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Overview and purposes of the meeting

WEATHER CLIMATE WATER
TEMPS CLIMAT EAU



WMO OMM

World Meteorological Organization

Organisation météorologique mondiale



Flash Floods vs. River Floods

Riverine Flooding:

- is caused by heavy rainfall (and/or snow melt) over long periods e.g., days, leading to rising water levels and flooding as the flood wave takes days to move down river.

Flash Flood:

- is a flood of short duration with a relatively high peak discharge usually having less than 6 hours between the occurrence of the rainfall and the peak.



Flash Floods – The most deadly natural (weather-related) disaster in the world

- “Recent findings of the WMO country-level survey where of the 139 countries, 105 indicated that flash floods were among the top two most important hazards around the world and require special attention”.
- “On the average, these events kill more people worldwide than any other [weather-related] natural disaster -in an average year, flash floods kill over 5,000 unsuspecting people and cause millions of dollars of property damage”(WMO 2008).



Flash Flood Guidance System (FFGS) Project

- FFGS is designed to produce flash flood early warning products to provide guidance to the forecasters in issuance of flash flood warnings by using several hydro-meteorological models, incorporating local and global hydro-meteorological, geomorphological, and topographical historical data as well as satellite data, in-situ observations, and Numerical Weather Prediction (NWP) Quantitative Precipitation Forecasts (QPF), allowing users to access the products and data through an internet-based user interface.



Rational for the Selection of HRC Flash Flood Guidance Concept

- Based on the best available scientific and technological background on flash floods;
- Proven concept in many regional implementations;
- Robust and stable system;
- Adaptable to various regional and local conditions (environmental, institutional, technical); and
- Dedicated capacity building components.



Background of the FFGS Project

- The WMO Congress XV in 2007 approved the implementation of the Flash Flood Guidance System (FFGS) project with global coverage:
 - developed by the Commission for Hydrology (CHy) jointly with the Commission for Basic System (CBS) in collaboration with the US National Weather Service (NWS), the US Hydrologic Research Center and USAID/OFDA.



Main Goal of the FFGS Project

- Contribute towards reducing the vulnerability of regions around the World to hydrometeorological hazards, *specifically flash floods*, by:
 - strengthening national and regional capacities to develop timely and accurate flash flood warnings; and
 - developing and implementing the regional Flash Flood Guidance (FFG) System.



Main Objectives of the SCM Meeting

- Present and discuss development and implementation status of the SAOFFG project; review its products; how to use them in preparation of flash flood watches, warnings, and alerts; introduce advances in FFG System; discuss the linkages with the other regional projects such as SWFDP-SAO; and
- Discuss and possible agree on the Step 4 and 5 training schedule.



Expected Outcomes of the FSC Meeting

- Understanding of the needs for the local, regional, and international cooperation among related institutions and organizations to implement the SAOFFG project;
- Understanding of concept of operation of SAOFFG System in issuance timely and accurate flash flood warnings;
- Understanding the needs of local hydrometeorological data and geomorphological requirements to improve the accuracy of the SAOFFGS products;
- Understanding the concept of basin delineation for the SAOFFGS and its verification/control procedure by the participating NMHSs;



Expected Outcomes of the FSC Meeting

- Understanding of the Advances in FFG System such as Multi-NWP model ingestion, Landslide susceptibility mapping, Urban flash flood EWS, and Riverine Routing;
- Become familiar with the Jakarta Urban Flash Flood EWS and its data requirements; and
- Understanding the FFGS Hydrometeorologist Training programme and its implementation in five steps.



Items to be Addressed in this Meeting

- Capabilities of the participating NMHSs on flash flood/flood forecasting and early warning system and available infrastructures;
- Review of Roles and Responsibilities of the Regional Centre and participating NMHSs;
- Overview of the SAOFFGS products and its background;
- Local data requirements for the implementation of the SAOFFG System;
- Verification/control of basin delineations;
- Example of FFGS regional implementation – BSMEFFGS;
- Verification of flash flood warnings;
- Advances in FFG System;
- Project Management issues; and
- Recommendations and decisions.



Thank you

Paul Pilon

ppilon@wmo.int

Ayhan Sayin

asayin@wmo.int

Petra Mutic

pmutic@wmo.int



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