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Construction of Big Dams Affecting Lives of Vulnerable People versus Prototype of Development

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Abstract: ***The incentive for abstracting the essentials of development at the global level has come from the United Nations' report. The significant objective of the report was of electing between the economic development and environmental protection by promising various nations across the world to achieve "sustainable development. This report recommends that the attitude of development has to be balanced on the commencement of 'development environment' rather than recommending 'environment for development'. For achieving sustainable development, countries across the world started to determine practicable technologies and machinery which includes agriculture and energy fields. The big dam technologies have been observed as 'sustainable' and 'eco-sensitive'. It is not just anticipated to deliver plentiful water to enable appropriate irrigation, but it is also anticipated to produce pollution-free energy that is hydro-power. This is how the improvement model supplemented by the big dams has been measured and considered sustainable for the ecology and social aspect as a whole.***

Keywords: Sustainability, Development, Environment and Big Dams

1. Introduction

Sustainable development implies the fulfilment of several conditions: conserving the overall balance, admiration for the surroundings, and avoiding the exhaustion of natural resources. Cheap manufacture of surplus resources and the justification of manufacture and energy consumption must also be executed. In order to be workable, development must trust three main fundamentals: equality, conservation of the environment, and financial effectiveness. A sustainable development project must be based on a better-developed manner of conversation between the public and the local authorities. The success of such a proposal also depends on users accepting limitations and inhabitants perceiving requirements with respect to contribution.

The goal of sustainable development is to describe applied arrangements and organizations combining the economic, social, and environmental aspects of human activity. These three aspects must therefore be taken into attention by communities, inhabitants and local authorities. The eventual goal of sustainable development is to find an enduring stability between these three aspects. In addition to these three main aspects, there is a oblique contemplation, which is vital to the application of policies and activities with respect to sustainable development. Authority concerned in the processes of the decision-making. In matters of sustainable development, the synchronization of all the contributors in society is mandatory in order to describe objectives, goals and implement them: private and public sector companies, NGOs, unions, and inhabitants.

Following are the Supports of Sustainability
Sustainable development is defined as the encounter of the daily requirements, without avoiding the capabilities and prospects of forthcoming generations to encounter their own needs. Such a description of sustainable development started a conversation on the difficulty of irregular predictions amongst various age groups for the depletion of ecological resources.

1) Economic: Generations of power, water supply and resources, food conservation, land renovation.
2) Environmental and Ecological: Eradication of fish, habitation loss, and nutrient transportation.
3) Social: New infrastructure and set up, transposition of local inhabitants, well-being concerns.

2. Big dams in India: Rhetoric and Certainty

India ranks third in the world in building of big dams all over the country, after United States and China. Since independence, the construction and the purpose of big dams in India has been deliberated as an operative representation of evolution and advancement. They are generally assembled to produce hydro-electricity for social as well as economic development of the Country, providing water to farmers for irrigation and the industrial and domestic difficulties of power and storing water for use in dry seasons for different areas and regulating floods. Hence, the big dams are intended as an explanation to a number of issues and ultimately it has become a symbol of growth and economic success of the country. Hydro-power produced by the big dams has been extensively deliberated the inexpensive basis of power and irrigation. Thus, increasing obligation of electricity and agricultural requirement of irrigation in India resulted in the constant construction of big dams on outsized and enormous scales across the nation. As a significance, India had soon become one of the greater dam constructers in the world. On the contrary, many conservationists, social activists and scientists along with NGO's have been disapproving the building of big dams. They announced that large dams have developed carefully impracticable, socially and publicly indefensible, technologically and industrially uncontrollable and ecologically and environmentally devastating, it was further added that it was against people and against the nature. Critics not only upraised questions and demands about the realism of large dams, but also debated that they invented unsolvable environmental, economic and communal difficulties. In spite of many profits of dams, at the end of 1970's and the beginning of 1980's, when the sustainable

development started to be conferred, the attention and cure for surroundings rose, mostly the undesirable effects of dams marked and discussed during negotiations and conferences. These negative or undesirable effects can be assembled as effects on surroundings and effects on inhabitants.

2.1 Effects on Environment

Mislaying of the environmental organizations on the regions on which dams appear. The superiority and extent of ecological effects of dams are subject to modification rendering to the determination and purpose of dams. It can also be said that, the affected zone of a dam is subject to change according to their purpose and needs; which can be flood mechanism, irrigation, potable drinking water, electricity generation, or all of them. The effects and influences on surroundings due to building of dam are discussed below:

1) **Influences of the dam on the catchment:** The building of a dam itself can subsidize to the degradation of its catchment. For example, removal of fuel by the industry force and enriched admission to the forests, both before, during and after big dam building, damages catchment forests. The construction of roads and other substructure and the improved happenings in the surrounding area around also put an supplementary pressure and stress on the forestry. This consequences in larger deposit and residue flowing into the reservoir, thereby dropping the lifecycle of the dam and also posing a hazard to its protection and well-being. Also, where catchments get sullied, the local society's admission to biomass is unfavourably affected. This often effects in further degradation of the catchments.
2) **Influences of mining and excavating for construction materials and other proposes:** The soil, stones and sand essential for the building of dam are frequently quarried from around the dam site. Such mining can also have environmental impacts and further causing problems, particularly by worsening the conditions of air pollution, distressing wildlife, flora and fauna and also abolishing vegetation and nature around. The mines or quarries that these excavations leave continue as environmental injuries and can also have an impact on the dam.
3) **Influences on marine environments:** Building accomplishments, which include the deviation of the water channels through a tunnel, have major impacts on the marine and river environment. Susceptible classes of this aquatic ecosystem, with either imperfect delivery and circulation or little acceptance, could become extinct even before the dam is completed.
4) **Influence on fauna and flora:** The condition produced by building actions, which include sound and undertaking, building of roads, mining of stone and rocks, erection of building, etc. also destructively impact the fauna and flora at and around the dam site.
5) **Submergence of forests:** Accessible suggestion titles that afforestation is problematic to implement, and is found in some cases was not comprehensive numerous years after accomplishment of the development. Rendering to the Department of Environment and Forests, the presentation of state governments and local authorities in afforestation has not been very satisfactory. Also, it is impossible to replace a natural forest by a plantation. Therefore, even if there is formal compensation of forest area, the actual ecological and biodiversity losses that the destruction of natural forests implies cannot be compensated.
6) **Wildlife losses:** Apart from forests, the lake and the dam affect further environments and fauna and flora types. Inappropriately, there was little determination to evaluate the influence on flora and fauna and on non-forest systems. During studies, there was a inclination to consider only large animals or creatures as wildlife.
7) **Influences on civilized biodiversity:** Water sources also immerse dynamic and fruitful agricultural land. This has a social and economic price to be paid along with adverse effects on civilized biodiversity and a mass of birds, insects, animals and reptiles that have modified to agricultural ecosystems. In many cases, particular crop varieties of the ecosystem and approaches of cultivation and agriculture wipes out because of dams.

3. Effects on People

Apart from the adverse environmental inferences big dams have also directly distressed the lives of a large number of inhabitants by relocating them from their home lands and communities and brought conclusion to their economy and means of income thus violating the rights of the pretentious inhabitants. These adverse effects along with their influences on lives are discussed below:

1) **Influences on inhabitant's well-being:** Mosquitoes, which are carriers of malaria, dengue, fluorosis, yellow fever and other diseases, strain in small pools created on the boundaries of the water source due to the dropping and raising of the water level of the source.
2) **Water cataloguing and salinity:** Channels and waterways can directly or indirectly subsidize to water cataloguing. If not accurately creased, or sustained, substantial quantities of water can percolate out of channels and waterways and downpour the lands around these canals. Also, when secondary canals are not well sustained or preserved, when the water releasing is not appropriately supervised, or when drainage is not guaranteed, water cataloguing in that area is a consequence. Water cataloguing is one of the grounds of salinity and deliver a advantageous environment for vector breeding. It destroys natural flora and fauna, damage habitations, structures and transportations and streets whose consequences include severe impact on the local habitants and their living.
3) **Influences of electricity supply lines:** Very often passageways have to be amended through the forests and other natural systems to house power lines. This adversely affects the native ecosystems. These passageways also have to be sustained or preserved in order to allow restoration and progression work on these power lines, which is not a short term effect but a long-term effect on the ecosystem and ultimately the inhabitants, distressing ecosystems. Most of the power lines, high-tension power lines cause fires and be hazardous to birds and animals.
4) **Influences of rehabilitation or relocation actions:** Often locations for rehabilitating are engraved out of forest areas or from other environmentally appreciated

and treasured areas. Also, when large masses are relocated to fresh areas, there is often severe adverse impact on the adjoining surroundings. This is accentuated if satisfactory incomes have not been deliberate for and made accessible to encounter the water, land, wood, daily food needs of these masses. Forests and other natural resources are also occasionally dishonoured because of lack of maintenance options which force the pretentious people to earn their living by mining firewood and daily food needs at an unmanageable proportion and rate.

4. Building of Big Dams and their Influence on Existence of Individuals

By the term 'development', people of developing countries do not mean the technological progressions but they are much anxious about their socio-economic improvement. The progressive model adopted by any Country or a State for improvement of civil society and the inhabitants must anticipate to carry a perceptible improvement and advancement in the standard of living and the lives of the poor along with the objective of technological advancements along with the swift economic and social improvement. Keeping in mind the severe poverty, illiteracy, inequality, malnourishment and other social ills, these socio-economic developmental projects should be planned. Sustainable improvement approximately means sustaining people's life sequence and zone of luxuries. On the contrary, the buildings of big dams have left many people particularly the pretentious individuals and the societies barehanded.

Due to immense dam building after 1947 a large number of people have been relocated and rehabilitated from their inherited birthplaces and agricultural lands which is initially their mode of income but they have also been deprived of the right to access to clean potable water, favoured or ideal ways of life and living standards which changes from community to community, nature and natural resources upon which their existence was reliant on, habitual standards and ethics as well as religious objectives. The situation is worsened as, the affected people agonizes and later dies from many water-borne and mosquito-borne diseases triggered directly or indirectly by the building of big dams.

5. Suggestions

1) Appropriate planning should be done while scheming the plans for the developmental projects of rehabilitation and relocation. The plan should contemplate the requirements of the growing population of the country as well as accessible ecological resources. The planning for short term gains should be avoided but must be for long term welfares and civilizing superiority and standards of life of inhabitants.
2) Environment Influence Valuation should be done mandatorily for all the relocation and habitation schemes including building of big dams. It should be revised and supervised by environmental specialists along with the local authorities concerned.
3) The administrative institutions and decision making agencies commended with the accountability of planning and performing the rudiments of sustainable development directly want to re-examine their sympathetic of progress based upon the big dams so that they could dodge the enormous social, economic and environmental costs involved with the construction of large infrastructural projects such as big dams.
4) NGO's, Media and Public spirited citizens play a major role in generating consciousness and awareness about the requirement to defend and conserve the environment and natural resources. They can also contribute the government and local bodies involved for determining the struggle among environment and development by estimating the influence of these developmental schemes, accompanying field studies, documentation etc.

6. Conclusion

During last few years, savings in the big dam schemes confirmed a negative tendency across the world and are still continuing. Such large scale funds have supplementary strengthened the struggles neighbouring the big dam building and unsolvable socio-economic and ecological expenses which are generally obligatory on the abandoned and unorganized societies and even individuals. Thus, a representation of national improvement and economic affluence, predominantly the big dams, has revolved out as a representation of mistreatment and manipulation of those who are previously existing on the edge. The sustainable improvement through building big dams is troubling the lives of many people and communities all over the world as well as in India.

Under the concept of sustainable development, both the right to development of the habitants and the right to environment are compatible characteristics of each other. The dissimilar nations of the world are in different stages of expansion and have dissimilar patterns of expansion as per their social, political and economic needs. Receiving of the survival of both a right to development of the habitants and a right to environment, would generate the obligatory circumstances for the presence of a new right to sustainable development. It is indispensable to device successfully the perception and the conception of Sustainable Development in India as it is a developing country and fundamentals to carry out economic accomplishments for providing elementary facilities, comforts to the enormous population and also should be considered for the growing population along with needs to protect surroundings and natural assets of the country.

For the operative representation of the above concept of sustainable development, few proposals are projected in suggestions. By following the suggestions sustainable development can be achieved and can be enacted to develop the standard of living of the local communities and later as the whole country. The proposals should be carried out by the central as well as the local authorities of the place, only by approving with the inhabitants, communities or the users.

References

[1] Schwarzenberger Georg, a Manual of International Law; Fifth Edition, Universal Law Publishing Co. Pvt. Ltd. Delhi, 2000

[2] Shanthakumar, Introduction to Environmental Law, Second Edition, Wadhwa and Company, Nagpur, 2007
[3] Journal of the Institute of Human Rights, Jaripatka, Nagpur on 'Right to Development' Vol. XIII No. II December 2010
[4] 'Social Action' A Quarterly Review of Social Trends, Vol. 64 No. 4 October – December 2014
[5] Abrishami, S., Goulding, J. S., Pour Rahimian, F., Ganah, A., &Sawhney, A. (2014). G-BIM Framework: A Feasibility Study for the Adoption of Generative BIM Workspace for Conceptual Design Automation. In: M. Hajdu& M. J. Skibniewski, (eds.), Creative Construction Conference 2014, Prague, Czech Republic, 21-24 June 2014. pp. 539-543.

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