


September 2014

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Recommended Citation

Brody, Thyra (2014) "Damming Brazil," *e-Research: A Journal of Undergraduate Work*: Vol. 3: No. 1, Article 4.
Available at: <http://digitalcommons.chapman.edu/e-Research/vol3/iss1/4>

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e-Research: A Journal of Undergraduate Work, Vol 3, No 1 (2012)

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Damming Brazil

Thyra Brody

Abstract: Hydroelectric power is often considered a safe and clean alternative to the combustion of fossil fuels. Although the consequences to the air and atmosphere are lower, damming large rivers in the jungles of Brazil have a significant impact on indigenous populations and environmental ecosystems. This article examines such fallout and calls out for equity, and social and environmental justice. As the fuel of the last century burns out the hectic scramble for a tenable alternative is becoming an increasingly serious question mark. We would do well for ourselves, and future generations, to try and solve the environmental issues associated with energy consumption as opposed to simply delaying them.

Keywords: Brazil, hydroelectricity, hydroelectric dam, indigenous people, energy, Vali Company, Belo Monte dam

In the present century dams are one of many a nation's biggest development projects, as demands for watering systems, power generation, and water supply grow. However, such dam constructions often have great consequences on social and environmental issues.^[1] The lives of ethnic minorities and indigenous tribes are especially affected and form the largest group of people who have lost their homes, livelihoods, and natural resources to dams.^[2] The purpose of this paper is to investigate the underlying cultural significance of water for indigenous people in order to understand the extensive effects on indigenous tribes when new dams are built.

Brazil is one of the world's leading dam-building nations. About 80% of Brazil's electrical energy comes from large dams, and continued construction is seen as a strategy necessary to sustain economic growth. Opponents to this type of power urge the use of less destructive energy sources. In Brazil, there was a heated controversy over the 6 km long hydroelectric dam,^[3] Belo Monte. Located in Para, Brazil, the area around the dam is marked by a sparse population and a large mining company, Vali. The Vali Company has the biggest mining plan in the world and exports a vast amount of iron to China.^[4] The government says that the Belo Monte dam is vital for the development of the economy and that the dam would produce 11,200 megawatts for industrial consumption. Accordingly, Belo Monte is thought to provide cheap energy to the mining company, Vali. Further, it is thought that the dam would increase the power supply to over 22 million homes. One aspect of the controversy that has arisen is the notion that Brazilian people would be providing cheap energy and iron for the benefit of the Chinese instead of themselves.^[5] In addition to this issue, a more critical question concerns the fate of indigenous tribes.

The dams have an immense impact on the cultural tradition and lives of indigenous tribes. Indigenous communities constitute the largest population to have lost their living environment to dams. The Government claimed that the indigenous tribes affected by the Belo Monte dam would be compensated and resettled;^[6] however, these reimbursements are often insufficient. The number of people eligible for compensation or resettlement were often underestimated.^[7] Before the dam was supposed to be built, tribal groups claimed that they did not receive enough information about the project but that they knew the dam would destroy the rivers, jungle, their living environment and their way of life.^[8] The tribes would lose fishing areas and boat transportation, as the river dries downstream. Upstream there would be permanent flooding that would bring diseases and destroy ecology crucial to the peoples' survival. The very survival of indigenous tribes would be threatened and they would become homeless as a large amount of land would be flooded.

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Many people protested and indigenous group leaders even delivered signed petitions against the government project, arguing the negative future perspectives that come with the Belo Monte dam construction. There would be more corporations, land invasions, conflicts and vast effects on the world's environment.^[9] However, the project has been ratified and most indigenous people will have to lose sacred land, change the boundaries of their territories, and relocate into cities.^[10] It takes little imagination to see that such relocation has great societal consequences, as groups have to readjust to entirely foreign lifestyles and will most likely fall into poverty.

Indigenous cultures not only suffer the loss of territories and the hardships of adjusting to a new location and lifestyle, but also have to face cultural deterioration. In the Indigenous Declaration after the Belo Monte Auction, the indigenous leaders stated that their people have already suffered numerous threats in the past, many members died and they had lost many of their rights and substantial portions of their culture. Some tribes have even disappeared completely. The indigenous people claim that the Belo Monte will not only endanger their environmental habitat, but also their culture. Focusing on the Xingu natives, there are fourteen different tribes. All groups practice agriculture and fishing except the nomadic Kayapo and Suyá tribes. Accordingly, most natives nourish themselves mainly with fish and manioc. Fish serves as their primary source of meat. The manioc, which complements this diet, holds poisonous toxins that have to be leached out with water.^[11] The water of the Xingu river is not only important for the indigenous tribes because of the significance of transportation and food, but the different indigenous groups see the river as their home. Examining the meaning of the word *Xingu*, the true significance is evident, as it represents "house of God." The destruction of this waterway would symbolize a cosmological catastrophe.^[12] Furthermore, lakes and rivers are considered the home of community ancestors. The river serves as a canal to carry the recently dead to the pool of dead ancestors.

In Peru the subterranean rivers represent the mountains' veins, and the ancestors who reside in them create the local springs and distribute water and land to local communities. Indigenous tribes believe that water represents the cycle of life and that human beings emerge from subterranean water and travel back through the water after their death. From there they are thought to provide for the well-being of their descendants.^[13] Similar beliefs can be observed in some African countries, as certain tribes of the Congo talk to the river because it is a familiar element and is full of spirits that are open to discussion. Comparable are indigenous peoples from Ghana who refer to the sea as "Mammy Water"^[14] and in festivals bring offerings and sacrifices to the spirits of water in order to express their respect and gratitude. As indigenous tribes believe in a cosmic circulation, they assume that Pachamama is considered Mother Earth, a fertile female "being", that is a vessel for the passage of water.^[15] The Mother Earth receives rains sent by God the father. In this context, foam and moving water are associated with semen and the masculine fertilizing principle.^[16] Accordingly Pachamama's productivity depends on replenishing the supply of water and the proper circulation of water around the mother as well as through her. The Milky Way draws water from the river, then the water rains down to eventually flow back to the river, which renews the cycle of life.^[17] In order to preserve the cycle of water, humans need to perform rituals in order to sustain the flow of life. For example, Indigenous tribes from the Andes act out rituals to bring about rain.^[18] If they do not present appropriate offerings the mountain may replace water with their human blood.^[19]

In addition to acting as the life-giving element, water is also a symbol of community relations. The ritual of exchanging water, creates and bolsters community sentiment and social solidarity. In the water exchange ritual, each participant brings water from individual sources and exchanges the jugs of water to symbolize the connection between the fertility of earth, water and all human beings. By circulating the water through collecting, mixing and re-dispersing it, the indigenous people simulate the circulation of water.

The significance of water for indigenous cultures is demonstrated by the fact that it holds great value across different cultures. In India, water is considered sacred and the rivers are greatly respected for their divine nature. Rituals and rites are performed to evoke rainfall in times of drought.^[20] Further investigation of literature shows how water is also a component of many faiths and historical societies, from ancient Egypt, to Islam and Buddhism. There seems to be not only the material necessity but also a spiritual tie with water that makes it relevant to religion. In some African countries, water is not only a symbol of regeneration, purification, and life, but also represents the origin of the world. African traditions have numerous symbolic meanings attached to water. As it

symbolizes life, it can not only awaken the dead, but also kill the living.[21] Water is used by various healers, witchdoctors and Shamans in their respective ritual practices.

As water is used medicinally worldwide its crucial significance is celebrated. Water festivals, like those of the Andean communities, are widely present in other populations as well. [22] For example, in ancient China, sacrifices were made to the mountains and rivers. Despite the modernity of Japan with its advanced technology, water celebrations are still very much present in their culture. Vietnam is no different with regard to their celebrations of water. The Vietnamese pantheon includes not only the spirit of agriculture but also the goddess of water, which is often the object of popular worship and is never absent from any feast. Water festivals mark the end and beginning of the Burmese year, which is comparative to the Indian festival Holi. In Hindu temples the faithful are sprinkled with "peace water." In African cultures the rituals of birth are closely linked to water, as the newborn is sprinkled with water as soon as it comes out. Furthermore, Cameroonian fathers bless their daughters during marriage with water and plants to ensure happiness and marital bliss. Indigenous tribes of Mali believe that the Niger contains the spirits of their ancestors.[23]

Research shows how water is not only a necessity for humanity's survival, but is closely linked to indigenous rituals and has deeper underlying meanings for many indigenous cultures. The religious and cultural symbolic meanings of water serve as an important foundation for the many rituals that are enacted by indigenous populations all over the world, including Brazil. The underlying symbolic meaning of water enhances the complexity of the Belo Monte dam conflict, as it not only encompasses environmental issues important for the whole world, but also affects the economy and the prosperity of the indigenous people. In my opinion, it would be vital to expand the research and implementation of alternative energy sources and, for example, to adopt greater dependence on solar energy. It is important for civilians to have access to information about Brazilian development and the dam projects. Most importantly, the government should provide immense financial and social support for the indigenous people. In other words, it is not only important to compensate the indigenous people financially, but to also assist the tribal groups with adjusting to the city lifestyle. The vast effects of the displacement of people should not be overlooked and should be further investigated in order to recommend alternative methods or programs for adaptation.

Nevertheless, efforts to adapt indigenous tribes or assistance in resettling them to other locations could never be enough to ensure complete satisfaction of the tribes. No compensation to the indigenous tribes could make up for the loss of their cultural ties to water. Thus, losing their living space does not only imply the destruction of their way of life, but also the elimination of important religious and cultural practices. Eliminating the access of the Xingu river tribes to their local river would prevent their spiritual connection with their ancestors and disrupt the natural circulation they believe in.

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