iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 11 **Issue:** VII **Month of publication:** July 2023

DOI: https://doi.org/10.22214/ijraset.2023.54288

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 11 Issue VII Jul 2023- Available at www.ijraset.com

Displacement of Policy Effected People Due to Dam Project: A Case Study of Odissa

Kushagra Sharma[1], PL. Arundhatee Mishra[2]
Master in Urban and Regional Planning (MURP), Faculty of architecture and Planning, Lucknow (FOAP)

Abstract: ***Dam projects, considered a significant development initiative of modern civilization, have worldwide consequences involving water use, abuse, power, and pollution. While these projects aim to achieve economic development, they often involve land acquisition, displacement, compensation, resettlement, and rehabilitation processes. However, project authorities displace people without considering their rights to development after displacement. The effectiveness of resettlement and rehabilitation policies in addressing the crisis of human displacement versus economic development remains a significant research question. This paper focuses on the land acquisition and related resettlement and rehabilitation issues caused by dam projects in Odisha, India. Tribal displacement in Odisha is substantial, with forest land acquisition accounting for 44.34% of the total land acquired. Around 20% of the displaced families belong to scheduled tribes, with certain projects displacing a significant proportion of tribal populations. Inadequate compensation and unresolv///ed rehabilitation issues have led to ongoing agitations. Consequently, these displacements contribute to Rawlsian inequality and injustice. The study highlights the need for rectifying the problems related to resettlement and rehabilitation in the country.***

Keywords: Dam Project, Land Acquisition, Compensation, Resentment, Rehabilitation

I. INTRODUCTION

The Dam project has long been recognized as a vital mechanism for human survival and economic development worldwide. Its multifaceted applications, ranging from irrigation and increased land productivity to flood control and electricity generation, have played a pivotal role in shaping societies and economies (Robinson, 2003; WCD, 2000; Cernea, 2000). However, the benefits of these projects come with significant adverse effects.

Thus, understanding the extent to which Dam projects can foster development while minimizing adverse consequences is a critical research inquiry.

By examining major dam projects like the Hoover Dam in the US, the Gorges Dam in China, the Kariba Dam in South Africa, and the Sardar Sarovar Dam in India, a comprehensive understanding of the prosperity and adversity caused by these projects at an international level is revealed.

For instance, the Hoover Dam led to the destruction of downstream fisheries, the Kariba Dam resulted in famine and impoverishment among displaced populations, the Bhakra Dam in India caused waterlogging and soil salinity issues, and the Banqiao Dam in China caused one of the largest dam catastrophes in history, claiming the lives of 171,000 people (Terminski, 2013; Robinson, 2003; WCD, 2000; Dreze, Samson and Singh, 1997; Cernea, 1997).

The impact on human displacement, although somewhat estimated, remains a significant aspect to consider in global progress over the past few decades.

Odisha possesses a significant wealth of minerals, predominantly located in tribal districts. The topography of these areas, coupled with the presence of water resources, makes them suitable for constructing reservoirs and dams. Noteworthy dam projects in the scheduled areas include Machkund, Salandi, Balimela, Upper Kolab, Indrawati, and Mandira. The industrial development in these regions encompasses major projects such as the Raurkela Steel Plant, NALCO's Alumina refinery in Damanjodi, HAL, and Sunabeda.

Additionally, numerous upcoming industrial projects, including UAIL's alumina refinery in Kashipur and Vedanta's project in Lanjigarh, are in progress or proposed.

The abundant forests and diverse wildlife have led to the establishment of several protected areas, such as wildlife sanctuaries and national parks, in Odisha's scheduled areas. However, the creation of these protected areas has posed a significant problem as the rights of the inhabitants residing in and around these areas, including access to forests and forestland, have been diminished. This has adversely affected their livelihoods and has sometimes resulted in displacements.

©IJRASET: All Rights are Reserved

ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 11 Issue VII Jul 2023- Available at www.ijraset.com

II. OVERVIEW OF DAM AND IRRIGATION PROJECTS IN ODISHA

In Odisha, the history of development-induced displacements can be traced back to the post-independence era, with notable instances such as the protest against the Hirakud Hydro-electricity Dam project in the 1950s, where the local indigenous population strongly resisted the project. Unfortunately, the majority of development projects in Odisha have had adverse effects on the local inhabitants. These communities have faced displacement from their ancestral lands without adequate compensation or assurances for their livelihoods and rights (Velath, 2009).

Between 1951 and 1995, an estimated 2,155,317 tribals were displaced, and 360,999 tribals were affected by various state-led development projects. These figures underscore the significant impact on tribal communities due to development-induced displacements in Odisha.

According to estimates, between 1951 and 1995, approximately 1.5 million people were displaced due to development projects, with 42% of those being tribal individuals. However, only a fraction, less than 25%, of the displaced tribal population was resettled, even partially. The lack of attention given to tribal displacements is evident from the absence of data on Scheduled Tribe (ST) families displaced in seven out of thirteen major dam projects before 1990. Similarly, data on the proportion of STs displaced is unavailable for seven out of ten major industrial project.

Table 1: Displacement of Trials in Development Projects (in acres)

S.No	Nature of Project	Total Displacement	Tribal Displacement	Total Affected	Tribal affected
1	Irrigation and Dams	410,000	1,53,540 (37.45)	3,90,000	1,54,380
2	Industries	71,794	25,937(36.13)	86,275	14,719
3	Mining	100,000	50,000(50.00)	2,00,000	1,00,000
4	Park and Sanctuaries	840	840(100.00)	1,07,000	80,450
5	Other Projects	50,000	25,000(50.00)	50,000	11,000

Source: Fernandes, Walter. and Mohmd. Asif. 1997. *Development-Induced Displacement and Rehabilitation in Orissa 1951-1995: A Database on its Extent and Nature*, New Delhi: Indian Social Institute.

Since the implementation of the first 5-year plan, numerous development projects have begun in the country. These projects have displaced many people, and the tribals represent a significant proportion of the total displaced. The purchase of forest land for development projects directly leads to removing their homes and their homes of tribals. In Odisha, about 56382.89 hectares of forest land have been diverted for different developmental projects as of March 31, 2020 . Mining is only responsible for the highest area, which composes 50.39% of total forest diverted for non-forest use.

Table 2: Project-Wise Forest Area Diverted for Non-Forest Use in Odisha (as of March 31, 2020).

S.No	Purpose	No. of Proposal	Forest Area Diverted (in ha)
1	Irrigation	84	10,652.06
2	Industry	29	4,404.63
3	Mining	186	28,409.53
4	Energy	06	116.45
5	Road and bridges	44	705.02
6	Railway	20	2,433.48
7	Defence	04	3,865.25
8	Human habitation	04	361.53
9	Transmission	70	4,338.81
10	Others	50	1,096.13
11	Total	497	56,382.89

Source:Odisha Economy Survey 2020-2021.

©IJRASET: All Rights are Reserved

The majority of projects in odisa have been not been accepted by the locals who have been as to leave there ancestral land without any compensation and surely lively hood rights , Odisa being rich in mineral resources and having a topographical advantage have attracted various local and multinational industries such as ,Hindalco , TATA, Jindal , BHP Billiton etc . Majority of displacement which happens due to development of project is Irrigation and dam , Mining, odisa have became a centre of attraction for various Foreign investment and Multinational corporation have exploited the natural resource of the forest which had an adverse effect on the people both socially and economically. Till ,1995 the total population which was displace was around 1.5 billion and till date it has been increased upto 2 billion till data there is no precise available data on the people effected and displaced. .

According to available data from academics, NGOs, people's movements, and researchers, the Hirakund and Rengali dam projects in Odisha have resulted in significant displacement of the local population, particularly indigenous tribals and economically marginalized communities. Specifically, in the case of the Hirakund project, approximately 285 villages, 22,144 families, 18,432 houses, and 112,038.59 acres of agricultural land were inundated in the reservoir. This displacement has had a profound impact on the livelihoods of the affected communities.

III.TRIBAL DISPLACEMENT DUE TO DAM AND IRRIGATION PROJECTS ODISHA

Dams and large irrigation projects in Odisha have had a significant impact on tribal communities, particularly in the districts of Kalahandi, Bolangir, and Sambalpur where frequent droughts exacerbate poverty, hunger, and disease outbreaks. As a result, the construction of irrigation and dam projects has been prioritized to address these challenges. Unfortunately, many of these projects are located in tribal districts, leading to extensive displacement and damage to indigenous communities. Out of the total 52,584 families displaced by seven multipurpose dam projects, 10,498 families, accounting for 20 percent, belong to scheduled tribes. In the undivided Koraput district, where tribal population displacement is as high as 58 percent, it amounts to 6 percent of the total district population. The land acquired for these projects includes 400,000 acres of forests, which have been crucial for the sustenance of tribal communities. Among the multipurpose dam projects, the Salandi Dam resulted in the highest percentage of tribal family displacement at 94.5 percent, affecting 893 families. Conversely, the Upper Indravati Project, while displacing 42.3 percent of tribal families, had the largest number of displacements with 2,260 families. This information is based on the Report of the Scheduled Areas and Scheduled Tribe Commission VI, 1960-61.

Table 3:Displacement of Tribal Families in Dam Projects

Sl. No	Name of the Project	Total No. of families displaced/affected	No. of ST families displaced/affected	Percentage of ST families displaced/affected
1	Hirakud	26,501	1636	6.17
2	Rengali	11,289	1328	11.76
3	Upper Kolab	3,067	1431	46.66
4	Upper Indravati	5344	2260	42.30
5	Balimela	2500	1450	58.00
6	Salandi	945	893	94.5
7	Machkund	2938	1500	51.00
Total		52,584	10,498	19.96

Source: 1. Nayak, A.C. (ed.) (2013) *Irrigation in Odisha,* Water and Land Management Institute, Cuttack.
Govt. of Odisha (2014).2. *Status of Resettlement and Rehabilitation in Completed and Ongoing Irrigation Projects,* Bhubaneswar: Office of Engineer-in-Chief, Odisha.

Out of the total 9,153 families displaced by 30 medium irrigation projects, 4,557 families, accounting for 49.78 percent, belonged to tribal communities. As these projects are of medium scale, the absolute number of displacements per project is not very high. The Rukura Project had the highest number of tribal displacements, with 636 families out of a total of 695 being affected. On the other hand, the Remal Medium Irrigation Project had the lowest number of tribal displacements, with only one family being affected. The Baghua, Dadroghati, Ramial, and Sunei projects displaced 144, 133, 285, and 267 tribal families, respectively. The Sundar project resulted in 100 percent tribal displacement, but in terms of absolute numbers, it affected only 30 families.

A. Gender Discrimination

Displacement has forced tribal women and young girls to migrate to urban slums where they often find themselves limited to low-paying jobs. Due to the prevailing caste mentality, employers view them as "low caste" and assign them menial tasks. Over time, tribal women themselves internalize this caste-based discrimination, leading to a low self-image within their own community. Mining activities have had a particularly negative impact on the livelihood security, employment opportunities, and rights of Adivasi women. Despite these challenges, tribal women have actively participated in movements such as the Niyamgiri movement, organizing protests, marches, and other activities alongside men. However, displacement has significantly affected their living standards and social status within the tribal community. They have lost control over their lives and livelihoods, including decisions related to farming, selling their products, and choosing their work. As a result, they have become dependent on men for their survival. Additionally, due to addiction issues among men, such as alcohol or drug dependency, tribal women have been compelled to work as laborers in mines or construction sites. This situation has exacerbated cases of domestic violence and prostitution within the slums where they reside.

IV. RESENTMENT AND REHABILITATION

The Rehabilitation and Resettlement Bill of 2007 was introduced to provide benefits and compensation to individuals displaced due to land acquisition or involuntary displacement. The bill also mandated the establishment of project-specific regulatory bodies responsible for implementing and formulating policies related to rehabilitation and resettlement. Social impact assessments were required for large-scale displacements. The bill aimed to ensure eligibility criteria and the provision of minimum benefits to the displaced population, including land, housing, skill development, monetary compensation, and job opportunities. Additionally, a grievance cell was set up to address issues related to rehabilitation and resettlement.

The Odisha Resettlement and Rehabilitation Policy of 2006 classified rehabilitation and resettlement programs for various projects, such as mining, industrial, urban, and others. Specific proposals were made for mining projects, including employment opportunities, agricultural land allocation for landless laborers, assistance for housing, self-relocation support, and vocational training based on assigned categories and eligibility of the displaced individuals and communities.

However, data shows that the actual rehabilitation rates have been low for different types of projects. For multi-purpose hydroelectric projects, out of 325,000 displaced people between 1951 and 1995, only 90,000 (27%) were rehabilitated. Similarly, out of 71,794 people displaced by industrial projects, only 27,300 (38.03%) were rehabilitated. Mining projects displaced around 100,000 people, with approximately 60% being rehabilitated, while sanctuaries resulted in the displacement of around 50,000 people, of whom only 15,540 (31.08%) have been rehabilitated.

Various studies have highlighted that these projects lead to displacement and the loss of land for forest dwellers. The impacts extend to the family structure, power dynamics, village economy, and cultural identity of the tribal population. Displacement exacerbates social and economic challenges and increases overall morbidity and mortality rates.

Table 4:Displacement and Rehabilitation in Odisha During

Project Types	Total Displaced	Total Rehabilitation	% of Rehabilitation
Hydro-electric project	425,000	90,000	21.18
Industrial	71,794	27,000	37.61
Mining	100,000	60,000	60.00
Sanctuaries	50,000	15,540	31.08
Total	546,794	192,540	35.27

Source: Fernandes W., & Asif M. (1997). Development-induced displacement in Odisha 1951–1995: A database on its extent and nature. Indian Social Institute.

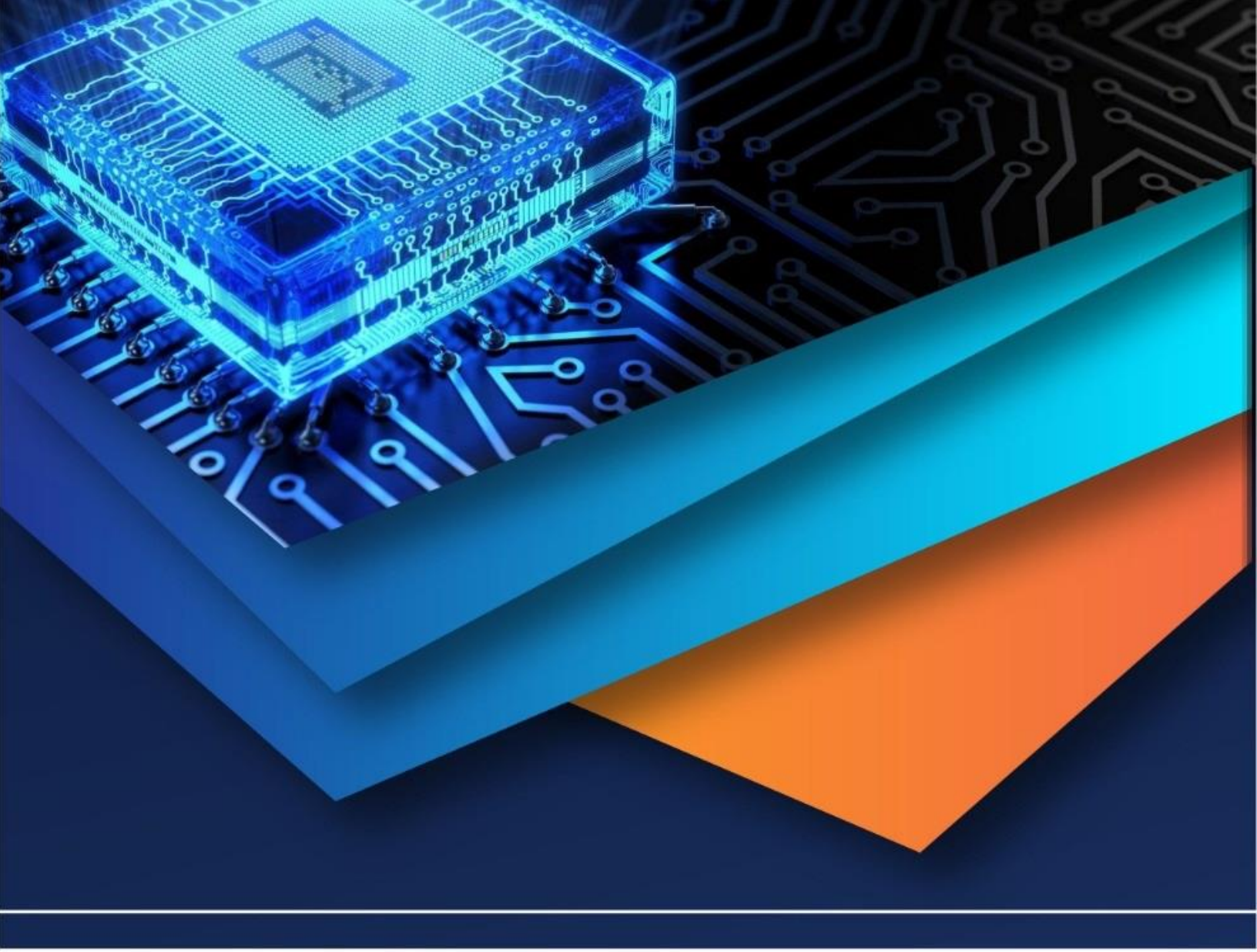
V. CONCLUSIONS

The current development model has failed to address the multiple challenges faced by tribal communities in Odisha. The acquisition of tribal lands for mineral-based industries and other development projects has infringed upon their right to live and sustain their livelihoods on ancestral lands. This has resulted in adverse effects on human development indicators, income levels, and employment opportunities for tribal populations. Furthermore, the inadequate implementation of compensation, rehabilitation, and resettlement policies has marginalized tribes even further.

The tribal movement has shed light on the state's disregard for tribal communities, prioritizing business interests and corporations over their well-being. Tribals have come to realize that their situation has regressed rather than progressed since pre-independence times. While recognizing the necessity of development projects for state and national economic growth, tribes and their supporters assert that such development should not come at the expense of the lives and livelihoods of indigenous populations. They emphasize the need for respectful rehabilitation and resettlement processes that consider the traditional and cultural significance of forests and land to tribal communities. Additionally, they stress the environmental consequences of mining projects and their impact on local populations and biodiversity.Causal Productions permits the distribution and revision of these templates on the condition that Causal Productions is credited in the revised template as follows: "original version of this template was provided by courtesy of Causal Productions (www.causalproductions.com)".

REFERENCES

[1] Dalua, A. K.. 1993. Development Projects and Induced Displacement, Cuttack: Mass Media (P) Ltd.
[2] Drydyk, Jay. (1999) 'Development-Induced Displacement and John Rawls's "General Conception of" of Justice,' Project Report-II, CIDA-SICI Partnership Project-II, Carleton University.
[3] Fernandes, Walter 1996. "Land Reforms Ownership Pattern and Alienation of Tribal Livelihood," Social Action, 46 (4), Oct-Dec.
[4] Fernandes, Walter. (ed.) 2006. "Developmental Induced Displacement: Impact on Tribals," Adivasi, Vol. 46, Dec. 2006.
[5] Fernandes, Walter. and Mohmd. Asif. 1997. Development-Induced Displacement and Rehabilitation in Orissa 1951-1995: A Database on its Extent and Nature, New Delhi: Indian Social Institute.
[6] Govt. of Odisha (2014). Status of Resettlement and Rehabilitation in Completed and Ongoing Irrigation Projects, Bhubaneswar: Office of Engineer-in-Chief, Odisha.
[7] Nayak, A.C. (ed.) (2013) Irrigation in Odisha, Water and Land Management Institute, Cuttack.
[8] Rawls, John. (1971) A Theory of Justice. Cambridge, Mass: Harvard University Press.
[9] Report of the Scheduled Areas and Scheduled Tribe Commission VI, 1960-61.
[10] Samal, K.C. 1998. "Poverty Alleviation after Liberalization: Study of a Tribal Block in Odisha," EPW, Vol. XXXIII, No. 28, July 11.
[11] Singh, Satyajit. 1997. Taming the Waters: The Political Economy of Large Dams in India, New Delhi: Oxford University Press.
[12] Government of India. (2011). Census Report 2011. Registrar General of Census
[13] Government of Odisha. (2021). Economic survey of Odisha 2010–21. Directorate of Economics and Statistics.
[14] Behera, M., & Padhi, S. R. (2022). Tribal Movements against Mining-induced Displacement in Odisha: The Case of Dongria Kondh's Niyamgiri Movement. The Oriental Anthropologist, 22(1), 102–113. https://doi.org/10.1177/0972558X221096265
[15] Dam and Tribal Displacement: A Case Study of Odisha by N. K. Panda, Dr. L. N. Dash, https://www.etribaltribune.com/index.php/volume-8/mv8i3/dam-and-tribal-displacement-a-case-study-of-odisha#conclusion



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)