

Impacts of hydropower station daily regulation on flow regimes downstream

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Abstract A hydropower station's daily regulation may change river natural daily runoff and river habitat characteristics, and thus could influence the composition, structure and function of the biocommunity. Based on characteristics of the hydropower station's daily regulation and concepts of ecohydrological parameters, hydrologic indices on the basis of the time series of hourly water level were applied to elucidate the influences of hydropower station daily regulation on streamflow. The attributes of those daily flow pulses, such as magnitude, rate of change, timing and duration, generated by the hydropower station, were quantified. The results of the study provides references for the assessment of impacts of altered flow regimes on riverine ecosystems due to hydropower stations' daily regulation.

Key words hydropower station's daily regulation; flow regime; hydrological indices