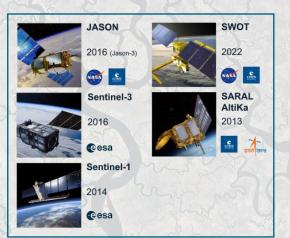
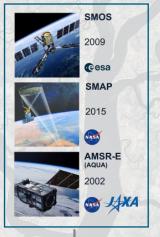


# HYDROLOGY FROM SPACE















Tropiques





(C2OMODO) 2029, 2031









**Evapotranspiration** 



SWOT

2022

Runoff

### **Δ Total Water Storage**

#### Δ Total Water Storage



















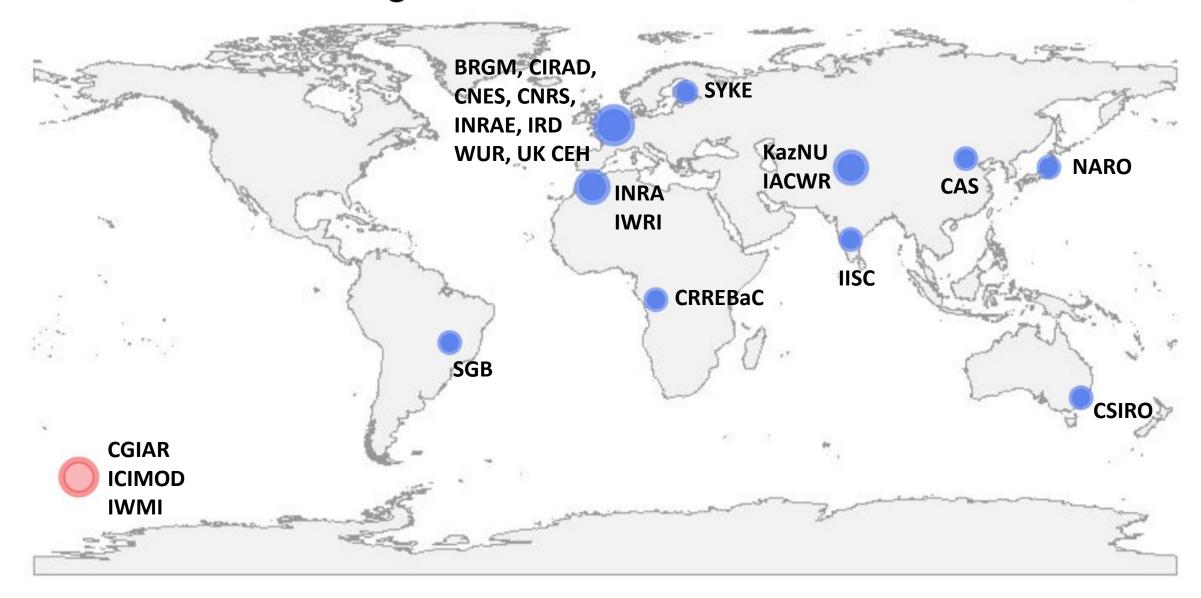


- Born from the **One Water Summit** (December 2024)
  The One Water Summit was held in December 2024 in Riyadh, alongside the 16th session of the UN Convention to Combat Desertification (COP16).
- Initiated by 6 French organizations, including INRAE (Secretariat) and CNES (as national coordinator), supported by partners (INBO and WMO), and an international scientific research consortium (~20 organizations): space agencies, research institutes, universities...
  - Integrate satellite observation into water governance
  - Complement in-situ data

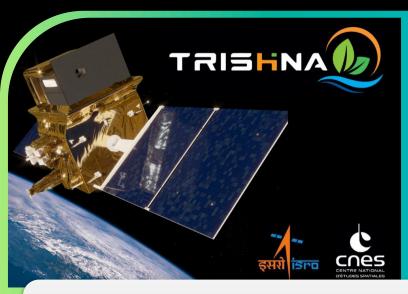
#### Objective:

- Using satellite data for integrated and resilient water management, combining space observations and in-situ measurements at all scales: from the local watershed to the global view of the water cycle.
- Develop services to address the water crisis and bring together scientific solutions leveraging satellite data to respond effectively

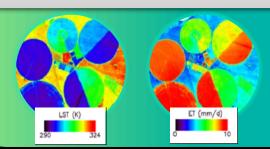
# One Water Vision - Organizations of the Scientific Consortium (IRC)



### **BILATERAL PROGRAMS AND INNOVATION**



Ground surface temperature and daily evapotranspiration



Bilateral programs devoted to water

Land, Coastal, Ocean Water

Satellite precursors LSTM, S3-NG TOPO **Downstream Programs** 





First global survey of Earth's surface waters







Launch scheduled in 2026-27

Launched Dec 16, 2022























## **INRAE: From Data to Decision**

- Monitoring soil moisture and canopy water content using both satellite and in-situ observations.
- Improving model calibration and validation with ground data enhancing the accuracy of missions like TRISHNA.
- Working across data-rich and data-scarce basins, from local catchments to large territories.
- Developing digital twins of river basins, combining field and satellite information to support decision-making
- Within **One Water Vision**, these methods are applied by partners worldwide to strengthen integrated and cooperative water management.

# **Conclusion**

#### **Contact:**

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