



European Commission

Early Detection/Warning Systems for Early Action

APPLICATIONS OF OPEN SOURCE INFORMATION MONITORING

EMM - Europe Media Monitor

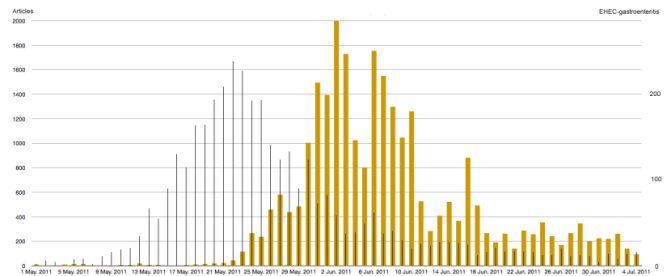
EMM is a framework developed and maintained by the JRC for Open Source Information Monitoring and analysis. EMM and the applications built around it provide decision makers with timely evidence-based alerts to support humanitarian intervention, health crisis management and early warning in a number of scenarios.

Internet Monitoring

EMM collects over 100000 new news articles every day from 3000 internet news websites from around the world in over 42 different languages. EMM applies leading edge techniques in information mining on each article automatically determining what is happening to whom and where by: classifying every received article according to a hierarchy of some 600 classes (what); identifying People and Organisations (who) in the news; geo-locating each article (where); and, sensing positive or negative tonality; in over 42 Languages

Analysis for Crisis Monitoring:

EMM uses a lightweight semantic approach to analyse news articles in order to extract Violent Events, Man Made Disasters, Natural Disasters and Humanitarian Crisis every 10 minutes (live). Exploiting results from information mining, we do further analysis by combining various cutting edge Natural Language Processing techniques.



Medsys Articles per day (shown in orange) and cases of EHEC-gastroenteritis (shown in black) in the period 1st of May 2011 till 4th of July 2011 (data taken from Robert Koch Institute 2011 and Linge et al. 2011). The media attention reached its peak on 2nd of June with over 2000 articles per day.

Medsys - Medical Information System

MedSys is a fully automatic event-based surveillance system that monitors reporting on infectious diseases in man and animals, chemical, biological, radiological and nuclear (CBRN) threats, plant health and food & feed contaminations on the internet. The system leverages the EMM framework by additionally retrieving news articles from specialised official and unofficial medical sites, general news media and selected blogs. EMM text mining techniques are then applied.



CEWS - Continental Early Warning

CEWS is developed for the Conflict Management Division of the African Union (AU) Department for Peace and Security. Its main aim is to provide the AU situation room with information on events of conflict or socio political nature that are occurring.

A custom instance of EMM called the Africa Media Monitor has been installed and is fully operational in the AU situation centre in Addis Ababa. The success of this system is evidenced by its deployment across the continent in the Regional Economic Communities (RECs).



EMM public web site: <http://emm.newsbrief.eu>



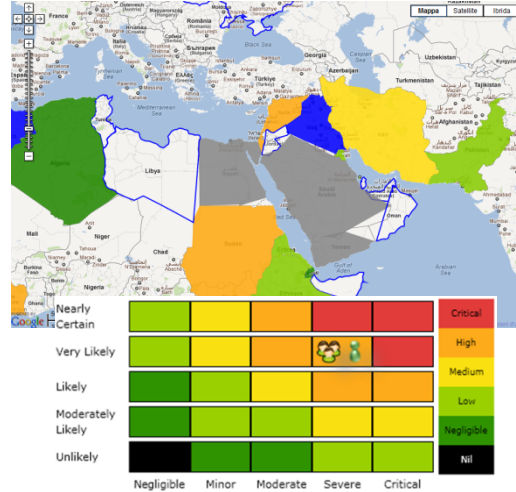
European Commission

HEWS II - Humanitarian Early Warning

HEWS aims to enable humanitarian decision makers to respond proactively to risks through collaborative monitoring and analysis. It assists humanitarian aid agencies in anticipating and planning for for unexpected crisis for which warning signs often exist but are overlooked or not acted upon by providing :

- A continuously updated global summary of emerging socio-political threats;
- Earlier warning of threats that warrant action;
- Inter-agency consensus on threats in near real time;
- increased efficiency via shared automated monitoring of open source information

A dedicated instance of EMM general news monitoring has been extended with custom modules that look for the emergence of critical indicators in the news. These indicators are then passed onto a dedicated collaborative platform for risk analysis.



HEWS collaborative risk evaluation and map showing risk levels.

EAR - Early Alerting and Reporting

The EAR (Early Alerting and Reporting) project of the Global Health Security Initiative (GHSI) is dedicated to the enhancement of the detection and the risk assessment of pandemics and CBRN (chemical, biological, radiological and nuclear) threats. The GHSI is an international partnership of the G7 countries (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States), Mexico, the European Commission and the World Health Organisation (WHO) to strengthen health preparedness and the global response to threats of CBRN substances and pandemic influenza.

Specifically, EAR aims to produce a single, common, web-based platform where all GHSI partners are able to access a list of possible, probable and credible CBRN and pandemic influenza threats, identified from open source, web-based medical intelligence systems. These reports are subjected to a generic risk assessment by subject matter experts from across the participating countries, whereby reports and alerts are issued to policy leads, day-to-day users from the GHSI member states and the European Union. EAR leverages EMM Medisys technologies.

Anthrax - Central Asia

Multiple foci of anthrax cases reported in Central Asia: 5 cases in Almaty region and 2 deaths and 3 cases in Pavlodar region of Kazakhstan and 3 cases in Jalal-Abad region of Kyrgyzstan. Links have been made to infected

Average Assessment: **7**

Suggested Action: No Report Necessary

Global Health Security Initiative (GHSI)

EAR Pilot Project - Event Report

Date Issued: Friday, July 30, 2010 6:42 PM

The following report has been assessed by the EAR Project subject matter experts (links listed for the following reasons):

- * Potential Hoax

Event Details

Disease: Anthrax

Country Affected: France

Detail of Incident: U.S. Paris Embassy Staff/France After Handling Suspicious Mail

Assessor's Comment: It was just a test in order to use the risk assessment tool - The suspicious mail is not harmful - Mail confirmed to be safe

Further Validation Action Initiated: No action

Source Information: Unverified source - not reliable

Average Score: 8

EAR web-based user interface for threat analysis.

CONTACTS

Delilah Al Khudhairy
email: delilah.al-khudhairy@ec.europa.eu
Phone: +39 0332 785696
Fax: +39 0332 785154