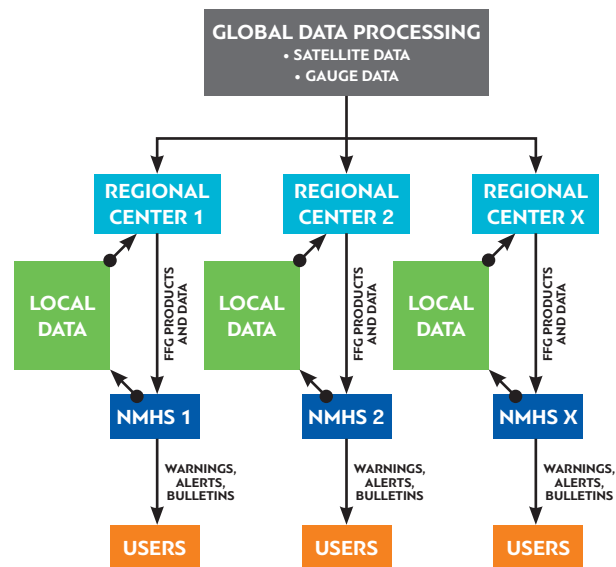


## A global implementation

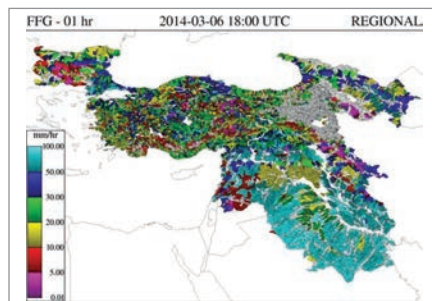
FFGS is designed as a global system characterized by distributed operations and functions. Coordination among NMHSs is ensured by Regional Centres through the provision of products, data and training to national and local counterparts.



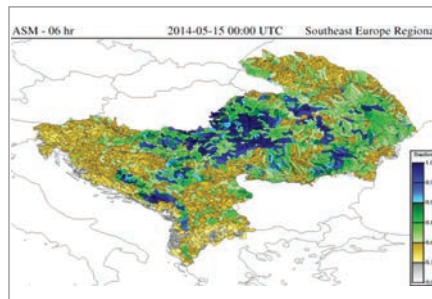
## What is a flash flood?

A flash flood rises and falls quite rapidly with little or no advance warning, usually as the result of intense rainfall on saturated soils or impervious areas. Effective issuance of flash flood forecasts and warnings requires both hydrological and meteorological expertise and constant vigilance, including local, up-to-the-hour information and around the clock operations 365 days a year.

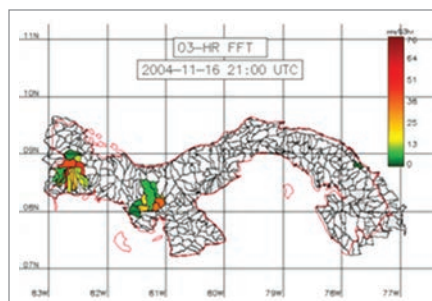
## FFGS products



Flash Flood Guidance for Black Sea and Middle East FFGS



Average Soil Moisture for South East Europe FFGS



Flash Flood Threat for Central America FFGS

# FLASH FLOOD GUIDANCE SYSTEM (FFGS) with GLOBAL COVERAGE

JN 16294  
WEATHER CLIMATE WATER

## Contacts

[www.wmo.int/ffgs](http://www.wmo.int/ffgs) | [www.hrcwater.org](http://www.hrcwater.org) | [ffgs@wmo.int](mailto:ffgs@wmo.int)



WORLD METEOROLOGICAL ORGANIZATION





## What is the Flash Flood Guidance System (FFGS) with Global Coverage?

The Flash Flood Guidance System (FFGS) with Global Coverage is a computational product generation system supported by extensive training programs that aims to support forecasters at regional and national levels in their effort to provide effective warnings on the occurrence of flash floods.

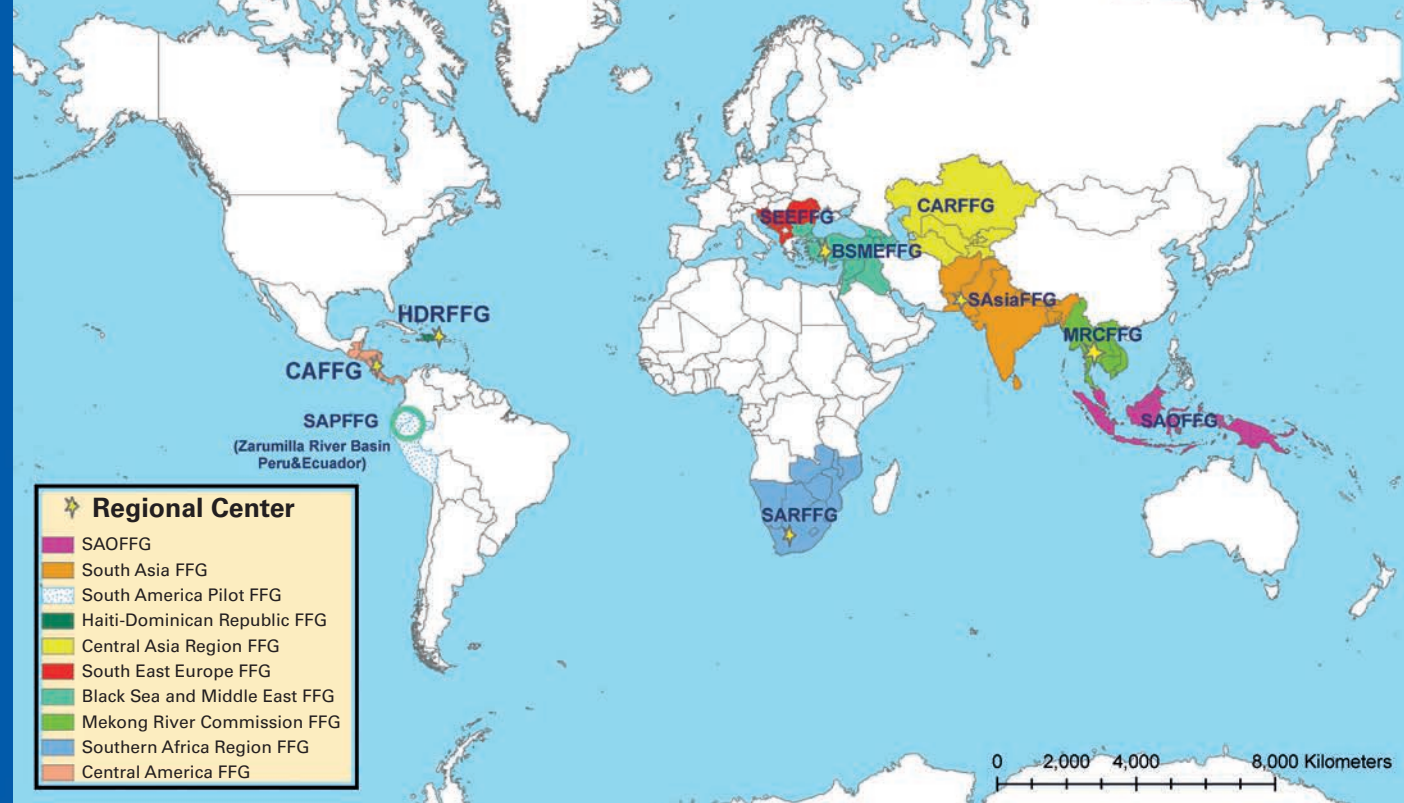
It has been jointly developed by the World Meteorological Organization (WMO) and the Hydrologic Research Center (HRC), with the support of the National Oceanic and Atmospheric Administration (NOAA) and the United States Agency for International Development (USAID).

### Objectives

- To improve the capacity of National Meteorological and Hydrological Services (NMHSs) to issue flash flood warnings and alerts
- To enhance collaboration between NMHSs and Emergency Management Agencies
- To foster regional cooperation
- To support and complement the WMO Flood Forecasting Initiative

### Why is a flash flood guidance system needed?

- Flash floods are among the world's deadliest natural disasters and result in significant social, economic and environmental impacts
- Frequency of flash flooding has been increasing over the last years due to climate variability and change



- Lack of flash flood warning capabilities and weak cooperation at the local, national and regional level are major factors contributing to local vulnerability
- Ineffectiveness of warnings further exacerbates the impacts from flash floods

### Who are the immediate and ultimate beneficiaries?

- National Meteorological and Hydrological Services
- DRR decision makers at the local, national and regional level
- Vulnerable communities in hilly-mountainous rural areas, as well as in urban areas
- All societal and economic stakeholders of potentially affected countries

### What products are included in a FFGS?

- Merged Mean Areal Precipitation (MAP): Satellite, Radar, and in-situ
- Average Soil Moisture (ASM)
- Flash Flood Guidance (FFG)
- Forecast Mean Areal Precipitation (FMAP)
- Forecast Flash Flood Threat (FFFT)
- Snow Covered Area (SCA)
- Snow Water Equivalent (SWE)
- Snow Melt (MELT)

All products are available at the basin scale that varies with available data and model resolutions, typically between 25 km<sup>2</sup> and 150 km<sup>2</sup>