



First Steering Committee Meeting(SCM 1)  
Southeastern Asia-Oceania Region Flash Flood  
Guidance(SAOFFG) project,Jakarta,Indonesia,10-12 July 2017

## Status of FLOOD FORECASTING & Data Needs in Papua New Guinea

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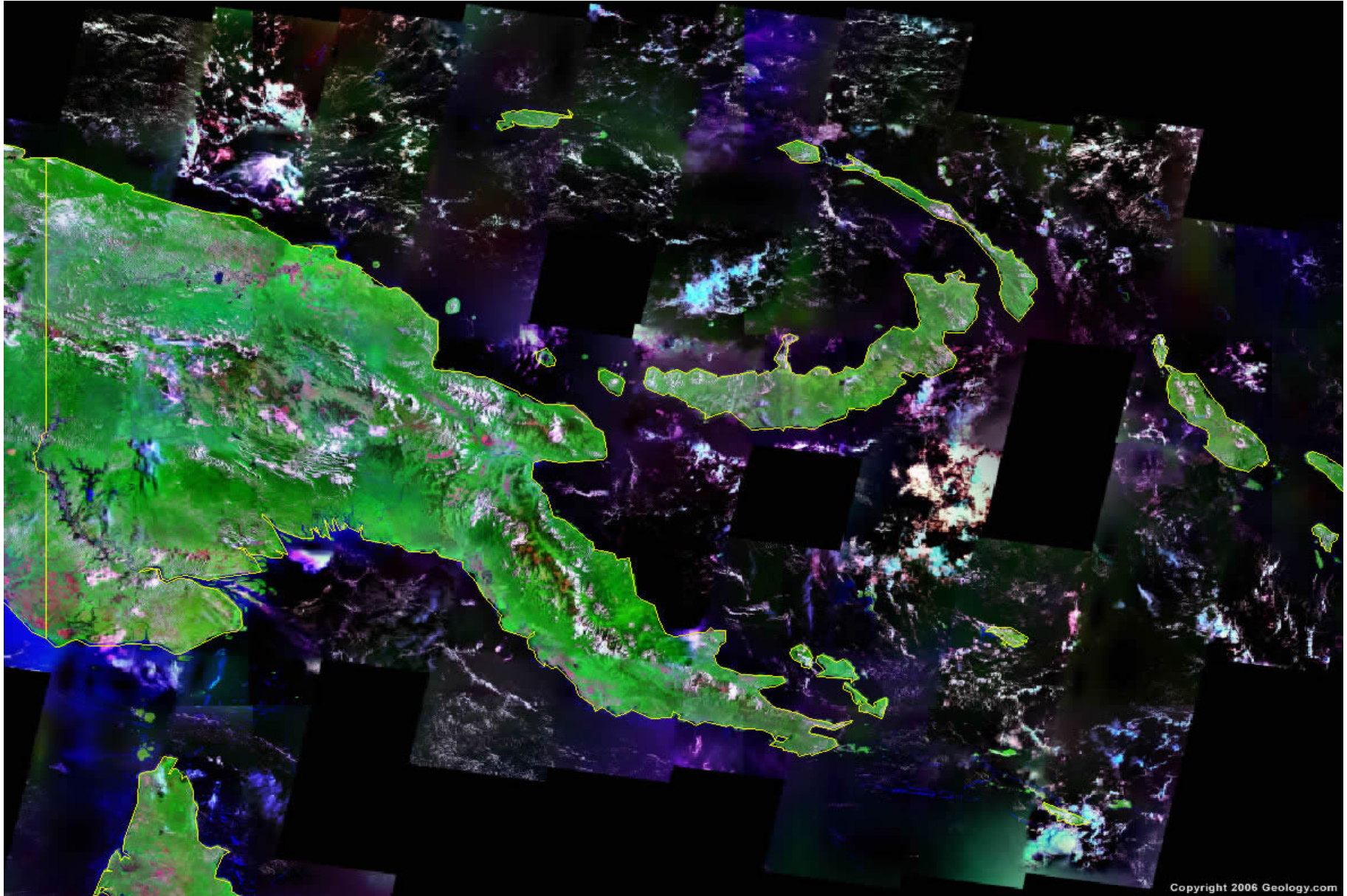
PNG NWS

Forecasting & Warning.

### Current Status:

- Hydrology was until 2014 under Department of Environment and Conservation
- Environment and Conservation was corporatized in 2014 with the formation of Conservation Environment Protection Agency(CEPA)
- Hydrology and Flood Forecasting was reduced in priority
- No Mandated Agency to undertake Flood Forecasting
- PNG National Weather Service is in the process of incorporating Hydrological forecasting as part of PNGNWS.
- UNDP project is in Progress-Flood Forecasting System
  1. 5 Automatic weathers stations (Wewak, Madang, Popondetta, Kavieng & Nadzab)
  2. River Gauges ( Sepik and Bumbu rivers)
  3. *ClIDEsc*. Climate Data for the Environment Services application Client
- PNGNWS is being Restructured to capture Hydrology and Flood Forecasting.

# GEOLOGIC MAP OF PAPUA NEW GUINEA-Courtesy of Geology .com







# Availability of Hydro-meteorological Data

Logistical Data	Longitude and Latitude Coordinates ( in decimals degrees) and elevation (in meters) of all sensors providing real time data and historical data along with data, units of measurement and sensor	Available for 35 AWS stations <a href="http://www.pngclimate.net">www.pngclimate.net</a>  13 Surface Manual observation stations	Memorandum of Understanding is needed to release data
	Longitude and Latitude coordinates (in decimal degrees) of dams and reservoirs	Will be made available for up to 10 Reservoirs	Request from in country Energy company.

# Availability of local Hydro-meteorological Data

Spatial Digital Data or Maps	Soils data to include soil texture or FAO soil classification or soil properties data and depth of upper soil and sub soil	Available in PNG Resources Information System(PNGRIS)	Memorandum of Understanding with DAL is needed to release data
	Land-use/ Land-cover or vegetation-cover data		
	GIS map(s) of bedrock, alluvial channels, or other hydrologic characteristics	Available from Mineral Resources Authority?	May require funding to source the data
	Digitized stream network data	Available in PNG Resources Information System(PNGRIS)	Memorandum of Understanding with DAL is needed to release data

## Availability of local Hydro-meteorological Data

Stream Survey Data	Local stream cross-sectional survey data for natural streams draining 10-2000KM <sup>2</sup>	Available? Format?	
	Reports of regional relationships between channel cross-sectional characteristics and catchment characteristics	Available? Format?	
Real Time Data	Surface precipitation and Weather Data	Available for 13 stations	
	River stage + rating curves, or discharge data (hourly,6 hourly or daily)	scarse data mostly for private companies.eg. Mining companies.	



## Availability of local Hydro-meteorological Data

Historical Data	Precipitation data(hourly, daily, monthly, climatology)	AVAILABLE/FORMAT?	Request Data Format
	Air temperature(hourly, daily, monthly, climatology)	AVAILABLE/FORMAT? AVAILABLE/FORMAT?	
	Pan evaporation data(daily, monthly, climatology)	AVAILABLE/FORMAT? AVAILABLE/FORMAT?	
	Soil Moisture data for top 1 meter of soil(weekly, monthly, climatology)	AVAILABLE/FORMAT? AVAILABLE/FORMAT?	
	Snow water equivalent	N/A	
	Stream-flow discharge data for local streams with drainage areas less than 2000km <sup>2</sup> (hourly, daily, monthly, climatology)	AVAILABLE/FORMAT?	

## Availability of local Hydro-meteorological Data

Historical Data	Spring discharge data		
	Stream stage data(hourly, daily, monthly, climatology) and associated stage-discharge curves(rating curves), also for local streams.	May Not be available	
	Radiation data for computation of potential evapo-transpiration (daily, monthly, climatology)	May not be available	
	Wind, humidity data for computation of potential evapo-transpiration (daily, monthly, climatology)	Available	Need Data Format
	Groundwater recharge rates, channel transmission losses.	May not be Available	Need Data Format.

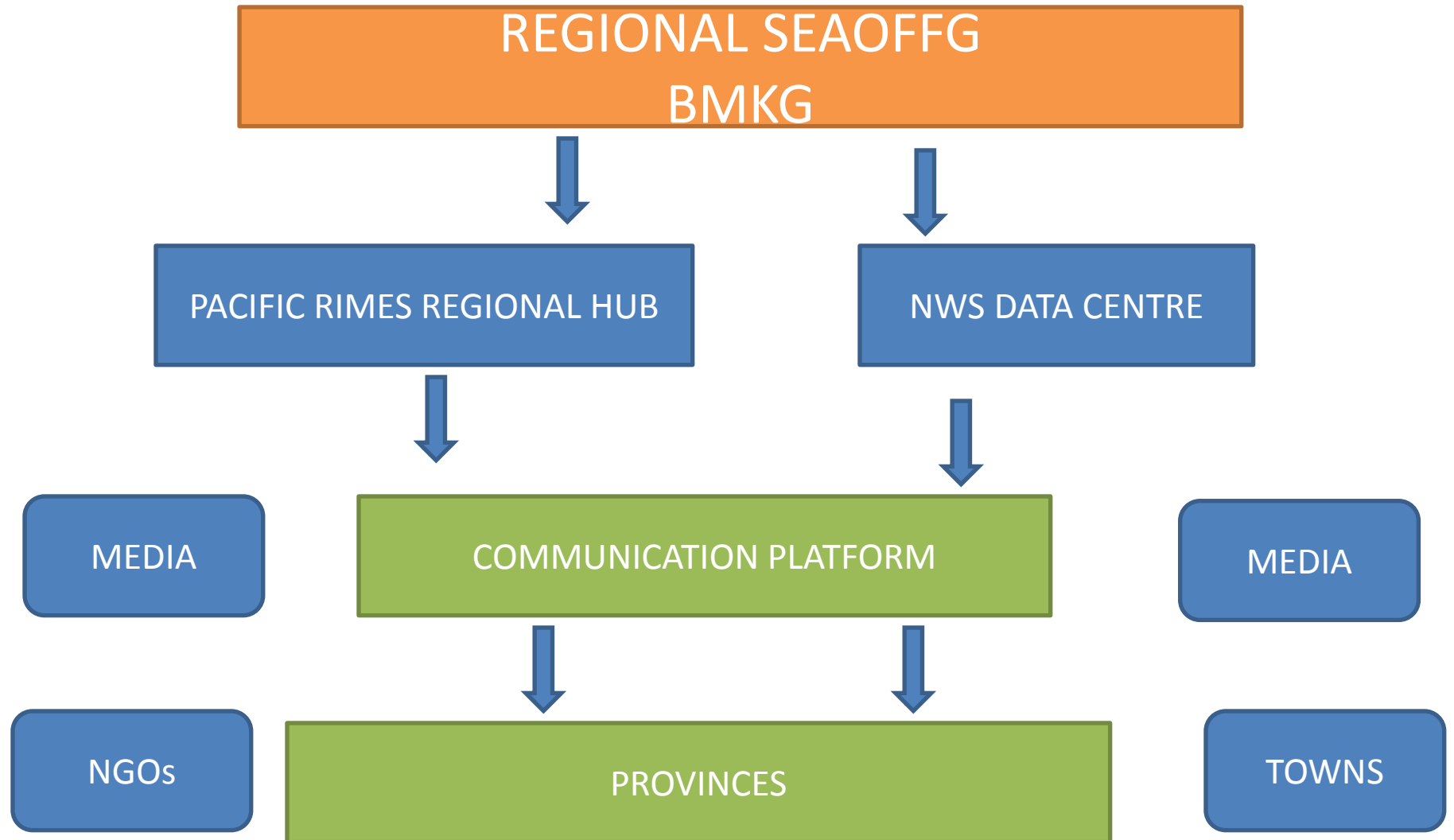
## Availability of local Hydro-meteorological Data

Reports	Flood Frequency Analysis (Regional and local)	May be available	
	Flash Flood Occurrence	Data may be available	
	Stream geometry studies for small streams	Will be available from 2017	
	Climatological precipitation and flood Studies	Available	Request Format

# Current Tools for Flash flood Forecasting

1. SMART MET FORECASTING SYSTEM IS CURRENTLY OUR FORECASTING SYSTEM
2. Regional Integrated Multi-hazard Early Warning Systems hub of Pacific will be launched On August 22-23, 2017 during RIMES Ministerial Conference in Port Moresby, PNG.
3. It is anticipated that Flood Forecasting will be one of the Hazards to be part of the RIMES Sub-Regional Hub of the Pacific.
4. WE LOOK FORWARD TO SEEING COLLEAGUES FROM THE REGION NEXT MONTH IN PORT MORESBY

FLOOD FORECASTING WILL BE PART OF MULTI-HAZARD EARLY WARNING CENTRE



**THANK YOU VERY MUCH**

**FOR**

**YOUR ATTENTION**

**Terimah Kasih**