waterSENSE | REINFORM

REmote Sensing INtegration For Optimised Resource Management

From Awareness to Action: Copernicus-powered water intelligence for Australian agriculture

Welcome from the Consortium!

Welcome to the first edition of the WaterSENSE | REINFORM Newsletter. A space to share real-world insights on smarter water management for agriculture in Australia.

Each edition will bring you practical updates, results, and opportunities from our Copernicus-enabled monitoring work showing how satellite data and local know-how can help you save water, strengthen sustainability reporting, and improve decision-making on the ground.

Building on the Horizon 2020 WaterSENSE project, REINFORM (funded by the European Union's Horizon Europe Programme and supervised by EUSPA[1]) continues our shared mission to make satellite-based water monitoring practical, transparent, and scalable.

Our goal is simple: to help Australian agriculture use every drop wisely.

[1] Funded by the European Union Horizon EUSPA-2023_SPACE Programme under grant agreement No. 101180201 Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Why It Matters

Water scarcity remains one of Australia's greatest agricultural challenges. Using Copernicus Sentinel-1 and Sentinel-2 data combined with hydrological modelling, REINFORM measures how efficiently water contributes to crop growth as a key indicator of productivity and sustainability.

Our solutions support:

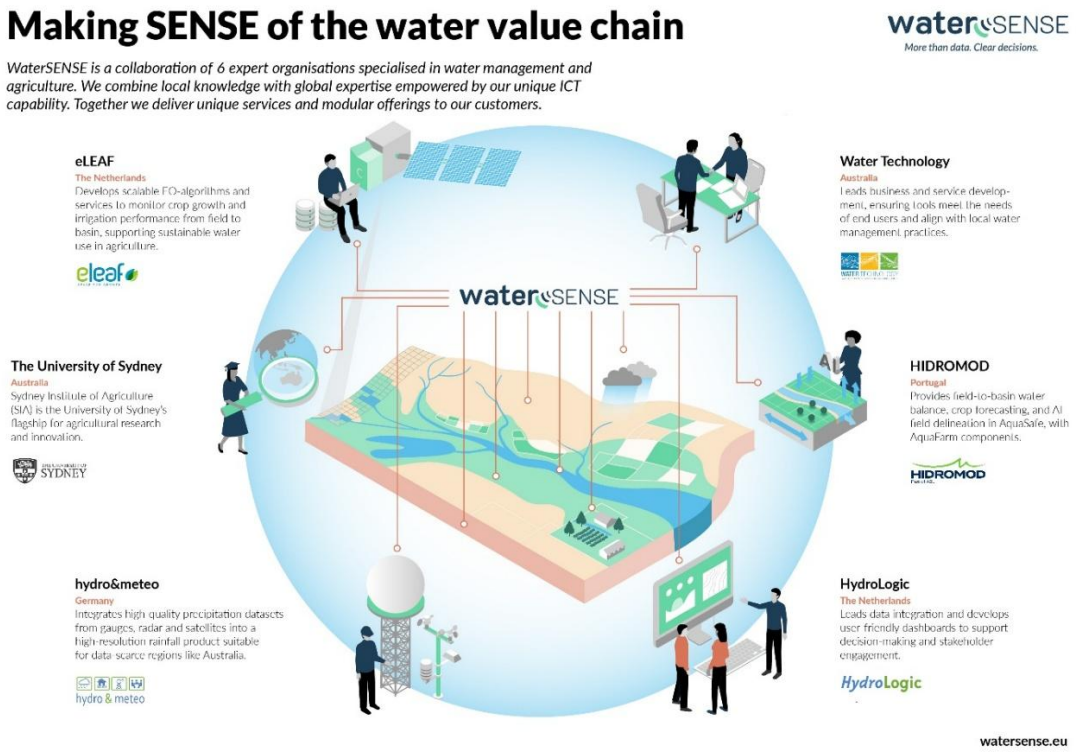
- Growers - with tools to monitor and report on water use;
- Cooperatives and water managers – with transparent, comparable performance metrics;
- Certification schemes (myBMP, Better Cotton) with verifiable, science-based indicators.

This data empowers the agricultural sector to plan with confidence, report with credibility, and adapt to a changing climate.

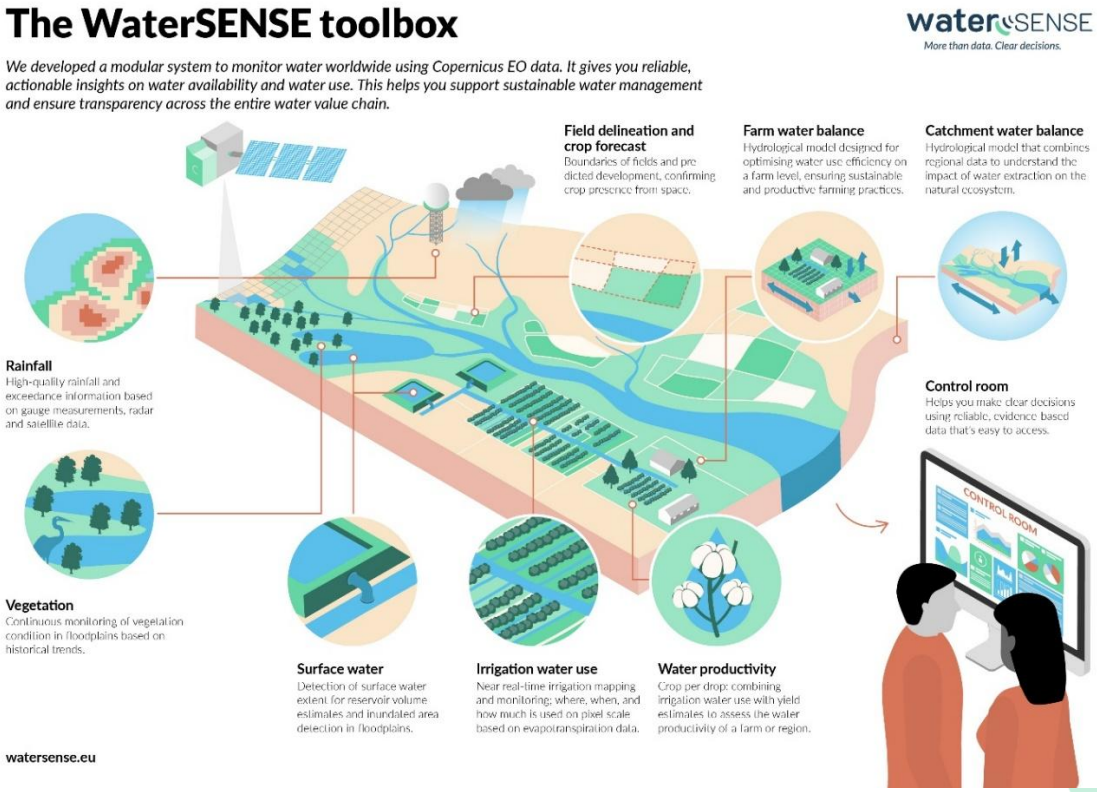
Meet the Consortium

Six partners across Europe and Australia combine science, technology, and field expertise to deliver Copernicus-based water intelligence tailored for Australian conditions:

- Water Technology;
- eLEAF,
- HydroLogic,
- HIDROMOD,
- Hydro-Meteo GmbH, and
- University of Sydney.



What the WaterSENSE Consortium Offers



Our WaterSENSE Toolbox integrates Earth Observation data, hydrological models, and cloud-based analytics into a single platform that supports:

- Farm-level water management,
- Regional benchmarking and reporting, and
- Sustainability certification support.

If you're exploring innovative ways to measure, manage, or report water use, we'd love to connect. Get in touch through Contact | WaterSense.eu or message us directly on **LinkedIn**.

Copernicus Corner – From Space to the Field

Copernicus, the European Union's Earth Observation programme, provides free and open satellite data that powers smarter, faster, and fairer ways to monitor agricultural water use.

Through REINFORM, this data is transformed into real-world tools that help track evapotranspiration, irrigation, rainfall, and crop health — bridging the gap between sustainability goals and on-the-ground action.

Learn more about Copernicus at copernicus.eu and explore REINFORM's work on **watersense.eu**.

Read More About Our Work

Curious about the science behind it? Here are two publications that underpin REINFORM's methods:

- Fuentes, I., Padarian, J., Vervoort, R.W. (2022). *Spatial and Temporal Global Patterns of Drought Propagation*. *Frontiers in Environmental Science*, 10. DOI:10.3389/fenvs.2022.788248
- Brombacher, J., Rezende de Oliveira Silva, I., Degen, J., Pelgrum, H. (2022). *A novel evapotranspiration-based irrigation quantification method using the hydrological similar pixels algorithm*. *Agricultural Water Management*, 267, 107602. DOI:10.1016/j.agwat.2022.107602

Stay Connected

If these topics resonate with you, whether you're a grower, water manager, or sustainability lead, follow us on LinkedIn and reach out.

Looking for more information? Please visit our website.

We'll be sharing results from our upcoming demonstrations, practical tools, and opportunities to collaborate across Australia's water-smart agriculture community.

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