Norwegian Polar Institute, 2017

D R O N N I N G M A U D L A N D

1:2 500 000

SOURCES AND NOTES

All sources are digital and online, and have been accessed in 2016 and early 2017, unless date specified. Courtesy of all data providers.

UPPER LEFT CORNER: FRONT COVER - PHOTO AND GLOBE

Part of Skigarden. Photo by Stein Tronstad, 2014.

Ocean names are placed based on **International Hydrographic Organization (IHO)** *Limits of Oceans and Seas (1953)* (https://www.iho.int/iho_pubs/standard/S-23/S-23_Ed3_1953_EN.pdf), as well as on **Scientific Committee on Antarctic Research (SCAR)** article *The Southern Ocean defined* (http://www.scar.org/articles/southernocean.html, accessed in 2013).

Basemap data from **Natural Earth** (http://www.naturalearthdata.com/) and **SCAR** *Antarctic Digital Database (ADD), version 7.0* (http://add.scar.org/), to which the **Norwegian Polar Institute (NPI)** has contributed Dronning Maud Land map data.

UPPER EDGE: 3D ILLUSTRATION

Place names are selected from **NPI** place names database (http://placenames.npolar.no/) and **SCAR** *Composite Gazetteer Antarctica* database (https://data.aad.gov.au/aadc/gaz/scar/), to which the Norwegian names are contributed.

Facilities presentation is based on **Council of Managers of National Antarctic Program (COMNAP)** *Main Antarctic Facilities operated by National Antarctic Programs in the Antarctic Treaty Area (South of 60° latitude South)*, version 26. July 2016 spreadsheet. (https://www.comnap.aq/Information/SitePages/Home.aspx).

The elevation of Dom Fuji station is gathered from **National Institute of Polar Research (NIPR)** web resource http://polaris.nipr.ac.jp/~domef/home/eng/page4.html. Height of Jøkulkyrkja is measured by **NPI** (value provided e.g. at http://carl.npolar.no/geografi/dronning_maud_land). Height of Vinson Massif in Ellsworth Mountains have been obtained from **Gildea, D., and J. Splettstoesser (2007)**, Craddock Massif and Vinson Massif remeasured, in *Antarctica: A Keystone in a Changing World* – Online Proceedings of the 10th ISAES, edited by A.K. Cooper and C.R. Raymond et al., USGS Open-File Report 2007-1047, Short Research Paper 069, 3 p.; doi:10.3133/of2007-1047.srp069 (http://pubs.usgs.gov/of/2007/1047/srp/srp069/of2007-1047srp069.pdf). The elevation at the Amundsen-Scott South Pole Station is gathered from the U.S. **Office of Polar Programs (OPP), National Science Foundation (NSF)**, http://www.nsf.gov/od/opp/support/southp.jsp

The basemap data are derived from **SCAR** ADD database, except the exposed ice, which is extracted in-house by visual interpretation of **U.S. Geological Survey (USGS)** *Landsat Image Mosaic of Antarctica (LIMA)* (http://lima.usgs.gov/).

The elevation visualization and hill shades are based on **Liu, H., K. C. Jezek, B. Li, and Z. Zhao. 2015.** *"Radarsat Antarctic Mapping Project Digital Elevation Model, Version 2" [RAMP2]. Boulder, Colorado USA. NASA National Snow and Ice Data Center Distributed Active Archive Center*, and vertically exaggerated.

CENTRE: MAIN MAP

Place names are selected from **NPI** place names database, and secondary from **SCAR** gazetteer. For the British (west) and Australian (east) claims, place names approved by the respective authorities have been selected from **SCAR** gazetteer.

The facilities presentation is based mainly on **COMNAP** spreadsheet.

Elevation points are mainly collected from **NPI** 1:250 000 map sheets in Dronning Maud Land. A few heights are derived from **USGS** provided *Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) Global Digital Elevation Model (GDEM) Version 2* (http://gdex.cr.usgs.gov/gdex/).

Ice shelf edges are from **SCAR** ADD database, with updates digitized in-house from **USGS / National Aeronautics and Space Administration (NASA)** Landsat 8 imagery mainly of 2016, available at https://earthexplorer.usgs.gov/.

Ice rises within Dronning Maud Land are based on **Moholdt, G., & Matsuoka, K. (2015).** *Inventory of Antarctic ice rises and rumples (version 1) [Data set].* Norwegian Polar Institute. https://doi.org/10.21334/npolar.2015.9174e644

Grounding lines within Dronning Maud Land are extracted from **Depoorter, Mathieu A; Bamber, Jonathan L; Griggs, Jennifer; Lenaerts, Jan T M; Ligtenberg, Stefan R M; van den Broeke, Michiel R; Moholdt, Geir (2013)**: *Antarctic masks (ice-shelves, ice-sheet, and islands)*, link to shape file. doi:10.1594/PANGAEA.819147

Bare land data and moraines are extracted from the **NPI** geology database.

Ice shelf edges, ice rises, grounding lines, bare land and moraines outside Dronning Maud Land are derived from **SCAR** ADD database.

Lakes are from **SCAR** ADD database.

The exposed ice presentation originates from interpretation of **USGS** LIMA product.

Hill shade and elevation contours have been generated based on three DEMs: **Helm, V., Humbert, A., and Miller, H.**: *"Elevation and elevation change of Greenland and Antarctica derived from CryoSat-2"*, The Cryosphere, 8, 1539-1559, doi:10.5194/tc-8-1539-2014, 2014; RAMP2; and ASTER GDEM. The hill shade is exaggerated and made transparent.

Depth tints and shades are derived and generalized from **Arndt, J.E., H. W. Schenke, M. Jakobsson, F. Nitsche, G. Buys, B. Goleby, M. Rebesco, F. Bohoyo, J.K. Hong, J. Black, R. Greku, G. Udintsev, F. Barrios, W. Reynoso-Peralta, T. Morishita, R. Wigley,** "The International Bathymetric Chart of the Southern Ocean (IBCSO) Version 1.0 - A new bathymetric compilation covering circum-Antarctic waters", *Geophysical Research Letters, doi: 10.1002/grl.50413*, provided by the **IBCSO program** (http://www.ibcso.org/). The hill shade is exaggerated and made transparent.

LOWER LEFT/RIGHT CORNERS: SATELLITE IMAGE MAPS

Place names from **NPI** place names database.

Facilities are plotted from **COMNAP** dataset.

Satellite imagery are prepared from **USGS/NASA** Landsat 8 scenes.

LOWER LEFT CORNER: FLOW SPEED MAP

Ice shelves and coastlines are derived from **SCAR** ADD database.

The ice flow speed presentation is based on **Rignot, E., J. Mouginot, and B. Scheuchl. 2011.** Ice Flow of the Antarctic Ice Sheet, *Science*, Vol. 333(6048): 1427-1430. doi 10.1126/science.1208336.

The hill shade is based on **Fretwell, P., and 55 others. 2012**. Bedmap2: improved ice bed, surface and thickness datasets for Antarctica*, The Cryosphere Discuss.*, 6, 4305-4361, doi:10.5194/tcd-6-4305-2012.

The outline of mainland Norway for comparison is based on **Natural Earth** data.

LOWER RIGHT CORNER: BED ELEVATION MAP

Ice shelves and coastlines are derived from **SCAR** ADD database.

The hill shade and bed elevation presentations are based on **Fretwell, P., and 55 others. 2012**. Bedmap2: improved ice bed, surface and thickness datasets for Antarctica*, The Cryosphere Discuss.*, 6, 4305-4361, doi:10.5194/tcd-6-4305-2012.

BACK SIDE: PLACE NAME INDEX
Place names are derived from **NPI** (Norwegian entries) and **SCAR** (non-Norwegian entries) gazetteers.

BACK SIDE: DRONNING MAUD LAND
Basemap data are derived from **SCAR** ADD database.

BACK SIDE: ANTARCTICA
Facilities are derived from **COMNAP** spreadsheet.
Basemap data are derived from **SCAR** ADD database.