GEOSPATIAL APPLICATIONS FOR CLIMATE CHANGE AND DISASTER MITIGATION: TOOLS AND METHODS

Prepared by

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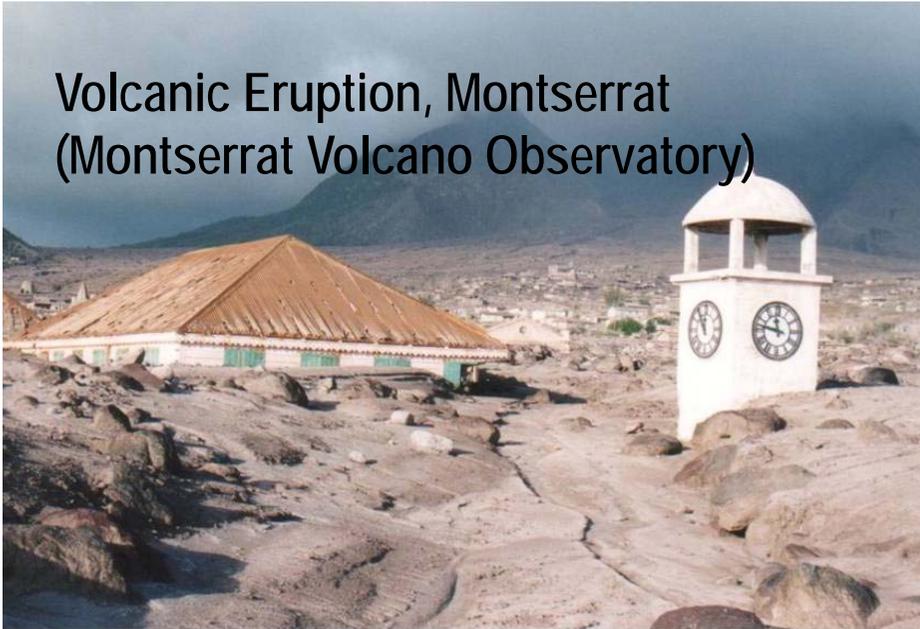
Presented by

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CDEMA
CARIBBEAN
DISASTER EMERGENCY
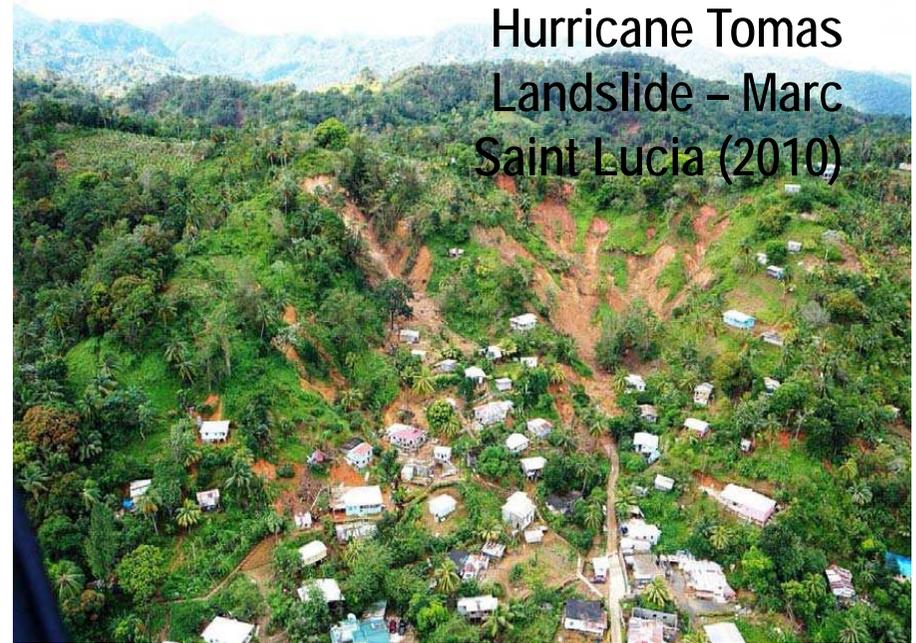MANAGEMENT AGENCY
Resilient States · Safer Lives

3rd High Level Forum on UNGGIM, Beijing, 23 October 2014

Volcanic Eruption, Montserrat
(Montserrat Volcano Observatory)

Hurricane Tomas
Landslide – Marc
Saint Lucia (2010)

Earthquake
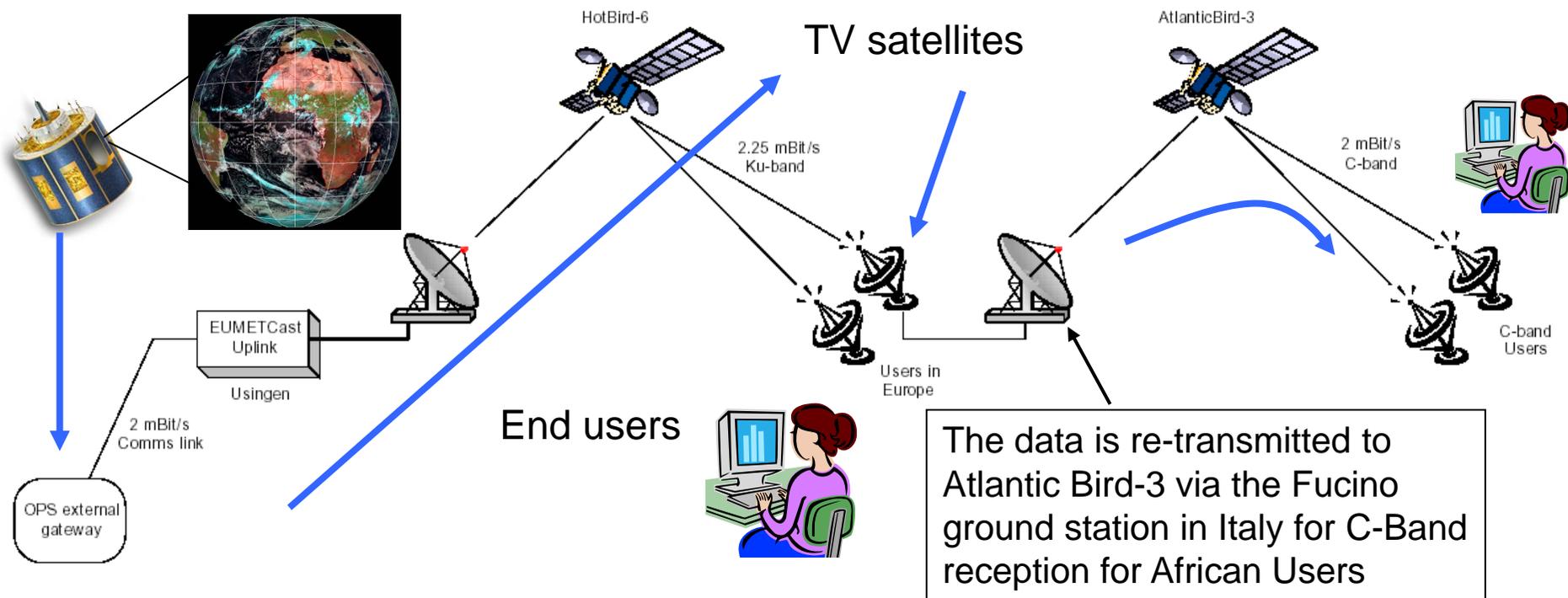Haiti, 2010

Hurricane Lenny
Gouyave, Grenada

We in the Caribbean do need access to tools and methods for undertake the following
- **Trend analysis**
- **Predictive analysis**
- **Risk modelling**
- **Scenario modelling**
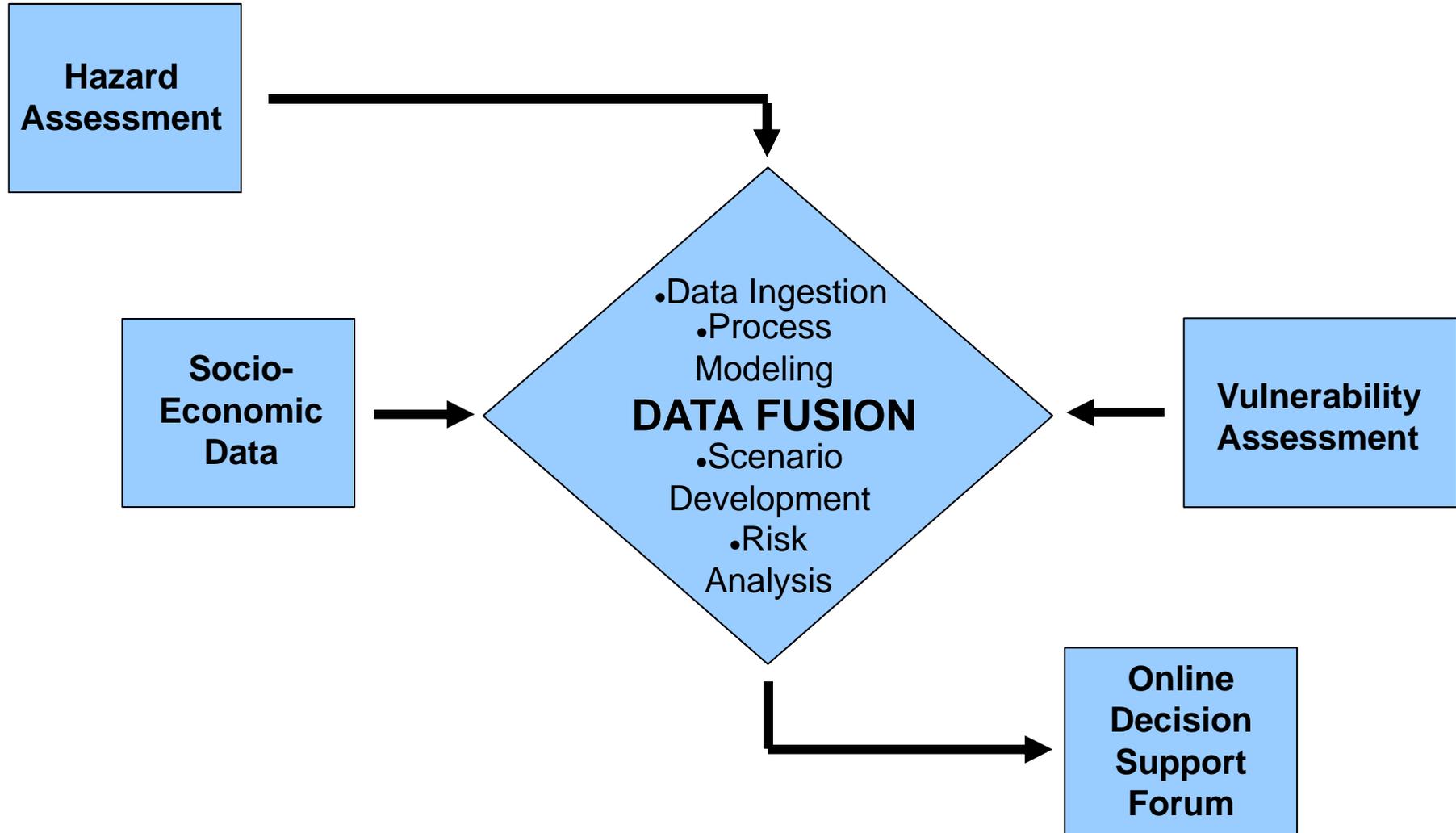- **Evacuation planning**

WE NEED REAL-TIME SATELLITE RECEPTION

After central ground processing at EUMETSAT, images in full resolution are transmitted in HRIT mode, within < 2 minutes of observation and then....

HotBird-6

TV satellites

AtlanticBird-3

2.25 mBit/s
Ku-band

2 mBit/s
C-band

EUMETCast
Uplink

Usingen

2 mBit/s
Comms link

End users

Users in
Europe

OPS external
gateway

C-band
Users

The data is re-transmitted to Atlantic Bird-3 via the Fucino ground station in Italy for C-Band reception for African Users
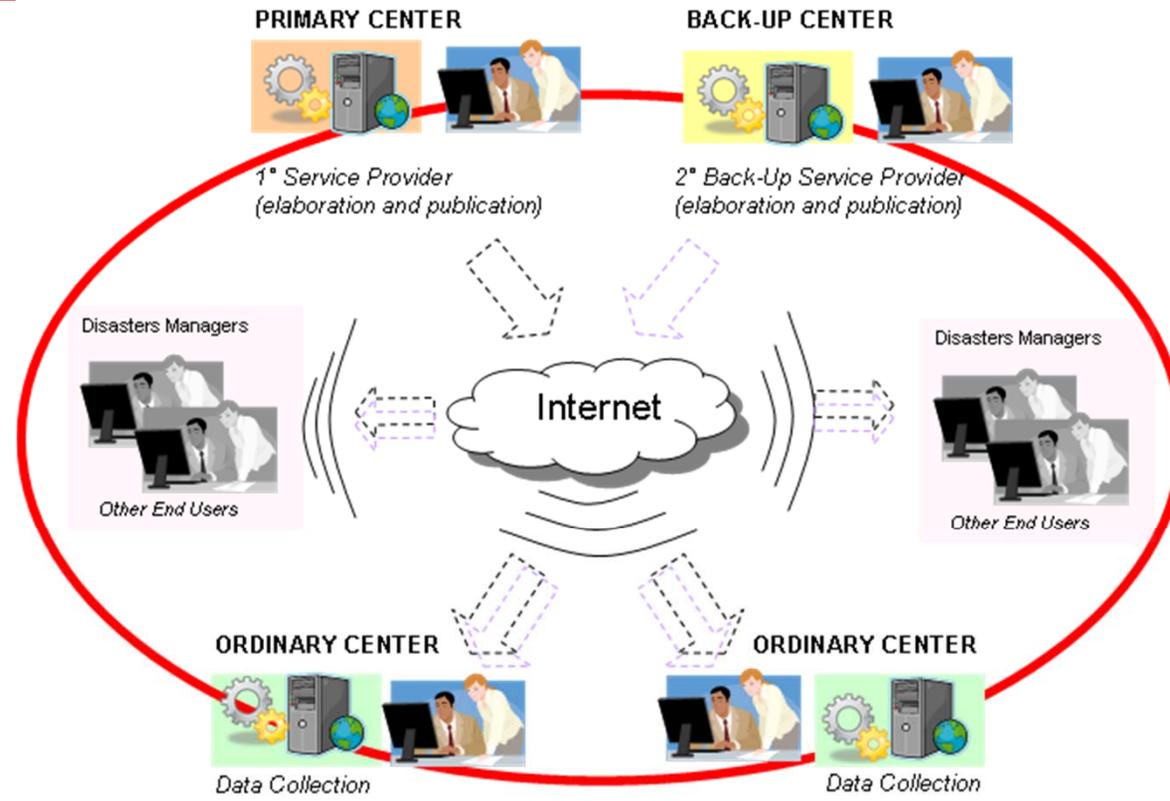
Before the (data) signal is received by an end-user, it has travelled:
from MSG in space -> Darmstadt -> Usingen -> Eurobird-6 -> Fucino -> AtlanticBird-3 -> Local Station (approximate distance is 5 * 36.000 km!!)

CONCEPTUAL FRAMEWORK FOR (DATA USE IN) EFFECTIVE HAZARD RISK MANAGEMENT (CIMH 2013)

Hazard Assessment

Socio-Economic Data

- Data Ingestion
- Process Modeling

DATA FUSION

- Scenario Development
- Risk Analysis

Vulnerability Assessment

Online Decision Support Forum

Slide courtesy of CIMH

CARIBBEAN DEWETRA PLATFORM

Slide courtesy of CIMH

HYDRO-METEOROLOGICAL RISK

Slide courtesy of CIMH

THANKYOU!

Should you have any queries, please contact:
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