



Committee on Earth Observation Satellites

GEO/LEO/SAR Flood Pilot

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WGDisasters Telecon-29

Virtual Meeting

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- SG1: Red River of the North
 - Vince Decker, Natural Resources Canada
- SG2: Bermejo and Picomayo Basins
 - Marcelo Uriburu Quirno, CONAE
- SG3: Brahmaputra River and Mahanadi Delta
 - G S Rao, ISRO
- SG4: Pearl River Basin
 - Weiyuan Yao, CAS
- SG5: Balkans
 - Issaak Parcharidis, Harokopio University of Athens
- SG6: Myanmar
 - Patrick Matgen, LIST



- WGDIsasters Flood Pilot Implementation Plan was endorsed during the CEOS 2020 Plenary
- Key Milestones:
 - 2020-21
 - Begin regional studies; collect data; establish relationships
 - 2021-22
 - Provide derived products to users for feedback and explore refinement of monitoring strategies. Initial evaluation of pilot results to GFP and international conferences.
 - 2022+
 - Develop reports from users on derived products, best practices, and evaluate results from study sites. Explore whether broader EO strategies can be developed.



- Objective A
 - Solicit input from CEOS partnering agencies and participants on current and upcoming efforts to map water and flood extent from diversity of LEO/GEO and SAR contributions.
- Objective B
 - Capture underlying requirements and future needs to sustain and improve upon these capabilities.
- Objective C
 - Explore ideal combination of LEO/GEO/SAR flood mapping outputs, using representative regional events of interest to partners.
 - Develop and document best practices for combining and sharing flood information from multiple platforms with diversity in sensor, spatial/temporal resolution, etc.



- CEOS Chair (NASA) 2021 Theme / Implementation Plan
 - Space-based EO Data for Open Science and Decision Support
 - Develop a demonstration of a repository of data, methodologies and capacity building resources for open science and decision support for flood research and applications, ensuring relevance of outputs that can inform choices, support decisions, and guide actions using open science principles for disaster risk reduction through partnership efforts with CEOS WGCapD and stakeholder engagement. (DIS-20-06)



**Implementation Plan for the 2021 CEOS Chair Theme:
"Space- based Earth Observation Data for Open Science and Decision Support"**

At the 2020 CEOS Plenary, the CEOS community welcomed NASA's proposed theme for the 2021 CEOS Chair term: **"Space-based Earth Observation Data for Open Science and Decision Support"**. This document summarizes an implementation plan that will identify existing CEOS activities (in the 2020-2022 CEOS Work Plan) and other CEOS activities (not in the Work Plan) that directly align with this theme and advance the concepts of "Open Science".



- Monthly meetings ongoing
- Flood Pilot Data Call Form Complete
- Methodology / Algorithm Collection
- Licensed Data discussions ongoing
- Continued collaboration with CEOS COAST Ad Hoc Team to identify and leverage shared objectives, data call methodology and leveraging EAIL.
- Exploring collaboration with CEOS WGCapD regarding EAIL training

CEOS WGDisasters GEO/LEO/SAR Flood Pilot

DATA CALL FORM

Last Updated: 2 March 2021

Intent: Document relevant data and methodology requests / requirements for each Flood Pilot Subgroup.

Subgroup #1: Red River of the North

Subgroup Lead: Vince Decker

Satellite	Sensor Type	Public	Volume (Scenes)	Scene ID or Date(s)	Data Format	Spatial Resolution (m)	Temporal Resolution (days)
RCM	SAR	No	77		Tentative ARD in GTiff	Various (5, 30)	Various (b/w 20200407 & 20200510)
RSAT-2	SAR	No	9		Tentative ARD in GTiff	Various (4.6 – 2.0 x 2.8, 5.2 x 7.6, 16.5 – 6.8 x 7.6, 26.8 – 17.3 x 24.7)	Various (b/w 20200411 & 20200508)
Sentinel-1	SAR	Yes	8		SAFE	20 x 22	12
Sentinel-2	Optical	Yes	11		SAFE	10 - 60	10
Landsat-8	Optical	Yes	3		L1TP GTiff	15 - 100	16
Planet	Optical	No	17		3B Surface Reflectance	3	Various (b/w 20200415 & 20200506)
VIIRS	Optical	Yes	2 files/day		GTiff	375	Daily
GOES	Optical	Yes	2 files/day		GTiff	1000	Daily
Joint Leo/GEO	Optical	Yes	2 files/day		GTiff	375 (LEO) 1000(LEO)	Daily



Chile



Earth Analytics Interoperability Lab – Getting Started

This document provides a basic introduction to using the Earth Analytics Interoperability Lab (EAIL) Datacube JupyterHub environment. Please review this before using EAIL and take particular note of the suggestions regarding shutting down your server when you finish.

The datacube has been built and configured by CSIRO and is hosted by the Chilean Data Observatory (www.dataobservatory.net). AWS resources are provided by the Data Observatory.

This is currently a prototype system and is for non-commercial use only. Please contact jonathan.hodge@csiro.au if you have any questions regarding other use.

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- CEOS EAIL accounts distributed to all Flood Pilot members, with Getting Started and Background content
- Leverage the Lab with all relevant and available data. Bring code to the infrastructure & collaborate towards improving existing mapping tools: open water, flooded vegetation, urban and critical infrastructure, multi-platform downscaling, identify gaps, etc



Red River of the North Team / NRCan have demonstrated their need and goals for multi-platform and partner data supporting analysis in the 2020 event and year

