

# DLO institutes



**WAGENINGENUR**

*For quality of life*

# Dutch Arctic Circle



## Theme description:

- Stakeholder cooperation
- Public-private platform to bring together separated networks
- Industries, research, and government
- Shell, Boskalis, Van Oord, Royal Haskoning DHV, MinEZ, MinBuZa, TuDelft, NIOZ
- Strengthen the position and interests of The Netherlands
- Stimulate and support stakeholders
- Operations are: Ecological responsible, Socially appreciated, Internationally renown
- Develop projects focussing on Building with Nature in Arctic conditions

## Involved scientists:

- Wouter Jan Strietman (LEI)
- Floris Groenendijk (IMARES)
- Martine v.d. Heuvel-Greve (IMARES)
- Bas Bolman (LEI)



## Projects:

- Maritime Innovation and Impuls Programme (2014-2016)
- Ministry of Foreign Affairs (2015/2016)

## References:

- 6 stakeholder meetings; 1 work session, presentations at various conferences



LEI

WAGENINGEN UR

More information:

[bas.bolman@wur.nl](mailto:bas.bolman@wur.nl) / +31 (0)317-487703





## How's life at Svalbard? 2015

### Involved scientists

- Judith Klostermann, Gaia Mori

### Outcomes

- Longyearbyen is not a transitory community; instead people are enjoying ties with friends and family.
- Sharing the love for nature may be an important reason for the sense of community in Longyearbyen.
- Ending coal mining will be a blow to the town's identity.
- All hopes are on tourism, research and education.



Longyearbyen centre



Old part of Longyearbyen



Svalbard camping

## Institutions for sharing resources in the Arctic 2013

### Involved scientist:

- Judith Klostermann

### Outcomes: Three systems for self-governance

- 'Home Rule': decentralized public administration, indigenous people within geographic boundaries have rights to use natural resources (Greenland and Nunavut).
- Dual system, both the 'southern' public administration and an aboriginal council exist (Saami and the First Nations in Yukon)
- 'Land claim settlements': a business model (Alaska)

More information:

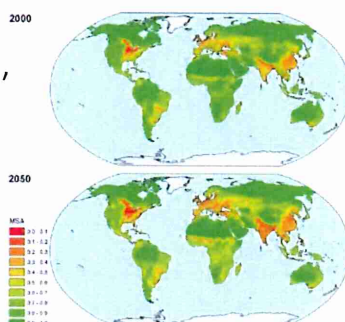
judith.klostermann@wur.nl  
+31 (0)317-486427



Saami Parliament in  
Murmansk Oblast



Svalbard reindeer



Example of GLOBIO model  
results for biodiversity

## Socio-economic indicators report 2014

### Involved scientists

- Judith Klostermann, Wies Breeksema, Natasha Valeeva, Verina Ingram

### Outcomes:

#### indicators are lacking on:

- Increasing human pressure on fish and wildlife
- Quantitative estimate of land use
- Estimated intake of certain pollutants
- Measurement of the reindeer economy

## Terrestrial impact studies 2014-2015

### Involved scientist

Joost Lahr

### Outcomes

- Scientific article of literature survey on discharge of drilling mud & cuttings in the Arctic (with colleagues from IMARES and Alterra).
- Feasibility study on risk mapping & analysis of terrestrial species vulnerable to pollution.

More information:  
joost.lahr@wur.nl  
+31 (0)317-485399

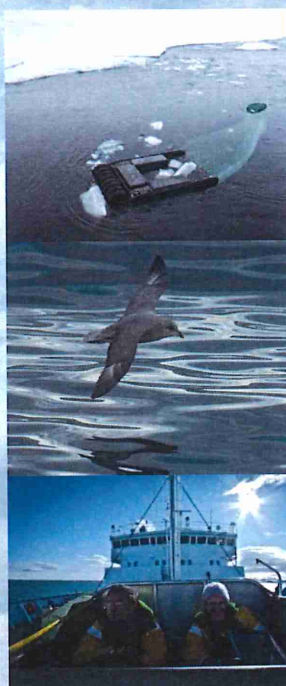




## Marine ecology

### Involved scientists:

- Sea-ice communities:  
Jan Andries van Franeker, Fokje Schaafsma (PhD)
- Fish:  
Ingrid Tulp
- Birds:  
Steve Geelhoed, Hans Verdaat, Ingrid Tulp, Rob van Bemmelen (PhD)
- Seals and walruses:  
Sophie Brasseur, Geert Aarts, Roger Kirkwood
- Whales:  
Meike Scheidat, Hans Verdaat, Steve Geelhoed, Brita Trapman



### Description

Knowledge development and advice with regards to marine ecosystem components and food webs in the Arctic.

### Projects

- PhD: 'The imperiled role of sea ice in supporting the living resources of the polar oceans'
- PhD: 'Migratory connectivity between Arctic breeding grounds and oceanic wintering areas of seabirds'
- In prep: JIP SALTO - [www.marin.nl/web/JIPs-Networks/Public/SALTO.htm](http://www.marin.nl/web/JIPs-Networks/Public/SALTO.htm)

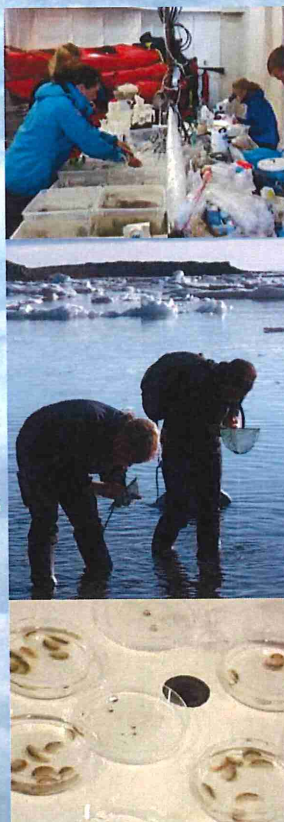
### Selected publications

-Flores, H (2009). Frozen desert alive: The role of sea ice for pelagic macrofauna and its predators'. PhD thesis.

## Human impacts

### Involved scientists:

- Pollution:  
Martine van den Heuvel-Greve
- Oil:  
Martine van den Heuvel-Greve, Jan Tjalling van der Wal, Edwin Foekema, Pepijn de Vries, Robbert Jak, Jacqueline Tamis
- Fisheries:  
Gerjan Piet, David Miller
- Invasive species:  
Jeroen Wijsman, Andrea Sneekes
- Offshore wind farms:  
Jan Tjalling van der Wal
- Ballast water:  
Andrea Sneekes, Klaas Kaag
- Marine Protected Areas:  
Oscar Bos
- Environmental Risk Assessment:  
Pepijn de Vries, Jacqueline Tamis, Sander Lagerveld



### Description

Knowledge development, innovation and advice on impacts of economic activities in the Arctic marine ecosystem.

### Projects

- SeaBasin Checkpoint Arctic ('15-'18; EC) – SEES expedition 2015
- 3P@Sea-Arctic ('12-'15; WUR)
- Systematic review environmental impact of drilling discharges in the Arctic ('13-'14; Shell)

### Selected publications

- Van den Heuvel-Greve et al (*subm.*). Low organotin contamination of harbour sediments in Svalbard. Polar Biology.
- Lagerveld et al (2013). Arctic Operations Handbook: Generic Framework for Environmental Assessments. IMARES C192/13.