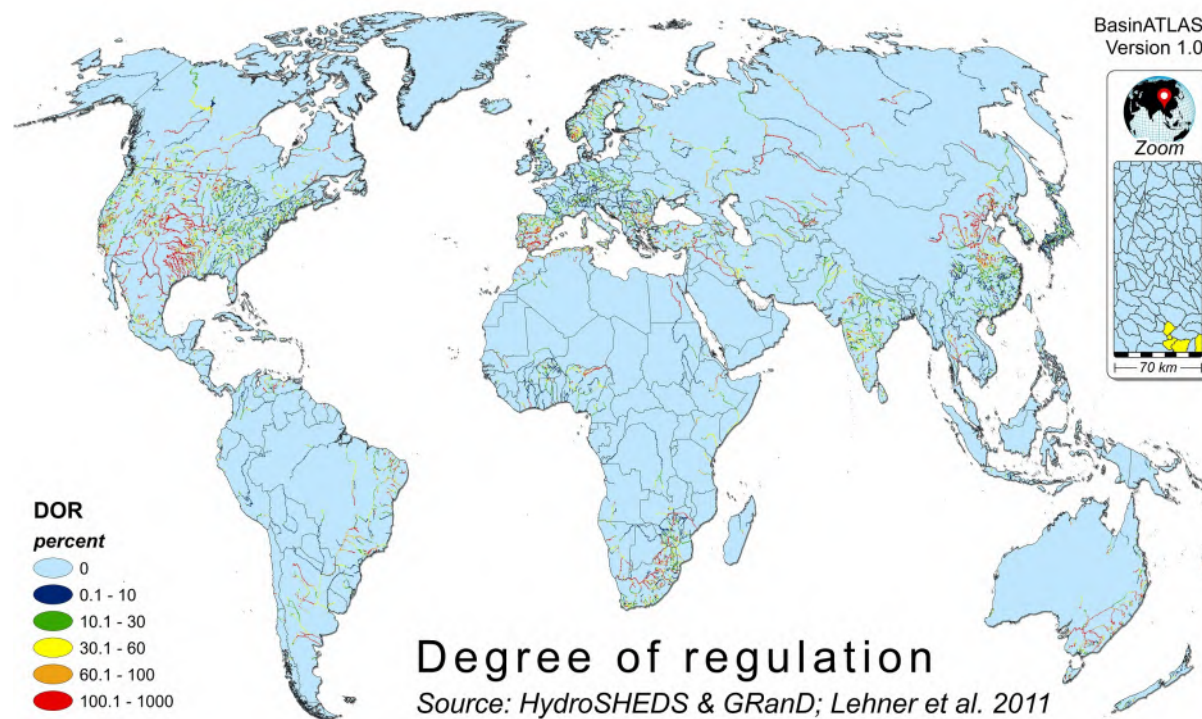


Category	Hydrology	ID-H07	>>> Back to Attribute List
Attribute	Degree of Regulation		
Source data	HydroSHEDS and Global Reservoir and Dams (GRanD) database v1.1		
Citation:	Lehner et al. 2011	Native format:	Polygons
		Units:	percent (x10)
Column name	dor_pc_{xoo}	(for syntax options of suffix {xoo} see next lines)	
Spatial extent {x}:	{p} at sub-basin pour point		
Dimension {oo}:	{va} value		
Existing suffixes {xoo}:	pva		



Data description	The Degree of Regulation (DOR) provides an index of how strongly a dam or set of dams can affect the natural flow regime of downstream river reaches. DOR for a river reach is calculated as the percent ratio between the total reservoir storage volume of all dams on or upstream of the reach and the the total annual discharge volume available at the reach (using attributes H01 and H06). A high DOR value indicates an increased probability that substantial flow volumes can be stored throughout a given year and released at later times. A DOR value of 100% means that the entire annual flow can be stored, and values larger than 100% indicate multi-year storage capacities. Note that DOR values were capped at a maximum of 1000% assuming that higher estimates are likely outliers or errors.
Reference	Lehner, B., Reidy Liermann, C., Revenga, C., Vörösmarty, C., Fekete, B., Crouzet, P., ... & Wisser, D. (2011). High- resolution mapping of the world's reservoirs and dams for sustainable river-flow management. <i>Frontiers in Ecology and the Environment</i> , 9(9), 494-502.
Website	https://sedac.ciesin.columbia.edu/data/collection/grand-v1
License	Creative Commons CC-BY 4.0
Additional information	In the stored data, percent values are multiplied by 10 (i.e. value 10 means 1%). The calculations used all dams from GRanD v1.1 except those attributed as "unknown capacity", "planned", "destroyed", "under construction" yet with unknown year of completion, and "unreliable quality". Also, Lake Victoria was excluded as it is a lake regulation structure that is not operated at full capacity. This left 6,778 out of all 6,862 original GRanD reservoirs.