

OVERVIEW OF THE FLASH FLOOD GUIDANCE SYSTEM FOR SOUTHEAST ASIA

DATA AND INFORMATION NEEDS

HYDROLOGIC RESEARCH CENTER

DATA AND INFORMATION NEEDS – AS AVAILABLE

Logistical Data Needs

- ▣ Longitude and latitude coordinates of all sensors providing real time data and historical data, type of data and sensor (*geo-referencing of data*)
- ▣ Longitude and latitude coordinates of dams and reservoirs (*accounting for contributing area in threshold runoff estimation*)
- ▣ Evaluation of basin delineation: initial delineations based on hydrologic processing of the SRTM (90-m) resolution digital elevation data and hydrographic information from the Digital Chart of the World
 - Evaluation of the delineation results with local knowledge and expertise is required for final quality assurance
 - Delineation maps may be provided in GIS format (ArcView shape files), or in image format (e.g., JPEG) for sub-regions within the delineated region.
(*evaluation/verification of delineation*)

DATA AND INFORMATION NEEDS – AS AVAILABLE

Spatial Digital Data or Maps

- ▣ Digitized stream network data (*evaluation/verification of delineation*)
- ▣ Digitized country catchment boundaries data (*evaluation/verification of delineation*)
- ▣ Land-use and land-cover data (*parameterization of hydrologic models*)
- ▣ Soils data to include soil texture or FAO soil classification or soil properties data (*parameterization of hydrologic models*)
- ▣ Local stream cross-sectional survey data for streams draining 10-2000km² (*estimation of threshold runoff*)
 - Reports of regional relationships between channel cross-sectional characteristics and catchment characteristics
- ▣ Population Distribution (if available)

DATA AND INFORMATION NEEDS – AS AVAILABLE

From at least 2012 - present

Historical Data

- Recent data, 5-20 years in record length, in digital format with daily and/or hourly resolution. Monthly or climatological data useful (*development of hydrologic model parameters and validation of hydrologic models*)
- Precipitation data (hourly, daily, monthly, climatology)
- Air Temperature data (hourly, daily, monthly, climatology)
- Pan evaporation data (daily, monthly, climatology)
- Soil moisture data for top 1 meter of soil (weekly, monthly, climatology)
- Streamflow discharge data for tributary streams to Mekong River or upstream (hourly, daily, monthly, climatology)
- Stream stage data (hourly, daily, monthly, climatology) and associated stage-discharge curves (rating curves), also for Mekong River tributaries or upstream
- Radiation data for computation of potential evapotranspiration (daily, monthly, climatology)
- Wind, humidity data for computation of potential evapotranspiration (daily, monthly, climatology)

DATA AND INFORMATION NEEDS – AS AVAILABLE

Real-Time Data

- ▣ Precipitation data (hourly)
- ▣ Temperature data for computation of potential evapotranspiration (hourly or six-hourly or Tmax and Tmin)
- ▣ Identification and longitude and latitude coordinates of real time reporting stations
- ▣ River stage and reservoir data for reference



THANK YOU