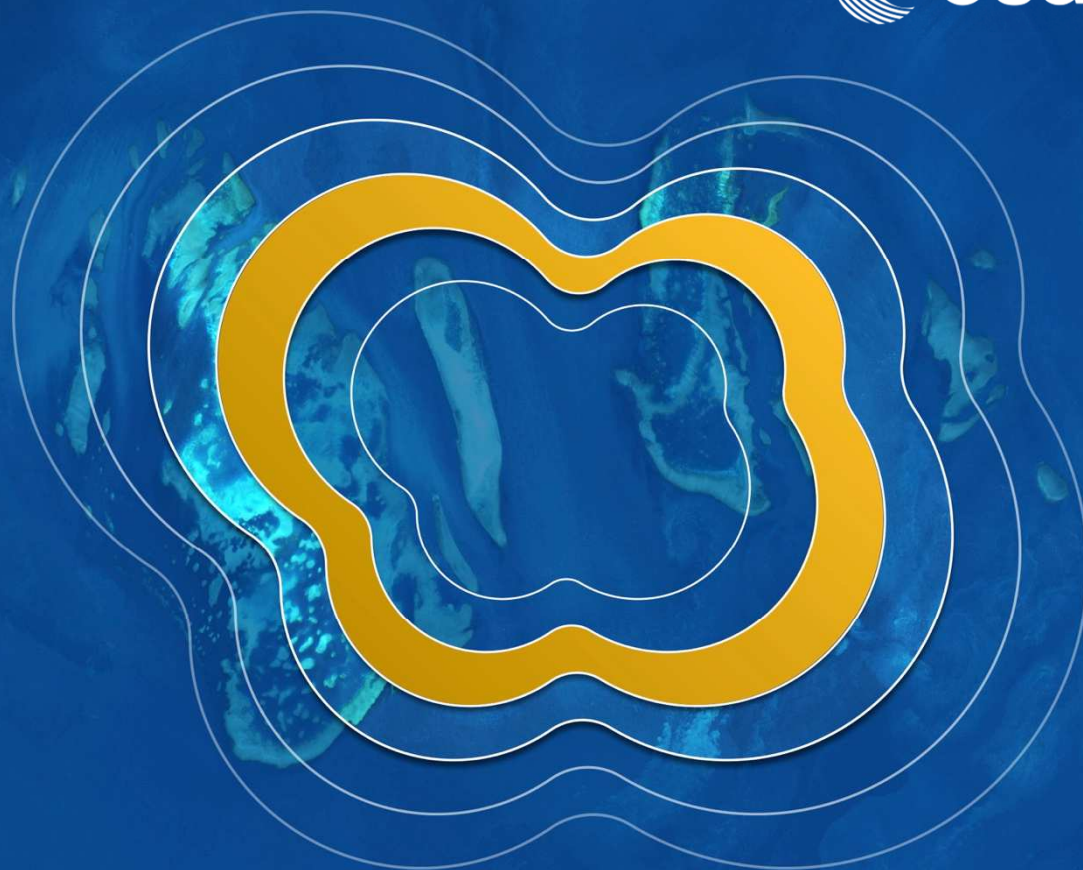




living planet symposium

MILAN
13-17 May
2019





Post hurricane Matthew Recovery Observatory in Haiti

Collet, A.¹, Mondésir, P.², De Boissezon, H.¹, Proy C.¹, Moll F.¹

1. Centre National d'Études Spatiales (CNES), Toulouse, France

2. Centre National de l'Information Géo-Spatiale (CNIGS), Port au Prince, Haïti



□ Haiti Recovery Observatory (RO)

- Genesis and RO definition
- Trigger in Haiti
- Two years of activities
- Next Steps

Mondesir P., Collet A. | LPS 2019 | 15/05/2019 | Slide 3



Committee on Earth Observation Satellites

62 Agencies operating 161 satellites !

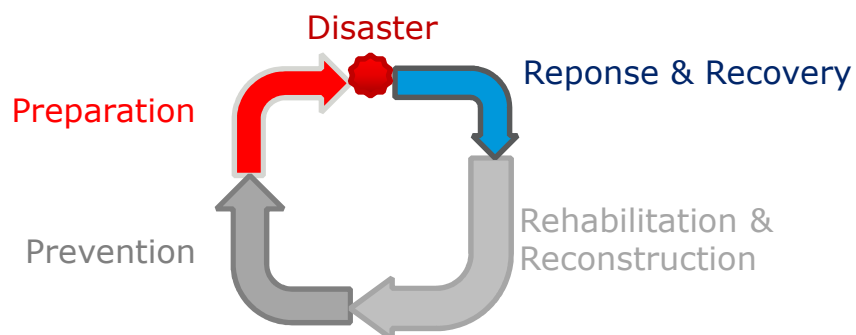
Operates on the basis of best effort



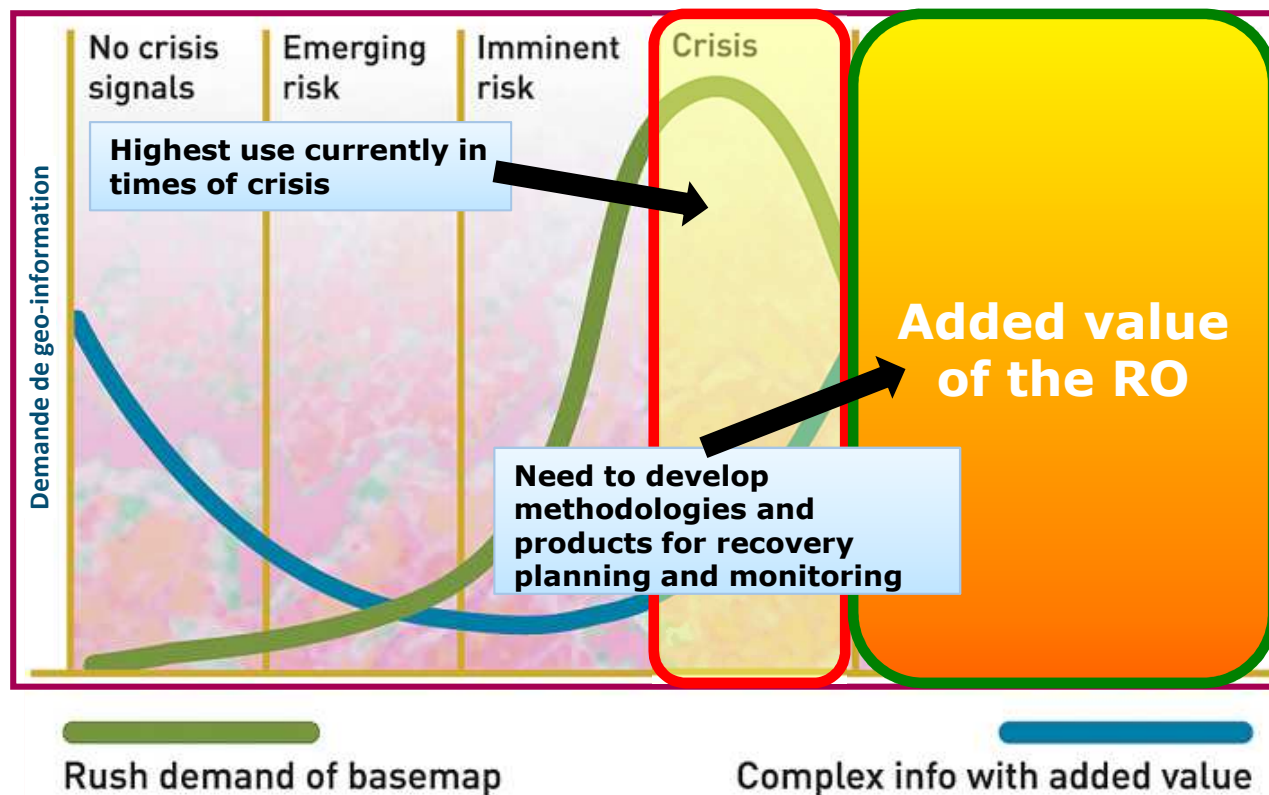
CEOS is divided into working groups, including a specialized group on disasters : **WG Disasters with more than 70 members from CEOS and research institutes specializing in applications**



- ***Access to satellite images during the "response" phases "post-crisis" "reconstruction"***
- ***Collaborative work for easy access to data, development and sharing of derived products from satellite images***
- ***Technical collaboration and co-construction with national actors and donors, through concrete achievements***



Mondesir P., Collet A. | LPS 2019 | 15/05/2019 | Slide 5



Slide adapted from UNOSAT Luca dell'Oro



Plan acquisitions of satellite images coordinated for:

- ❖ ***Detailed assessment of damage to the most affected areas (buildings, roads, agriculture, forests...)***
- ❖ ***Assessment of the impact on natural resources and the environment***
- ❖ ***Planning and follow-up of the reconstruction***
- ❖ ***Tracking changes over the next several years***

Mondesir P., Collet A. | LPS 2019 | 15/05/2019 | Slide 7



Hurricane Matthew in Haïti

Oct 4th 2016

Mondesir P., Collet A. | LPS 2019 | 15/05/2019 | Slide 8



A Reminder of Haiti's

- Triggering of the RO by CEOS Chair - December 22, 2016
- Mission #1 to Haiti - end January 2017 Definition of activities in Haiti
- Mission #2 to Haiti 29 May – 2 June 2017 1st Users Workshop (1st products, needs..)
- Mission #6 to Haiti 25 Apr – 03 Mai 2019 User Workshop (PàP, Jérémie), training

Mondesir P., Collet A. | LPS 2019 | 15/05/2019 | Slide 9



Role of the Haitian partners:

- Information on post-Mathieu reconstruction projects
- Expression of post-Mathieu geo-spatial information needs, with prioritization
- Recommendations on the content and means of dissemination of RO products (central level, local level)
- Feedback on the usefulness of satellite images and derived products, recommendations to improve the RO concept

Mondesir P., Collet A. | LPS 2019 | 15/05/2019 | Slide 10



- **Free and open collection of images and maps at multiple scales**
- **Field data for validation**
- **Strong capacity building component**

Overview

Medium scale resolution

- Change of land cover, open spaces
- Loss or growth of vegetation

Zooms

Very High Resolution

- Protected areas
- Settlement areas
- Infrastructures



Hurricane Matthew in Haiti
10/04/16

Malawi, Nepal Demonstrators



Missions to Haiti (2 to 3 per year)

1st
31 Jan – 3 Feb

1st User Workshop

29 May – 2 June

Technical Rev. Formation

5-8 Dec

10-14 Dec

2nd User Workshop

8 – 11 May

Mondesir P., Collet A. | LPS 2019 | 15/05/2019 | Slide 12

Organismes institutionnels d'Haïti:

3 initials champion : **CNIGS, CIAT, ONEV**

Other partners : Ministry (planification, interior, agriculture, Health...)



Universities : universities and instituts (UEH, URGeo, UniQ, ENS...)

CEOS Spatial Agencies : Italy (**ASI**), China (CAS), France (**CNES**), Europe (**ESA**), Japan (JAXA), USA (**NASA, NOAA, USGS**), Germany (**DLR**), Canada (CSA)...








International community : WB, BID, GFDRR, UNDP, EU, UNEP, UNOPS, WHO, UN Habitat, UNOOSA,...



NGO, associations : Potentiel 3.0, OSM,

Scientific Community : CIMA, CIRAD, CESBIO, EOST, SERTIT...

RO : Products Thematic Table (EN) April, 2019

	Produit	Utilisateur-clef	Elaboration	Données satellites
	Buildings Mapping	CIAT / Planning Ministry	CNES/SERTIT, Copernicus EMS R&R	Pléiades, WorldView-3
	Terrain Motion Change Detection	BME / URGeo	ASI, CNES/EOST	COSMO-SkyMed, Pléiades, Spot 6/7, TerraSAR-X
	Watershed / Flood	ONEV / Agriculture Ministry	ASI/CIMA Foundation	Pléiades, COSMO- SkyMed
	Agriculture	Agriculture Ministry	Copernicus EMS R&R	Sentinel-2, Spot 6/7, GeoEye-1, WorldView-2
	Macaya Park Monitoring	ANAP / ONEV / Environment Ministry	Copernicus EMS R&R, CNES/SERTIT	Spot 6/7
	Environmental Impact	ONEV / Environment Ministry	Copernicus EMS R&R	Sentinel-2, Spot 6/7, Pléiades, WorldView-2
	Land Use	All	CNIGS, CNES	Sentinel-2



CIAT

Comité Interministériel
d'Aménagement du Territoire



Ministère de
l'Environnement



Empowered lives.
Resilient nations.



MARNDR

MINISTÈRE DE L'AGRICULTURE DES RESSOURCES
NATURELLES ET DU DÉVELOPPEMENT RURAL



Ministère de
l'Environnement



URGéo

Faculté des Sciences (UEH)
Unité de Recherche en Géosciences



Empowered lives.
Resilient nations.



Ministère de
l'Environnement



Mondesir P., Collet A.

19 | Slide 15



Mondesir P., Collet A. | IPS 2019 | 15/05/2019 | Slide 16

2019 – RO Exploitation

Product validation campaigns by Haitian experts

Enrichment of the RO product database (update, new products)

Animation of the user community

Achievement Assessment Campaign (User Survey)

Implementation of the Haitian Capacity Building Plan to promote the production, use and ownership of the most useful products

Communications (colloquia, workshops, ...) and promotion of OR in international groups

2020 –RO closure

Acquisitions of images, product updates, new product generation, Haitian capacity building, methodological documentation

Preparation of the closure of RO Haiti, transfer of data and products, final evaluation of the project (products and capacity building)

Proposition of a generic and reproducible concept of RO, with WB UNDP EU

Mondésir P., Collet A. | LPS 2019 | 15/05/2019 | Slide 19

Recovery Observatory Haiti

Recherche

Use of space-based data as part of recovery phase in Haiti

Thanks !

www.recovery-observatory.org

Images and Products from space

Access to RO Haiti community, Share on themes, projects

Learn more about RO Haiti, from first fruits to today