

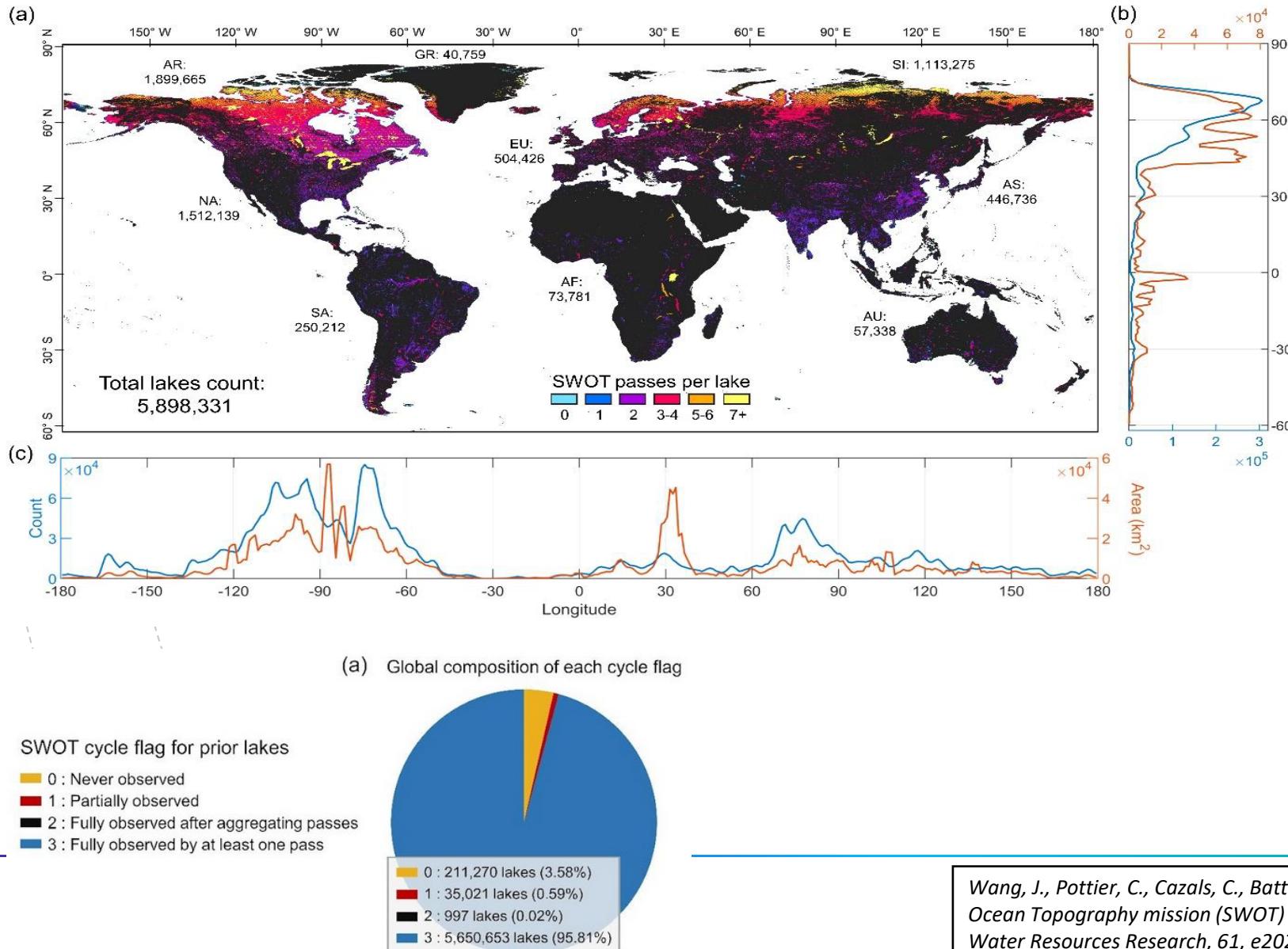
SWOT HR

PRIOR LAKE DATABASE UPDATES AND ON-GOING WORK

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on behalf of the HR Algorithm Development Team

SWOT SCIENCE TEAM MEETING, ARCAHON, FRANCE
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PRIOR LAKE DATABASE (PLD)



Role

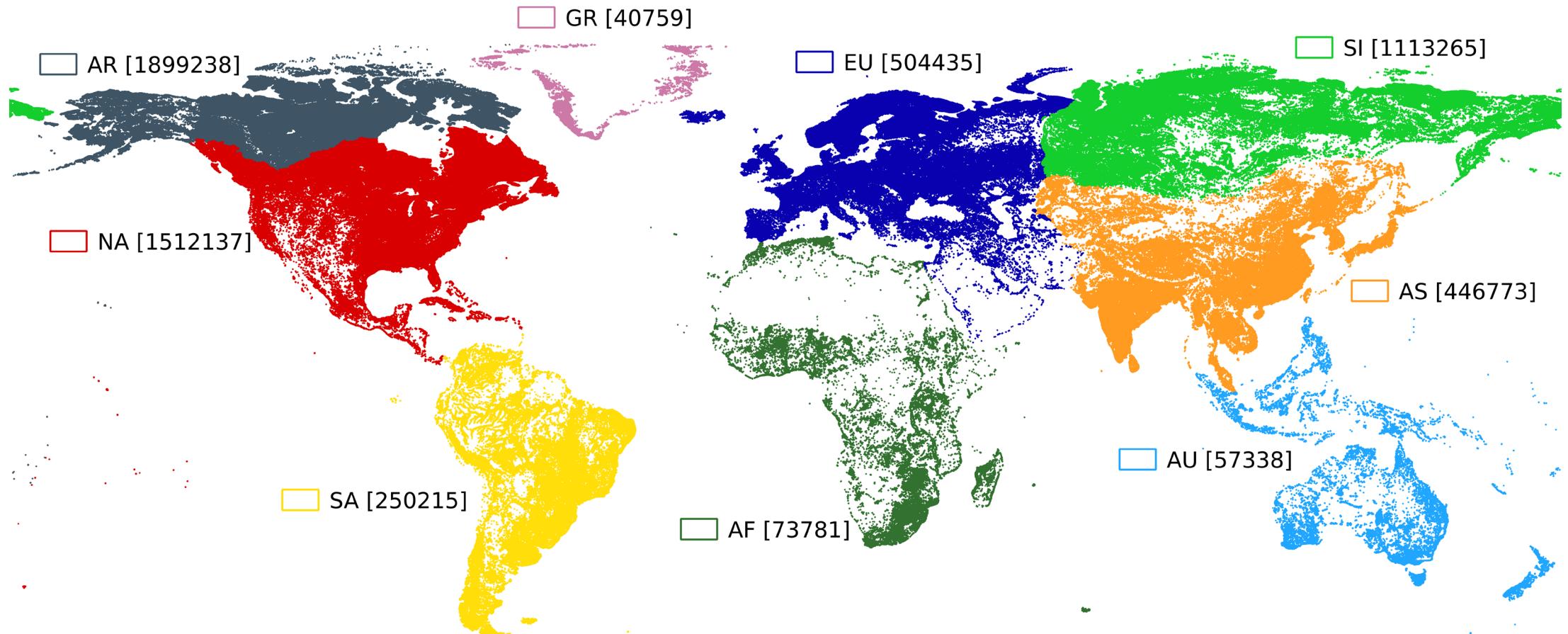
- Link SWOT observations between them
- Store data needed for lake processing

Water mask from:

- Circa-2015 dataset [Sheng et al. 2016; Wang et al., 2025]
- Recently built reservoirs [Sikder et al., 2023]
- Specific inputs for scientists

CURRENT VERSION = 2.02
→ in LakeSP products version D0

5,897,941 lakes



MAJOR CHANGES WRT PLD V1.06 (which was used in LakeSP products version C2)

- SWORD v15 to v17b:
 - Harmonisation between Prior Lake Database and SWORD
 - 1306 lake_id modified:
 - last digit from 3 ("lake connected to a SWORD river") to 2 ("disconnected lake") : 420 lakes
 - or vice-versa : 886 lakes
 - update of reach_id_list (= list of SWORD reach_id intersecting PLD lake) for 597 PLD lakes
- Addition of **reference values** ref_wse, date_t0 and ds_t0
→ computation of storage change for ~5.3 millions of PLD lakes
- Lake **geometry updates and creation** based on scientist requests
- Removal of Caspian Sea and other fake objects in the sea
- Minor updates and corrections

DISTRIBUTION

<https://hydroweb.next.theia-land.fr/>



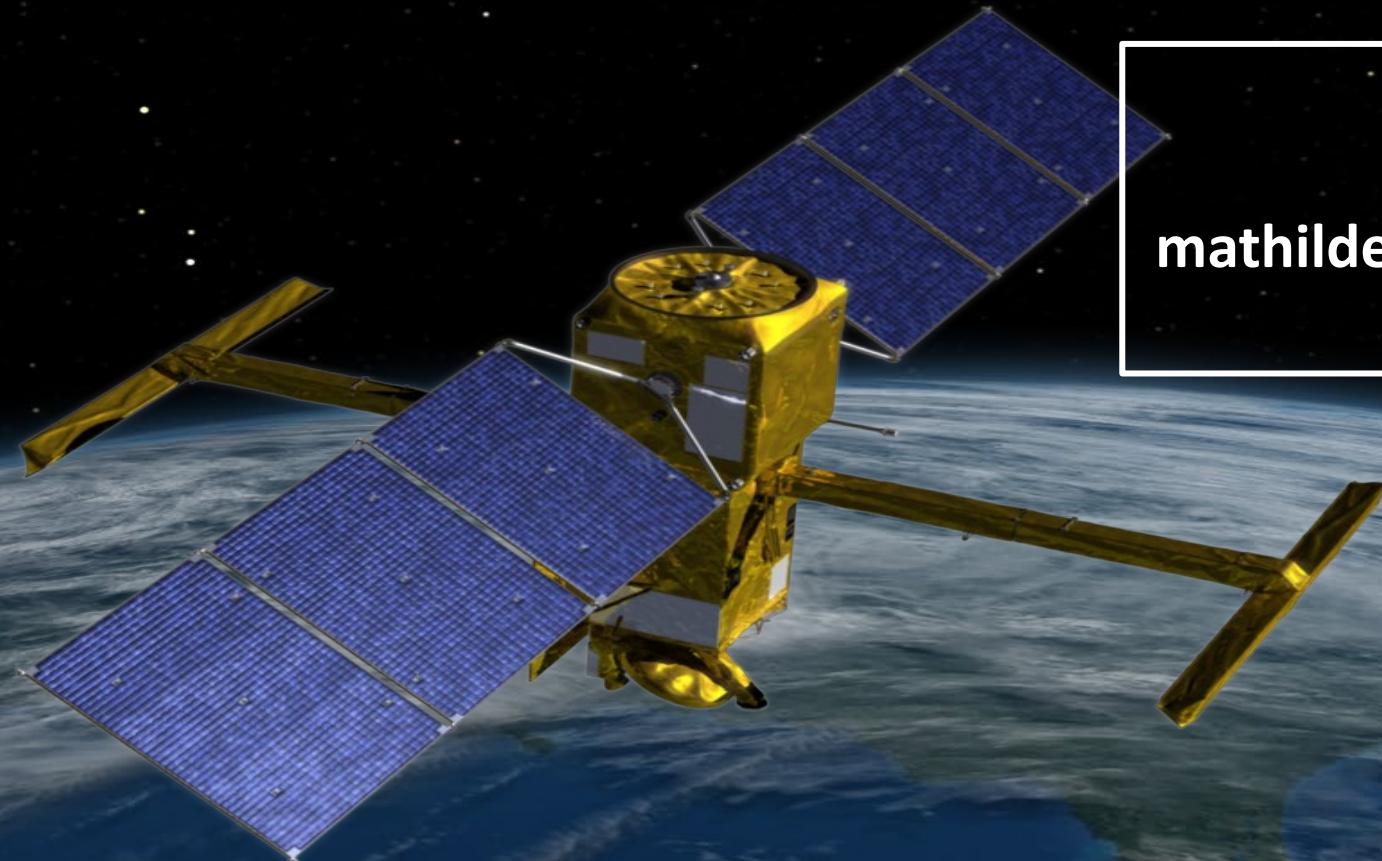
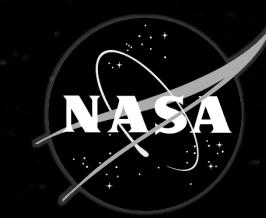
- Current distribution of “operational” PLD and “scientific” version in SQLite format
- Requests from users to access to smaller/simpler datasets:
→ 3 new datasets in **GPKG** format

Filename	Content	Volume
PLD_light[...]	Single file containing lake_id and geometries at global scale	6.4 GB
	Single file containing the PLD « lake » table	10.5 GB
PLD_<continent_code>	PLD « lake » table for each continent	66.3 MB to 3.1 GB

Soon available on [hydroweb.next](https://hydroweb.next.theia-land.fr/)

ON-GOING WORK

- Improve reference values by computing them with version D data, over a longer period
- Add other parameters needed to improve the lake product / processing
- Keep adding/correcting YOUR lake information



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Thank you for your attention!