

EO data and compound risk

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EO data are an essential tool for supporting the study of compound risk.



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These data are used to analyze the effects of cascading hazards such as torrential rainfall → flooding → landslides → displaced populations.



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EO are used for monitoring between and during disasters and for emergency response. Some satellite agencies have particular emergency management systems in place.



04

An example of use of EO data is Synthetic Aperture Radar (SAR) for flood inundation

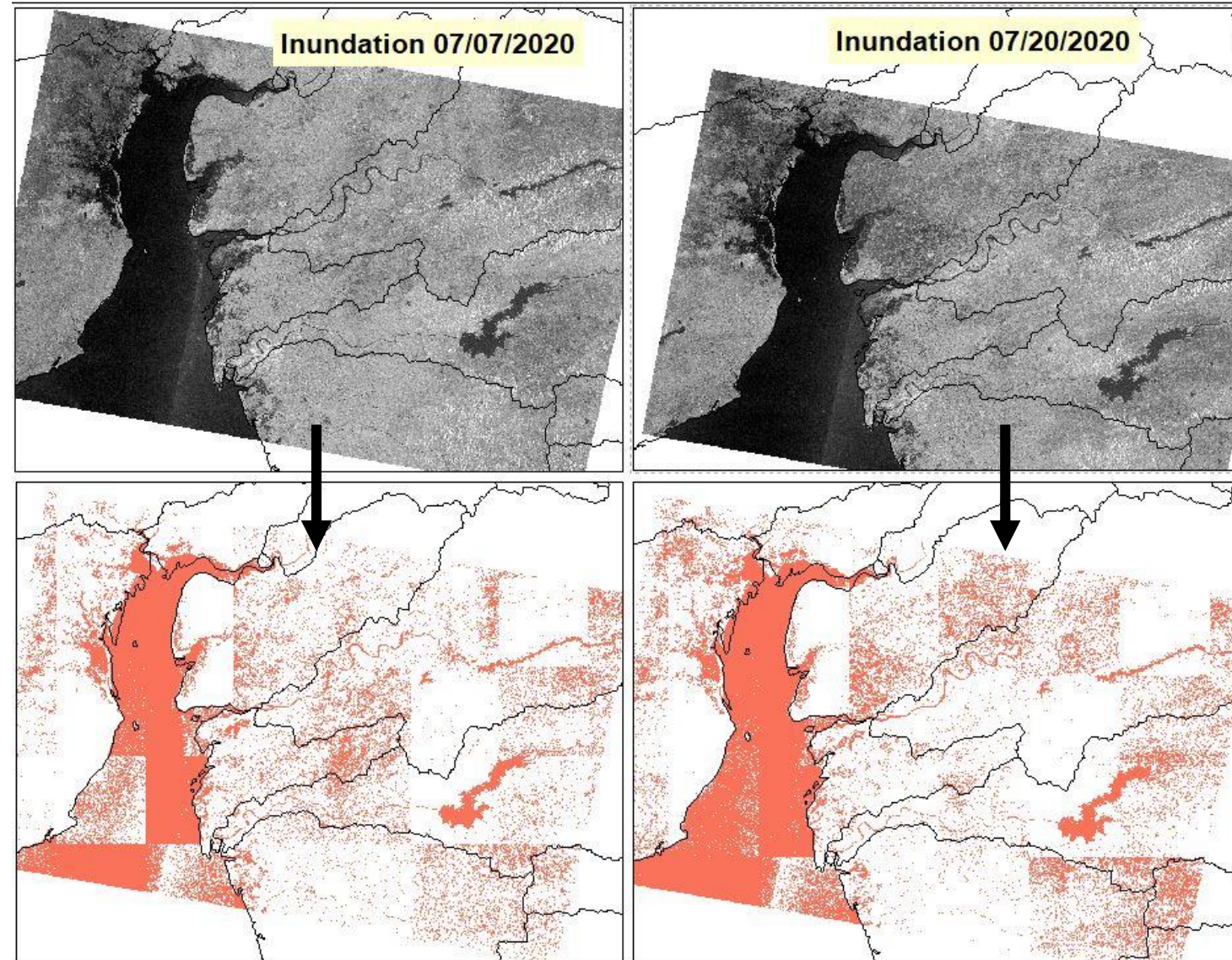


05

A NASA funded project out of the Applied Sciences Disasters Program is looking at the affects of global flooding and cascading hazards.

Sentinel 1A Output for Vadodara, India

Preprocessed
and resampled
to common grid
GRDH Products



Final Binary product
that shows detected
water

Project Objectives

Classify flood severity and send alerts based on severity level similar to USGS PAGER (used for severity alerting for earthquakes) using Pacific Disaster Center's (PDC) DisasterAWARE® platform.

Validate and calibrate the model outputs using remote sensing (Synthetic Aperture Radar) derived flood outputs.

Purpose: Develop and deploy a Model of Models (MoM) approach integrating hydrodynamic models and remote sensing derived products for flood forecasting.



1 Integrate two globally operationally flood models - GloFAS (Global Flood Awareness System) and GFMS (Global Flood Monitoring System)



3 Provide situational awareness information to impacted communities in near real-time to for response and recovery efforts.

