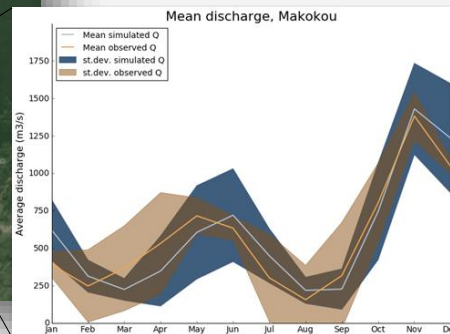
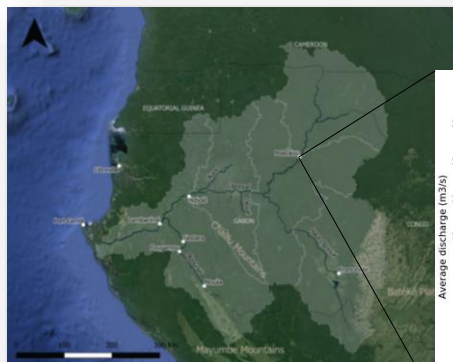


River Basin Hydrology



Description: This product provides hydrological modelling facilities. The key outputs are simulated river discharge time series at various locations in the basins. The product can be used to establish baseline conditions for poorly gauged and ungauged basins as well as to quantify impacts on hydrological regimes due to climate change, hydraulic infrastructure projects, irrigation diversions etc. The hydrological models are set up using the semi-distributed, physically based hydrological simulation software SWAT (Soil and Water Assessment Tool), developed by the US Department of Agriculture. Required static inputs for SWAT are elevation, land cover and soil type. Required time-variable forcing's are precipitation and reference Evapotranspiration. Sub-catchment discretization is guided by the available in-situ discharge stations, location of reservoirs and other points of interest. Calibration is performed with the PEST software package. In-situ discharge data, satellite radar altimetry data and Gravity Recovery and Climate Experiment (GRACE) total water storage estimates are used to calibrate and validate the model.



Product : River Basin Hydrology

Location: Ogooué, Gabon

Input EO data sources: SRTM and/or ACE2 digital elevation model; FEWS-RFE and/or TRMM precipitation estimates; Virtual station radar altimetry time series (Jason, AltiKa, Sentinel-3); Drifting-orbit radar altimetry data (CryoSat-2); GRACE total water storage time series

Time period: 2000 to present (Daily time steps)

Spatial resolution: Sub-catchment level

Accuracy: Not accessed due to lack of congruent in-situ discharge data, but considered the best available hydrologic information for the Ogooué

