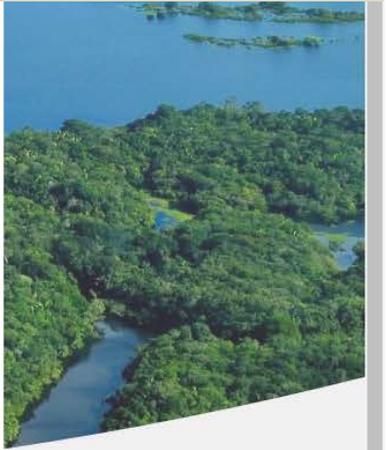




Created in 2003
New site opened in 2016



Hydroweb.theia-land.fr



Lakes

Op: 63
Re: 89

Sélectionnez un bassin, lac ou rivière

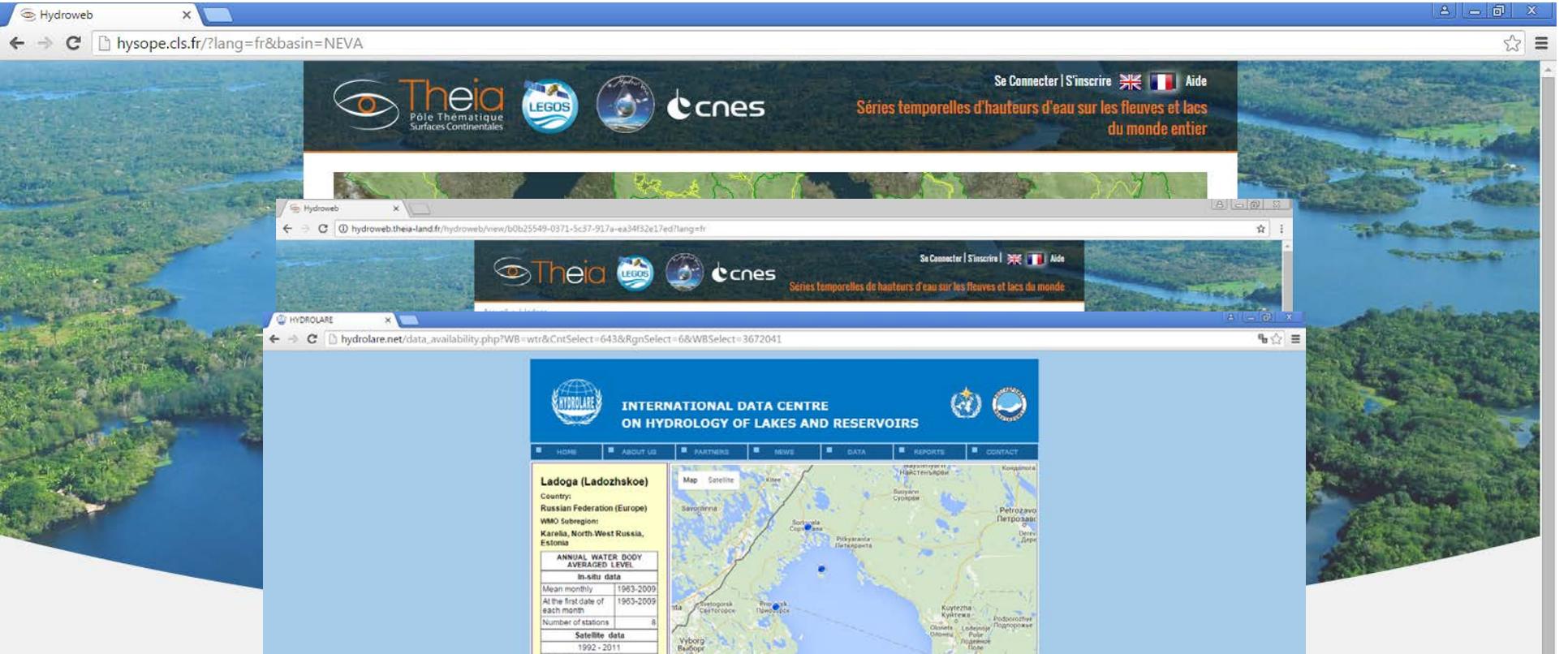
● lac(s) ● station(s) virtuelle(s) ● lac(s) et station(s) virtuelle(s)

Résultats par page: 10

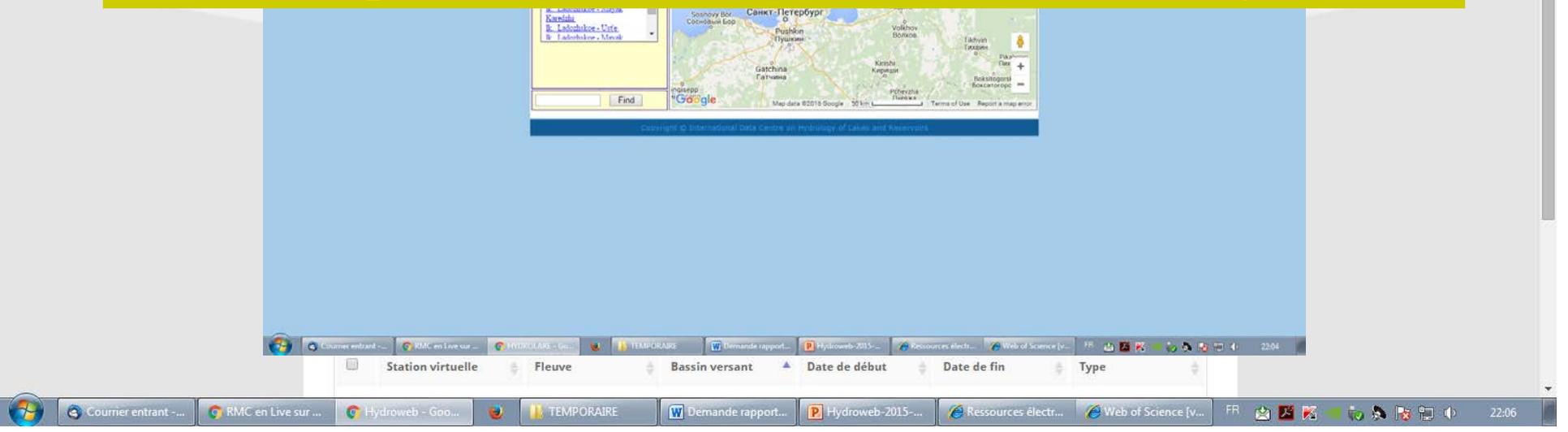
PRODUITS LACS						
Lac	Bassin versant	Continent	Date de début	Date de fin	Type	
Amadjuak	Hudsonbay	Amérique du nord	1992/09/26	2017/05/11	Operationel	
Rybinskoye	Volga	Europe	1992/09/26	2017/05/11	Operationel	
Kariba	Zambezi	Afrique	1992/09/26	2017/05/09	Operationel	
Michigan	St.Lawrence	Amérique du nord	1992/09/27	2017/05/17	Operationel	
Nasser	Nile	Afrique	1992/09/27	2017/05/17	Operationel	
Caspian	Caspian	Asie	1992/09/27	2017/05/16	Operationel	
Ladoga	Neva	Europe	1992/09/27	2017/05/16	Operationel	

Rivers

Op: 58
Re: 1201



Jason 3 in operational mode since October 2016 on Hydroweb



Users registration and citations

2012: 80 new users

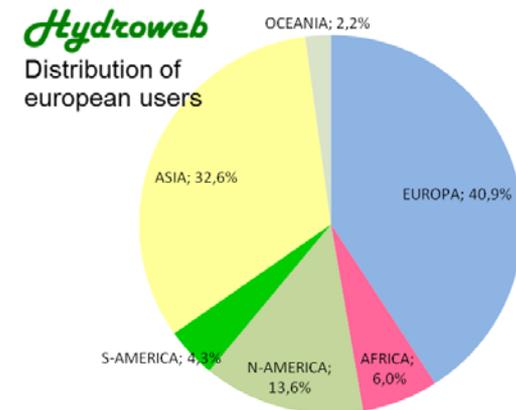
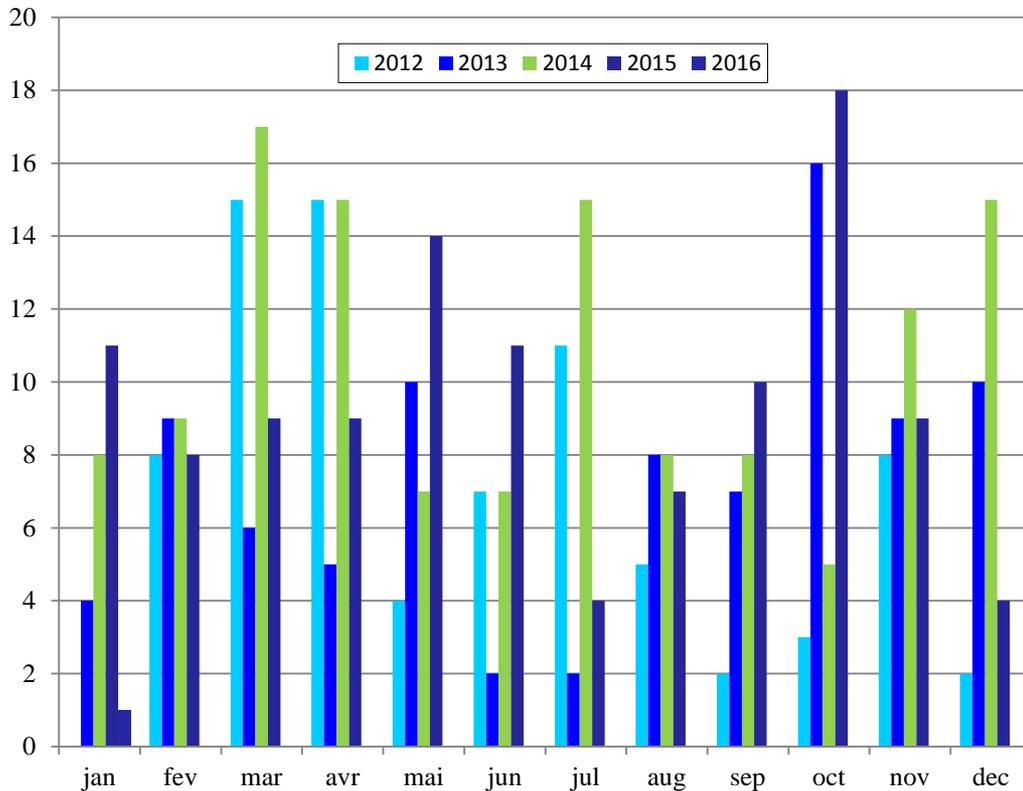
2013: 88 new users

2014: 126 new users

2015: 114 new users

2016: 90 new users

2017: 29 new users



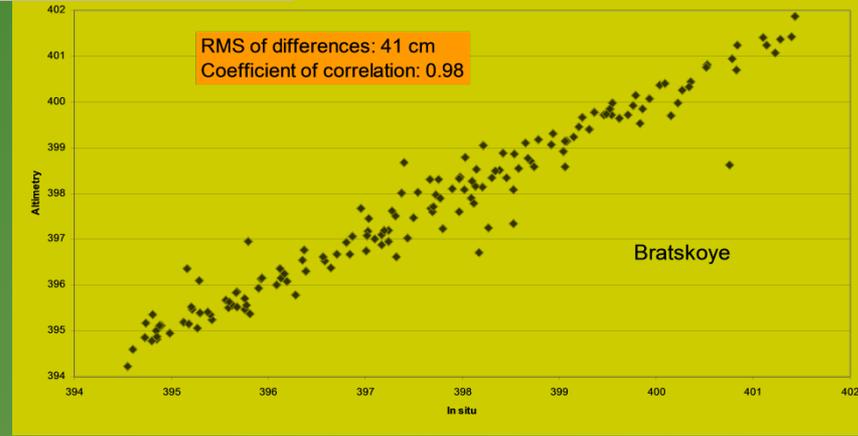
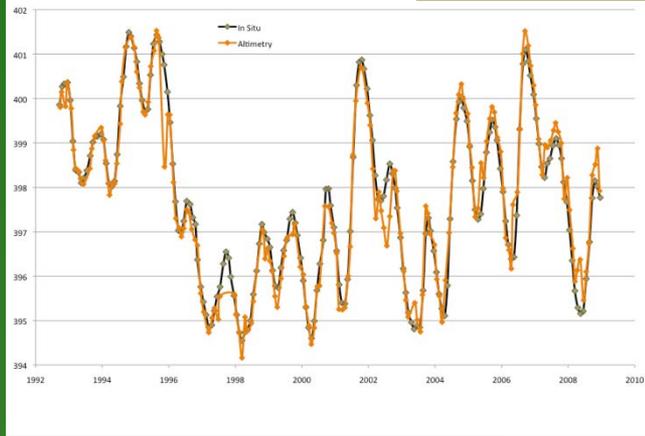
Citations: 37 in 2014, 29 in 2015, 30 in 2016, 11 in 2017

Comparison to in situ data

SHI, IWPB / cooperation with Legos

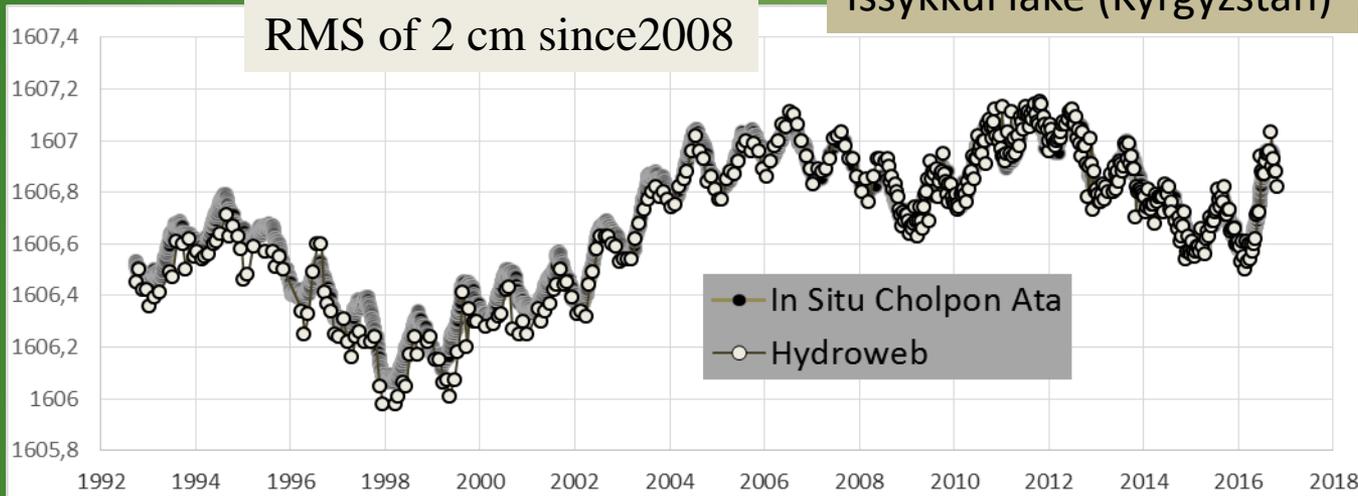
2-3 cm <accuracy< 1m

Bratskoye reservoir (Russia)



Issykkul lake (Kyrgyzstan)

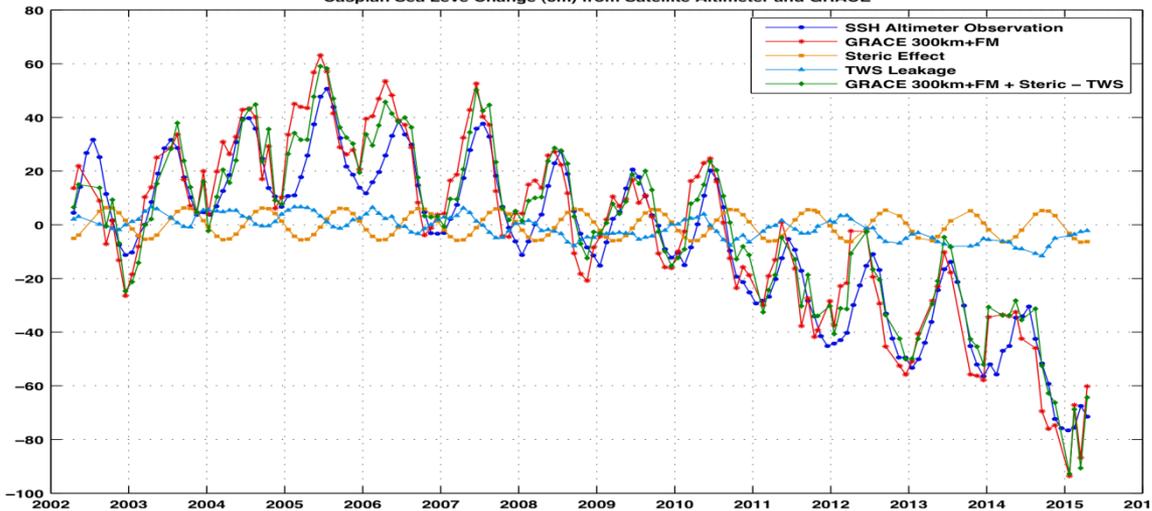
RMS of 2 cm since 2008



Validation of GRACE data and models using altimetry

Caspian Sea (Ru, Tk, Kz, Ir, Az)

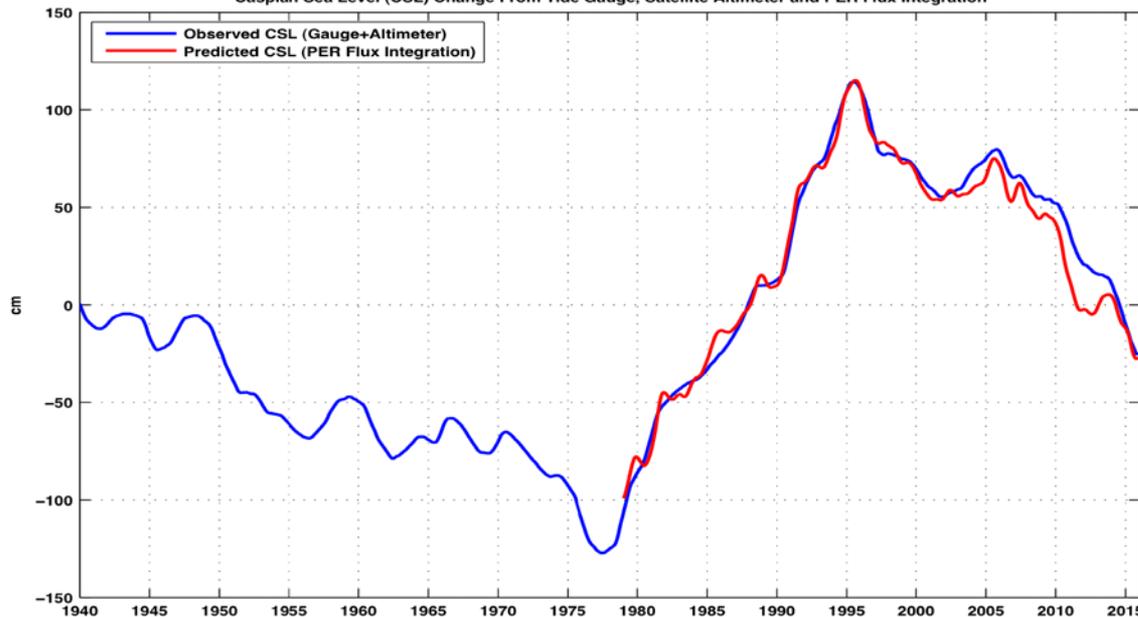
Caspian Sea Level Change (cm) from Satellite Altimeter and GRACE



Hydroweb data used as reference for GRACE signal decontamination and interpretation over the Caspian Sea

Chen, Wilson, Tapley, Save, Bettadpur, Cretaux, Long-Term and Seasonal Caspian Sea Level Change From Satellite Gravity and Altimeter Measurements, JGR, 2017

Caspian Sea Level (CSL) Change From Tide Gauge, Satellite Altimeter and PER Flux Integration



The causes of long term changes over the CS have been investigated using combination of In Situ data, Hydroweb products (CS and Kara Bogaz Gol reservoir).

Some discrepancies due to uncertain river discharge are still present but agreement is remarkable

Chen, Pekker, Wilson, Tapley, Kostianoy, Cretaux, Safarov, Long-Term Caspian Sea level changes, GRL, 2017, in press

Further developments

For 50% of lakes in Hydroweb, areal extent and volume changes are also produced (using satellite imagery) => 100% in the next 2 years

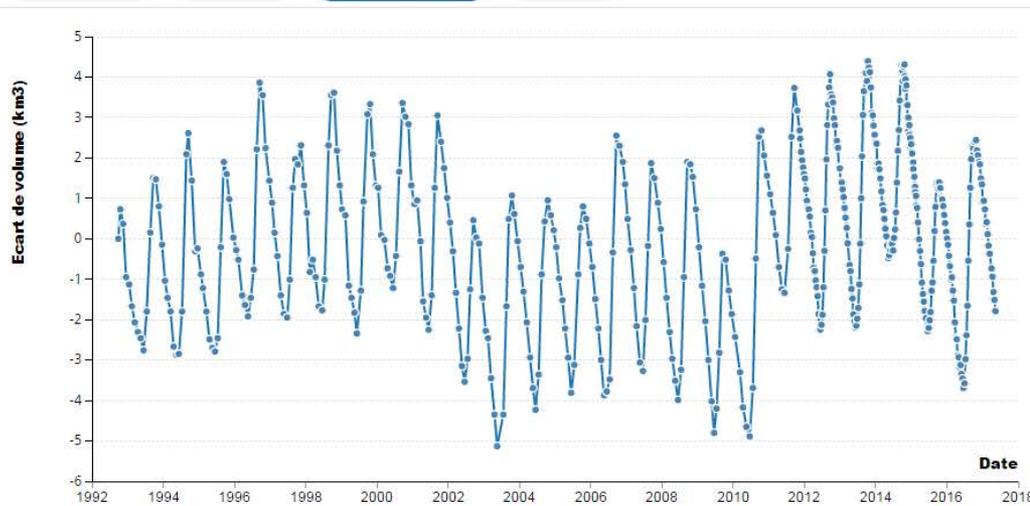
Lac Tana

Hauteur d'eau (m)

Surface (km²)

Ecart de volume (km³)

Hypsométrie



- Drastically increase the number of lakes in Hydroweb using the new missions Sentinel-3A & 3B, Jason-CS & SWOT
- Determination of near lake bathymetry using Laser ranging instruments & global lakes extent products (Peckel, Shen)
- Continue & Strengthen the participation in the Hydrolare project
- Include lake ice products (duration and date of ice formation and breakup)
- Development of a CCI+ project for Lake's ECVs in a European consortium