Impact of dams

The main objective of this essay was to evaluate the impact of dams on the economic, social and environmental contexts. The idea was to analyse the dam’s major impact on each of these aspects. In the economic background, the benefits that hydroelectric dams provide were discussed in addition to the dam’s economic role in agriculture and food supply. Next, social impacts of dams were assessed which were mostly negative that dealt with population displacement and cultural sites destruction.

The environment section discussed dam’s effect on river flow and river line erosion, but concurrently benefitting the environment by controlling flood and generating clean electricity. Finally, in the conclusion an indication of what should be done was given highlighting the importance of dams. The innovation of dams has created a revolution in the state and phase of water resources since its establishment. Dams serve several purposes that are so beneficial that constructing a dam becomes an imperative mission for a particular nation.

In the book, “ Principles of Water Resources”, Cech (2009, p . 217) states “ Dams are a basic fundamental, management tool used to control, regulate and deliver water for a variety of purposes”. As mentioned by the author, these several purposes include hydroelectric generation, water supply, irrigation, flood control, recreation, navigation and many more valuable purposes. However, despite the much better outcomes, dams have faced huge criticism over the past years soon after its innovation.

This reveals the issue that dams have some negative consequences that have put the subject under so much criticism. However, the range of positivity and negativity differs for each of the backdrops that dams

influence. It is important to evaluate dams due to their immense impact in several contexts such as economic, social and environmental. One of the most important aspects of dams is the economic impact it has on the region or a country as a whole. Hydroelectric power production is the major factor in providing the economic benefits by dams.

Since the developments of generating electricity in dams, there has been a significant boom in the energy and power sectors. Being a renewable and a clean source of energy are the chief reasons for making dams a favourable method for generating electricity. In his article, “ Advantages of Hydroelectric power production and usage”, Binacional (2003) writes “ The flexibility and storage capacity of hydroelectric power plants make them more efficient and economical in supporting the use of intermittent sources of renewable energy. . The author’s viewpoint is certainly correct and it can be justified by giving an example of the very significant The Three Gorges Dam in China. It is reported that it can generate electricity more than 22000 MW because of its immense capacity. Due to the easy storage of water, it generates power at considerably high levels. Power and energy are imperative for a country’s socio-economic surroundings. As a result many nations prefer to prosper in it by having hydropower as one of their energy sources.

Another feature of dam largely contributing to a nation’s economy is the agriculture sector. It gets flourishing due to the advanced water supply and irrigation methods mainly attributed to dams. Since most of the foods we get are from cultivated land, water supply and irrigation methods provided by the dams can play a significant role in enriching agriculture thus

emphasizing the importance of dams. The food supply also becomes secure giving political instability. Most of the dams in India and China have played a major role in providing water for irrigation.

Therefore, the economic factors of a nation seem to be largely positive contrary to the social factors of dams. Social factors are one of the most sensitive issues regarding the impacts of dams. The social perspectives of dams have been largely negative. Only few groups of people mostly the upper classes benefit from it who have added their credits to such projects. The construction of dams adversely affects the people living in or around the region. The major problem is the displacement of large groups of regional people making them homeless as well as jobless.

Scudder (2005, p . 19) explains that dams and their activities unfavourably alter millions of people residing beneath them as the usual flood routines impact their livelihoods. I agree with the author's statement because the indigenous people's living standards are dependent on the rivers with fishing and agriculture being their main income source. Their displacement will be disastrous making them difficult to rehabilitate after migrating to other regions. For instance, the Sardar Sarovar Dam on the Narmada river in India was infamously known for displacing millions of people.

In addition, constructions of dams demolish some cultural, heritage and archaeological sites. In the article," Dams and Cultural Heritage", the author (2001) explains that big dams have considerable negative impacts on heritage because of the damaging and ruining of cultural and archaeological assets. The example of Gotvand Dam in Dasht –e-Lali in Iran bears testimony to the stated fact. The dam under construction will destroy some pre-Islamic

and many historical sites. This destruction provokes and infuriates the citizens of these regions.

Moreover, the historic and cultural essences that the area had been preserving all these years are vanished due to which people lose their ethnic belongingness, heritage and origin. As a result, it can be inferred that the social value of the regional population is damaged due to the dams. After analysing economic and social factors, environmental impacts of dams become our focus. The environmental impacts of dams are one of the most controversial issues that have met both favouring and disfavouring of the critiques.

The adverse consequences of dams to the environment have always been objected by the local people ever since the establishing of dams. According to the author (2010) of the article “ Environmental Impacts of Dams”, the most noticeable adverse effect of dams is the variation in the river’s course that ruins the downstream environment and the environment in which the river moves. It is true that the river’s ecosystem is deeply affected in many ways due to the dam activities. Dams fragment rivers, segregate species and cause them difficulty in migrating.

Due to the related dam activities many fishes and birds are reported to be vanished. Apart from these, dammed rivers usually contain less sediment due to which there is shoreline or riverline erosion. For instance, the Glen Canyon Dam on Colorado River in the United States caused sand bar erosion due to the accumulation of sediments at sand bars. Moreover, it raised the temperature of water creating an environment unsuitable for the marine

species as well as plants. On the other hand, dams assist in developing a reasonably better environment as well.

Dams have been successful in controlling floods. Further, the water collected in their reservoirs is used for providing safe drinking water. The electricity generated by using reservoir water is clean and renewable energy which doesn’t emit greenhouse gases. Therefore, dams have some positive impact on environment apart from the huge adversities which have put them under much scrutiny on the environmental impact. It is clear by now that dams are evaluated by their impacts on economy, social and environment. On analysing each of the contexts, overall dams have faced more bjections mostly from the local people due to population displacement, destruction of cultural sites and damaging the regional environment. In contrast, the purposes that dams have provided to the mankind are just magnificent and have made a revolutionary landmark in dealing with water resources. However, the significant regressing factors shouldn’t be neglected too. Dams must be dealt in such a way that they rectify or minimize all such inconsistencies, but at the same time not spending as much resources on such issues as on the dam activities.