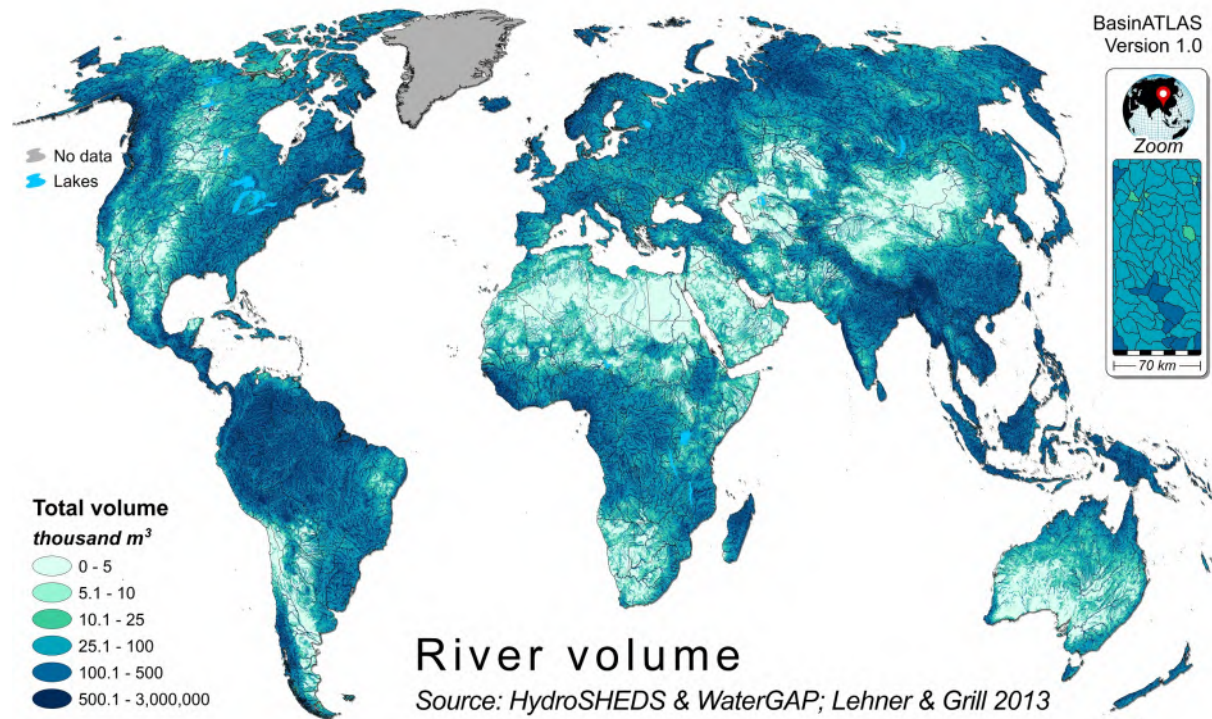


Category	Hydrology	ID-H09	>>> Back to Attribute List
Attribute	River Volume		
Source data	HydroSHEDS and WaterGAP v2.2		
Citation:	Lehner & Grill 2013	Native format:	15 arc-second grid
		Units:	thousand cubic meters
Column name	riv_tc_{xoo}	(for syntax options of suffix {xoo} see next lines)	
Spatial extent {x}:	{s} in sub-basin {u} in total watershed upstream of sub-basin pour point		
Dimension {oo}:	{su} sum		
Existing suffixes {xoo}:	ssu usu		



Data description	River volume was calculated using the the HydroSHEDS database at 15 arc-second resolution. HydroSHEDS was derived from high-resolution (3 arc-second) elevation data obtained during NASA's Shuttle Radar Topography Mission (SRTM) in February 2000. Based on global discharge estimates and simple hydraulic geometry laws (Allen et al. 1994), a first-level approximation of the dimensions of channel width and depth was derived for every river reach of the HydroSHEDS database. For discharge, the long-term (1971-2000) monthly maximum was used (see attribute H01) as a proxy to represent bankfull flow. The water volume per river reach was then calculated by multiplying channel width, depth, and length.
Reference	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.
Website	http://www.hydrosheds.org/
License	Creative Commons CC-BY 4.0
Additional information	Further reading: Allen, P.M., Arnold, J.C., Byars, B.W. (1994). Downstream channel geometry for use in planning-level models. JAWRA Journal of the American Water Resources Association, 30, 663-671. doi:10.1111/j.1752-1688.1994.tb03321.x