

MEMBER COUNTRY: Netherlands
National Report to SCAR for year: 2012

Activity	Contact Name	Address	Telephone	Fax	Email	web site
National SCAR Committee						
Netherlands Polar Committee	ms. L.H.W. Noor MSc.	Netherlands Organisation for Scientific Research, Dep. Earth and Life Sciences, PO Box 93510, 2509 AM The Hague, the Netherlands	+31-70-3440820	+31-70-3819033	l.noor@nwo.nl	www.nwo.nl
SCAR Delegates						
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2) Alternate Delegate	mr. T.F. de Bruin, MSc	Royal Netherlands Institute for Sea Research (NIOZ), P.O.Box 59, 1790 AB Den Burg, The Netherlands	+31 222 369 479	+31 222 319 674	Taco.de.Bruin@nioz.nl	www.nioz.nl
Standing Scientific Groups						
Life Sciences						
1)						
2)						
3)						
4)						
Geosciences						
1)						
2)						
3)						
4)						
Physical Sciences						
1)	prof.dr.ir. H.J.W. de Baar	Royal Netherlands Institute for Sea Research (NIOZ), P.O.Box 59, 1790 AB Den Burg, The Netherlands	+31 222 369 456	+31 222 319 674	debaar@nioz.nl	www.nioz.nl
2)	prof.dr. M.R. van den Broeke	Utrecht University, Institute for Marine and Atmospheric Research (IMAU), P.O.Box 80005, 3508 TA Utrecht, The Netherlands	+31 30 253 3169	+31 30 254 3163	m.r.vandenbroeke@uu.nl	www.uu.nl/imau

Activity	Contact Name	Address	Telephone	Fax	Email	web site
Scientific Research Program						
ACE 1) 2) 3) 4)						
AGCS 1) 2) 3) 4)						
EBA 1) 2) 3) 4)						
ICESTAR 1) 2) 3) 4)						
SALE 1) 2) 3) 4) AAA (2010-) 1) 2) 3) 4)						

Activity	Contact Name	Address	Telephone	Fax	Email	web site
ACTION GROUPS						
1) 2) 3) 4) insert others as needed						
EXPERT GROUPS						
1) SCAR-SCOR Oceanography Expert Group	mr. T.F. de Bruin, MSc	Royal Netherlands Institute for Sea Research (NIOZ), P.O.Box 59, 1790 AB Den Burg, The Netherlands	+31 222 369 479	+31 222 319 674	Taco.de.Bruin@nioz.nl	www.nioz.nl
2) Joint Expert Group on Human Biology and Medicine	ms. L.H.W. Noor MSc.	Netherlands Organisation for Scientific Research, Dep. Earth and Life Sciences, PO Box 93510, 2509 AM The Hague, the Netherlands	+31-70-3440820	+31-70-3819033	lnoor@nwo.nl	www.nwo.nl
SCADM						
1)	mr. T.F. de Bruin, MSc	Royal Netherlands Institute for Sea Research (NIOZ), P.O.Box 59, 1790 AB Den Burg, The Netherlands	+31 222 369 479	+31 222 319 674	Taco.de.Bruin@nioz.nl	www.nioz.nl
SCAGI						
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NATIONAL ANTARCTIC DATA CENTRE						
Netherlands Antarctic Data Inventory (NADI)	mr. T.F. de Bruin, MSc	Royal Netherlands Institute for Sea Research (NIOZ), PO Box 59, 1790 AB Den Burg (Texel), The Netherlands	+31 222 369 479	+31 222 319 674	Taco.de.Bruin@nioz.nl	www.nioz.nl
SCAR DATABASE						
insert name of database for which your country has responsibility	none					

A BRIEF SUMMARY OF SCIENTIFIC HIGHLIGHTS*:

The Netherlands Organisation for Scientific Research (NWO) has set up a Dutch mobile research facility at the British research station Rothera on the Antarctic Peninsula. With this laboratory the Netherlands has become a fully fledged research partner within international polar research. The Dirck Gerritsz Laboratory was finalized in 2012. It is made up of four independent laboratory units each of which is housed in a sea container:

1. Annunciation

The temperature in this container will be kept between 15 °C and 20 °C. It is a dry lab and therefore suitable for the use of a wide range of analytical instruments. Besides the standard equipment the lab also contains a laminar flow cabinet.

2. Hope

This lab has a mass spectrometer that can quantify climate gases in the atmosphere. There is also a culturing cabinet with plasma lamps that provide the daylight spectrum.

3. Love

This lab is for carrying out analytical work that demands a high degree of accuracy. It has therefore been equipped with special filters in the air-processing system to ensure that the air entering the container is dust free. The lab is intended for work under clean conditions, free of contamination from metals, so that analyses on uncontaminated samples can be carried out later. In addition to the standard fittings this lab has two laminar flow cabinets.

4. Faith

This wet lab has an incubation unit to study effects on the composition of Antarctic algal species. This unit allows the researchers to vary the pCO₂ (partial pressure of carbon dioxide), pH (degree of acidity), temperature, salt level and turbidity, for example. Water samples will also be processed in the lab.

The names are taken from five ships (the fifth ship was called Loyalty) that set sail from Rotterdam in 1598 in search of a trade route via South America to Asia. The ship Annunciation commanded by Dirck Gerritszoon Pomp was blown southwards when sailing close to the southern tip of South America. Gerritsz then saw the snow-capped mountainous landscape which looked 'like the country of Norway'. He possibly saw the South Shetland islands, and so was the first to set eyes on Antarctica. The entire research facility therefore bears the name Dirck Gerritsz Laboratory.

The first research team started working in the lab in November 2012. Research projects that started in the lab in 2012 or in January 2013 are:

- 1) Structuring of marine pelagic microbial communities by glacial meltwater in Ryder Bay, Antarctica of Professor Buma, University of Groningen;
- 2) Seasonality of iron and other trace metals in relation to the rapidly changing ice/water cycle and plankton dynamics of the West Antarctic Peninsula of Professor De Baar, Royal Netherlands Institute for Sea Research (NIOZ);
- 3) Antarctic phytoplankton in a changing world and its consequences for the lower pelagic food web (Antphirco) from Dr. Brussaard, Royal Netherlands Institute for Sea Research (NIOZ);
- 4) Temporal dynamics of the climate gas dimethyl sulphide (DMS) and related compounds in a changing Antarctic sea-ice environment from Dr. Stefels, University of Groningen;
- A fifth project starts as well at Rothera during season 2012-2013 but is not specifically bound to the Dirck Gerritsz Laboratory;
- 5) Freshwater fluxes and climate change in the Antarctic Peninsula: a combined observational and modelling approach from Dr Tijm-Reijmer, Utrecht University

Other Antarctic research conducted in the Netherlands Polar Programme during 2012:

- 6) Reducing the Uncertainties in the Mass Balance of Antarctica (RUMBA) of professor Van den Broeke, Utrecht University;
- 7) Viral impact on microbes in coastal waters of the Antarctic Peninsula and its ecological implications (VIRANT) of Dr Brussaard, Royal Netherlands Institute for Sea Research (NIOZ);
- 8) Reconstructing the evolution and dynamics of the Antarctic cryosphere from Ocean Drilling; a dinoflagellate perspective of professor Brinkhuis, Royal Netherlands Institute for Sea Research (NIOZ);
- 9) Separating GIA and ice mass change signals in Antarctica using satellite data of Dr Gunter, Delft University of Technology
- 10) Modelling the Antarctic firn layer for improved estimates of remotely-sensed ice mass changes of professor Van den Broeke, Utrecht University;
- 11) iWS: a new generation of automatic weather stations for use on glaciers and ice sheets of professor Van den Broeke, Utrecht University

For more information about the Netherlands Polar Programme please visit:

www.nwo.nl/npp

NO BIOPROSPECTING ACTIVITIES PLANNED

