



EFAS Bulletin

Issue 2009(1) *January/February 2009*

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EFAS news

The 4th Annual workshop of European Flood Alert System (EFAS) was held on 29 and 30 January 2009 for the first time at ECMWF in Reading, UK. The workshop participants came from 24 national and regional water authorities across Europe.

A total of 43 participants were informed by the EFAS team about the progress achieved during 2008 in terms of early warnings and system development:

- The development of the new collection systems for hydrological and meteorological data (EU-FLOOD-GIS and ETN-R)
- The benefits of including COSMO-LEPS data and the new meteorological products (i.e., rainfall probability, average snowmelt, temperature) into EFAS
- A number of publications on the EFAS system, case studies and research have been published or are in review in 2008. A full list of these is available from the EFAS web pages

Furthermore, EFAS partners provided feedback to the flood alerts issued by EFAS throughout 2008. Overall, the feedback was positive and most of the alerts were useful as an early warning that flooding could happen in the concerning river basin.

An outlook was given on the future development of EFAS especially with respect to the future more active participation of several partner

organizations in an operational EFAS service. In addition, the foreseen products to support the civil protection service of the European Commission were presented in more detail.

Finally, the participants discussed in working groups the topics concerning (I) the pros and cons of expanding EFAS to smaller national rivers and flash flood forecasting, (II) how an operational EFAS fits into the national flood forecasting/CP strategy, (III) what data and specific services would the hydrological EFAS community like to have from the meteorological centres, and (IV) what should an operational EFAS deliver in the future.

The second day was dedicated to training on probabilistic products and lessons learned from national EPS based flood forecasting systems. Furthermore, the participants had the opportunity to visit the high performance computing facilities of the ECMWF.

A list of all presentations held at the 4th annual EFAS meeting can be found at <http://www.ecmwf.int/newsevents/meetings/workshops/2009/EFAS/presentations/index.html>.

EFAS Alerts January/February 2009

External flood alert have been sent during January and February 2009 for the Ebro river basin [ES], the Garonne, Dordogne, and Loire river basins [F].

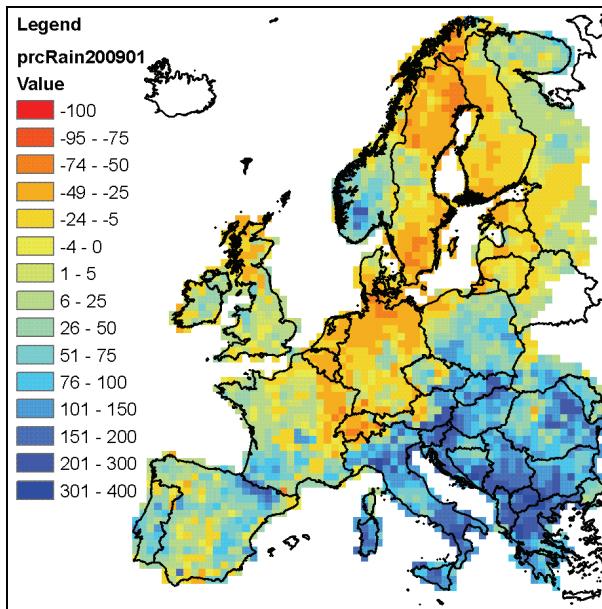


Figure 1: Difference in precipitation [%] for January 2009 in comparison to long term average (1990-2004)

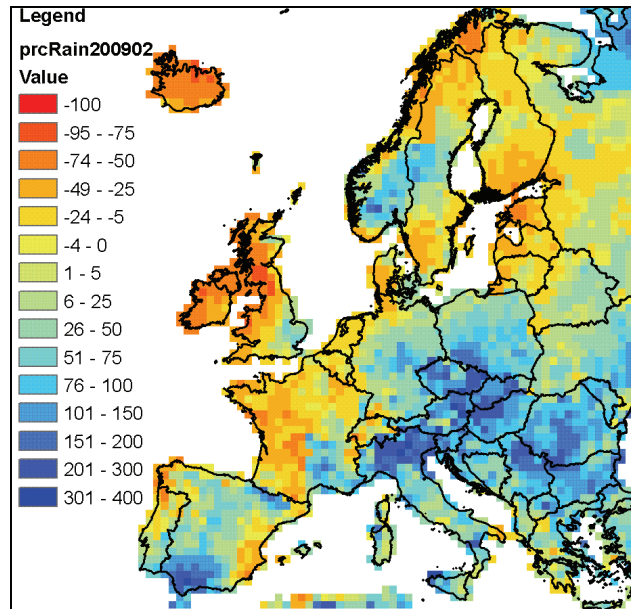


Figure 2: Difference in precipitation [%] for February 2009 in comparison to long term average (1990-2004)

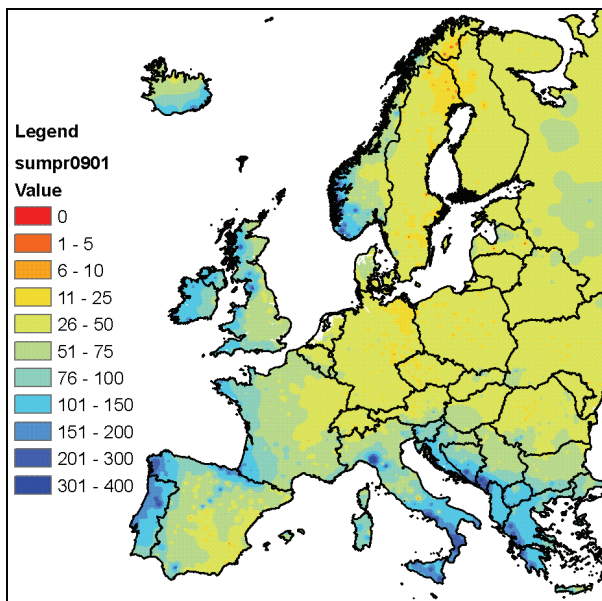


Figure 3: Accumulated Precipitation [mm] for January 2009

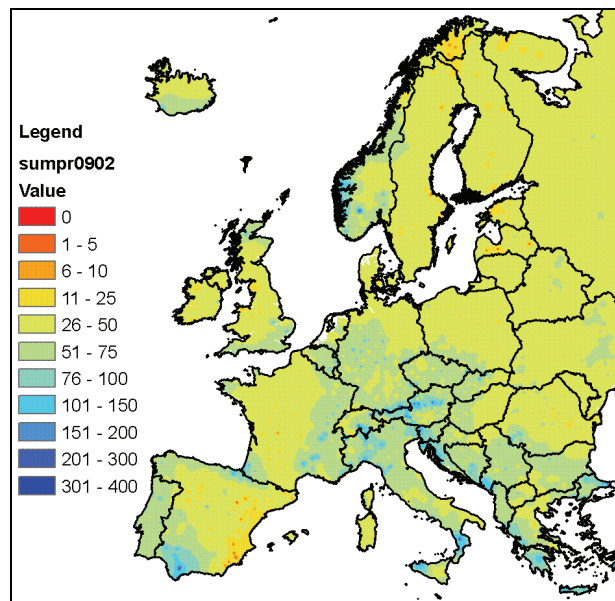


Figure 4: Accumulated Precipitation [mm] for February 2009

Meteorological situation January / February 2009

In January most of south Eastern Europe received more than average precipitation whereas parts of central and northern Europe received less (from 1990 to 2004, observed JRC MARS data) (Fig.1). The accumulated precipitation for this month only exceeded high amounts in some parts of the Adriatic coast, southern Italy and the

Atlantic coast of Portugal and Spain (Fig. 3). During February a similar situation could be observed. Again, most of south Eastern Europe received more than average precipitation and parts of France, northern Europe and the UK received less than average precipitation (Fig. 2) The accumulated precipitation amounts did not exceed unusually high amounts (Fig 4.).

For actual soil moisture distribution, see also: <http://desert.jrc.ec.europa.eu>.

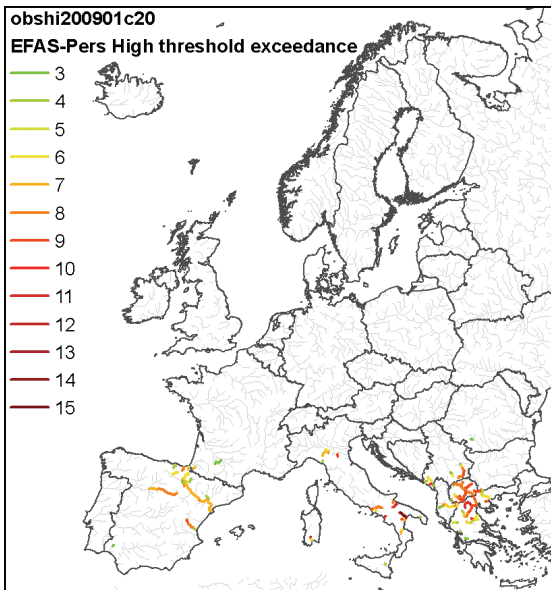


Figure 5: EFAS high threshold exceedance (January 2009) for LISFLOOD simulations with observed meteorological data

Simulated hydrological situation by EFAS

An overview of the threshold exceedances resulting from LISFLOOD simulations using observed meteorological data (JRC-MARS) is shown in Figs. 5 and 6.

As already mentioned in the previous section only the Balkan region and parts of Italy received more than average precipitation for the months of January and February. Hence, most of the high threshold exceedance of the ECMWF EPS occurred in some Greek, Macedonian and Serbian basins in January. Due to lack of data, the accuracy of the forecasts are difficult to

verify in this a region. However, also the Ebro river basin in Spain exhibited some high water levels during the month of January. A similar situation is observed for the month of February, but with less high threshold exceedances.

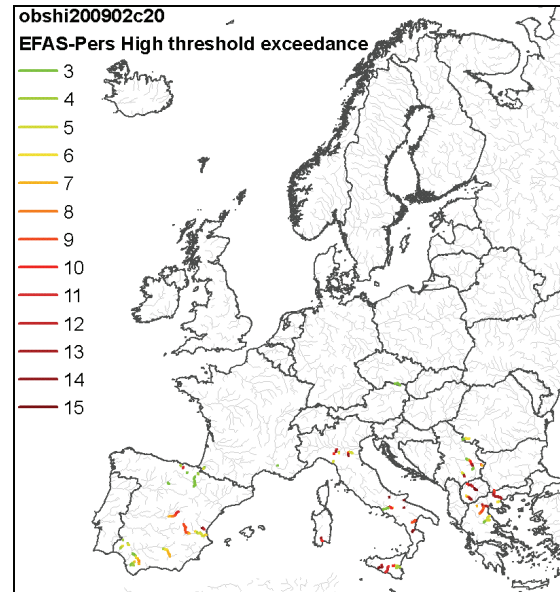


Figure 6: EFAS high threshold exceedance (February 2009) for LISFLOOD simulations with observed meteorological data

Acknowledgements

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Abstract

EFAS Bulletin summarizes the meteorological and simulated hydrological information for the corresponding months.

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