SMHI

EFAS

European Flood Awareness System

http://www.efas.eu/

EFAS Partner Network

The first operational hydrological network in Europe

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Coordinator EFAS Dissemination Center

- **1999-2002** **European Flood Forecasting System (EFFS) DG RTD**
- **2002** **Severe flooding in Europe (Elbe & Danube)**
- **2003** **Launch of the development of a European Flood Alert System**
  (***Early warning system, risk for flooding, 3-10 days ahead***)
- **2005** **Start of pre-operational dissemination of results to NHS partners**
  (National Hydrological Services)
- **2007** **Launch of EFAS-IS making data directly accessible to partners**
- **2010** **Dissemination of results on daily basis to MIC** (Monitoring and Information Centre)
- **2011** **EFAS (**European Flood Awareness System) **adopted as GMES*** emergency service** (2011-2013)
  (Global Monitoring for Environment and Security, now **COPERNICUS**)
- **2012** **Transfer from research to operations within MS organizations**
  (Member States)

- New GMES*** Regulation adopted by EP (European Parliament) and agreed by Council on13/09/2010

now COPERNICUS

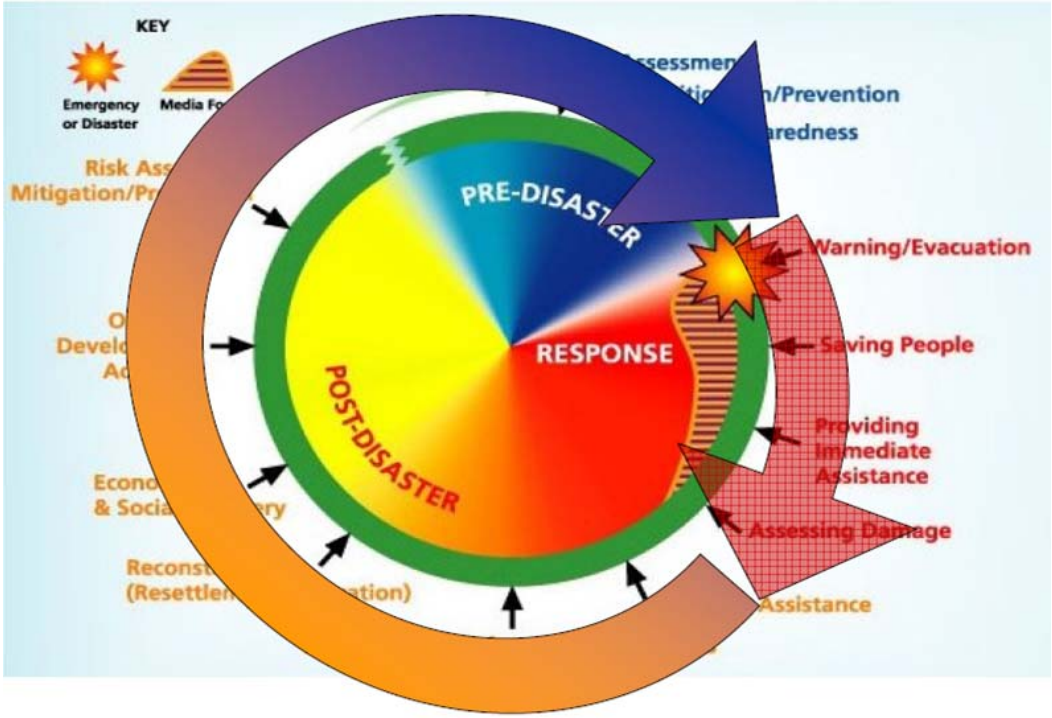
- Period 2011-2013 Initial Operations

- EFAS is part of the COPERNICUS Emergency Management Service

To provide reinforced European monitoring and EO capacity to support emergency response to crisis within and outside Europe:

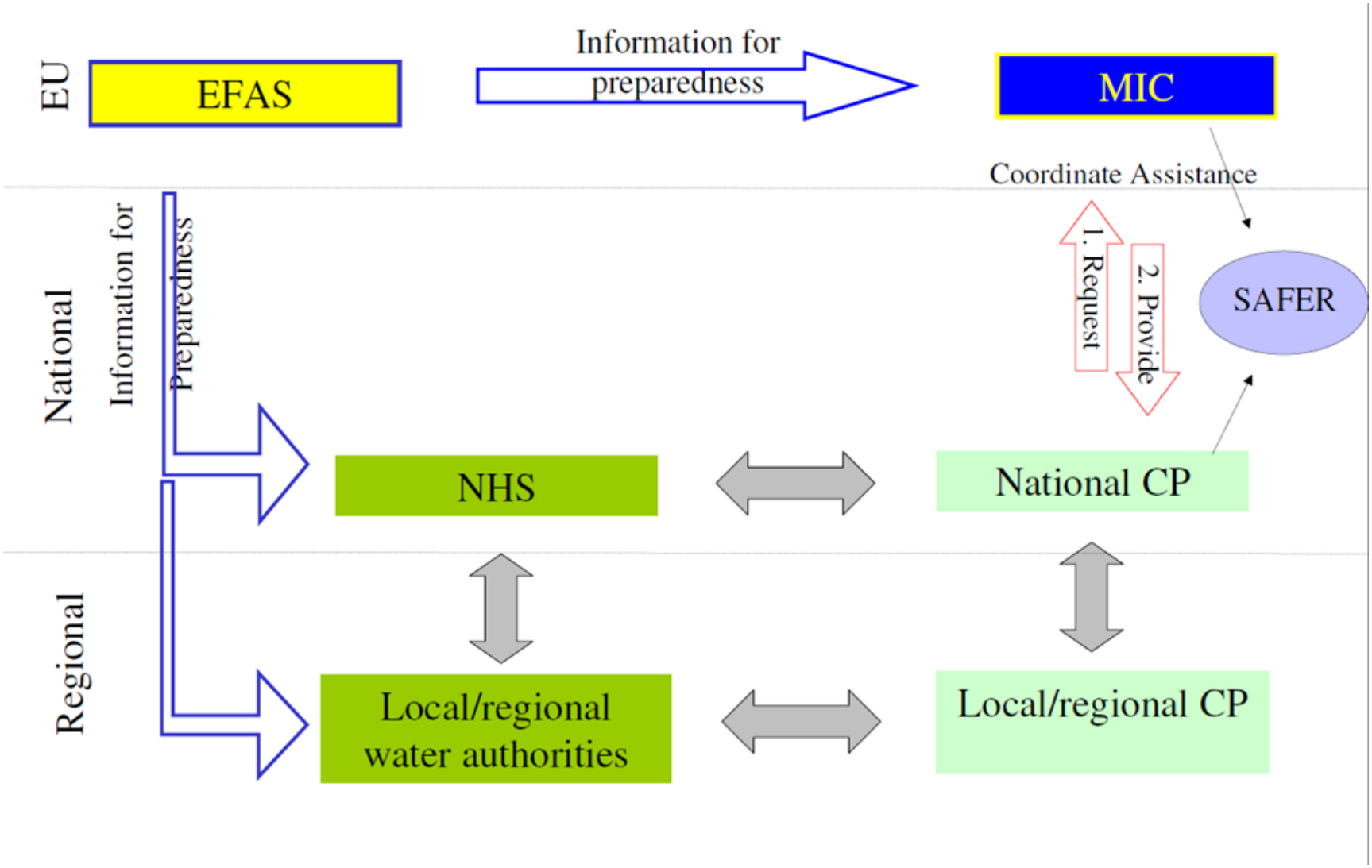
- *Natural disasters* **: floods, fires, earthquakes, landslides, volcanic eruptions, tsunamis, storms…**
- *Man-made disasters* **: industrial and chemical hazards**
- *Humanitarian crisis*

Focus on response and preparedness



COPERNICUS Emergency Management service

- Request from DG ECHO/MIC to include European EWS (Early Warning Systems) tools in COPERNICUS, starting with EFAS (outsourcing)
- Call for Tenders, July 2011


EU
EFAS
Information for preparedness
MIC
Coordinate Assistance
National
Information for Preparedness
1. Request
2. Provide
SAFER
NHS
National CP
Regional
Local/regional water authorities
Local/regional CP

JRC
EUROPEAN COMMISSION

Poland floods May-June 2010

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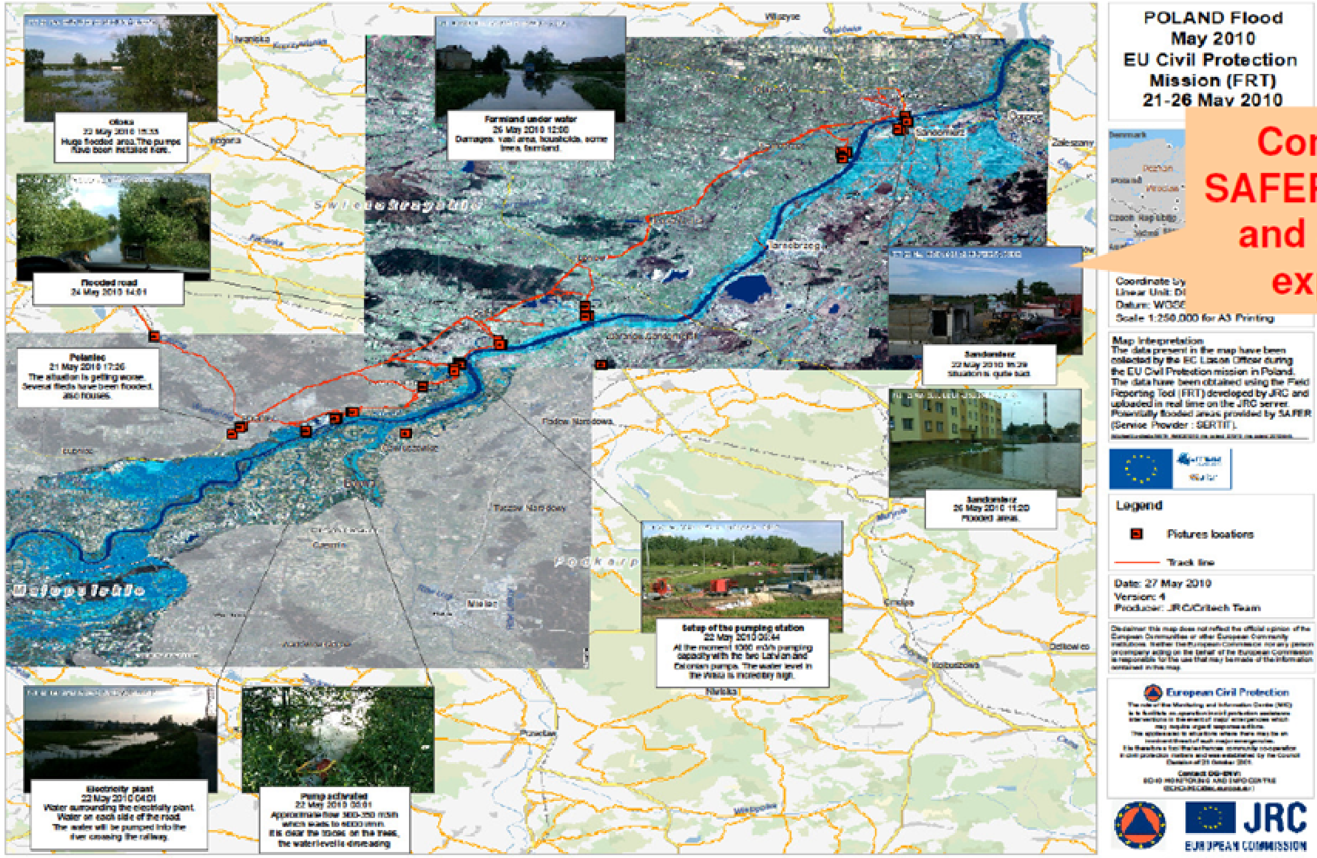


Combining SAFER products and JRC/MIC expertise

The EFAS Hydrological data collection centre**,** currently executed by a Spanish consortium of REDIAM and ELIMCO, is collecting historic and real-time discharge and water level data in support to EFAS.

The EFAS Meteorological data collection centre is currently hosted at JRC Ispra. The centre collects historic and real-time meteorological data in support to EFAS.

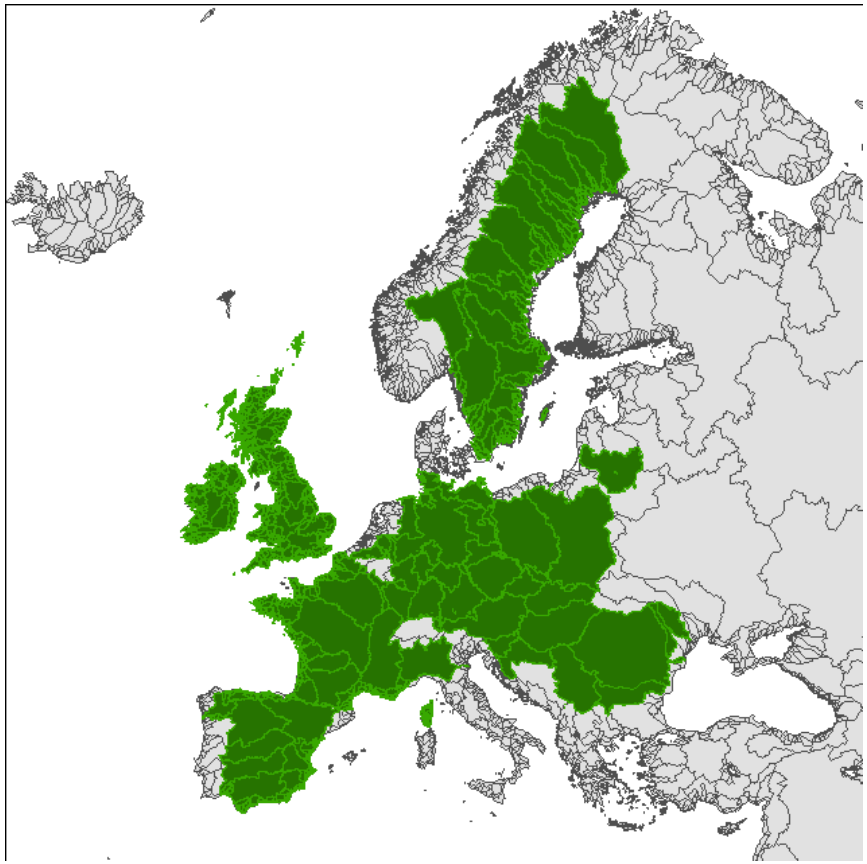
The EFAS Computational centre is located at European Centre for Medium-Range Weather Forecasts (ECMWF). The centre runs the forecasts and post-processing calculations as well as the web interface of the EFAS-Information System

The EFAS Dissemination centre is a consortium of Swedish Meteorological and Hydrological Institute, Slovak Hydrometeorological Institute and Rijkswaterstaat (the Netherlands). The centre analyses the results on a daily basis, assesses the situation, and disseminate information to the EFAS partners.

Further scientific and technical development to keep EFAS state-of-the-art is conducted and coordinated by the ***JRC*** (Joint Research Centre).

The European Commission (i.e. DG ECHO-MIC, DG ENTR and DG JRC) is responsible for contract management of Operational EFAS.

EFAS Operational Centres & EFAS Partner Network



EFAS Partner Network, June 2013

- EFAS is a pan-European system.
- The hydrological model for EFAS is setup on a 5x5km^2 and provides twice a day ***early flood warning information*** with 6 hourly and daily time steps.
- EFAS results are based on multiple weather forecasts with different spatial and temporal resolutions including data from different weather services, deterministic and ensemble products, short-range and medium-range products. Currently included are products from the Deutsche Wetterdienst (DWD), the European Centre for Medium-Range Weather Forecasts (ECMWF) and the Consortium for Small-scale Modeling (COSMO).
- The majority of EFAS information is based on critical level exceedance and not quantitative discharge forecasts. Only at those stations where the National Hydrological Services are providing appropriate real-time data, EFAS provides bias corrected quantitative discharge forecasts also that can be downloaded by the partners upon request.

- An EFAS partner is any national, regional or local authority that is legally obliged to provide flood forecasting services or has a national role in flood risk management within its country and the European Commission Services, i.e. DG ECHO-MIC, DG ENTR-COPERNICUS and DG JRC.

- EFAS Partnership gives to an EFAS Partner ***REAL-TIME ACCESS TO THE EUROPEAN FLOOD AWARENESS SYSTEM (EFAS)*** products through the EFAS Information System (EFAS-IS), as well as the right to attend and get one vote at the Annual EFAS Partners Meeting.

- An EFAS Partner gains free of charge, password protected, web access to the EFAS Information System (EFAS-IS) from which the Partner can retrieve ***early flood information products*** for the river basins agreed upon.

EFAS Partners´ Commitments

- An EFAS Partner shall routinely give feedback to EFAS Dissemination Centre on the accuracy of the flood alerts

- An EFAS Partner should participate in EFAS trainings when possible.

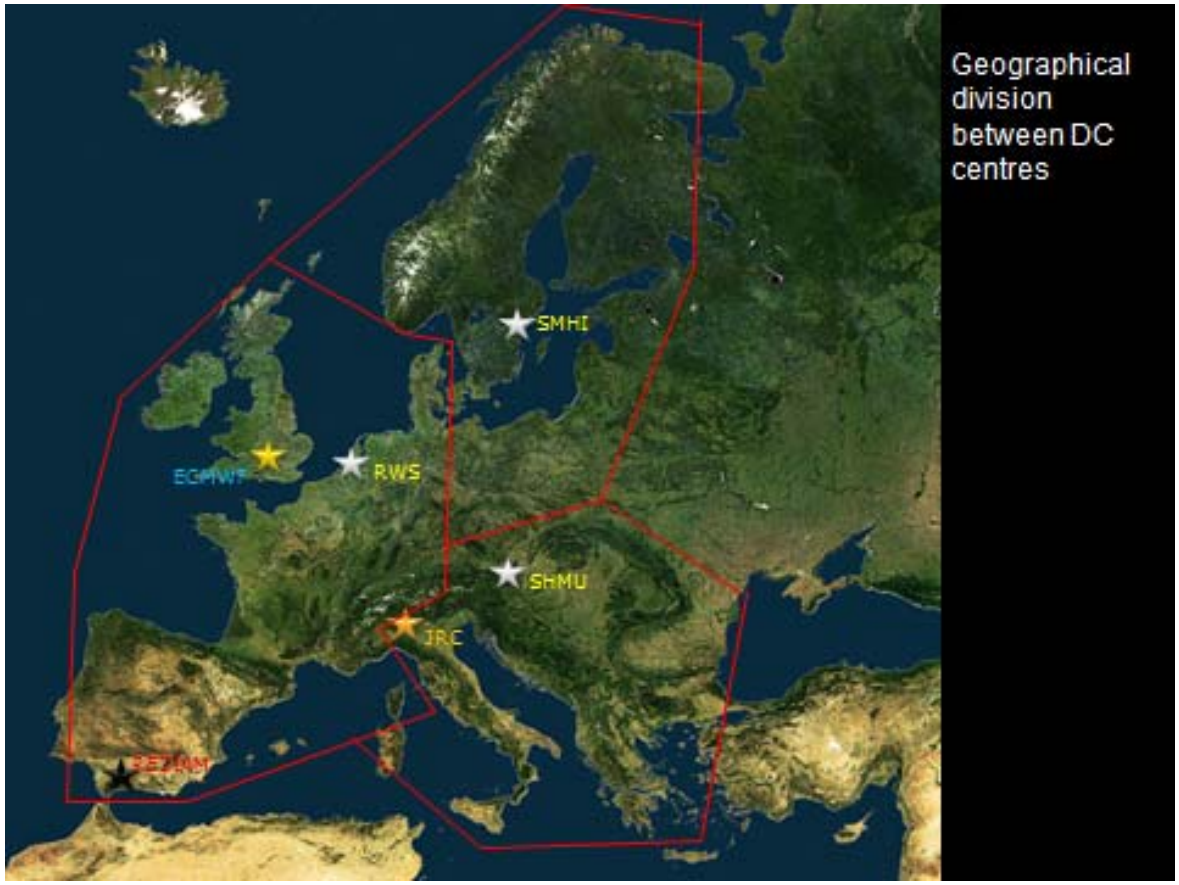
- An EFAS Partner has the option to share or transfer the information from EFAS-IS to all relevant authorities or offices in their countries

EFAS Dissemination Center, EFAS DC, is a consortium of :

- Swedish Meteorological and Hydrological Institute, SMHI, consortium coordinator
- Slovak Hydro-Meteorological Institute, SHMU
- Rijkswaterstaat, Water Management Centre in the Netherlands

The responsibility for the dissemination of EFAS alerts is divided among the EFAS DC consortium partners with regard to **the run-off to the main European sea basins.**

The consortium partners also shares the responsibility for dissemination of EFAS alerts to the EFAS partners in the Mediterranean region.



- Set up phase started April 2012
  "Establishing a ***virtual office for EFAS*** and to prepare for operational tasks disseminating EFAS results"

  - Configuration of EFAS Communication Platform (including the *project diary and teleconference service);*

  - Training on EFAS-IS for EFAS DCs officers;

  - Harmonization of the EFAS operational routines among the three Dissemination Centres;

  - Communication with EFAS partners network (including the draft proposal for EFAS Conditions of Access);

  - Preparation and implementation of the EFAS Annual meeting;

- Operational phase started November 2012

How does the EFAS DC work in the operational phase?

- Three partners. One partner is leading during one week in rotation.
- Each partner performs a daily analysis of on-going floods, medium range and flash floods for the basins under its responsibility with EFAS-IS, before 08h45.
- Chat on line and telephone meeting of the DC partners about the actual and expected situation at 08h45.
- If necessary, watches and/or alerts are sent to NHS, before 09h30.
- Report for MIC is compiled by the DC-partners. Lead partner does final check and sends the report to MIC, before 09h30.
- Each partner performs a second daily analysis of the 00 EFAS run in the afternoon to confirm the conclusions of the morning analysis.
- On Friday afternoon a more extensive meeting of the DC partners takes place. If necessary EFAS Computation Centre, JRC and EFAS Hydrological Data Collection Center join in this meeting. Decisions are made for the weekend service. In non-flood situations only the lead partner is active in the weekend.

Additional tasks for the EFAS DC

- Extension of the EFAS partner network (e.g. Greece, Montenegro, Macedonia, Albania, Bosnia-Herzegovina, Kosovo, Italy, Portugal, Spain, Ukraine, Lithuania, etc.)
- New agreement (EFAS Conditions of Access)
- Collection of feedback on alerts
- More contact with partners to improve the system

CONTACT

Information on EFAS: **info@efas.eu**

Contact to join the EFAS network:
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