



The Norwegian Institute for Nature  
Research and EEA Programmes  
RO02 Biodiversity and Ecosystem  
Services and RO07 Adaptation to  
Climate Change

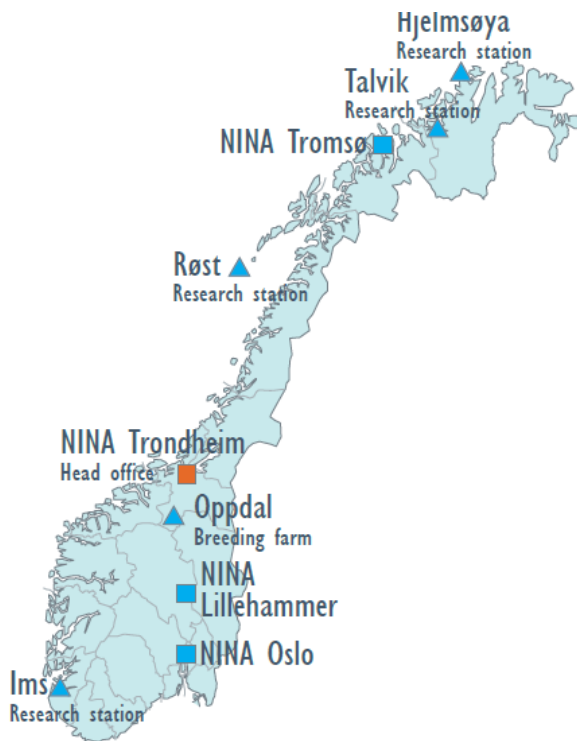
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[NINA website](#)  
(English)

[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.

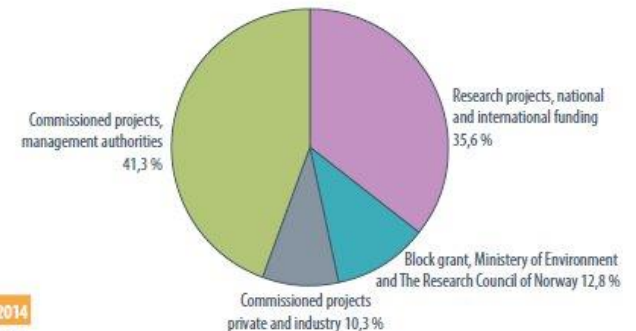
#### NINA's key statistics for 2015

Number of publications	2015	2014
Scientific papers	189	201
NINA reports	146	124
External lectures and presentations	721	600
Media coverage	2482	2548
News stories published at nina.no	101	79
Unique visitors to nina.no website	105 454	90 902

Number of employees	2015	2014
Total	231	222
- women	33.8 %	34.2 %
- women in scientific positions	26.3 %	25.5 %
- female PhD students	50.0 %	66.7 %

Number of employees (full-time equivalents)	2015	2014
Total	222.4	216.5
- scientific staff	145.4	143.7

#### NINA's turnover 2015



Total turnover: 34,9 mill. EUR

## 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.



## RO02 Biodiversity and Ecosystem Services

### Eligible activities

- 1: “Studies and training regarding Protected Areas’ natural ecosystems contribution to main economic sectors”
- 2: “Increased capacity in managing and monitoring ecological corridors”
- 3: “Large ecosystems restoration scheme”
- 4: Small Grant Scheme: “Identification of Payments for Ecosystem Services (PES)”
- 5: Pre-defined project: “Development of a National Database on ecosystems and ecosystems services”

## RO07 – Adaptation to Climate Change

**1: “Studies and training regarding Protected Areas’ natural ecosystems contribution to main economic sectors”**

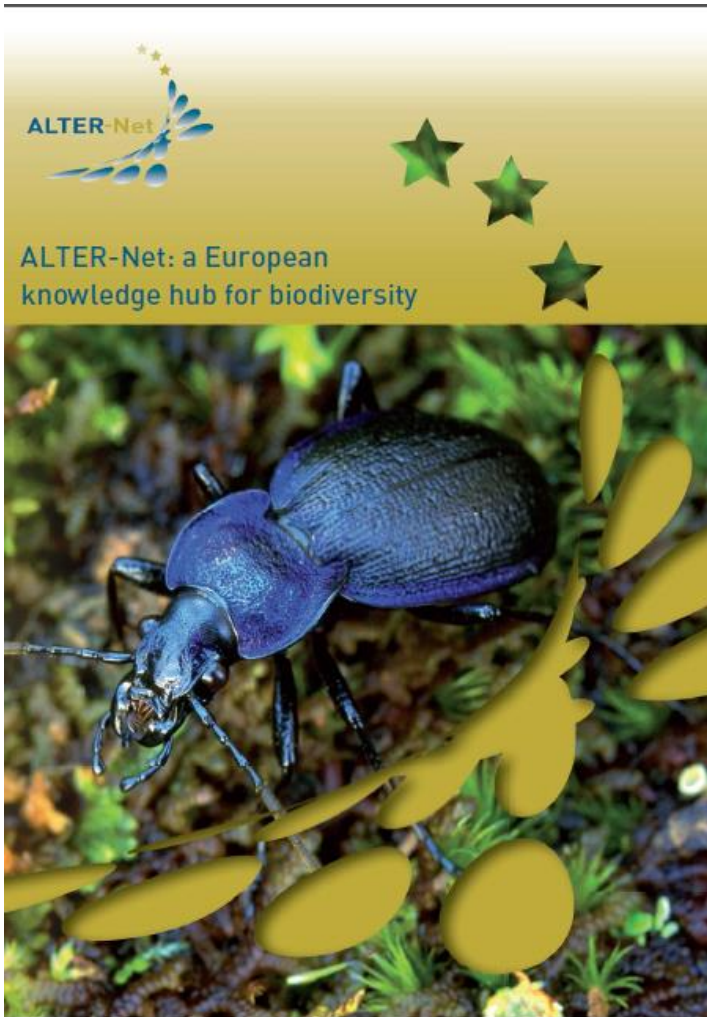
**4: Small Grant Scheme: “Identification of Payments for Ecosystem Services (PES)”**

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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](#)

## 2: “Increased capacity in managing and monitoring ecological corridors”



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

## 2: "Increased capacity in managing and monitoring ecological corridors"

## 5: Pre-defined project: "Development of a National Database on ecosystems and ecosystems services"

## The Norwegian Species and Habitats Database



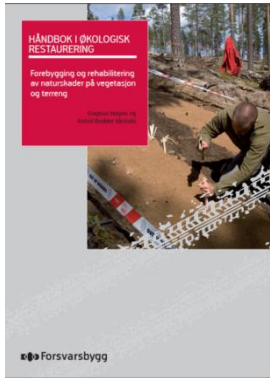
## The Norwegian Nature Index

## 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

### 3: “Large ecosystems restoration scheme”



‘Handbook of ecological restoration’ (in Norwegian) ([.pdf](#))



**See also:**

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

Selected publications on ecosystem restoration theory and practice: [here](#), [here](#), [here](#), [here](#), [here](#), [here](#).

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

### 3: "Large ecosystems restoration scheme"



Ecosystem restoration:  
reintroductions

Arctic fox

White-tailed eagle

Beaver





### 3: "Large ecosystems restoration scheme"

## Norwegian example of large scale restoration: Restoration of Hjerkinn military firing range



### Norwegian Parliament 1999:

*"reset for civilian use"*

*"future nature protected area (National Park)"*

*"restore to original state"*



### 3: “Large ecosystems restoration scheme”

**Developing methods for restoration and recovery (1990 -)**

**Practical efforts on a large scale(1994 -)**

**Political decision, closedown (1999)  
→setting goals**

**Large scale restoration 2009 – 2020**

**Monitoring**



### 3: "Large ecosystems restoration scheme"



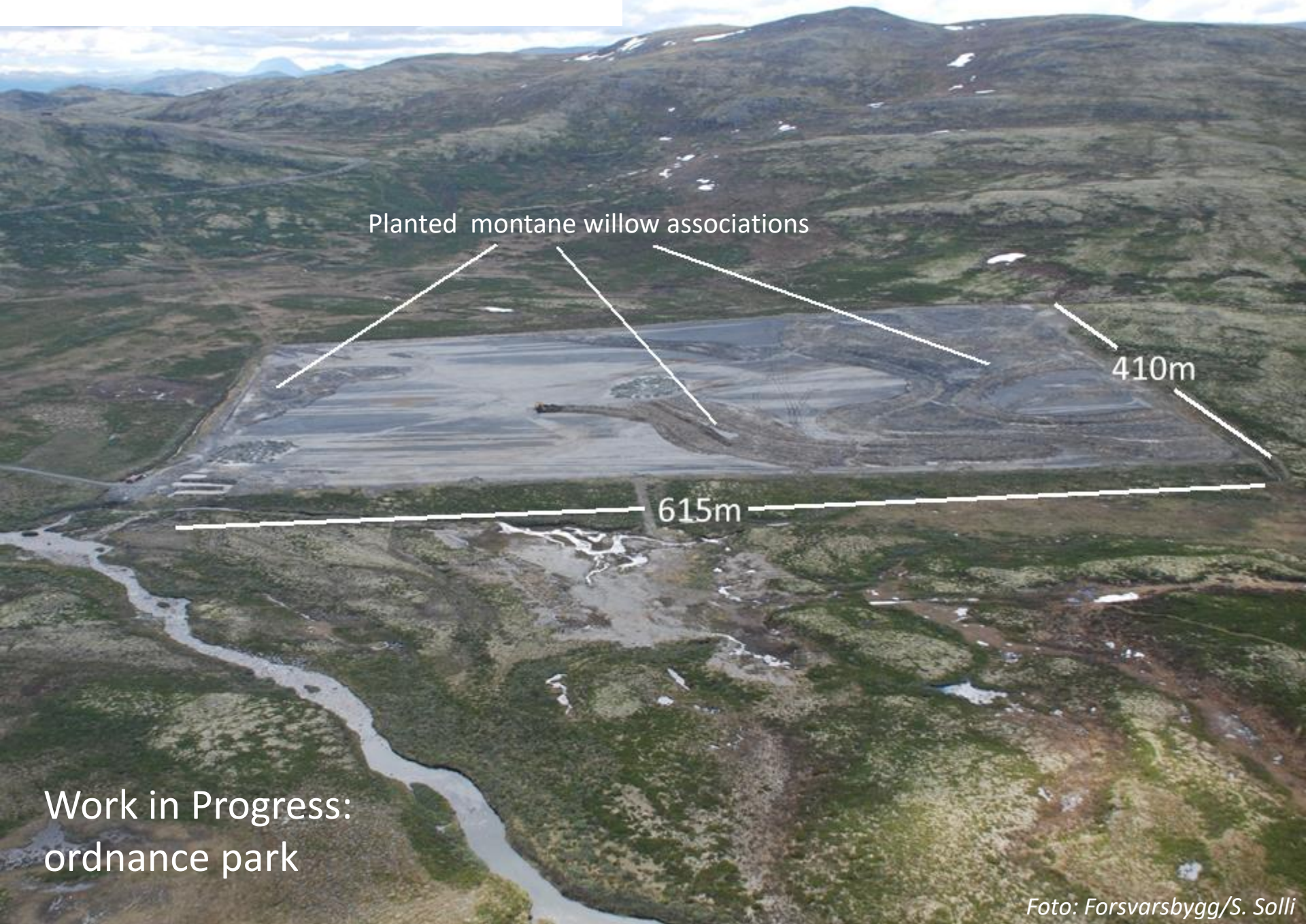
Juli 2002

Initial restoration: hill tracks



Juli 2005

### 3: "Large ecosystems restoration scheme"



Planted montane willow associations

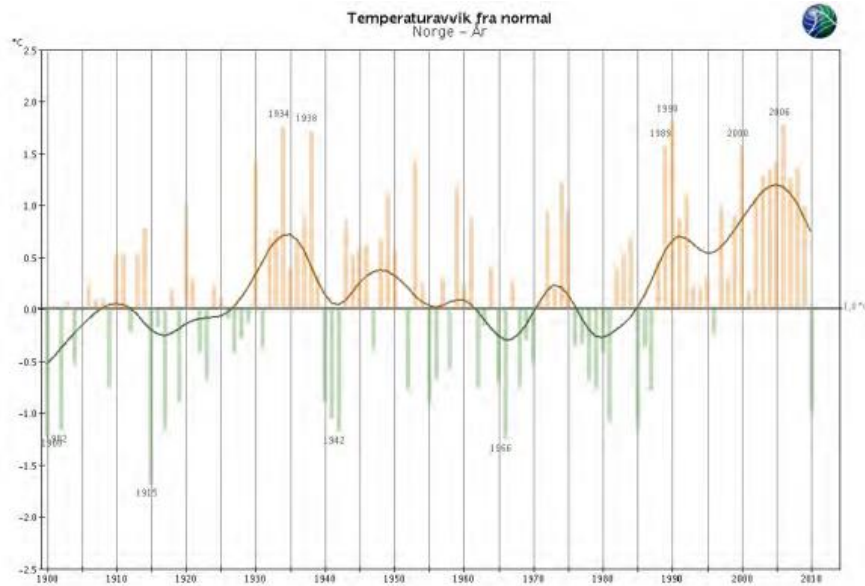
410m

615m

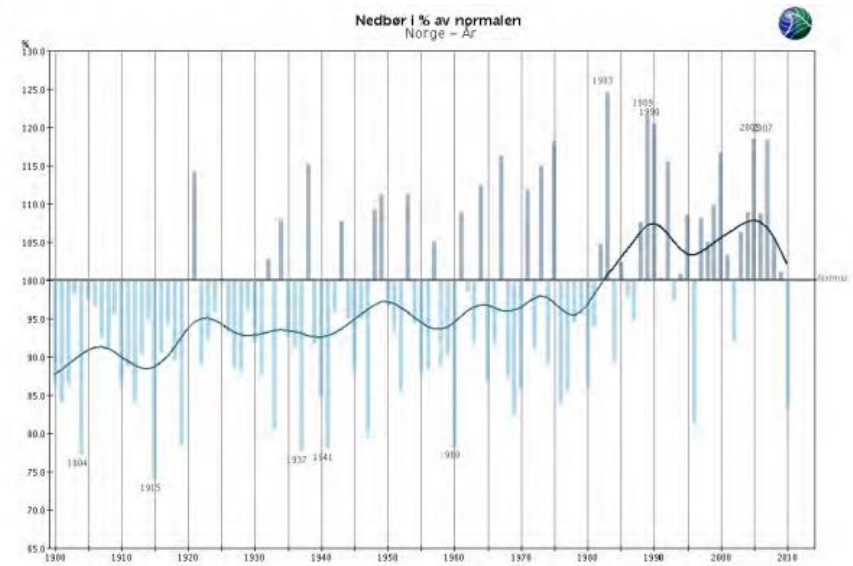
Work in Progress:  
ordnance park

## TOV: terrestrial nature monitoring

- Long distance air pollution
- **Climate**
- Species management



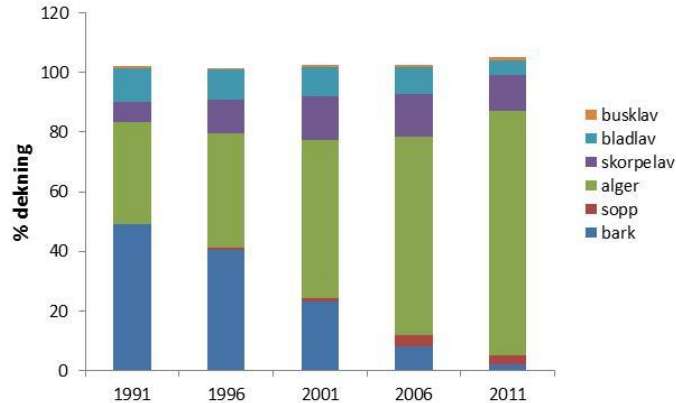
Temperature deviation from normal, Norway, 1900-2010



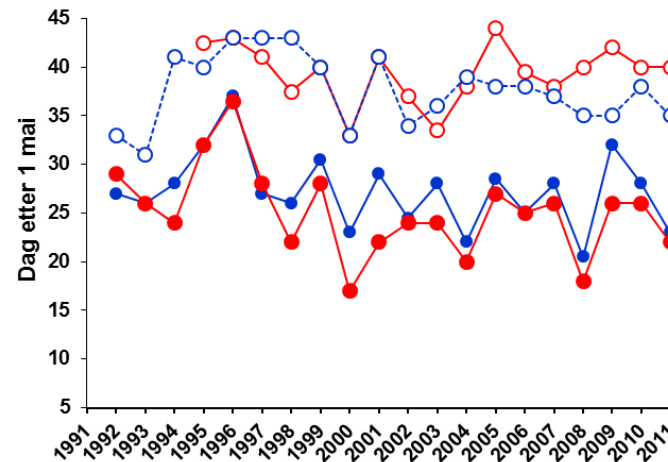
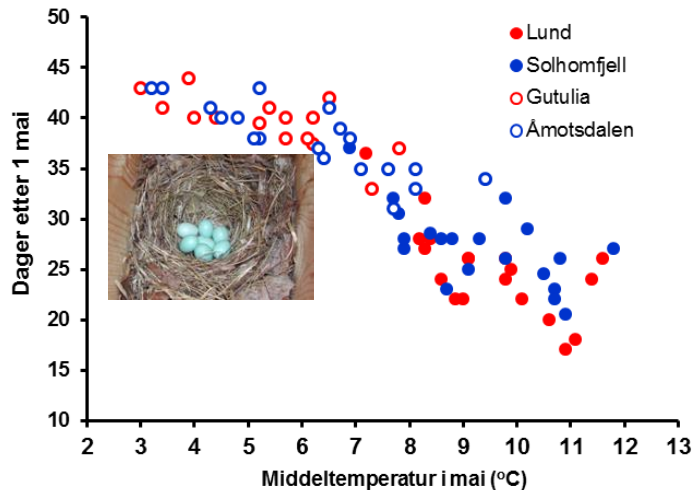
Precipitation, % of normal, Norway, 1900-2010

# RO07 Adaptation to Climate Change

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



## Example 2: Climate and birds – date of egg laying



## RO07 Adaptation to Climate Change

- Identification of 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](#)



5: Pre-defined project: “Development of a National Database on ecosystems and ecosystems services”

## Terrestrial nature monitoring (TOV) in an international perspective

LTER Europe

- 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



ILTER = International Long Term Ecological Research



# 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 5 areas of the EEA area RO02, and in the area RO07
- ▶ **CONTACT:** [duncan.halley@nina.no](mailto:duncan.halley@nina.no)