

Tagore's Cognition of Large Dam And Its Relevance of Present Degrading Scenario of River: A Geographical Approach



Geography

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ABSTRACT

Impact of large dam is one of the most buzzing topics of debate in the 21st century. There is unanimity in the global thinking that more than 45000 large dams constructed around the world have played an important positive role on agriculture for food production, industrial water supply, flood control, domestic use and power generation. To many people, it is the potent symbol of patriotic pride and the conquest of nature by human ingenuity. But over dependency of man on technologies for controlling the natural gifts to meet his demand have invited so many unwanted problems sometimes it seems that the very existence of human being will face danger in near future. Tagore warned us about those problems many years ago. A poet warned us in poems, essays and dramas that techno-centric river impedimentation not only bifurcate the integrity of river ecosystem but it will be the means of suppression and exploitation by the powerful to the powerless people in the society in near future. This paper will give us an insight about Tagore's view on river impedimentation, its ultimate fate to the society and relevance of modern day thinking of Tagore's view for solving our problems.

Introduction

Next to air, water is essential to sustain life for all the living beings of the planet earth. Water set the stage for the evolution of life and is still an essential ingredient of all life today (Hess, 2012). There are however, 1,360,000,000 km³ water found in the planet earth, of which only 38,000 km³ water makes runoff to oceans from rivers and icecaps (Manning, 1989). As per report of National Commission for Integrated Water Resources Development Plan (NCIWRDP, 1996) almost 1953 km³ water flows in rivers of our country but annual usable water resources of the country are 690 km³ surface water and 396 km³ of ground water, making a total of 1086 km³ (Iyer, 1996). In our country almost 80% rainfall occurs in few monsoon months. Besides, there are wide spatial variations in the availability of water resources in the country. These variations led to proposals for construction of large dams.

But one important question arises regarding the above issue - is it necessary to construct large dams without constructing small earthen dams which are cheaper, time-tested, eco-friendly, sustainable for poor common people without bringing any trauma of eviction? This article seeks to answer the above questions in the light of Tagore's thinking.

Objectives

The major objectives are to find out

- Are dams damned?
- Damming and dam movements in India.
- Tagore's thinking of dams on river and its present day realization.

Database and methodology

The present paper is based on primary as well as secondary sources of information. Actually, the primary sources of information are the literary works of Tagore, and the author's personal field observation of Kangsabati dam in West Bengal and the secondary sources of information are the works of earlier researchers belonging to different disciplines of knowledge.

Dams in Short Historical Perspectives

A river is the channelized flow of water and a dam is a barrier which checks that flow. A dam may store water to its capacity. The stored water is used to generate electricity; to supply water for irrigation, industries and households; to control flooding; to assist river navigation by providing regular flows and drowning rapids, or for serving other needs, like fisheries and leisure activities, such as boating.

Farmers in the foothills of the Zagros Mountains on the eastern edge of Mesopotamia around 8000 years ago may have been

the first dam builders. Up to 1949, number of large dams in the world was 5000. At the end of 20th century, 45,000 large dams have been constructed in 140 countries in the world (World Commission on Dams [WCD], 2000). More than 400,000 km² land areas have been inundated by reservoirs in the world. Number of small dams in the world is 800,000 (McCully, 1998). The aggregate storage capacity of large dams in the world is about 6000 km³ and more than \$ 2 trillion have been invested for construction of dams throughout the world (WCD, 2000).

A Short History of Damming in India

The first Prime Minister of independent India, Pandit Jawharlal Nehru dreamt that the large dams will be the temples of developments of modern India. A large number of dams were constructed in many rivers through the country for this realization. Large tracts of the agricultural land, forest field and an uncountable number of villages got lost in those constructed reservoirs. Huge numbers of poor people were evicted from their homeland. During the construction of largest earthen dam in India, Hirakud, Nehru told in 1948 to the evicted people that "if you are to suffer, you should suffer in the interest of the country" (Rudra, 2008, p.8)

At the beginning of the 20th century India had 42 large dams and now the number has increased to 4528 (Thakkar, 2009). At present, India accounts 40% of large dams which are now being built in different parts of the world in the last few years (WCD, 2000).

Positive and Negative aspects of Large Dams in India

In India, large dams supply irrigation water approximately 30-35% of the total agricultural land (WCD, 2000), contribute 10%-30 % of increased food production, and account about two-thirds of countries hydroelectric power (Iyer, 2003). As per estimate made by Thakkar and Chaturvedi (2009) the total submerged reservoir area by 4528 large dams in India is 4.426 million hectares. Almost 7 million hectares of irrigated (7% of total irrigated land) agricultural land is affected by salts, cost overruns rises 235 % for dam construction and 75% of the displaced people from reservoir areas have not been rehabilitated and are impoverished (WCD, 2000).

Dam Movements in India

Mulshi Satyagraha in 1921 was the first anti-dam movement in India (Gadgil & Guha, 2007). It is true that although the Heroic-river valley projects like Bhakra Nangal dam in Punjab, the Tungbhadra project in Andhra Pradesh, the Hirakud dam in Orissa and the Rihand dam in Uttar Pradesh, each displacing tens of thousands of people met with little opposition during 1950s. Organized opposition to new projects in India started

during 1970s. Through the 1980s and beyond, different river valley projects—from Tehri in the north to Silent Valley in the south, Koel Karo in the east to Sardar Sarovar in the west—have been the subject of bitter controversy (Gadgil & Guha, 2007).

The Pangs of displacement in India

It is a matter of great regret that we have no actual statistics that how many people have been uprooted from their homeland due to the construction of large dams, since independence. In the opinion of noted writer Arundhati Roy (1999), large dams displaced 33 million people in the 50 years after independence. Likewise, Sing (2002) estimated the number 56.68 million (Thakkar, 2009). By analyzing the various estimates, it can be concluded that more than 50 million people have been displaced by large dams in India. The Govt. of India noted that there are no reliable statistics with social and economic classification of the people displaced by each large dam since independence. Almost 45% of the displaced persons are tribal and members of the scheduled castes (Thakkar, 2009) who constitute 24.50% of the country's population.

Tagore's Cognition of dam on river and its present day relevance

Large dams have emerged as a major tool for the management of water resources in the 20th century. These dams are considered as infrastructure for modernization and development. It is claimed that infrastructure development is an indicator of modernization, but the question posed by the social scientists and ecologists is that modernization and development for whom, and for what cost?

Development means making a better life for everyone. A better life for most people means, essentially, meeting basic needs: sufficient food to maintain good health; a safe healthy place to live; affordable services available to everyone; and being treated with dignity and respect (Peet & Hartwick, 2010). Sometimes, we express economic growth and development in similar way. But if economic growth wrecks the environment, and if growth deadens working life, it is not development. If economic growth merely concentrates wealth in the hands of a few, it is not development. Development means changing the world for the better. Development means starting change at the bottom rather than the top. Whenever a dam is constructed on the course of any river it has naturally brought perceptible changes in the ecology and environment of the area. Impact of any change does not only affect the physical state of an area, but the living organisms must have to experience those changes with their life and survival. Dam construction is the direct conviction in the ecological principles on the free flow of a river. The essence of a river is to flow, while the essence of a dam is to remain still or static. Thus, a dam not only dissects the integrity of a river ecosystem but it changes the unique ecosystem into two distinct zones:

a demand zone, and the other is the supply zone leaving aside the riparian downstream zone.

The catchment area of the dam is the area of receiving run-off water from upslope areas. Thus, this section cannot avail the benefit of the water storage, rather it loses lands and forests through submergence and people has to allow these actions, actively or passively. Thus, the catchment section of the project can be considered as a supply zone or as a donor area.

Conversely, the command section of the project which avails the benefits of water for agriculture can be considered as a demand zone or a gainer or acceptor area.

After the construction of the dam, actually the river is taken away from the downstream people. It means their source of drinking water, irrigation water and water for domestic needs

is taken away; the ground water recharge is affected as the river dries up; the biodiversity and fisheries are destroyed; the concentration of pollution in the downstream parts of the river increases due to stoppage of fresh water flow; navigation of the downstream communities ceases; due to sudden release of water severity of flash flood increases; the geomorphologic behavior of the river water i.e. the eroding power is altered due to trapping of the silts in the reservoir; and finally the salinity ingress increases due to reduced flow of fresh water which ultimately affects the soil and ground water in the coastal zone (McCully, 1998; WCD, 2000; Thakkar, 2009).

In India, in fact, the scholars working on the issue of large dams are divided into three categories:

- Development Optimists, who think that large dams are necessary for the essential development of a society.
- Conditionalists, who think that dams may be constructed after an adequate Environmental Impact Assessment (EIA) and if it is equitable, labour intensive economic activities, eco-friendly and not displace large-scale population.
- Negationists, who think that large dams are not desirable because they bring various physical, social, economic, cultural, psychological and other insoluble problems.

However, in India, the issue of equity is not considered in case of dam construction and a situation of inequity and injustice prevails among the oustees (Sharma, 2014).

Tagore's perception of man-environment relationship was based on ancient Indian philosophy as eco-ethical human living embedded in the Upanishads. He considers nature and human life as integral parts of the single entity, the omniscient, omnipresent, ubiquitous (*sarbang khallidang*), attribute free (*nirguna*) Brahman (Basu, 2009). In the Indian Puranic literature, Great Poet Kalidasa mentioned in Raghuvansham, "... Rivers are like mothers for the country..." (Bharati, 2004, p.1). According to Tagore the river is not only a part of Nature but the expression of multi-facets of Nature. River was the focal theme of the epics of Tagore. In his opinion, "...I like river very much, and love sky..." (Bishi, 2011, p.212).

From the very childhood of the poet, a deep attraction, a romantic conception or imagination for river was created in his mind which is clear from his writings of memoir of life (*Jivansmriti*) and childhood (*Chhalebela*). Sometimes we think that the river Ganges was as if intimate with the poet's previous birth and the river Padma was as if poet's intimate with next life. To him the whole universe has endless specific beauty. He felt this aesthetic beauty of nature by wandering through the senile course of river Padma and her innumerable distributaries. He compared the river as women. Because, he envisaged a deep link between these two. His opinion in a letter in *Chhinapatra* :

"...Both water and women continually glitter and clatter very easily—a simple motion and rhythm, both can dry-up gradually but they do not break-up into two parts for the whole life by a little strike... No one has the incessant simple flow and murmur except women and water..." (Tagore, 1968, pp.103-104)

The conflict between man and machine is a great challenge in today's ultra-modern civilization. Tagore warned the people all over the world again and again about the overuse of machines and the mechanical systems for the betterment of livelihood strategy. Man has been making machines since the dawn of civilization. A boat or a plough share is also a machine. Although, now a day, these techniques seem as simple machines, yet in the early days, those were the amazing inventions of man. In the subsequent period, the invention of various types of machines gradually precedes the pace of civilization; yet, these machines

have not been against the force of life and livelihood process of human being. These machines did not hit the thoughts and sentiments of human beings. There were simple congruity between life and machine. After 19th century, the dependency of man on machine is continuously increasing day by day. As a result, the social man gradually changes into the greedy technological man. It is the machine which has become the medium of oppression and exploitation of the some sections of the society and most part of the nature. Of late, over- dependency of man on the machine has become the enemy of man. The thoughtful present generation is perceptualizing this very much. Tagore pursued this possibility many years ago. The drama '*Rakshai*' written by novelist Tarashankar Bandopadhyay, the famous folk singer Woody Guthrie's songs were in favour of dams. American novelist and essayists Wallace Stegner, Pandit Nehru, Acharya Prafulla Chandra Roy, Meghnad Saha, Kapil Bhattacharya saw dams in respect of human welfare. The impacts that we observe of large dam on the society was beyond their imagination. Tagore himself like Mahatma Gandhi foresaw the ecological crisis of modern industrial society. He anticipated our environmental concerns against the construction of large dams.

Poet Rabindranath has represented the conflict of machine against the nature and the life in his drama *Raktakarabi* and *Muktadhara* (Ohadedar, 2012). Post war Euro-America was the mental background of Tagore's play *Muktadhara*. He viewed nationalism as a diabolic force and considered it an intoxicating and addictive sentiment that breeds radicalism and passionate excitement in people. Then he shuddered at the fearful consequences of aggressive state policy, chauvinism and machine based civilization (Mukhopadhyay, 2012). Another noteworthy aspect of this drama is that the poet did not support the passive and blind mass movement, as he did not stand by the doctrine of incarnation (Majumder, 2000). Although, we find the tentative scheme of feudal system in the play but the problem was created by technology (Chattopadhyay, 2011).

Actually he expressed his view in a lucid way in a play *Muktadhara* of man's limitless greed and backlash from nature. In this drama, the modern problems of machine have been dramatized. The central theme of this drama is aggressive and imperialistic attitude of *Uttarkut* (a kingdom, located in the upstream section of a river) and defense of *Shibtarai* (another kingdom, located in the downstream section of that river). The machine made by the engineer Bibhuti of Uttarkut has dammed the free spring of life in nature. It was an endeavour of techno - centric river impedimentation by a king. The prince joins commoners to protect the natural flow of water.

Actually, it is the dramatization of prosaic, beautiful leisure free mechanization fled by science. Here, he also represents how the heartless, insatiable desire for stocks deviate the human from his co-existence in surrounding beautiful areas. The struggle of Dhananjoy Bairagi against the technocrat engineer Bibhuti and his artificial dam which took the very existence of people of Shibtarai was greater than the struggle against the king. The struggle of king's uncle Biswajit and Prince Abhijit was against the machine which was unfavourable and against the welfare of the people. The imperialistic exploitation based on machine has disregarded the human soul by and large in modern ages. He was disheartened and embittered. In this drama the protest is waged against that. Man has won over anti-human machine. The breakdown of the dam is, as if, the symbol of freedom of suffering humanity.

It may be said that in the year 1922 when Kabiguru's drama *Muktadhara* was published then river dam did not surface in as the problem of modern civilization. At present, the debate on dam in our country lie on the issues of:

- equity,
- governance,
- justice,
- power,
- efficiency,
- Sustainability, and
- accountability.

We find the question of equity, justice and power in Tagore's play. But it was amazing fact indeed that he depicted with what a marvelous care the picture of future anti-dam movement which mainly comes on to the fore front of the Indian society due to displacement. Through this drama, Tagore sends us a social message that man can come out from greed by the exercise of divertive pleasantness and co-operative quality in human mind.

When he was living at *Santiniketan* continuously for two and half a month, his mind and body was overpowered with exhaustion. So he went to *Selaidaha* for some days to rest as if he had eternal connection with this river. Rabindranath wrote a letter to his daughter *Ranu* after returning from *Selaidaha* to *Santiniketan*, 22th *Poush*, 1329(in Bengali Calendar), "...I love river. Shall I say why? The land on which I live does not move...the river flows days and nights. It has its own echo. Its rhythm corresponds with rhythms of our movements. The flow of our conscious mind has similarity with the flow of the river-so we have deep intimacy with river..." (Mukhopadhyay, 1961, p. 115).

According to Tagore, the river whose spirit is ever flowing, construction of large dam leads her to the cemetery. He mentioned his regret in the following lines of the poem, *Durakankha* :

"*Keno more galo nadi*
Ami bandh bandhi tare chai dharibare
Paibare nirobotdhi
Tai more galo nadi"

'Why did the river die?
I made dam to catch her
To have her for all the times
For this the river died.'

Conclusion

During the last five decades, our ancient knowledge did not place any importance for the management of water resources in the development planning. Our knowledge about irrigation management is going on to the blind imitation of the west which is inviting a large number of ecological problems. To embalm Tagore's cogitation of micro level rural centric development plan it is an urgent need in the new millennium to prepare human-centric small scale irrigation development projects on river that Nehru thought at the last phase of his life which will be economically viable, socially equitable and ecologically sustainable, because there is no question of displacement, nor submergence of forest and agricultural land and nor soil erosion and salinization. Hope that a new philosophy will be borne by the admixture of new scientific knowledge with the age old experience of our people for the rational management of river water in near future.

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