Introduction

Tropical hydrology and cloud forests.

This database provides information and data from the Tropical Hydrology and Cloud Forests Project.

The data represent the results of a research project carried out by Dr. Mark Mulligan at Kings College London and Dr Sophia Burke of AMBIOTEK and are derived from a variety of original data sources.

A pan-tropical model for cloud forest distribution and water balance model was developed and the implications of historic forest loss in the tropical upland and lowlands examined.

See the project report in English (3.5 MB) here

Key results:

View the global distribution of cloud forests (fractional cover in 1km pixels) here. [Requires Google Earth]

View the global distribution of cloud forest loss to land use change (fractional cover in 1km pixels) here. [Requires Google Earth]

View the global distribution of unprotected remaining cloud forests (fractional cover in 1km pixels) here. [Requires Google Earth]

View the GCM projected temperature and rainfall of cloud forests for 2050 (fractional cover in 1km pixels) here. [Requires Google Earth]

You can find an interactive Google Earth Layer of downloadable GIS data and results from the project here

Click here for a short video which indicates how to use this Google Earth interface (10 MB, AVI).

Download Google Earth here

For data distribution, the entire tropics are broken up into a series of tiles. Each of these grids contains a 1024 by 1024 km tile of approx. 1km resolution data. The data represent the results of a research project and are derived from a variety of original data sources. All data are in the Geographic Coordinate System, WGS84 datum and are distributed as zipped ARCASCII files.

DATA AVAILABLE (covering entire tropics, not only cloud forest areas)

Forests

allf - current tropical forest fractional cover (%)

forloss - fractional forest cover loss to date (%)

cf - current fractional cloud forest cover (%)

cfloss - fractional cloud forest cover loss to date (%)

unprotcf - unprotected remaining cloud forest cover (%)

Climate

cloud - annual average cloud frequency (%)

wprec - wind driven precipitation inputs (mm/year)

annevap - annual total evapotranspiration (mm/year)

Hydrology

annbal - annual water balance (wind driven rainfall minus evapo-transpiration) (mm/year)

sensluc - hydrological sensitivity to land use change (change in water balance per unit change in land cover fraction) (mm/%)

The modelled global distribution of current cloudforests

ACKNOWLEDGMENT AND CITATION

We kindly ask any users to cite this data in any published material produced using this data. Citations should be made as follows:

Mulligan, M. and Burke, S.M. (2005) Global cloud forests and environmental change in a hydrological context. December 2005. http://www.ambiotek.com/cloudforests

DISTRIBUTION

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