

Dams are very important for any country

environmental sciences essay

[Environment](#), [Ecology](#)



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Dams are really of import for any state. First they produce hydroelectricity which is the most cost effectual power in the universe. Second, hydroelectricity production used H₂O as a resource which is a renewable resource. Dams are besides utile for irrigation intents. Water can be stored in them and so distributed in Fieldss as required. Dams besides help in halting inundations as it store the extra H₂O. Constructing a dike requires a batch of stuff and labour input. This boosts up the industry in the state and creates employment chances.

The Kalabagh Dam Project was designed in1984. The United Nations Development Program (UNDP) assisted this undertaking. It was supervised by World Bank. This undertaking was started by the Water and Power Development Authority of Pakistan (WAPDA) . The undertaking Planning Report was submitted to the federal authorities for blessing. In the average

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clip detailed design and contract papers were to be made by the people heading the Kalabagh undertaking. This undertaking was completed in the following two and a half old ages and building was to be started in mid 1987. It was estimated to be US \$ 3. 46 Billion at June 1987 degree and was to be completed in six old ages, with first bring forth unit to be commissioned in April 1993. Kalabagh dike was proposed to be situated on River Indus in Kalabagh, Mianwali territory in Punjab state surrounding the Khyber Pakhtunkhwa.

During Zulfiqar Ali Bhutto 's government (1972-1976) Tarbela dike was constructed which was a immense undertaking. The Kalabagh dike design had already crossed the pulling board phase at that clip. Due to tremendous stuff and fiscal resources already committed for Tarbela dike, there did non originate the inquiry of start building Kalabagh dike. The political parties of Sindh and NWFP state were against the undertaking and argued that during the storage of H₂O in Kalabagh dam the flow of River Indus in the Sindh country and peculiarly at the delta near the metropolis of Haiderabad would be well reduced endangering the ecology of the country and support of a big figure of people depending on piscaries. Similarly the political leaders of the North West Frontier Province (now Khyber Pakhtunkhwa) had reserves of another sort. One of their concerns was that 100s of estates of utile land would be covered in the reservoir country striping the state of agricultural usage of that land. They farther thought that some populated metropoliss would besides be threatened with inundations from clip to clip besides the hazard that any inadvertent breach of a little part of the dike will rinse off

several little towns of the state doing tremendous loss of life and belongings. The federal authorities tried to convey about a consensus amongst all the states and no authorities felt itself strong and safe plenty to travel in front with the undertaking in malice of the reserves expressed by the oppositions of the construct of Kalabagh dike. General Zia-Ul-Haq ruled from 1976 to 1985 but he was ever at cold war with the Pakistan Peoples Party (PPP) holding a strong clasp in the Sindh state and opposed to the Kalabagh dike. It did not accommodate the general 's power political relations to take part on confrontation with PPP on this issue and there was no inquiry of any rapprochement between the two. There was a glimmer of hope during the military regulation of general Musharaf (1998-2007) when he flatly announced his committedness to build the dike. However he did not turn up true to his words and there is small public cognition about what made him bury his committedness and not much was heard about Kalabagh dike during the 2nd half of his regulation.

Features of Kalabagh Dam

Kalabagh Dam 's salient characteristics include catchments country of 110, 500 sq. stat mis. Average one-year flow would be 91. 4 MAF. It has gross and unrecorded storage capacities of 7. 9 MAF and 6. 1 MAF, severally. Its upper limit and minimal keeping degrees are 915 pss 825 pss above mean sea degree. Dam 's type zone embankment is filled with clay nucleus. Its maximal height above river bed is 260 pss and entire length is 11, 000 pss whereas the entire fill volume is 60 million three-dimensional paces. Dam 's flood and wastewear capacities are 1, 070, 000 pss and 980, 000 pss,

severally. Unit size at Kalabagh Dam would be 300 MW. Turbines would be Francis type. Turbine design caput would be 170 pess. Power houses designed are indoor types. The initial installed capacity of the dike would be 2400 MW whereas the ultimate capacity would be 3600 MW. The estimated entire investing in June 1997 for the undertaking was Rs. 250 Billion. (Alvi, 1997)

Political and provincial issues

One of the leaders that have been seen giving importance and statements demoing his enthusiasm in edifice Kalabagh Dam is General Parvez Musharaf. On December 31 2005 he addressed The News stating that all the major dikes including Kalabagh, Bhasha and Akhori will be built till 2016 to get the better of H2O deficit in the state. (News, 2005)

One of the chief grounds why Kalabagh Dam does non be today is that there was no political consensus on the issue as stated by Minister Syed Yousaf Raza Gilani on Monday, August, 10, 2010 in Multan. He besides stated that the deceases and devastation caused by the inundation could hold been averted if Kalabagh Dam would hold been built. (Daily Times, August 10, 2010) .

Everyone has a right to talk up on the Kalabagh Dam issue because everyone in this state will be affected by it. Even if person does non hold a proficient know-how on the issue he/she can still talk up and give his/her sentiment about it. It is non a proficient instead, a political issue. (Ghazanfar)

Punjab Sindh contention:

Sindh blames Punjab for `` H2O robbery ". Water is a important affair for Sindh for the past three old ages. They believe that Kalabagh Dam would profit lone Punjab and all the H2O and grosss will be stolen from Sindh through the Dam. Sindhis, their support and agribusiness are being negatively affected by deficit of H2O and they blame it all on Punjab. (Eckholm, 2003)

Sindh and North West Frontier Province (NWFP) had serious apprehensivenesssing the possible negative effects of Kalabagh Dam.

Apprehensions of NWFP:

Chief Minister of NWFP, Akram Khan Durrani said that the authorities of NWFP did non authorise President General Pervez Musharraf to build new dikes in the state. (News, NWFP non authorizes President to build new dikes: Durrani, 2005)

The Frontier Province put forward their ailments stating that 182, 000 estates of their productive land will be lost under the reservoir, 34, 000 people will be displaced and that Nowshera, a ample metropolis of NWFP, will be threatened with H2O logging. (Kazi, 2003) . The political parties of NWFP besides said that Drainages of enviroing country of Mardan, Pabbi and Swabi fields would be adversely affected by the reservoir therefore making water-logging and salt. They were besides afraid that their traditionally cultural land would be submerged into the Dam. (Kazi, 2003)

Answers to apprehensivenesss of NWFP by Alvi:

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Equally far as the drowning of Nowshera was concerned, in the modified design of the undertaking the reservoir preservation degree has been lowered by 10 pss from 925 pss to 915 pss above mean sea degree (MSL) therefore the demand for building of any protective butch near Nowshera was eliminated. At maximal preservation degree of 915 pss, the back-water consequence of Kalabagh lake would stop about 10 stat mis downriver of Nowshera. A state-of-art computing machine based survey, backed by physical mold in Pakistan has assured that a inundation every bit black as the inundation of 1929 would non impact the H2O degree at Nowshera even after 100 old ages of deposit in reservoir.

As for Mardan, Pabbi and Swabi countries their lowest land degrees are 970, 962 and 1000 pss above MSL severally whereas the maximal preservation degree at Kalabagh Dam is 915 pss above MSL so it will non be a menace.

Displaced people would be resettled and provided with surrogate irrigated land and other installations (Alvi, 1997)

Apprehensions of Sindh:

Sindhi political parties said that there would be no H2O to make full Kalabagh Dam 's reservoir, cultivation will be effected adversely in Sailaba country, Rhizophora mangles would be threatened, and imbibing H2O and fish production bellow Kotri would be negatively affected. (Kazi, 2003)

Answers to apprehensivenesss of Sindh by Alvi:

Dams are built for the intent of hold away H₂O in the inundation season and doing it available on harvest demand for the remainder of the dry season. They are not built to devour H₂O.

If any state wants to construct, its portion of H₂O would be purely governed by WAA 1991.

Flood extremes above 300, 000 cusecs would still be coming after Kalabagh, while big inundations would be efficaciously controlled.

Out of the entire 1. 53 million estates (MA) tidally inundated historic Indus Delta, Mangrove forest screen an country of about 0. 32 MA In this wood, 95 % of the population now consist of a salt tolerant assortment. In order to resuscitate the Rhizophora mangles, existent demand is for replanting salt tolerant assortments, this possibility would be enhanced by constructing Kalabagh Dam.

Fish production has been invariably increasing as shown by the statistical informations and there is no grounds that in Kotri it has been diminishing. (Alvi, 1997)

Importance of Kalabagh Dam

If Kalabagh Dam is not built, there will be a 25 % shortage in nutrient and agribusiness in Pakistan by the twelvemonth 2000. (Alvi, 1997) .

Construction of the Kalabagh dike will assist salvage 20 million barrels of oil a twelvemonth needed to bring forth thermic power or Rs. 33. 2 Billion. This

is said by the Lahore Chamber of Commerce and Industry (LCCI) President Zafar Iqbal Chaudhry. (Tribune, 2010) .

It will supply inexpensive hydroelectricity to the National Grid with its installed capacity of 2400 MW (ultimate 3600 MW) . In an mean twelvemonth, 11413 million kW hours (MKWh 's) of electricity would be generated.

It will cut down the menaces and inclinations of inundations in Indus River.

Dam would salvage around Rs. 25 billion per annum. Thus the investing cost of undertaking would be repaid within a really short period of 9-10 old ages. (Alvi, 1997)

Disadvantages of Kalabagh Dam

There is no H₂O in Indus River to make full Kalabagh Dam. Provincial assemblies of three states nem con rejected the Kalabagh undertaking. They must hold done so on some pure groundss.

Indus River System Authority, IRSA, rejected the Kalabagh Dam on October 22, 1996 on the footing that the Dam will be silted rapidly ; it has a short life of approximately 22 to 30 old ages ; its public presentation will be instead hapless ; it has a relatively lower electric coevals capableness. All this would ensue in immense losings to the state 's treasury. The Dam is economically impracticable. The dwellers of Sawan, Kabul and Tui will hold to be rehabilitated which will be really expensive.

The dike will displace a big figure of people which amounts up to 48500 - 44000 in Punjab and 4500 in the NWFP (figure taken from (Ghazanfar)) and inundate fertile lands in NWFP and Punjab which is 24500 estates out of which merely 2900 (figure taken from (Ghazanfar)) acres is irrigated land.

Nowshera will endure terrible H₂O logging. Infrastructure will be submerged by Kalabagh Dam including including the Attock-Talagang route on river Sawan, the Kohat-Rawalpindi route and the Peshawar-Rawalpindi route on river Indus besides some railroad paths. The Sui gas line between Peshawar-Rawalpindi and Rawalpindi-Kohat will besides drop in the dike.

The Mardan and Swabi SCARP undertakings will be affected and there will be a possible backwater effects on the Ghazi-Barotha undertaking. Earthquakes can damage the Dam as it sits on the mistake country. Kalabagh would hold hurtful impact on environment, ecosystem, biodiversity, home ground, wetlands and undersoil aquifers. (Narejo, 2005)

Positions of Water And Development Authority (WAPDA)

Chairman WAPDA Tariq Hameed said that the building of Kalabagh Dam will neither do loss to Sindh nor to NWFP. Seismic survey has already been conducted and temblors will non be a danger to the Dam. 35. 2 million acre pess H₂O has flowed in the sea since the building of Tarbela dike so at that place will decidedly be H₂O available for the Dam. Sindh would acquire 37 per cent (2. 4 million acre pess) extra H₂O after the Dam is constructed. (News, 2005) .

WAPDA has been pulling strings of the figures it shows to public. In 1987 WAPDA put the eastern river flow at 2 MAF but in 1994 it all of a sudden raised it to 4.00 MAF, denoting it as "flow generated within Pakistan". WAPDA has given a little figure of 2.0 MAF for the future Indian claim on the western rivers, which in fact, could be every bit high as 4.8 MAF. System losses have been shown as 10 MAF which could really make up till 18.7 MAF. WAPDA has been increasing the influx figures and diminishing the outflows figures. (Ghazanfar) .

Cultural and other issues

The Washington based World Sindhi Institute (WSI) is a human rights organisation. After hearing the intelligence of blessing of Kalabagh dike by the Nawaz Sharif regime it proposed that it will set together a place paper on Kalabagh dike, foregrounding the negative political, environmental, proficient, and societal impacts of the dike. It will inquire the other Sindhi corporation to collaborate with it. It will form protests, seminars, workshops, publish articles, interacts with media and inquire Sindhi people to collaborate with it. It targeted the Sindhi husbandmen and made the cultural depletion an issue to elicit them. There were other bureaus as good which cooperated with WSI and farther told Sindhis and people of NWFP about the negative impacts of Kalabagh Dam, concealing the positive points. They created green-eyed monster towards Punjab and the authorities stating that they will utilize the land of NWFP and steal H₂O from Sindh to develop gross for Punjab. They targeted the landlords as good and made them against the

undertaking. The husbandmans were brainwashed that their traditional ways of farming would be depleted. (Dc, 1998)

Discussion

Kalabagh Dam is a really controversial issue. In the survey of this issue I have come to detect that even the experts in different Fieldss who have been related to this issue or have been someway interested to analyze and compose about it besides seem to hold conflicting positions sing this undertaking. In the earlier portion of this paper I have written about different positions from different experts and it is apparent that Kalabagh Dam undertaking has seen many contentions on political, cultural, international and proficient evidences.

Mr. Alvi said that if Kalabagh Dam is non built, there will be a 25 % shortage in nutrient and agribusiness in Pakistan by the twelvemonth 2000. (Alvi, 1997) . This statement is based on statistical survey or female horse premise I can non state because the existent statistics province the antonym. The quantum index figure of major agricultural harvests states that there has been an existent addition in overall production of major agricultural harvests of Pakistan. These statistics have been taken from the Federal Bureau of Statistics.

Due to non constructing Kalabagh Dam the nutrient and harvest production in Pakistan did non diminish as Mr. Alvi had predicted but if Kalabagh would hold been built, the production could hold been boosted up even more. It would hold helped Pakistan in increasing its exports as Pakistan 's major

exports are its harvests. From an economic sciences position, it would hold helped the Pakistani economic system to turn to a great extent. The husbandmans would hold benefited, the people would hold benefited by acquiring cheaper harvests to eat and lesser of their income would hold had to be spent on indispensable points, which means they could hold saved more for superior goods. The consequence: an overall addition in the criterion of life of people in Pakistan.

Other than the disbursement factor as Kalabagh Dam is a large undertaking it would hold boosted the whole economic system due to an addition in investing in many different countries of economic system. It would hold had a multiplier consequence. The natural stuffs required in constructing it such as cement would hold boosted the cement industry. Labor demand would hold been high. Peoples would really hold been employed. Unemployment rate in Pakistan would hold been reduced. Skilled and unskilled workers, both were required in this large undertaking. The machinery required in edifice it would hold boosted up the steel industry. And there are many other factors as good which would hold straight resulted in an addition in production in the whole economic system. It would hold had a great multiplier impact and the economic system would hold been boosted up. Peoples would hold earned incomes and the criterion of life in Pakistan would hold increased at a singular gait. This is the effects such large investing undertakings have on the economic system. Kalabagh Dam would hold helped the economic system to hike up in a short period of clip.

A large undertaking it would hold been, lending to the lower monetary values and lower electricity measures. Statistics have shown that it could hold produced 11413 million kW hours (MKWh 's) of electricity. It would hold provided inexpensive electricity to the people and might hold helped in diminishing the job of burden shading and high electricity measures that we are confronting today.

It will cut down the menaces and inclinations of inundations in Indus River. Dam would salvage around Rs. 25 billion per annum. Thus the investing cost of undertaking would be repaid within a really short period of 9-10 old ages. (Alvi, 1997) . Construction of the Kalabagh dike will assist salvage 20 million barrels of oil a twelvemonth needed to bring forth thermic power or Rs. 33. 2 Billion. This is said by the Lahore Chamber of Commerce and Industry (LCCI) President Zafar Iqbal Chaudhry. (Tribune, 2010) .

Even our leaders, though they are conflicting amongst themselves on the issue of Kalabagh Dam, are cognizant of the advantages they have lost due to non constructing kalabagh dike. `` One of the chief grounds why Kalabagh Dam does non be today is that there was no political consensus on the issue as stated by Minister Syed Yousaf Raza Gilani on Monday, August, 10, 2010 in Multan. He besides stated that the deceases and devastation caused by the inundation could hold been averted if Kalabagh Dam would hold been built. " (Daily Times, August 10, 2010) .

Kalabagh dike had many advantages for the state. The state on the whole would hold benefited a batch from the undertaking. It should hold been built.

Decision

So, if I were to give an sentiment I must state that Kalabagh dike should hold been built. It would hold had so many benefits to the economic system of Pakistan. It would hold boosted the economic system to a great extent. From harvest production to cement industry to employment sector, everything would hold benefited from Kalabagh dike. Pakistan 's authorities is excessively controversial in itself and the civilization is so backward that people do non hold exposure to the new engineering and hence its benefits. They stick to their conventional agencies of irrigation and are afraid of any large alterations. These contentions are the basic grounds in my position that Kalabagh does non be today and I must state that Pakistan has lost something which it does non cognize could hold done admirations to its economic system and people. The burden shadowing we all complain about could hold been controlled and reduced to a great extent if Kalabagh was built because the demand for electricity has outrun its supply. Due to Kalabagh, the supply of electricity would hold increased and it could hold come to equilibrium with the demand. The deficit of electricity would hold been managed by constructing Kalabagh dike.

Sindh and NWFP had some apprehensivenesssing the undertaking but the experts answered them in a satisfactory mode. The design of Kalabagh Dam was changed in order to foster fulfill them. Kalabagh dike would hold decreased the inundation menaces for the state. It would hold increased the harvests production. This in return would hold increased the exports of Pakistan and benefited its balance of payments account. The currency of

Pakistan would hold become a small stronger. Overall, Kalabagh Dam undertaking was so a large investing undertaking which would hold benefited the whole state and its people. Everyone would hold benefited from it. By non constructing it, we have lost a large beginning of income for the people every bit good as the authorities.