Category	Hydrology	ID-H01	***>>> Back to Attribute List***

Attribute Natural Discharge

Source data WaterGAP v2.2 (data of 2014)

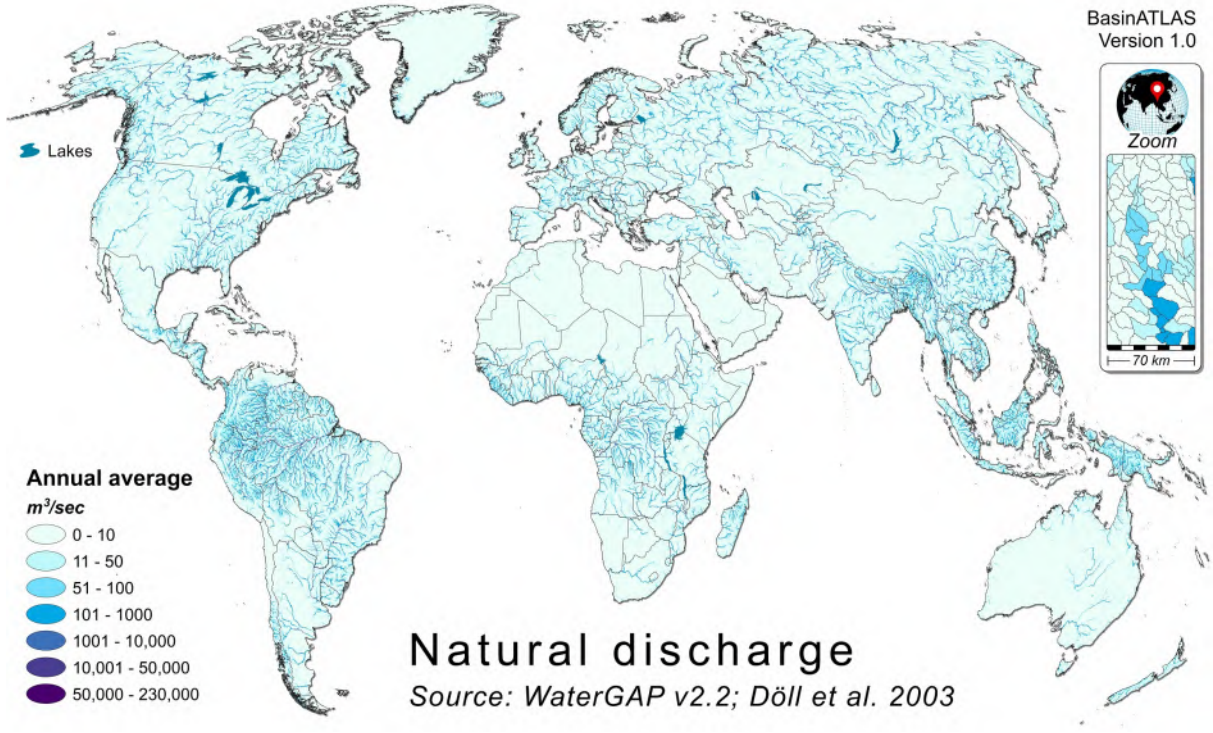
Citation: Döll et al. 2003 ***Native format:*** 15 arc-second grid ***Units:*** cubic meters/second

Column name **dis_m3_{xoo}** *(for syntax options of suffix {xoo} see next lines)*

Spatial extent {x}: {p} at sub-basin pour point

Dimension {oo}: {yr} annual average | {mn} annual minimum | {mx} annual maximum

Existing suffixes {xoo}: pyr | pmn | pmx



Data description	Discharge and runoff estimates for HydroATLAS are based on long-term (1971–2000) average 'naturalized' discharge and runoff values provided by the state-of-the-art global integrated water balance model WaterGAP (Döll et al. 2003, model version 2.2 as of 2014). The WaterGAP data were spatially downscaled from their original 0.5 degree pixel resolution (~50 km at the equator) to the 15 arc-second (~500 m) resolution of the HydroSHEDS river network using geo-statistical techniques (Lehner and Grill 2013). Preliminary tests against approximately 3000 global gauging stations indicate a good overall correlation for the long-term averages, but also reveal larger uncertainties, in particular in the minimum and maximum statistics, for areas that are dominated by snow, glaciers, wetlands, and (semi-)arid conditions.
Reference	Döll, P., Kaspar, F., Lehner, B. (2003). A global hydrological model for deriving water availability indicators: model tuning and validation. Journal of Hydrology, 270, 105-134.
Website	http://www.watergap.de/
License	Creative Commons CC-BY 4.0
Additional information	Annual minimum and maximum discharges were derived from the 12 long-term average monthly flow values (1971-2000), i.e. they represent the flow of the lowest or highest month within the average year. Additional reading: Lehner, B., Grill G. (2013). Global river hydrography and network routing: baseline data and new approaches to study the world's large river systems. Hydrological Processes, 27(15), 2171-2186. doi: 10.1002/hyp.9740.