

Moisture sources and sinks for Amazon basin

Prakki Satyamurty[†]; Claudia Costa

[†] Universidade do Estado do Amazonas, Brazil

Leading author: saty.prakki@gmail.com

Maps of moisture divergence integrated in the vertical can reveal sources and sinks of atmospheric moisture. Regions of divergence are sources and regions of convergence are sinks. The moisture transport stream lines running from the sources to the sinks can be viewed as aerial rivers. Source regions for the Amazon moisture are in the tropical North and South Atlantic Oceans lying equatorward of the subtropical high pressure centers. A part of the moisture entering the Amazon Basin is transported to southern Brazil, northern Argentina and adjoining regions through the low-level jet east of the Andes. The strength and position of the sources present seasonal and interannual variability. The wet and dry years in the Amazon Basin show different characteristics in terms moisture convergence and southward transport of moisture. The evapotranspiration in the Amazon forest accounts for about 39% of the precipitation in the basin. These aspects of moisture transport are obtained from the NCEP-NCAR reanalysis data sets.