# GIoFAS v3.3



European Management Service



SMHI





The following is a description of GIoFAS v3.3. For an overview of other GIoFAS releases, please see: GIoFAS versioning system

# Summary

GloFAS version 3.3 is associated with a change in ECMWF IT infrastructure and the necessary modifications to a number of software. Here is a summary of the main changes:

## 1. New version of LISFLOOD

LISFLOOD version 3.2.0 is used in this GloFAS release. It includes important developments, such as:

- enhanced code capability to handle inputs;
- new netCDF readers based on xarray that allow for more flexibility and efficiency, dramatically decreasing the time required to load large inputs thus leading to improved computational performances;
- extensive use of unit tests to verify the functioning of the model and enhance collaborative development of the code;
- improvements of the management of latitude and longitude grids to allow maximum precision of the reference system;
- porting of the code to python3.

The modelling of the hydrological processes has not changed compared to the version of the model used in the previous GIoFAS release.

For more information, please visit the dedicated GitHub space: https://github.com/ec-jrc/lisflood-code/releases

### 2. Enhancement of the web reporting points layer

- Introducing over 400 new river stations (grey symbols, for monitoring the hydrological forecast) in the reporting point layer
  279 in Africa
  - 45 in Mozambique, 29 in Cote d'Ivoire, 23 in Togo, 22 in Guinea, 19 in Cameroon, 16 in Chad, 14 in Namibia, 11 in Benin and Nigeria, 10 in Sudan and Zambia, 9 in Republic of Congo, 7 in Malawi and Rwanda, 6 in Senegal and Tanzania, 5 in Burkina Faso and Mali, 4 in Gabon and South Africa, 3 in Congo and Guinea Bissau, 2 in Algeria, Morocco and Zimbabwe and finally 1 new station in Botswana, Central African Republic, Ethiopia and Lesotho
  - 73 in Central America
    - 64 In Guatemala and 9 in Honduras
  - ° 65 in South America
    - all 65 in Argentina
  - 28 in Asia
    - 23 in China and 5 in Bangladesh

#### Technical details

Pre-release date	NA
Release date	2022-10-19
In test suite	2022-10-12
GloFAS internal number	004
Archiving of data	ECFS, MARS, CDS
Reference climatology (for thresholds/ anomalies)	1979-01-01 to 2020-07-31
GloFAS historical	1979-01-01 to near real-time
Reforecasts	GloFAS: 1999-01-03 to 2018-12-30.
	GloFAS Seasonal: 1981-01-01 to 2016-01-01
Horizontal projection	EPSG4326
Horizontal resolution	0.1 x 0.1°

**Temporal resolution** 

Daily