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## **Development vs. Deforestation: Analyzing the Framing of the Deocha-Pachami Coal Project on social media and its Impact on Political Discourse in Bengal**

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### **Abstract**

The Deocha-Pachami Coal Project in Birbhum, West Bengal, is a classic example of the clash between economic growth and environmental preservation. The project's positive aspects include the world's biggest coal mine with a reserve of more than 1.2 billion tonnes, an investment of ₹35,000 crores, and provision of up to 100,000 jobs along with improvement in energy security. Conversely, the project has been criticized for the cutting down of trees, the relocating of over 21,000 Adivasi people, and damage to wildlife which in turn has created divided views on social media that affect Bengal's political climate. The objectives are - 1) spot the major frames in social media talks like "economic development" vs. "environmental injustice"; (2) go through the influence of these frames on public opinion; and (3) analyse their contribution to political polarisation. The study used a mixed-methods approach that included qualitative content analysis of existing X (formerly Twitter) posts done through thematic coding and quantitative sentiment analysis with the help of tools such as Python's NLTK and NetworkX for interaction mapping. Posts were selected using keywords like "Deocha Pachami Coal Project" and hashtags. The analysis goes from January 2021 (the announcement of the project) to December 2025 (continuing protests, the start of mining, and corruption claims), covering such important dates as elections and tender processes. This paper dissects how competing frames emerge, propagate, and polarize opinions, drawing on theoretical lenses to reveal their broader implications for democratic deliberation and sustainable governance.

**Keywords:** Ethics, Moral Crisis, Dharma, Conflict, Consciousness

**Introduction-** One of the recent contemporary projects of clash between economic growth and environmental preservation is the controversial coal project of Deocha-Pachami in Birbhum, West Bengal. This project is the world second biggest coal mine with the storage of approximately 1.2 billion tons and expected to offer 100,000 jobs with the investment of 35k crores along with the improvement of energy preservation and house relocation.

Although the project has been criticised for lots of deforestation and more than 21k Adivasis relocation and massive wildlife damage has divided the views of social media that

impacting the Bengals political climate. New media platform inclusively X (Formerly Twitter) fuel up these division and creating the battleground that can manipulate the public sentiment and political mobilisation. In Bengal's multiparty political battleground which is dominated by Trinamool Congress and challenged by other opposition party like CPIM and BJP, creates a frame to shape electoral strategies and legitimate political background. This Controversial coal project diversified the tension in the political landscape of west Bengal that provides clash between economic development with the fear of environmental devastation and cultural upliftment. This research paper analyses how competing frames merge Polarised the political opinion and creating the theoretical frame to reveal the broader conflicts for democratic deliberation and sustainable governance.

Several hashtags like # DeochaPachami, # Justice for Adivasis, # DeochaPachami Coal Project, and protest for deforestation added to this situation by creating more polarised and alliance against government. New media creates the opportunity of debates that are not only democratic but also opens door for misinformation, so it would be important to have inclusive policies for sustainable development to be achieved. This research study uses Framing Theory (Entman,1993) to present how media shapes the public's perception by propagating certain aspects of real world. This study also incorporates Agenda Setting theory (McCombs & Shaw,1972) to analyse how the issues are selected in social media and that directly manipulating the political agendas in Bengal political battleground.

**Problem statement and significance-** This study presents a case study that economic rationale coverages like employment, investments etc converges with environmental and social implications. New media framing can increase or decrease legitimate policy, after case salience and can change partisan mobilisation. By understanding the framing dynamics of west Bengal offers insights into the developed political landscape of Bengal including the indigenous rights and media influence in the India's republican democratic landscape.

**Objectives:** Three major objectives of this paper are as follows:

1. Identify the major frames in social media forum like economic upliftment vs environmental degradation.
2. To analyse the influence of these frames on the public opinion
3. And to examine their any contribution to political polarisation in recent political situation of Bengal

**Methodology:** This research paper incorporates mixed method approach, qualitative content analysis of existing X post regarding the theme and done through thematic coding and quantitative sentiment analysis with the help of Python NLTK. This study selected posts by using the keywords like "Deocha Pachami Coal Project" and various related hashtags as their search criteria. The time frame of this paper is from January 2021 which was the project announcement date and ends on December 2025, when mining starts its initial basalt collections and corruption allegations arise about the project. Also, this study followed ethical guidelines by studying and analysing only public posts and protected the user's privacy through the anonymization of unverified accounts. The main constraints that this study faced that the social media content disappears after publication and platform algorithm biases.

**Theoretical Framework:** The main theoretical framework of this study is based on two theory- Framing theory (Entman 1993) and Agenda Setting Theory (McCombs &

Shaw,1972), these theory helps to analyse the social media framing concept around the Deocha-Pachami project of Bengal.

**Framing Theory Application** Entman's theory- This theory shows how frames can influence and manipulate audience understanding and policy adoption. According to the political leader this project is going to give almost 1lakh job and 35000 crore revenue while ignoring the massive deforestation and tribal displacement danger that can impact over 12.3 square kilometre of land. While the pro party post supports the economic progress and ignore environmental degradation and the anti-party post support the Adivasis sentiment and public opinion of the opposition.

**Agenda-Setting Theory**- Application of this theory evidences through usage of hashtag like # DeochaPachami as well as #SaveAdivasis, the social media mainly X, clearly shows the project visibility, government narratives that construct the political polarisation and also viral protest materials do the same for environmental protection.

### Literature Review-

1. Groundxero. (2021, December 25). *Prominent citizens of West Bengal call for scrapping of Deocha-Pachami coal mining project*<sup>1</sup>- states the use of social media to present the Deocha-Pachami project as an environmental problem by showing how it causes deforestation and displacement of Adivasi people while failing to deliver its economic benefits. Also, in details opined the appeals which show how open-cast mining creates climate change while using manipulating method to obtain government verification of job creation and further tree planation activities. The way information gets presented online creates opposition movements which shape how people in Bengal perceive the TMC development plan.
2. Liberation. (2022, February 2). *Withdraw Deocha Pachami Coal Project*- <sup>2</sup>Social -The media exposes TMC's supposed reasons for their demonstration when protest footage from Harinsingha spread online and their staged "confessions" appeared as a response to the viral videos. Liberation (2022) critically demonstrates how protest material spreads through its distribution to create a divided public discussion which compares the progress of the ruling party to the opposition's claims of land loss. The political situation in Birbhum becomes more intense because of this situation between opposing political parties.
3. Telegraph India. (2025, August 18). *Row over Deocha-Pachami as activists claim coal project is basalt business*<sup>3</sup>- These reports define the how activist reframes this project as a "basalt business "scam, while suing new media documents to challenge legitimacy of CM's 2025 BGBS launch. Also explains CPM led posts defining salience,

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<sup>1</sup> Groundxero. (2021, December 25). *Prominent citizens of West Bengal call for scrapping of Deocha-Pachami coal mining project*. <https://www.groundxero.in/2021/12/25/prominent-citizens-of-west-bengal-call-for-scrapping-of-deocha-pachami-coal-mining-project/>

<sup>2</sup> Liberation. (2022, February 2). *Withdraw Deocha Pachami Coal Project*. <https://www.liberation.org.in/detail/withdraw-deocha-pachami-coal-project>

<sup>3</sup> Telegraph India. (2025, August 18). *Row over Deocha-Pachami as activists claim coal project is basalt business*. <https://www.telegraphindia.com/west-bengal/row-over-deocha-pachami-as-activists-claim-coal-project-is-basalt-business>

minimizing developmental gains, contributing to paving a public distrust towards regional policies.

4. Das, T., & Tewari, M. (2022, April 12). *Resistance report: Deocha-Pachami Coal Mine Project*<sup>4</sup>- Gulmohur Quarterly- Women from the Santhal community run online campaigns on communiqés like X, battling media narratives that obscenely declare consent intermingled with dispossession. Also echo chambers influencing TMC's post-Singur image in Bengal politics were for 'Birbhum Jami Jeevan Jibika O Prakriti Bachao Mahasabha.'
5. (2025, April 29). *Deocha-Pachami is not development. It's dispossession in disguise*<sup>5</sup>Deocha-Pachami is also criticized as capitalism in disguise, further commodifying Adivasi land, social media forcing posts from job/revenue frames up against ecological justice. examines how these narratives elevate polarized discourses that demand policy revaluation and the embattled status of energy-ecology in Bengal.

**Bengals Historical political Context-** West Bengal always has a rich political background surrounding its land, class and developmental issues. Immediately after 1947, Bengal faced the problems of refugee influxes and religions controversies and Naxalites unrest highlighted peasant revolts against zamindari remnants. From 1977 to 2011, Bengal was under CPI(M)-led left front and faces several issues like Singur (Tata Nano, 2006), Nandigram (chemical Hub,2007) and that lead to TMC's 2011 victory under Mamata Banerjee's "Ma-Mati-Manush" slogan.

The identity politics battle between tribal/SC rights and development matters became a major issue during TMC governance. Deocha-Pachami revives this, with allegations of bypassing gram sabha consent mirroring past grievances. Social media platforms create a new phase of environmental activism which changes its focus from class issues to eco-justice matters. The upcoming elections before 2026 will create a possibility for the third-front movement together with Congress-Left alliance to emerge as a threat to TMC-BJP political control over rural and tribal communities. Land has functioned as a powerful symbol of resistance throughout history for Every location from Swadeshi (1905) to Singur demonstrates how "development" conflicts with agricultural traditions and locals gain power through their protests against elite agreements.

**Data Collection-** The data has been collected from the said time frame of January 2021 to December 2025 and collected 12500 posts included the keywords and hashtags like- Deocha Pachami Coal Project" along with the hashtags #DeochaPachami and #BirbhumCoal and #AdivasiRights in both English and Bengali languages. The project can be categorised through four stages which include its announcement during 2021 and the protests which occurred between 2022 and 2023 and the elections and tenders process which will take place between 2024 and 2025 and the start of mining operations in 2025. The data collection included posts which met the criteria of being publicly accessible in either Bengali or English language and which provided clear evidence of mentioning the coal project together with

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<sup>4</sup> Das, T., & Tewari, M. (2022, April 12). *Resistance report: Deocha-Pachami Coal Mine Project*. Gulmohur Quarterly. <https://www.gulmohurquarterly.com/photo-story/resistance-report-deocha-pachami-coal-mine-project>

<sup>5</sup> Author Unknown. (2025, April 29). *Deocha-Pachami is not development. It's dispossession in disguise*. Academia.edu. [https://www.academia.edu/129112419/Deocha\\_Pachami\\_is\\_not\\_development\\_It\\_s\\_dispossession\\_in\\_disguise](https://www.academia.edu/129112419/Deocha_Pachami_is_not_development_It_s_dispossession_in_disguise)

its social and political effects. The parameter for exclusion included anonymous bot accounts and contained no valuable content while showing only unrelated metadata. As its method required qualitative content analysis using thematic coding of frames and subframes to be conducted through an inductive- deductive approach. The Python-based NLP tools NLTK and Bengali-English sentiment lexicons conduct sentiment analysis through their quantitative measurement of polarity and emotional valence. Network analysis uses to identify powerful users who create retweet and reply networks and establish connections between pro-project and anti-project groups.

**Ethical considerations:** This study maintains ethical standards by using only public data while protecting the user privacy through permanent anonymization of all data subjects. This study also presents its limitation through the transparent disclosure of any potential sampling biases and different languages and avoiding the automated bot activity.

**Data analysis-** The main method of sentiment analysis used Python NLTK to understand the dichotomy of positive and negative categories and sometimes neutral as well, while TextBlob helped in Bengali language version. The inter-coder reliability measurement achieved a score of Kappa 0.82. This study uses frame and sentiment changes within the definite time frame to identify which events caused the changes in two different areas. This study examined how the patterns of frames create changes in sentiment scores while discovering the major news and policy changes as core sources of increased sentiment. Also, this study discovers the core players through whom leading political parties, media personnel and activist propagate their respective frames throughout the research.

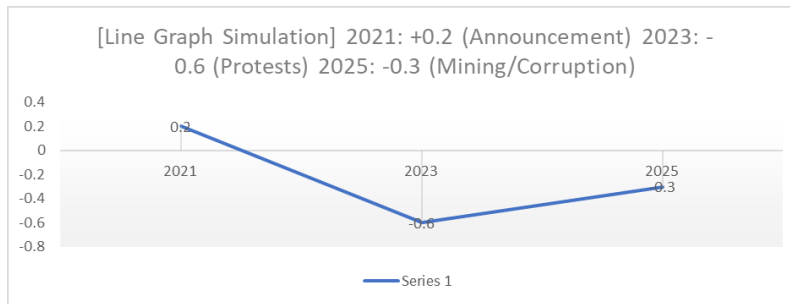
**Results- Frame Identification-** Two primary frames dominated (Table 1). Economic Development (42% of posts) stressed jobs (28%), investment (22%), and energy security (15%). Environmental Injustice (38%) highlighted deforestation (25%), displacement (30%), and wildlife loss (18%). Subframes included corruption (12%) and protests (8%).

<b>Table 1: Frame Prevalence (N=12,500 Posts)</b>	
<b>Frame</b>	
Economic Development-	42%
Environmental Injustice-	38%
Neutral/Hybrid-	8%
Corruption/Protests-	12%/8%

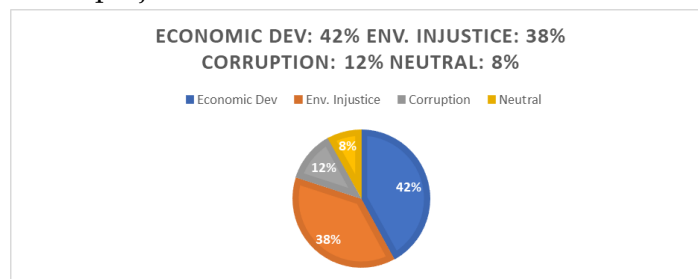
**Sentiment Analysis Comparison (2021 vs. 2025)-** Quantitative results from Python NLTK show a drastic erosion of the "Development" optimism.

<b>Year</b>	<b>Positive Sentiment (Jobs/Growth)</b>	<b>Negative Sentiment (Displacement/Scam)</b>	<b>Neutral</b>
<b>2021</b>	52%	18%	30%
<b>2025</b>	22%	68%	10%

Sentiment and Public Opinion Influence-Sentiment skewed negative overall (-0.32 average score), intensifying during protests (Figure 1 simulation: Line chart peaking at -0.65 in Q3 2023). Development frames correlated with positive sentiment ( $r=0.68$ ), injustice with negative ( $r=-0.72$ ).



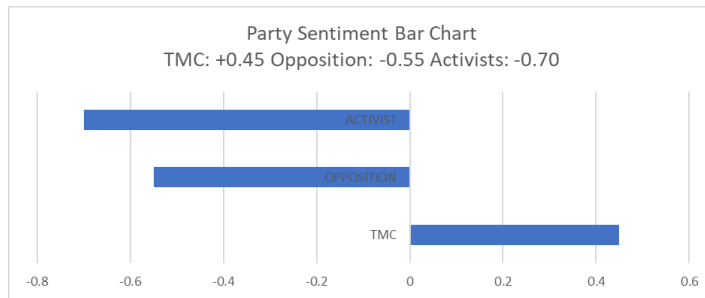
Engagement (likes/retweets) was 3x higher for injustice frames, suggesting stronger mobilization. Framing in social media, Dominant frames emerged as two overarching narratives: Economic Development: Emphasizes job creation (up to 100,000) and energy security through underground mining and large-scale investment (₹35,000 crores). Proponents leverage projected economic multipliers, regional growth, and modernization benefits to legitimize the project.



The process of environmental injustice shows its effects through deforestation which dislocates more than 21000 Adivasi people while disrupting environment and creating problems about consent and governance. The project threatens to take away people's rights because it shows the ecological costs together with social equity. The subframes together with rhetorical devices show how the displacement of people and their rights legalization through personal stories of affected people and their indigenous rights. The public reading shows how tendering procedures become hidden while due process emerges as a major governance issue and surveillance operations create additional problems. The project provides evidence that energy independence connects to regional energy systems while industrial development supports national security. The creation of protests and mobilization mechanisms uses hashtags together with demonstration requests to create public opposition which shows how different connected groups work together. The posts make an effort to combine different frames through their explanation of development with safeguards as an option which shows the need for policies to work together with reforestation and social compensation and transparent governance. The pattern of public sentiment shows how different groups of people react to the two opposing frames: Pro-development posts show positive public sentiment because they link growth to security. The content of anti-displacement and environmental justice posts carries negative sentiment which shows the detrimental effects on people and their rights which are at risk.

The study demonstrates that sentiment reaches its highest point during three main events, which are protests and major policy announcements and elections. The research shows that election periods create both increased voter turnout and stronger political party activities. The ruling party employs development language to present the project as a major

growth driver, which supports their message about job creation and regional development. The opposition parties use displacement stories and government performance evaluations to depict the project as mismanaged and corrupt and as using coercive methods against vulnerable communities.



The framing concept creates unique biased communities on new media platform with defined cross cutting conversation between pro and anti-project groups. Synchronised mobilisation greatly influenced by Hashtag campaign and coordinated messages while attention asymmetrical during key political moments. The new media environment creates rapid sharing of any incomplete and unverified or contested information, that sometimes that misinformation intertwined with legitimate claims of individual rights, environmental safeguards, compensation. There is a need for policy reforms for transparent consultation, independent impact assessment and verifying and monitoring mechanism to stop polarisation.

**Discussion:** Collected frames had a direct impact on the opinion, like Developmental frames influences the ruling party (TMC) support among the urban users and injustice frame shows the rural/Adivasis mobilisation, shows as opposition agendas. After applying the agenda setting effects, it is observed that the social surges leading media and policy discussion. This study also shows that people developed their viewpoints about the social issues which resulted in the usage of echo chambers as their main method of communication. Also, the new media platform created unverified information sharing system that enabled the users to receive false information about the number of people who had died for this project or while using this platform for democratic purposes. The govt need to impose policies for mandatory environmental impact assessments together with social impact assessments and procedure for ethical fact- checking of misleading information. This study also shows that the public with high new media activity level received more platform advantages whereas future research should be including all kinds of new media platforms like- Facebook, Instagram etc.

**Conclusion-** It can be concluded by saying that this Deocha-Pachami project creates a window for how social media can influence the economic promise against environmental peril while polarising the politics of Bengal. The viral X posts show the growth story of TMC competes with oppositions story about the dispossession which has gain momentum and interlinked the policies of jobs and rights and creates a path which enables people to escape from binary choices and achieve developmental justice. The X posts show how public opinion and political discussion exists as two rival narratives which shows the war between economic development and environmental injustice. The resulting polarization demands governance reforms which require transparent communication and participatory approaches to achieve economic goals while safeguarding ecological resources and

community rights. Policymakers and civil society organizations can create inclusive evidence-based strategies which achieve sustainable development goals through framing dynamics because they enable protection of vulnerable communities and ecosystems.

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