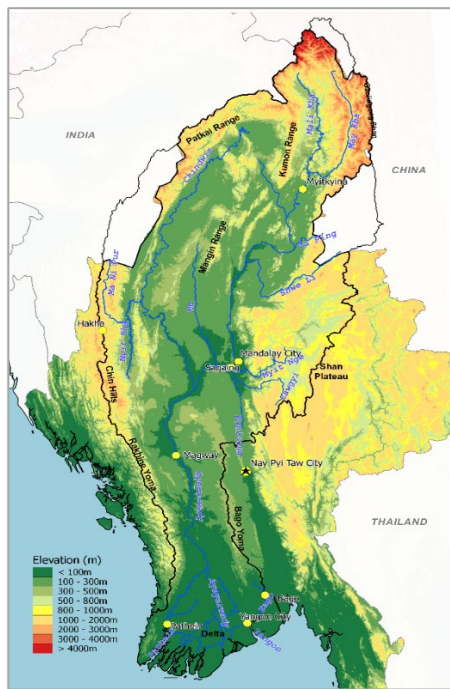


WATER RESOURCES OF THE AYEYARWADY RIVER BASIN

BACKGROUND

The Ayeyarwady Basin, is in the Republic of the Union of Myanmar. An agriculturally dominated country in South-East Asia. With an area of just over 675 000 km², Myanmar is the second largest country in South-East Asia, after Indonesia.

Originating in the Himalayas, the Ayeyarwady River is approximately 2 000 km in length, flowing in a north-south direction through Central Myanmar. The river basin has a total area of 413,700 km² and covers about 61% of Myanmar. About 5% of the Basin extends into the neighboring countries of India (to the west) and China (to the east).



The climate of the Ayeyarwady River Basin is dominated by a monsoonal rainfall regime, associated with the south western Indian monsoon. It is also affected by convectional systems and cyclones from the Bay of Bengal. Groundwater flows to the streams and snowmelt from the northern regions also contribute to basin flows.

The Ayeyarwady River Basin is still a relatively undeveloped basin. Most of the Basin is characterized as rural, with agriculture the main use of water.

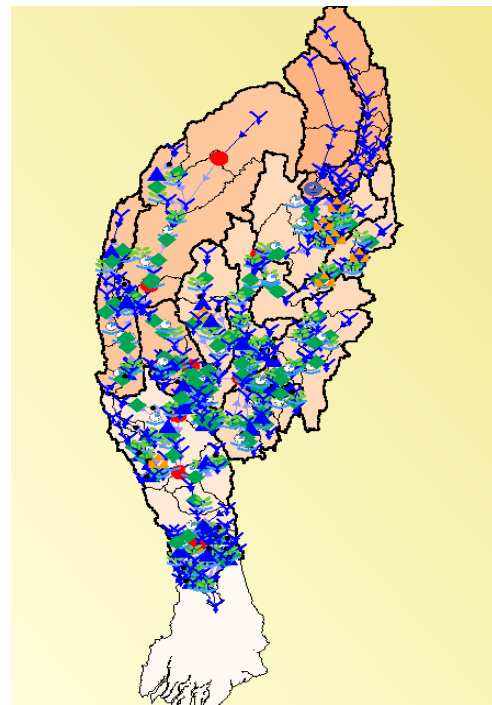
PROJECT OVERVIEW

The project was part of a State of the Basin Assessment (SOBA) for the Ayeyarwady Basin. The SOBA was undertaken for the Government of Myanmar, with the support of the Australian Water Partnership.

The SOBA was the first integrated assessment of the Ayeyarwady River Basin. It provides a baseline of the basin's water and other natural resources, from which future management options can be compared against.

eWater's role was to develop a preliminary baseline Source water system model for the basin (north of the delta). The model was then used to support a baseline assessment of the surface water resources of the Ayeyarwady Basin.

The model is run with historic climate data for 1981-2016, 2014 land use and 2016 storage capacity. It includes representations of agricultural, domestic, urban and hydropower water use.



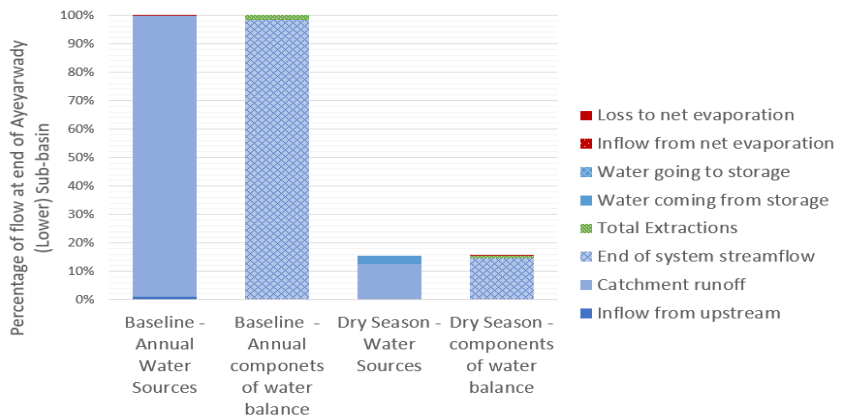
Ayeyarwady Basin Source model



WATER RESOURCES OF THE AYEYARWADY RIVER BASIN

PROJECT BENEFITS

The baseline assessment gives water managers a description of the hydrology of the Ayeyarwady River Basin according to 5 Hydro-Ecological Zones and 13 sub-basins. The project focused on water availability and use, giving a better understanding of the Basin's water resources, such as the water balance shown below.



The water system model, which has been built to underpin this assessment, is a first cut at drawing together the information required to adequately understand and simulate the complexities of the Ayeyarwady River Basin. The baseline model will be key tool to support the future management of the basin's water resources, making it possible to:

- Simulate components of the hydrological cycle at points in the Ayeyarwady River Basin where observed values are not available.
- Combine outputs from the model together with observed values, to provide an overall assessment of water availability and uses across the Ayeyarwady River Basin.
- Have a baseline for support the ongoing assessment of the Basin's water resources and to examine possible future scenarios and possible implications, for example with climate change or increased agricultural use.
- Identify information gaps and inform future data collection initiatives.

eWater is currently working with its partners in Myanmar to use the model to explore future scenarios in terms of climate change and changes in development.



Myanmar Water Professionals learning how to build a Source model for the Ayeyarwady, December 2016