



# Institute for the Protection and Security of the Citizen



## IPSC Mission

“IPSC provides research-based, systems-oriented support to EU policies so as to protect the citizen against economic and technological risk.

The application areas include:

- non-proliferation and nuclear safeguards
- anti-fraud, compliance monitoring and cybersecurity
- risk management and mitigation

The Institute maintains and develops its expertise and networks in information, communication, space and engineering technologies in support of its mission.

The strong cross-fertilization between its nuclear and non-nuclear activities strengthens the expertise it can bring to the benefit of customer in both domains.”





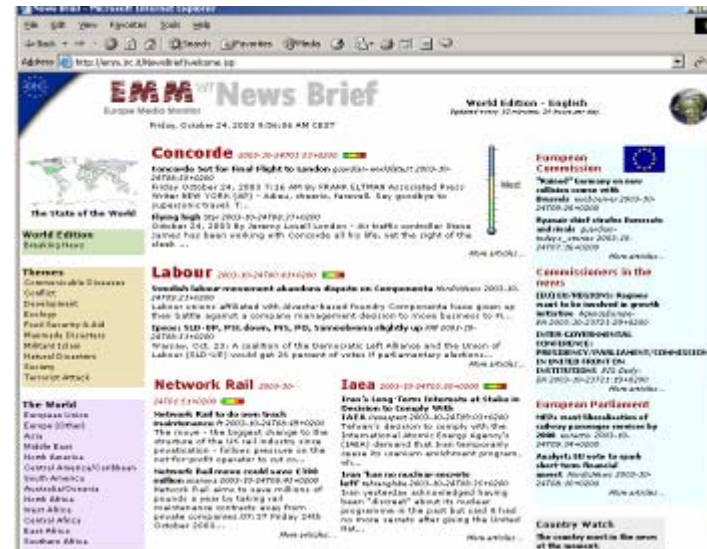
# Institute for the Protection and Security of the Citizen



**Open source intelligence:** tools for automatic, multi-lingual, intelligence gathering and analysis

**EMM: European Media Monitor**  
Automatic newsletter updated live 24/7

<http://emm.jrc.it>



Multilingual  
 Top stories  
 Breaking news  
 Global themes  
 Derives statistical indicators

**Image intelligence:** post-disaster damage assessment, humanitarian impact, refugee monitoring, illicit drug crop monitoring, global crisis atlas

**Online, interactive information/decision support infra-structures:**

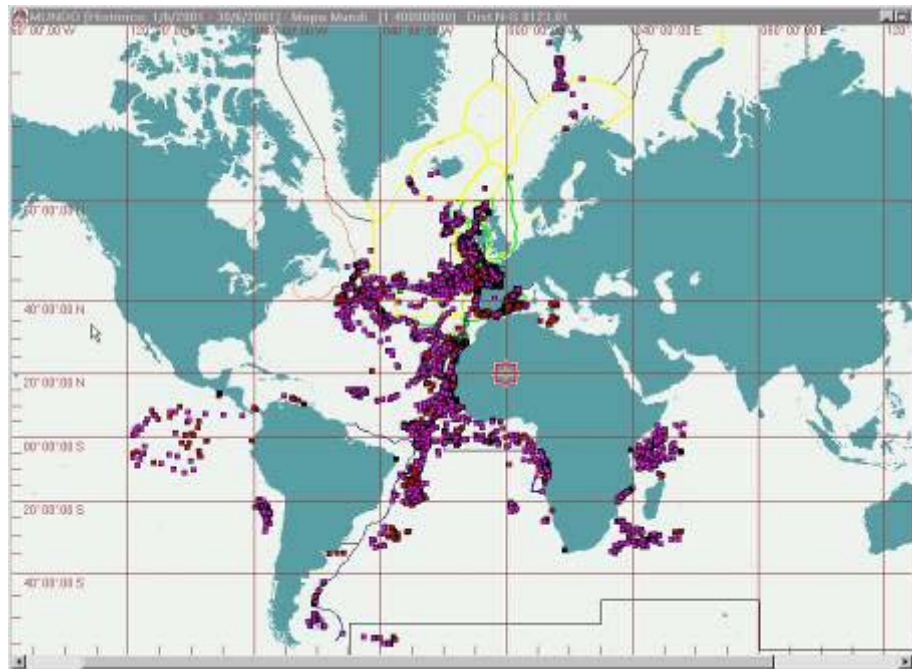
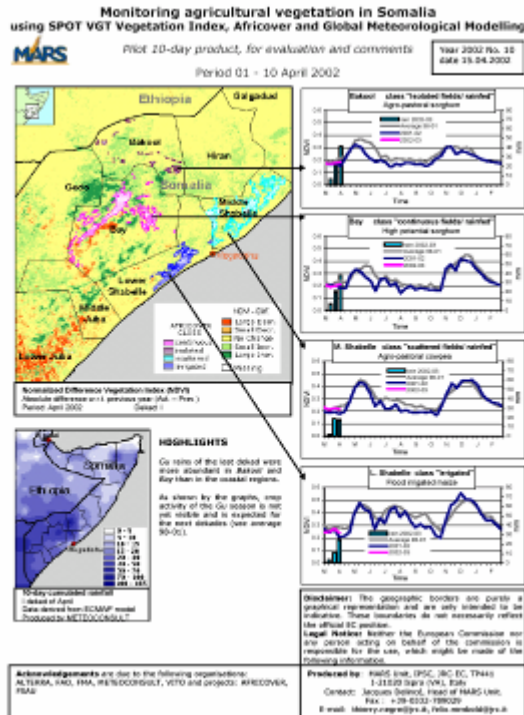
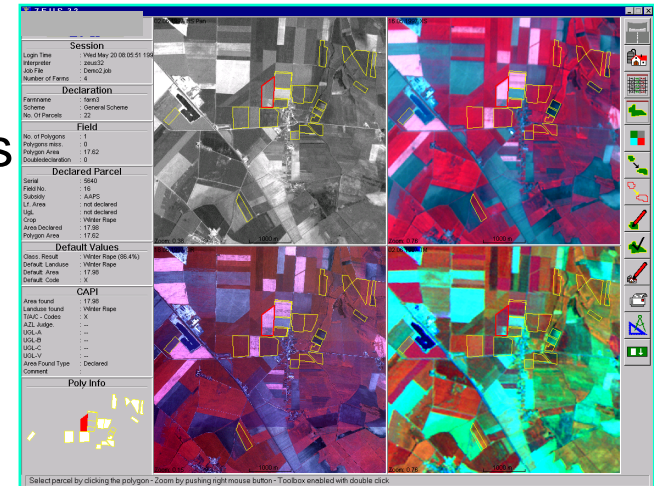
Global intelligence monitor, external trade monitor, disaster alert/impact analysis tools

**Risk analysis:** route-based maritime container targeting, country and regional security risk assessments, security incident monitoring, early warning conflict analysis, illegal migration



**MARS:** *Monitoring Agriculture with Remote Sensing*  
Provides crop yield forecasting, production estimates and monitors compliance with the EU's CAP

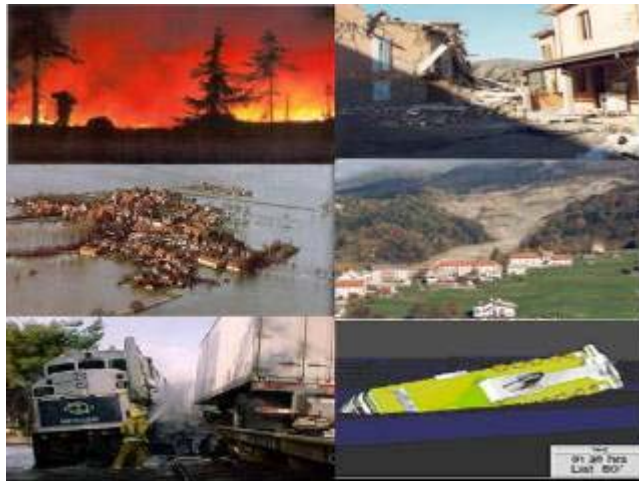
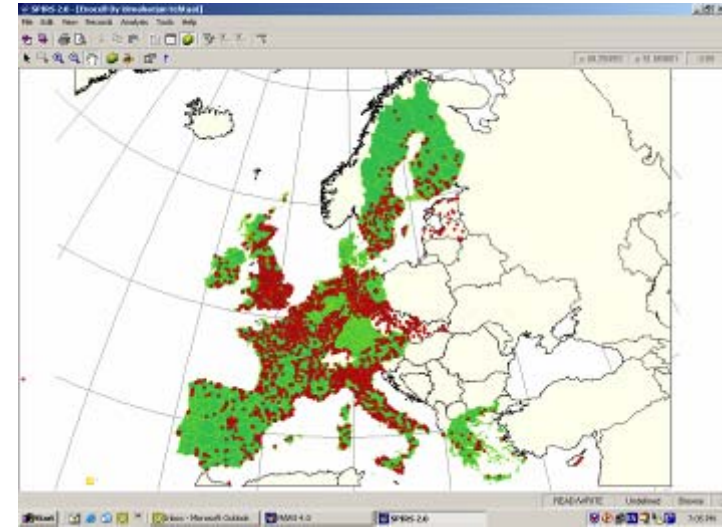
Provides regular crop yield predictions on pilot zones in developing world



**FISHREG:**  
Monitors compliance with EU Fisheries regulations

# Hazard Assessment

**MAHB:** *Major Accident Hazards Bureau*  
Major accident reporting, mapping, analysis  
and risk management of incidents  
reportable under the Seveso II Directive



**NEDIES:** *Natural and Environmental  
Disaster Information Exchange System*  
Natural and technological disasters not  
falling under the Seveso II Directive  
NEDIES PORTAL - <http://nedies.jrc.it>

**ISARM-CA:** *Integrated Safety Assessment and Risk Management  
in Civil Aviation*

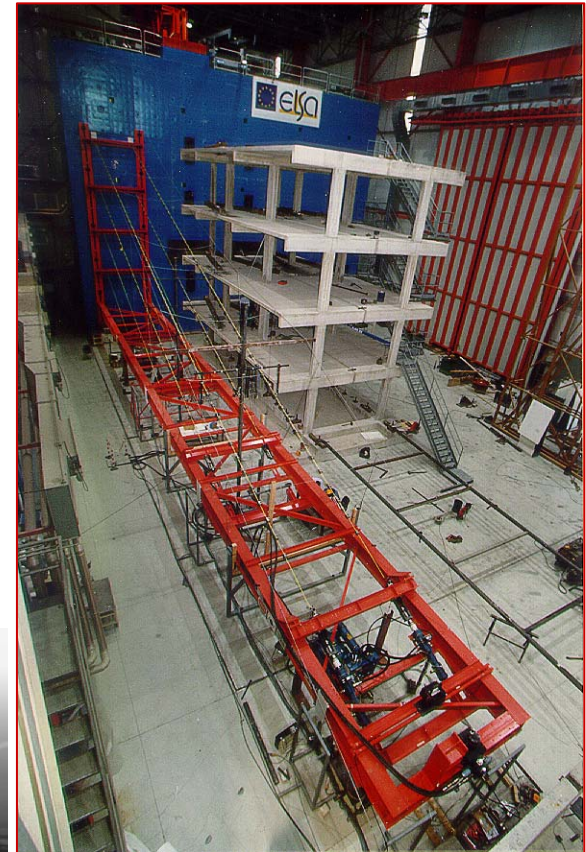


**R & D for risk governance in the policy context:** Methodologies to  
assess the reliability and quality of information used in the formulation of  
European policies



**ELSA:** Contributes to standards that harmonize construction and performs vulnerability assessment of buildings and civil infrastructures for risk mitigation

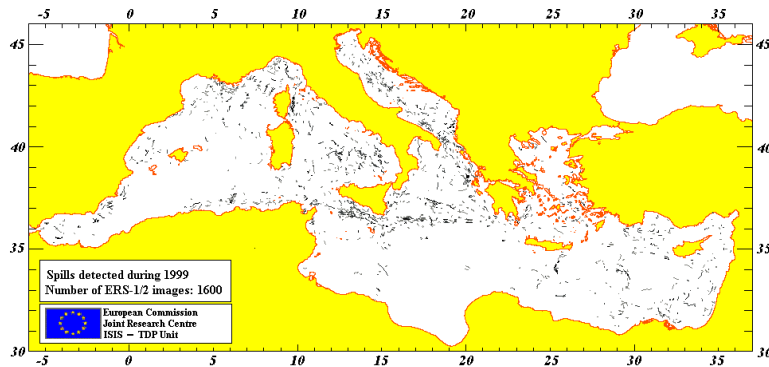
**SAFECONSTRUCTION:** Research in support of standardisation in construction and construction products



**INFRAID:** *Infrastructure Damage Prevention, Assessment and Reconstruction following a Disaster*

## **AMTRALA:** *Advanced Monitoring Techniques for Risk Assessment of Landslides and Avalanches*

Identification of ground displacement fields on wide areas, as in the case of post seismic subsidence, volcano dynamics, subsidence in urban areas and landslides



**MIDIV:** *Monitoring of illicit vessel discharges*  
Satellites, equipped with SAR (Synthetic Aperture Radar) sensors, providing wide-area reconnaissance, have shown excellent potential for monitoring deliberate vessel pollution

## **RSC:** *Reference Systems for Cybersercurity*

Assessment of the threats and vulnerabilities of ICT systems and their interdependencies with other infrastructures that are vital for Society.

This entails technologies for managing digital evidence of cybercrime activities as well as methods for risk management of information infrastructures.

<http://hsu.jrc.it>



# Traceability and vulnerability assessment

## **COMPASS:** *Vulnerability Assessment*

- Develop tools and methods to identify, assess and map vulnerabilities in EU critical infrastructures
- Develop a methodology for assessing integrated risk from man-made, technological and natural hazards

## **METS:** *Maritime and Energy Transport Security*

- Assess the risk and vulnerability of maritime transport systems
- Provide scientific/technological support to the Maritime Safety Agency
- Support the conception, preparation and implementation of European Directives



## **Energy security:** Main focus on gas, oil and electricity infrastructures

- Knowledge base of energy supply sources eg pipelines, electricity grids
- Identifying/assessing key vulnerabilities
- Understanding the global consequences of disruptions to energy supplies
- Addressing vulnerabilities



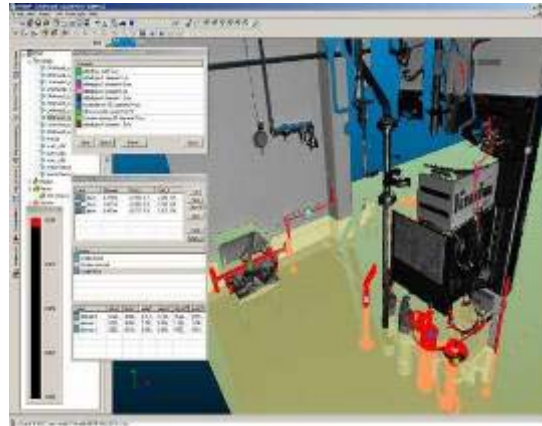
## **TL:** *Traceability of livestock*

- Electronic system to trace livestock from birth to slaughterhouse

## NPNS: Non-Proliferation and Nuclear Safeguards

Nuclear material measurements by non-destructive assay

Mass and volume determination, Nuclear forensic techniques



## Surveillance:

3-D image reconstruction and augmented reality  
e.g. for design verification



## GIF: Support to the Generation IV International Forum (nuclear reactors)

Evaluate the vulnerability of each gen. IV system to security threats

## Secure information exchange systems:

Project aims at evaluating the feasibility of employing wireless data acquisition and transmission in remote and unattended monitored systems for international Safeguards purposes

