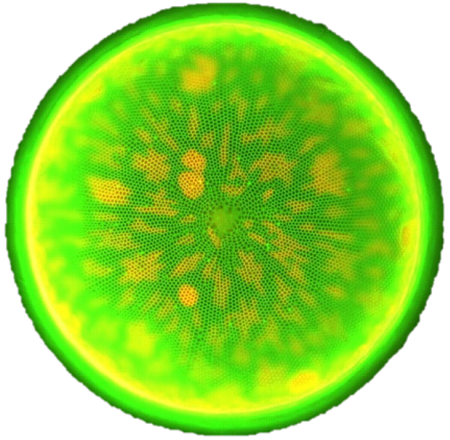
Introduction to LIMNADES database

Adam Varley



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LIMNADES (Lake Bio-optical Measurements and Matchup Data for Remote Sensing)

- *Centralise in situ bio-optical measurements from lakes and coastal waters*
- *Provide access to a large user base*
- *Standardise metadata*

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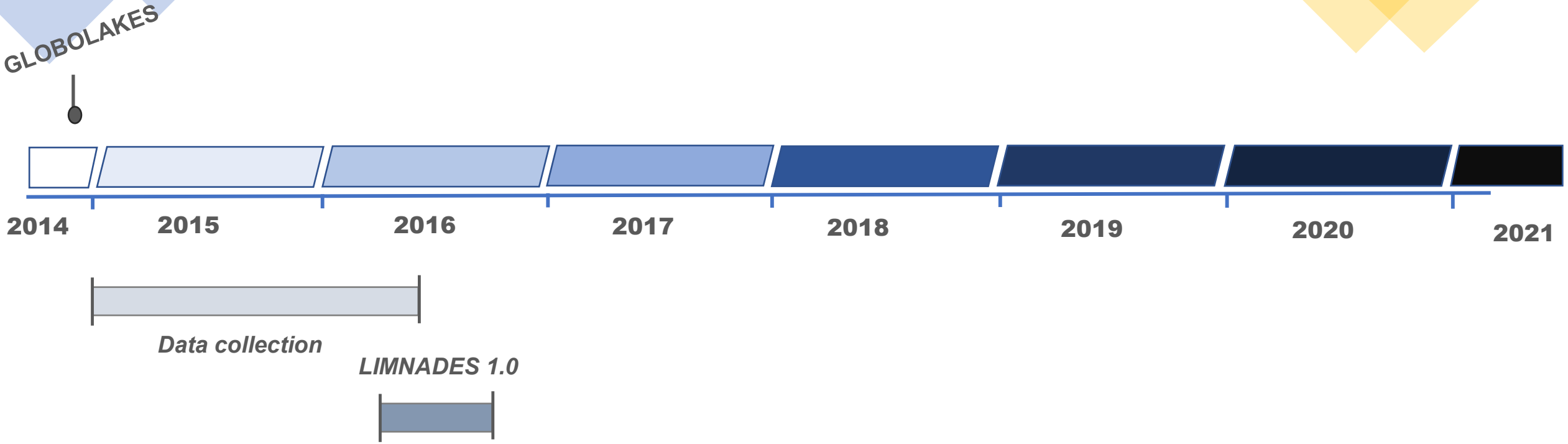
Evolution of Limnades



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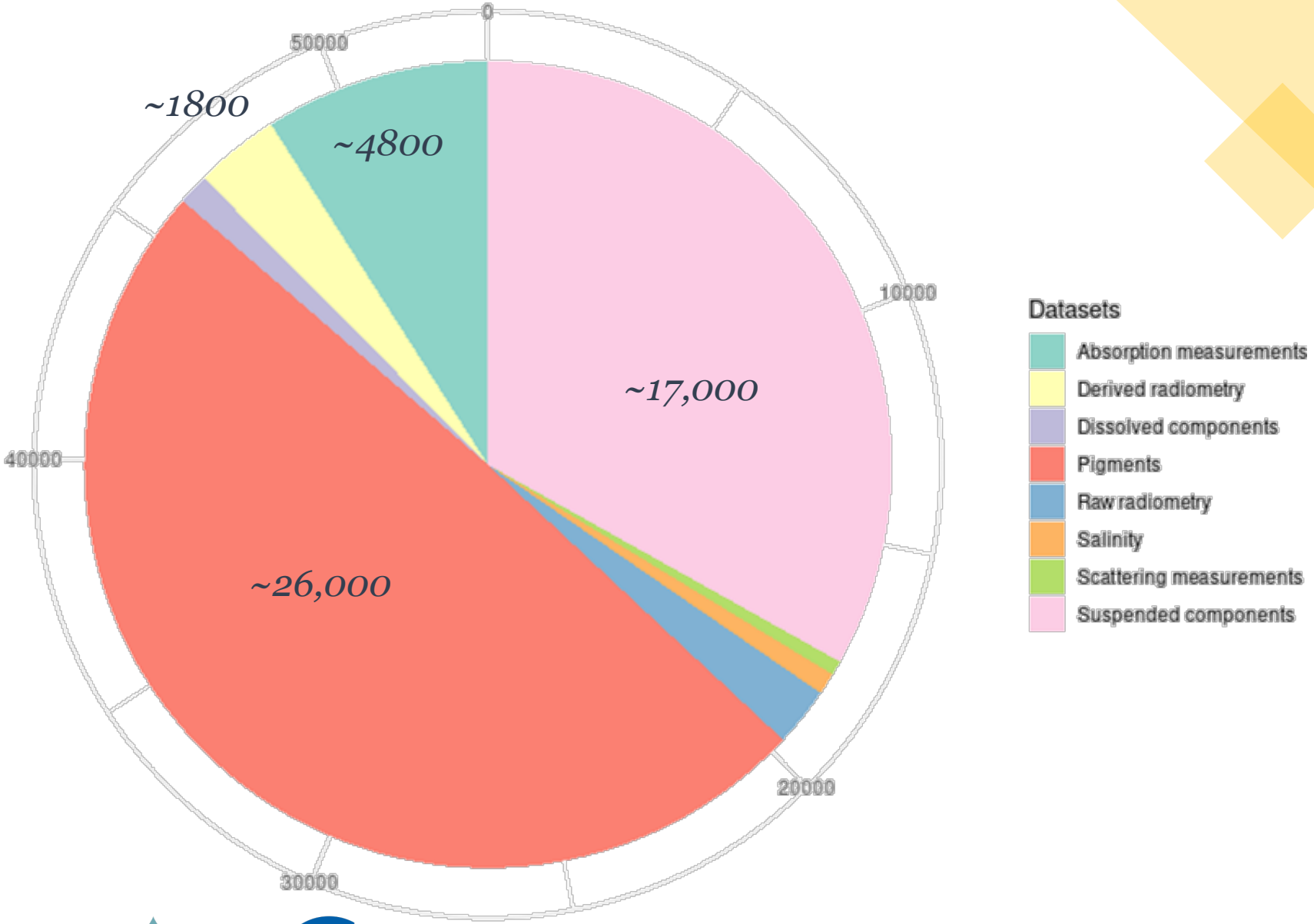

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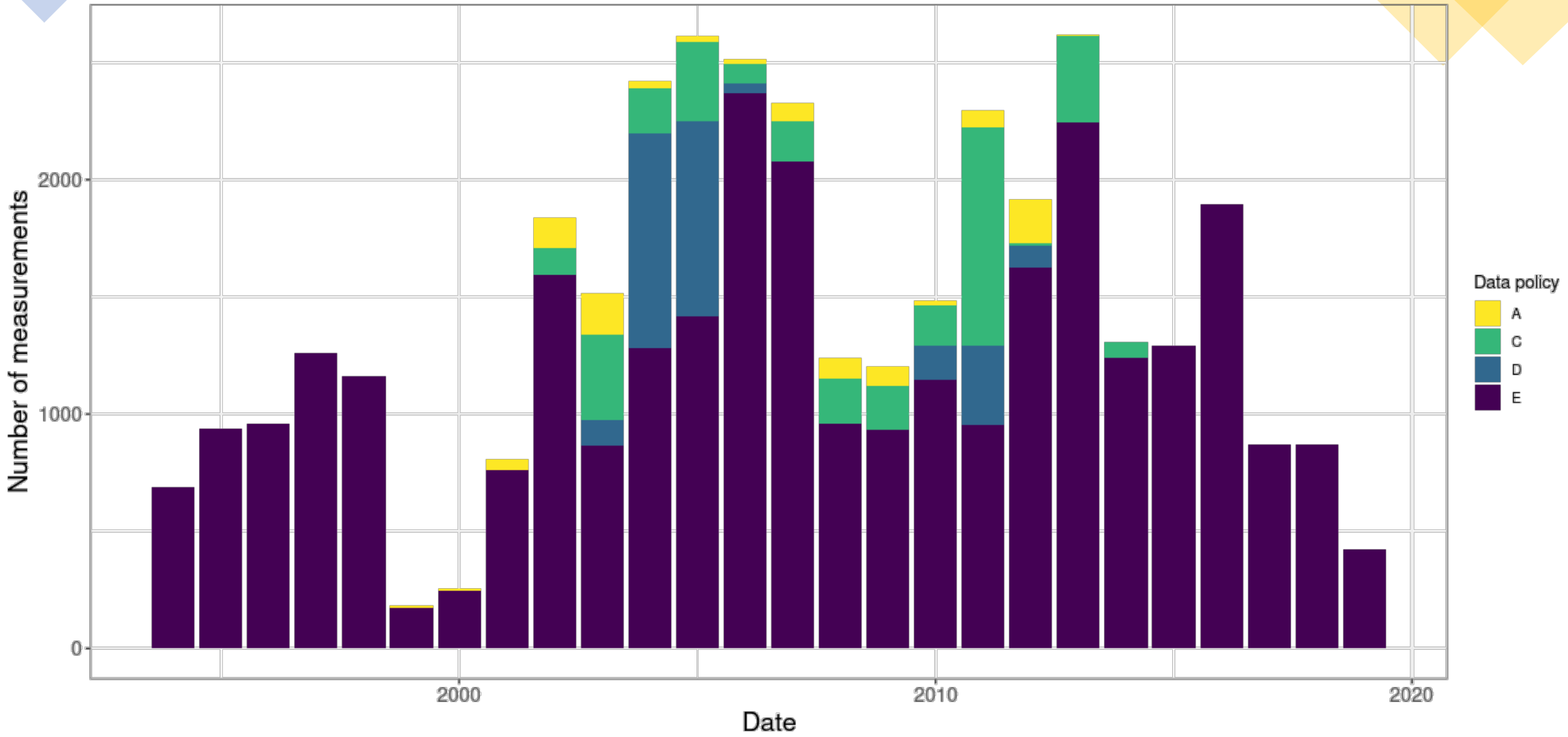
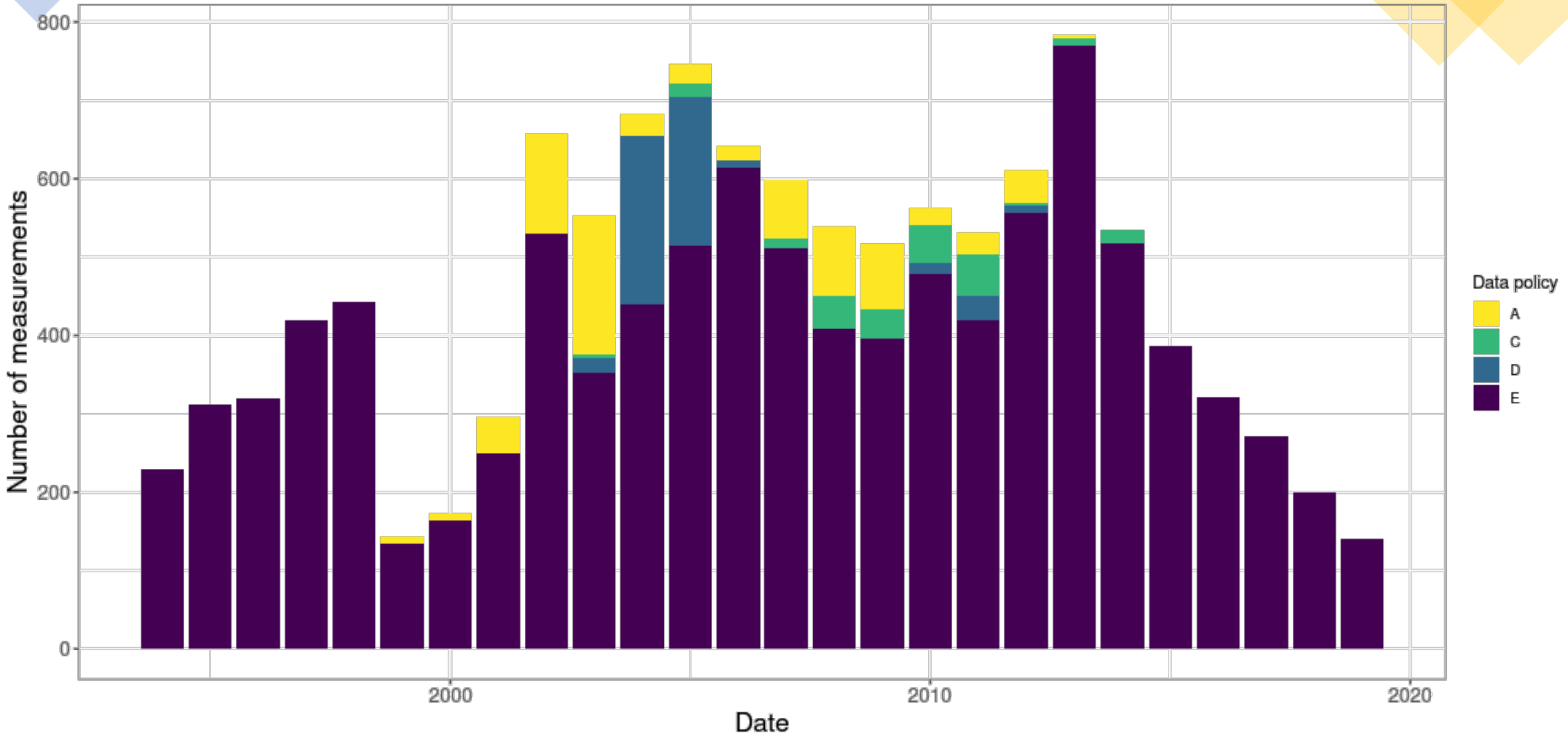
Measurements over time

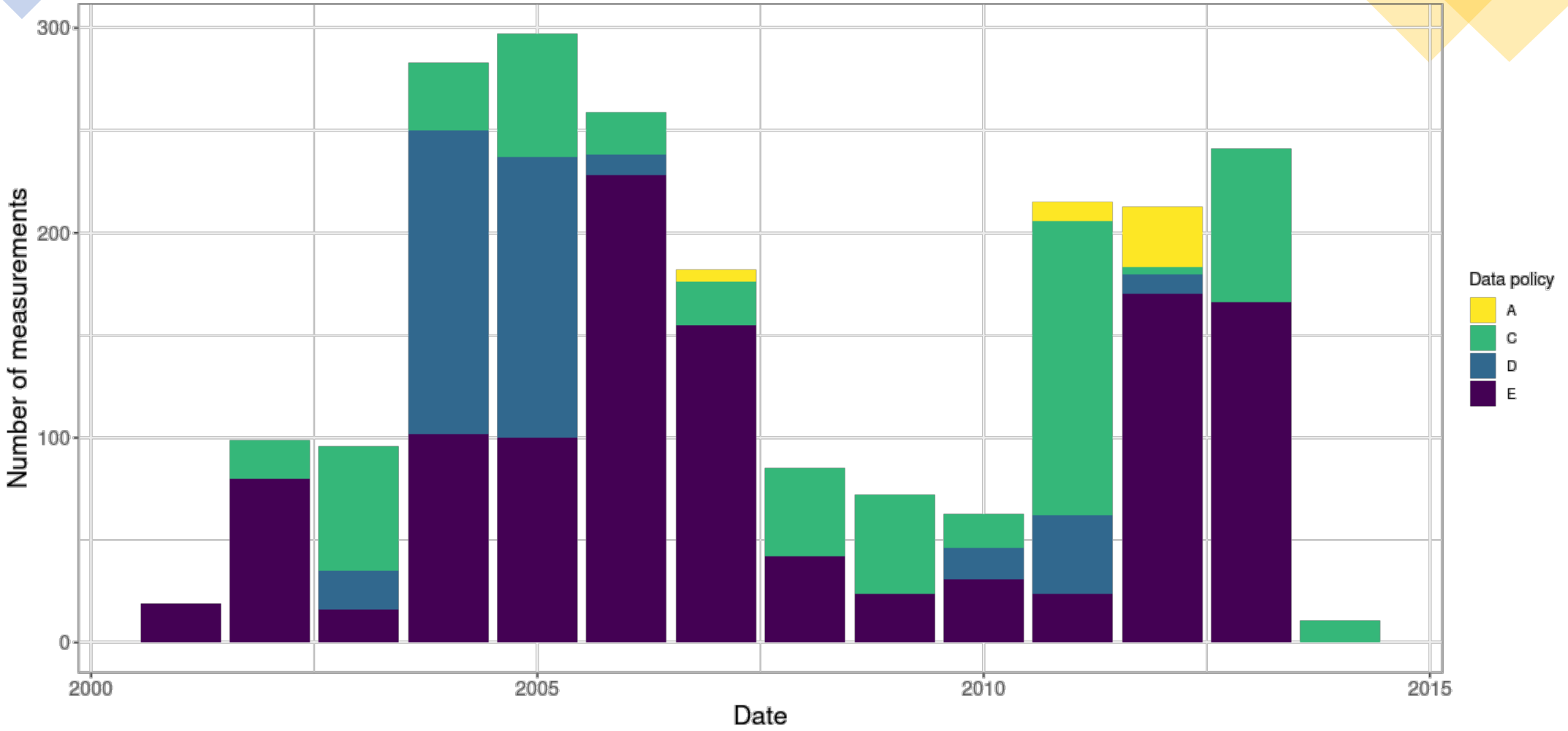


- *~50,000 measurements from ~ 3500 stations (unique timestamp and location)*
- *90 % are closed licence*

Chlorophyll a over time

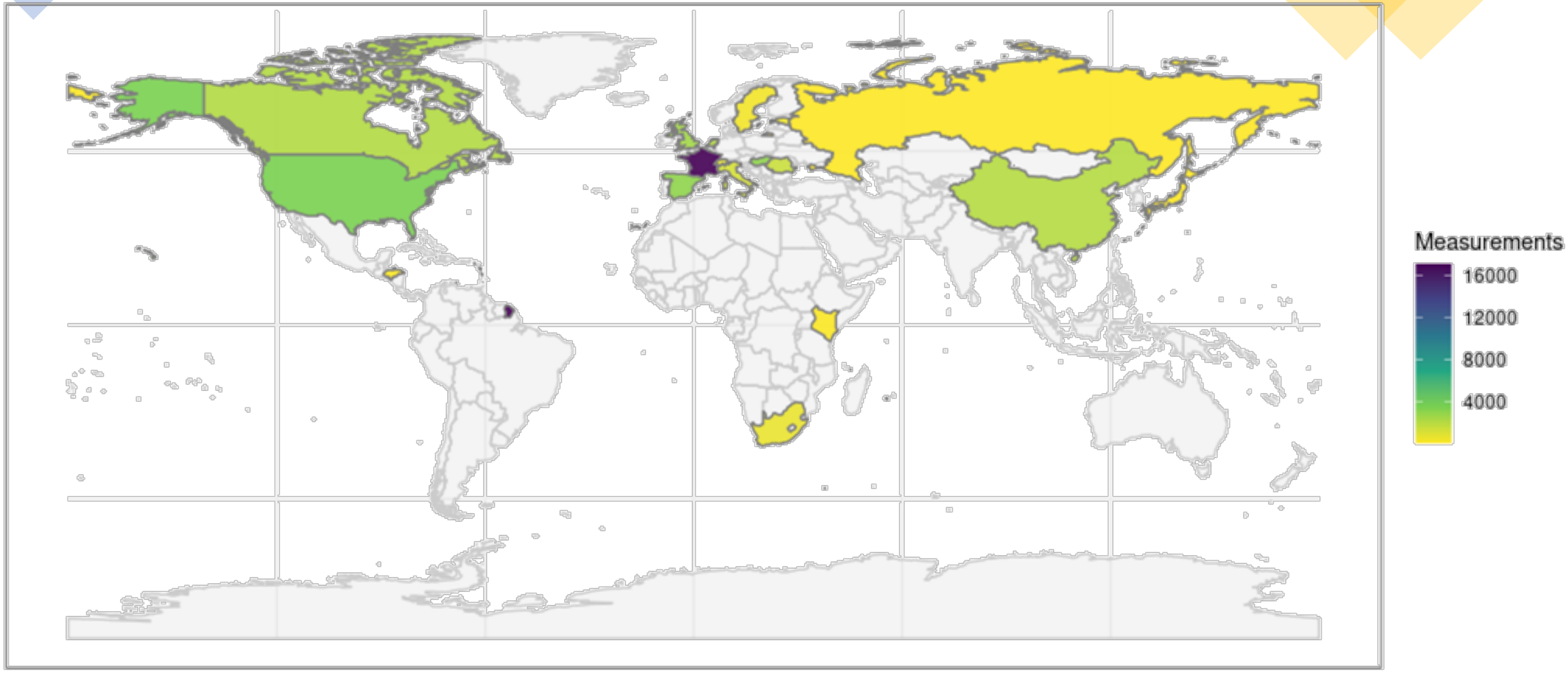


Remote Sensing Reflectance over time



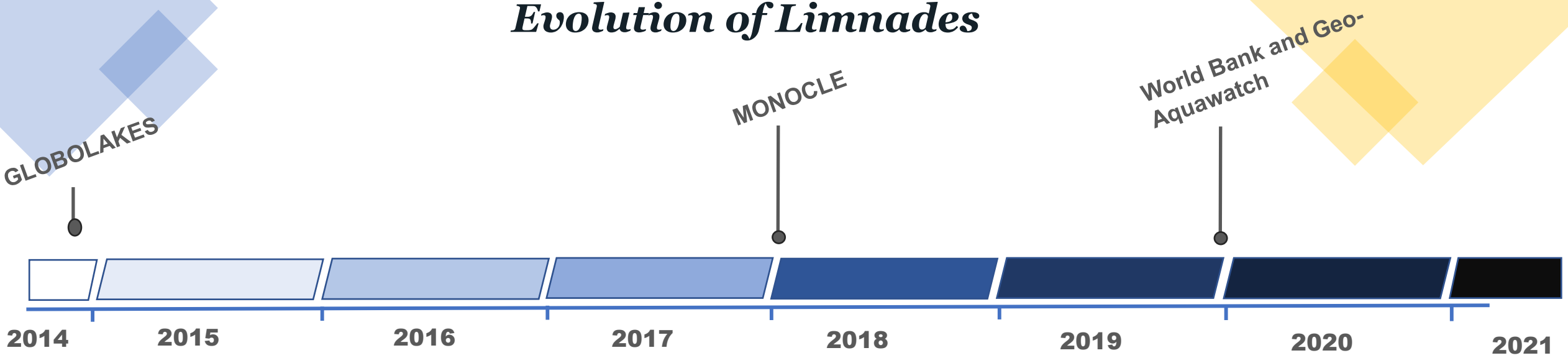
- ***More recent data to be added***

Measurements in space



- *~85 % of measurements in Europe and North America*

Evolution of Limnades



Data collection

LIMNADES 1.0

LIMNADES 2.0

Search and request system

Private API (interoperable)

FAIR principle

LIMNADES 3.0

Data input system

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Evolution of Limnades

https://limnades.stir.ac.uk

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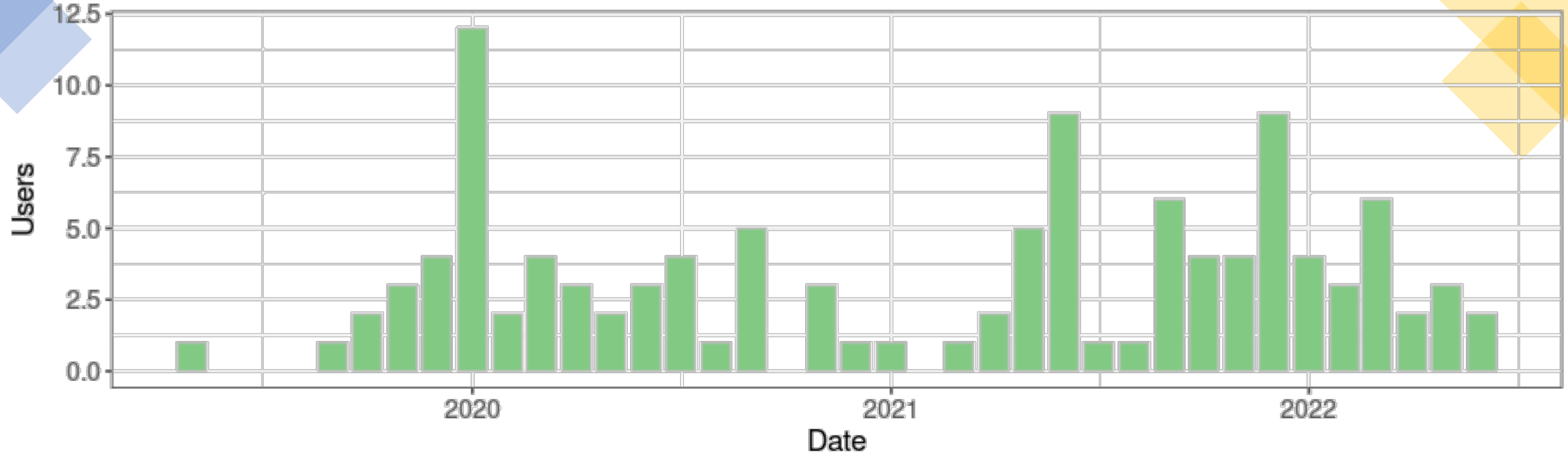
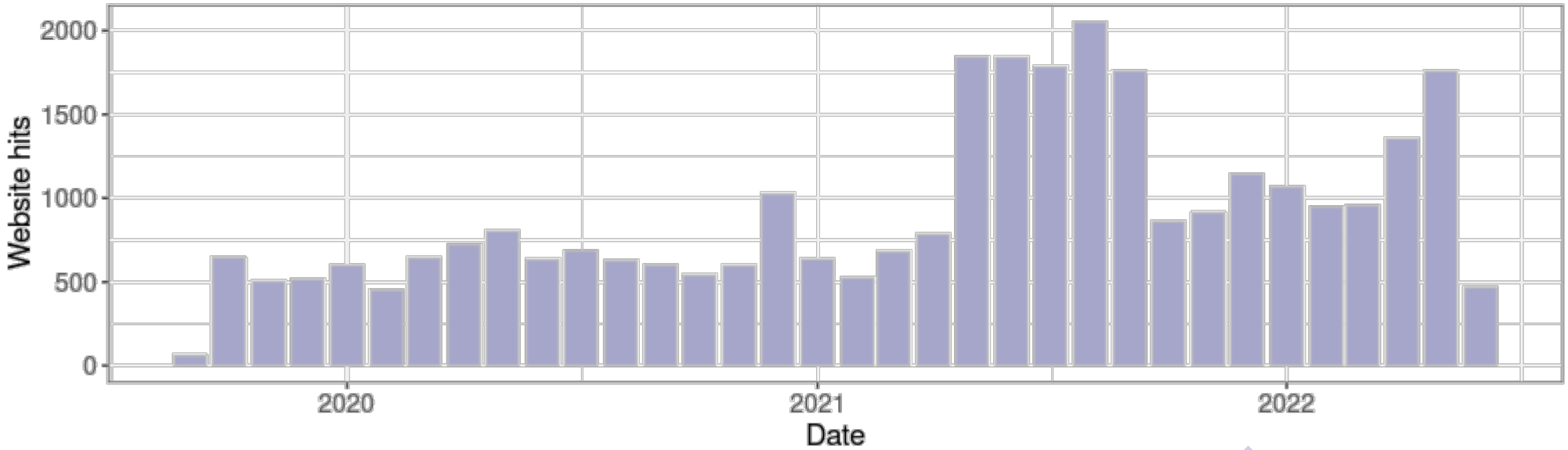
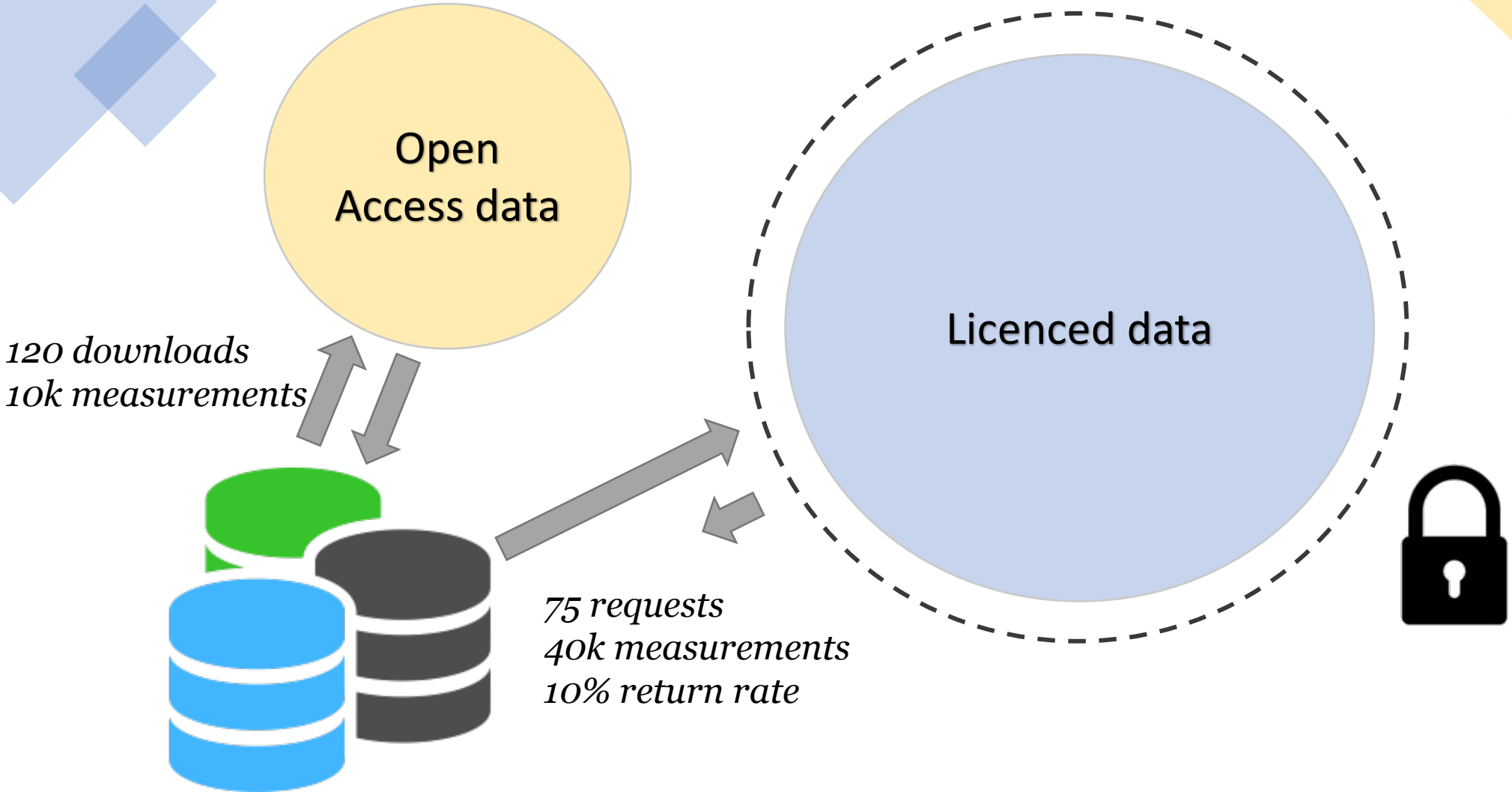

12.5
10.0
7.5
5.0
2.5
0.0
Users
2020
2021
2022
Date


2000
1500
1000
500
0
Website hits
2020
2021
2022
Date

QC steps

- *Very simple QC step on coordinates and timestamps*
- *QC is left up to the data owner*
- *Next steps - it would be great to automate some of this*

LIMNADES: Current Barriers



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Step forward…

- ***Increase user engagement in the platform.***
  - ***Data uploads (increase measurement diversity)***
  - ***Encourage user - owner interaction***
- ***Develop user experience (UI).***
- ***Implement intelligent QC based on data.***
- ***Adopt standardise OGC compliant software.***

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