

What I DID, am DOING, and will DO???

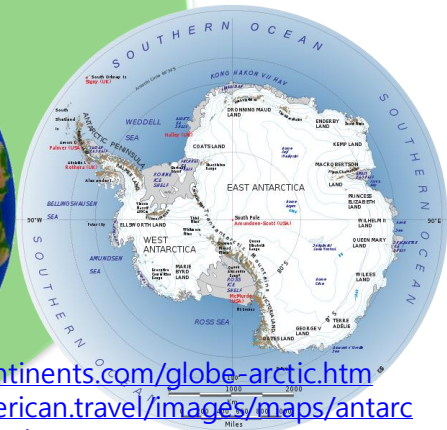
Ok-Sun Kim

Polar Life Sciences,
Korea Polar Research Institute (KOPRI), Incheon, Republic of Korea

Backgrounds



Ok-Sun Kim
Microbial Ecology
Senior Research Scientist
Korea Polar Research Institute
(KOPRI)



<http://www.maps-continents.com/globe-arctic.htm>
<http://www.southamerican.travel/images/maps/antarctic/antarctica-map-big.jpg>



Backgrounds

- Environmental Sciences, Bachelor, 1997~2000
- Environmental Microbiology, Master, 2001~2002
- Analyses of the soil bacterial community structure by FISH method at forest fired area and microcosm for restoration
- KOSEF-DAAD fellowship for Summer Student Exchange Course at Max-Planck Institute for Limnology, Ploen, Germany in July & August, 2002

Ok-Sun Kim

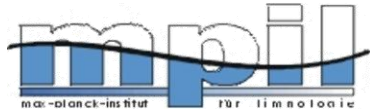
Microbial Ecology
Senior Research Scientist
Korea Polar Research
Institute (KOPRI)

Prof. Tae-Seok Ahn

Bachelor & Master
Kangwon National
University



Backgrounds



Dr. Karl-Paul Witzel
Ph. D
Max-Planck Institute
for Limnology,
Libniz-Institute for Marine Sciences
in the University Kiel



Ok-Sun Kim
Microbial Ecology
Senior Research Scientist
Korea Polar Research
Institute (KOPRI)



- Microbial Ecology, Ph. Doctor, 2004~2007
- Diversity of functional genes in the aquatic nitrogen cycle
- Soil, Lakes, the Baltic Sea
- Molecular Microbiology
- Biogeochemical cycles
 - Nitrogen, Sulfur, Methane

Backgrounds

- Post-Doctor, 2007~2010
- Curator for developing DB and tools for microbial ecology, EzTaxon-e DB
- Biocurator for Microbial diversity using pyrosequencing techniques
- National Research Laboratory, Fusion technology for isolation and taxonomy of unculturable prokaryotes
- The analysis of Microbial community in drinking water purification systems using pyrosequencing
- Platform bioinformatics technology for microbial diversity using next generation sequencing

Ok-Sun Kim

Microbial Ecology
Senior Research Scientist
Korea Polar Research
Institute (KOPRI)

**Prof. Jongsik
Chun**

Post-Doctor
Seoul National University



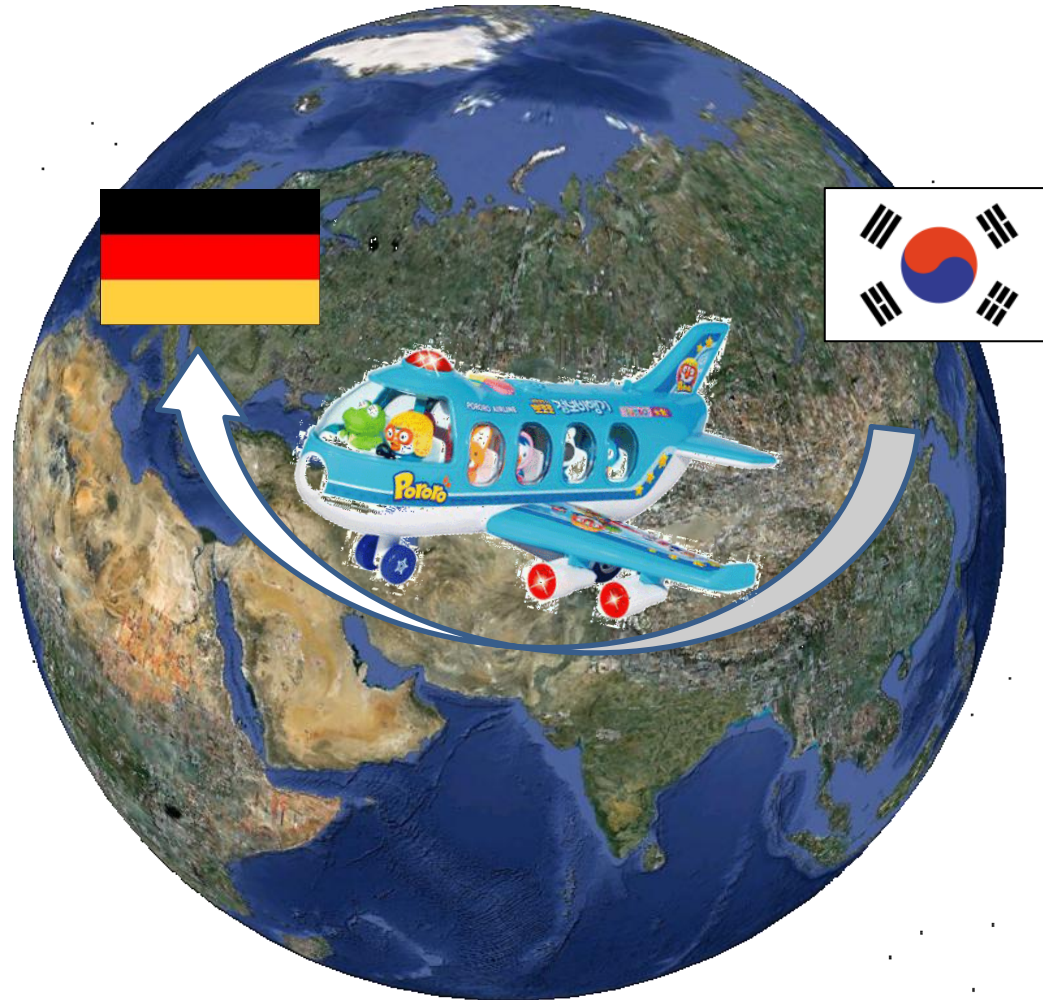
Processes for making decisions

Three BIG Decisions for my career

- Studying in Germany for a Ph. D
- Coming back to Korea after Ph. D
- Getting a permanent position at KOPRI

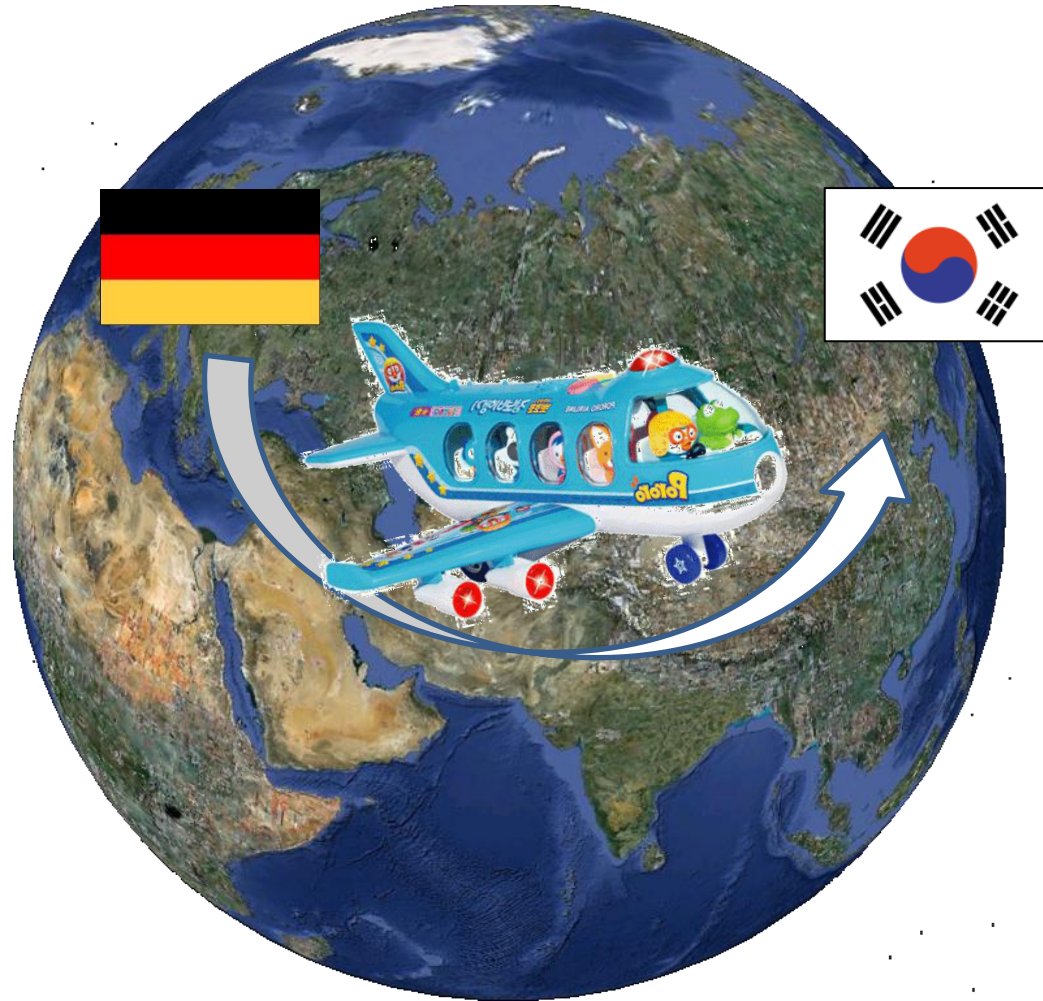
Processes for making decisions

Study in Germany for a Ph. D, 2003



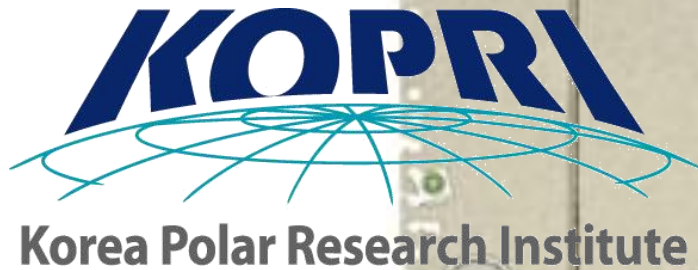
Processes for making decisions

Come back home, 2007



Processes for making decisions

Get a permanent position, 2010



**1st Trial in Autumn 2009
; Marine Biology**

**2nd Trial in Summer 2010
; Microbial Ecology**

My current life and futures

Current researches: Team of Microbial diversity
Microbial diversity and ecology in Arctic and Antarctic ecosystems

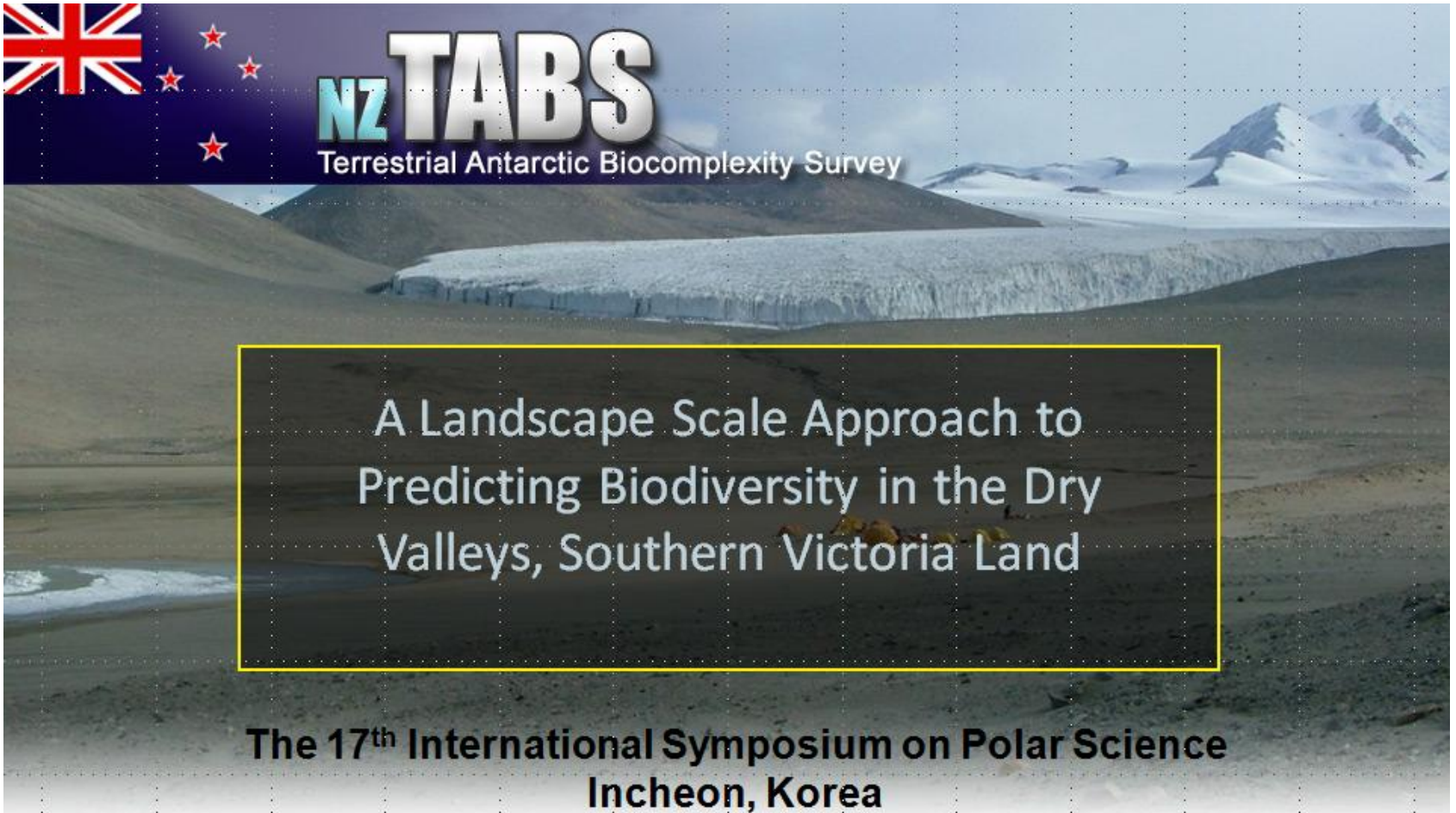


My current life and futures

Camping in the Dry Valleys



My current life and futures

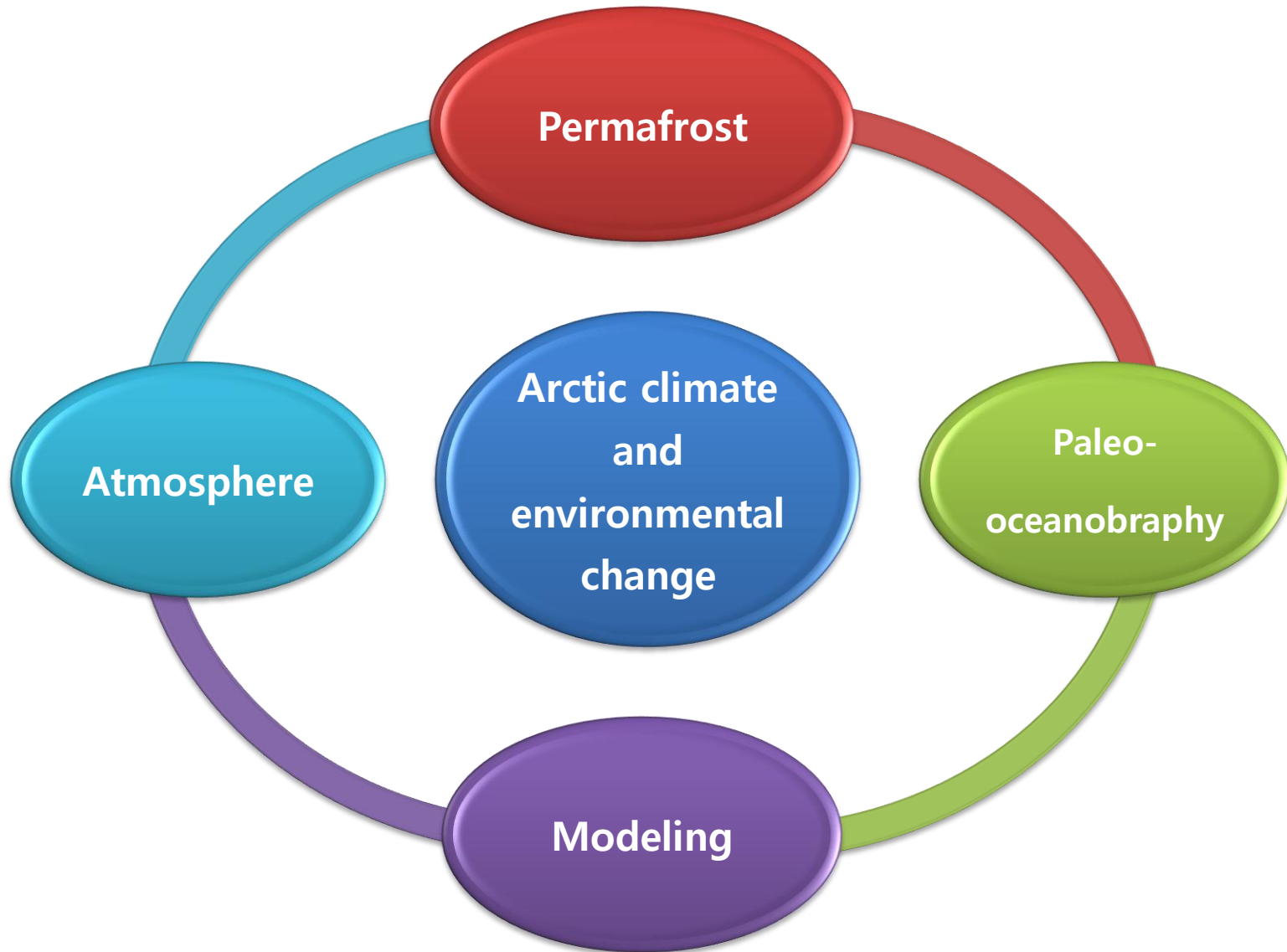


Talk given by Dr. Craig Cary

My current life and futures

Korea Arctic Multidisciplinary Program (KAMP)

-Arctic climate and Environment Change-



My current life and futures

Korea Arctic Multidisciplinary Program (KAMP) -Arctic climate and Environment Change-

노르웨이 극지연구소 · 스웨덴 예테보리대학

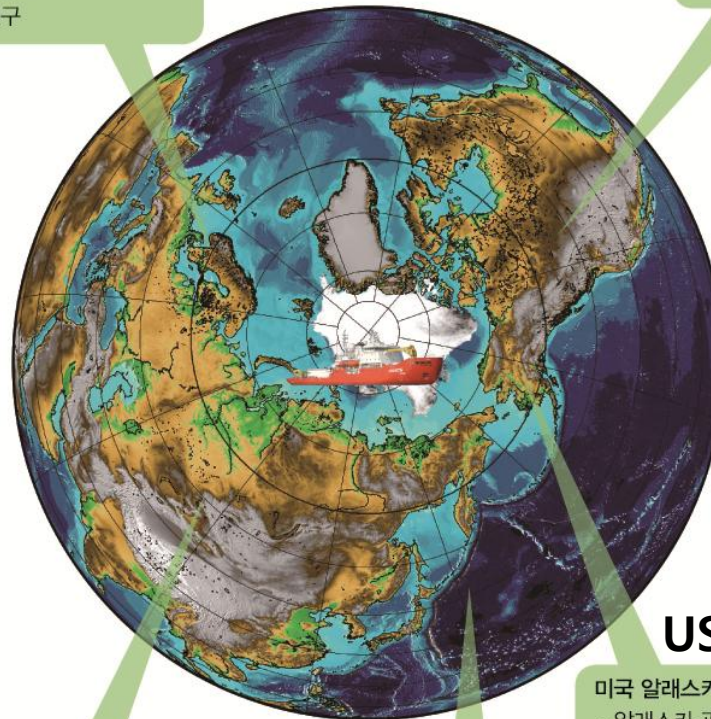
- 다산기지 활용
- 제플린 관측소 공동활용
- 동토층 모델링 공동연구

Norway

캐나다 국립자원연구소

- 리조루트 인프라 활용
- 북극해 연안 기후관측 공동 구성

Canada



Russia

러시아 수문기상국

- 텍시 관측소 인프라 공동사용 추진

USA

미국 알래스카대학 국제북극연구센터 (IARC)

- 알래스카 관측 공동 수행

Germany

한국, 독일, 러시아 북극해 공동탐사 시스템 구축

- 아라온과 Polarstern 공동 탐사
- 독일 극지연구소에 북극 연구 현지 랩 운영
- 기후변화 적응 프록시 공동 개발

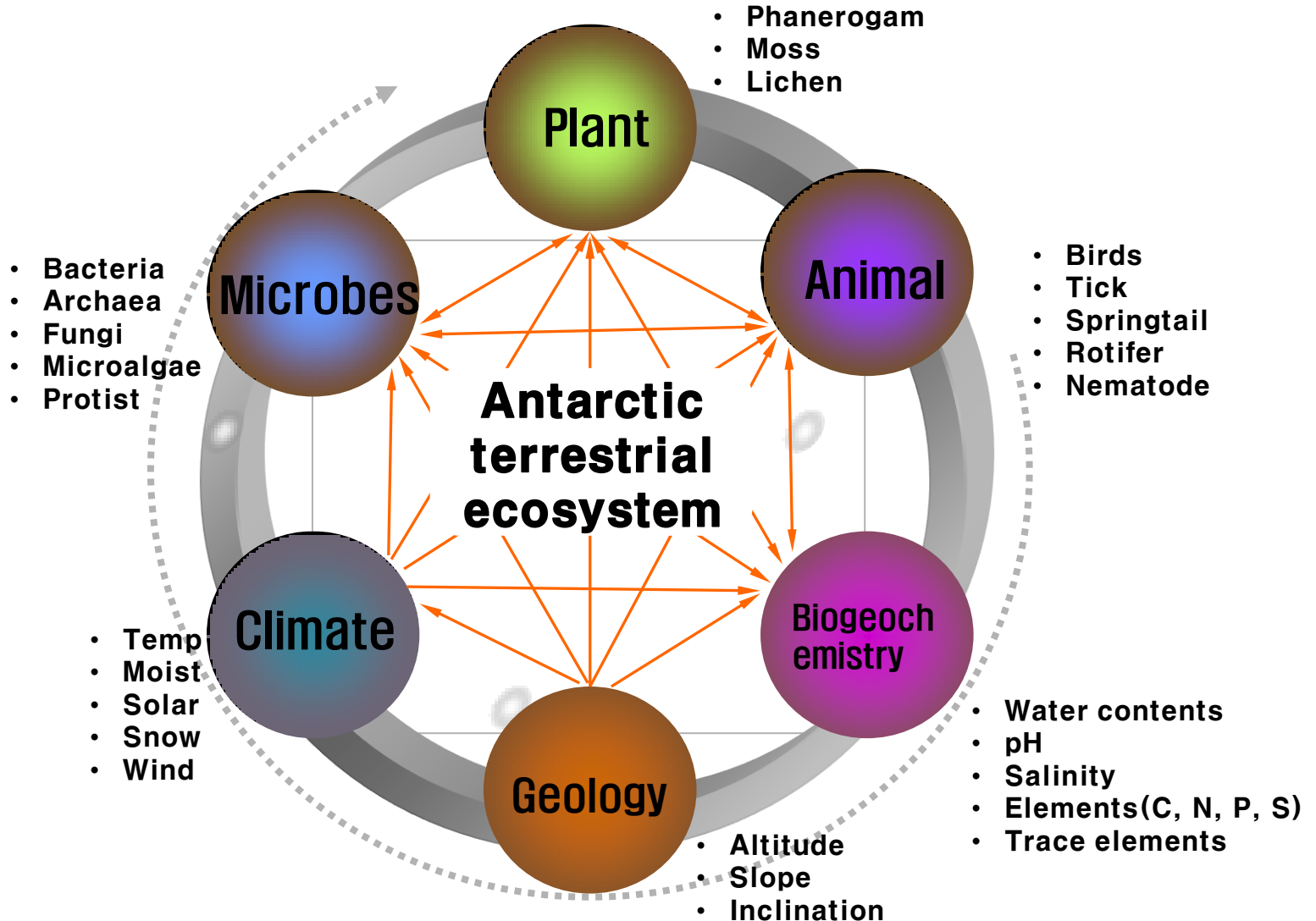
My current life and futures

Alaska, 2010



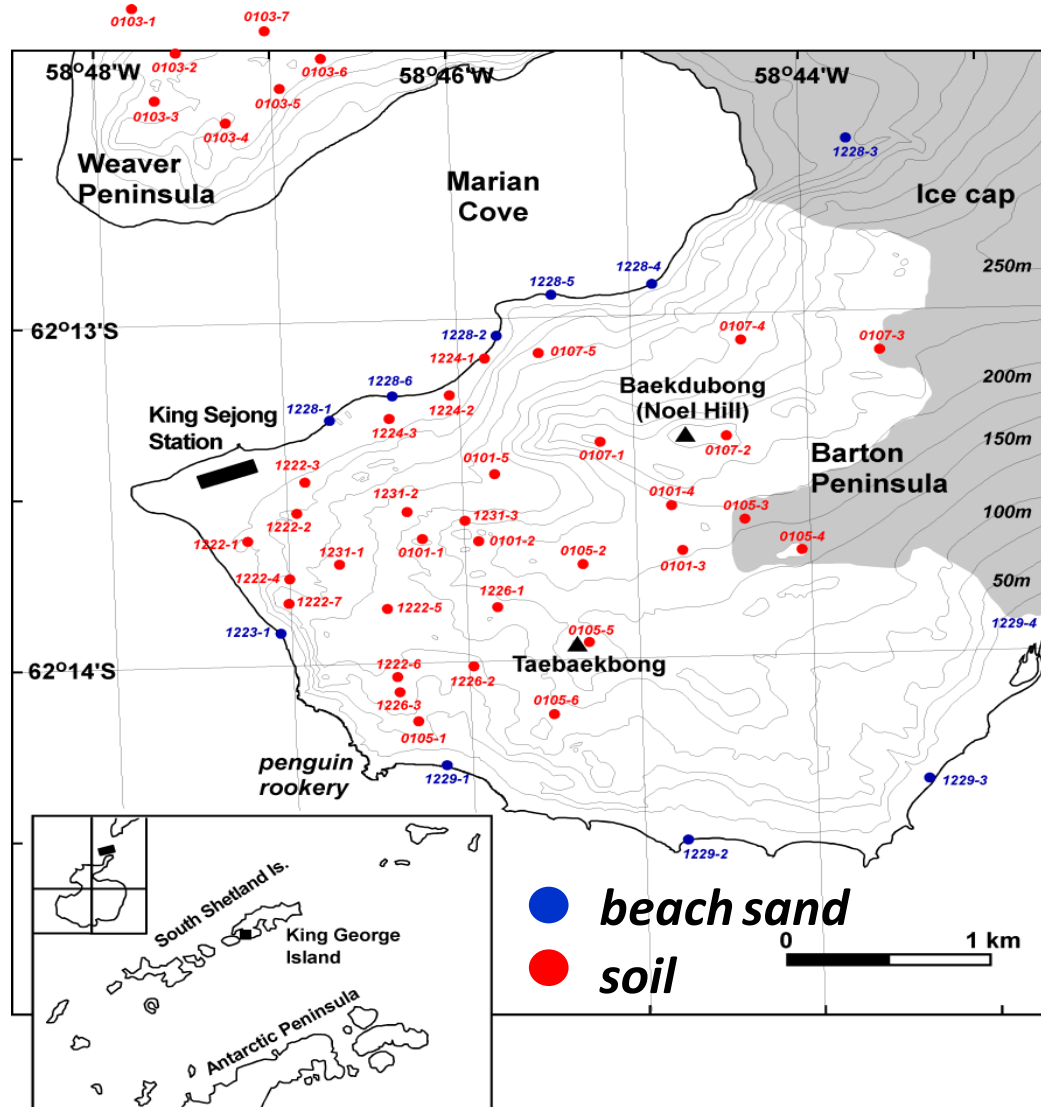
My current life and futures

Biocomplexity in Antarctic terrestrial ecosystems



My current life and futures

Barton Peninsula and sampling points in Season 2010/2011

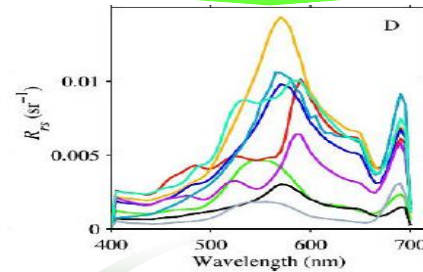


My current life and futures

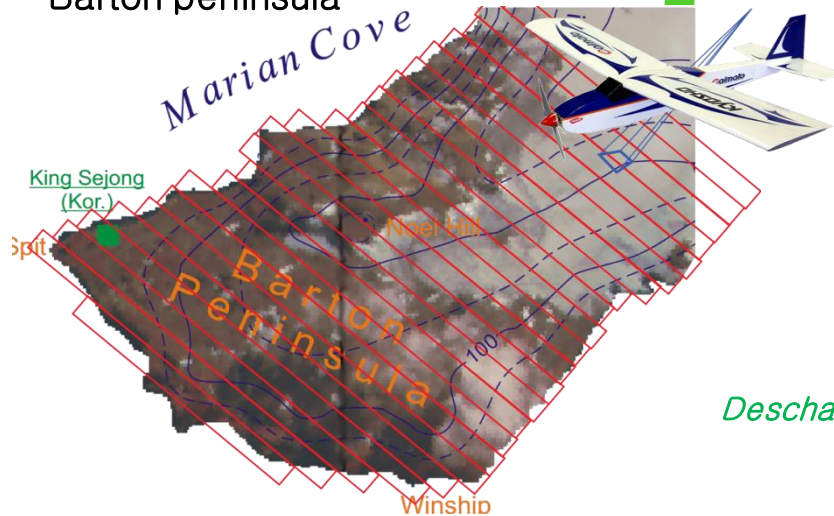
Mapping plant distribution using UAV (unmanned aerial vehicle)



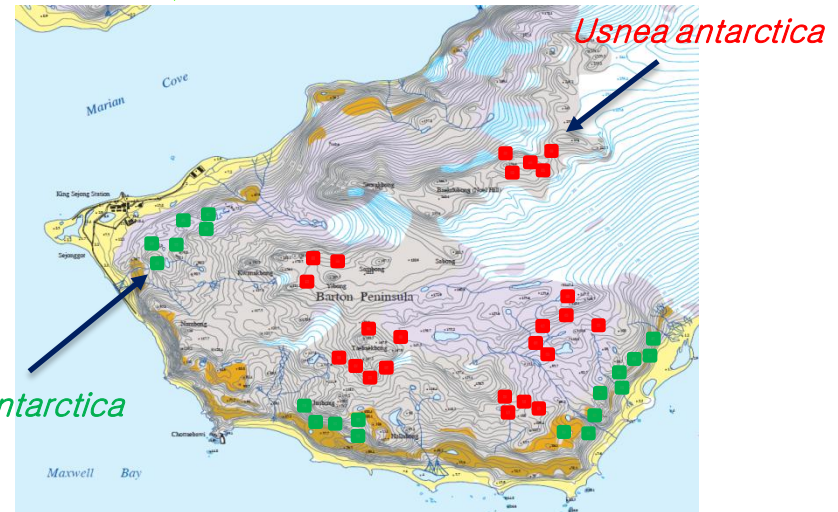
Constructing a spectrogram profile library of plant or lichens



- Using UAV
- Detecting spectrogram in Barton peninsula

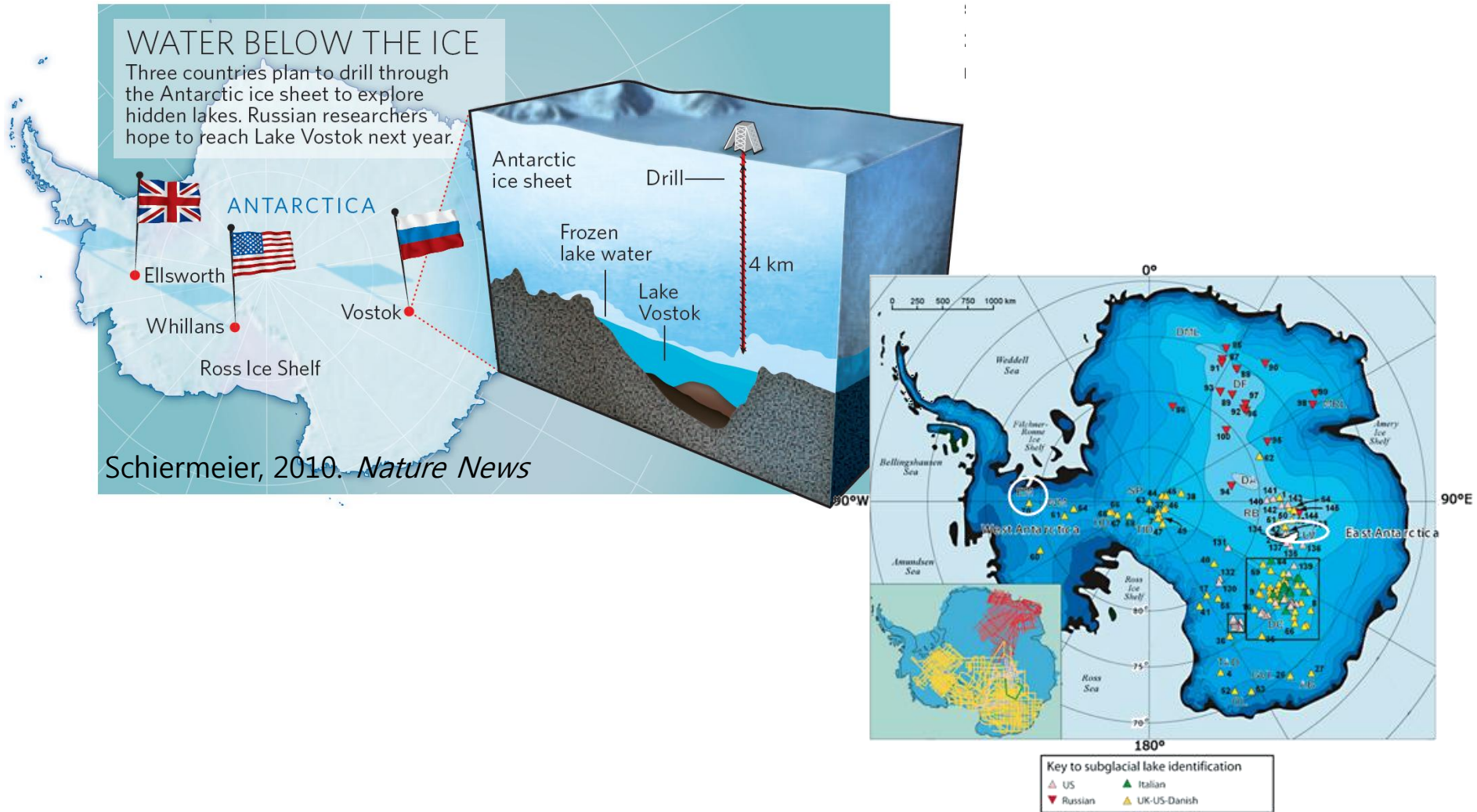


- Partitioning surface
- Library reference
- Mapping plant distribution



My current life and futures

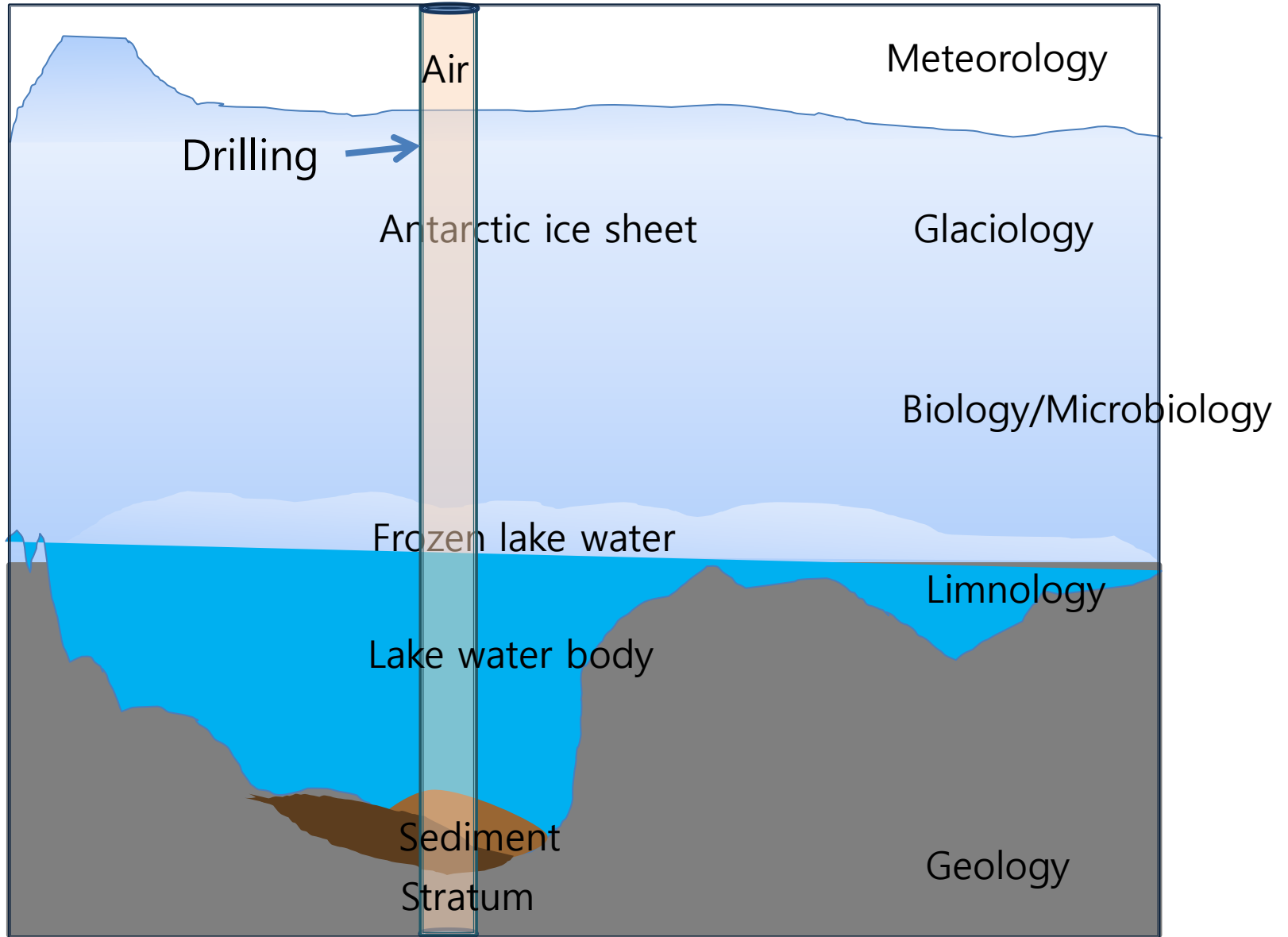
Waking up the sleeping beauty



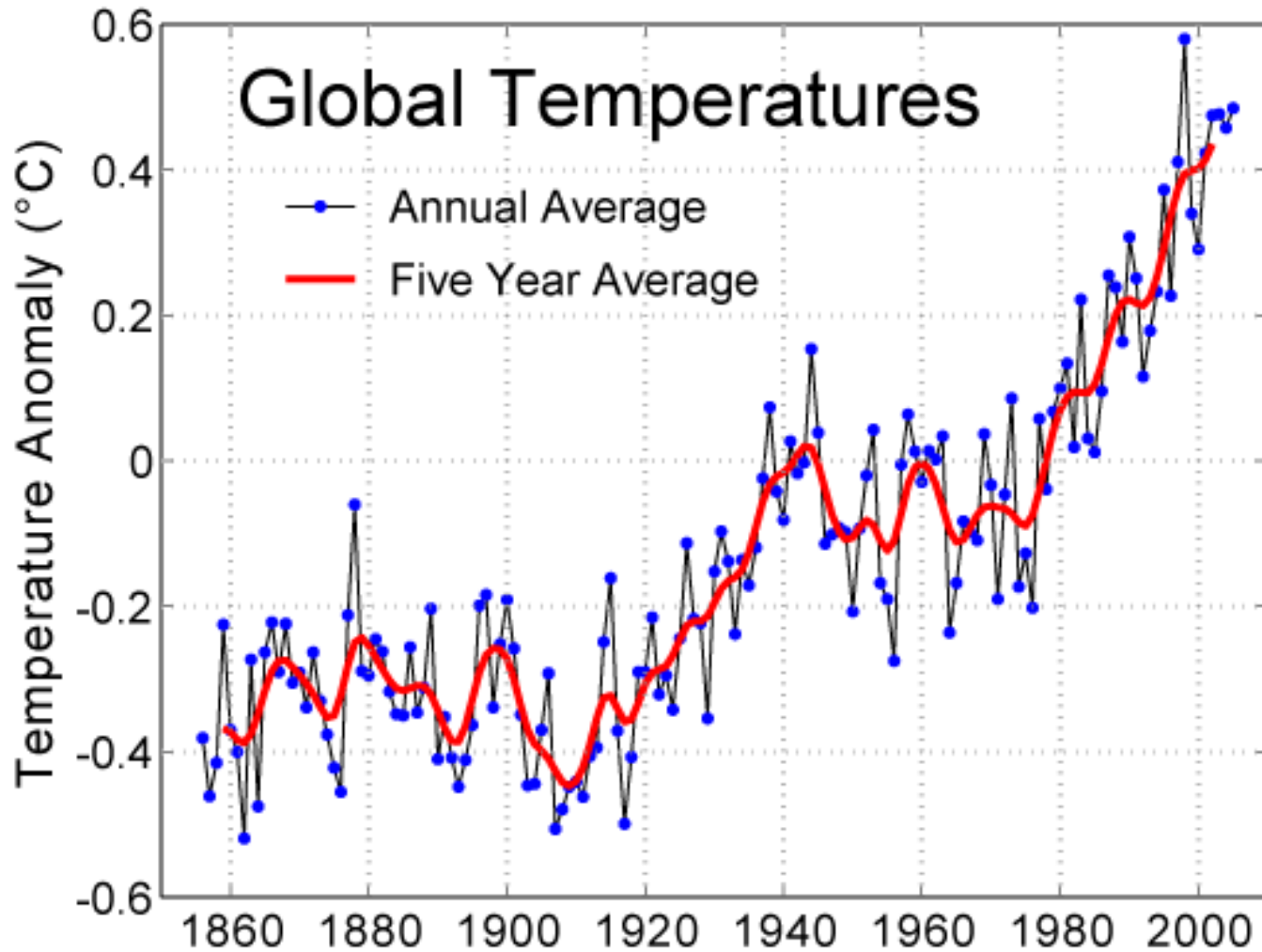
Location of 145 Antarctic subglacial lakes; The National Academies Press

My current life and futures

Planet Drilling project



Comparison and Contrasts



**Thank you
for your attention!!!**

