

## SEA, LAND AND RESISTANCE IN COASTAL ODISHA

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### **ABSTRACT**

*The proposed POSCO steel project in Jagatsinghpur district of Odisha became one of the most debated industrial projects in contemporary India. Announced in 2005 through an agreement between the Government of Odisha and the South Korean company POSCO, the project involved an estimated investment of approximately US\$12 billion and was presented as a major step toward industrial growth and foreign investment in the state. The project included a large steel plant, a captive port and associated infrastructure that required extensive land acquisition in the coastal region. While government authorities and corporate actors portrayed the project as a symbol of economic progress, local communities viewed it differently. Villagers in Dhinkia, Gobindpur and Nuagaon feared the loss of land, forests and livelihoods that had sustained them for generations.*

*This paper argues that the resistance against POSCO was not driven solely by concerns about displacement. The movement emerged from the defence of an existing coastal economy based on betel cultivation, fishing, forest resources and community management of natural assets. These activities provided income, food security and ecological stability to thousands of households. The conflict therefore reflected two competing visions of development. One prioritised industrial expansion and global investment, while the other emphasised livelihood security, environmental sustainability and local control over natural resources. By examining the ecological foundations of the movement, the paper highlights how coastal communities articulated an alternative understanding of development rooted in everyday economic and environmental realities.*

**KEYWORDS:** POSCO Steel Project.

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### **INTRODUCTION**

The coast can be viewed in different ways. For governments and corporations, it often appears as a site for ports, industries and investment. For local communities, the same landscape represents livelihood, security and everyday survival. This contrast lay at the heart of the resistance against the proposed POSCO project in coastal Odisha. Following economic liberalisation in 1991, Indian states increasingly competed to attract private and foreign investment. Mineral rich regions and coastal areas became important locations for large industrial projects. Odisha emerged as one of the leading destinations of this new development strategy because of its natural resources, expanding infrastructure and access to maritime trade routes.<sup>1</sup> Industrial projects related to steel, mining, energy and ports were promoted across different parts of

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<sup>1</sup> Vijay Joshi and Ian Malcolm David Little, *India's Economic Reforms, 1991-2001* (Oxford University Press, 1996).

the state as instruments of economic growth and modernisation. Within this broader context, the Government of Odisha signed a Memorandum of Understanding with the South Korean company POSCO in June 2005.<sup>2</sup> The proposed project involved an estimated investment of around US\$12 billion and included a steel plant, captive port and mining linkages. At the time, it was widely described as one of the largest foreign direct investment proposals in India. The project was planned in the coastal region of Jagatsinghpur district, particularly around the villages of Dhinkia, Gobindpur and Nuagaon. Government officials presented the project as a major opportunity for employment generation, industrial development and regional transformation.

However, the project area was not an empty space waiting for industrial investment. The coastal villages supported a vibrant local economy based on betel cultivation, fishing, cashew production and the use of forest resources. Thousands of households depended directly on these activities for income and food security. The forests and coastal landscape also performed important ecological functions by protecting settlements from cyclones, coastal erosion and environmental degradation. For local residents, therefore, land represented much more than a transferable economic asset. It formed the basis of livelihood, community life and environmental security. As plans for land acquisition became clearer, resistance emerged across the affected villages. Local people organised meetings, demonstrations and collective campaigns questioning both the necessity and desirability of the proposed project. Their opposition raised a larger question about development itself. Could industrial investment be considered beneficial if it undermined an already functioning local economy and ecological system. This paper addresses three questions. Why did local communities resist one of India's largest foreign investment projects.<sup>3</sup> What role did coastal ecology play in shaping that resistance. Can ecological economies provide an alternative understanding of development in resource rich regions.

The study draws upon published literature, government reports, movement documents, newspaper accounts and secondary academic sources related to the POSCO movement and coastal livelihoods in Odisha. Using a qualitative analytical approach, it examines the relationship between environment, economy and resistance in the project area. The paper argues that the anti POSCO movement was not simply a reaction against industrialisation. It was a defence of an existing ecological economy built around land, forests, fishing and community resource management. The conflict revealed competing ideas of development and highlighted the importance of environmental security in shaping local responses to large scale industrial projects.

## COASTAL ODISHA BEFORE POSCO

Before the announcement of the POSCO project, the coastal region of Jagatsinghpur was already a productive and economically active landscape. Discussions on the conflict often begin with industrial investment, land acquisition and resistance. However, such an approach risks overlooking the social and economic realities that existed before the project arrived. The villages that later became associated with the anti-POSCO movement were not isolated or economically stagnant settlements. They supported a diverse local economy rooted in agriculture, fishing, forest resources and small-scale trade. The proposed project area was located in the coastal belt of Jagatsinghpur district near the Bay of Bengal. Villages such as Dhinkia, Gobindpur and Nuagaon were surrounded by fertile agricultural land, patches of coastal forest

<sup>2</sup> Mihir Deb and Sanjib Chandra Sarkar, "Issues of Sustainable Development in the Mines and Minerals Sector in India," in *Minerals and Allied Natural Resources and Their Sustainable Development: Principles, Perspectives with Emphasis on the Indian Scenario* (Singapore: Springer Singapore, 2017), 519.

<sup>3</sup> Shruti Yerramilli, "The "Public Purpose" that is not Inclusive," in *Land Policies in India: Promises, Practices and Challenges* (Singapore: Springer Singapore, 2017), 127.

and access to marine resources. The region benefited from a favourable coastal environment that supported multiple livelihood activities throughout the year. Unlike many industrial project sites that are portrayed as underutilised spaces, this area already sustained thousands of households through a combination of land-based and resource-based occupations.<sup>4</sup>

Agriculture formed the foundation of village life. Among all economic activities, betel vine cultivation occupied a particularly important place. Betel vines were cultivated in carefully managed plots that generated regular cash income for farming households. Many families depended on betel cultivation as their primary source of livelihood because it provided returns that were often higher than conventional agricultural crops. The cultivation process also generated employment for family members and agricultural labourers within the village economy. As a result, betel farming contributed not only to household income but also to local economic circulation. Fishing represented another major source of livelihood. The coastal location provided access to marine and estuarine resources that supported both full-time and seasonal fishing activities. Fishing households supplied local markets while also participating in wider regional trade networks. The sector created employment for fishers, traders, transport workers and small vendors. For many families, fishing functioned as a reliable economic activity that complemented agricultural income.

Forest resources also played a significant role in everyday life. Coastal forests provided fuelwood, fodder, fruits and other non-timber forest products that contributed to household consumption and supplementary income. These forests performed environmental functions as well. They acted as natural barriers against cyclones, strong winds and coastal degradation. Their value therefore extended beyond economics and included ecological protection and community security. Alongside agriculture, fishing and forest use, many residents engaged in small trade and wage labour. Local markets connected villages to nearby towns and enabled the exchange of agricultural products, fish and household goods. This combination of livelihoods created a diversified economic structure that reduced dependence on a single source of income.

Understanding these pre-existing conditions is important because it challenges the assumption that industrial investment was entering an economically empty space. The communities that resisted the POSCO project were defending not only land but also a functioning ecological economy that already provided livelihoods, income and environmental stability. This perspective helps explain why resistance remained strong despite promises of investment and employment. The conflict was not simply about future opportunities. It was also about protecting an existing way of life that many households considered both productive and sustainable.<sup>5</sup>

**Table 1: Major Livelihood Sources in the Proposed POSCO Area**

Livelihood Source	Estimated Dependence
<b>Betel cultivation</b>	High
<b>Fishing</b>	High
<b>Cashew and forest products</b>	Moderate
<b>Wage labour</b>	Moderate

Source: Prepared by the author based on field reports, movement literature and secondary studies on the POSCO region.

<sup>4</sup> *Ibid.*

<sup>5</sup> Padmanabha Hota and Bhagirath Behera, "Extraction of Mineral Resources and Regional Development Outcomes: Empirical Evidence from Odisha, India," *The Extractive Industries and Society* 6, no. 2 (2019): 267–278.

## UNDERSTANDING COASTAL ECOLOGY AND LIVELIHOOD SECURITY

To understand why the POSCO project generated such strong opposition, it is important to look beyond the issue of displacement alone. Land acquisition was certainly an important concern, but it does not fully explain the depth and persistence of local resistance. The proposed project affected a coastal region where livelihoods, natural resources and community institutions were closely interconnected. For this reason, the relationship between ecology and livelihood security provides a useful framework for understanding the movement.<sup>6</sup>

### Sustainable Livelihoods Approach

One useful perspective is the Sustainable Livelihoods Approach. This perspective argues that people depend on a combination of resources rather than a single source of income. Livelihood security is created when households can draw upon land, water, forests, skills, social networks and local knowledge to support everyday life. A disruption to any one of these resources can affect the overall stability of the household.<sup>7</sup> In the coastal villages of Jagatsinghpur, livelihood security was built upon a diverse economic base. Families combined betel cultivation, fishing, collection of forest products, small trade and wage labour. These activities complemented one another and reduced economic risk. When agricultural income declined, fishing or forest resources often provided support. This diversified structure made the local economy resilient and adaptable to changing conditions. The proposed industrial project therefore threatened not only land ownership but an entire livelihood system that had evolved over generations.<sup>8</sup>

### Environmental Justice

A second perspective comes from environmental justice. This approach focuses on how the benefits and costs of development are distributed across society. Large development projects often generate economic gains for governments, investors and urban centres. At the same time, the environmental and social costs are frequently borne by local communities.<sup>9</sup> The POSCO project reflected this tension. Supporters of the project highlighted investment, industrial growth and employment opportunities. Local residents, however, faced the prospect of losing productive land, access to forests and long-established livelihood systems. This created a situation in which the expected benefits and burdens of development were distributed unevenly. The resistance movement therefore raised questions not only about compensation but also about fairness and environmental responsibility.

### Community Resource Governance

A third perspective is community resource governance. In many rural regions, natural resources are managed through local practices and shared community norms. Forests, water bodies and common lands often support collective forms of use and management that have developed over long periods of time. In the villages affected by the POSCO project, community institutions played an important role in regulating access to local resources. Forests provided fuelwood and other products. Fishing grounds supported household economies. Agricultural land formed the basis of social and economic life. These resources were not viewed simply as commodities. They were part of a broader community system that linked livelihood, environment and social relations. Any large-scale transformation of this system therefore carried consequences beyond immediate economic calculations.

<sup>6</sup> Robert Chambers and Gordon Conway, *"Sustainable Rural Livelihoods: Practical Concepts for The 21st Century,"* (1992).

<sup>7</sup> Ian Scoones, *Sustainable Rural Livelihoods: A Framework for Analysis (IDS Working Paper No. 72),* (Institute of Development Studies, 1998).

<sup>8</sup> Hota and Behera, "Extraction of Mineral Resources and Regional Development Outcomes: Empirical Evidence from Odisha, India," 267–278.

<sup>9</sup> David Schlosberg, *Defining Environmental Justice: Theories, Movements, and Nature* (OUP Oxford, 2007).

### Moving Beyond Displacement

Taken together, these perspectives help explain why the anti POSCO movement cannot be understood only as a reaction to displacement. The movement emerged from concerns about livelihood security, environmental sustainability and community control over local resources. By focusing on these dimensions, the present study shifts attention from compensation and land acquisition alone to the wider ecological economy that sustained everyday life in coastal Odisha. This approach offers a more complete understanding of why local communities viewed the proposed project as a threat to both economic survival and environmental security.

**Table 2: Theoretical Perspectives and Their Relevance**

Theory	Relevance
Sustainable livelihoods	Economic survival
Environmental justice	Distribution of impacts
Community governance	Local management

*Source: Prepared by the author based on relevant literature on development, environment and resource governance.*

### THE POSCO PROJECT AND THE PROMISE OF DEVELOPMENT

The signing of the Memorandum of Understanding between the Government of Odisha and POSCO in 2005 was widely presented as a landmark moment in India's industrial development. State authorities described the project as an opportunity to accelerate economic growth, attract foreign investment and transform Odisha into a major industrial destination. Within official narratives, the project symbolised progress, modernisation and integration with global markets.

#### The Proposed Steel Plant

At the centre of the project was a large integrated steel plant proposed near Paradip in Jagatsinghpur district. The plant was designed to become one of the largest steel manufacturing facilities in the country. The project aimed to utilise Odisha's rich mineral resources and strategic coastal location to support large scale steel production for domestic and international markets.

The proposal emerged during a period when state governments across eastern India actively sought industrial investment in mining, steel and infrastructure sectors. Odisha, with its abundant natural resources and expanding transport networks, became a key destination for such investments.<sup>10</sup>

#### Investment and Infrastructure

The project involved an estimated investment of approximately US\$12 billion, making it one of the largest foreign direct investment proposals in India at that time. The scale of investment attracted national and international attention. Supporters argued that such investment would generate industrial growth, increase state revenue and strengthen the region's economic profile. The proposal also included major infrastructure development. Plans were made for transportation networks, industrial facilities and a captive port designed to support the movement of raw materials and finished products. Improved connectivity was expected to strengthen Odisha's position within national and global trade networks.

<sup>10</sup> Hota and Behera, "Extraction of Mineral Resources and Regional Development Outcomes: Empirical Evidence from Odisha, India," 267–278.

### Land Requirement

To establish the steel plant and associated infrastructure, large areas of land were required. Villages such as Dinkia, Gobindpur and Nuagaon fell within the proposed project zone. Land acquisition became one of the most controversial aspects of the project because the area already supported a vibrant local economy based on agriculture, fishing and forest resources. Government agencies viewed land as a necessary input for industrial development. Local communities, however, viewed the same land as the foundation of livelihood and economic security. This difference in perception gradually became a source of conflict.

### Employment and Development Promises

Employment generation formed a central part of the development narrative. Project supporters argued that industrial investment would create direct and indirect jobs while stimulating broader economic opportunities. Improved infrastructure, education, healthcare and market access were also presented as likely benefits. However, local communities questioned whether these benefits would reach those most affected by land acquisition. Similar experiences from other industrial projects in eastern India had created doubts regarding employment guarantees and long-term livelihood security.<sup>11</sup>

### What Kind of Development Was Being Promised

The development model promoted through the POSCO project was based on industrial production, foreign investment and large infrastructure expansion. Economic growth was expected to emerge through integration with national and global markets. Yet this vision differed significantly from local understandings of development, which emphasised livelihood security, environmental stability and community control over resources. The resulting debate was therefore not simply about a steel plant. It reflected competing ideas about what development should mean and who should benefit from it.

**Table 3: Major Components of the Proposed POSCO Project**

Project Component	Proposed Scale
Integrated steel plant	Approximately 12 million tonnes annually
Port facilities	Captive port and transport infrastructure
Land requirement	About 4000 acres
Investment	Approximately US\$12 billion

*Source: Prepared by the author based on government documents, policy reports and contemporary studies.*

### THE HIDDEN VALUE OF THE COASTAL ECONOMY

Much of the discussion surrounding the POSCO project focused on future investment, industrial production and employment generation. Far less attention was given to the economic value that already existed within the affected villages. The proposed project area supported a functioning coastal economy that generated income, employment and environmental security long before industrial development was proposed. Understanding this existing economy is essential for explaining the intensity of local resistance.

<sup>11</sup> Yerramilli, "The "Public Purpose" that is not Inclusive," in *Land Policies in India: Promises, Practices and Challenges*, 127.

### **Betel Cultivation and Rural Prosperity**

Betel vine cultivation formed the economic backbone of many households in Dhinkia, Gobindpur and surrounding villages. Farmers cultivated betel vines within carefully maintained enclosures that required continuous labour and local knowledge. The activity generated regular cash income and supported a relatively prosperous rural economy compared to many other villages in the region.

Unlike seasonal crops, betel cultivation provided year-round returns and created employment for family members as well as agricultural workers. Income from betel leaves supported household consumption, education, housing and social obligations. For many families, the economic returns from betel cultivation were considerably more reliable than the uncertain benefits promised by future industrial employment.

### **The Fishing Economy**

The coastal location of Jagatsinghpur also supported an active fishing economy. Marine and estuarine resources provided livelihoods for fishing households and contributed to local food security. Fish was sold through local markets and regional trading networks, creating employment not only for fishers but also for traders, transporters and vendors.<sup>12</sup> Fishing complemented agricultural activities and reduced dependence on a single source of income. This diversification strengthened household resilience and helped communities cope with environmental and economic uncertainties.

### **Forest Resources and Everyday Security**

The forests surrounding the proposed project area performed both economic and ecological functions. Local communities depended on forest resources for fuelwood, fodder, fruits and other products used in daily life. Although these resources were often absent from formal economic calculations, they reduced household expenditure and contributed significantly to livelihood security. The forests also provided ecological benefits. They helped protect settlements from strong coastal winds, supported biodiversity and contributed to environmental stability. Their value therefore extended beyond direct income generation and included important ecosystem services that supported community well-being.<sup>13</sup>

### **Seasonal Employment and Small Trade**

The coastal economy was strengthened by a range of seasonal and supplementary occupations. Wage labour, transport activities, local trading and market exchange created additional sources of income. Weekly markets connected villages with nearby towns and facilitated the movement of agricultural products, fish and household goods. This combination of activities produced a diversified economic structure. Households rarely depended on a single livelihood source. Instead, they combined farming, fishing, forest use and small trade according to seasonal conditions and household needs.<sup>14</sup>

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<sup>12</sup> Deb and Sarkar, "Issues of Sustainable Development in the Mines and Minerals Sector in India," in *Minerals and Allied Natural Resources and Their Sustainable Development: Principles, Perspectives with Emphasis on the Indian Scenario*, 519.

<sup>13</sup> *Ibid.*

<sup>14</sup> Vidhya Das, "Kashipur: Politics of Underdevelopment," *Economic and Political Weekly* (2003): 81–84.

### An Economy Often Ignored

One of the limitations of conventional development assessments is their tendency to focus on formal investment while overlooking existing local economies. In the POSCO case, public discussions frequently highlighted the economic value of the proposed steel plant. Comparatively little attention was paid to the economic contributions of betel cultivation, fishing and forest-based livelihoods. This omission shaped perceptions of the project area as economically underutilised. In reality, the villages possessed a productive economic system that generated income, employment and social stability.

### Rethinking Development

The hidden value of the coastal economy helps explain why resistance remained strong despite promises of industrial growth. Local communities were not defending an unproductive landscape. They were defending an existing economic system that combined livelihood security with environmental sustainability. This perspective offers an important contribution to the study of development conflicts. Rather than viewing resistance solely as opposition to industrialisation, it highlights how communities often mobilise to protect functioning economic systems that are deeply connected to local ecosystems.

**Table 4: Economic Value of Existing Livelihoods in the Proposed POSCO Area**

Activity	Estimated Annual Value and Economic Importance
Betel vines	Very High. Primary cash income source for many households. Generated year round earnings and supported local employment.
Fishing	High. Major source of income and food security. Supported fishers, traders and transport workers.
Cashew cultivation	Moderate to High. Provided seasonal income and supplemented household earnings.
Forest products	Moderate. Contributed fuelwood, fodder, fruits and other resources that reduced household expenditure and supported livelihoods.

*Source: Prepared by the author based on movement reports, secondary studies, government records and published literature on the POSCO project area.*

## COMMUNITY RESISTANCE AND GRASSROOTS DEMOCRACY

The resistance against the POSCO project was not simply a reaction to land acquisition. It evolved into a significant example of grassroots democratic participation in contemporary India. As concerns regarding displacement, livelihood loss and environmental degradation increased, local communities organised themselves through collective action. The movement demonstrated how ordinary villagers could participate in public decision making when they believed that their rights and livelihoods were under threat.

### Formation of the POSCO Pratirodh Sangram Samiti

One of the most important developments was the formation of the POSCO Pratirodh Sangram Samiti (PPSS). The organisation emerged as a collective platform representing affected villagers from Dhinkia, Gobindpur and Nuagaon. It coordinated local opposition to the project and became the principal voice of the movement. The PPSS brought together farmers, fishers, women, youth and local leaders. Rather than relying solely on external organisations, the movement was largely rooted in village level participation. Public meetings, consultations and collective decision making became central features of the resistance. Through these activities, local communities sought to assert their right to influence decisions that would directly affect their future.

### Village Meetings and Collective Action

Village meetings played a crucial role in sustaining the movement. Residents gathered regularly to discuss project developments, share information and formulate common strategies. These meetings helped strengthen community solidarity and ensured that resistance remained locally grounded. Participation was often broad based. Farmers discussed the future of betel cultivation, fishers raised concerns regarding coastal livelihoods and community elders reflected on the long-term implications of land loss. Such discussions transformed the movement into a democratic space where different voices could contribute to collective decision making.<sup>15</sup>

### Protests and Barricades

As tensions increased, villagers adopted various forms of peaceful protest. Demonstrations, public rallies and road blockades became common methods of expressing opposition. One of the most distinctive features of the movement was the construction of village barricades. These barricades were intended to restrict the entry of officials and project representatives into certain areas. Although often portrayed as acts of confrontation, the barricades also symbolised local claims over land and community resources.

### Local Leadership and Community Mobilisation

Local leadership played an important role in maintaining the continuity of the movement. Community leaders acted as mediators, organisers and spokespersons. Their influence was rooted not in formal political authority but in local trust and participation. The strength of the movement emerged from collective leadership rather than dependence on a single individual. This broad leadership structure enabled the resistance to continue over many years despite political pressure and administrative challenges.

### Resistance as Democratic Participation

The significance of the anti POSCO movement lies not only in its opposition to a development project but also in its democratic character. Villagers demanded consultation, transparency and participation in decisions affecting their lives. In doing so, they expanded the meaning of democracy beyond elections and formal institutions. The movement therefore represents an important example of grassroots democracy in practice. It demonstrates how local communities can engage with questions of development, environment and public policy through collective action. Seen from this perspective, resistance was not merely opposition.

**Table 5: Forms of Community Resistance in the POSCO Movement**

Village	Form of Resistance	Key Features
Dhinkia	Community mobilisation	Village meetings, leadership networks, sustained participation
Gobindpur	Land defence	Protection of agricultural land, resistance to acquisition efforts
Nuagaon	Public protests	Demonstrations, rallies and collective mobilisation
Multiple villages	Barricades and monitoring	Community control over village entry points
Entire movement area	Grassroots organisation	Coordination through POSCO Pratirodh Sangram Samiti

*Source: Prepared by the author based on movement literature, secondary studies and reports on the POSCO movement.*

<sup>15</sup>Yerramilli, "The "Public Purpose" that is not Inclusive," in *Land Policies in India: Promises, Practices and Challenges*, 127.

## **WOMEN AND THE DEFENCE OF COASTAL LIVELIHOODS**

Women played a key role in the anti-POSCO movement in Odisha. Their participation demonstrated the close relationship between household livelihoods, natural resources, and community well-being. While public discussions often focused on land acquisition and industrial development, women recognised that the project could affect the resources that sustained their daily lives and household income.

### **Women and the Betel Economy**

Betel cultivation was one of the most important sources of income in the project area. Women were actively involved in various stages of production, including planting, maintaining the vines, harvesting leaves, processing, and marketing the produce. Income from betel cultivation supported household consumption, children's education, healthcare, and other essential expenses. Because of their dependence on this agricultural economy, many women viewed the proposed land acquisition as a direct threat to household economic security.

### **Forest Resources and Everyday Life**

Women also relied on nearby forests for fuelwood, fodder, and other forest products used in everyday household activities. These resources contributed not only to family subsistence but also to the ecological stability of the coastal region. The possibility of losing access to forests and common resources increased women's involvement in the struggle against the project.<sup>16</sup>

### **Community Mobilisation and Protest**

Women participated actively in village meetings, demonstrations, rallies, and protest activities. They helped organise community mobilisation efforts and often stood at the forefront of resistance actions. Their involvement strengthened the movement by broadening its social base and demonstrating that opposition to the project reflected widespread community concerns rather than the interests of a small group of leaders.<sup>17</sup> The POSCO movement highlights that women were not passive victims of development-induced displacement. Instead, they emerged as active defenders of livelihoods, natural resources, and community welfare. Their participation illustrates the important role women play in environmental movements and struggles for sustainable and inclusive development.

## **ENVIRONMENTAL RISKS AND COASTAL VULNERABILITY**

The debate around the POSCO project was not only about land acquisition and industrial investment. It was also connected to the environmental future of the coastal region. The villages affected by the project were located in a fragile coastal landscape that faced several ecological risks. These included coastal erosion, cyclones, forest loss and environmental degradation.

### **Coastal Erosion and Changing Landscapes**

The Odisha coast is highly vulnerable to erosion. Coastal winds, tidal movements and extreme weather events constantly reshape the shoreline. Natural features such as sand dunes and coastal vegetation play an important role in reducing erosion and protecting settlements. Any large scale alteration of these landscapes can increase environmental vulnerability and weaken local resilience.

<sup>16</sup>Das, "Kashipur: Politics of Underdevelopment," 81–84.

<sup>17</sup>Iswar Chandra Naik, "Rethinking Satyagraha in the Context of Environmental Movement in India: A Study of Kashipur Block of Orissa," *Voice of Intellectual Man-An International Journal* 4, no. 1 (2014): 131–152.

### Cyclone Risks and Community Security

Odisha has experienced several destructive cyclones over the past few decades. Coastal communities are therefore highly aware of environmental risks. Forests, vegetation belts and natural barriers help reduce the impact of strong winds and storms. These ecological assets provide protection that is often overlooked in economic assessments of development projects. Many villagers feared that industrial expansion would weaken these protective systems.

### Forest Loss and Environmental Degradation

The forests in the proposed project area supported both livelihoods and ecological stability. They provided fuel wood, small forest products and habitat for local biodiversity. At the same time, they acted as natural barriers against environmental stress. Large scale industrial development often requires land clearing, infrastructure construction and landscape modification. Such changes can reduce vegetation cover and increase pressure on local ecosystems.<sup>18</sup>

### Climate Resilience and Ecosystem Protection

An important lesson from the POSCO movement is that local communities were defending more than economic resources. They were also protecting ecological systems that contribute to climate resilience. Forests, dunes and wetlands help communities adapt to environmental shocks and reduce vulnerability to natural disasters. This perspective connects the POSCO movement with contemporary discussions on climate resilience and ecosystem protection. Long before climate adaptation became a major policy concern, local communities were already defending landscapes that performed important environmental functions.

**Table 6: Ecological Assets and Their Protective Functions**

Ecological Asset	Environmental Function
Coastal Forests	Reduce wind impact and help protect coastal areas from cyclones
Sand Dunes	Prevent coastal erosion and support shoreline stability
Wetlands	Regulate water flow and reduce flooding risks
Vegetation Belts	Protect soil and maintain ecological balance
Coastal Ecosystems	Strengthen climate resilience and support biodiversity

*Source: Prepared by the author based on environmental studies and literature on coastal Odisha.*

## DISCUSSION

The POSCO movement has often been interpreted as a conflict between development and resistance. However, the findings of this study suggest a more complex reality. The central issue was not whether development should occur. The real question was what kind of development should be pursued and whose interests it should serve. The development model promoted through the POSCO project was based on industrial production, large-scale investment and infrastructure expansion. Economic growth was expected to emerge through steel production, export activity and integration with global markets, reflecting the broader neoliberal development trajectory adopted in Odisha during the post-liberalisation period.

In contrast, local communities depended on an ecological economy. This economy was based on betel cultivation, fishing, forest resources and small-scale trade. These activities generated income, supported employment and maintained environmental stability. They also provided a level of economic security that many households valued highly. The conflict therefore involved two different economic systems rather than a simple opposition to industrialisation. It reflected competing visions of development and resource use.<sup>19</sup>

<sup>18</sup>Das, "Kashipur: Politics of Underdevelopment," 81–84.

<sup>19</sup>Das, "Kashipur: Politics of Underdevelopment," 81–84.

### **Livelihood Security and Environmental Protection**

The study demonstrates that livelihood security and environmental protection were closely connected. Agricultural land, forests and coastal ecosystems supported both economic activity and ecological resilience. The loss of these resources would affect not only income but also community stability and environmental sustainability. This explains why resistance remained strong despite promises of investment and employment. Local people believed that they were being asked to exchange an existing economic system for an uncertain future. Similar concerns have been observed in other resource-conflict regions of Odisha where communities questioned the social costs of extractive development. The findings of this paper support a new concept that may be described as the Ecological Economy of Resistance. This concept refers to situations where communities resist development projects because they are defending existing economic systems rooted in nature. Their actions are motivated not only by cultural attachment to land but also by the practical value of ecological resources in supporting livelihoods and social well-being.<sup>20</sup> In the POSCO case, resistance emerged because communities recognised the economic value of forests, fishing grounds, agricultural land and coastal ecosystems. These resources formed part of a functioning economy that already sustained thousands of households.

### **Rethinking Development**

The anti-POSCO movement therefore offers a broader lesson for development policy. Large investments should not be evaluated only in terms of projected industrial output or financial returns. Equal attention must be given to the value of existing livelihood systems and environmental resources. The movement shows that local communities were not rejecting development. Rather, they were defending an alternative vision of development based on livelihood security, ecological sustainability and community participation.

### **CONCLUSION**

The POSCO movement is one of the most important examples of resistance to large-scale development projects in India. This study shows that the movement was not only about opposing industrialisation or foreign investment. It was primarily a struggle to protect existing livelihoods, local resources, and the ecological systems that supported community life. Our findings reveal that the affected villages had a strong and functioning local economy based on betel cultivation, fishing, forest resources, and small-scale trade. These activities provided employment and income to local households and were closely connected to the surrounding natural environment. The forests, coastal ecosystems, and agricultural lands were not only sources of livelihood but also important for environmental protection and community well-being. The study also highlights the role of collective action and community participation in shaping resistance. Local residents, including a large number of women, actively participated in protecting their land, livelihoods, and natural resources. Their involvement demonstrates how environmental concerns and livelihood security are deeply interconnected.

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<sup>20</sup>Deb and Sarkar, "Issues of Sustainable Development in the Mines and Minerals Sector in India," in *Minerals and Allied Natural Resources and Their Sustainable Development: Principles, Perspectives with Emphasis on the Indian Scenario*, 519.

A key contribution of this study is the concept of the Ecological Economy of Resistance, which explains how communities resist development projects when they threaten existing economic and ecological systems. The POSCO movement shows that local economies based on natural resources can be productive, sustainable, and valuable, even when they are often overlooked in conventional development planning. Overall, this study argues that development should not be assessed only in terms of industrial growth and investment. Equal importance must be given to livelihood security, environmental sustainability, and the voices of local communities. The experience of the POSCO movement demonstrates the need for development approaches that balance economic progress with social justice and ecological protection.

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