

ASDE-ECOREGIONS POSTER PRESENTATION FOR THE ESA LIVING PLANET SYMPOSIUM, MILANO, ITALY, 13-17.05. 2019

Abstract on Challenges in Strengthening Earth Observations Local/National Operational Capacity, Coordinated By Regional Trans-national/Trans-border Networks to Deliver on International Risk Reduction Efforts

Session: D.1.02 Managing Risks: Using Earth Observations to Deliver on International Risk Reduction Efforts

Preliminary notes:

For international agreements such as the Sendai Framework for Disaster Risk Reduction to be effective, governments need to create and implement national and local disaster risk reduction strategies. These strategies require and improved understanding of risk to resilient societies, and an improved understanding of the fundamental elements underlying risk: hazard, exposure, and vulnerability. Work in relation to each of these requires enhanced access to data, and interoperable systems. Earth observation data and information, including from satellites, has a key role to play in relation to this understanding as it can be used across multiple jurisdictions, platforms, and risk models.

This session will be led by the Group on Earth Observation (GEO) and the Committee on Earth Observing Satellites (CEOS). It will discuss how and why internationally agreed policies are adopted, how satellite data can provide insight into each of the elements of the risk equation, and the role that practitioners play in helping to deliver actionable change within these frameworks.

GEO is an intergovernmental organisation working to improve the availability, access and use of Earth observations for the benefit of society. CEOS has worked for several years on risk reduction activities, and is beginning to implement multi-hazard risk management projects in several countries.

Abstract:

Title& Challenges in Strengthening Earth Observations Local/National Operational Capacity, Coordinated By Regional Trans-national/Trans-border Networks to Deliver on International Risk Reduction Efforts

Presentation type: Oral presentation

Content

TASKS:

I – A new Mechanism for decentralized prevention planning and management, through Regionally Integrated Networks of national units with high operational capacity and regular monitoring of changes, challenges and risk reduction;

II – Significant added-value services for EU citizens, nature resources and society;

III – Integrated approach on disaster risk management & disaster risk reduction, including territory/infrastructure/resources management and prevention modelling - performance-results-resilience;

IV – Real-time Earth Observation Big Data applications, based on integrated remote and in-situ data acquisition and interpretation capacity;

Details:

I.1. Core action is the elaboration of methodology for a REFERENCE LAND COVER/LAND USE Dataset, based on the principles of ISO 19144-2. It will provide stable territorial units of management allowing monitoring of the land dynamics using COPERNICUS Sentinels

II.2. The South East Europe (later for other macro regions) Big Data Cloud – involving existing IT infrastructure using a new methodology - “MULTI-DIMENSIONAL NUMBERED DATA BASE”™ (MDNDB™) providing powerful and adequate management of big data masses; Link to EU/EC SDB platforms – COPERNICUS, EMM, EFAS, EFFIS, DRDSI, national; ;

III.1. Regular monitoring of changes, trans-border challenges, critical infrastructure/assets status, fostering the application of regionally integrated COPERNICUS SDB's and in-situ services, support to EU DG's monitoring mechanism (CAP, ENV, HOME, etc.); Possible target – support of CAP monitoring with respect to handling extreme weather events/biodiversity challenges through Regional Integrated Risk & Territory Monitoring Network.

IV.1. - Demonstration of a pilot application on two trans-border sites - Bulgarian-Romania and Bulgaria-Turkey. Real-time value-added services, based on integrated remote (ESA&GAF&COPERNICUS support) and in-situ (ASDE&RESAC&RUSE and BOLYAROVO municipalities) Data and Operational Capacity; Application of an integrated approach, based on Earth Observation (EO), including surface and terrain data (DTM/DSM) provided by standardized pan-European datasets and services (LC layer on ISO 19144-2), enhanced with detailed information at local level. Selective monitoring of vulnerable sites - trends, tendencies and emerging risks. Transition from the traditional approach based on static maps to systematic tracking of the area of interest through monitoring, combined with a strengthening of the local operational capacity through transfer of knowledge and responsibilities;

IV.2. Proposal for an IMPORTANT PROJECT OF COMMON EUROPEAN INTEREST (IPCEI) ON TRANS BORDER/TRANS NATIONAL DISASTER RISK MANAGEMENT/DISASTER RISK REDUCTION); New quality of EU collaboration – Direct links between EU programs as COPERNICUS, with regional networks of MS operational capacity, providing Stakeholder & Users based prevention measures.