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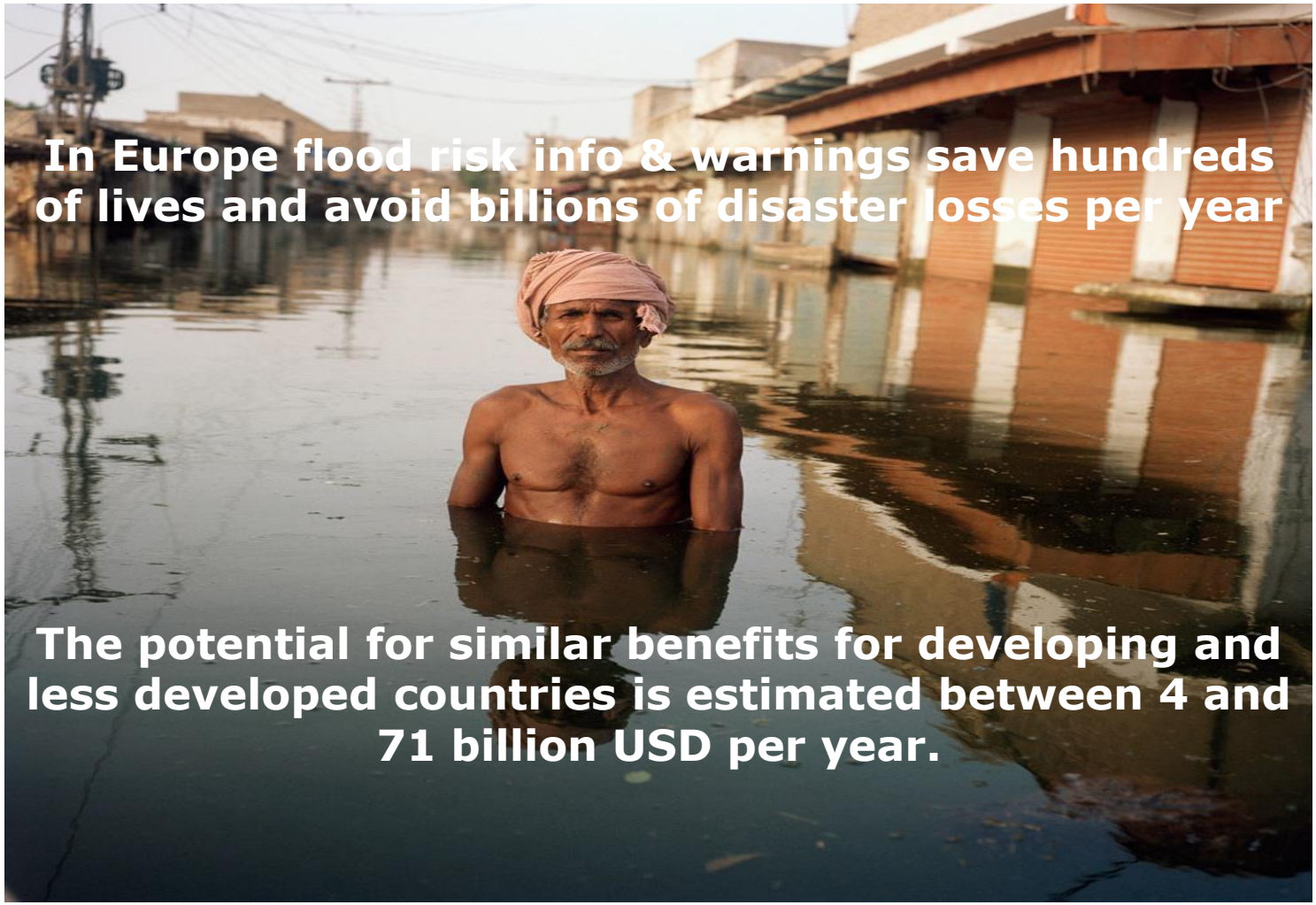
Copernicus
Europe's eyes on Earth

Global Flood Awareness System

Peter Salamon, Joint Research Center, European Commission

Joint Research Centre



Source: World Bank 2012 / Image: www.actionaid.org

European Commission

Efficient flood risk management requires:

- Awareness about the risk of flooding
- Appropriate legal & administrative frameworks
- Economic investments
- Expertise knowledge
- Data

Unfortunately, some or all factors are still missing in many regions around the world

Image: Moby@flickr

Joint Research Centre

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Global/ large scale flood risk models could:

- Fill the gap/ be complementary
- Foster knowledge transfer & exchange
- Improve data sharing

Image: UNEP-GRID

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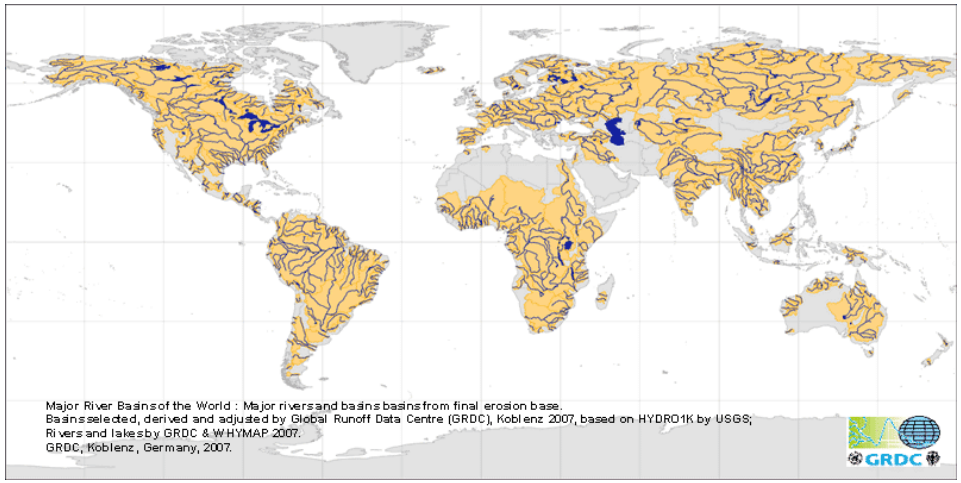
GloFAS Principal Objectives



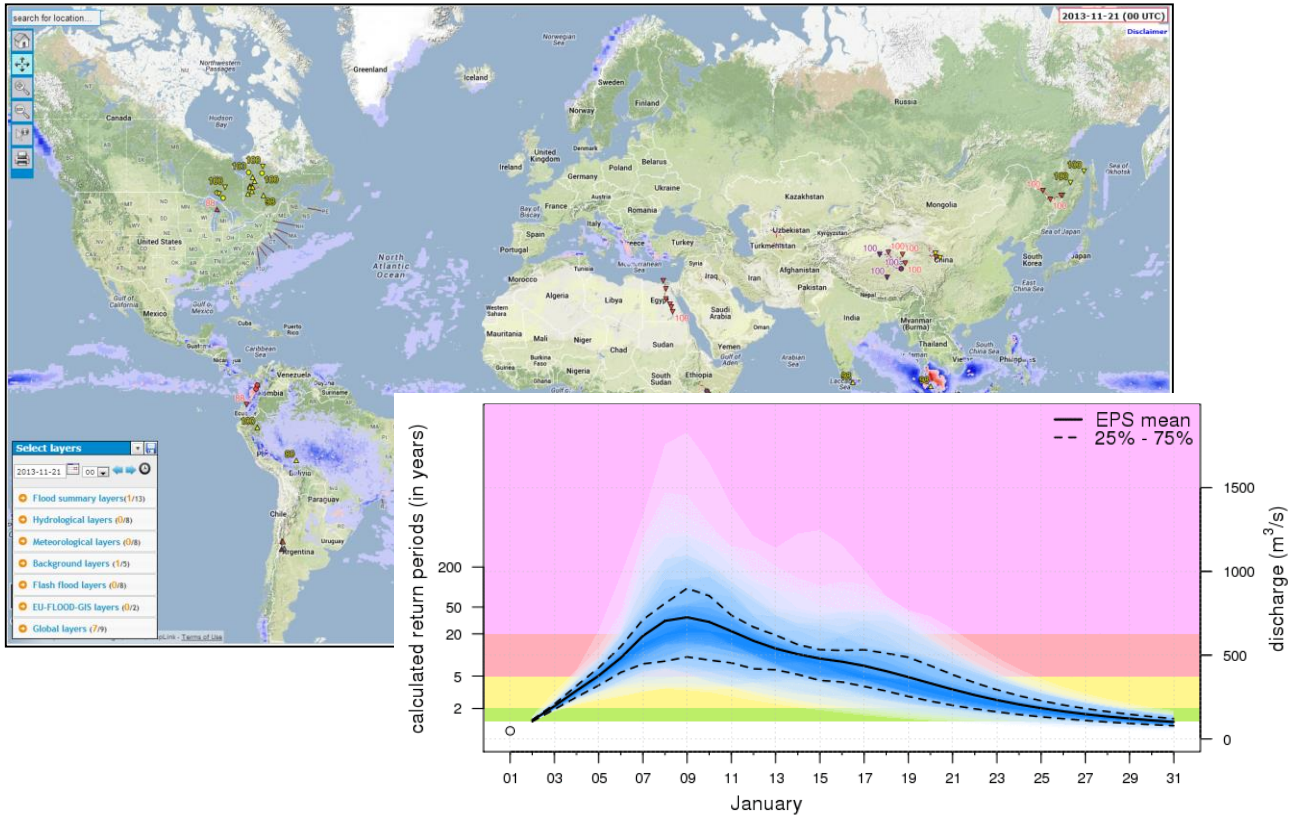
Added, complementary value for national emergency response services

Supporting international organizations & global actors

What is GloFAS?

Global-scale ensemble-based flood forecasting system.

A collaboration product between the JRC and ECMWF.



Forecast frequency:
Updated daily

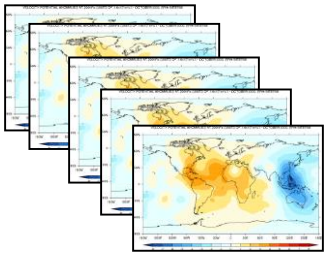
Forecast lead time:
Up to 30 days

Forecast variable:
River Flow

Forecast type:
Probabilistic

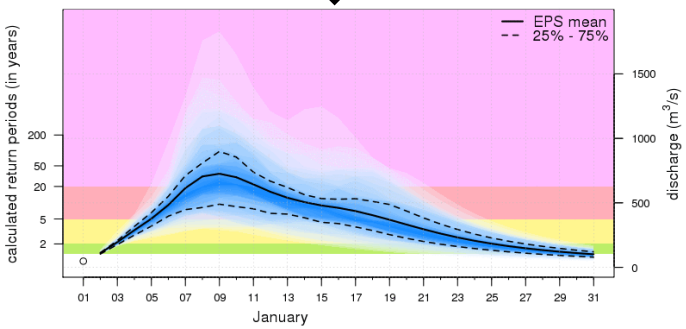
Forecast resolution:
Daily and 0.1 degree

How GloFAS works

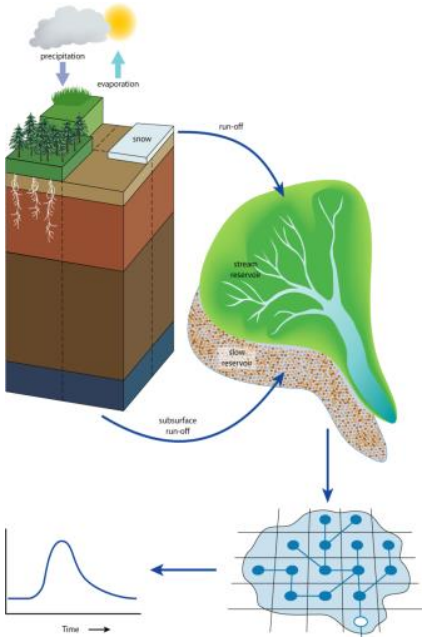


Meteorological forecast

Hydrological model

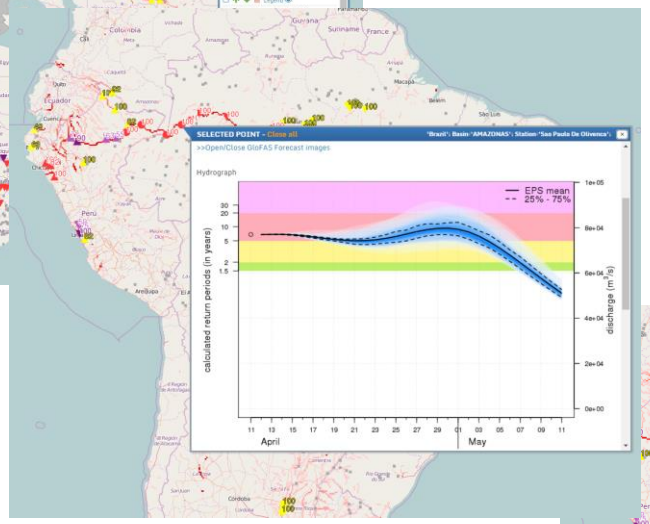


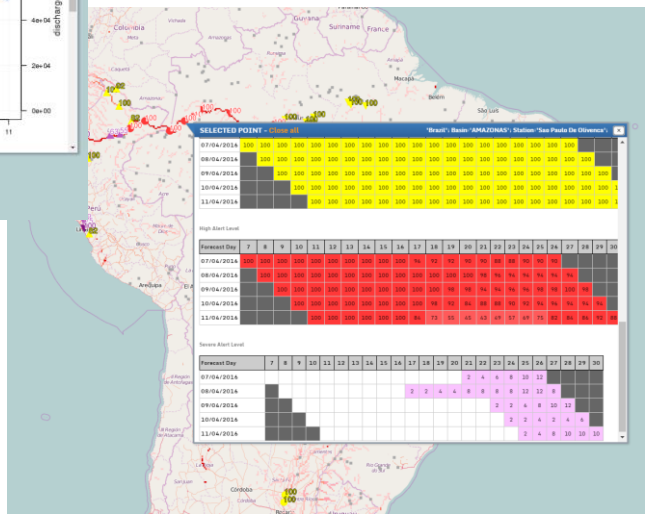
Meteorological inputs are from ECMWF



Model setup

How GloFAS works





Access through a web interface

different map and gauging station products available

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GloFAS "in operation"

GloFAS triggers pre-disaster humanitarian action in Uganda

RED CROSS/RED CRESCENT
CLIMATE CENTRE

International Federation of Red Cross and Red Crescent Societies
The Netherlands Red Cross

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'Humanitarian history' made as Uganda Red Cross launches forecast-based financing for real

15/11/2015 - by the Climate Centre

In a ground-breaking humanitarian action triggered by a scientific forecast of flood risk, the Uganda Red Cross (URC) Friday distributed just under 5,000 preparedness items to flood-prone communities in Kapelebyong sub-county, some 300 km north-east of the capital, Kampala.

The action was based on a forecast of rising water-levels in the Teso area – especially in Amemia parish.

The non-food items (NFI) were procured under 'forecast-based financing' with the support of the German government through the German Red Cross, who have established a special mini-site.

The URC mobilized the supplies as soon as a predetermined threshold of forecast risk was crossed on Thursday.

It was the first full humanitarian use of forecast-based financing, which had only been piloted.

Dysentery

"One of the disaster effects we were targeting is waterborne disease," said Irene Amuron, URC Disaster Risk Reduction Manager, who led the operation.

Local Acting Chief Administration Officer Paul Edotu had indicated that dysentery existed in the area, and the authorities were anxious to prevent it.

How to help

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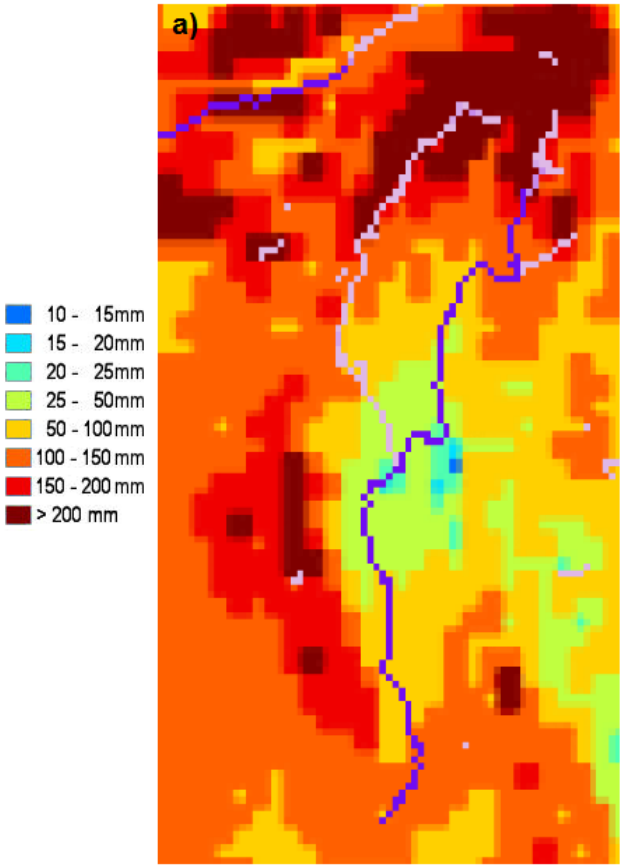
CLIMATE TRAINING KIT

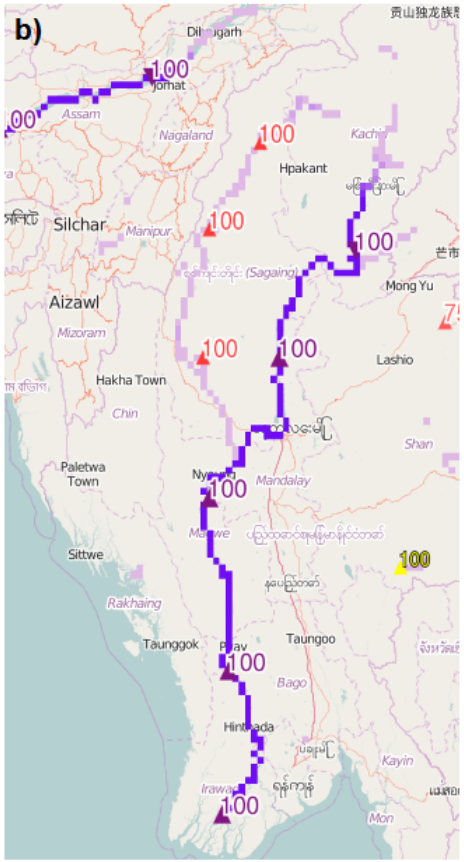
play our climate GAMES

Library PARTNERS FOR RESILIENCE

view our

GloFAS "in operation"





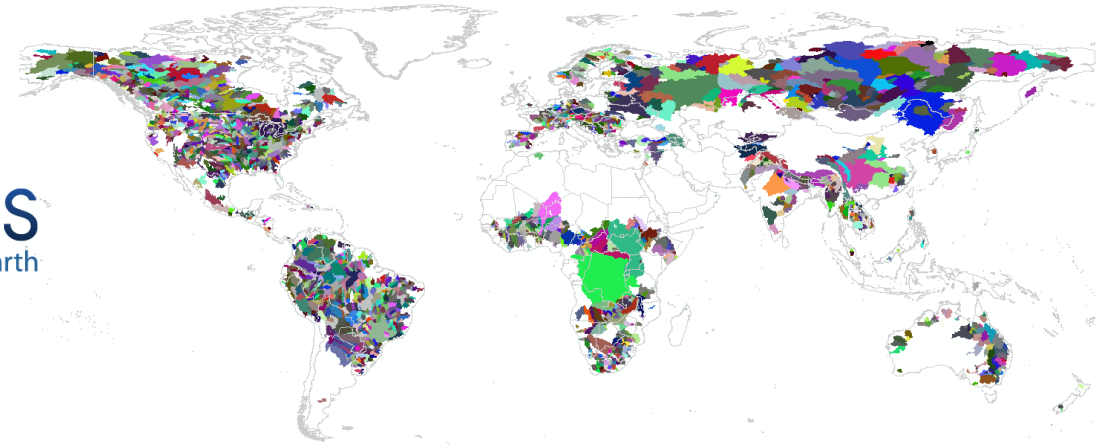
GloFAS forecast for Myanmar flood

- July/August 2015: Most severe flooding in decades
- Daily reports to ERCC based on GloFAS forecasts & shared with local authorities
- Defining areas for satellite rapid mapping

GloFAS forecast over Myanmar on the 1st September 2015

GloFAS development

- Model calibration using re-forecasts (in collaboration with local authorities)
- Global Flash Flood Indicator
- Rapid Impact Assessment
- GloFAS OGC web services (SOS, WFS, WMS-T)
- New features for the web interface
- GloFAS to become fully operational second half 2017 as part of the Copernics EMS



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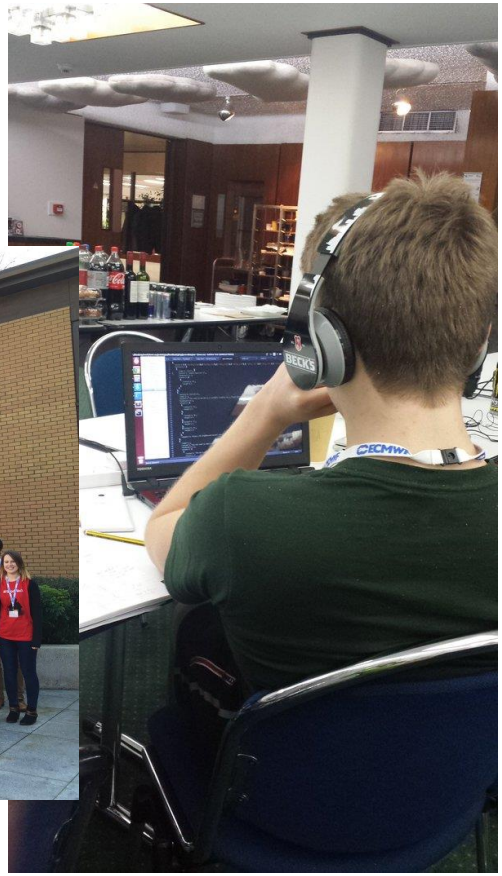
How to get involved?

http://www.globalfloods.eu

YouTube

#FloodHack



GFP
global flood partnership

Global Flood Partnership
2016 Conference
29 June - 1 July
JRC, Ispra, Italy
Get registered!

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