Dam Building Essay, Research Paper

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Many people have already dammed a small stream using sticks and mud by the time they become adults. Humans have used dams since early civilization, because four-thousand years ago they became aware that floods and droughts affected their well-being and so they began to build dams to protect themselves from these effects. The basic principles of dams still apply today as they did before; a dam must prevent water from being passed. Since then, people have been continuing to build and perfect these structures, not knowing the full intensity of their side effects. The hindering effects of dams on humans and their environment heavily outweigh the beneficial ones. The paragraphs below will prove that the construction and presence of dams always has and will continue to leave devastating effects on the environment around them. Firstly, to understand the thesis people must know what dams are. A dam is a barrier built across a water course to hold back or control water flow. Dams are classified as either storage, diversion or detention. As you could probably notice from it’s name, storage dams are created to collect or hold water for periods of time when there is a surplus supply. The water is then used when there is a lack of supply. For example many small dams impound water in the spring, for use in the summer dry months. Storage dams also supply a water supply, or an improved habitat for fish and wildlife; they may store water for hydroelectricity as well. A diversion dam is a generation of a commonly constructed dam which is built to provide sufficient water pressure for pushing water into ditches, canals or other systems. These dams, which are normally shorter than storage dams are used for irrigation developments and for diversion the of water from a stream to a reservoir. Diversion dams are mainly built to lessen the effects of floods and to trap sediment. Overflow dams are designed to carry water which flow over their crests, because of this they must be made of materials which do not erode. Non-overflow dams are built not to be overtopped, and they may include earth or rock in their body. Often, two types of these dams are combined to form a composite structure consisting of for example an overflow concrete gravity dam, the water that overflows into dikes of earthfill construction. A dam’s primary function is to trap water for irrigation. Dams help to decrease the severity of droughts, increase agricultural production, and create new lands for agricultural use. Farmland, however, has it’s price; river bottomlands flooded, defacing the fertility of the soil. This agricultural land may also result in a loss of natural artifacts. Recently in Tasmania where has been pressure from the government to abandon the Franklin project which would consume up to 530 sq. miles of land listed on the UN World Heritage register. In the land losses whole communities must leave everything and start again elsewhere. The James’s Bay Hydroelectric project, hailed to be one of the most ambitious North American undertaking of dams was another example of the lands that may be lost. The 12.7 billion scheme was to generate 3160 megawatts of electricity a day, this power output would be enough to serve a city of 700000! One of the largest problems with this dam, is that it would be built on a region that meant a lot to the 10500 Cree and 7000 Inuit peoples that live near there. Lands that their ancestors have hunted and lived on for more than 5000 years will be flooded along with 90% of their trapping lines. If this happened these people must resettle, find a new way of life and face the destruction of a piece of their heritage if this project is approved.

When a dam is being constructed, the river where it is supposed to be built on must be drained. This kills much of the life and disrupts the ecosystem and peaceful being of all the aquatic and terrestrial animals around it. At fisheries there is a large impact on the fish. The famous Columbia River saw it’s stock of salmon drop considerably after the dams were built, although there were fish ladders built. The salmon were unable to swim upstream when it was time for breeding as they usually did. But perhaps it is the plans for the Amazon Basin in Brazil that shows us how large the side-effects can be. In the city Surinam, in northern Brazil, Lake Brokopondo was created in 1864 swamping about 580 square miles of virgin rainforest. Foul smelling gas called hydrogen sulfide was produced as the trees decomposed. The turbine casings were attacked by the acidic water and the decay of water allowed a chance for hyacinths to float on the surface. This did not allow the light to shine through to the water onto the plants which the fish feeded on. The plants were unable to perform photosynthesis, and the fish died also because there was a lack of food. In the lack of sun the waterweeds grew and threaten to create diseases such as malaria, where the whole lake’s ecosystem would die out. Many little animals and plants which were never discovered and may have had high economic value were to be lost forever.There remains a problem with reservoirs which to date hasn’t been solved yet. A reservoir is a dam to store water, mainly for hydroelectric power or irrigation. Nearly 10000 caribou drowned while crossing the inflated Caniapiscau River in September 1984, because of these reservoirs. The heavy rainfall created enough water to overtop the structure and caused extra amounts of spillages in the reservoir. The water flooded the river while the caribou were literally submerged. The Colorado River, known as the most litigated, controlled and legislated river in the world. People who used to raft there now say it is very insafe because of the fluctuating surges of water meant to accommodate when the people use most energy. What was fresh water is now being converted to salty water because of these reservoirs. The water standing in the reservoir evaporates when not used and the rest of the water becomes more salty. There is another theory that dams are causing earthquakes, when these large structures are placed with the mass of the unnatural weight of the lake near it, this disrupts the Earth’s surface and is a new precaution where before it was never heard of. Many people say that dams protect people from natural disasters, but there are some which it can intensify. For instance if an Earthquake happens then, along with cracks in the ground, buildings falling, there would also be a flood and large pieces of the broken dam to cope with. Dams are harming the environment that people live in. What was being hailed as great accomplishments are now showing signs of great consequence. The preservation of our environment is the key to the preservation of people. We cannot exchange money for the deterioration of our own animals, plants and land. The is the environmental age and humans must respond by changing their ways and looking at the long-term prospect instead of the short-term. Until we as the users and protectors of the land can do this, future of our great human civilization will continue to look grim.

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