

Understanding Risk (UR) 2018 – Mexico City
Side Event Report – 15 May, 2018
“Satellite Support for Risk management in Haiti – an innovative example”

This event was co-organised by the Haitian Civil Protection Department (DPC), the Haitian Centre national d’information géospatiale (CNIGS), and the French space agency (CNES). The event aimed to showcase the very rich experience currently underway in Haiti to improve risk management using satellite data, which ranges from use of the International Charter by Haitian organisms (and their candidacy to become Authorized Users under the Universal Access policy); to risk reduction measures tied to improved satellite based risk assessment; to the creation of the 1st CEOS Recovery Observatory, where the post hurricane Matthew recovery experience serves as a full scale demonstrator for satellite support to recovery over a multi-year period.

The session was attended by approximately forty people, from a range of backgrounds, including regional and international disaster managers, public sector and academic organizations with activities in Haiti or an interest in Haiti, thematic experts, students, and satellite operators.

9:00 Welcoming Remarks – Bobby Piard

Bobby Piard, the Director General of CNIGS, welcomed participants and expressed his sentiment that in the last few years, Haiti had made significant progress in the use of satellite to support risk management. The morning’s agenda is an excellent cross-section of that progress, highlighting the main projects where satellite data and new capacity is being used, and opening the horizon for further developments and Haitian appropriation in the years to come.

9:05 Haitian Civil Protection Department and the use of satellite data for hurricane response: The Charter experience – DPC Haiti – Yolène Surena

Yolène Surena, deputy manager of the Civil Protection Department, reviewed the role of the DPC in disaster response in Haiti, with a focus on the work that has been achieved since the response to the 2010 Earthquake. There have been a half dozen Charter activations in Haiti since that time, initially through the intercession of international partners such as the US, France and Canada, and more recently by cooperation directly with the DPC, working through the French space agency CNES. In the coming days, Haiti will make a formal request to be Authorized User under the Charter, and DPC will be able to request activations directly, and define the zones of concern. CNES will work with CNIGS to train them as Project Managers and as rapid mapping Value-Adding Producer, so that products can be generated in Haiti using Charter data. Yolène was adamant about the value of this type of information for future response to hurricanes especially in Haiti, and thanked the international community for its support. She feels that the development of Haitian capacity is a critical element to success and happy to see this figure prominently in the cooperation that is going forward.

9:20 World Bank and GFDRR support to Geomatics capacity building in Haiti: HaitiData.Org and other examples – WB/GFDRR – Roland Bradshaw

The World Bank has been active for many years in Haiti developing capacity and over the last few years has established a special relationship with CNIGS. One of the main outputs of this cooperation is the HaitiData website, a site set up with GFDRR funding but now managed directly by CNIGS. This site serves as a repository for valuable data sets that can now be openly and freely accessed by all Haitian users, and by the international community working in Haiti.

Disaster risk reduction is a critical priority to be able to achieve development goals and the work of the Bank is a solid element contributing to DRR through information systems dedicated to risk management, in open data, with DPC and CNIGS at the forefront. The World Bank is now a partner of the Recovery Observatory and looks to this project to develop new products that can be regularly generated in Haiti by CNIGS after the project.

9:35 UNDP Risk Management activities in Haiti – UNDP – Samira Philip

Samira Philip presented the engagement of the UNDP in Haiti risk reduction activities. A lot of effort went into the development of a methodology for multi-hazard risk assessment in Haiti, and that methodology was successfully applied in the Grand'Anse department in 2016. This work was a great building block for the immediate warning for Hurricane Matthew, and the relationships in place allowed for better preparation and saved lives during the Matthew early warning period. Now UNDP is collaborating with the RO to ensure that data is available to support other UNDP risk reduction activities, including the extension of the multi-hazard assessment to the rest of the Grand Sud. UNDP is a solid partner of the RO and already a user of satellite data in its many initiatives across Haiti.

9:50 The Post-Matthew Recovery Observatory (RO) in Haiti: a pilot – CNES – Helene de Boissezon

Helene de Boissezon presented an overview of the genesis of this innovative CEOS project. The RO aims to provide comprehensive information on recovery after a major disaster to be able to support recovery planning and monitoring for a multi-year period. Essentially, this involves:

- Demonstrating in a high-profile context the value of using satellite Earth Observations to support Recovery from a major disaster: - long-term (e.g. major recovery planning and monitoring, estimated to be ~3 years).
- Working with the Recovery community to define a sustainable vision for increased use of satellite Earth observations in support of Recovery.
- Establishing institutional relationships between CEOS satellite data providers and stakeholders from the international Recovery community.
- Fostering innovation around high-technology applications to support Recovery.

After initial trials in Malawi and Nepal, the full scale RO demonstration was triggered in Haiti in December 2016, after Hurricane Matthew. Now at its halfway point, the

collaborative project has successfully defined a number of products supporting long-term recovery in Haiti. Eventually, the outputs of the project will be used to help define a generic and replicable RO that could be activated a few times a year on a global basis for major events.

10:05 Early achievements of the RO project – CNIGS – Bobby Piard

Bobby presented the main successes of the RO to date. A half dozen thematic areas have been defined including land cover changes over the whole zone, agricultural changes in key areas, population displacement and urban zone damage assessment, infrastructure monitoring, forestry changes in the Macaya Park, coastal zone monitoring, watershed management, and terrain displacement. In each of these areas a joint methodology has been developed between Haitian and international experts and project team has been established to develop products to address long-term monitoring. The effort also involves a significant capacity building component, and technology transfer to ensure that Haitian organizations can develop and use their own products after the end of the RO. The RO is an innovative example of cooperation. There is no RO budget. Each partner brings their own resources to make this happen. It has been challenging, but there is strong commitment on all sides to see the project through. Satellite data is becoming an integral part of risk management practices in Haiti, and the RO is a leading element of making this new approach a reality.

10:20 Contribution of Copernicus EMS Risk and Recovery Mapping service to RO project – Michalis Voudoukas

The Copernicus Risk and Recovery program of the Emergency Management Service can be activated by any EU delegation around the world, as well as by a range of international actors. In Haiti, it was activated for the RO post Matthew through the joint work of the CNIGS and the EU delegation, and there are currently two activations, with a possible third activation being planned. The program has framework contracts with three preselected consortia to provide rapid assessments (in a few weeks) to support recovery. In this case, the assessments underway or being considered are:

EMS50 – Built area damage (situation before, immediately after, one year after)

EMS51 – Agriculture, Parc Macaya damage and coastal change.

Still pending EMSTBD – possible analysis of road infrastructure and situational awareness around ports and airports (recovery and risk reduction).

10:35 RASOR (Rapid Analysis and Spatialisation of Risk) in Haiti: an advanced tool for risk assessment and risk information integration – CIMA – Giorgio Boni

RASOR is an online web-based tool established with EC funding from 2014-2016, with test cases in six areas, one of which was in Haiti. Since that time, RASOR has also been developed and extended to the RO area for rough assessment, and over the coming two years, there are plans to extend full RASOR capacity to a half dozen areas across the country where risk presents a serious threat to populations. RASOR allows users to break risk into hazard, exposure, and vulnerability and perform event simulations to model the direct and indirect impacts of catastrophes on populations and assets.

10:50 Next steps for satellite data exploitation in Haiti: a round table discussion – moderator – Andrew Eddy

Although there was little time for the round table, a short question and answer session allowed participants to ask more about what was presented. The general consensus is that significant strides have been made in Haiti to apply satellite data to questions of risk. Yolene Surena pointed that open governmental databases are a key for success.

Several participants wondered whether projects such as RO or RASOR could and would be extended to other countries in the region. The planned extension of both of these initiatives depends on resources for the other country applications. For the RO, there is a concrete plan to have a generic service that could be deployed a few times a year after major events. For RASOR, it is a case-by-case effort where national governments collaborate with donors to identify the resource set feed the system with the right data. Once the system is in place with the right data, it is free and open and can be maintained by local partners.



From left to right : Roland Bradshaw (WB), Yolene Surena (DPC), Boby Piard (CNIGS), Helene de Boissezon (CNES), Andrew eddy (Athena global), Samira Philip (UNDP), Giorgio Boni (CIMA/ASI) – missing orator : Michalis Vousdoukas (EC/JRC)