

IAF EARTH OBSERVATION SYMPOSIUM (B1)
Interactive Presentations - IAF EARTH OBSERVATION SYMPOSIUM (IPB)

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GMES & AFRICA: MULTI-SCALE FLOOD MONITORING AND ASSESSMENT SERVICES FOR
WEST AFRICA PROJECT - A CONTRIBUTION TO THE SENDAI FRAMEWORK DISASTER RISK
REDUCTION 2030 TARGETS

Abstract

We are halfway in the implementation of the Sendai Framework for Disaster Risk Reduction (DRR) global target of 2030. With a single goal outcome of substantial reduction of disaster risks and losses in lives, livelihoods and health, the Sendai Framework strategy is to prevent new risks and reduce existing disasters. Flood events in many West African countries have increased dramatically in the past few decades, and have led to displacement of people; loss of lives and outbreak of epidemic diseases; and loss of properties running into millions of Dollars. High rainfall variability and extreme rainfall events have been the main course of these floods. Disaster Management Organizations (DMOs) in the respective countries are mandated to manage and reduce the risks associated with such disasters. However, they often lack the capacity in terms of logistics and knowledge before, during and after the flood events to optimally deliver on their mandate. Furthermore, DMOs in the target countries generally lack the capacity to use earth observation data to extract timely information (e.g. location and extent) during or immediately after flood disasters to assist in the assessment of the extent of damage, estimation of relief items and possible evacuation routes for affected victims. The GMES Africa supported project “Multi-scale Flood Monitoring Assessment Services for West Africa” (MiFMAS) was implemented by a Consortium of seven (7) institutions across five (5) West Africa countries. The main objective of the project is to enhance the efficiency of flood monitoring, assessment and management in West Africa by providing Earth Observation (EO) based services on near-real time basis to DMOs including development of their human capacity to adapt to these services. Using freely accessible data especially Sentinel datasets and Open Source software, the CSSTE led Consortium delivered Products and Services are: Up-datable Regional Flood Event Database, Flood Reporter, Flood Geospatial Data Base; Flood Forecast Geoportal; Flood Damage Assessment; and Capacity Building where technical capacities have been developed for proper applications of the tools and sustenance of the project. The paper highlights the major efforts achieved and challenges faced by these institutions that have resulted in the products and services. These products and services once domesticated at the national level will greatly contribute to the attainment of

2030 Sendai Framework targets, particularly in the region. Knowledge gained can easily be adopted in any part of the African continent.