

How will Remote Sensing and ICT Impact EU Policy Making

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<http://ipsc.jrc.ec.europa.eu/>


<http://www.jrc.ec.europa.eu/>

- ❑ Range of EU instruments and tools to prevent, prepare and respond to “crises” inside and outside the EU:
 - ❑ Policy Instruments
 - ❑ Crisis Rooms
 - ❑ Analyses and Systems





FACTSHEET HAITI EARTHQUAKE – EU RESPONSE to date (27/01/2010)



Source: Emergency Operation in Haiti report of the Action Group, 25/01/10, page 8. GAO: Google Earth

L. LITER AVAILABLE FIGURES¹

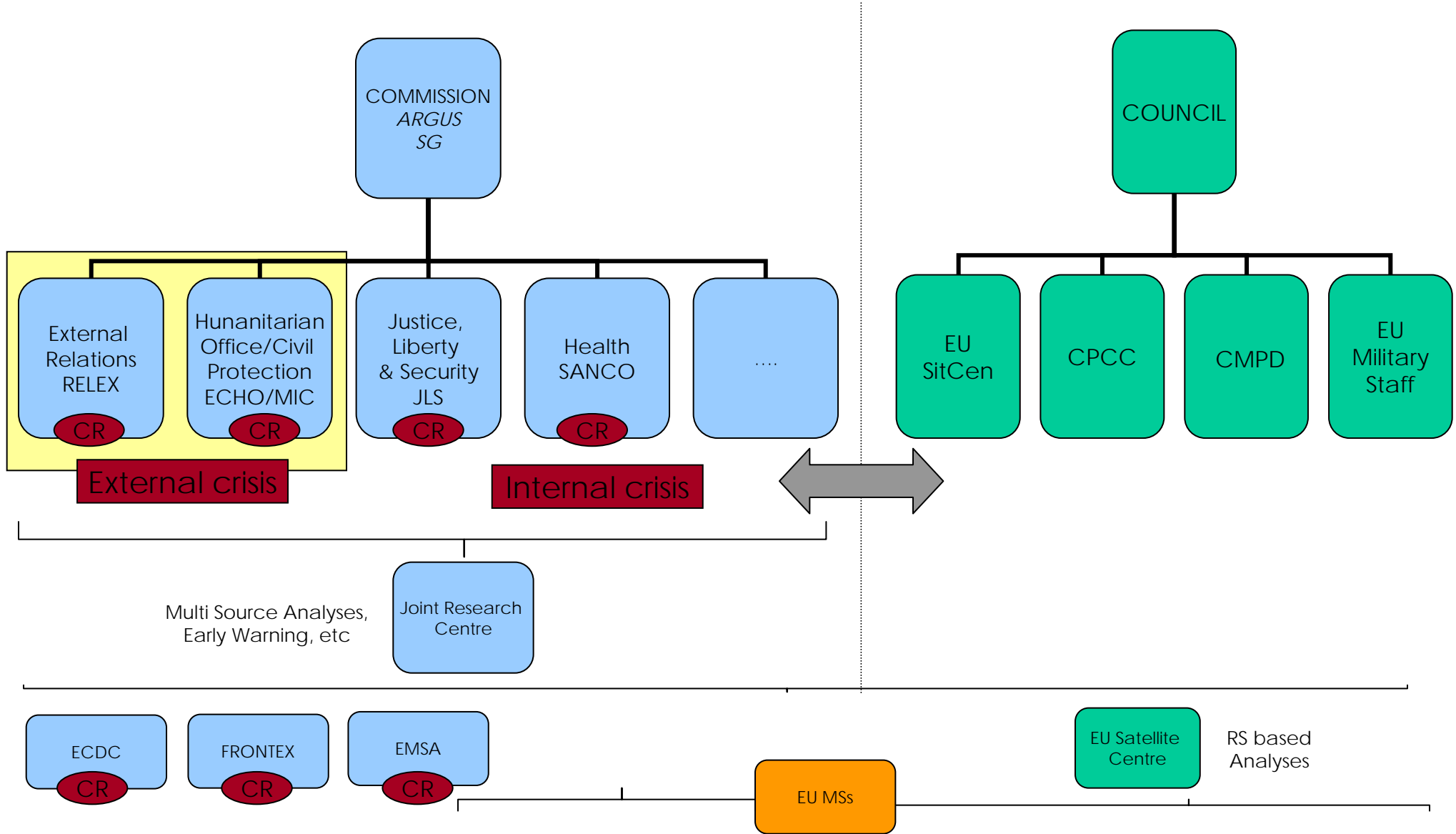
Item	Value
Books received and/or sent	~ 100,000 ²
Specialised information received by all member states	100 ³
People with immediate need for shelter	~ 1,000,000 ⁴
Total number of people affected in some way	~ 2,000,000 ⁴
EU RESPONSE⁵	
Emergency groups on the ground/mission/teams ⁶	2,100 ⁷
Emergency allocated for	100 ⁸
Emergency allocated for humanitarian assistance	200 ⁸
Emergency teams	10
Emergency personnel sent	10
Emergency aid	10
Allocated	100 ⁸

¹ Source: EC/EEC, various international media, Haitian Government.
² An additional figure of 50,000 books is provided by the Ministry of Communication.
³ Source: EC.
⁴ Source: UN.
⁵ Source: EC/EEC, Consular Unit, Member States, Consular Authorities.
⁶ Excludes all consular staff at the Member States Embassies. This number also includes national staff with dual nationalities.
 27 January 2010 (1.0) GPEP v. 1.1
 Updated by DG-RES Crisis Room

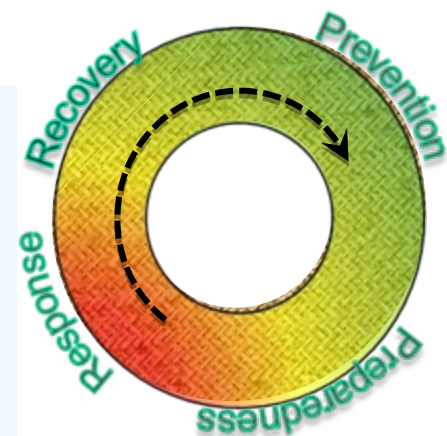


Crisis Management

EU Institutions' Set-Up Today



- Detection, Identification and monitoring of risks
- Early warning signals
- Common threat assessment and Situation awareness
- Post-crisis Damage assessment



Policy Area: Kimberley Process Certification Scheme (Council Reg. 2368/2002)

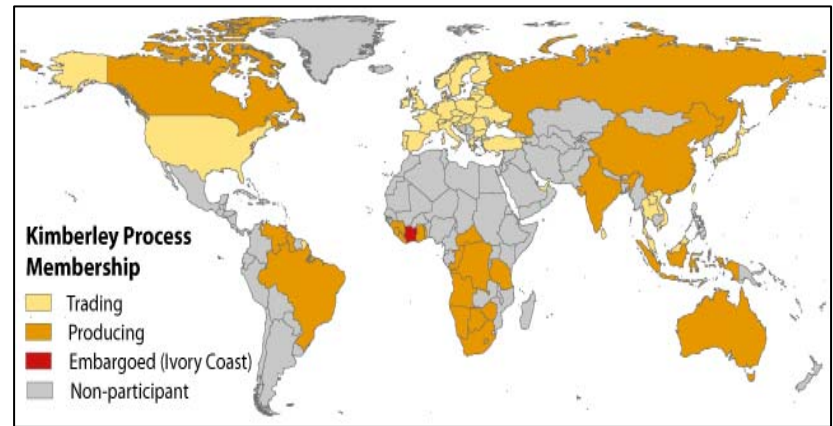
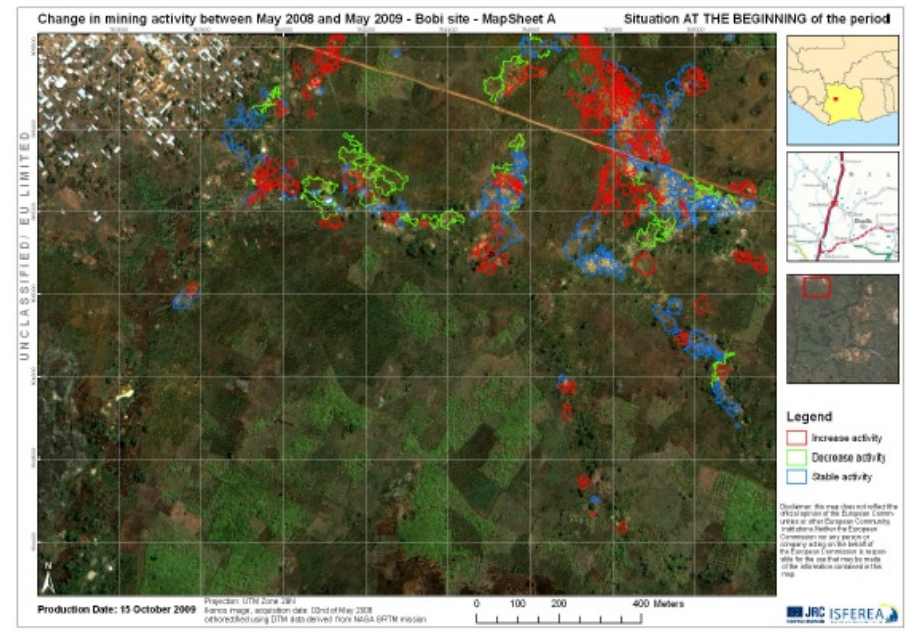
Users: EC, KP Monitoring and Statistics Working Groups

JRC/Impact: *Remote Sensing Diamond mine activity 'identification and monitoring' techniques*

Statistical Analysis based Early Warning Method

Monitoring Mining Activity
Early warning
Verification

	from	to	T	Q P O D T	V P O D T	P R E V M E A N Q	P R E V M E A N V	P R I C E	P R E V P R I C E	P V A L U E 0	A L A R M 1 0 0	A L A R M 2 0 0
1	AU	AE	2008	120014	14745018	5019	442426	122.9	88.1	0.0029	*	*
15	GN	AM	2008	1276	304699	66	26500	238.9	400.7	0.0059	*	*
16	GN	IL	2008	370945	18466763	94522	3089325	49.8	32.7	0.0076	*	*
17	GN	IN	2008	902	88355	56	16833	98.0	300.6	0.0022	*	*
18	GN	KR	2008	2569	78745	179	147782	30.7	827.8	0.0034	*	*
19	GN	LB	2008	1949948	5463780	130655	660735	2.8	5.1	0.0100	*	*
20	GN	UA	2008	1088	163045	100	22266	149.9	223.0	0.0057	*	*
37	ZA	US	2008	510677	64498275	12444	6.626E7	126.3	5324.8	0.0001	*	*



JRC introduced "Remote Sensing and Statistical Analysis" to the Kimberley Process

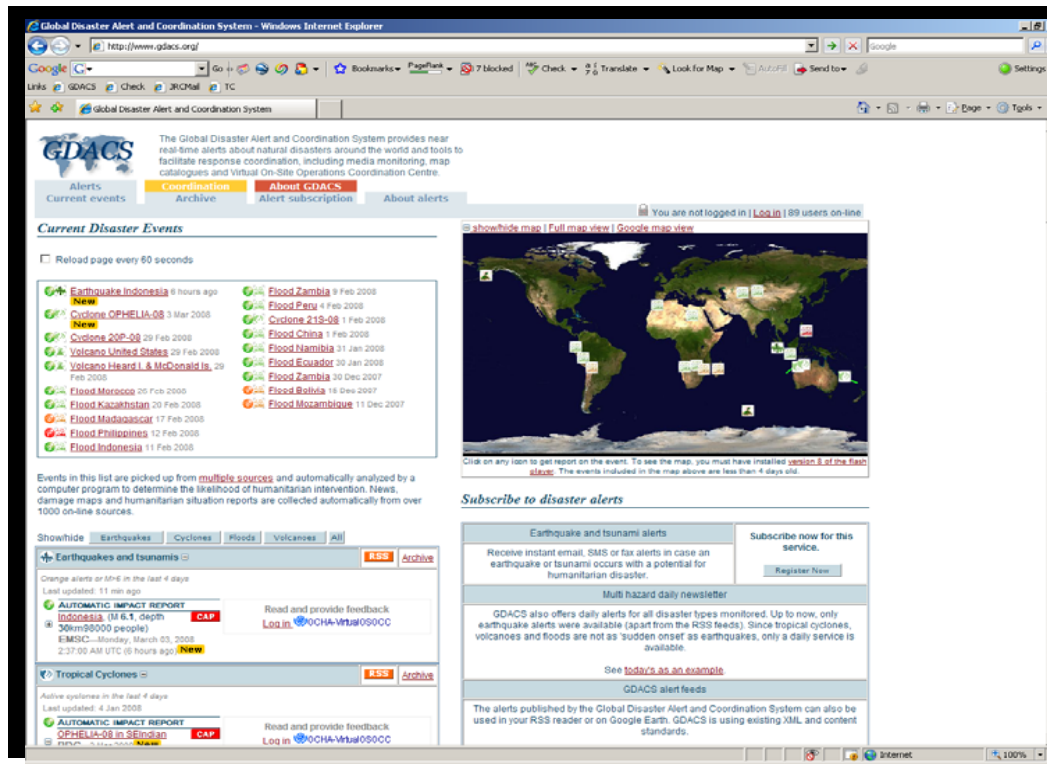
Policy Area: Humanitarian Aid Instrument (Council Reg. 1257/96), EU Communications on disaster prevention/disaster risk reduction COM (2009) 82 and 84.

Partners: EC, UN (OCHA: Secretariat), EU MSs

Users: EC, UN, International humanitarian and emergency response community

JRC : Global Disaster Alert and Coordination System (GDACS); >10,000 GDACS users

Impact: *Declared by donor community as front line reliable source of alerts for humanitarian natural disasters*

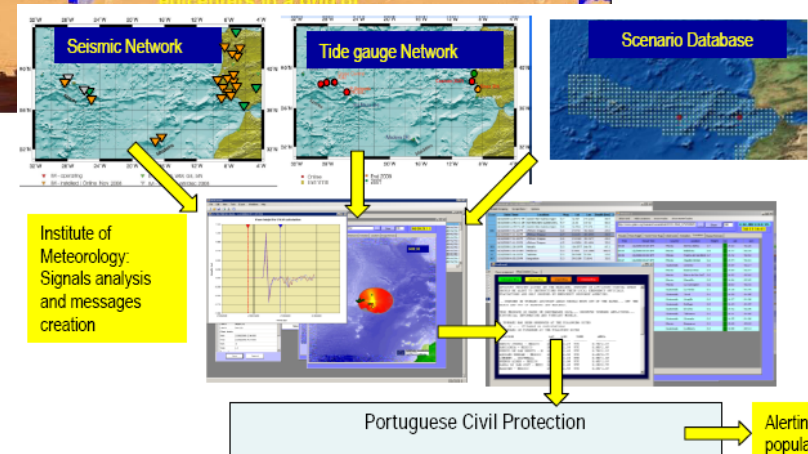
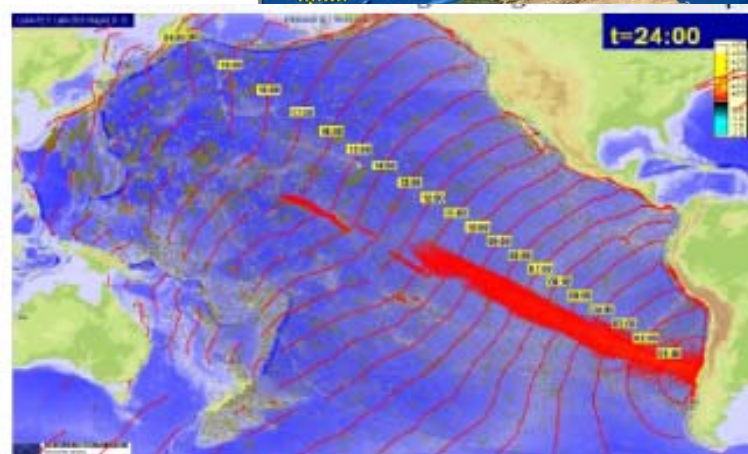
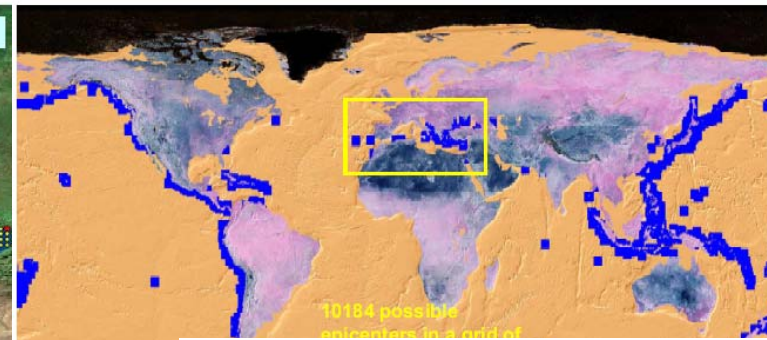
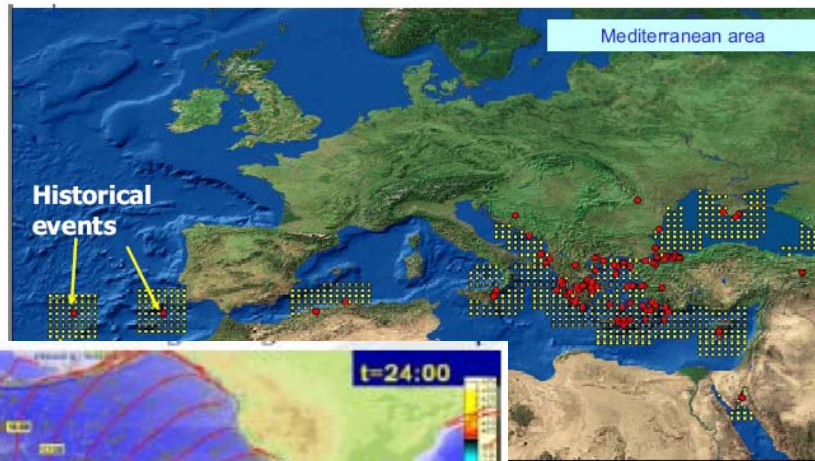


The screenshot shows the GDACS website interface. At the top, there's a navigation bar with 'Alerts', 'Coordination', and 'About GDACS'. Below that, a 'Current Disaster Events' section lists various disasters with their dates and locations, such as 'Earthquake Indonesia' and 'Flood Zambia'. A world map is displayed with markers indicating disaster locations. There are also sections for 'Subscribe to disaster alerts' and 'Earthquakes and tsunamis'.



<http://www.gdacs.org>

- ❑ Wave propagation model for real-time evaluation of potential tsunami risks.
- ❑ Model is integrated in **Global Disaster Alerts and Coordination System (GDACS)**
- ❑ *Impact: Assisting Portugal to build tsunami EWS - contributing to North East Atlantic tsunami warning node, under coordination of UNESCO/IOC*



Public Health Threats

Early Identification of Health Risks

Policy: EU Action plan on health emergency preparedness (Council Decision 2119/98/EC)

Users: SANCO, ECDC, WHO, GPHIN, Public Health Authorities in EU MSs, Global Health Security Action Group

JRC : Health Intelligence System for early detection and warning

Impact: Independent information source for SANCO and ECDC
European System used internationally



- ✓ Health threats/crises related news
 - ✓ e.g. pandemics, infectious diseases
- ✓ Early warning and alerting
- ✓ 50 languages

<http://medusa.jrc.it>

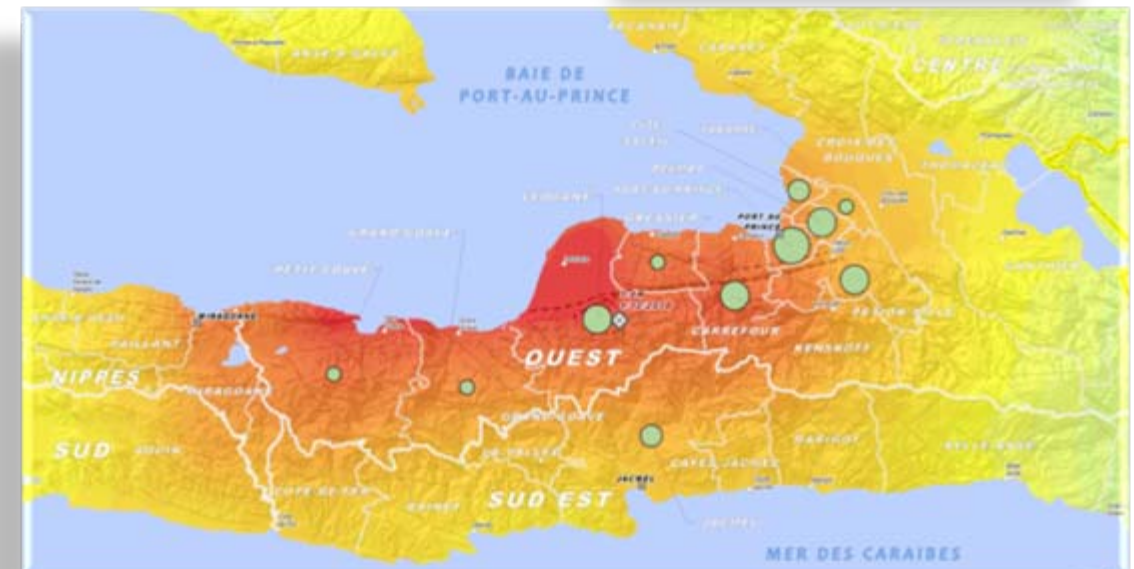
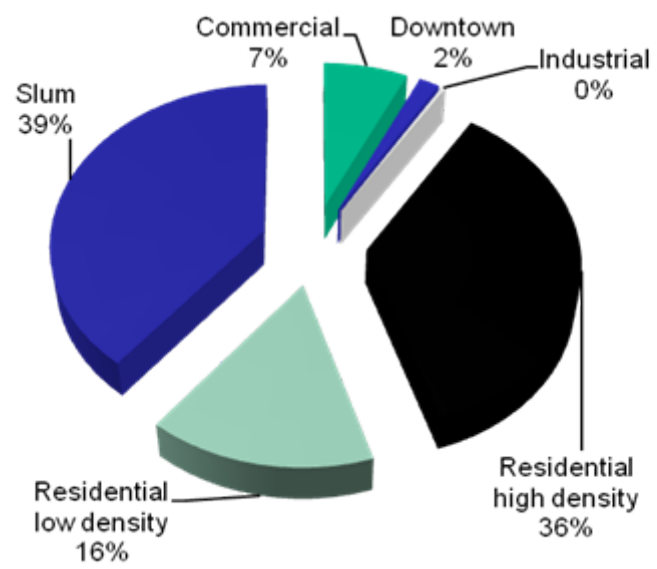
Policy Area: EC/UN/World Bank Declaration on Post Crisis Needs Assessment (PCNA) signed in 2008

Users: Donor Conference, Government of Impacted country.

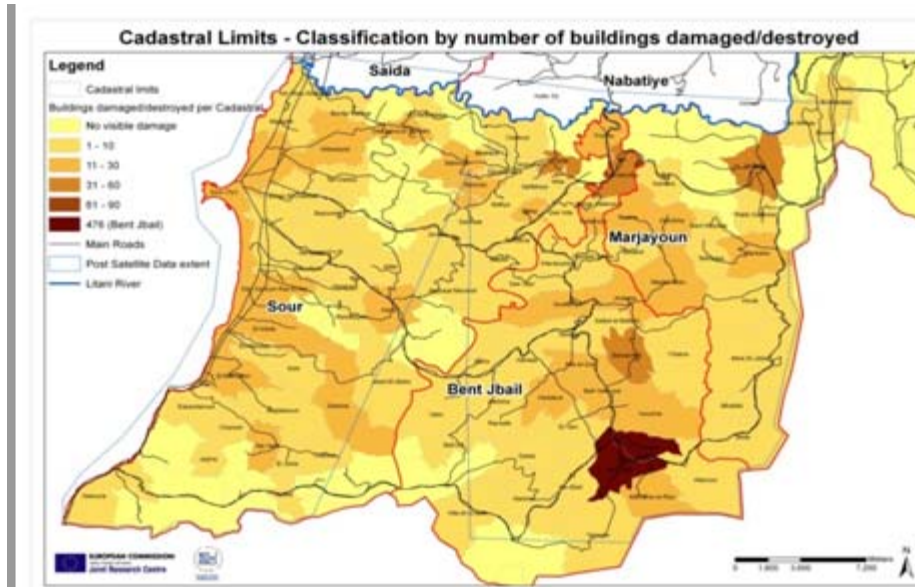
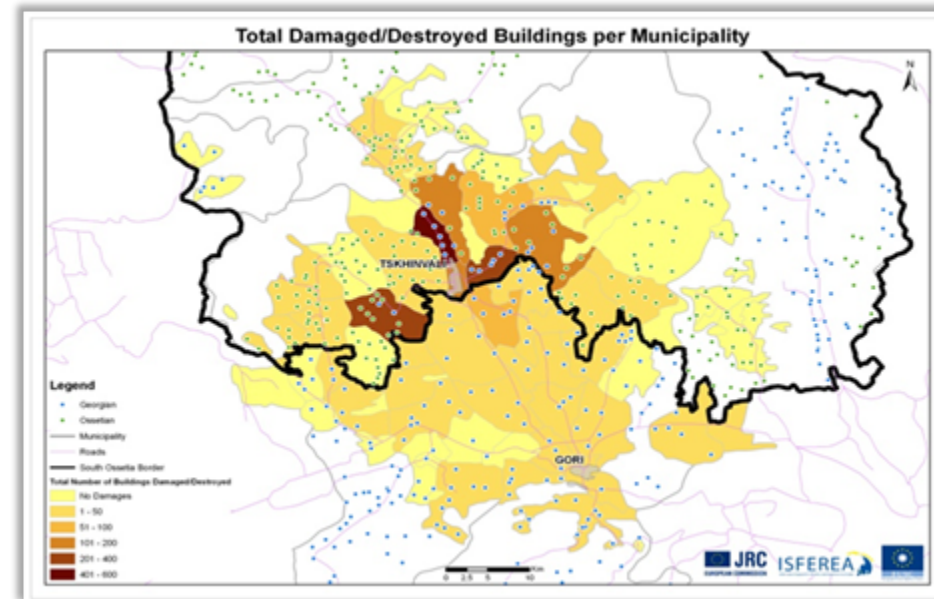
JRC : Remote sensing based damage assessment technique for the infra-structure sector, field sampling and validation methods

Impact: *Introduction of remote sensing in the PCNA process*

Assessed Commune	Damaged Buildings
PORT-AU-PRINCE	27,703
CARREFOUR	9,414
LEOGANE	8,891
DELMAS	8,599
PETION-VILLE	6,204
JACMEL	2,099
CITE SOLEIL	1,993
TABARRE	1,170
GRESSIER	913
PETIT-GOAVE	408
GRAND-GOAVE	270
Total	67,664



- ❑ Security Dimension of Global Monitoring for Environment and Security (GMES)
- ❑ Joint EU assessments in the event of major conflicts e.g. Lebanon (2006), Georgia (2008)
- ❑ Training and Workshops



- **Science and Technology** play an increasingly important role in EU Crisis Management
- **JRC** is providing strategic scientific support to EU Crisis Management Policies and Strategies:
 - Full crisis management cycle: prevention, preparedness, response and recovery for actions inside and outside the EU
 - Building technical cooperation with EU MSs, as well as International and regional organisations such as the UN, World Bank and the African Union
- **Balance** between advances in modern technologies, challenges in crisis management, and information mining and analysis capacity