IDEA: EUROPEAN UNION/EUROASIA MACRO-REGIONAL MONITORING NETWORK-EUMONT

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

I. ESSENCE

I.A. GENERAL PROBLEM in Policy Implementation

• Data centrally collected by EC services and EU entrusted bodies with disputed accuracy and little added value to national/regional authorities and local users;
• Abundance of EC initiatives, projects, documents and report with little or no coordination, no operational roll-out;
• Role and responsibilities no well defined; no sharing will;
• Lack of integrated monitoring on the efficiency of EU policies implementation and on emerging challenges;

I.B. PROPOSED SOLUTION

• Decentralized, but coordinated regional networks, based on integrated national/trans-border operational capacity;
• Harmonized national data hubs for monitoring of risk and territorial policies;

I.C. Integrated regional monitoring - Key Concepts

• Focused on core EU policies
• With priority EU external borders
• Oriented to prevention and risk management
• Delivering output on EU policy performance
• Combined bottom-up and top-down approach
• Relying on new technologies and related EU initiatives (Copernicus, Galileo, HPC, Big Data, AI)

I.D. New Management Mechanism

• Based on strengthened national and trans-border operational capacity
• Coordinated at regional at EU level (synergies with other monitoring systems)

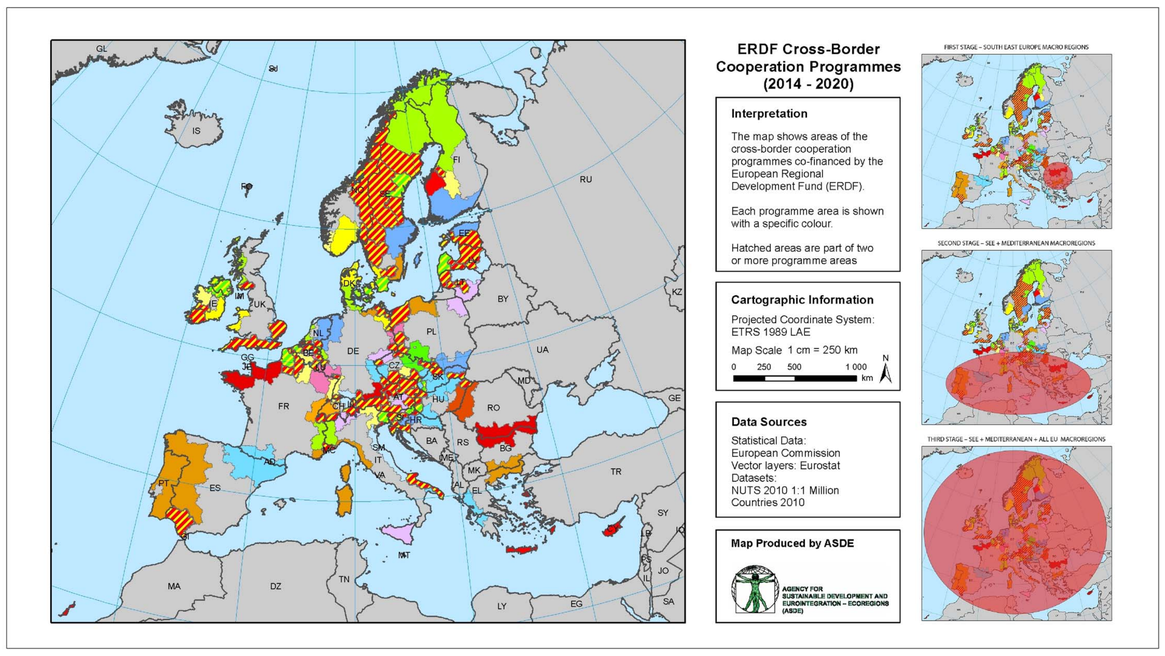
TASKS:

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

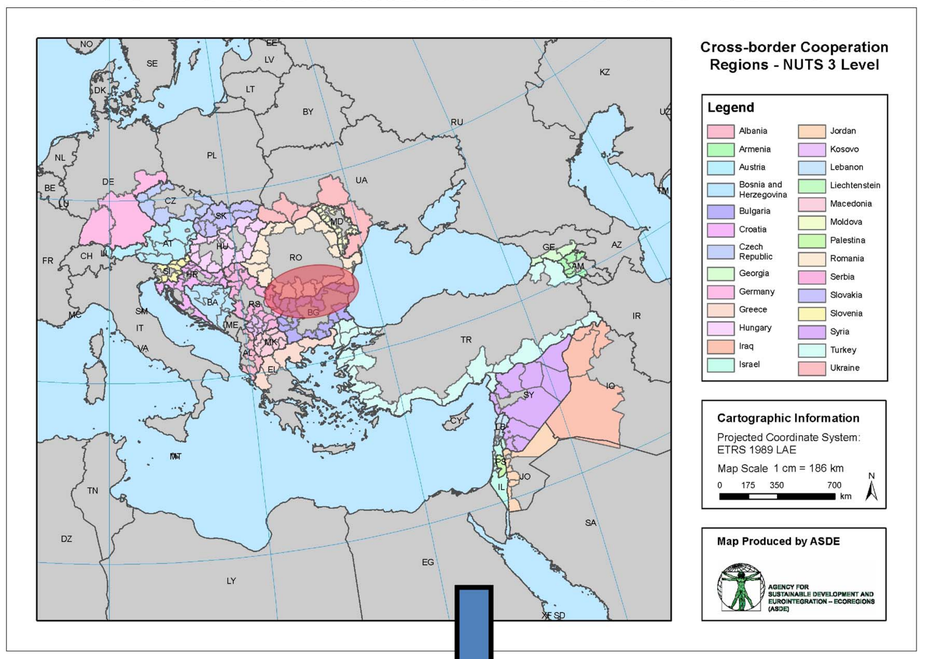
DETAILS:

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 massifs; 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 trans-border sites – starting with 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.

A VARIANT OF THE COVERAGE OF THE EUMONT NETWORKS, BASED ON THE ERDF Cross-Border Programmes

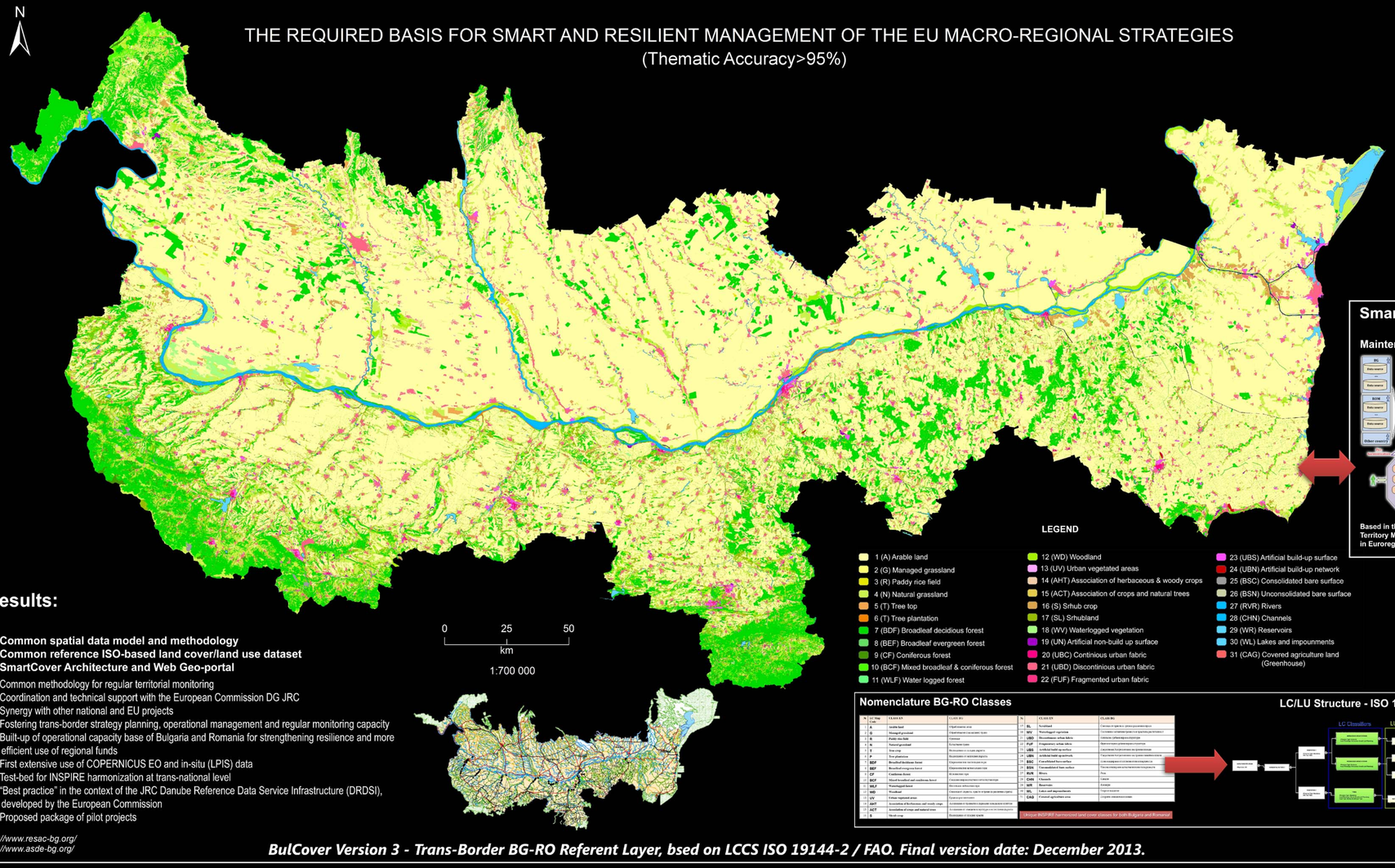


FIRST STAGE EUMONT NETWORK – SOUTH EAST EUROPE MACRO REGIONS + CENTRAL EUROPE + MIDDLE EAST



THE FIRST IN EU COMMON TERRITORIAL DATABASE, INCLUDING REFERENCE LAND COVER/LAND USE LAYER AND SMART ARCHITECTURE GEO-PORTAL – CROSS-BORDER COOPERATION BULGARIA-ROMANIA

THE REQUIRED BASIS FOR SMART AND RESILIENT MANAGEMENT OF THE EU MACRO-REGIONAL STRATEGIES
(Thematic Accuracy>95%)



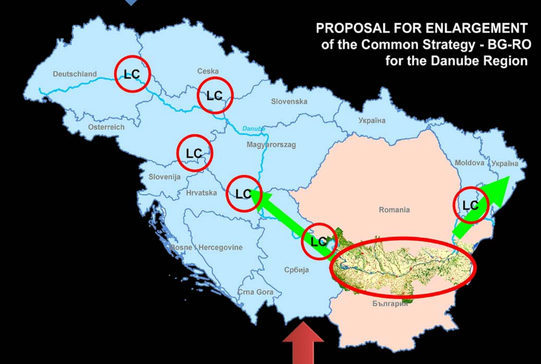
Results:

- **Common spatial data model and methodology**
- **Common reference ISO-based land cover/land use dataset**
- **SmartCover Architecture and Web Geo-portal**
- Common methodology for regular territorial monitoring
- Coordination and technical support with the European Commission DG JRC
- Synergy with other national and EU projects
- Fostering trans-border strategy planning, operational management and regular monitoring capacity
- Built-up of operational capacity base of Bulgaria and Romania for strengthening resilience and more efficient use of regional funds
- First extensive use of COPERNICUS EO and in-situ (LPIS) data
- Test-bed for INSPIRE harmonization at trans-national level
- "Best practice" in the context of the JRC Danube Reference Data Service Infrastructure (DRDSI), developed by the European Commission
- Proposed package of pilot projects

http://www.resac-bg.org/
http://www.asde-bg.org/

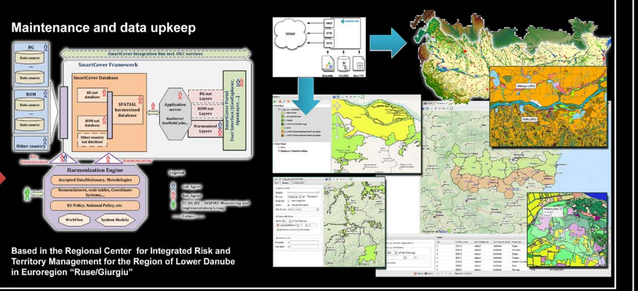
BulCover Version 3 - Trans-Border BG-RO Referent Layer, bsed on LCCS ISO 19144-2 / FAO. Final version date: December 2013.

PROPOSAL FOR ENLARGEMENT of the Common Strategy - BG-RO for the Danube Region



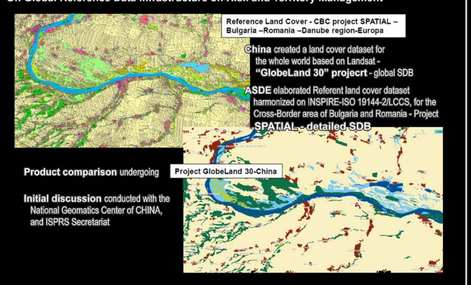
SmartCover Architecture

Maintenance and data upkeep



Based in the Regional Center for Integrated Risk and Territory Management for the Region of Lower Danube in Euroregion "Ruse/Giurgiu"

Proposed Partnership EU - China:
On Global Reference Data Infrastructure on Risk and Territory Management



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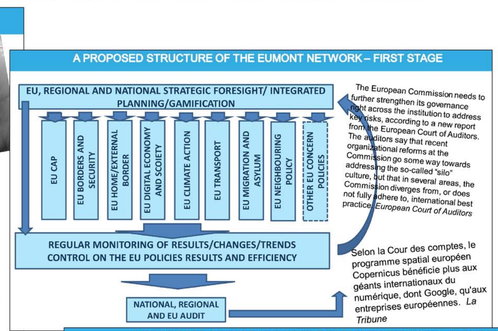
DRAFT STRUCTURE AND OPERATIONAL CAPACITY OF THE FIRST STAGE - EUMONT

A START LIST OF OPERATIONAL CAPACITY OF THE INVOLVED PARTNERS IN EUMONT

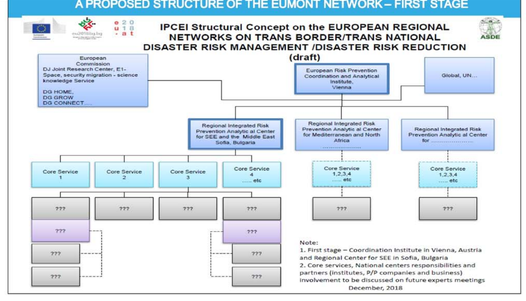
A PROPOSED STRUCTURE OF THE EUMONT NETWORK – FIRST STAGE



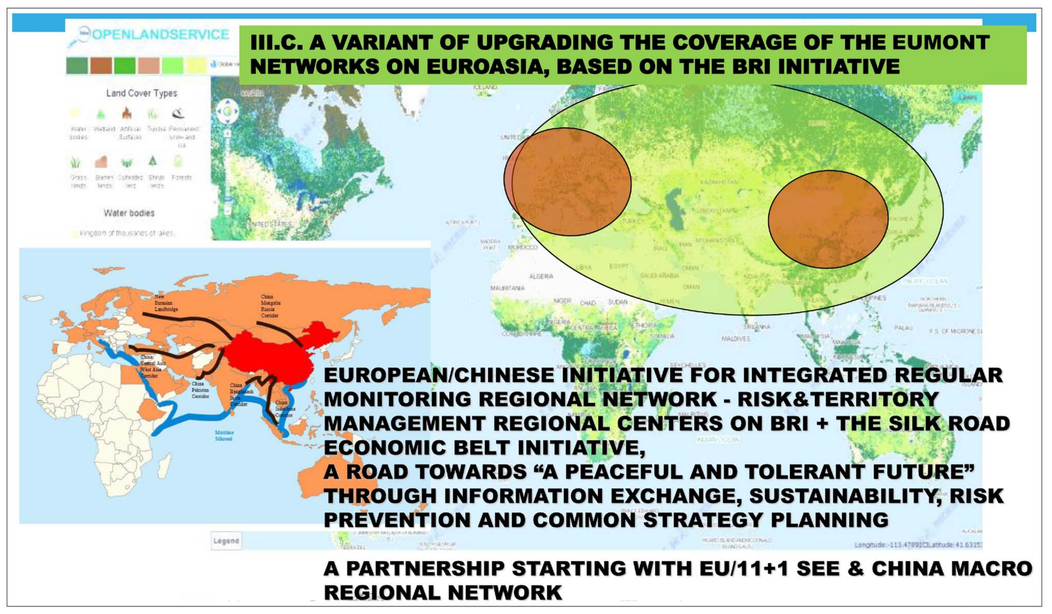
The European Commission needs to further strengthen its governance effort across the institution to address risks, according to a new report from the European Court of Auditors. The auditors say that recent organizational reforms at the Commission go some way towards addressing the so-called "silo" culture, but that in several areas, the Commission diverges from, or does not fully adhere to, international best practices. *European Court of Auditors*

Selon la Cour des comptes, le programme spatial européen Copernicus bénéficie plus aux géants internationaux du numérique, dont Google, qu'aux entreprises européennes. *La Tribune*

A PROPOSED STRUCTURE OF THE EUMONT NETWORK – FIRST STAGE



POSSIBLE NEXT STEPS



Note:
1. This poster presentation is based on the collaborative work of experts from ASDE (Bulgaria), DCNA(Austria), GAF AG (Germany) and the Aristotle University (Greece), with an advisory support from DG JRC-E1-Disaster Risk Management Unit, as well as on the results of the Inter-ministerial working group to the Council of Ministers of Bulgaria (order R 94/20.04.2015). Support was provided during expert meetings in Sofia and Vienna. New partners have been added, recently

April-December 2018, Sofia-Vienna

2. Similar proposal was presented on the World Emerging Industries Summit (WEIS 2019), Zhengzhou

Ministry of Economy
Ministry of Environment and Water
Ministry of Agriculture, Food and Forestry

Autor: Kristian MILENOV - ASDE-ECOREGIONS, Sofia, BULGARIA
and the united team of specialists of ASDE-ECOREGIONS and ReSAC with the kind support from Bulgarian and EU (Austria, Germany, Greece, France) partners in consultation with DG JRC-E1-DRMKC