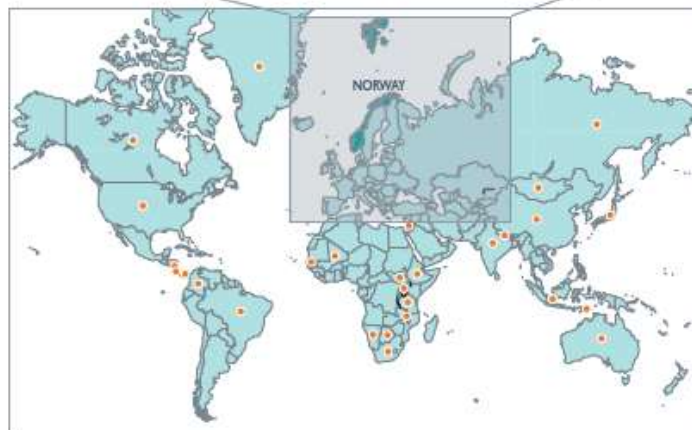
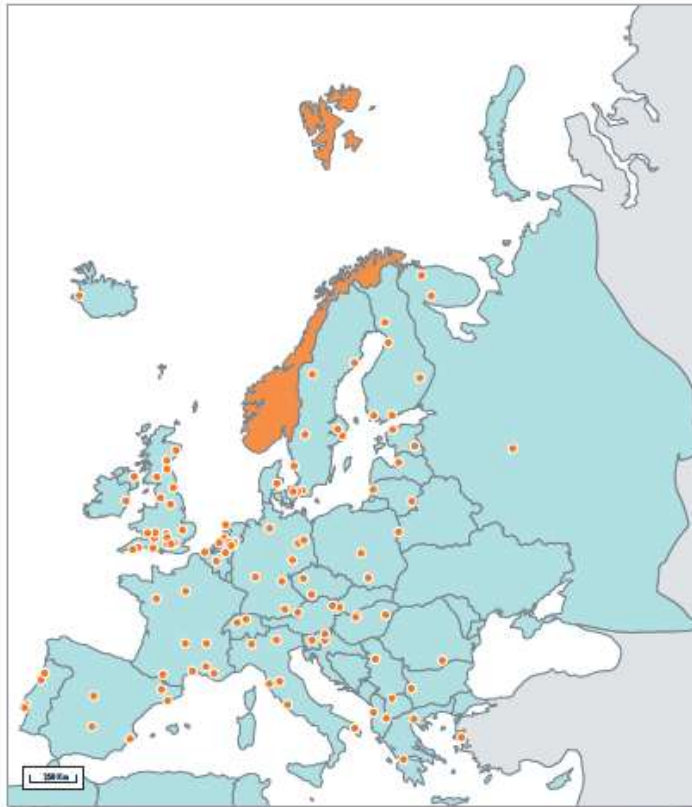


- The Norwegian Institute for Nature Research (NINA) is Norway's leading institution in the areas of nature management, monitoring, biodiversity, ecosystems services, sustainability, and community development of natural resource management.
- It is a non-profit making, nongovernmental foundation.



Cooperation

NINA is an attractive partner in international cooperation projects. These maps provide an indication of the current level of international activity. The map of Europe shows the cities where our partner institutions are based. The global map shows the countries where we have active project cooperation.



Eligible activities

BG02 – Integrated Marine and Inland Water Management

- More integrated management of marine and inland water resources
- Improved monitoring of marine waters
- Increased capacity for assessing and predicting environmental status in marine and inland waters

BG03 - Biodiversity and Ecosystem Services

- Increased awareness of and education in biodiversity and ecosystem services, including awareness of and education in biodiversity and climate change, and economic valuation of ecosystems
- Increased protection of native ecosystems against invasive alien species
- Improved integration of biodiversity considerations in sectoral policies and legislation

BG02: NINA has strong management and applied research capacities in this field



[.pdf](#)

Recent publications include:

- ▶ [Economic benefits of remediation of pollution to marine sediments](#)
- ▶ [Effectiveness of marine Protected Areas as harvest refuge for fish](#)
- ▶ [Marine ecosystem variability and vulnerability to oil pollution](#)
- ▶ [Predictive probability modelling of marine habitats](#)
- ▶ [GIS modelling of wave exposure at the seabed](#)
- ▶ [Pollution by organochlorines in a marine top predator in relation to latitude](#)
- ▶ [An integrated development program for marine stocking: the Norwegian example \(FAO report\)](#)
- ▶ [Modelling of marine nature types and the EUNIS classes](#)
- ▶ [Freshwater crustaceans as monitors of long-range transported air pollutants](#)
- ▶ [Ocean warming, freshwater, and age of maturity of anadromous fish](#)
- ▶ [Quantifying marine, freshwater and human effects on stocks of anadromous fish](#)
- ▶ [Successful restoration of freshwater shellfish populations](#)
- ▶ [Survival and movements of eels in late freshwater and early marine phases](#)

SEAPOPOP – long term monitoring of seabirds for improved management of the marine environment



► <http://www.seapop.no/en/about/index.html>

Management and restoration of freshwater ecosystems



([.pdf](#))



See also:

Managing river meanders ([.pdf](#)); communities and river & wetland restoration in Oslo ([.pdf](#); [.pdf](#));

Monitoring: see, e.g., The Norwegian Nature Index;
The Norwegian Species and Habitats Database, below

BG03 – Biodiversity and Ecosystem Services

Increased awareness of and education in biodiversity and ecosystem services, including awareness of and education in biodiversity and climate change, and economic valuation of ecosystems

Increased protection of native ecosystems against invasive alien species

Improved integration of biodiversity considerations in sectoral policies and legislation

NINA has broad and deep engagement in these areas. Recent publications include:

- ▶ [The Norwegian Nature Index: Expert evaluations in precautionary approaches to biodiversity policy](#)
- ▶ [Biodiversity protection and economics in long term boreal forest management — A detailed case for the valuation of protection measures](#)
- ▶ [Is biofuel policy harming biodiversity in Europe?](#)
- ▶ [ALTER-Net, a long-term biodiversity, ecosystem and awareness research network](#)
- ▶ [Assessment of existing and proposed policy instruments for biodiversity conservation in Norway](#)
- ▶ [Costa Rica: National level assessment of the role of economic instruments in the conservation policy mix](#)
- ▶ [Capacity building for Intergovernmental Platform for Biodiversity and Ecosystem Services \(IPBES\)](#)
- ▶ [Forest owners' willingness to accept compensation for voluntary conservation: A contingent valuation approach](#)
- ▶ [Renewable energy respecting nature](#)
- ▶ Good Practice Wind - <http://www.project-gpwind.eu/>
- ▶ [Valuation of species and nature conservation in Asia and Oceania: a meta-analysis](#)
- ▶ [Bio Score – Cost-effective assessment of policy impact on biodiversity using species sensitivity scores](#)
- ▶ [Confronting the costs and conflicts associated with biodiversity](#)
- ▶ [Securing the Conservation of Biodiversity across Administrative Levels and Spatial, Temporal, and Ecological Scales](#)
- ▶ [Towards the development of a management relevant index for invasive alien species : a pilot study](#)



- Leading member of [Alter-NET](#), Europe's biodiversity research network. Awareness of and education in biodiversity and climate change is a main theme.
- Modelling effects of increasing or decreasing connectivity in ecological networks [paper](#)
- Restoring migration routes for reindeer [paper](#); [.pdf](#); [.pdf](#)
- Bears and habitat fragmentation [paper](#)
- Effects of ecological network connectivity on predictions of wolf distribution [paper](#)
- Effects on biodiversity of habitat fragmentation by roads: [.pdf](#)



The Norwegian Species and Habitats Database



The Norwegian Nature Index

4 minute animation explaining the NNI (in English)

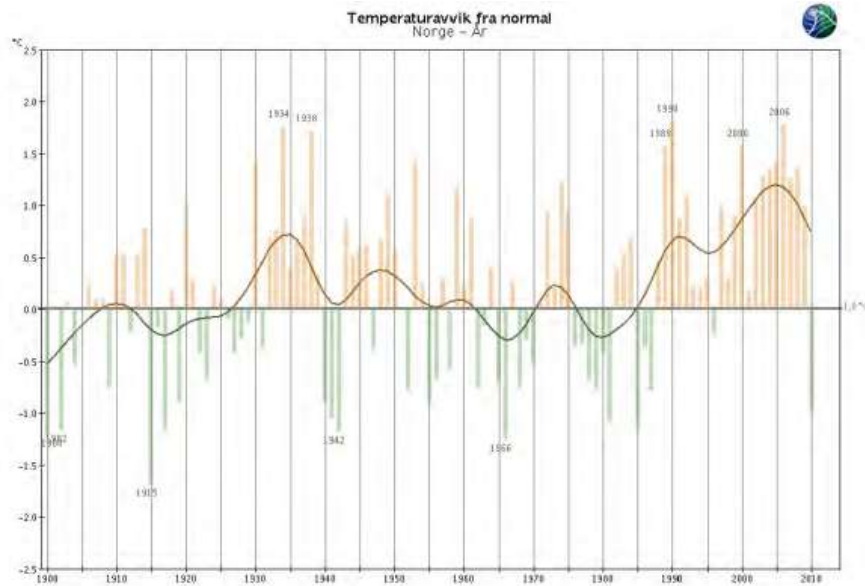
NINA runs Rovdata and is a main partner in the Nature Index, and the Species and Habitats Database

Rovdata - The Norwegian large predator database

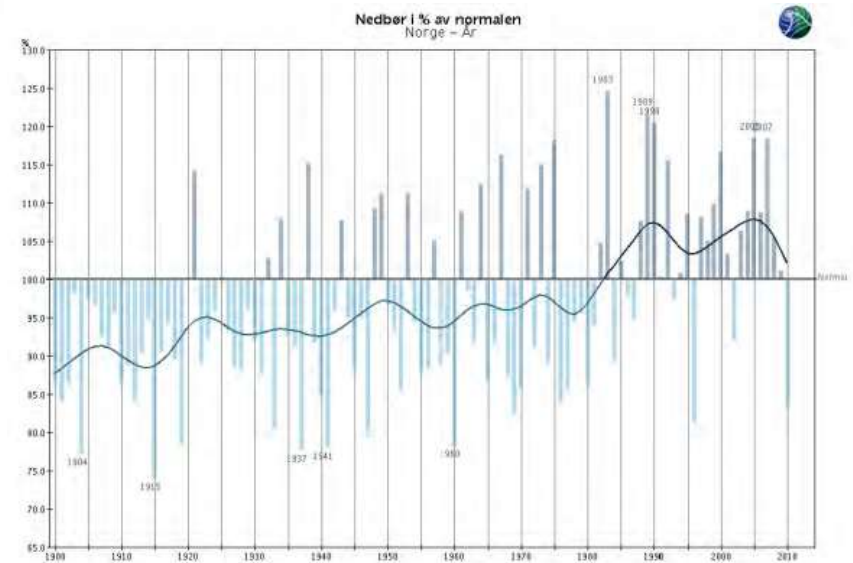


TOV: terrestrial nature monitoring

- Long distance air pollution
- Climate
- Species management

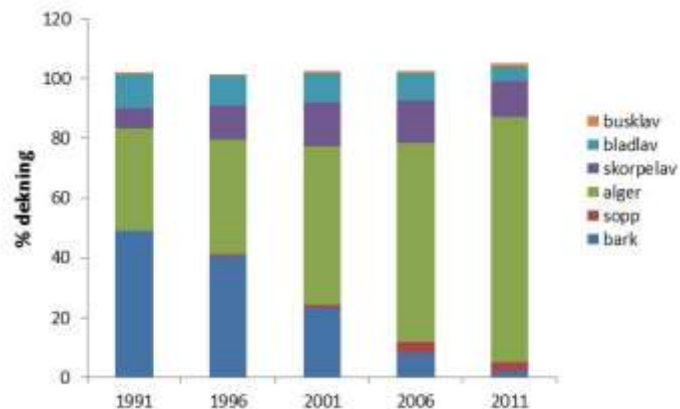


Temperature deviation from normal,
Norway, 1900-2010

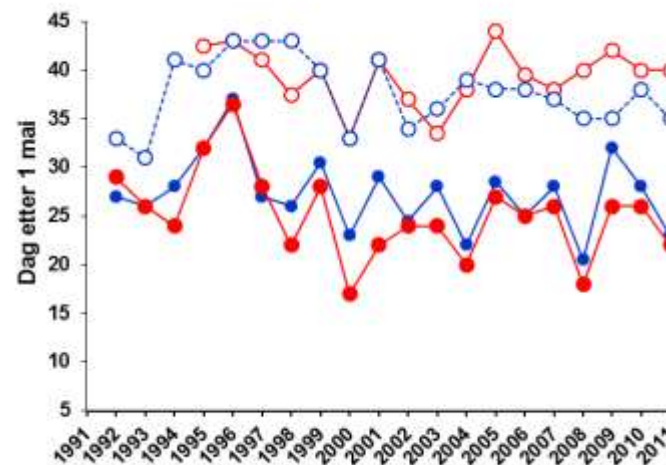
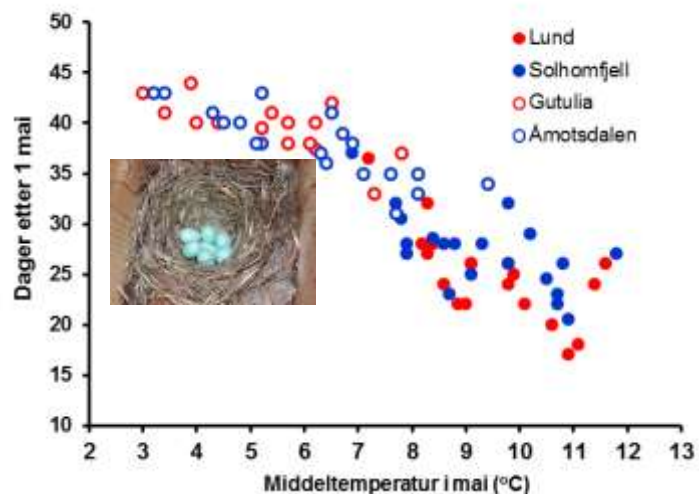


Precipitation, % of normal, Norway,
1900-2010

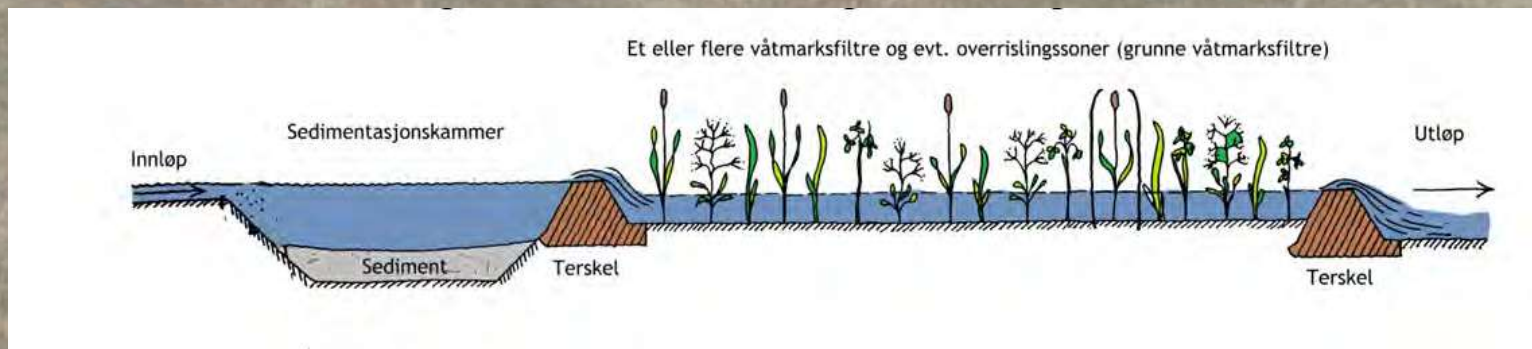
Example 1 : Nitrogen combined with climate change: algae and lichens on birch trees in Norway



Example 2: Climate and birds – date of egg laying



- Identification of climate change impacts on e.g. salmon [paper](#); salmon and trout [paper](#); vegetation [paper](#); soil fauna [paper](#); grouse reproduction [paper](#); seashores [.pdf](#); seabirds [.pdf](#); freshwater [.pdf](#); lemmings [paper](#); geese [paper](#); trees [paper](#); birch forest vegetation assemblages [paper](#); reindeer [.pdf](#);
- Adaptation measures: floodplains [paper](#); north Norway and Svalbard [.pdf](#); extreme weather events [.pdf](#)



Terrestrial nature monitoring (TOV) in an international perspective

- International reporting
 - EU Biodiversity Indicators (SEBI 2010) – terrestrial breeding birds
- International study areas for long-term ecological research
 - ILTER, LTER Europe
- European Infrastructure for Research
 - LifeWatch
- Multi-site Experiments

LTER Europe



ILTER = International Long Term Ecological Research

876 Towards the development of a management relevant index for invasive alien species: a pilot study

NINA Report

Jeska van Dijk
Jens Aström
Hanne Esk-Pilekjø



NINA Report 468

Alien species and climate change in Norway

An assessment of the risk of spread due to global warming

Jan Ove Gjenshaug
Graciela M. Rusch
Sandra Cøberg
Marte Qventad



Cooperation and expertise for a sustainable future

- NINA is a leading research institution in the area of invasive species, e.g.:
- [Development of a management relevant index for invasive alien species : a pilot study](#)
- [Alien species and climate change](#)
- [National use and applicability of Alien Invasive Species assessment criteria](#)
- [Invasive crayfish and disease transmission](#)
- [History and consequences of alien freshwater fish invasion in Norway](#)

Summary

- ▶ The Norwegian Institute for Nature Research is an internationally leading institute in the areas of applied ecological research, biodiversity, ecological monitoring, nature management, and human/nature interactions
- ▶ It is an independent, non-profit making institute
- ▶ NINA has long experience in collaborating in international programmes
- ▶ NINA has strong expertise in all areas of the EEA BG02 and BG03 Calls for Proposals and is seeking Bulgarian partners
- ▶ **CONTACT:** duncan.halley@nina.no