

Asia Water Cycle Initiative (AWCI) International Task Team (ITT)

Working Session

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PAGASA/DOST



- The principal river, Angat River, originates from the western flank of the Sierra Madre Mountains. It then cuts through the mountainous terrain in a westerly direction to the dam site.
- The elevation within the watershed rises to a maximum of 1,115 meters at the Sierra Madre Mountain range and is lowest at the dam site at 100 meters.
- It has three major tributaries, namely, the Talaguio, Catmon and Matulid Rivers. The Angat Watershed has a moderate to intensive forest cover and has a drainage area of about 568 square kilometers, which receives an average annual rainfall of about 4,200 millimeters.
- The Angat Dam is a rockfill dam with a spillway equipped with three gates at a spilling level of 219 meters. Its storage capacity is about 850 million cubic meters. Water supply to the MWSS is released through five auxiliary turbines where it is diverted to the two tunnels of the Ipo Dam.



ANGAT BASIN



Angat Dam

The Angat Reservoir and Dam are located at the Angat River in San Lorenzo, Norzagaray, Bulacan. The facilities were constructed from 1964 to 1967 and have been operational since 1968. They have multi-purpose functions:

1. To provide irrigation to about 31,000 hectares of land in 20 municipalities and towns in Pampanga and Bulacan;
2. To supply the domestic and industrial water requirements of residents in Metro Manila;
3. To generate hydroelectric power to feed the Luzon Grid; and
4. To reduce flooding to downstream towns and villages.



MAJOR ISSUES AND NEEDS RELATED TO THE WATER CYCLE AND WATER RESOURCES MANAGEMENT IN ANGAT BASIN

a) Development of a more accurate short and long-term weather/climate forecast model

b) Streamflow forecast model for the basin/watershed

c) Decision support system for the management of the water resource of the basin/watershed



AVAILABLE OBSERVATIONS AND EXISTING DATA SETS

a) rainfall stations

Angat— 1968- present

Maputi – May,1986 - present

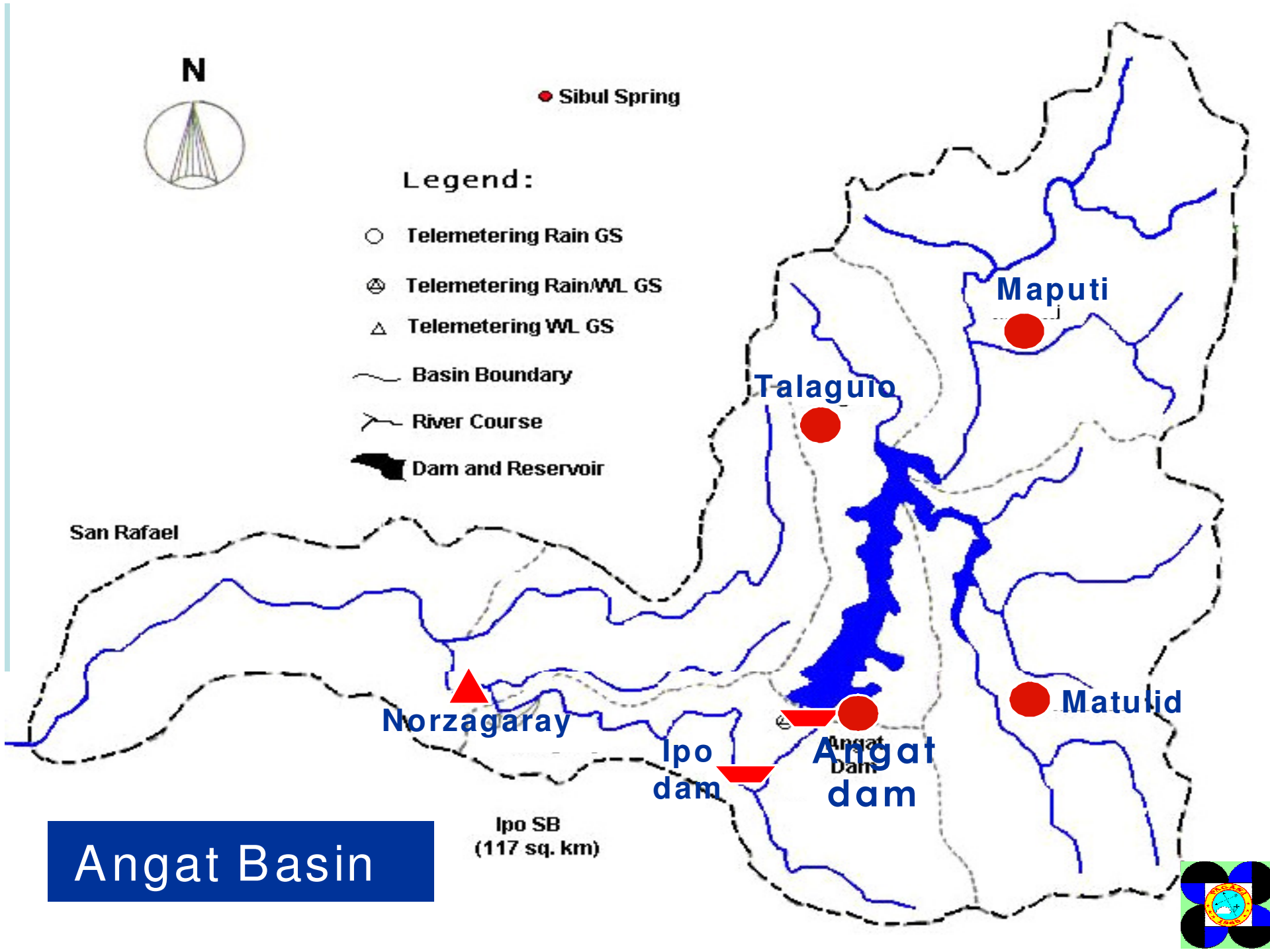
Talaguio – May,1986 - present

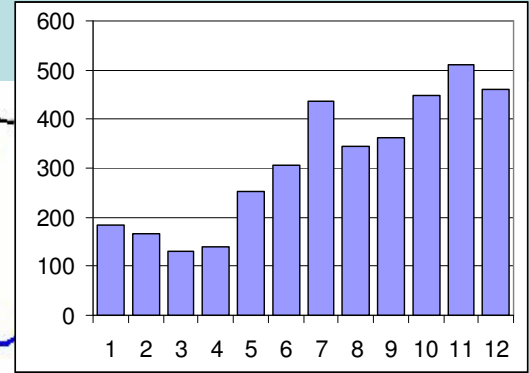
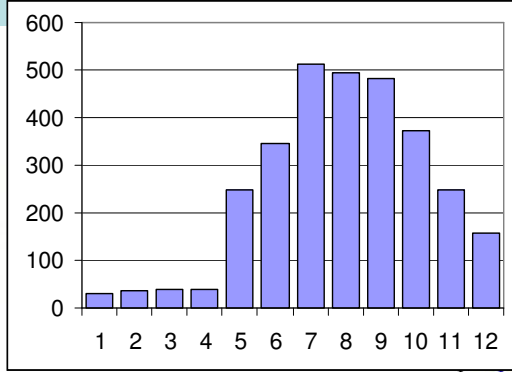
Matulid – May,1986 - present

b) dam elevation -- 1968 - present

c) inflow -- 1968 - present

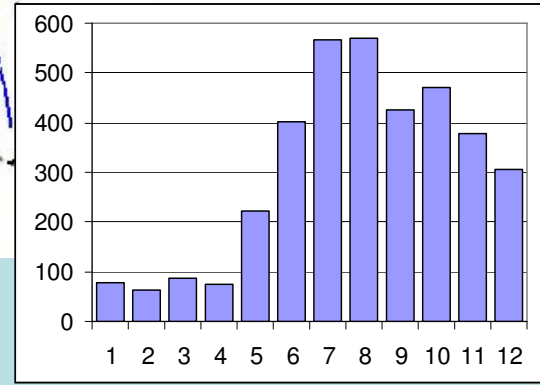
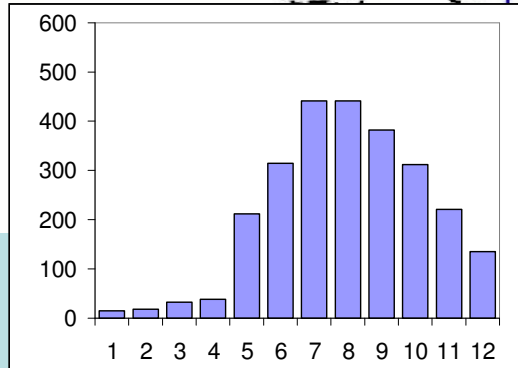
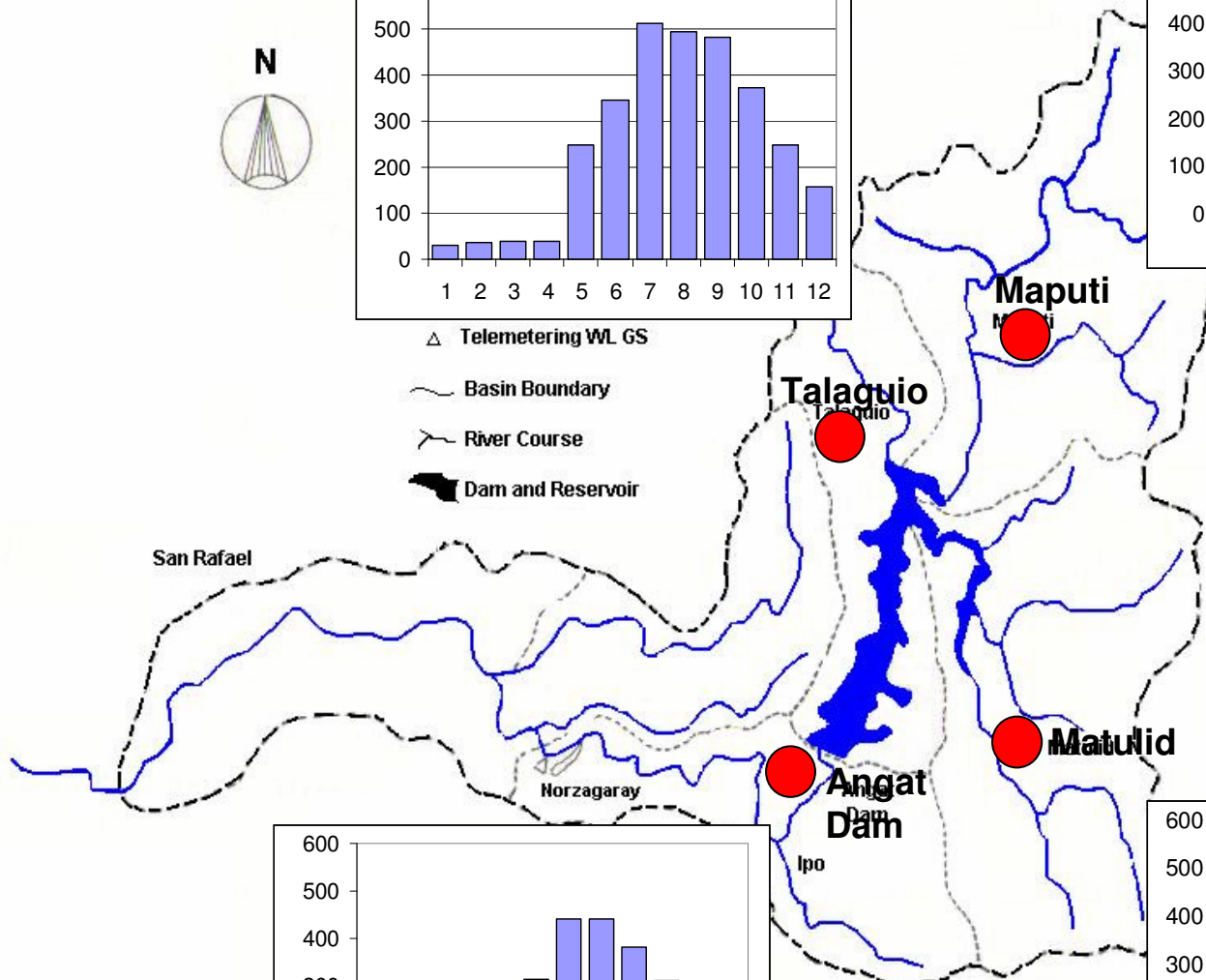






- △ Telemetering WL GS
- Basin Boundary
- River Course
- Dam and Reservoir

Monthly distribution of rainfall in the Angat watershed



AWCI demonstration project

- Identify common issues and concerns
- The data set to be provided by CEOP consisting of in-situ, satellite and atmospheric GCM and regional model outputs can be utilized to address the issues that were identified.
- the participating countries use similar methodologies





Thank You!

“tracking the sky . . . helping the country”