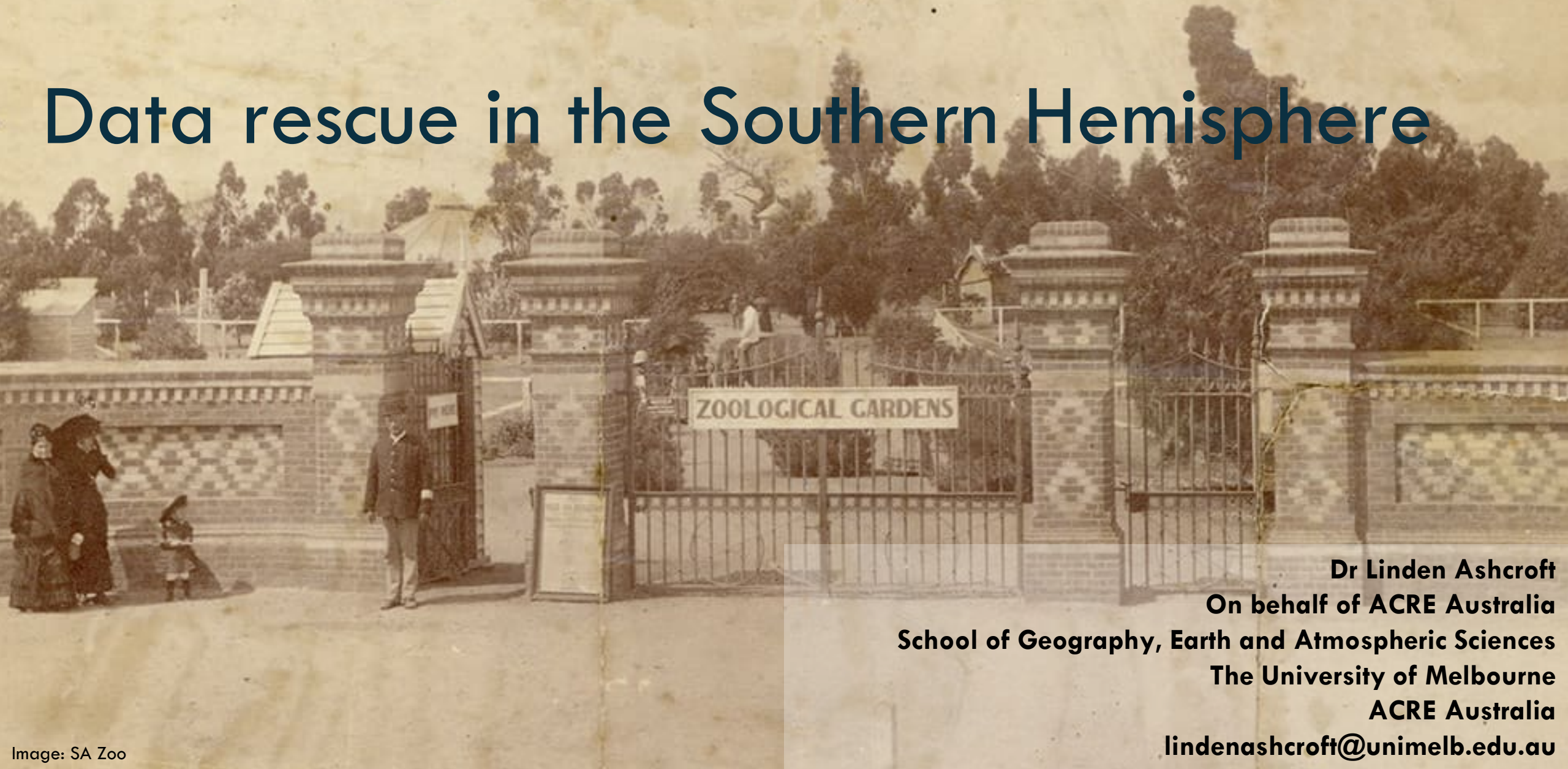


# Data rescue in the Southern Hemisphere



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**On behalf of ACRE Australia**  
**School of Geography, Earth and Atmospheric Sciences**  
**The University of Melbourne**  
**ACRE Australia**  
**[lindenashcroft@unimelb.edu.au](mailto:lindenashcroft@unimelb.edu.au)**



# Why do we need historical data?

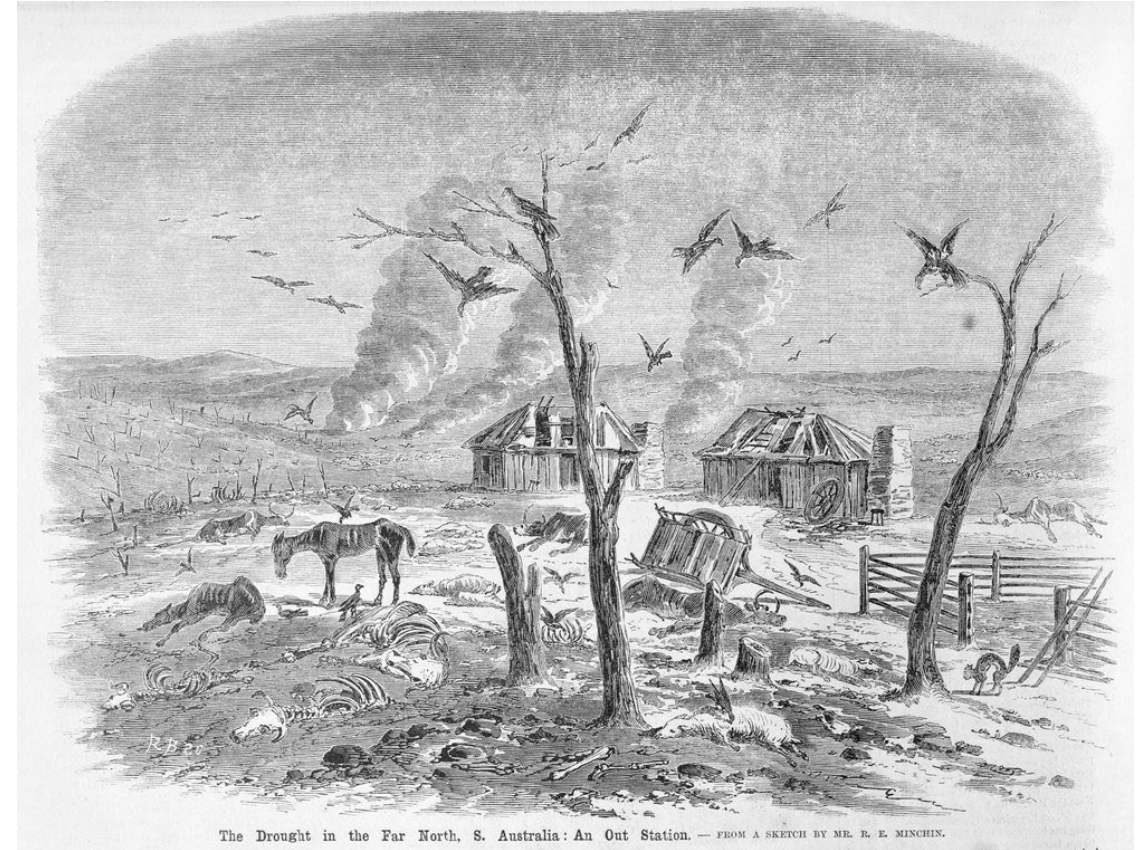




# 1. To better understand **risk**



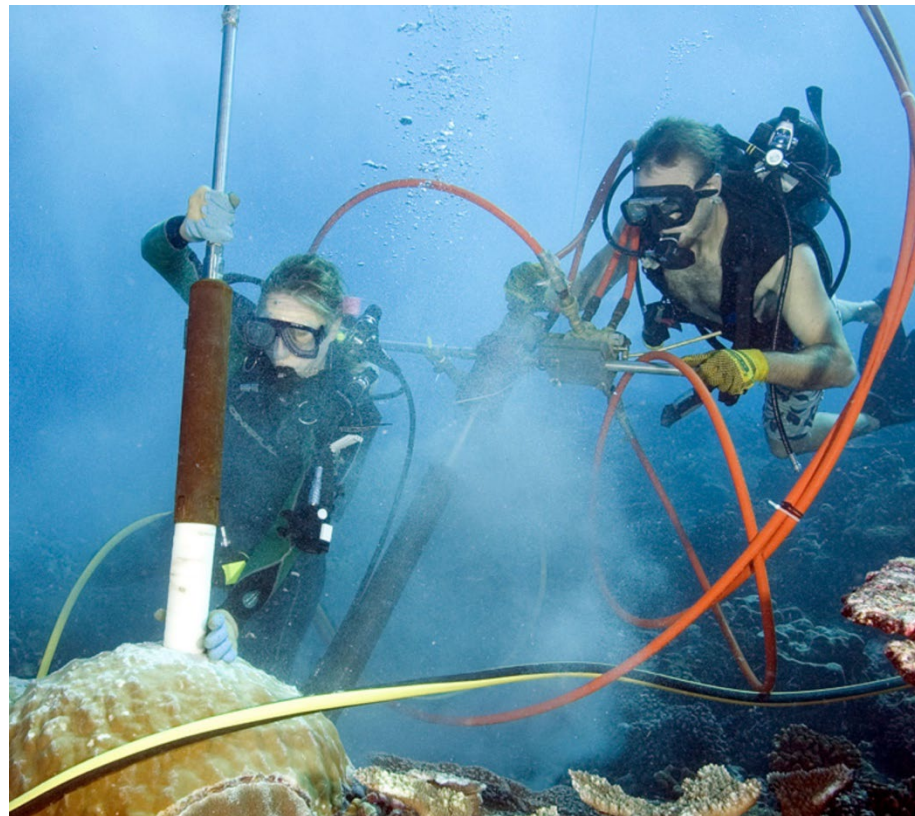
Ballarat, Victoria, 2000  
Image: Susan Gordon-Brown, State Library of Victoria



South Australia, 1865  
Image: State Library of Victoria



# 2. To provide a longer reference for natural records



Images: Cobb Lab, Jack Triest, University of Melbourne.



# 3. To provide a longer reference for pre-industrial baselines



Image:  
Museums  
Victoria



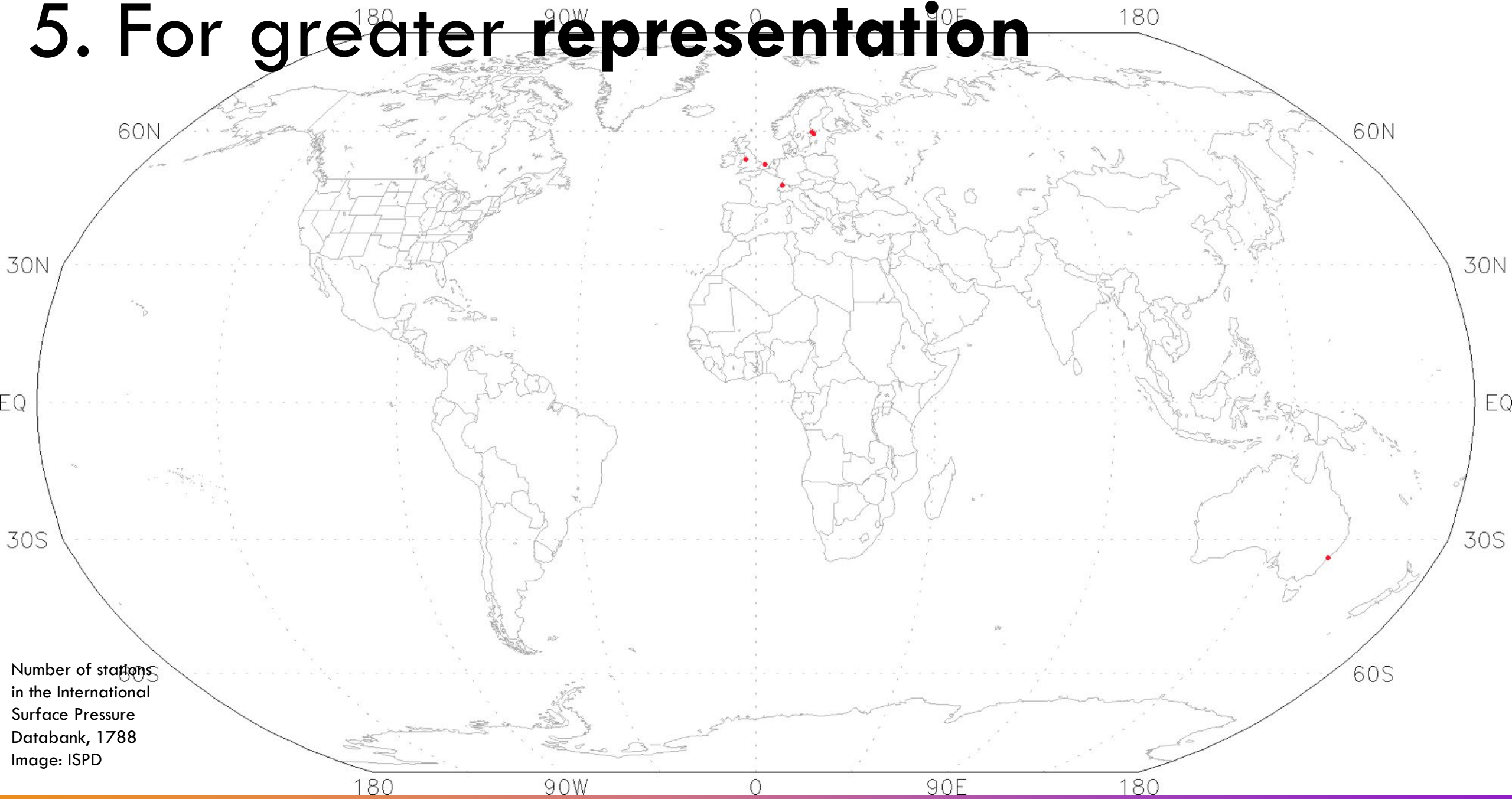
# 4. To get a great return



Images: NASA, NCI, Bureau of Meteorology

1788: Total # stations = 6

# 5. For greater representation

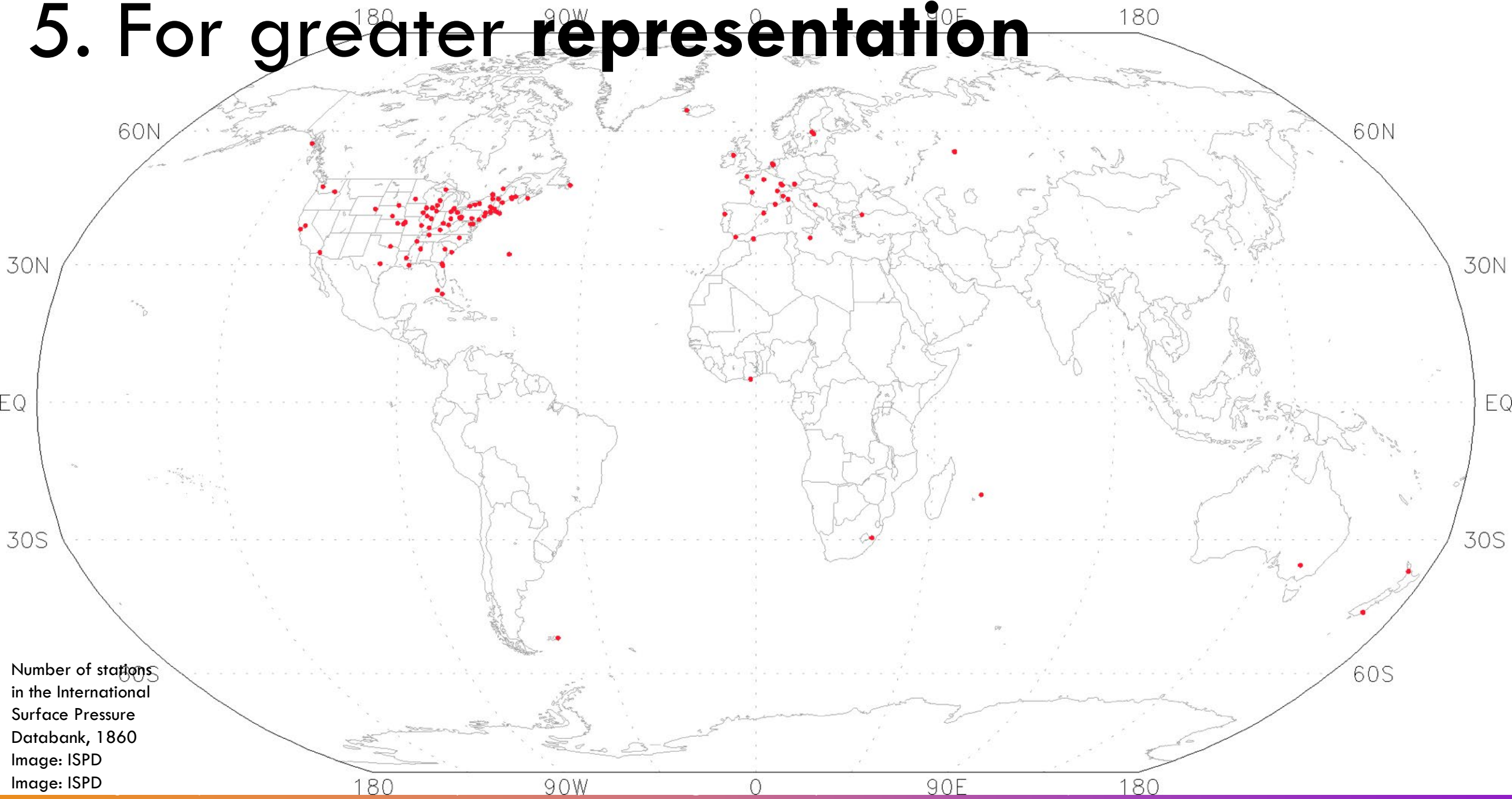


Number of stations  
in the International  
Surface Pressure  
Databank, 1788  
Image: ISPD



1860: Total # stations = 118

# 5. For greater representation

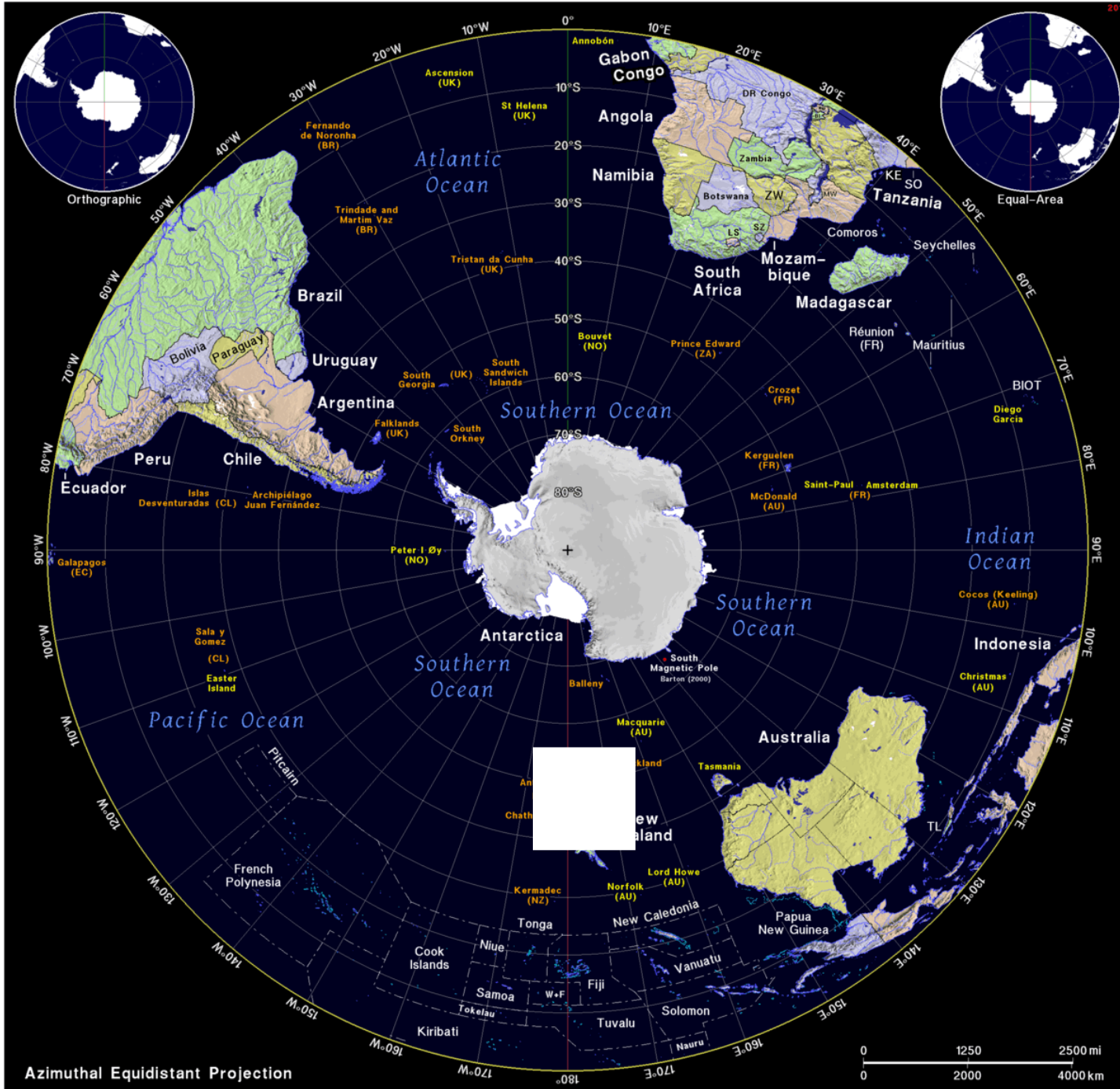


Number of stations  
in the International  
Surface Pressure  
Databank, 1860  
Image: ISPD  
Image: ISPD

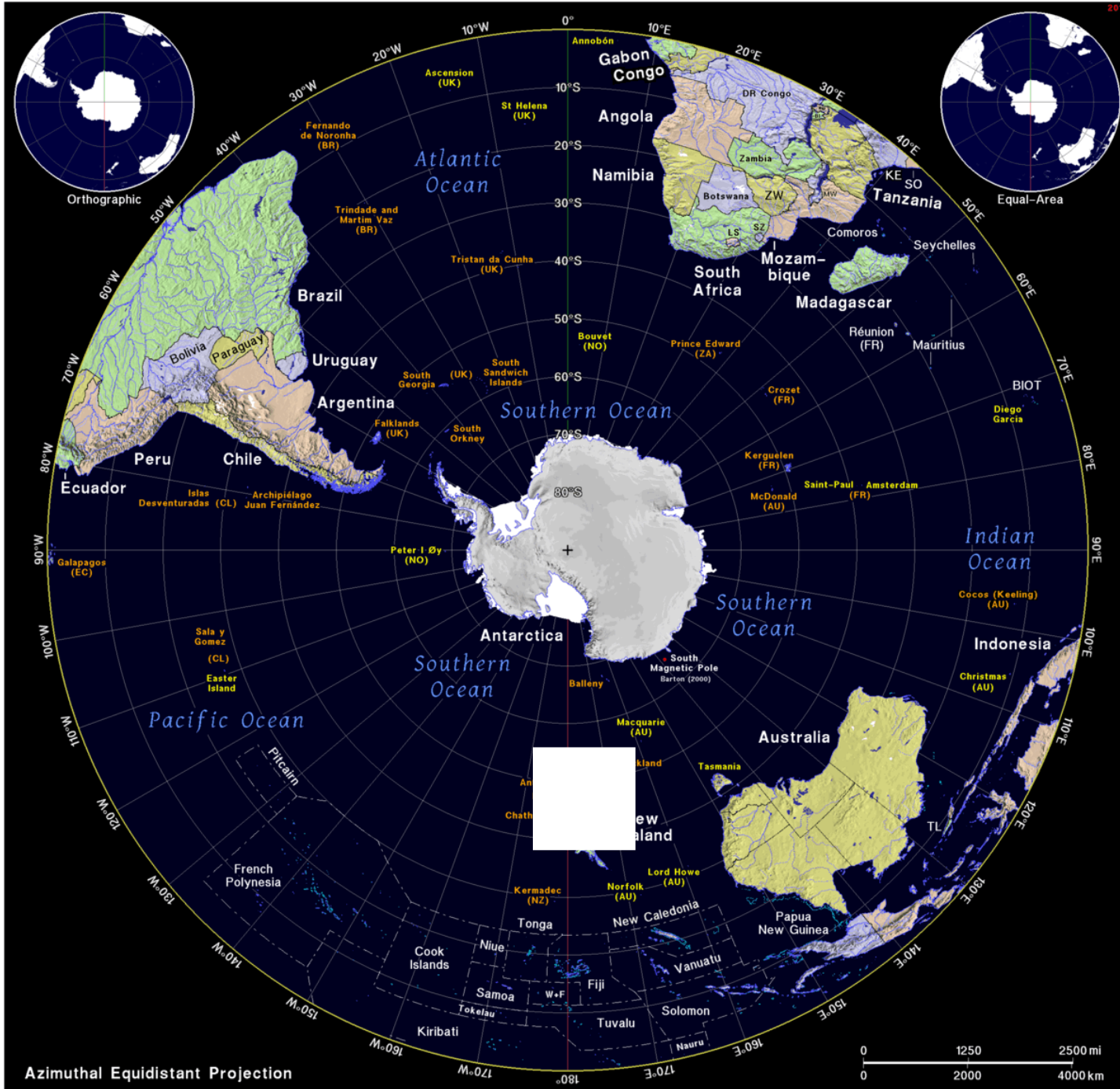


We need more historical weather data  
everywhere, but PARTICULARLY in the Southern  
Hemisphere









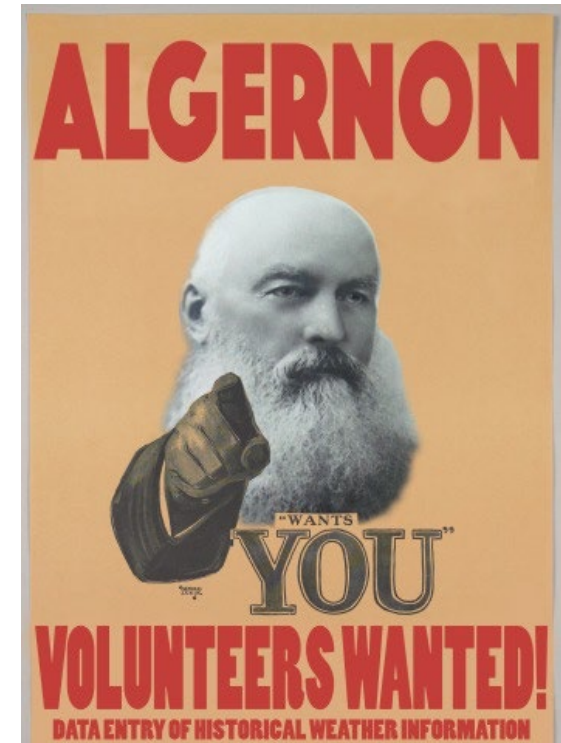
Azimuthal Equidistant Projection



# Why is historical weather data rescue so piecemeal?

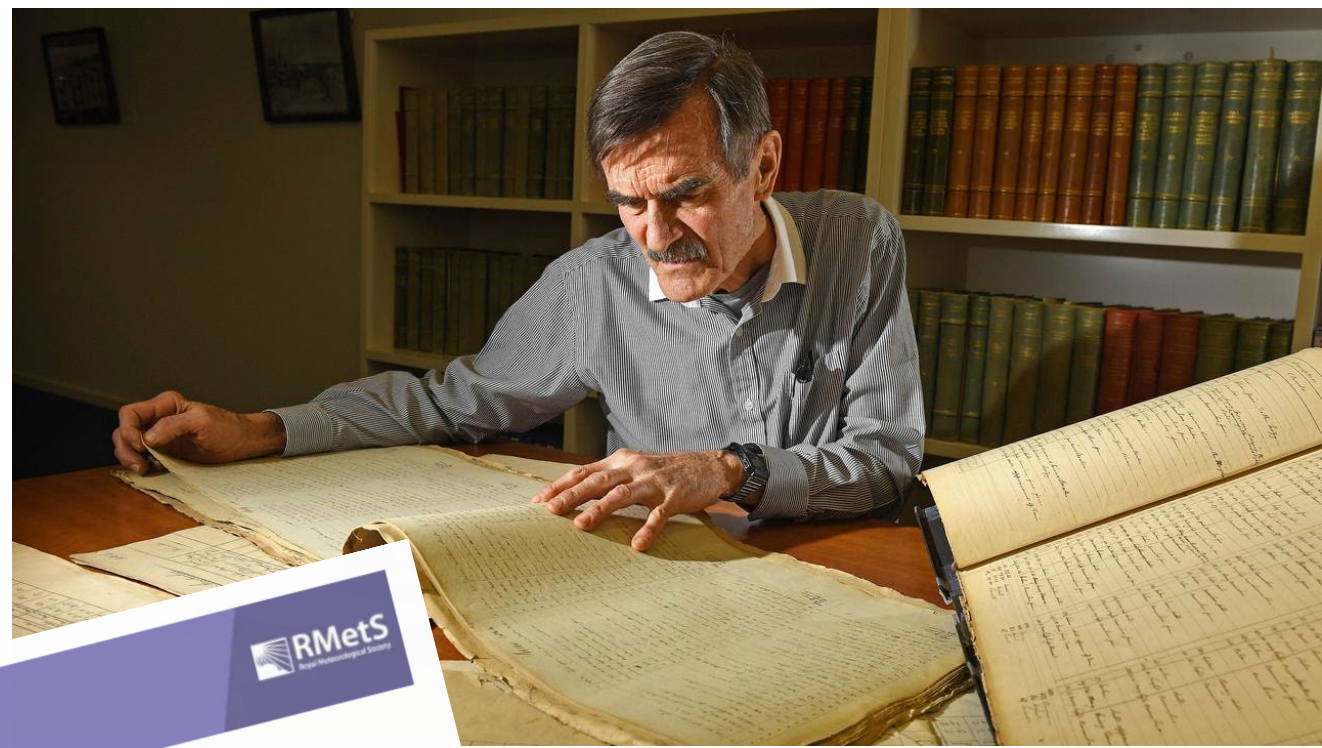
- Local access to sources
- Local interest in sources
- Nature of original documents – there is NO one size fits all approach
- Limited resources (time and money)
- Intrinsic motivation of volunteers

The individual approach leads to valuable experiences, but slow rescue times





# Example 1: Citizen science unit, Australian Meteorological Association



International Journal of Climatology



RESEARCH ARTICLE

The world's longest known parallel temperature dataset: A comparison between daily Glaisher and Stevenson screen temperature data at Adelaide, Australia, 1887–1947

Linden Ashcroft, Blair Trewin ✉, Mac Benoy, Darren Ray, Catherine Courtney,

First published: 14 September 2021 | <https://doi.org/10.1002/joc.7385>





# Example 2: Climate History Australia

## Step 1

Copy and paste the form on the Classify page (it's in between the lines) into the white box.

The 'form' is surrounded by a red box in the image below, and the 'white box' is circled with an ellipse:

**TASK** TUTORIAL

**THERMOMETERS, Dry Bulb (Max. & Min.)**

See 'NEED SOME HELP WITH THIS TASK' (at the bottom of this page) for step-by-step instructions.

Copy and paste the form (between the lines) into the white box.

DATE, T(Max), T(Min)

1,  
2,  
3,  
4,  
5,  
6,  
7,  
8,  
9,  
10,  
11,  
12,  
13,  
14,

## CLIMATE HISTORY AUSTRALIA

- HOME
- ABOUT US
- BLOGS
- CITIZEN SCIENCE
- EARLY WEATHER DATA
- DOCUMENTARY RECORDS
- PALAEOCLIMATE
- PUBLICATIONS
- CONTACT US



Climate History Australia

Great work! Looks like this project is out of data at the moment. See the results or dismiss this message

Help create Australia's longest daily weather records

Learn more

Unearthing Australia's climate history

[climatehistory.com.au](https://climatehistory.com.au)

# The volunteer experience: positive feedback around enjoyment and education.

*“I learned a lot about the climate in Adelaide!  
I didn't know anything about it before.”*

*“This interconnection between climate and events has always fascinated me. Now, uncovering this new historical weather data makes me feel like I'm using my skills to do something meaningful for the future while feeling connected to the past.”*

“Acquiring knowledge about Australia's climate, especially the early years of establishing the colony, is extremely valuable to modern climate change science. My participation allowed me to be a part of ongoing climate change science.”



# Data rescue in the Southern Hemisphere

- Is happening!
- Is driven by local passionate groups of researchers, volunteers, communities
- Suffers from a lack of funding
- For better and worse, doesn't use much AI
- Is vital for understanding global weather and climate change

**[linden.ashcroft@unimelb.edu.au](mailto:linden.ashcroft@unimelb.edu.au)**



Wang Wang the Panda in an ice bath during a 2023 heatwave in Adelaide. Image: Maitland Mercury