

# The microbial Antarctic Resource System (mARS)

integrating discoverability and preservation  
of environmental annotated  
**microbial -omics data.**



Sweetlove M., Gan Y. M., Murray A. and Van de Putte A.





- Online thematic database
- Microbial sequence datasets
- Focus on Antarctica microbiota
  - Antarctic Treaty (1959)
  - truncated food webs
  - Limited human impact
- Core business
  - Data archiving
  - virtual lab infrastructure



Photo: Angela Bai

# The life of Data after publication...



**Sequence data**

- Nucleotide databases



**Meta data**

- Often only described in paper

**Additional environmental data**

- Table in paper
- "available upon request"
- Nucleotide databases

- Missing link between sequences and paper
- Environmental data gets lost over time
- Forgetting unrecorded metadata
- Difficult to find sequence data

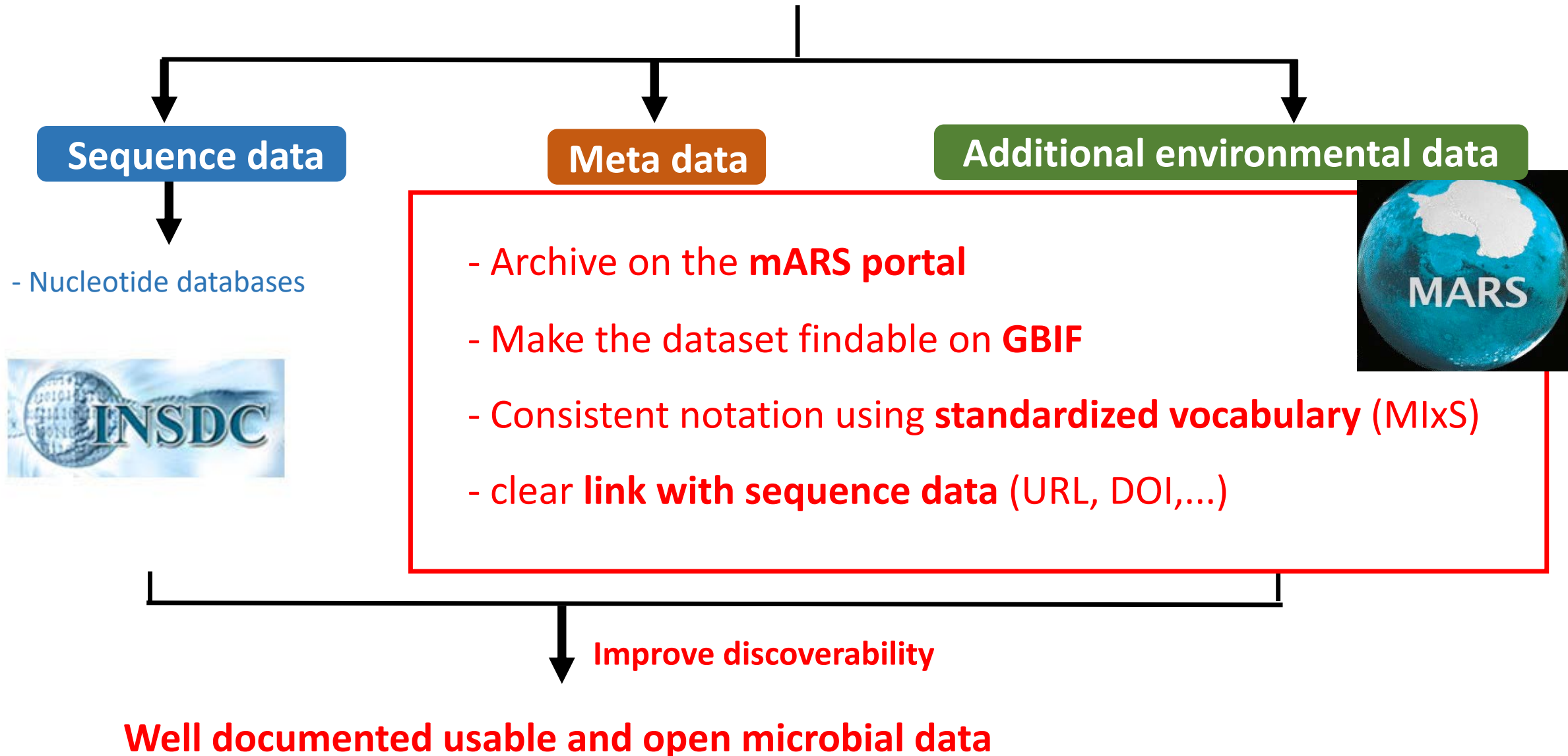


**Loss of data or dataset becomes useless**



# The aims of mARS

[mars.biodiversity.aq](http://mars.biodiversity.aq)





### Datasets

LOGIN

Author	Dataset Name	toIPT	MIMARKS	Sequence Set	Download
Charles Lee	<a href="#">Inter-Valley Soil Comparative Survey of the McMurdo Dry Valleys</a>				
S. Craig Cary	<a href="#">New Zealand Terrestrial Biocomplexity Survey</a>				



Link to metadata



Environmental data in MlXS standard



Link to sequence data

# Use of the LifeWatch-ERIC infrastructure

- Create an inventory of Antarctic microbial biodiversity
- Based on archived metabarcode datasets

