

Using Remote Sensing to Study Impact El Niño Southern Oscillation on Reservoir Level at Murum and Bakun Dam Hydropower, Sarawak

ABSTRACT

In the years 2015 and 2016 has happened El Niño phenomenon was one of the three worst in history that has been happened since 1908. The El Niño phenomenon is usually related to the drought in Southeast Asia, Asia Pacific, and the Caribbean. This study analyses the impact of El Niño in the year 2015/2016 on rainfall at Bakun and Murum Hydropower using the technique of remote sensing. Global Precipitation Measurement (GPM) satellite was applied to understanding, the impact of 2015/2016 El Niño on rainfall at Bakun and Murum Hydropower. The results of this study show that drought conditions are widespread have reduced the total amount of rainfall and reservoir level and led to unusually low lake levels in Bakun and Murum reservoirs. Better understand the hydrological response and the complexity of different methods. The study found the rainfall decrease 20 until 30 % from normal during neutral and reduced 25 until 30 meters above sea level the reservoir water level at Murum and Bakun dam during the El Niño 2015/2016. The impact approach can support the design of more adaptive management strategies for specific areas.