

# [Freshwater resources](https://assignbuster.com/freshwater-resources/)

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This paper seeks to find out more information on large dams and the sustainable use of water resources. Research studies carried out in this area have revealed that massive dams have both positive and negative aspects. The researchers advocating that large dams have more gains than losses have put out the following arguments. Big dams promote the socio-economic development among the people. This is seen in most African countries where a majority has benefited from the dams.

After large dams are set up, various activities are carried out. These activities show the positive gains of large dams. Dams provide water for drinking and industrial use. Water is stored in the dams when there is a surplus amount. This water is then used in times of drought.

Water sits in the dams for long periods, and it is decanted, and small levels of treatment have to be made to the water. This water is used for domestic and industrial consumption. Another use for the water in dams is irrigation of crops. Big dams are used for large irrigation schemes which produce substantial economic benefits to a country. Irrigation schemes in arid and semi arid regions are a success due to the presence of dams. It is estimated that, most of the food that will be consumed by 2025, will come from irrigated regions.

Huge dams are used in flood control. In areas prone to floods, the excess water is contained by the use of dams. This water collected during floods can be used for domestic purposes. Hydro power generation is a key reason for the development of dams. Hydro power is a source for clean, cheap and renewable energy. Huge dams are used for various uses at once.

This makes these dams multipurpose. Enormous dams can be used for inland navigation. If the planning of a dam is well done, dams can be used for transportation of goods and people from town to town. Some reservoirs are created beautifully and can act as recreation areas. Huge dams, the size of lakes, are best suited for recreation purposes.

These benefits are washed down by the negative impact large dams have. Many writers discredit the need for massive dams. During construction, a large number of people is displace from the region under construction. People are forced to abandon their economic and social activities so as to pave the way for dam construction. The natural environment is destroyed, and animals are moved from their habitats endangering more species in the process.

Huge dams block the flow of the river to another country or region which leads to problems. Disputes may erupt between countries due to this. The construction of large dams causes a change in the water table level. For example in Egypt, the Aswan High has caused changes in the water table level. Generation of hydro power causes pollution in the river flowing downstream, which results in the destruction of aquatic life. Fish populations do not travel upstream where the spawning grounds are located.

Hydropower generation is affected by drought spells. If a drought occurs, no power will be produced. Scientists estimate that, by the year 2020, new nd alternative energy generation methods will be in place. These new methods will replace hydropower generation. Dams have various uses, e.

g., to provide water for towns and cities, like the Warragamba Dam in Australia, which supplies Sydney city with water. Another key reason for dam construction is to provide water for crop irrigation. Dams are set up in arid areas, but this only happens where a river flows. Generation of hydropower electricity also requires dams.

Most countries generate their electricity from water energy. The largest hydroelectric power plant in the world is the Itaipu dam in Brazil. Dams are also used to control flooding in areas that are prone to floods; these dams mitigate floods by preventing water from flowing in excess. This is seen in the U. S.

A. where a series of dams has been set up to prevent flooding on the Tennessee, the lower Ohio, and the lower Mississippi Rivers. The dams are referred to as the Tennessee Valley Authority dams. Such dams, set for flood control, are kept empty during normal river flow. When it rains, the floodgates are closed and water is prevented from exceeding the normal levels.

After the rains are over, water that is in the dam is let out slowly for weeks or days, depending on the quantity that had collected in the dam. Big dams around the world can be ranked according to their height or storage capacity. This is the first five dams in decreasing order, when ranked according to their height: Owen Falls in Uganda, Kariba in Zimbambwe, Bratsk in Russia, Aswan High in Egypt, and Akosombo in Ghana. When ranked according to their storage capacity, they are the same as when ranked according to height. Most of the water in dams must be used prudently to prevent its exhaustion. This water in dams is set for specific uses, and its wastage should be prevented in the first place.

Sustainable use of fresh water resources is encouraged among people so as to prevent the waste of resources. Sustainable use of fresh water implies that the water must be used in the most responsible manner. This ensures that water sources are maintained both in quality and quantity for future generations to use. Sustainability encourages the use of a resource and maintaining its source and its availability. Pollution is the leading cause of the lack of fresh water for human consumption. Certain laws have to be put in place so as to ensure pollution is controlled.

Water resource management policies should be introduced, and this should be done with the cooperation of institutions and the public. This goes a long way in ensuring firms take into account their pollution activities. International conventions on water management should also be implemented in all countries so as to ensure resource maintenance and preservation. Fresh water is the naturally occurring water on the earth’s surface. Fresh water that contains low amounts of dissolved salts. Most of fresh water comes from precipitation from the atmosphere, i.

e., rain, snow, and fog. Other sources are underwater springs, which give rise to springs and rivers. Thhese bring underground water to the surface and distribute it to other areas. The water capacity available on the surface after precipitation is dependent on the storage capacity, soil permeability, and evaporation rates of the area. Ground water is another source of freshwater contained in the water table of the earth.

It is also referred to as sub-surface water. This source is more permanent as compared to surface water (precipitation) and it can be used for a long time without exhaustion. This water comes to the surface through springs and boreholes. People can also get fresh water by desalinating seawater. This process involves removing minerals from the seawater to make it fresh. It is a hugely expensive process and not economical at the moment, since there is still enough water in most countries.

Icebergs in the seas and oceans can also be a source of water. Snow and ice that is found on mountain peaks can also be classified as a source of fresh water. This frozen water forms rivers and streams as it melts and flows in streams. Most of the water around the world is used in agriculture and animal rearing. This is the most beneficial use of fresh water.

The next beneficial use is industrial purposes. Most manufacturing and processing industries use water in their activities. Hydroelectric power is also generated from this water resource. Water is also required for household use. These uses are for drinking, cooking, bathing, gardening, and sanitation purposes.

Water is also used for recreation purposes, parks and swimming pools. Water resources have been under the threat of depletion due to the rapid industrial growth of countries. This has led to pollution of water sources by industries and households, which release untreated waste into the water sources. Rapid climate change has also contributed to the reduction of water sources. It is occasioned by droughts and floods.

The rise in global temperature has caused the melting of the icecaps on mountains and in the Polar Regions. These and other various reasons have led to the formation of global forums. These forums discuss how countries will manage their water resources to enhance sustainable use of fresh water. Conferences are held around the world with the aim to address the issue of water management. Policies have been made, and new ways have been enacted in many countries so as to reduce the pollution of water sources.

Each and every country is mandated to implement the policies made on international forums, so they can come up with the best methods for sustainable use of water. What each state does affects the whole world. People should be informed on proper water management and each state should ensure it protects its water resources and prevents their depletion. During those world forums, it is predicted that by the year 2030, if the following trend of pollution and disrespect to the environment continues, we shall have no water in the world. Degradation of the environment should be stopped, and ecosystems should be protected. This will make sustainable management of fresh water a success in the world.