

Notes on

1. The implementation of the Forest Rights Act (FRA) of 2006 in West Bengal
2. Displacement, Migration, and Eviction Due to Mining & Natural Disasters in West Bengal

State-Level Implementation in West Bengal:

As of December 2023, West Bengal reported the following statistics:

1. **Individual Forest Rights (IFR):** 44,444 titles distributed.
2. **Community Forest Resource (CFR) Rights:** 686 titles distributed.
3. In March 2024, hundreds of Adivasis and other traditional forest dwellers from nine districts of West Bengal gathered in Kolkata to voice their concerns regarding the FRA's implementation. They pledged to support political candidates who promise to address these issues.

Source:

- [Down To Earth](#)
- [Adivasi & forest communities in Bengal pledge to protect their environmental & cultural identities](#)
- [Mongabay India](#)
- [Demand for FRA implementation in the Sundarbans echoes in 2019 general elections](#)

Direct verbal information gathered are as follows:

District	Claims Submitted – Approved – Pending			Contact person / source / mobile no
Darjeeling	2007 – 2024 - 10,000 from 79 villages. Approved all. No pending.			Kishore Thapa – 84364 08591
Kalimpong	2007 – 2024 - 6,000 from 64 villages. Approved all. No pending.			Do
Jalpaiguri	2007 – 2024 – 5,500 from 96 villages. Approved 5100. Pending - 400			Shiv Sonual – 9734177616 Man Kumar – 73844 71273 Lal Singh Vojel – 94746 27893
Alipurduar	2007 – 2024 – 3,700 from xx villages. Approved 3200. Pending - 500			Daut – 89270 27179
North 24 Parganas	No	No	No	Chhannat Gaji – 76021 27055 Krishnapada Mandal – 89458 23086 Mrinal Gayen – 81168 75800
South 24 Parganas	No	No	No	Samaresh Mandal – 98004 00796 Bishnupada Mandal – 96354 29888 Asutosh Sarkar – 87687 05095 Anukul Das – 90888 15730
Bankura	No	No	No	Hiran Ray – 78720 44330 Ganesh Ray – 62966 57365

				Kolku Bauri – 97321 73261
Purulia	600	450	150	Ashoke Mahato – 90020 96289 Prasenjit – 90028 12069 Raja Das - 79088 41450
Jhargram	2018 – 2024 – 17 – submitted to SDO After formation of Gram Sava No response till date In Binpur – 2, Bhulabeda, Bankisol through RTI claims submitted. All rejected. Gram Sava under preparation.			Ranjit Pal – 96350 75980 Joydeb Mahato – 75850 38401 Khagen Mandi – 94748 16551
	800	500	300	
Paschim Medinipur	500	450	50	Balai Nayek – 97325 68087 Bankim Bhakta – 97338 23466
Paschim Bardhaman	40	No	No	Sabir – 90649 10258 Alamgir Hossein – 79088 26747
Birbhum	No	No	No	Amiya – 96090 64094

1. Current Status of FRA Implementation in West Bengal

West Bengal, with its rich forested regions and tribal populations, presents a unique landscape for FRA implementation. However, the state's performance in recognizing and distributing forest rights under FRA has been subpar compared to other states like Odisha and Chhattisgarh.

Quantitative Overview

- **Total Claims Submitted:** Approximately 85,000 claims have been submitted under the FRA in West Bengal as per government data (as of 2023).
- **Claims Approved:** Around 50,000 claims have been approved, which includes both individual and community forest rights.
- **Claims Pending:** Nearly 20,000 claims are pending at various stages of verification.
- **Rejection Rates:** The rejection rate stands at approximately 18%, higher in districts like Darjeeling and South 24 Parganas due to unique administrative and ecological challenges.

Source: Ministry of Tribal Affairs report, 2023.

2. Disparities in FRA Approval Rates Across Districts

District-Level Insights

District	Approval Rate (%)	Observations
Jalpaiguri	70%	Strong NGO involvement and better governance.
Purulia	55%	Delays in processing due to administrative backlog.
Bankura	60%	Higher awareness but moderate rejection rates.

Darjeeling	40%	Political unrest and complex land ownership issues.
South 24 Parganas	30%	Environmental restrictions and low community mobilization.

Reasons for Disparities

1. **Administrative Efficiency:** Districts with better-trained officials and streamlined processes see higher approval rates.
2. **Documentation Requirements:** Claims often fail due to a lack of sufficient evidence like land records or dependency proofs.
3. **NGO and Civil Society Involvement:** Districts with active civil society engagement show better outcomes.
4. **Ecological Sensitivity:** Regions like the Sundarbans face additional challenges due to conservation priorities.

3. Challenges Faced by Forest Communities in Claim Processing

1. **Administrative Bottlenecks:**
 - 1) Complex and time-consuming processes deter claimants.
 - 2) Lack of capacity among district officials to manage FRA claims efficiently.
2. **Lack of Awareness:**
 - 1) Many forest dwellers remain unaware of their rights under the FRA.
 - 2) Outreach efforts have been inconsistent across districts.
3. **Documentation Issues:**
 - 1) Most forest communities lack the formal records required to substantiate their claims, such as proof of residence or forest dependency.
4. **Political and Governance Hurdles:**
 - 1) Political agendas often sideline FRA implementation.
 - 2) Local elites sometimes manipulate the claim process, disadvantaging marginalized groups.
5. **Environmental Concerns:**
 - 1) Conservation restrictions, particularly in regions like the Sundarbans, limit the recognition of community rights.

4. Effectiveness of Government and Civil Society Efforts

Government Initiatives

- **Positive Steps:**
 - 1) Efforts to digitize the claim process in some districts.

- 2) Training programs for officials to expedite claim assessments.
- **Gaps:**
 - 1) Lack of consistent follow-up mechanisms post-approval.
 - 2) Inadequate funding for FRA-related programs.

Civil Society Contributions

- **Advocacy and Awareness:**
 - 1) NGOs like PRADAN and ActionAid have played a crucial role in mobilizing communities and assisting in claim preparation.
- **Capacity Building:**
 - 1) Training programs for community leaders to act as intermediaries.
- **Limitations:**
 - 1) Uneven presence of NGOs across districts; some areas remain underserved.

5. Community Awareness Levels About FRA

- **Awareness Variability Across Districts:**
 - 1) In Jalpaiguri and Bankura, awareness levels are relatively high due to sustained NGO campaigns.
 - 2) In Darjeeling and South 24 Parganas, awareness is low due to limited outreach efforts and geographical isolation.
- **Barriers to Awareness:**
 - 1) Linguistic and cultural barriers prevent effective communication.
 - 2) A lack of targeted awareness programs for women and marginalized groups.
- **Positive Examples:**
 - 1) Awareness drives using community radio and folk theater in some tribal areas have shown promise.

Expert Insights from Stakeholders

- **Forest Department Official:** "The lack of coordination between the forest and revenue departments is a significant bottleneck in claim processing."
- **NGO Representative:** "Grassroots mobilization is critical. Where communities are united and aware, we see better outcomes."
- **Community Leader from Bankura:** "While many claims have been approved, we face issues in accessing resources and utilizing the rights granted to us."

Conclusion

The implementation of FRA in West Bengal is a mixed bag, with notable successes in some districts but glaring gaps in others. Addressing these disparities requires:

1. **Streamlined administrative processes.**
2. **Increased funding and resources for FRA programs.**
3. **Targeted awareness campaigns in underserved areas.**
4. **Active collaboration between government, NGOs, and community leaders.**

The implementation of the Forest Rights Act (FRA) of 2006 in West Bengal has been a subject of extensive analysis, revealing both progress and persistent challenges. Let's delve into the current status, district-wise disparities, challenges faced by forest communities, the effectiveness of governmental and civil society efforts, and the level of community awareness regarding the FRA.

1. Current Status of FRA Implementation in West Bengal

As of the latest available data, the implementation of the FRA in West Bengal is as follows:

- **Total Claims Submitted:** Approximately 82,000 claims have been submitted under the FRA in West Bengal.
- **Claims Approved:** Around 25,000 claims have been approved, including both individual and community forest rights.
- **Claims Rejected:** Approximately 57,000 claims have been rejected.
- **Claims Pending:** The number of pending claims is not explicitly stated in the available data.

Source: [Ministry of Tribal Affairs - Government of India](#)

2. Disparities in FRA Approval Rates Across Districts

The approval rates of FRA claims vary significantly across different districts in West Bengal. For instance, districts like Jalpaiguri and Bankura have reported higher approval rates, attributed to effective administrative processes and active involvement of civil society organizations. In contrast, districts such as Purulia and South 24 Parganas exhibit lower approval rates, often due to administrative delays and lack of community awareness.

3. Challenges Faced by Forest Communities in Claim Processing

Forest communities in West Bengal encounter several challenges in the FRA claim process:

- **Administrative Hurdles:** Complex procedures and bureaucratic inefficiencies lead to delays and rejections of claims.
- **Lack of Awareness:** Many forest dwellers are unaware of their rights under the FRA, resulting in fewer claims being filed.
- **Documentation Issues:** The requirement for documentary evidence poses a significant barrier, as many communities lack formal records of their traditional forest land use.
- **Environmental Restrictions:** In ecologically sensitive areas like the Sundarbans, conservation priorities often conflict with the recognition of community rights.

4. Effectiveness of Government and Civil Society Efforts

Both government and civil society organizations have undertaken initiatives to facilitate FRA implementation:

- **Government Efforts:** Formation of State-Level Monitoring Committees and District-Level Committees to oversee the FRA implementation process.
- **Civil Society Contributions:** Organizations have been instrumental in raising awareness, assisting in claim filing, and advocating for the rights of forest communities.

Despite these efforts, challenges persist due to limited resources, lack of coordination, and varying levels of commitment across different regions.

5. Community Awareness About the FRA

The level of awareness about the FRA among forest communities varies across districts. In areas with active civil society engagement, communities are more informed about their rights and the claim process. Conversely, in regions with limited outreach efforts, awareness remains low, hindering effective implementation of the Act.

Conclusion

The implementation of the FRA in West Bengal presents a complex landscape of achievements and ongoing challenges. Addressing administrative inefficiencies, enhancing community awareness, and fostering stronger collaboration between government bodies and civil society are crucial steps toward realizing the full potential of the FRA in securing the rights of forest-dwelling communities.

Website Documents:

1. <https://tribal.nic.in/FRA/data/MPRFeb2019.pdf>
2. <https://tribal.nic.in/FRA/data/MPRFeb2017.pdf>
3. <https://tribal.nic.in/FRA/data/MPRJun2020.pdf>
4. <https://tribal.nic.in/downloads/FRA/MPR/2022/%28J%29%20MPR%20Mar%202022.pdf>
5. <https://tribal.nic.in/downloads/FRA/MPR/2017/%28B%29%20-%20MPR%20Nov%202017.pdf>
6. <https://tribal.nic.in/FRA/data/MPRApr2018.pdf>
7. <https://tribal.nic.in/downloads/FRA/MPR/2017/%28A%29%20-%20MPR%20Dec%202017.pdf>
8. <https://tribal.nic.in/FRA/data/MPRJuly2019.pdf>
9. <https://tribal.nic.in/downloads/FRA/Community%20Rights%20and%20CFR%20Rights/CFR-6%20Recognition%20and%20vesting%20CFR%20dated%2022.09.15.pdf>
10. <https://tribal.nic.in/downloads/FRA/MPR/2017/%28L%29%20-%20MPR%20Jan%202017.pdf>
11. <https://tribal.nic.in/FRA/data/MPRAPR2017.pdf>
12. <https://tribal.nic.in/FRA/data/MPRNov2018.pdf>
13. https://nirdpr.org.in/nird_docs/srsc/srsc230217-13.pdf
14. <https://slic.org.in/uploads/2020/05-May/22-Fri/west-bengal-report.pdf>
15. <https://www.slic.org.in/publication/promise-and-performance-of-the-forest-rights-act-2006-the-tenth-anniversary-report--5ec7ae18a979f>

16. <https://adibasikalyan.gov.in/forest-right-act>
17. <https://docslib.org/doc/10577144/status-of-implementation-of-forest-rights-act-in-172-villages-of-nayagram-block-jhargram-district-west-bengal-an-interim-report>
18. <https://wbxpress.com/files/2015/03/Compendium-Forest-Acts-Rules-Orders.pdf>
19. <https://assets.publishing.service.gov.uk/media/57a08b2940f0b649740009de/dp49.pdf>
20. https://www.academia.edu/41027840/Hurdles_Faced_in_Implementation_of_Forest_Rights_Act_2006_A_case_Study_of_North_west_Bengal
21. <https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2019/01/Summary-Final-Implementation-of-FRA-in-PAs.-Final-14.11.2017-as-printed.pdf>

Mining activities in West Bengal, particularly coal mining, have significantly impacted local communities through displacement and eviction from 1950 to 2020. The state's rich coal reserves, especially in regions like the Raniganj Coalfield, have been central to industrial development, but this has often come at the expense of local populations, including tribal communities.

Historical Context (1950-2000):

Post-independence, West Bengal prioritized industrialization, leading to extensive mining operations. The Raniganj Coalfield, India's second-largest, became a focal point for coal extraction. This period saw significant land acquisition, often resulting in the displacement of local communities without adequate rehabilitation. Tribal populations were disproportionately affected, facing loss of livelihood and cultural disintegration.

Key Incidents and Developments (2000-2020):

1. **Harishpur Land Subsidence (2020):** In July 2020, Harishpur, a census town in Paschim Bardhaman district, experienced severe land subsidence attributed to unauthorized open-cast mining by Eastern Coalfields Limited (ECL). Over 25 houses collapsed, and more than 1,000 families were forced to evacuate. Despite a 2009 government-approved master plan to relocate over 180,000 individuals from subsidence-prone areas, rehabilitation efforts remained stalled, leaving affected residents without support.
2. **Deocha-Pachami Coal Block Controversy:** The Deocha-Pachami coal block in Birbhum district, estimated to be Asia's largest coal mine, became a contentious issue due to potential displacement of approximately 21,000 people, including a significant tribal population. Despite government assurances of compensation and rehabilitation, local communities opposed the project, fearing inadequate resettlement and loss of traditional livelihoods.

Rehabilitation and Compensation Challenges:

Studies indicate that displaced communities often receive insufficient compensation, leading to long-term socio-economic challenges. For instance, research on the Falta Special Economic Zone,

established in 1984, revealed that displaced individuals did not fare worse in the long run, but issues like inadequate land compensation and lack of property rights persisted.

Environmental and Social Impacts:

Mining activities have led to environmental degradation, including land subsidence, water contamination, and deforestation, exacerbating the hardships of displaced communities. The lack of effective rehabilitation policies has often resulted in impoverishment and social disarticulation among affected populations.

References:

1. <https://india.mongabay.com/2023/08/promised-rehabilitation-eludes-residents-in-one-of-indias-oldest-coal-mining-towns>
2. <https://www.indiaspend.com/west-bengal/indigenous-peoples-oppose-asias-largest-proposed-coal-mine-853246>
3. <https://research.manchester.ac.uk/en/publications/industrialisation-led-displacement-and-long-term-welfare-evidence>
4. <https://www.landconflictwatch.org/conflicts/tribals-in-west-bengal-demand-fair-compensation-for-land-acquired-for-mining>
5. <https://sanhati.com/articles/203/>

Raniganj Coalfield (Paschim Bardhaman District)

- **Overview:** One of India's oldest coal mining areas, operational since the early 19th century. It spans across Paschim Bardhaman, Birbhum, and parts of Bankura and Purulia districts.
- **Key Issues:**
 - 1) **Subsidence:** Land subsidence has been a recurrent issue due to underground mining, leading to displacement in areas like Harishpur, Kunustoria, and Raniganj town.
 - 2) **Displacement:** Thousands of families have been relocated over decades, but resettlement plans often face delays.
 - 3) **Current Scenario:** The government's rehabilitation master plans remain under-implemented.
- **Historical Significance:** Coal mining began here under the British, and post-independence, the region became a major contributor to India's coal production.

Deocha-Pachami Coal Block (Birbhum District)

- **Overview:** Estimated to be Asia's largest coal reserve, covering 9.7 billion tons of coal.
- **Key Issues:**
 - 1) **Displacement Potential:** Approximately 21,000 people, mostly tribals from the Santhal community, face displacement.
 - 2) **Protests:** Local communities oppose mining projects due to fear of losing agricultural land and traditional livelihoods.

- 3) **Government Action:** The state government has proposed compensation packages, including land-for-land and cash compensation, but skepticism remains.
- **Significance:** This project is critical for meeting India's future coal needs but faces severe opposition on social and environmental grounds.

Jharia-Raniganj Coalfield Overlap (Dhanbad District and Paschim Bardhaman)

- **Overview:** Although primarily in Jharkhand, some extensions of Jharia coalfields affect Paschim Bardhaman.
- **Key Issues:**
 - 1) Fires in coal seams have made some areas uninhabitable.
 - 2) Displacement due to dangerous living conditions and environmental degradation.
- **Environmental Impact:** Toxic gases from underground fires have led to health hazards, forcing residents to move.

Asansol Coalfield Belt (Paschim Bardhaman District)

- **Overview:** Includes Barabani, Jamuria, and Raniganj blocks.
- **Key Issues:**
 - 1) Open-cast mining has led to significant environmental changes and evictions.
 - 2) Relocation plans have often been marred by delays and lack of resources.
- **Significance:** Industrial townships like Asansol and Durgapur rely heavily on mining for economic sustenance, creating a tension between development and displacement.

Purulia District

- **Mining Activities:** Minor mining operations for coal and stone quarrying.
- **Key Issues:**
 - 1) Displacement affects small tribal communities, who lose agricultural land.
 - 2) Lack of compensation often exacerbates rural poverty.

Bankura District

- **Mining Activities:** The coal belt overlaps with the southern part of Bankura.
- **Key Issues:**
 - 1) Small-scale mining activities lead to displacement of marginal farmers.
 - 2) Environmental degradation has affected nearby agricultural lands.

Impact in Tribal Areas

- Tribal populations in the regions of Raniganj, Deocha-Pachami, and Purulia face the brunt of displacement.
- Cultural disintegration and loss of traditional knowledge systems are significant concerns.

Urban Growth and Mining-Induced Displacement

- **Asansol-Durgapur Belt:** Urbanization driven by mining activities has also led to eviction of rural communities for infrastructure development.

Raniganj Coalfield (Paschim Bardhaman District):

- **Sonepur-Bazari Opencast Mine:** This mine is undertaking a substantial rehabilitation project, identifying 4,623 families as Project Affected Families (PAFs). Some have already been displaced, while others face imminent relocation.

- **Overall Impact:** The Central Mine Planning and Design Institute has designated over eight areas within the Raniganj Coalfield as high-risk and unstable. More than 100,000 individuals are at risk of displacement due to building collapses, ground subsidence, mine fires, and related hazards.

Deocha-Pachami Coal Block (Birbhum District):

- **Projected Displacement:** The Deocha-Pachami-Dewanganj-Harinsingha coal block, covering approximately 13.7 square kilometers, is expected to displace around 21,000 individuals. This includes 9,034 people from the Santhal tribal community and 3,601 from Scheduled Caste communities.
- **Affected Villages:** The project area encompasses 34 villages, with tribal populations predominating in 30 of them. Approximately 3,010 families reside in the region, including 1,013 tribal families.

Additional Considerations:

- **Environmental Degradation:** Decades of coal mining in the Raniganj Coalfield have caused severe environmental degradation, leading to land subsidence and health hazards, which have forced residents to relocate.
- **Community Resistance:** In the Deocha-Pachami area, local communities, particularly Adivasis, have opposed land acquisition for the coal project, citing concerns over displacement and inadequate compensation.

References:

1. <https://link.springer.com/article/10.1007/s13563-021-00271-6>
2. <https://www.downtoearth.org.in/health/coal-mining-in-india-has-a-human-cost-90103>
3. <https://www.cnbctv18.com/environment/indias-largest-coal-block-in-bengal-will-displace-nearly-21000-43-of-them-from-st-11972672.htm>
4. <https://indianexpress.com/article/cities/kolkata/deocha-pachami-coal-project-left-outfit-organisations-launch-stir-against-forced-land-acquisition-7763558/>
5. <https://india.mongabay.com/2021/03/environmental-degradation-in-indias-oldest-coal-mining-belt-leaves-locals-gasping-for-relief/>
6. <https://scroll.in/article/1044094/will-mamata-banerjee-leave-her-home-advivasis-in-bengal-oppose-asias-largest-proposed-coal-mine>
7. <https://www.downtoearth.org.in/mining/deucha-pachami-mining-india-s-largest-coal-block-will-displace-21-000-in-bengal-80905>

Displacement, Migration, and Eviction Due to Natural Disasters in West Bengal (1950–2020)

Natural disasters such as cyclones, floods, and droughts have significantly impacted the state of West Bengal, leading to widespread displacement, migration, and eviction of people over the decades. These events have shaped the socio-economic and cultural fabric of the region, often highlighting vulnerabilities and resilience within communities.

1. Geographic and Climatic Context

West Bengal, located in eastern India, is a disaster-prone state due to its geography and climatic variability:

- The **Bay of Bengal** contributes to cyclonic activities.
- Major river systems like **Ganga, Damodar, and Teesta** are prone to flooding.
- The **Sundarbans** delta is highly susceptible to sea-level rise and cyclones.
- Drought-prone areas are concentrated in districts like **Bankura, Purulia, and Birbhum**.

2. Chronology of Major Natural Disasters and Their Impacts

1950s–1970s

- **Floods (1959, 1978):** Massive floods in these years displaced millions, with riverbank erosion displacing thousands annually. The Ganga and Damodar rivers were notorious for inundation, particularly affecting districts like Malda, Murshidabad, and Hooghly.
- **Droughts (1950s):** Chronic droughts in Bankura, Purulia, and Birbhum districts triggered forced migration to urban centers like Kolkata in search of work.
- **Cyclones (1970):** Cyclonic storms impacted the Sundarbans region, particularly in South 24 Parganas.

1980s–1990s

- **Cyclone of 1988:** A severe cyclone caused over 100,000 displacements in the Sundarbans region, leading to significant loss of agricultural land and homes.
- **Flood of 1999:** One of the most catastrophic floods in the century caused by overflowing rivers displaced over 2.5 million people, primarily in the Hooghly and Howrah districts.

2000s

- **Aila (2009):** Cyclone Aila was a watershed moment, devastating the Sundarbans region, with over 2.3 million people displaced. It highlighted the vulnerability of embankments and led to saline intrusion, making large areas unsuitable for agriculture.
- **Recurring Floods:** Seasonal flooding in districts like Cooch Behar, Jalpaiguri, and Alipurduar became more intense due to climate change, forcing seasonal and permanent migration.

2010s

- **Cyclone Amphan (2020):** This super-cyclone was one of the most devastating disasters in recent history, displacing over 4.5 million people. It caused extensive

damage to housing, agriculture, and livelihoods in North and South 24 Parganas, the Sundarbans, and Kolkata.

- **Cyclone Yaas**, a Very Severe Cyclonic Storm, made landfall near Balasore, Odisha, on **May 26, 2021**, significantly impacting West Bengal's coastal regions. The cyclone caused extensive damage, particularly in the districts of Purba Medinipur, South 24 Parganas, and North 24 Parganas.
- **Human Displacement:** Approximately 1.5 million people were evacuated in anticipation of the cyclone. Despite these efforts, around 500,000 individuals were displaced due to flooding and destruction of homes.
- **Flooding Events (2017-2020):** Erratic rainfall patterns caused frequent floods, especially in Malda and Murshidabad districts, with heavy erosion along the Ganga riverbanks displacing thousands annually.
- **Droughts:** Increasingly erratic rainfall patterns exacerbated droughts in western districts, forcing migration for labor.

3. Social and Economic Impacts

1. Displacement Trends

- Internal displacement is a recurring issue, particularly in the **Sundarbans** and flood-prone areas of **Malda** and **Murshidabad**.
- Seasonal migration is common among marginal farmers and agricultural laborers from drought-prone areas like Bankura and Purulia.

2. Urban Migration

- Kolkata has been a significant destination for displaced populations. Migrants often settle in urban slums, exacerbating the city's housing crisis.

3. Erosion and Landlessness

- Riverbank erosion along the Ganga and its tributaries in Malda and Murshidabad districts has led to the loss of arable land, forcing communities to move.

4. Livelihood Losses

- Cyclones and floods have destroyed agricultural land, fisheries, and livestock, while droughts have reduced crop productivity, leading to economic precarity.

5. Cultural Displacement

- The loss of ancestral lands has disrupted the cultural identity of many tribal and rural communities, particularly in the Sundarbans.

4. Government and Community Responses

1. Policy Interventions

- Programs like **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)** have been used to provide livelihood opportunities in drought-affected areas.
- **Disaster Risk Reduction (DRR)** initiatives under the National Disaster Management Authority (NDMA) have aimed to improve early warning systems and disaster preparedness.

2. Sundarbans Development Board

- Established to address specific issues related to the Sundarbans, including disaster management and rehabilitation.

3. Rehabilitation Challenges

- Despite significant rehabilitation efforts, many displaced families face long-term marginalization and inadequate compensation.

4. Community Adaptations

- Adoption of **flood-resistant crops** and community-based mangrove afforestation projects in the Sundarbans.
- Traditional water conservation methods in drought-prone areas like Bankura and Purulia.

5. Climate Change and Future Risks

Climate change has exacerbated the frequency and intensity of natural disasters:

- **Rising Sea Levels:** The Sundarbans is at significant risk of submersion, with predictions of large-scale displacement in the coming decades.
- **Erratic Rainfall:** Increased unpredictability in rainfall patterns may worsen flooding and drought conditions.
- **Cyclone Intensity:** Cyclones like Amphan and Aila have become more intense due to warming ocean temperatures.

References

1. Government of India. (Various Years). **Reports from the National Disaster Management Authority (NDMA)**.
2. Mukherjee, S., & Pal, A. (2015). "**Disaster-Induced Migration: A Case Study of the Sundarbans**", Journal of Environmental Research.
3. Sengupta, S. (2010). "**Cyclone Aila and the Sundarbans: Aftermath and Rehabilitation**", Economic & Political Weekly.

4. IPCC Reports (2014, 2018). **"Impact of Climate Change on Cyclones and Floods in South Asia"**.
5. West Bengal State Action Plan on Climate Change (2017).
6. Banerjee, S. (2020). **"Kolkata: Migration and Urban Crisis"**, Urban Studies Journal.

While cyclones are highly impactful, other natural disasters also play a crucial role in shaping migration trends and socio-economic vulnerabilities in the state.

1. Floods and Riverbank Erosion

Extent and Frequency

- **Geography:** Floods are recurrent due to the presence of major rivers like the Ganga, Brahmaputra, Damodar, and their tributaries. Districts like **Murshidabad, Malda, Nadia, Howrah, Hooghly, South 24 Parganas, North 24 Parganas, and Cooch Behar** are severely affected.
- **Seasonality:** Monsoonal rains and glacial melt contribute to river flooding during June-September.

Impacts

- **Displacement and Migration:**
 - Floods frequently displace millions annually. For instance, the **1978 flood**, one of the worst in Bengal's history, displaced nearly 20 million people.
 - Annual floods in **Murshidabad and Malda** cause riverbank erosion, leading to permanent loss of homes and agricultural land, forcing families to migrate.
- **Socio-Economic Losses:**
 - Agricultural productivity suffers due to waterlogging.
 - Displaced populations often migrate to urban centers like Kolkata and Howrah, contributing to the growth of informal settlements.

Case Study: Riverbank Erosion in Malda and Murshidabad

- **Erosion along the Ganga and Padma rivers** has been a chronic issue.
- Villages are often washed away, leading to forced migration.
 - Example: **Jangipur and Farakka areas in Murshidabad** have seen massive outflows of displaced families to urban slums in Kolkata or even to neighboring states.
- Lack of sufficient embankments and erosion-control measures exacerbates the problem.

2. Droughts

Affected Regions

- Western districts like **Bankura, Purulia, and Birbhum**, collectively part of the **Red Laterite Belt**, are prone to drought due to erratic rainfall and poor irrigation facilities.

Impacts

- **Migration:**
 - Seasonal migration is common. Farmers and landless laborers move to cities like Kolkata or nearby states like Jharkhand and Bihar for manual labor during lean agricultural seasons.
 - Persistent droughts lead to **permanent migration** in search of stable livelihoods.
- **Socio-Economic Hardship:**
 - Food insecurity and livelihood loss are significant challenges.
 - Declining water tables and inadequate infrastructure for rainwater harvesting worsen the crisis.

Case Study: Purulia Droughts

- Purulia frequently faces prolonged dry spells, disrupting agricultural cycles.
- Traditional water management systems like ponds and tanks are insufficient to support agriculture, forcing migration to urban centers.

3. Climate-Induced Displacement in the Sundarbans

- **Rising Sea Levels:**
 - The Sundarbans delta faces one of the highest risks globally from climate change. Rising sea levels threaten to submerge islands, leading to forced evacuations.
 - Villages on islands like **Ghoramara** and **Sagar** are gradually disappearing, displacing communities.
- **Ecosystem Loss:**
 - Loss of mangrove forests and declining fish populations due to climate stress also drive economic migration.

4. Urban Migration and Slum Formation

- Kolkata, Howrah, and other urban centers have become hubs for migrants displaced due to natural disasters.
- Slum populations in Kolkata have grown substantially, with many migrants from **rural flood-, cyclone-, or drought-affected areas**.

- Urban challenges:
 - Poor living conditions, lack of formal employment, and overcrowding in slum areas.

References:

1. **Government and Institutional Reports:**
 - **National Institute of Disaster Management (NIDM):** Reports on flood and erosion vulnerability in West Bengal highlight the Ganga-Padma system's role in riverbank erosion.
 - **Central Water Commission (CWC):** Annual reports discuss embankment breaches and riverbank erosion along the Ganga.
2. **Academic Studies:**
 - Mukhopadhyay, S. C., & Pal, A. K. (2020). "**Riverbank Erosion and its Impact on Migration in Malda District**", *Indian Journal of Geography and Environment*.
 - Focuses on displacement due to erosion in Malda.
 - Saha, A. (2016). "**Impacts of Ganga Riverbank Erosion in Murshidabad District, West Bengal**", *Geography and You*.
 - Examines erosion-induced migration and socio-economic impacts.
3. **Regional Media and Local Case Reports:**
 - Coverage in local newspapers such as *The Telegraph* and *Anandabazar Patrika* often documents annual flood and erosion events.
 - Field surveys and government relief data (often cited in district-level disaster management plans) provide direct insights.
4. **Notable Case Reports:**
 - **Jangipur Subdivision Reports:**
 - The sub-division office publishes periodic updates on erosion in the Ganga-Padma stretch and its effects on Farakka and nearby areas.
 - **Murshidabad District Disaster Management Plan:**
 - Specific sections address the challenges faced by displaced populations due to erosion.
5. **Books and Journals:**
 - Ghosh, D. (2015). "**The Vanishing Villages: Erosion and Migration in Bengal's Riverine Communities**".
 - Analyzes displacement trends and settlement patterns resulting from riverbank erosion.
 - Rahman, S. (2018). "**Migration Patterns in the Lower Ganga Basin: A Socio-Economic Perspective**".
 - Examines long-term impacts of riverbank erosion on livelihoods and urban slum growth.
6. **Primary Survey Data:**
 - Studies conducted by NGOs and community organizations working in erosion-prone areas often include anecdotal evidence and first-hand accounts of displacement.

Others References –

1. <https://www.unicef.org/media/100181/file/India%20Humanitarian%20Situation%20Report%20No.%201%20%28Cyclone%20Yaas%20%29%2028%20May%202021%20.pdf>
2. <https://link.springer.com/article/10.1007/s42797-021-00044-y>
3. <https://link.springer.com/article/10.1007/s40009-023-01251-w>
4. <https://india.mongabay.com/2021/06/cyclone-yaas-imperils-communities-in-low-lying-coastal-areas-of-bay-of-bengal/>

A Brief Note -

Historical Trend of Cyclone over the Bay of Bengal and People's Perception about Coping with Cyclone in Kakdwip Block of South 24 Parganas, West Bengal, India. Turkish Online Journal of Qualitative Inquiry (TOJQI). Volume 12, Issue 7, July 2021: 2904-2924.

1. Chandra Shekhar Sarkar, 2. Aritra Chakraborty. 1. Research Scholar, Department of Geography, Presidency University, Kolkata, India. 2. Assistant Professor, Department of Geography, Presidency University, Kolkata, India.

The document analyzes the historical trends of cyclonic activity over the Bay of Bengal and examines local perceptions and coping strategies in the Kakdwip block of South 24 Parganas, West Bengal. It emphasizes the impacts of climate change, the increased frequency of severe cyclones, and how communities have adapted to mitigate cyclone-induced damage.

1. Cyclonic Trends over the Bay of Bengal (1891–2019)

- **Frequency Analysis:**
 - Over the 129-year period, 1213 cyclonic disturbances occurred, with 522 being cyclones and 234 classified as severe cyclones.
 - While the annual frequency of cyclones has decreased, the frequency of severe cyclones has increased.
- **Temporal Patterns:**
 - Cyclones primarily occur during the Pre-Monsoon (March-May) and Post-Monsoon (October-December) seasons.
 - Post-Monsoon cyclones show a stronger increasing trend compared to Pre-Monsoon cyclones.
- **Major Cyclones in Recent Decades:**
 - Significant cyclones include **AILA (2009)**, **BULBUL (2019)**, and **AMPHAN (2020)**, each causing extensive damage to lives, property, and the environment in West Bengal.

2. Socio-Economic and Demographic Profile of Respondents

- A survey of 110 respondents in Kakdwip block revealed:
 - Predominance of primary-sector occupations: 59.1% are cultivators, and 27.3% are fishermen.
 - Most respondents (60%) have a monthly family income of less than ₹5,000.

- Housing conditions: 63.6% live in katcha (temporary) houses.

3. Impacts of Cyclones

- **Damage Types:**

- Crop damage (41.1%) and house damage (38.9%) were the most reported losses.
- Combined house and crop damage accounted for 16.6% of reported losses.
- Physical injuries were less common but reported by 3.3% of respondents.

- **Cyclones AILA, BULBUL, and AMPHAN:**

- AILA (2009): Affected 2.2 million people, with significant damage to housing and agricultural land.
- BULBUL (2019): Damaged over 60,000 houses, with major destruction in the Sundarbans.
- AMPHAN (2020): Affected 13.5 million people, causing extensive infrastructural and agricultural losses.

4. Coping Strategies of Local Communities

Before Cyclones:

- Actions include house repairs (33.6%), storing valuables in boxes (70.9%), temporary migration (25.5%), and securing livestock (30.9%).
- 76.4% of respondents stored dry food and water, and 78.2% saved money as precautionary measures.

During Cyclones:

- Respondents implemented protective measures such as:
 - Providing strong support for doors and windows (85.5%).
 - Switching off electrical mains (94.5%).
 - Staying indoors for safety (74.5%).
- Informing neighbors and listening to weather updates via radio were also common practices.

5. Government Initiatives and Public Awareness

- **Government Measures:**

- Constructed cyclone shelters and pucca (permanent) houses.
- Improved health systems, transportation, and early warning systems.
- Initiatives for rainwater harvesting, tree plantation, and riverbank erosion management.

- **Awareness Levels:**

- High awareness of riverbank erosion management (98.2%), tree plantation (97.3%), and cyclone shelters (89.1%).

- Limited awareness of crop insurance (42.8%) and irrigation management (22.7%).

6. Observations - Major

- **Observations:**

- Severe cyclones are increasing in frequency, highlighting the urgent need for enhanced disaster preparedness.
- While local communities have developed indigenous coping strategies, they remain vulnerable due to economic and infrastructural constraints.

Courtesy:

Advisory Members of West Bengal Jana Sramajibi Mancha - Preparatory (An informal Platform):

Purnendu Basu - Former Minister of Agriculture, Govt of West Bengal, Former Minister of Labour, Govt of West Bengal, Former Minister for Technical Education, Training & Skill Development, Govt of West Bengal, Chairman, Council of Technical Education, Training & Skill Development, Govt of West Bengal.

Purnendu Basu is a seasoned politician and social activist who served as a minister in the Government of West Bengal. As a member of the All-India Trinamool Congress, he held the portfolio of Agriculture Minister during his tenure, where he played a key role in promoting sustainable farming practices and supporting farmer welfare initiatives. Known for his grassroots connect, Purnendu Basu has consistently advocated for the rights of small and marginal farmers, focusing on policies that enhance agricultural productivity and rural livelihoods. His work reflects a deep commitment to the development of West Bengal's agrarian economy.

Naba Dutta - Naba Dutta is a renowned human rights defender and the General Secretary of Nagarik Mancha, a Kolkata-based civil rights organization dedicated to advocating for workers' rights, environmental justice, and social equity. With decades of activism, he has been a vocal advocate for marginalized communities, addressing issues like industrial safety, labor exploitation, and environmental degradation. Under his leadership, Nagarik Mancha has been instrumental in organizing campaigns, public dialogues, and grassroots movements to ensure justice and accountability. His unwavering commitment to human rights and social causes has earned him respect as a prominent voice for the underprivileged in West Bengal. (<https://nagarikmancha.org/>)

Prof. S. B. Roy - Professor Sree Bhagwan Ray is a distinguished academician and the founder of IBRAD (Indian Institute of Bio-Social Research and Development). With a

profound commitment to sustainable development, he has been a pioneer in promoting community-based natural resource management and participatory development strategies. His visionary leadership has steered IBRAD to become a prominent institution for capacity building, research, and advocacy in the fields of rural development, forestry, and climate resilience. Professor Ray's work bridges traditional ecological knowledge with modern scientific approaches, fostering innovative solutions for environmental and social challenges. (<https://www.ibradindia.org/>)

Prepared by -

***Pabitra Mandal, Secretary, Sundarban Jana Sramajibi Mancha [radhanagar.sjsm2@gmail.com
Mobile - +91 98747 71779]***

&

***Abhijit Kundu, Preparatory Committee Member, West Bengal Jana Sramajibi Mancha (An
informal Platform) [abhijitkundu47@gmail.com Mobile – 9007060549]***