Global Shoreline Ternary Process Classification

The global shoreline ternary process classification dataset is based on the work described in

Nyberg, B. & Howell, J.A., (2016). Global distribution of modern shallow marine shorelines. Implications for exploration and reservoir analogue studies, Marine and Petroleum Geology, Vo. 71, 2016, Pages 83-104.

Null values = 0 or -9999

Coordinate System = World_Equidistant_Cylindrical

GSTPC

Parameter	Description
Wave	Mean Significant Wave Height (m)
Tide	Tidal range (m)
F_Inf	Fluvial influence acting on a shoreline based on equation $\left(\frac{Qs^3}{D}\right) where\ D\ is \geq 10km$. QS is in kg/s and D distance from the fluvial source.
Process	The two-tier ternary process classification to define the dominant and influenced processes acting on a shoreline. For example **Ft** = Fluvial Dominated Tide Influenced. Nine different shoreline types are available as **F**, **Ft**, **Fw**, **T**, **Tf**, **Tw**, **W**, **Wf** and **Wt**;
Structure	Simplified tectonic regime imposed on the coastal region.
MainClass	Main climate at the shoreline based on the KÖPPEN-GEIGER classification scheme
Shelf	The type of continental shelf as 0 – narrow (<25km), 1 - medium (25 – 75km), 2 – epicontinental seaways/miscellaneous and 3 – wide (>75km)
Funnel_L	Length of a funnel feature (e.g., estuary, embayment, etc…) in meters.
Subclass	Sub climate based on the based on the KÖPPEN-GEIGER classification scheme
T	Relative tidal influence acting on the shoreline $0 - 1 (0 - 100\%)$
F	Relative fluvial influence acting on the shoreline $0 - 1 (0 - 100\%)$
W	Relative wave influence acting on the shoreline $0 - 1 (0 - 100\%)$
Qs	Calculated total suspended sediment load in kg/s based on the BQART formula of Syvitski and Milliman (2007)

W

Wave Height (H)

Water Level

H

Crest

Trough

Time (s)

Mean Significant
Wave Height (Hsig)

1/3

Hsig

n

Wave Height (H)

Watershed

F

T

High Tide

Low Tide

Discharge (Qs)

$Qs = 0.02BQ^{0.31}A^{0.5}RT$ for $T \geq 2°C$
$Qs = 0.04BQ^{0.31}A^{0.5}R$ for $T < 2°C$

Shoreline
Geomorphology

Tidal Amplitude
(Ta)