

# Belo monte case study essay

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Geological damage. According to Conservation International Institute, the excavations for the construction of the canal will remove 100 million cubic meters of trees and biomass, enough to fill 40, 000 Olympic swimming pools.

The dam has a significant impact on the local population – mainly the indigenous people. The consequences of its construction can range from the spread of malaria, caused by the inevitable increase of the mosquito in charge of spreading the disease in the villages to the deprivation of one of the main livelihoods of traditional peoples of the region, since the fish and fauna of the region will be drastically affected by the eutrophication of waters. Belo Monte at the present is illogical since Brazil has plenty of energy load for 20 years.

Improving the efficiency of residential and commercial electrical appliances and increasing the efficiency of existing power plants such as through refurbishment of old hydropower plants and combined heat and power could efficiently help the energy problem. The work of reforestation and recovery of ecosystems can reach up to millions. The costs after the construction is done are not being considered in order to minimize the pressure on the government. Therefore the construction is not economically feasible nor sustainable for the country. It's necessary at least US\$ 300 million annually to assure a safe recovery of the destroyed area. Therefore, clearly the government has severely underestimated the budget required to build and recover the dam. The fact of reducing the flood area obviously contributes to produce less environmental damage but it's still a major problem in the construction.

To guarantee a year-round flow of water, the government would need to construct a series of large dams on the Xingu and its tributaries that will gravely impact forests and forest peoples. Over 60 large dams planned to be built in Brazil over the next 20 years = worsens the situation of many Amazonian rivers. Many species will be at threat such as the Zebra Pleco, the Plant-eating Piranha and the Xingu Poison Dart Frog. Decomposing vegetation from the flooded forest behind the Belo Monte dam would release methane, a greenhouse gas that is 25 times more potent than carbon dioxide and so therefore it is not clean energy. The Hadley cells are 30° north and south of the equator and move cold air from the poles to the equator, and warm air from the equator to the poles.

This means that there is a constant air movement which in turn causes constant winds. The ITCZ is where these two cells meet and marks where the sun is directly overhead but it moves slightly north and south of the equator during the year. This is where the sun's radiation is highest, causing low air pressure which forms clouds and rain, blocking out the sun – a major disadvantage for solar energy. The low pressure means the air gets saturated and dew point is reached, causing daily rainfall and the climate at the equator. This is at the ITCZ but as it moves throughout the year so does the rainfall, causing the dry seasons to occur in Brazil.