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Dams and Displacement in India: From Temples of Modern India to Temples of Doom

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In the present-day global setting, there exists a significant need for energy to support the activities of daily living. Hydroelectric facilities have traditionally been regarded as an environmentally sustainable substitute for fossil fuels, constituting one of the primary suppliers of this form of energy. Nevertheless, it is crucial to recognize that the establishment and functioning of extensive hydroelectric dams have significant and diverse effects on human civilizations and the ecological system. Furthermore, although constructing enormous dams is not intrinsically problematic, it is widely recognized that there is a clear and urgent need for rigorous environmental stewardship in their execution and ongoing management. This article extensively examines the ongoing discourse over the significance of dams within the current context of India's landscape. This inquiry aims to explore a basic query: Are these hydroelectric dams truly emblematic of progress for contemporary India, or have they, due to their numerous repercussions, transformed into symbols of impending catastrophe? By conducting an in-depth examination of the intricate interplay between socio-political dynamics, environmental ramifications, and economic concerns, this article aims to offer a nuanced understanding of this pivotal matter.

Keywords: *mega dams, displacement, rehabilitation, replacement.*

INTRODUCTION

"If you are to suffer, you should suffer in the country's interest."

- Pandit Jawaharlal Nehru¹

The development of a vast network of over 45,000 significant dams has been observed worldwide, with about half of the world's river systems being intercepted by these large-scale infrastructures. The increase in the number of dams can be attributed to the widely held belief that these large hydraulic constructions have the capacity to stimulate socioeconomic progress through the facilitation of expanded agricultural irrigation and the creation of hydroelectric power. As a result, developing nations and key international financial institutions such as the World Bank have allocated significant resources towards establishing dam infrastructure. By the beginning of the 21st century, dams had become a substantial component of the worldwide energy infrastructure, contributing to approximately 19% of global electricity generation. Furthermore, they were crucial in facilitating irrigation systems that covered over 30% of the Earth's arable land, which amounted to approximately 271 million hectares. However, it is crucial to emphasize that the extensive system of dams has incurred significant costs, including the displacement of about 40 million people, the disruption of established agricultural practices, and the worsening of problems related to soil salinization and waterlogging in fertile areas.²

A deliberate and systematic approach to planning marked India's trajectory in nation-building after gaining independence. The formal initiation of this process occurred in 1950 when the central government introduced the Five-Year Plans and established the Planning Commission. Given the significant lack of economic development, planners primarily focused on fostering economic growth, measured by the increase in Gross National Product (GNP). This objective was exemplified by the implementation of large-scale projects such as dams, mining initiatives, and the establishment of new manufacturing facilities. The then-Prime Minister Pandit

¹ Smitu Kothari, 'Whose Nation? The Displaced as Victims of Development' (1996) 31(24) Economic and Political Weekly <<https://www.jstor.org/stable/4404269>> accessed 20 November 2023

² Biswaranjan Mohanty, 'Displacement and Rehabilitation of Tribals' (2005) 40(13) Economic and Political Weekly <<https://www.jstor.org/stable/4416394>> accessed 20 November 2023

Jawaharlal Nehru praised dams as the 'temples of contemporary India' symbolizing advancements and economic well-being.

After achieving independence, India implemented a succession of hydroelectric projects that played a significant role in driving industrial and economic progress. Currently, India holds the third position worldwide regarding the number of river dams, with China and the United States being the only countries ahead. The primary benefits arising from these projects include the production of energy, the provision of irrigation, and the building of recreational facilities. Nevertheless, the implementation of these programs has faced significant resistance from environmental activists who are alarmed by the negative effects on indigenous plants and animals. Additionally, displaced communities have expressed apprehension regarding their relocation and economic well-being. Concerns have been raised by social activists and researchers over the potential adverse outcomes associated with these endeavours.

The construction of large-scale projects, such as dams, has undeniably provided electricity to growing industries, facilitated irrigation in arid regions, and played a crucial role in the economic advancement of the nation. However, it is important to acknowledge that these projects have also resulted in the forced relocation of numerous individuals from their ancestral lands. As a result, the previously revered structures known as the 'temples of modern India' have undergone a transformation, now serving as representations of displacement and hardship for those who have been marginalized and deprived. Moreover, these activities have significantly transformed the existing frameworks that control land utilization, water administration, forestry practices, and the utilization of other natural resources in the regions that have been impacted. Individuals who depend on these resources for their sustenance have experienced displacement due to land acquisition and relocation authorized by the state. The construction of big dams, which serve various goals such as hydropower generating, irrigation, or flood control, has elicited both praise and criticism in equal proportions. In the Indian context, there exists a notable disparity between Nehru's favourable depiction of dams as '*modern India's temples*' and Arundhati Roy's vehement criticism, wherein she characterizes them as outdated, authoritarian, and undemocratic. Roy contends that dams serve as a means for the

government to consolidate its authority in matters pertaining to resource allocation and land use, thereby highlighting their negative implications.³

LEGAL FRAMEWORK

National Rehabilitation and Resettlement Policy, 2007:⁴ A **National Policy on Resettlement and Rehabilitation** for Families Affected by the Project was developed in 2003 and enacted in February 2004. The policy's implementation experience indicates numerous issues addressed in the approach that should be reviewed. There should be a clear perception of the desirability and justifiability of each project based on a careful quantification of the costs and benefits to society as a whole. The adverse economic, environmental, social, and cultural consequences for affected families must be assessed in a participatory and transparent manner. A national policy must be applied to all projects that result in involuntary displacement.

The policy states that for the provision of public facilities or infrastructure, the government has to acquire private property under the principle of *eminent domain*, leading to involuntary displacement of people, which deprives them of their livelihood, food, shelter, etc. and their traditional resource base as well as restricting their access to their socio-cultural environment. This displacement also has broad-ranging psychological and traumatic effects on them. The most affected demography is the weakest citizens of our country, i.e. the Scheduled Tribes, Scheduled Castes, women and marginal farmers.⁵

Environment (Protection) Act 1986:⁶ This act was enacted by the **Parliament of India in 1986 under Article 253**⁷ of the Constitution in the aftermath of the Bhopal Gas Tragedy, which is considered the worst industrial disaster of our nation. The **Environment Protection Act was passed in May 1986** and came into force on **19th November 1986**. This act provides for the

³ Paige Johnson Tan, 'Arundhati Roy's The Greater Common Good: Dams, Development and Democracy in India' (*Association for Asian Studies*, 2005) <<https://www.asianstudies.org/wp-content/uploads/arundhati-roys-the-greater-common-good-dams-development-and-democracy-in-india.pdf>> accessed 20 November 2023

⁴ National Rehabilitation and Resettlement Policy 2007

⁵ Jai Sen, 'National Rehabilitation Policy: A Critique' (1995) 30(5) *Economic and Political Weekly* <<http://www.jstor.org/stable/4402342>> accessed 20 November 2023

⁶ Environmental Protection Act, 1986

⁷ Constitution of India 1950, art 253

protection of the environment and its conservation and improvement, as decided at the **United Nations Conference on Human Environment held in Stockholm, Sweden in June 1972**. This act is necessary in the case of dams, as dams are causing a lot of damage to the river ecosystems and the human environment. Dams are leading to the extinction and endangerment of several aquatic plant and animal species causing global warming.

The Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest right) Act, 2006:⁸ Sections 3⁹ and 4¹⁰ of the legislation provide forest dwellers with a legal entitlement to occupy forest habitats, thereby safeguarding their right to inhabit these forested areas, namely '*Nistar Rights*'. In instances of relocation, there are strict regulations that require the provision of fair and equitable compensation as well as comprehensive rehabilitation efforts.

Environmental Impact Assessment Notification, 1992 of Environment (Protection) Act, 1986:¹¹ The Central Government is empowered to determine whether developmental projects are environmentally sustainable. Almost all mega developmental projects are included in **Schedule 1 of the EIA notification**. Local residents or project-affected parties may speak during the public hearings under the EIA if the developmental project is detrimental to them. The scheme also takes into account the number of people who will be displaced and the cost of their rehabilitation when calculating profit and loss.

Constitutional Rights:

- The **Right to Equality**, as enshrined in **Article 14**¹² of the Indian Constitution, is violated when individuals are subject to arbitrary displacement.
- The **Right to Reside and Settle wherever in India**, as protected by **Article 19(1)(e)**¹³, includes the entitlement to refrain from being displaced without justifiable grounds. Furthermore, it can be argued that the inclusion of the Right to Livelihood under **Article**

⁸ Scheduled Tribe and Other Traditional Forest Dwellers Act 2006

⁹ Scheduled Tribe and Other Traditional Forest Dwellers Act 2006, s 3

¹⁰ Scheduled Tribe and Other Traditional Forest Dwellers Act 2006, s 4

¹¹ Environmental Impact Assessment Notification 1992

¹² Constitution of India 1950, art 14

¹³ Constitution of India 1950, art 19(1)(e)

21¹⁴, which safeguards the **Right to Life and Personal Liberty**, implies that any act of displacement would be a blatant infringement upon this fundamental right.

- Significantly, it is crucial to note that these rights are susceptible to judicial review as outlined in **Articles 32¹⁵ and 226¹⁶**, making them justiciable and open to legal examination.

Precautionary Principle: The precautionary principle is implemented when it is foreseen that the continuation of an activity or work may cause damage to the environment when scientific knowledge is lacking on that particular activity.

Sustainable Development Goals (SDGs): The relevance of water and sanitation in the global political calendar is confirmed by the established order of **Sustainable Development Goal 6 (SDG 6)** - Ensure the availability and sustainable management of water and sanitation for all. SDG 6 builds on the applicable **Millennium Development Goal** by focusing on the quality, availability, and management of freshwater sources to ensure the sustainability of water and sanitation access. Ecosystems and their inhabitants, as well as people, are water consumers, and their actions on land might jeopardize the quality and availability of clean water, according to **SDG 6**. Wetlands, rivers, aquifers, and lakes are among the water-related ecosystems addressed in **SDG 6**, and they support a high level of biodiversity and life.

FINDINGS AND ANALYSIS

During the initial decades of the 1980s and 1990s, a discernible transformation occurred in economic perspectives toward environmental concerns and the displacement challenges associated with large-scale projects¹⁷ particularly those involving dams. The aforementioned transition led to the development of fresh protocols and sparked a discourse regarding the imperative nature of an all-encompassing rehabilitation strategy. The discourse saw a period of

¹⁴ Constitution of India 1950, art 21

¹⁵ Constitution of India 1950, art 32

¹⁶ Constitution of India 1950, art 226

¹⁷ Bikram Keshori Jena, 'Development - Induced Displacement In 21 St Century India' (2014) 75 Proceedings of the Indian History Congress <<https://www.jstor.org/stable/44158508>> accessed 20 November 2023

transformation following the founding of the **World Commission on Dams (WCD) in 1998**. This initiative was a combined effort between the **World Bank and the International Union for Conservation of Nature (IUCN)**.

The **World Commission on Dams (WCD)** released a significant report in November 2000 that analyzed the various ramifications of major dams, including their environmental, social, and economic components. In the Indian context, the official reaction to the findings of the WCD was notably contentious, characterized by a complete dismissal of the report. The aforementioned answer successfully silenced twenty years of increasingly enlightened viewpoints, replacing them with forceful language portraying the **World Commission on Dams' (WCD)** endeavours as an international plot impeding India's progress.

Government ministries have expressed that an excessive focus on equity carries inherent hazards. The authors argued that engaging in consultations with individuals affected by the project would result in unfavourable feedback. Instead, they called for adopting a more comprehensive viewpoint that prioritizes the nation's overall growth. The assertion was made that extensive consultations would effectively impede significant initiatives.

It is imperative to emphasize that the report of the **World Commission on Dams (WCD)** did not unequivocally denounce dams, but instead shed light on the shortcomings in their design and management methodologies on a global scale. The paper elucidated the dichotomous characteristics of dams, recognizing their contribution to promoting economic progress while concurrently emphasizing the substantial displacement of a **staggering 40-80 million individuals within the 20th century**. The report proposed the implementation of a *'rights and risks'* framework for the future, indicating a shift in perspective towards the consideration of two key inquiries:

- **Whose rights are being affected by this hydroelectric project?**
- **Who is likely to bear the risks arising from this project?**

Moreover, the most affected group by the displacement caused by dams are the tribals who have owned those lands for thousands of years, and there is no clause in the **National Rehabilitation Policy** that assures them compensation or resettlement as soon as possible.

These steps need to be followed by our country before starting any dam project. However, the economic development of the few outweighs the rights, and the livelihoods of the many and thus, the construction of dams has led to a gradual shift of resources from the weak to the rich and robust. The **Supreme Court of India** has played a significant role in cases about community displacement, effectively navigating the tension between the state's developmental goals and the individual interests of those impacted, with a commitment to upholding principles of socioeconomic justice, equality, and individual liberty. In the notable legal case of *B D Sharma v Union of India*¹⁸, a significant precedent was set, affirming that the perceived overall advantages of a dam project should not be used as a justification for disregarding the fundamental rights of individuals living in the affected area. The need to guarantee the rehabilitation of impacted individuals before the commencement of the six-month period preceding submergence was emphasized by the Court.

The *Narmada Bachao Andolan v Union of India*¹⁹ case underscored the notion that rehabilitation goes beyond simply providing basic necessities but also includes the crucial aspect of rebuilding livelihoods and ensuring the fundamental prerequisites for sustaining life. Furthermore, in the legal matter of *N.D. Jayal and Another v Union of India*²⁰, the judiciary acknowledged the entitlement of displaced people to be resettled and underscored the augmentation of **Article 21**²¹ of the Constitution to include the right to rehabilitation. According to Justice Bhagwati's statement in the case of *Francis Coralie v U.T. of Delhi*²², the right to life encompasses the entitlement to live with human dignity. This includes the provision of fundamental necessities such as sufficient nutrition, appropriate clothing, adequate shelter,

¹⁸ *B D Sharma v Union of India* (1992) Supp 3 SCC 93

¹⁹ *Narmada Bachao Andolan v Union of India* AIR 2000 SC 3751

²⁰ *N D Jayal and Anr v Union of India* (2004) 9 SCC 362

²¹ Scheduled Tribe and Other Traditional Forest Dwellers Act 2006, s 4

²² *Francis Coralie v U.T. of Delhi* AIR 1981 SC 746

access to educational resources, the freedom to express oneself, and the ability to engage in unrestricted social interactions with fellow individuals.

In the landmark legal decision of *Olga Tellis v Bombay Municipal Corporation*²³, the Court elucidated that **Article 21**²⁴ extends beyond the mere proscription of loss of life; it covers all dimensions and capacities that contribute to the genuine enjoyment of life. Dams, nevertheless, have not only modified the societal structure but have also exerted significant environmental effects. Concrete barriers hinder the migration of fish species, resulting in disturbances within ecosystems. In addition, it should be noted that hydropower reservoirs, especially those located in tropical regions, emit substantial amounts of greenhouse gases.

The presence of stagnant lakes formed by dams frequently leads to the deterioration of aquatic flora, releasing carbon dioxide and methane, which are powerful greenhouse gases, into the sky. The emissions originating from reservoirs of this nature make a notable contribution of more than 4% to the overall climate change induced by human activities, which is roughly comparable to the climatic effects attributed to the aviation industry. In specific circumstances, hydroelectric power facilities may release a greater amount of pollutants compared to coal-fired power plants that produce an equivalent amount of electricity. Furthermore, with the progression of climate change, there is an increase in the frequency of extended droughts, which in turn leads to a decrease in the capacity of dams to retain water. Consequently, this reduction in water retention negatively impacts the overall energy output. Countries that have a significant dependence on hydropower are increasingly exposed to greater vulnerability due to the ongoing increase in global temperatures.

The negative consequences of displacement hinder the exercise of constitutional rights and those provided under **The Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006**²⁵ primarily due to the state's mechanism of displacement, namely **The Land Acquisition Act 1894**²⁶. The latter grants the state the power to appropriate private

²³ *Olga Tellis v Bombay Municipal Corporation* AIR 1986 SC 180

²⁴ Scheduled Tribe and Other Traditional Forest Dwellers Act 2006, s 4

²⁵ National Rehabilitation and Resettlement Policy 2007

²⁶ Land Acquisition Act 1894

property for public use but lacks a detailed provision for determining appropriate compensation or replacement expenses. Instead, it vaguely refers to these as '*negotiated sums*'.

In summary, the judiciary plays a crucial role in protecting the rights and well-being of displaced populations, effectively balancing developmental objectives with the fundamental rights of individuals. Moreover, the environmental consequences associated with dams are extensive, encompassing ecosystem disturbances, the release of greenhouse gases, and changes in energy production. The issues experienced by marginalized populations affected by displacement are further exacerbated by the deficiencies in legislation, as demonstrated by The **Land Acquisition Act 1894**²⁷. This underscores the need for thorough reform and redressal measures.

SUGGESTIONS

The use of precise terminology is crucial when understanding the process of displacement and the subsequent efforts to mitigate its effects. Instead of labelling it as a '*rehabilitation policy*' or a '*resettlement and rehabilitation program*' term that assumes displacement, we propose adopting a paradigm that prioritizes '*displacement and rehabilitation*' (**D&R, not R&R**). It is crucial to acknowledge that displacement, even in the most favourable conditions, is an inherently stressful phenomenon that should be avoided if feasible. The initiation of a D&R strategy or legislative framework should begin with a clear and unambiguous recognition of this fundamental principle.

Furthermore, the use of the precautionary principle necessitates that any organization or individual proposing a project of a developmental kind must ensure that the aims of the project are carefully planned, essential, and genuinely inevitable while also taking measures to minimize displacement and provide fair compensation. The concept that societal progress should involve certain individuals making sacrifices for the benefit of others is unsustainable and motivated by self-interest. There exists a widely shared agreement among scholars and experts that the **Land Acquisition Act 1894**²⁸, due to its outdated nature, requires a full overhaul.

²⁷ *Ibid*

²⁸ *Ibid*

Moreover, in situations where displacement becomes unavoidable, it is preferable for it to be based on personal choices rather than forced actions. The principle of 'free, informed prior consent' established by the World Commission on Dams should be diligently maintained and incorporated into policy or legislation.

Shifting our attention towards environmental considerations, it is important to acknowledge that dams, as previously examined, impose a detrimental impact on river ecosystems and make a substantial contribution to the phenomenon of global warming. The presence of aging dams can lead to the accumulation of sediment, which has a negative impact on the dynamics of river flow and the biodiversity of aquatic plants and animals. It is crucial to conduct a comprehensive state-wide survey and assessment of dams and their associated environmental impacts. If the negative consequences of a dam outweigh its advantages, particularly concerning environmental dangers, it is advisable to proceed with a cautious decommissioning process to protect both human populations and the natural environment.

CONCLUSION

Considering the potential risks to the lives and freedoms of individuals who undergo relocation in the pursuit of national advancement, it is essential to prioritize protecting their interests above other national priorities. Although development is an inevitable phenomenon, it should not be pursued at the detriment of individuals' fundamental rights to life and livelihood. Minimizing displacement should be prioritized and only warranted by a compelling public interest. When evaluating displacement, it is imperative to give due consideration to livelihood factors. There exists a strong argument in favour of restricting the interpretation of the term 'public purpose' to prioritize land acquisition solely on the grounds of public interest. Displaced Persons/Project Affected Persons must be allowed to participate in decision-making processes. Even in cases when there is a compelling public interest that requires their displacement, obtaining their prior informed permission is crucial. The legal system ought to duly recognize the long-established rights of tribal and rural people with regard to natural resources and subsistence. The basis for determining compensation should be the replacement value rather than the market value or depreciated worth. In addition, it is imperative to explore alternate options in order to guarantee

a reliable and uninterrupted source of income for individuals impacted by the undertaking. The implementation of regional planning is crucial in order to reduce the occurrence of multiple displacements effectively.

Environmentalists have faced criticism from critics due to their hostility towards nuclear, thermal, and large-scale hydroelectric projects. While hydroelectricity is commonly seen as an environmentally sustainable energy source, the ecological ramifications associated with the construction of major dams are becoming more evident. Hence, it is imperative to investigate alternate options thoroughly. The statement 'the most economically efficient form of renewable energy is energy conservation' emphasizes the need to prioritize reducing excessive energy usage by individuals with high levels of wealth. Simultaneously, it is imperative to thoroughly investigate many alternative energy sources, encompassing petroleum, natural gas, geothermal, biomass, solar, tidal, animal excrement, and wind energy, among others. This necessitates focused and collective consideration. Nuclear power may offer a feasible alternative when implemented with suitable safety measures.

In conclusion, dams were envisioned as the forefront of India's future, serving as the heralds of progress and modernization. Nevertheless, considering the extensive societal displacement and environmental degradation associated with these dams, they have transformed into indicators of hardship and ecological devastation, disproportionately impacting marginalized and vulnerable populations. By implementing prudent governmental policies and enacting laws, fostering increased community awareness, and garnering solid public backing, it is plausible to reposition these dams as emblematic of a self-sufficient, environmentally conscious and contemporary India.