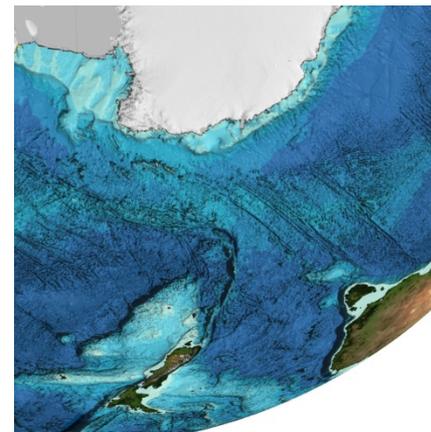
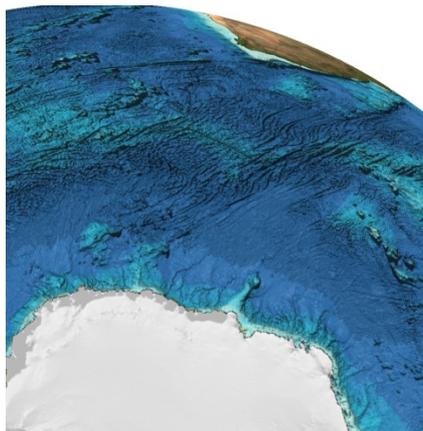
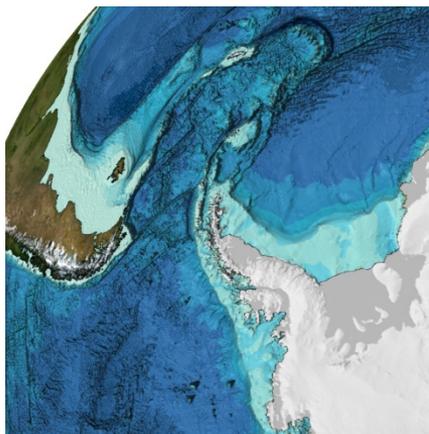


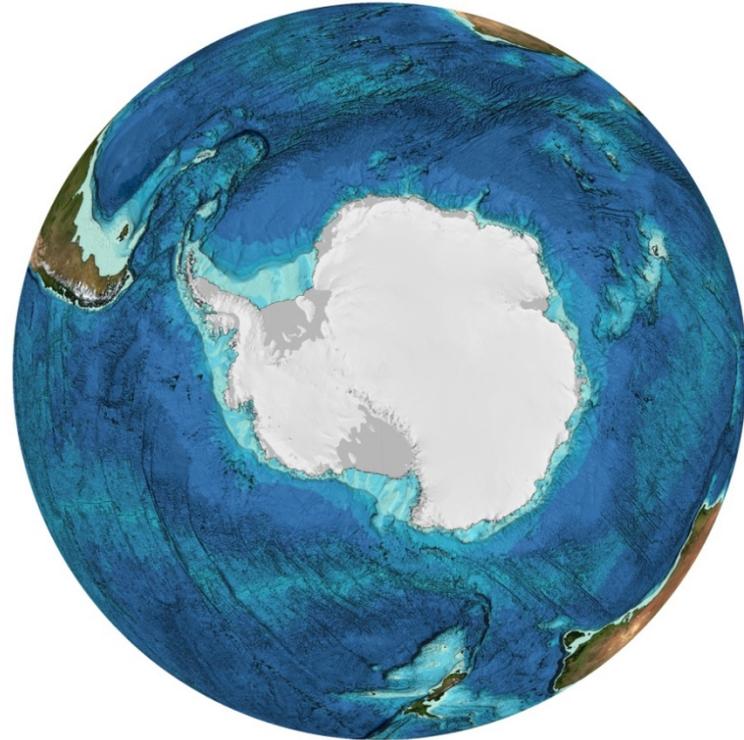
# Mapping the Gaps in Antarctica



Dr Jodie Smith

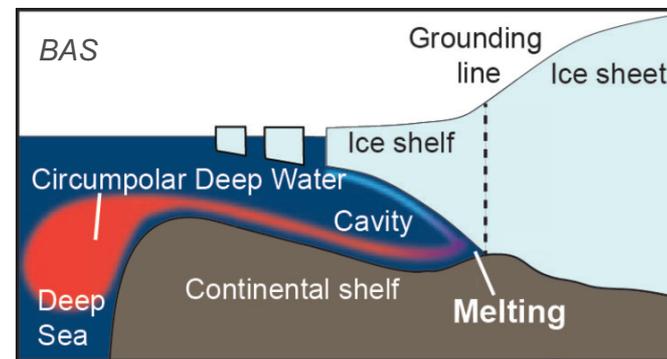
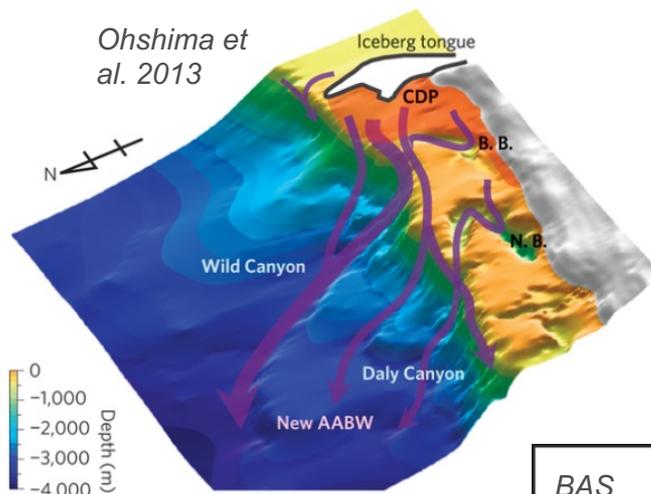
# OUTLINE

- Antarctic-specific applications
- Existing data
- Plans for the future (IBCSO, Seabed 2030)
- Opportunities for mapping in East Antarctica
- The role of collaboration



*GEBCO\_14 (Weatherall et al. 2015)*

# APPLICATIONS OF BATHYMETRY DATA IN ANTARCTICA

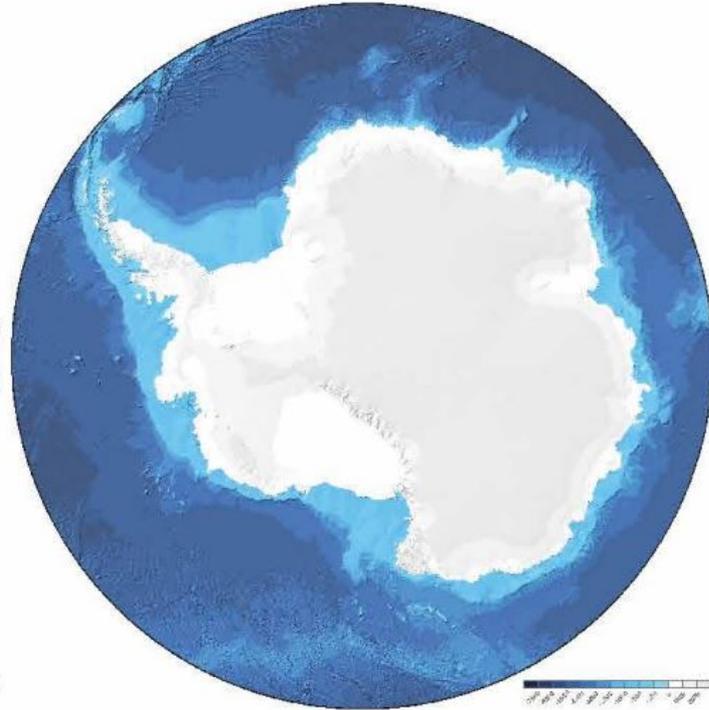


# EXISTING DATA

IBCSO Version 1.0 - bedrock



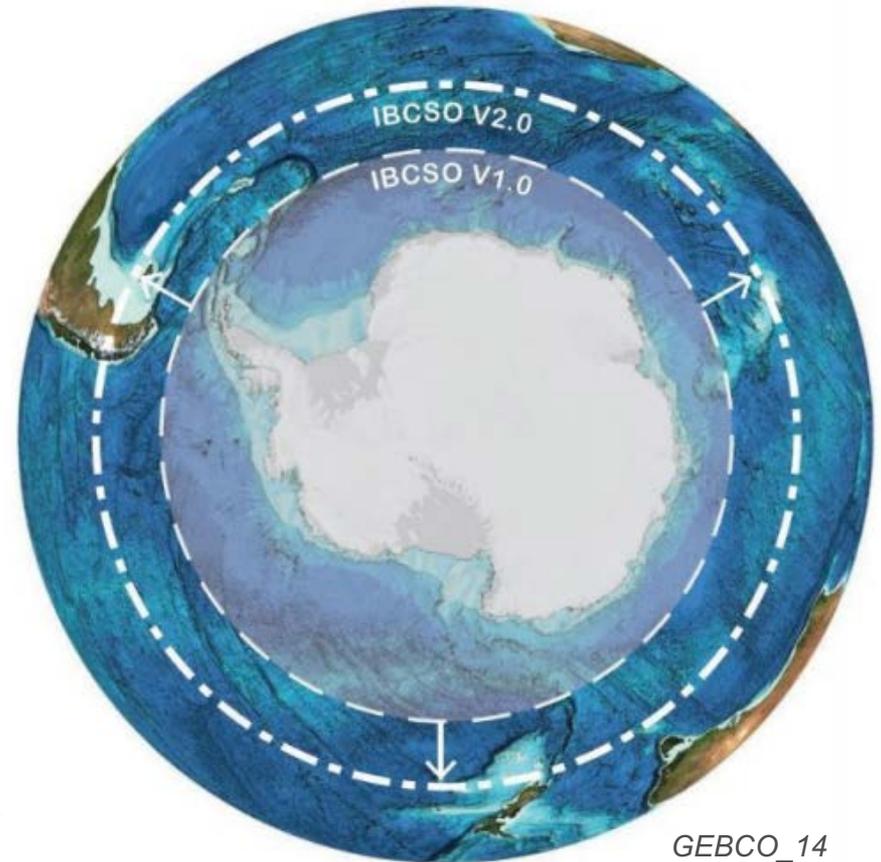
IBCSO Version 1.0 - icesurface



*“approximately 83% of the offshore 500 x 500 m grid cells of the IBCSO DBM are left unconstrained by depth data” (Arndt et al. 2013).*

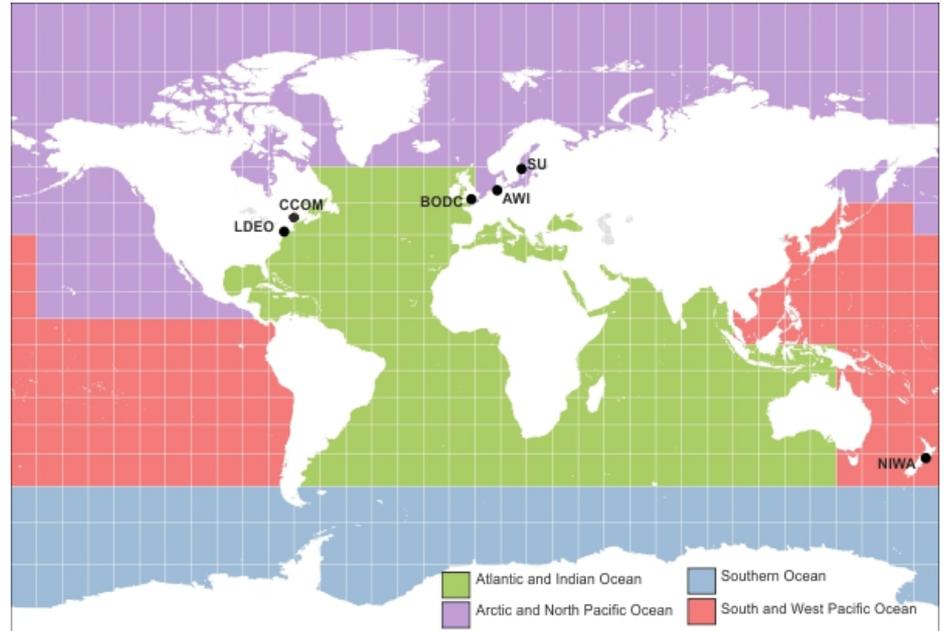
# PLANS FOR THE FUTURE - IBCSO

- Larger extent
- 2.5 times the area as Version 1.0!
- 500 m resolution
- Currently compiling data – to Dec 2018
- Data release and publication - late 2019

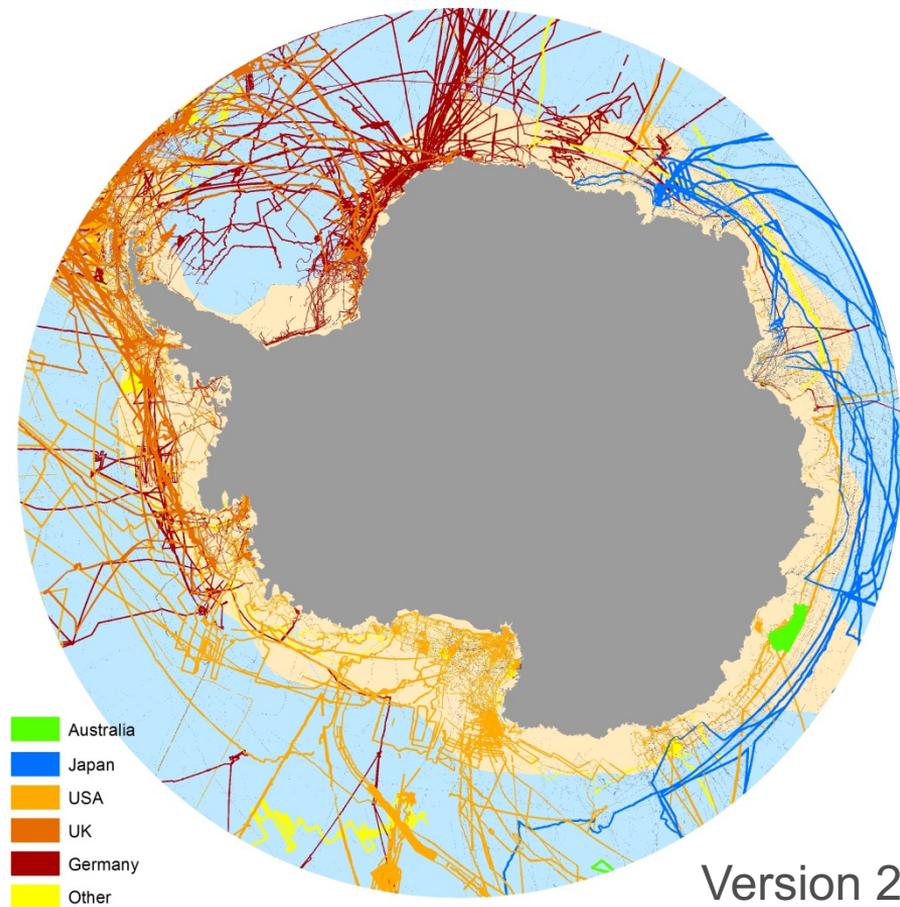
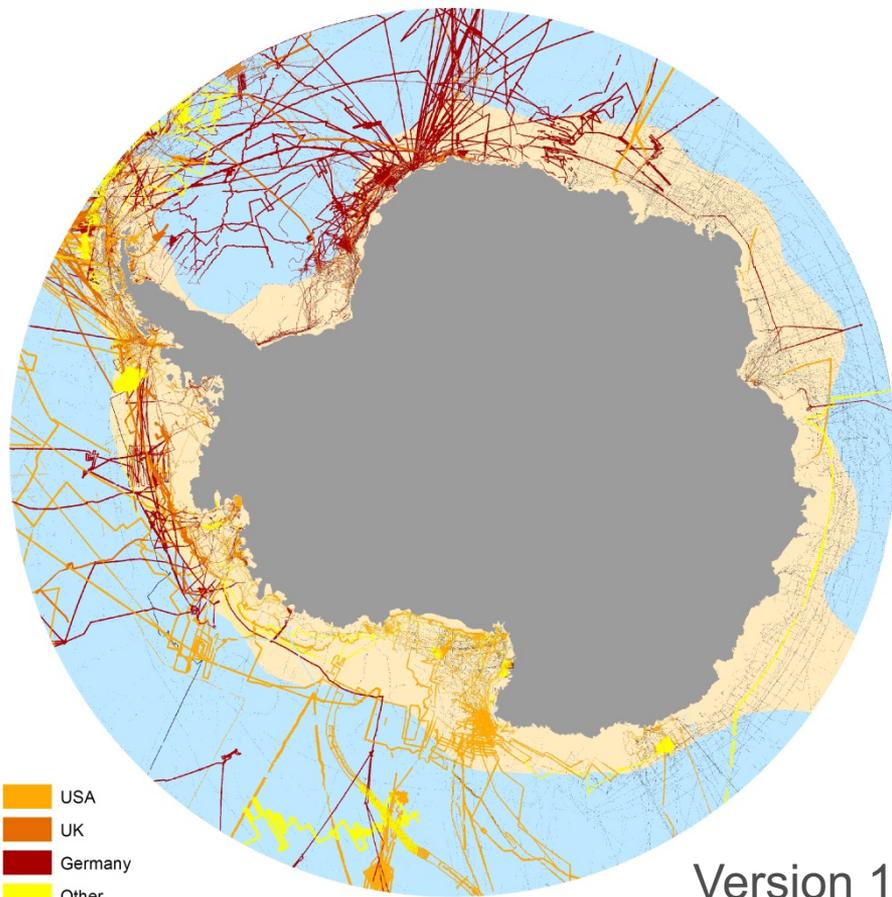


# PLANS FOR THE FUTURE - SEABED 2030

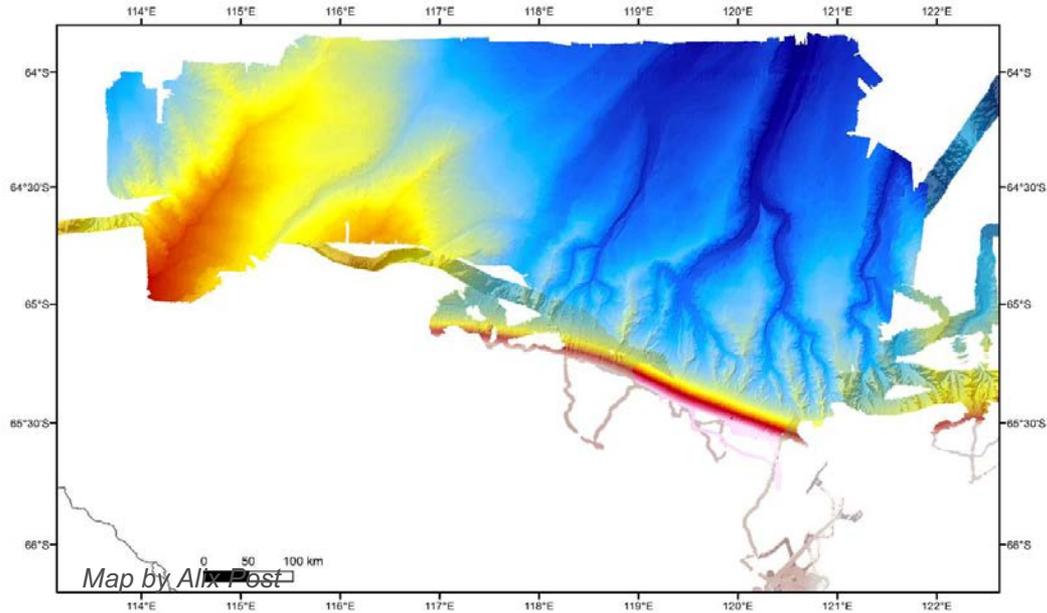
- IBCSO Version 2 = Seabed 2030 Southern Ocean region
- Common goals
- Both managed through AWI



# IBCSO SOURCE DATA



# OPPORTUNITIES FOR THE FUTURE



# OPPORTUNITIES FOR THE FUTURE

- Australia's new icebreaker - *RSV Nuyina*
- Under construction – due in 2020
- Full ocean depth multibeam capabilities
- Several annual transit voyages
- Dedicated marine voyages



# COLLABORATION - AUSTRALIA



**Australian Government**

**Department of the Environment and Energy**  
Australian Antarctic Division



**AUSTRALIAN  
ANTARCTIC  
PROGRAM**



**Australian Government**  
**Department of Defence**



**Australian Government**  
**Geoscience Australia**



**AusSeabed**



# COLLABORATION - INTERNATIONAL

- Japan and Australia
- 4<sup>th</sup> Japan-Australia workshop on Antarctic Science – July 2018
- Multidisciplinary – all recognise the need for bathymetry



# LETS MAP THE GAPS IN ANTARCTICA

