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## Flash Flood Guidance System (FFGS) User Training Workshop

**Bucharest, Romania**

**26 – 28 March 2024**

### 1. Background

Flash floods are among the world's deadliest natural hazards with more than 5,000 lives lost annually. Accounting for approximately 85% of flooding cases, flash floods also have the highest mortality rate among different classes of flooding.

To address the issues associated with flash floods, especially the lack of capacity to develop effective flash flood warnings, the Flash Flood Guidance System (FFGS) was designed and developed for interactive use by meteorological and hydrological forecasters throughout the world. In support of the FFGS project, a Memorandum of Understanding was signed by the WMO, the U.S. Agency for International Development (USAID), the National Oceanic and Atmospheric Administration (NOAA) and the Hydrologic Research Center (HRC) to work together under a cooperative initiative to implement the FFGS worldwide.

As of today, the [Flash Flood Guidance System \(FFGS\)](#) has been instrumental in saving lives and reducing losses from flash flooding in more than 70 countries, benefiting over 3 billion people.

The flash floods continue to significantly threaten lives, livelihoods, and property, especially with the added challenges of climate change and unplanned development in flood-prone areas. To tackle this global issue, concerted actions are required at the global, regional, and national levels to enhance existing systems and extend coverage to more countries, aligning with the Early Warnings for All initiative to ensure that early warning systems protect everyone on Earth within the next four years.

To support South East European (SEE) and Black Sea and Middle Eastern (BSME) forecasters in their daily operational tasks and to assist National Meteorological and Hydrological Services (NMHS) in deciding whether to issue flash flood warnings, the Turkish State Meteorological Service (TSMS) has created an application. This app sends email alerts when the Flash Flood Guidance System (FFGS) indicates a significant flash flood threat, notifying forecasters via mobile phones and emails. The application furnishes forecasters with crucial information including the likelihood of flash floods, specific location details (county and sub-basin), adequate lead time for issuing warnings, as well as other pertinent data such as forecasted precipitation intensity and soil moisture conditions. Moreover, TSMS has developed supplementary tools for visualizing flash floods and assessing snow water potential, with plans to implement these in SEE and BSME member countries.

### 2. User Training Objectives

- Foster regional development and collaboration
- Increase awareness of FFGS product usage through developed tools
- Unify the FFGS community
- Exchange knowledge and technology among FFGS members



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- Enhance FFGS functionalities
- Increase FFGS visibility
- Promote data sharing among member countries
- Gather feedback from FFGS regions

### 3. Participants and modality of the training workshop

Estimated number of participants: 40

Participating countries: Albania, Armenia, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Israel, Jordan, Lebanon, Moldova, Montenegro, North Macedonia, Romania, Serbia, Türkiye

Workshop modality: In-person

### 4. Tentative Agenda

The User Training Workshop will be held during 3 days with the following items:

26 March 2024 (Tuesday)		
09:00-09:15	Opening of the Workshop and Welcome Remarks	National Meteorological Administration, National Institute of Hydrology and Water Management, TSMS, WMO
09:15-09:30	Introduction of Participants	All
09:30-09:50	Overview of the FFGS with Global Coverage	WMO
09:50-10:00	Overview of the Workshop and its Objectives	TSMS
10:00	Group photo	
<b>10:00-10:30</b>	<b>Coffee break</b>	
10:30-10:45	Ice breaker activity	WMO
10:45-11:00	Knowledge and Technology Transfer	TSMS
11:00-12:00	Effective and Operational Use of the FFGS Tools	TSMS
12:00-12:30	Preparation of flash flood warning	TSMS
<b>12:30-13:30</b>	<b>Lunch break</b>	
13:30-14:00	"Sending Automatic Warning e-mail Message (Life-saver) Tool"	TSMS
14:00-15:30	"Sending Automatic Warning e-mail Message (Life-saver) Tool" Hands-on exercise	All
<b>15:30-16:00</b>	<b>Coffee break</b>	
16:00-17:00	Continuation of the exercise, Questions and answers	All
19:00	<b>Welcome Dinner</b>	



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	Hosted by the National Meteorological Administration of Romania	
<b>27 March 2024 (Wednesday)</b>		
09:00-09:15	Group activity	WMO
09:15-10:30	“Visualization of the Flash Flood Threat Tool” and Hands-on exercise	TSMS, All
<b>10:30-11:00</b>	<b>Coffee break</b>	
11:00-11:30	“Monitoring Snow Water Potential Tool” and Hands-on exercise	TSMS, All
11:30-12:30	FFGS Simulator Hands-on exercise	WMO, All
<b>12:30-13:30</b>	<b>Lunch break</b>	
13:30-16:00	Visit to the National Meteorological Administration and National Institute of Hydrology and Water Management of Romania	All
<b>28 March 2024 (Thursday)</b>		
09:00-09:15	Group activity	WMO
09:15-10:00	Flash flood case study and discussion	TSMS
10:00-10:15	Exploring the operational dynamics: FFGS server status	TSMS
10:15-10:30	Modification and the development process of FFGS applications	TSMS
<b>10:30-11:00</b>	<b>Coffee break</b>	
11:00-12:00	Hands-on exercise	All
12:00-12:30	Closing Session & Certificate Distribution	All
<b>12:30-13:30</b>	<b>Joint lunch</b>	
	END OF THE WORKSHOP	