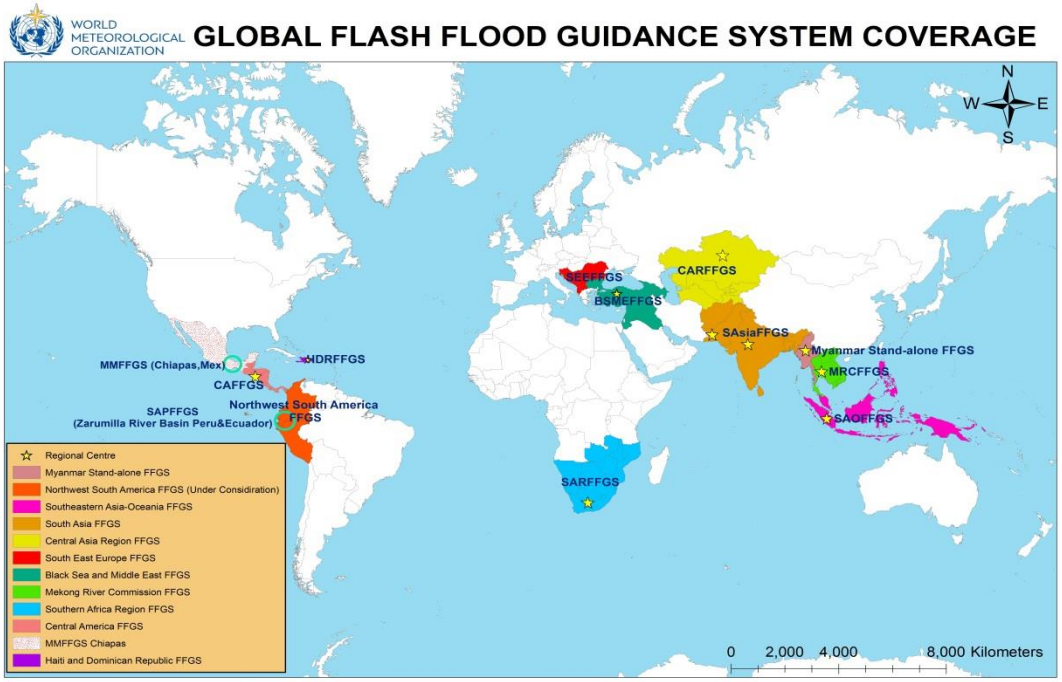
World Meteorological Organization

Weather • Climate • Water

Overview and Purposes of Second Steering Committee Meeting of the Black Sea and Middle East Flash Flood Guidance (BSMEFFGS) System

Flash Flood Guidance (FFG) System



Flash Flood Guidance System with global coverage (Resolution 21, World Meteorological Congress-XV) enhances early warning capabilities of the NMHSs, currently covers fifty two (52) countries and more than two billion people around the world saving lives and decreasing economic losses**.**

The WMO Commission for Hydrology (CHy) jointly with the WMO Commission for Basic Systems (CBS) and in collaboration with the US National Weather Service, Hydrologic Research Center (HRC), and USAID/OFDA have developed the concept of the Flash Flood Guidance System (FFGS) with global coverage. The concept has been endorsed by the Fifteenth WMO Congress and is being implemented through a series of regional projects with funding from USAID.

FFGS Regional Projects

The following regional Flash Flood Guidance (FFGS) projects are implemented or under implementation or under consideration:

- **Central America FFG** (**CAFFG**) (Operational): Costa Rica (Regional Centre (RC), Belize, Guatemala, Honduras, El Salvador, Nicaragua and Panama;
- **Southern Africa Region FFG** (**SARFFG**) (Operational): South Africa (RC), Botswana, Lesotho, Malawi , Mozambique, Namibia, Swaziland, Zambia, and Zimbabwe;
- **Mekong River Commission FFG (MRCFFG**) (Operational): Cambodia (RC), Lao PDR, Thailand, and Viet Nam;
- **Black Sea and Middle East FFG** (**BSMEFFG)** (Operational)**:** Armenia, Azerbaijan, Bulgaria, Georgia, Iraq, Israel, Jordan, Lebanon, Syria, and Turkey (RC);
- **South East Europe FFG (SEEFFG**) (Operational): Albania, Bosnia and Herzegovina, Croatia, Moldova, Montenegro, Romania, Serbia, Slovenia, The Former Yugoslav Republic of Macedonia, Turkey (RC);

GFFGS Regional Projects (cont.)

- **South Asia FFG (SAsiaFFG**) (under implementation): Afghanistan, Bangladesh, Bhutan, Nepal, Pakistan, Sri Lanka, and India;
- **Central Asia Region FFG (CARFFG)** (under implementation**):** Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan;
- **South America Pilot FFG** (Operational): Zarumilla River Basin (Peru and Ecuador);
- **Haiti-Dominican Republic FFG** (**HDRFFG**) (under implementation): Dominican Republic and Haiti;
- **South Eastern Asia Oceania FFG (SAOFFG)** (under development): Brunei, Indonesia, Malaysia, Papua New Guinea, Philippines, Singapore, and Timor Leste.

Objectives of the FFGS with Global Coverage

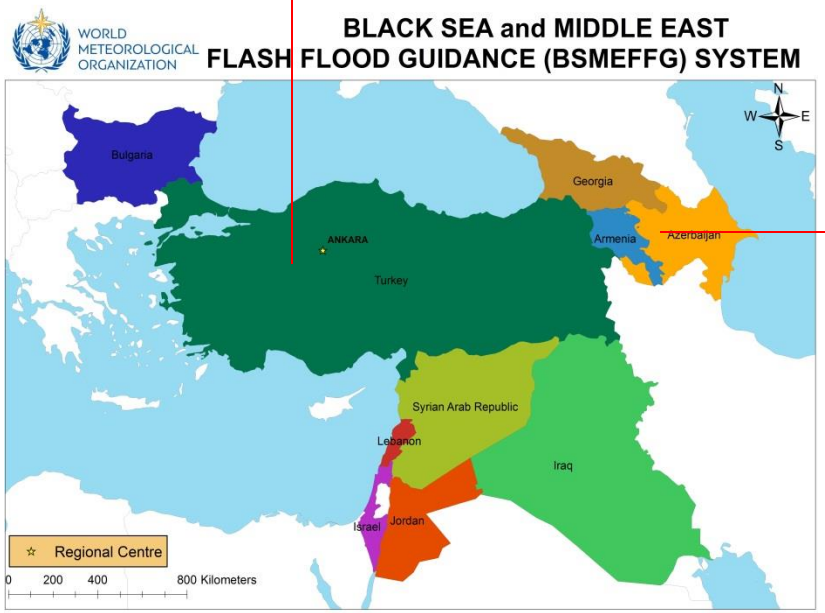
The main objectives of the Flash Flood Guidance System with global coverage are to:

- Enhance NMHSs capacity to issue flash flood warnings and alerts;
- Mitigate adverse impacts of hydrometeorological hazards;
- Enhance collaborations between NMHSs and Emergency Management Agencies;
- Generate flash flood early warning products by using state-of-the-art hydrometerological forecasting models;
- Provide extensive training including on-line training to the hydrometeorological forecasters;
- Foster regional developments and collaborations; and
- Support WMO Flood Forecasting Initiative.

Regional Components

The Regional Centre:

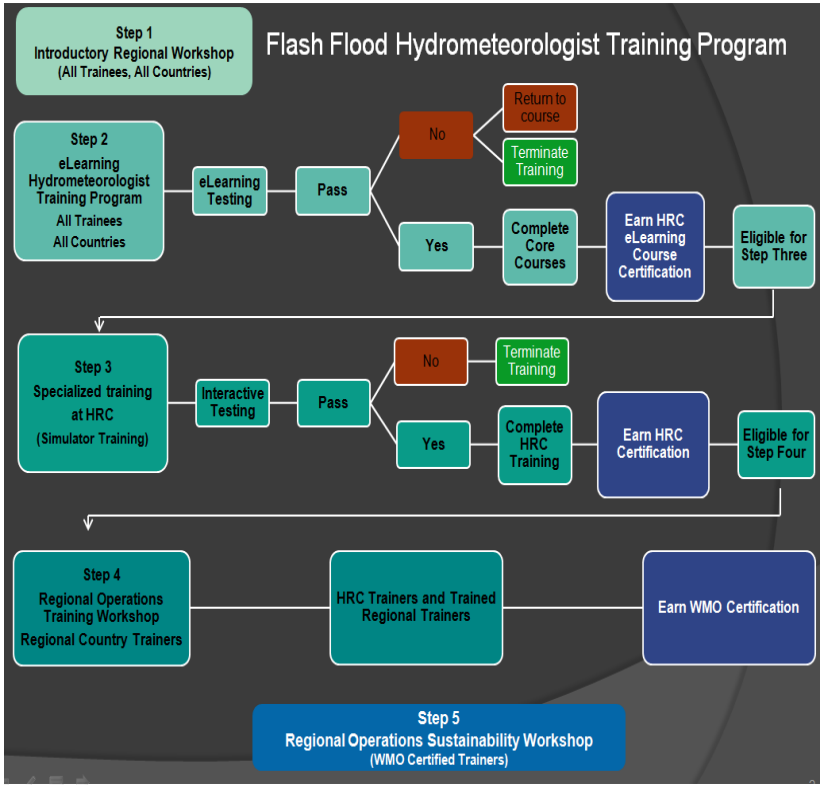
- Maintain FFG servers to provide products and data to the participating countries,
- Collaborate with WMO to implement flash flood hydrometeorologist training programme,
- Evaluate FFG products from the regional perspective and conduct verification study in collaboration with participating countries,
- Have good internet connection to download and exchange data.



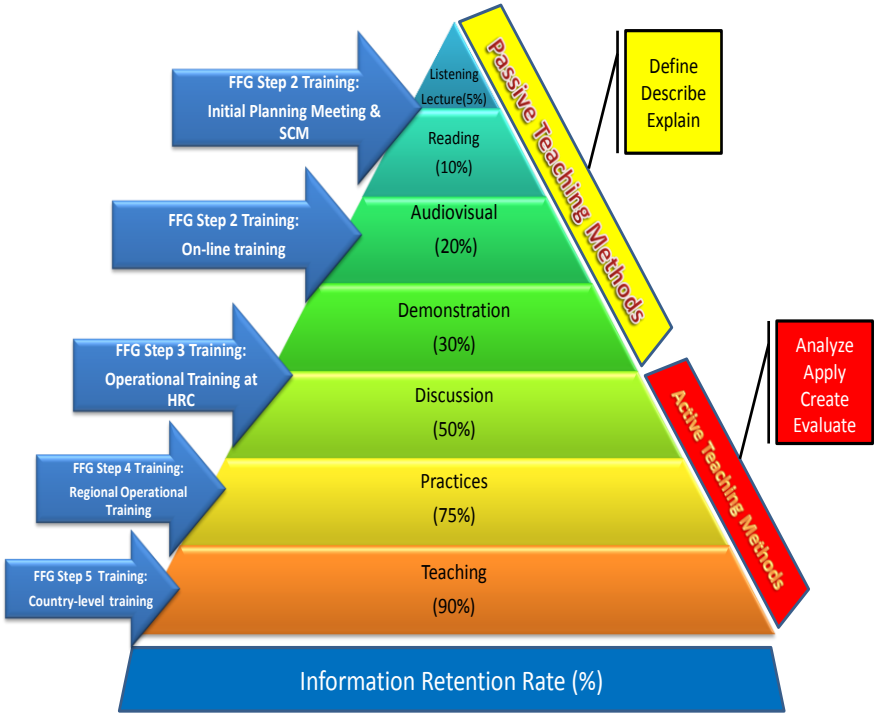
Participating NMHSs:

- Have good cooperation, collaboration, communication with the Regional Centre for the implementation of the project,
- Provide historical and in-situ local data to the FFG system developer through the RC,
- Prepare and issue flash flood warnings and alerts to the public and national agencies including Emergency Management Authorities,
- Participate in the Flash Flood Hydrometeorologist Training Programme (Steps 1-5),
- Conduct verification studies.

Flash Flood Hydrometeorologist Training Programme



Learning Pyramid and Flash Flood Hydrometeorologist Training Programme



Participants of the Operational Training at HRC (Step-3 Training)

Country	Participants
Bulgaria	Snezana Balabanova
Georgia	Marina Kordzakhina
Turkey	Yusuf Ulupinar
	Ayhan Sayin
	Ertan Turgu
Jordan	Dafi Elryalat
Lebanon	Abbas Obeid
	Fadi Doumit

Certified WMO FFG Trainers (Step-4 Training)

Country	Participants
Turkey	Yusuf Ulupinar
Jordan	Dafi Elryalat
Lebanon	Abbas Obeid

WORLD METEOROLOGICAL ORGANIZATION

This is to certify that

MR DAFI ELRYALAT

has successfully completed, **effective August 2016**, all requirements of the Flash Flood Hydrometeorologist Training Programme associated with the Black Sea and Middle East Flash Flood Guidance (BSMEFFG) System and is qualified as a

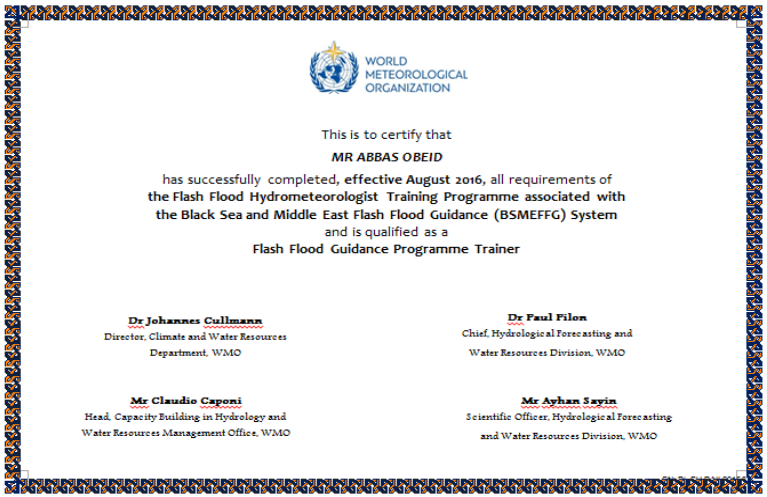
Flash Flood Guidance Programme Trainer

Dr Johannes Cullmann
Director, Climate and Water Resources Department, WMO

Dr Paul Pilon
Chief, Hydrological Forecasting and Water Resources Division, WMO

Mr Claudio Caponi
Head, Capacity Building in Hydrology and Water Resources Management Office, WMO

Mr Ayhan Sayin
Scientific Officer, Hydrological Forecasting and Water Resources Division , WMO



WORLD METEOROLOGICAL ORGANIZATION

This is to certify that

MR ABBAS OBEID

has successfully completed, **effective August 2016**, all requirements of the Flash Flood Hydrometeorologist Training Programme associated with the Black Sea and Middle East Flash Flood Guidance (BSMEFFG) System and is qualified as a

Flash Flood Guidance Programme Trainer

Dr Johannes Cullmann
Director, Climate and Water Resources Department, WMO

Dr Paul Pilon
Chief, Hydrological Forecasting and Water Resources Division, WMO

Mr Claudio Caponi
Head, Capacity Building in Hydrology and Water Resources Management Office, WMO

Mr Ayhan Sayin
Scientific Officer, Hydrological Forecasting and Water Resources Division, WMO

WORLD METEOROLOGICAL ORGANIZATION

This is to certify that

MR YUSUF ULUPINAR

has successfully completed, **effective August 2016**, all requirements of the Flash Flood Hydrometeorologist Training Programme associated with the Black Sea and Middle East Flash Flood Guidance (BSMEFFG) System and is qualified as a

Flash Flood Guidance Programme Trainer

Dr Johannes Cullmann
Director, Climate and Water Resources Department, WMO

Dr Paul Pilon
Chief, Hydrological Forecasting and Water Resources Division, WMO

Mr Claudio Caponi
Head, Capacity Building in Hydrology and Water Resources Management Office, WMO

Mr Ayhan Sayin
Scientific Officer, Hydrological Forecasting and Water Resources Division, WMO

Objectives of the SCM2 (Step 5 training)

Objectives of the BSMEFFG Second Steering Committee Meeting (Step-5 Training) are:

- Review the BSMEFFG products to allow forecasters to become familiar with the BSMEFFGS products;
- Promote operational use of the BSMEFFG products through hand-on exercises;
- Review and evaluate the BSMEFFG products for elected past flash flood events through case studies;
- Evaluate the performance of a participant from Turkey who successfully completed FFG Step-2 and Step-3 training to be qualified for the certified WMO FFG Trainer.

COMPETENCY REQUIREMENTS

A forecaster shall have the following competencies to use the BSMEFFGS products in operation:

- Analyze and monitor the evolving meteorological and hydrological situation;
- Analyze and monitor the BSMEFFGS Product;
- Forecast meteorological and hydrological phenomena and parameters such as flash floods;
- Prepare flash flood advisories, watches, warnings, and alerts; and
- Communicate flash flood warning information to internal and external users, including Emergency Management Agencies.

World Meteorological Organization

Weather · Climate · Water

Thank you for your attention

Ayhan Sayin

asayin@wmo.int