



Committee on Earth Observation Satellites

# FloodDAM

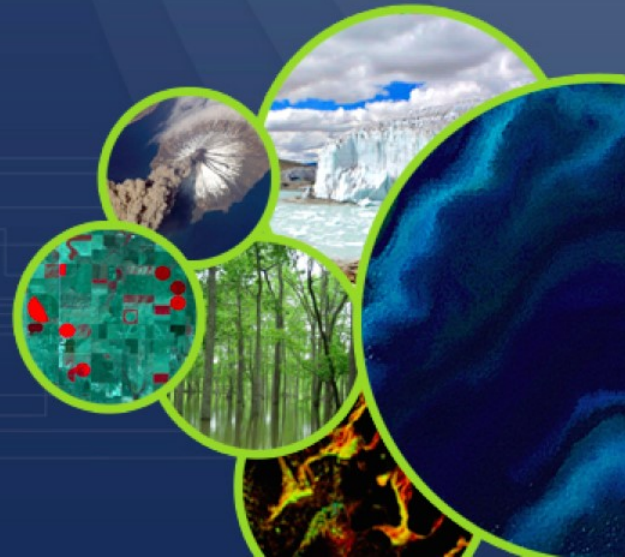
## WG Disasters : Flood pilot session

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WG Disasters 17 (virtual)

15, 16, and 17 March 2022





- **SCO** project: <https://www.spaceclimateobservatory.org/floodam-garonne>
- **Objectives:** building an automated service to reliably detect, monitor and assess flood events globally.

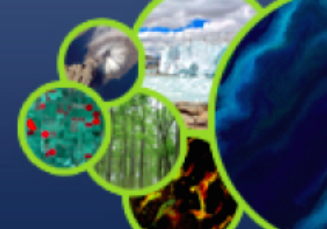


## Flood **D**etection, **A**lert and rapid **M**apping

- Partners:



- Dates: 09/2020 → 03/2022



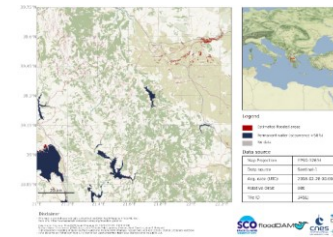
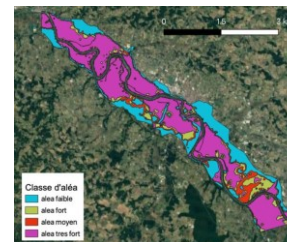
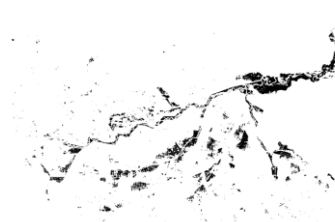
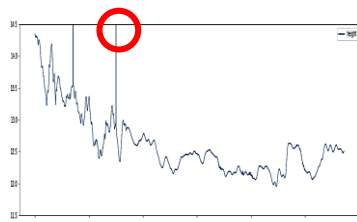
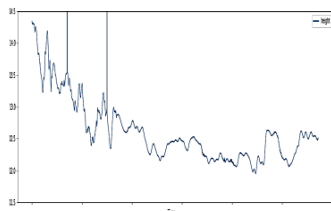
Water level measurement

Water height anomaly detection

Flood rapid mapping from EO imagery

Risk map and modelling

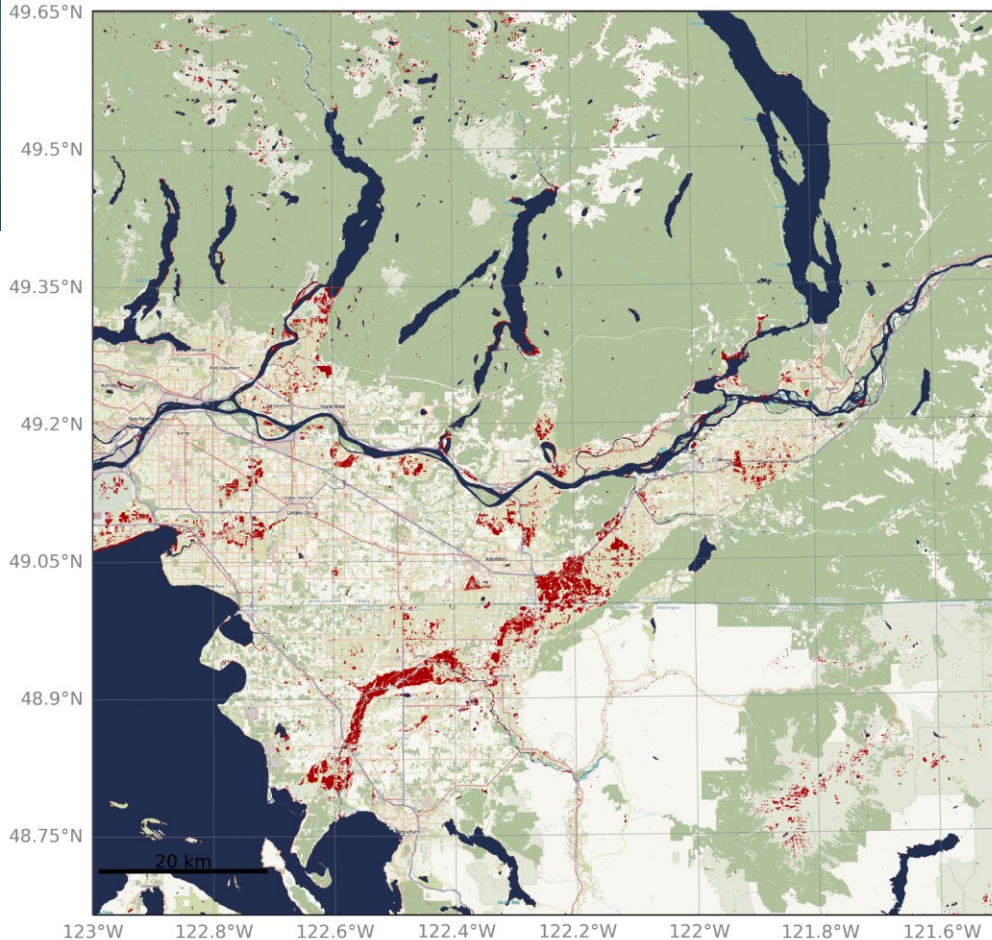
Result visualization



VRE Platform + WPS



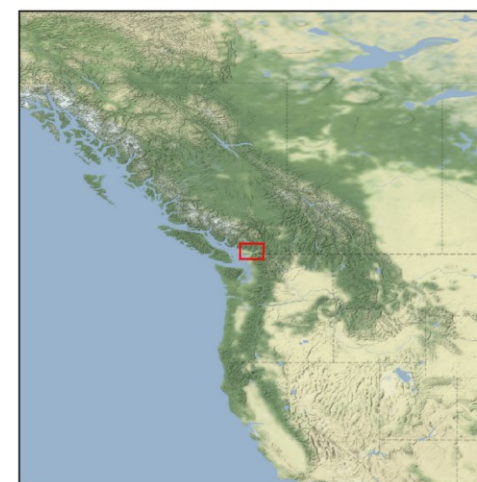
# FloodDAM result: Example in Vancouver, CANADA November 2021



### Disclaimer

- This map is derived automatically using the FloodDAM Rapid-Mapping (FloodML) tool.  
More info: <https://www.spaceclimateobservatory.org/flooddam-garonne>

- How to cite this map: FloodDAM Rapid-Mapping (© CNES-CLS-CS, 2019-2021)  
- Surface Water Occurrence (GSW) data: Jean-Francois Pekel, Andrew Cottam, Noel Gorelick, Alan S. Belward.  
High-resolution mapping of global surface water and its long-term changes. Nature 540, 418-422 (2016). (doi:10.1038/nature20584)  
- Fond de carte par Yohan Boniface & Humanitarian OpenStreetMap Team sous licence domaine public CC0



### Legend

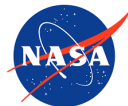
- Estimated flooded areas
- Permanent water (occurrence >50%)
- No data

### Data source

Map Projection	EPSG:32610
Data source	Sentinel-1
Relative orbit	013
Acq. date (UTC)	2021-11-16 00:00:00
Polarization	VV,VH
Post-processing	Majority filter r=2



- Duration: 18 months
- Partners:



- **Objectives:**
  - Consolidation of the first FloodDAM achievements and improvements
  - Introduction of new models/new sources, standardize resource interfaces
  - Link with end-users with respect to risks and the finance sector
  - Demonstration on a selection of test sites (TBD)