**Dowstream impacts of dams**

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**Abstract**: Besides being prized for its fabulous biodiversity, the Amazon is the world’s biggest river basin with a 70,000 MW hydroelectric potential. Confining our focus to Brazilian territory, such outstanding energy potential has transformed the north of the country into a key energy frontier. The Tucuruí hydroelectric power plant, the first major hydroelectric scheme in the Amazon region, offers important lessons regarding the issue raised by the present study. With a maximum capacity for generating 7,920 MW, this was the first of a series of fifteen plants to be installed to harness the 20,645 MW potential of the Araguaia-Tocantins hydrographic basin. The impact of dams extends well beyond the area surrounding the artificial lakes they create, harming rich Amazon wetland ecosystems. The morphology of dammed rivers changes in response to new inputs of energy and matter, which may in turn destroy certain biotopes. This is a remote-sensing-based case study of the Tucuruí hydroelectric scheme in the Amazon state of Pará. Attention is drawn to the need to take into account effects on alluvial rivers downstream from hydroelectric power plants when it comes to making planning decisions, as part of a sustainable energy policy.

Keywords: Amazon region, Hydroelectric power plant, Downstream environmental impacts