Source-to-Sink Database V0.1

The Source-to-Sink Database Version 0.1 (S2SV0.1) provides a digital documentation and compilation of morphological information on modern source-to-sink systems. **IMPORTANT NOTE – The summary figures provided in the manuscript is related to the main tectonic regime of the terrestrial landscape. Large scale systems may have a hinterland region that has a different tectonic setting that its submarine fan (a mixed-influenced system).**

Null values = 0 or -9999

Coordinate System = Cylindrical_Equal_Area / GCS_WGS (1984)

Catchment Segment

Parameter	Description
Catchment ID (FID)	Catchment ID
Area (Area)	Catchment area (km^2)
Maximum Relief (R)	Maximum catchment relief (km)
% < 10 m/km (10m_km)	% of catchment area with < 10 m/km in relief
% Terrestrial Sink (Sed_Basin)	% of catchment area defined as a terrestrial sink
Terrestrial Sink ID (S_Basin_ID)	Terrestrial sink ID
River Length (River_L)	Longest river channel (m)
River Profile Gradient (River_S)	Average river profile gradient (m/km)
Shortest Path (SP)	Shortest path distance from river mouth to furthest reach of the longest river channel (m)
Water Discharge (Q)	Water discharge (km^3/yr) based on Syvitski and Milliman (2007)
Total Suspended Sediment Load (Qs)	Total suspended sediment load (MT/yr) based on the BQART equation of Syvitski and Milliman (2007).
B factor (B)	B factor of the BQART equation describing glacial erosion, dam trapping efficiency, human influence and average lithology (see Syvitski and Milliman, 2007).
L factor (L)	Average lithology factor of the BQART equation ranging from 0.5 to 3 (see Syvitski and Milliman, 2007).
T factor (T)	Average annual catchment temperature (C).
I factor (I)	I factor representing the proportion of catchment area with glacial coverage ranging from 1 to 10 (see Syvitski and Milliman, 2007).
Ternary Process (Process)	Ternary process classification at the shoreline of a catchment as either W (wave), T (tide) or fluvial (F) based on Nyberg and Howell (2016).
Tectonic Regime (Structure)	Primary tectonic regime of the catchment: Foreland, Intracratonic, Forearc, Passive Margin, Extensional or Strike-Slip
Climate (MainClass)	Primary climate of the catchment: Warm temperate, arid, polar, equatorial or snow.
Body of water (BoW)	The catchment contributes to this body of water.
Continental Shelf Type (Shelf)	Type of continental shelf (1 – narrow shelf < 75km; 2 - epicontinental seaway; 3 – wide shelf > 75km; 5 - endorheic)
MarginType	Indication of an active or passive continental shelf/slope margin
Area (Area_1)	Milliman and Farnsworth (2011) observed catchment area (km^2)
Water Discharge (Q_1)	Milliman and Farnsworth (2011) observed water discharge (km^3/yr)

Pre-dam Water Discharge (PD_Q)	Milliman and Farnsworth (2011) observed pre-dam water discharge (km^3/yr)
Runoff (Runoff)	Milliman and Farnsworth (2011) observed runoff (Q_1/Area_1)
Total Suspended Sediment Load (TSS)	Milliman and Farnsworth (2011) observed total suspended sediment load (MT/yr)
Pre-dam Total Suspended Sediment Load (TSS)	Milliman and Farnsworth (2011) observed pre-dam total suspended sediment load (MT/yr)
Maximum Relief (Max_Elev)	Milliman and Farnsworth (2011) maximum calculated catchment relief (m)
Sediment Yield (SedYield)	Milliman and Farnsworth (2011) observed sediment yield (QS/Area_1)
Average Annual Sediment Concentration (ASedConc)	Milliman and Farnsworth (2011) observed sediment yield (QS/Area_1)
Total Dissolved Load (TDS)	Milliman and Farnsworth (2011) observed total dissolved load (MT/yr)
Pre-dam Total Dissolved Load (PD_TDS)	Milliman and Farnsworth (2011) observed pre-dam total dissolved load (MT/yr)
Dissolved Yield (DisYield)	Milliman and Farnsworth (2011) observed average annual dissolved yield (TDS/Area_1)
Dissolved Concentration (DisConc)	Milliman and Farnsworth (2011) observed average annual dissolved concentration (TDS/Q_1)

Continental Shelf Segment

Waterbody Length (E_Length)	Waterbody/estuarine length (m) measured along the bathymetric profile
Shelf Width (S_Dist)	Width of the continental shelf (m) measured along the bathymetric profile
Shelf Depth (Shelf_LowH)	Depth at the continental shelf edge (m)
Shelf Profile Gradient (C_Shelf_S)	Gradient of the continental shelf (m/km)
Sediment Thickness (Sed_Thick)	Average sediment thickness on the continental shelf/slope (m)

Continental Slope Segment

Slope Length (Slope_L)	Length of the continental slope (m) measured along the bathymetric profile
Base of Slope Depth (Slope_LowH)	Depth at the base of the continental slope/basin floor transition (m)
Top of Slope Depth (Slope_TopH)	Depth at the top of the continental slope (m)
Slope Profile Gradient (C_Slope_S)	Average gradient of the continental slope profile (m/km)
Canyon ID (C_ID)	Submarine canyon ID
Canyon Length (C_Length)	Length of the submarine canyon (km)
Canyon Distance (C_Distance)	Distance from river mouth to the submarine canyon (m)
Canyon Head Frequency (C_Freq)	Number of canyon heads
Top of Canyon Depth (C_TopH)	Depth at the top of the submarine canyon (m)
Base of Canyon Depth (C_LowH)	Depth at the base of the submarine canyon (m)

Submarine Fan Segment

Fan ID (F_ID)	Fan ID
Fan Area (F_Area)	Area of the submarine fan (km^2)

Fan Length (F_Length)	Length of the submarine fan (m)
Fan Width (F_Width)	Width of the submarine fan (m)
Fan Depth (F_Depth)	Depth of the distal submarine fan (m)
Fan Profile Gradient (F_S)	Average gradient of the submarine fan profile (m/km)
Fan Area (Fan_Area)	Sømme et al. (2009) measured fan area (km^2)
Fan Length (Fan_Length)	Sømme et al. (2009) measured fan length (km)
Fan Width (Fan_Width)	Sømme et al. (2009) measured fan width (km)
Fan Depth (Fan_Depth)	Sømme et al. (2009) measured distal fan depth (m)
Fan Volume (Fan_Volume)	Sømme et al. (2009) measured fan volume (km^3)