RSS-Hydro: your choice in environmental remote sensing & water risks

Introduction to RSS-Hydro

Building on scientific advances in remote sensing, Earth observation, drones, ML & computer models to solve the problems of our times, with the SDGs always in mind.

International team (7+ languages) & inclusive work environment: →

Guy Schumann
Founder

Moh Zare
Senior Scientist
in Hydrology

Ruja Mansorian
Hydrologist

Laura Giustarini
Environmental Engineer

Margherita Bruscolini
Geoscientist,
UAV Pilot

Ben Gaffinet
Physicist

Ben Suttor
Geoinformatics,
IT expert

RSS-Hydro presentation film

Science-based services

- Advanced computer models and cutting-edge remote sensing & geospatial technologies (satellite imagery, drone data, etc.) to model water risks (floods, droughts, etc.) at impact level scales; and

- Flood risk analysis & flood risk maps including the main climate change scenarios for the future.
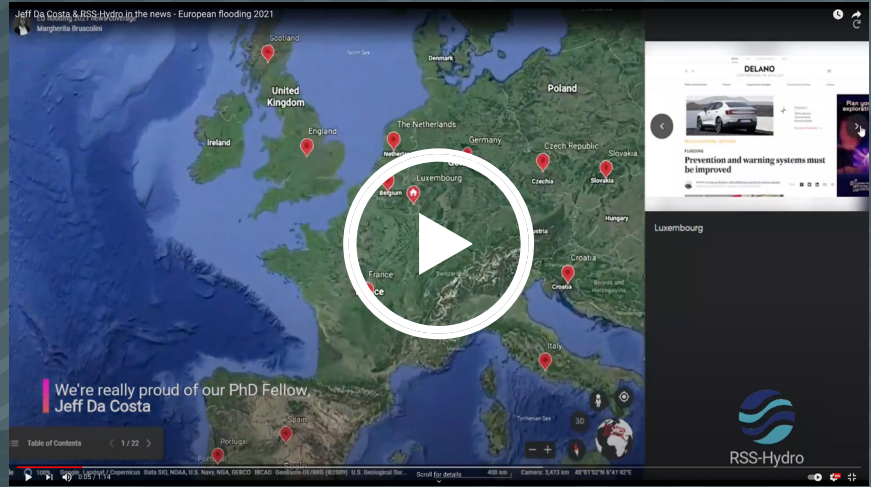
EU flooding events of 2021
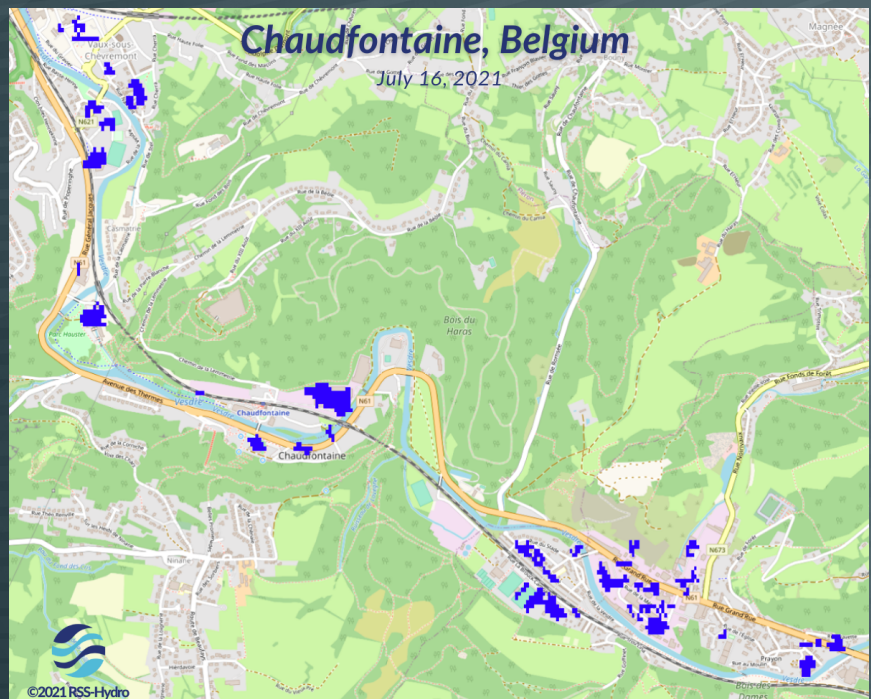
Map of flooded buildings in Chaudfontaine, Belgium, on July 16 (EU flood events 2021) produced using Copernicus Sentinel-1 (SAR).

RSS-Drones, flying to innovate sustainability

Drone-powered solutions to address the problems of our times under a changing climate.

Modular drones with different sensors (optical and thermal cameras, LiDAR sensors, etc.) for:

- Aerial surveys (photos & videos);
- High-precision terrain & 3D mapping; and
- LiDAR point clouds.

Drone-based products & services around different sectors:

- **Renewable energy** (solar panel inspection for thermal efficiency monitoring);
- **Natural disasters & humanitarian aid** - flood mapping, flood risk maps, flood models validation, assisting global disaster response;
- **Precision agriculture & viticulture** (agricultural field monitoring to promote sustainable water use during irrigation, field mapping, plant counting and positioning, vegetation health monitoring and diseases control); and
- **Construction** (flight planning and 3D modelling software to map and monitor large sites over time).

Colmar, Luxembourg

EU flood events mapping in Luxembourg from drone

Research & Education Department (RED)

Cutting-edge research projects in partnership with national & international organisations (ESA, UN, WASDI, LIST, Fathom, OGC, FDL, etc.).

Working with graduate students, PhD candidates and postdoctoral researchers to advance the scientific fields of hydrology, climate science & policy, water-related risks, etc.

Humanitarian aid & geospatial technologies

- Working on different projects, using geospatial technologies and Artificial Intelligence to model natural hazards and water risks for improving societal resilience, while decreasing the vulnerability (e.g. FloodSENS with ESA); and

- Global consulting for UN agencies (e.g. UN WFP), assisting flood disaster response efforts globally. We are part of WFP Drones Working Group and assisting MSF Luxembourg during Mapathons.

SDGs & CSR

Making the SDGs a reality

Young & dynamic R&D company operating across fields in environmental remote sensing & modelling of water risks. Determined to make the world more sustainable, including the SDGs 1, 2, 6, 13, 15, 17 in our mission & activities.

We are part of IMS Luxembourg (Inspiring More Sustainability), the leading network of Luxembourg companies involved in Corporate Social Responsibility (CSR).
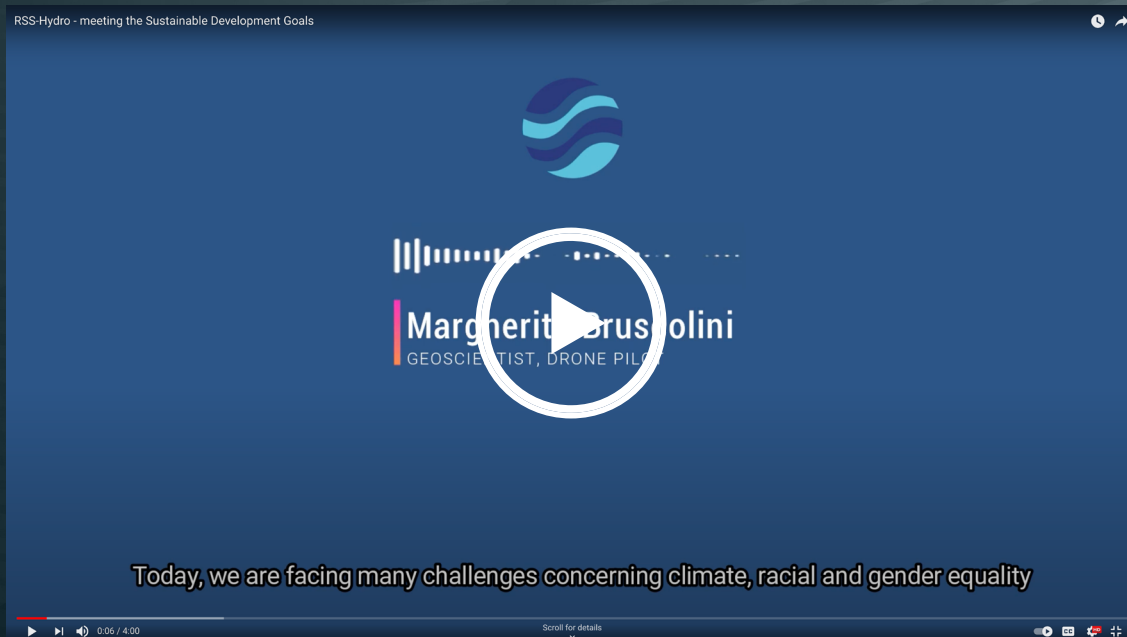
Meeting the Sustainable Development Goals

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