



CONSERVATION POLICY IN BRIEF

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AUTHORS:

CAMILA JERICÓ-DAMINELLO
SUSAN EDDA SEEHUSEN
IRENE BURGUÉS ARREA
AARON BRUNER
ANE A.C. ALENCAR
VALDERLI PIONTEKOWSKI

PHOTOS:

LEONARDO C. FLECK
CAMILA JERICÓ-DAMINELLO



CONSERVATION
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BEYOND THE OBVIOUS: LOCAL ECONOMIC COSTS OF THE SÃO LUIZ DO TAPAJÓS DAM

In response to rapidly growing electricity demand, the Brazilian government is actively exploring investments in massive hydroelectric dam development in the Amazon region. One of the main areas targeted for development is the Tapajós river basin in the state of Pará, with a total of 43 planned dams. The São Luiz do Tapajós dam was expected to be the largest of these, with an installed capacity of 8,040 MW and a reservoir covering 720 square kilometers (km²), representing around 14.6% of the basin.¹

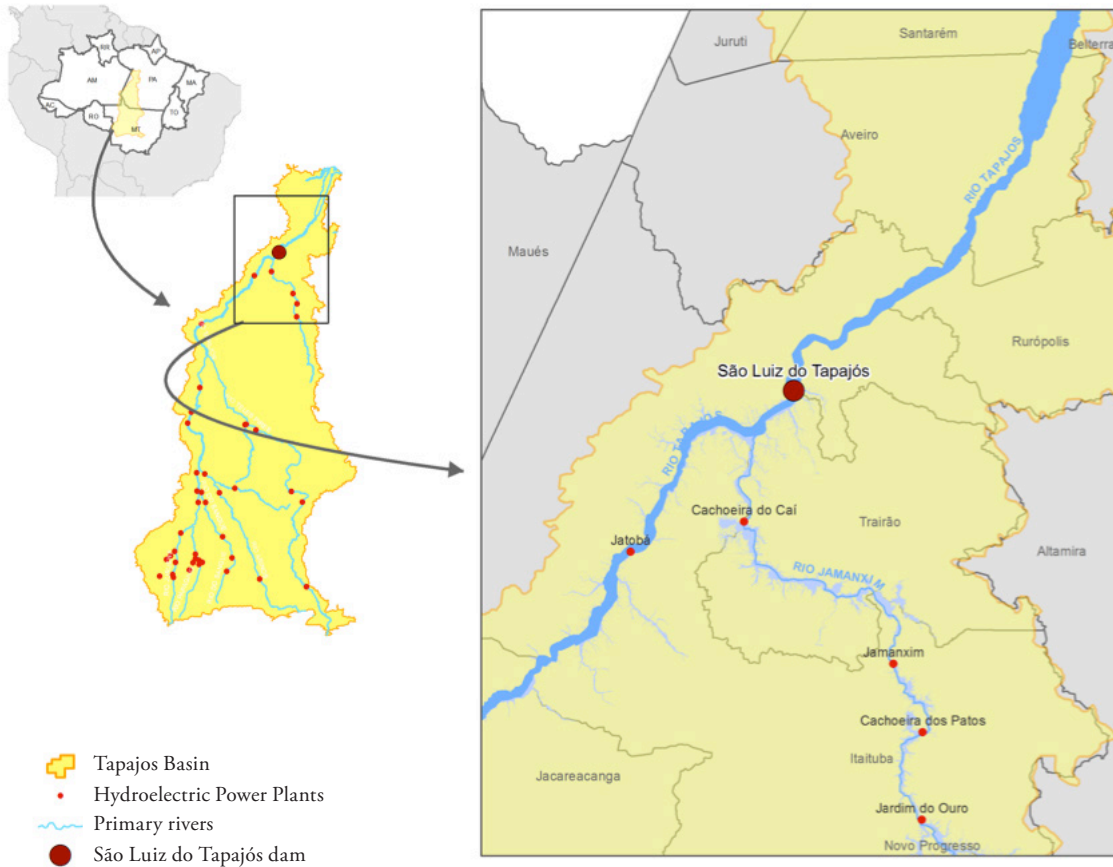
The environmental licensing process in Brazil does not account for all of the social and environmental costs that an infrastructure project can impose. Consequently, the true costs of large hydroelectric projects are often underestimated. Moreover, there is typically insufficient information about the possible negative impacts on local residents, who in some cases are not even aware of planned projects.







To better understand local impacts in the case of the São Luiz do Tapajós dam, Conservation Strategy Fund conducted a study of ecosystem service provision in the region and assessed how local people would be economically affected by the construction of the dam. Specifically, the study looked at losses in subsistence income, reduction in water quality, and increased carbon emissions over a 30-year period.

Assuming the dam construction results in a deforestation pattern similar to that observed around other comparable dams in the region (Belo Monte, Jirau and Santo Antônio), our analysis showed that the total local ecosystem service losses associated with the project would be approximately R\$1.9 billion (US\$ 590 million) over the period from 2019 to 2048.² These results are derived from a combination of primary calculations and judicious use of the benefit transfer approach. Specifically:

- 1) Approximately 28,000 local families would suffer a loss in subsistence income. Losses for all affected families over 30 years would total R\$ 1.4 billion (US\$ 430 million).
- 2) Reduced water quality in the dam area and downstream would affect around 174,000 families, and would cost the affected municipalities an additional R\$ 62.5 million (US\$ 18.78 million) for the acquisition, installation, and maintenance of water treatment systems.
- 3) The construction and operation of the dam would release more than 70 million tons of carbon dioxide equivalent (CO₂e) into the atmosphere. If carbon markets emerge, the present value of these emissions at currently prevailing market prices would be R\$ 471 million (US\$ 141 million) over the period of analysis.



Proposed dams in the Tapajós River basin.

-  Tapajós Basin
-  Hydroelectric Power Plants
-  Primary rivers
-  São Luiz do Tapajós dam

Local economic losses of the São Luiz do Tapajós dam would seriously impact local well-being and, in some cases, threaten local residents' survival. More broadly, these results reinforce the need to include social and environmental costs in assessing the feasibility and design of dams and other major development projects.

¹ Source: Chico Mendes Institute for Biodiversity Conservation report, 2011
² A discount rate of 6% was used throughout

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For the full report, please visit: http://conservation-strategy.org/sites/default/files/field-file/PORT_Serie_Tecnica_UHE_Tapajos_Set_2016.pdf

POLICY UPDATE

At the end of 2014, The Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) requested additional socio-environmental analysis from Eletrobras, the dam construction company. In April 2016, Eletrobras had still failed to provide the requested information, and the National Indigenous Foundation (FUNAI) reported the violation of indigenous peoples' rights, which led IBAMA to suspend the environmental licensing process for the project. In August 2016, the the Specialized Federal Prosecutor's Office (PFE) and IBAMA - still under pressure from civil society and local activists - canceled the project's environmental license, which effectively stopped the dam construction. The analysis described here contributed to this decision. Moreover, the São Luiz do Tapajós dam has been classified as unconstitutional because it would permanently remove indigenous peoples from their lands.



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FROM THE AMERICAN PEOPLE



1160 G St. Suite A-1
Arcata, CA 95521
T: 707.822.5505
F: 707.822.5535

www.conservation-strategy.org