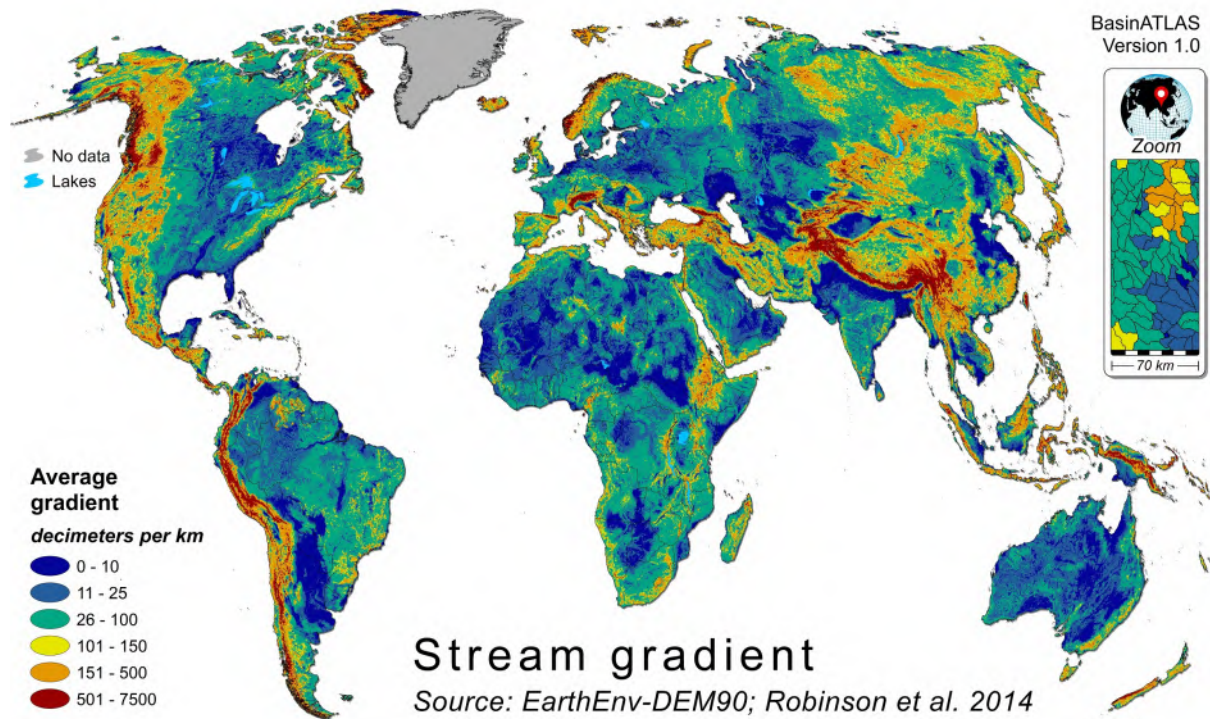


|                    |                                             |                                                     |                                                     |
|--------------------|---------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|
| <b>Category</b>    | Physiography                                | ID-P03                                              | <a href="#">&gt;&gt;&gt; Back to Attribute List</a> |
| <b>Attribute</b>   | <b>Stream Gradient</b>                      |                                                     |                                                     |
| <b>Source data</b> | EarthEnv-DEM90                              |                                                     |                                                     |
|                    | <b>Citation:</b> Robinson et al. 2014       | <b>Native format:</b> 3 arc-second grid             | <b>Units:</b> decimeters per km                     |
| <b>Column name</b> | <b>sgr_dk_{xoo}</b>                         | (for syntax options of suffix {xoo} see next lines) |                                                     |
|                    | <b>Spatial extent {x}:</b> {s} in sub-basin |                                                     |                                                     |
|                    | <b>Dimension {oo}:</b> {av} average         |                                                     |                                                     |
|                    | <b>Existing suffixes {xoo}:</b> sav         |                                                     |                                                     |



|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Data description</b>       | EarthEnv-DEM90 is a digital elevation model that provides elevation values for a pixel resolution of 3 arc-seconds (approximately 90m at the equator). It is derived from CGIAR-CSI SRTM v4.1 and ASTER GDEM v2 data products. These data have been processed and merged to provide a continuous coverage between 60°S and 83°N. Stream gradients were computed after removing single pixel sinks by lifting them to the minimum elevation of their eight surrounding pixels. The 3 arc-second pixels were then aggregated to 15 arc-second resolution using the 'minimum' statistic (to preserve the valley bottom height within the larger pixel). Finally, the stream gradient was calculated as the ratio between the elevation drop within the river reach (i.e. the difference between min. and max. elevation along the reach) and the length of the reach. |
| <b>Reference</b>              | Robinson, N., Regetz, J., Guralnick, R.P. (2014). EarthEnv-DEM90: A nearly-global, void-free, multi-scale smoothed, 90m digital elevation model from fused ASTER and SRTM data. ISPRS Journal of Photogrammetry and Remote Sensing, 87, 57-67. doi: 10.1016/j.isprsjprs.2013.11.002.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Website</b>                | <a href="http://www.earthenv.org/DEM">http://www.earthenv.org/DEM</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>License</b>                | Creative Commons CC-BY 4.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Additional information</b> | NoData values (-9999) were assigned to all of Greenland because calculated stream gradients were not within reasonable ranges due to substantial outliers in DEM over the Greenland ice sheet.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |