

GMES Service Element transition to Fast Track Services

Emergency Response Support Service (ERSS)

Splinter Session conducted with representatives from:
RISK EOS, RESPOND and TERRAFIRMA.

- **Objectives:**
Reinforce European capacity to respond to emergency situation associated with meteorological-driven hazards, geophysical hazards, man-made disasters and humanitarian emergencies.
- **(2007 Call) Core Services (short to medium term):**
Strengthening the preparedness and response Capabilities:
 - Rapid Mapping capacity in reponse to emergencies.
 - Preparatory services to collect and map spatial and socio-economic data in areas at risk.
 - **Scope: response part of the crisis management cycle.**
 - **What: Natural and technological disasters, complex emergencies.**
 - **Where: Europe & Rest of the World**
 - **Users: EU national teams, UN actors, Red Cross/crescent, Int. NGOs**
- **Service Evolution:**
(future Calls for core services? but marginally part of the 2007 Call)
 - Better document risk vulnerabilities through mapping of sensitive areas with risk level nomenclature (= Risk Mapping).
 - Design and streamline Early Warning and Preparedness systems.
- **Downstream Services**
(not subject of the 2007 Call BUT limited number of downstream services will be supported)

- **Reference Maps (differed time)**
 - Geographic Maps
 - Historical Assets Maps
 - Historical situation Maps
 - Historical Hazard Maps
 - Historical Damage Scenario Maps
 - Events reports
- **Assessment Maps (crisis time)**
 - Actual Damage Assessment Map / Event rapid map (incl NRT)
 - Actual Assets Map
 - Actual Situation Map
 - Actual Hazard Map
 - Actual Damage Scenario Map
 - Situation Maps

GSE Portfolio

Flood Risk Analysis

Flash Flood Early Warning

Rapid Mapping

Regional Rapid Mapping

Regional Fire Monitoring

Asset Mapping

Burn Scars Mapping

Basic maps

Crisis & damage mapping

Situation maps

Thematic maps: Health

Thematic maps: Environmental Impact Assessment

Thematic maps: Prev/Reconstr/Planning

Refugee/IDP support maps

H1: Basic Terrain Motion Product

H2: Interpreted Terrain Motion Product for Urban Stability, Floodplain Assessment and Crustal Deformation

H3: Modelled Terrain Motion Product

LSI: Landslide Inventory Product

LSM: Landslide Monitoring Product

POLARVIEW: River Ice Monitoring

- Overall there is a consensus that the GSE service portfolios of RISK EOS, RESPOND and TERRAFIRMA do correspond to the requirements as defined in the Implementation Group draft Report (and its annex c). This, mainly in the form of Core services.
- There was limited discussion on Core versus Downstream (although all consortia consider that Downstream activities are also needed).
- Service continuity is the single most crucial issue for the user bases of the existing GSEs; user expectations have been raised with users from RISK EOS, RESPOND and TERRAFIRMA actions.

- The schedules of the FP7 Call and the GSE programme must be taken into account to ensure that service provider do not fail to satisfy users by an lack of adequate financial support to ensure service delivery
- In particular for the damage assessment services provided by RISK EOS & RESPOND there is today higher user expectation (CPAs, UN, etc) than ability to deliver although the capacity is in place (funding): risk of hiatus

- Timeliness of service delivery is a key aspect of the GMES service deliveries; this is largely dependent on the timely delivery of multi-sensor datasets (as part of the data access element of GMES Space Component – GSC).
- the Splinter group have converged to assemble a unique table comprising all relevant GSE services and mapping them against the services as they are defined in the IG Report draft (and Annex c on rapid mapping services) ; this table is provided here after and commented in the detailed comments section.

GMES Emergency services (ERSS) portfolio as described in the Implementation Group Draft report and Annex (Rapid Mapping Services)							
Reference Mapping Service (differed time)				Assessment Mapping Service (crisis time)			
Geographic maps	Historical Assets map	pre-crisis situation maps & event reports	Historical Hazard map & Historical Damage scenario	Actual Asset maps & Actual situation maps	Actual Damage assessment maps/Event rapid maps	Actual hazard maps/Actual Damage scenario maps (using modelling)	Situation maps Security Maps, operations co-ordination – who/where/what - Refugee/IDP camps)



RISK EOS

RESPOND

TERRAFIRMA

GSE Portfolio		GMES Emergency services (ERSS) portfolio as described in the Implementation Group Draft report and Annex (Rapid Mapping Services)							
		Reference Mapping Service (differed time)				Assessment Mapping Service (crisis time)			
		Geographic maps	Historical Assets map	pre-crisis situation maps & event reports	Historical Hazard map & Historical Damage scenario	Actual Asset maps & Actual situation maps	Actual Damage assessment maps/Event rapid maps	Actual hazard maps/Actual Damage scenario maps (using modelling)	Situation maps Security Maps, operations co-ordination - who/where/what - Refugee/IDP camps)
RISKEOS	Flood Risk Analysis				X		(x)		
	Flash Flood Early Warning								
	Rapid Mapping					(x)	X		
	Regional Rapid Mapping					(x)	X		
	Regional Fire Monitoring					(x)	X		
	Asset Mapping		X						
	Burn Scars Mapping				X (yearly)		X (daily)		
RESPOND	Basic maps	X	(x)			X		(x) Comm.	
	Crisis & damage mapping					(x)	X		
	Situation maps			(x)		(x)		X	
	Thematic maps: Health				X				
	Thematic maps: Environmental Impact Assessment				X			(x)	
	Thematic maps: Prev/Reconstr/Planning				X			(x)	
	Refugee/IDP support maps			X				(x)	
TERRAFIRMA	H1: Basic Terrain Motion Product				X				
	H2: Interpreted Terrain Motion Product for Urban Stability, Floodplain Assessment and Crustal Deformation				X				
	H3: Modelled Terrain Motion Product				X				
	LSI: Landslide Inventory Product				X				
	LSM: Landslide Monitoring Product				X		X		
	POLARVIEW: River Ice Monitoring					(x)	X		

The Splinter group have identified issues associated with the Implementation Group (IG) draft Report; the issues are as follows:

- considerations of Downstream services (IG Report page 35) are only vague and the expected **balance between Core and Downstream activities** is unclear
- The IG Report describe 3 levels of services (data, informationm thematic maps) with assumptions on the users capacity to perform Value Adding: this is confusing and the **distinction between provider and user** is unclear; this is an issue as providers should have clear commitments towards the recipients of their services (users)
- The IG Report is assuming that the reference mapping services start at the scale of 1:25k (large scale); Actually both RISK EOS and RESPOND are providing reference mapping services (respectively asset mapping and background mapping plus situation mapping - all using SPOT-5 or US based VHRO) that start at **the scale of 1:10k** not just 1:25k.
- The IG Report Annex c (rapid mapping services) is stating that the **delivery time for reference mapping services is 6 hours and 24 hours for damage assessment services**; this is an excessive generalization of the INSCRIT Workshop recommendations from a service to a service family. These timeliness constraints were defined for specific disaster response services not for the complete families. The background mapping (one of the reference mapping services) and the actual damage assessment service (one of the assessment services) are the two services that must satisfy these 6 hours and 24 hours requirements (respectively). In addition there are relevant damage assessment services not delivered within 24 hours (e.g. landslide monitoring services to Italian Civil Protection).

▪ **Reference Mapping Services**

- derived from pre-existent data or simulations
- Cartographic information
- Information about population, economic assets, infrastructures & networks
- Overview scale (1:100,000) or tactical scale (1:25,000)
- Delivered within 6 hours

▪ **Assessment Mapping Services**

- From in-situ or EO observations acquired during the crisis or through numerical modelling
- Event timing, location, extent, level of damage, level of hazard
- Overview scale (1:50,000 to 100,000), detailed scales (1:10,000 to 1:25,000)
- Delivered within 24 hours, with daily updates

Detailed comments:

- PolarView also have a service relevant to GMES Emergency services : river and ice monitoring (see table)
- TERRAFIRMA suggest geo-hazard risk deformation measurements to the insurance sector is a relevant downstream service candidate
- TERRAFIRMA have adjusted the description of the service portfolio to clarify that services include Urban Stability, Crustal Deformations and Floodplain Assessment
- For RISK EOS, burnt scar mapping has two component one is a reference service (yearly mapping) and one is a actual damage assessment of burnt scar (daily and over the 5 preceding days)
- RISK EOS rapid mapping and RESPOND crisis/damage mapping should be meeting both the actual asset/actual situation maps and the actual damage assessment maps (both from the assesment mapping services family)
- Flash flood early warning services has an indirect contribution to GMES Emergency services as an early warning component; this is nation specific and is a relevant downstream candidate service
- RISK EOS consider that the Flood risk mapping service contributes to both the hazard mapping (within reference mapping services) and actual hazard maps/actual scenario maps (within the assessment mapping services family); the latter component - although not frequent - corresponds to assessment and simulation utilizing modelling.

Questions / Comments ?