

# Breakout groups

**Models**

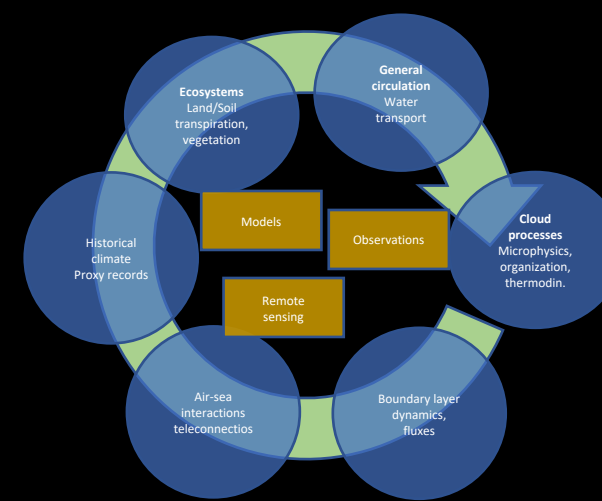
**Observations**

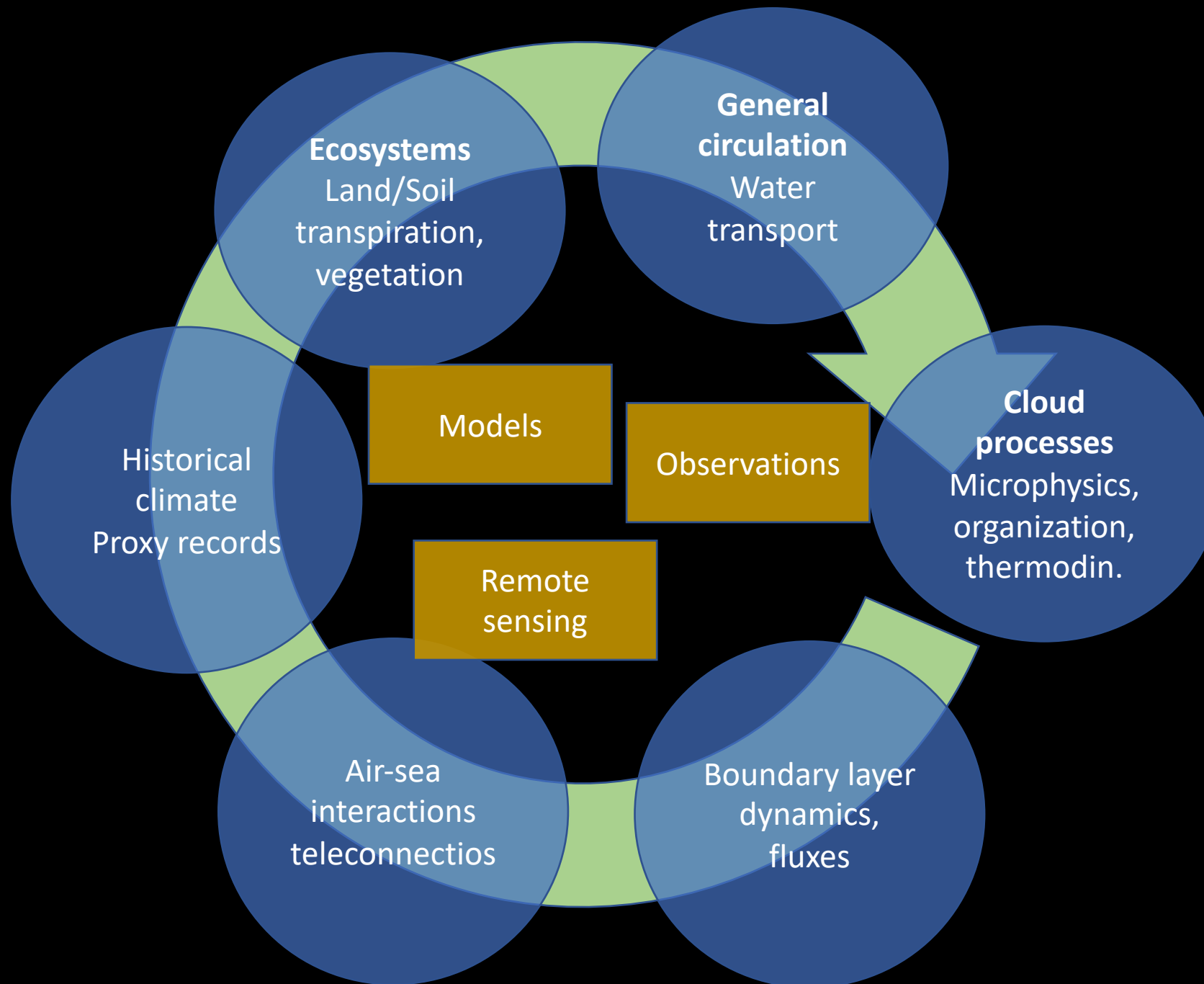
**Archives**

**Advances in proxies**

Grouping has certain pragmatics:

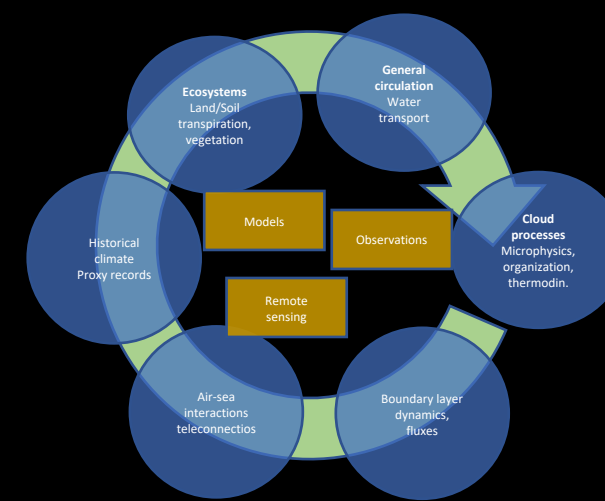
- What are immediate, and long term, opportunities?
- What are the immediate, and long term, needs?
- How do these project onto some of the Grant Challenges?





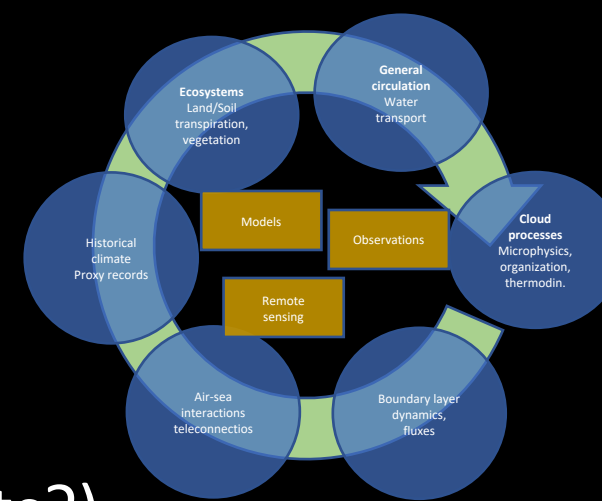
# Observations

- Are there critical gaps that are easy to fill?
- What are the essential variables?
- What are the essential climate metrics that isotopes give?
- What are some of the minimum requirements of ?
- Is there (what is) an “observing system” need?  
(On a per-science problem basis? Or specific to target processes?)
- What is the existing robust and emerging technology?



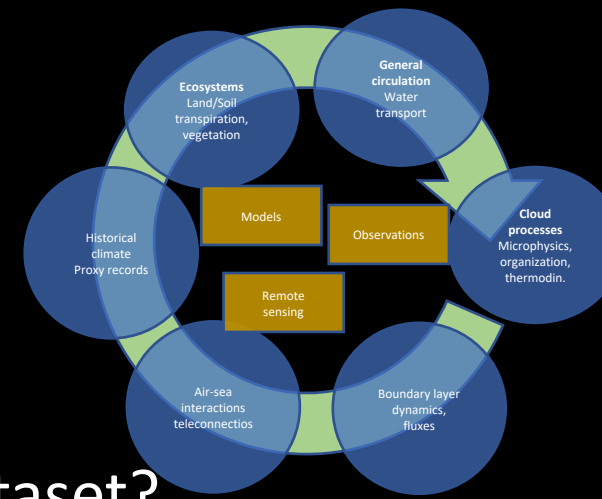
# Models

- Are there adequate validation metric?  
(Should/how to standardize? Synthesis validation datasets?)  
What are best practices/gold standards?
- Are there particular shortcomings?  
Atmosphere? Land? Ocean? Others...?
- Role for synthesis of global, region, cloud, process models?
- Need for community experiments?
- Need for intercomparison work?

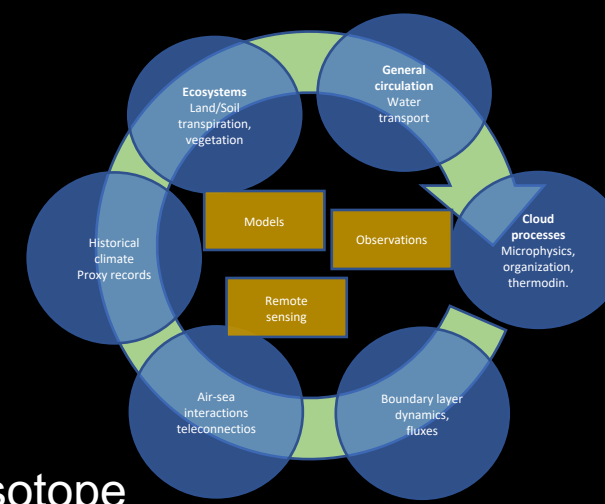


# Archives

- Is there a need for new archives? (IS a catalog enough?)
- What is a minimum bar for entry into an archived isotopic dataset?
- How do we ensure consistency among datasets contributed by many different individuals/groups?
- What levels of processing (correcting) do you want to include?
- What is the scope of the archive?  
(Any water isotopic data or water vapor and liquid water only)?
- What is the right way to maintain legacy?
- Should the archive be active (accept continuous contributions)?
- What are needs/opportunity to promote data discovery of isotopic data?



# Advances in proxies



- What are the key regions where water isotope based records are lacking?
- Where is the true "ceiling" in what climatic information we can interpret from water isotope archives? Can PSMs help?
- What level of metadata and standardization is already in place /ongoing (e.g. Iso2k) and how can we as a community agree on best practices for paleo data management?
- Will this help facilitate use of paleo records in DA?
- In-situ monitoring and process-based studies are crucial for paleoclimate interpretation, and yet crucially under-funded. How can we better motivate such studies to our program managers?
- What is the cutting edge for new types of proxies that incorporate water isotopes? Peat? Permafrost? Where are the new frontiers?

# What is your wish?

(Prioritized, and “reasonable” in 5 years)

**Models** :

**Observations** :

**Archives** :

**Advances in proxies** :

**Two sessions of each. Go to two!**

Consider your expertise interest, and being involved in other groups.

Outcomes: We will be making recommendations. What should these be.

