

FIESTA

FIESTA : Fog Interception for the Enhancement of Streamflow in Tropical Areas.

This database provides information and data from the project : Hydrological impacts of converting tropical montane cloud forest to pasture, with initial reference to northern Costa Rica. The project was collaborative between King's College London, The Vrije Universiteit, Amsterdam and AMBIOTEK.

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. As part of a larger project led by Sampurno Bruijnzeel of the Vrije Universiteit, Amsterdam., a national scale hydrological model for analysing the impact of land cover change in complex tropical environments was developed.

Download the project report (English, Spanish) [24 MB]

Results in Google Earth

You can find an interactive Google Earth Layer of results for Costa Rica from the 90m version of the model

You can find an interactive Google Earth Layer of results for Central America from the 1km version of the model

Model

Download and use the 1km FIESTA fog delivery model and data for Costa Rica (1km version, 91 MB) (90m version, 3.5 GB!)

Policy exercises Download and use the FIESTA fog delivery model policy exercises for Costa Rica in English, Spanish (3 MB)

Other applications The model has also been applied in the following basins/regions:

- Volta (1km resolution)
- Andes/Amazon (1km resolution)
- Colombia and Ecuador (1km resolution)
- Bogota system of basins (1 ha. resolution) Report (English with Spanish summary), Presentation (English, Spanish), Policy brief (English, Spanish)
- Valle del Cauca (1ha. resolution)

As part of the Challenge Program on Water and Food Andes Basin Focal Project the model will be applied to the following basins at 1 ha. resolution (and the entire Andes at a 1km resolution): Colombia : Fuquene, La Miel

Ecuador : Ambato, El Angel

Peru : Alto Mayo, Jequetepeque

Bolivia : Tunari

Water balance for the area of Lake Arenal, Costa Rica using the 90m version of the model, note the impacts of exposure of water balances.

To run the model computers will need at least 1 GB of free disk space and at least 512 MB memory and the following software installed : PCRASTER GIS (free from PCRASTER Environmental Software). Adobe Acrobat (free from www.adobe.com). Computers will also need to be connected to the internet.

Downloading and installing PCRASTER on your own computer

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) FIESTA: Fog Interception for the Enhancement of Streamflow in Tropical Areas, 174 pp.). <http://www.ambiotek.com/fiesta> **DISTRIBUTION** Users are prohibited from any commercial, non-free resale, or redistribution without explicit written permission from Kings College London (mark.mulligan@kcl.ac.uk) Users should acknowledge Kings College London as the source used in the creation of any reports, publications, new data sets, derived products, or services resulting from the use of this data set. Kings College London also request reprints of any publications and notification of any redistributing efforts. **NO WARRANTY OR LIABILITY** Kings College London provides these data without any warranty of any kind whatsoever, either express or implied, including warranties of merchantability and fitness for a particular purpose. Kings College London shall not be liable for incidental, consequential, or special damages arising out of the use of any data downloaded.