Tropical and Subtropical Peatland Distribution

# Summary

This dataset shows a distribution of peatland that covers the tropics and sub tropics (40° N to 60° S; 180° E to -180° W), excluding small islands. It was mapped in 231 meters spatial resolution by combining a hydrological model and annual time series of satellite-derived estimates of soil moisture to represent water flow and surface wetness that are then combined with geomorphological data.

# Process information and warning

Peat is here defined as any soil having at least 30cm of decomposed or semi-decomposed organic material with at least 50% of organic matter. This corresponds to 29% of carbon content using 1.72 as the transformation factor. The peatland map is produced by adding the peat forming wetlands: mangrove (20), swamp/bog (30), Fen (40), riverine (50), and floodswamps (60) *(note: the number in parentheses refer to pixel code of each class in Wetlands dataset).* Our map of peatlands was contrasted against n=275 geo-positioned soil profiles containing peat, with 65% of agreement. Further fieldwork is however needed to validate our map. Mangroves are here considered to host the thresholds of depth and organic matter content needed for peat definition, although mineral soil may prevail. Mangroves contribute with ca. 180,000 km2 to the 1.7 million km2 of peatlands (11%), which would need further ground validation (i.e. in areas like Indonesian Papua have large extents of mangrove that contribute to peat, which would need ground-truthing to validate if they contain peat as defined here).

# Pixel value

Peatland distribution dataset is a 1 bit dataset that consist of 2 values:

0 =Non-peatland

1 =Peatland

# Time period of content

2011

# Published date

2016

# Spatial Information

## Reference system

Geographic coordinate system

## Datum

WGS84

## Pixel size

0.0011139935(eq. 123m)

## Extent

Top Left coordinates: 39.9999999964°, -179.999997771°

Bottom Right coordinates: -60.0009704103°, 179.999262518°

# File Information

## Format

GeoTIFF

## Pixel depth

1 bit

## Columns x Rows

323161 X 89767

## Original Reference System

## For geographic re-projections please note that the original reference system at which the data were produced is:

## Reference system original: undefined, sinusoidal

## Linear unit: Meter (1m)

## Angular unit: Degree (0.0174532925199433)

## Columns x Rows original reference system: 134400 X 48000

## Pixel size original reference system: 231.6563581, 231.6563581 m

## Top Left coordinates: 4447802.07867N, -12231455.7163W

Bottom Right coordinates: -6671703.11024S, 18903158.8126E

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# Reference

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