

The drought of 2010 in the context of historical droughts in the Amazon region

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The year 2010 featured a widespread drought in the Amazon rain forest, which was more severe than the "once-in-a-century" drought of 2005. Water levels of major Amazon tributaries fell drastically to unprecedented low values, and isolated the floodplain population whose transportation depends upon on local streams which completely dried up. The drought of 2010 in Amazonia started in early austral summer during El Niño and then was intensified as a consequence of the warming of the tropical North Atlantic. An observed tendency for an increase in dry and very dry events, particularly in southern Amazonia during the dry season, is concomitant with an increase in the length of the dry season. Our results suggest that it is by means of a longer dry season that warming in the tropical North Atlantic affects the hydrology of the Amazon rivers at the end of the recession period (austral spring). This process is, sometimes, further aggravated by deficient rainfall in the previous wet season.