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DIALOGUE

QUARTERLY

Founded by
Late Dr. B.B. Kumar and Late Shri J.N. Roy

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*In Memory of respected
Late Dr. Braj Bihari (B.B) Kumar
(1941-2019)*

*One of the founding fathers of Dialogue and a visionary
scholar whose work bridged academic rigor with policy relevance.*

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Editorial Perspective

It gives me immense pleasure to present this special edition of *Dialogue* as we celebrate a remarkable milestone, **26 + years of publication**. The silver jubilee of *Dialogue* is not just an occasion of festivity, but a moment of deep reflection and reaffirmation. Over the past quarter-century, *Dialogue* has evolved into a credible and dynamic platform for informed deliberation, diverse scholarship, and meaningful public reasoning. This enduring journey has been marked by intellectual rigour, passionate engagement, and an unwavering commitment to addressing contemporary issues through a lens of inclusivity, evidence, and balance.

From its inception, *Dialogue* has been shaped and sustained by the vision and dedication of two remarkable individuals - **Dr B.B. Kumar** and **Shri J.N. Roy**. Their intellectual leadership, unwavering commitment, and deep subject expertise laid the foundation upon which the journal has grown into a respected platform for serious scholarship and critical discourse. As *Dialogue* marks its silver jubilee, we take this opportunity to remember and honour its extraordinary contributions.

Dr B.B. Kumar, the founding editor, was a physicist by training but an extraordinary scholar of Indian society, culture, and identity, particularly in the context of the North East. His pioneering work on tribal communities, regional languages, and socio-political dynamics, much of which remains archived in the Nagaland Library, reflects his depth of understanding and passion for the region. He managed nearly every aspect of *Dialogue* with tireless zeal, academic rigour, and an unwavering commitment to excellence. His ability to maintain the journal's integrity, relevance, and scholarly depth was unmatched and remains a benchmark for all who follow.

Shri J.N. Roy, known for his authoritative work on Kashmir and conflict-affected regions, brought a vital perspective to *Dialogue*. His nuanced understanding of sensitive geopolitical issues and his ability to present complex realities with clarity and balance greatly enriched the journal's thematic diversity and intellectual standing. Together, Dr Kumar and Shri Roy were the twin pillars of *Dialogue*, guiding its trajectory with wisdom, clarity, and purpose.

Many others, editors, writers, peer reviewers, and advisors, have contributed immensely to this journey. We at **Astha Bharati** and the **Policy Perspectives Foundation** remain deeply grateful to each one of them. Their collective efforts have made *Dialogue* what it is today, a trusted space for reflection, research, and responsible public reasoning.

This journey has been one of intense learning and unflinching inquiry. Over the years, *Dialogue* has not only flagged critical and sometimes uncomfortable questions, but it has also created a space for thoughtful, grounded, and future-facing conversations. As we move forward, it is important that we not only remember the path we have walked but also set new benchmarks for the future.

The current edition upholds that spirit and carries forward the intellectual legacy with which *Dialogue* was first envisioned. As a tribute to a pioneering scholar, Dr B. B. Kumar, this volume republishes his seminal paper on the *Tribe-Caste Continuum*, originally featured in the inaugural issue of *Dialogue* in 1999. The paper remains deeply relevant, offering enduring insights into India's social structures and reaffirming the journal's commitment to original, policy-relevant scholarship, an ethos Dr Kumar championed throughout his life.

The edition also responds to evolving regional and geopolitical realities, with a timely analytical intervention on Bangladesh, an issue of growing strategic and humanitarian significance. In this context, we are privileged to include Ambassador Pinak Ranjan Chakravarty's piece, *India-Bangladesh Relations: Heading for a Reset*, which offers a

nuanced and practitioner's perspective on bilateral relations at a critical juncture. Complementing these contributions are empirically grounded studies examining themes such as the relationship between telecommunications investment and economic growth, the psychological vulnerabilities of migrant youth, and the transformative potential of microfinance, amongst other crucial subjects. We also feature a reflective review of *Poor Economics*, the Nobel Prize-winning work by Abhijit Banerjee and Esther Duflo, which revisits foundational assumptions around poverty alleviation, offering both insight and provocation.

Looking ahead, we reaffirm our commitment to strengthening *Dialogue* as a forum that nurtures emerging voices, encourages serious research, and promotes thoughtful exchange. We are also planning to reconnect with our contributors through interactive online sessions and make our subscription model more inclusive and accessible in the digital era.

On behalf of Astha Bharati, I extend our heartfelt gratitude to all contributors, peer reviewers, editorial members, and long-standing readers for their sustained support. It is this collective commitment that has enabled *Dialogue* to thrive, not just as a journal, but as a living space for ideas, inquiry, and national discourse.

Warm regards,

P C Haldar
President
Astha Bharti

The Tribe Caste Continuum

Late. Dr. B.B. Kumar

Article 342 of the Constitution of India empowers the President to draw up a list of Scheduled Tribes in consultation with the Governor of each State, subject to revision by Parliament. Accordingly, the President has made orders specifying the Scheduled Tribes in different States of India. Such lists have been amended by the Acts of Parliament. It is pertinent to note that though the Constitution has the provision for the listing of the Scheduled Tribes and the same is done accordingly, the 'tribe' is not defined in the Constitution of India. The social scientists have failed to provide a uniform definition of the tribe. They have enumerated different traits for defining the tribe. Such definitions do not apply equally to all the tribes. Most of the definitions equally apply to the castes and the tribes. The tribe is an administrative category in India. This is precisely the reason that a particular community is listed as tribal in one state and non-tribal in other states. The Santhals are listed as tribals in Bihar, West Bengal and Orissa and as 'Other Backwards Community' (O.B.C.) in Assam. Such examples may be multiplied.

The term 'tribe' was introduced in India by the colonial writers in the last quarter of the last century. The lead was taken by the Census department. Most of the tribes and the castes continue to use the term 'jat' or 'jati' to denote their social category. The terms for the tribe in some of the tribal languages given in the parentheses, such as Bodo (jat, jati), Dimasa (jati), Garo (jat), Tripuri (jaiti), Khasi (jaid), Konyak Naga (jat), Phom Naga (jat), Zeliang Naga (jati), Kabui Naga (jati), Santal (jat,jati), Ho (jati, patki) and Kurukh (jat, jait, jaypuy, khut) confirm the statement. Different communities often considered them to be the castes. Even the colonial writers were not very clear about the 'Caste-Tribe' divide. The boundary line between the two remained blurred, and the two terms were often interchangeably used. The monographs

* This paper is originally published in Dialogue in July-September, 1999, Volume 1, No. 1

on the various communities studied the castes and the tribes together. Some of the publications of the kind were 'The Tribes and Castes of Bengal' by H.H. Risley, 'Castes and Tribes of Southern India' by E. Thurston, 'Cochin Tribes and Castes' by L.K.A. Ayyar, 'Hindu Tribes and Castes' by N.A. Sherring, R.E. Ethnoven's 'Tribes and Castes of Bombay', Sherring's 'Tribes and Castes of Rajasthan' and 'Tribes and Castes of Madras Presidency', 'Tribes and Castes of the Central Provinces of India' by Russel and Biralal, and C. William's 'Tribes and Castes of the North-Western India'. The studies of the castes and the tribes were undertaken together because of the haziness which the colonial writers had about the differences between the two in spite of their biases and colonial interest in fabricating the social divide in India.²

The colonial writers have often translated the Sanskrit word 'jan' as tribes. The Indian scholars of colonial tradition have also done the same³. In reality, the word 'jan' means 'people'. Shayana, in his commentary of Rigveda, has translated 'panchajanah' as the four varnas and the Nishada. The castes of mixed origin are also labelled as tribes by the colonial writers.⁴ In this connection, it may be said that neither jan nor the mixed castes are the tribes. There is a continuum in Indian society incorporating the castes and the tribes. The break of the continuum and the resultant misperception is the result of the misinterpretations of the kind mentioned above. Such misinterpretations have thoroughly confused the Indian social scientists. The basic features of the caste and tribal organisations do not differ. The boundaries between the two remain blurred and undefined. And yet, they continue to over-emphasise the Caste-Tribe dichotomy.

It was the Census department under the colonial regime which initiated the Caste-Tribe divide in Indian society, in a big way. According to Nihar Ranjan Ray, "First in the eighteenth century writing on India, the caste has often been used synonymously with tribe and later on, for a long time, not synonymously but in a cognate manner as in the phrase 'castes and tribes', as if they were cognate social groups."⁵ Gradually, the term 'tribe' replaced 'caste' in the writings of the colonial writers, and the lead was taken by the Census of India.⁶ Baines, in 1891 Census Report, included 'Forest Tribes' as a sub-category under the category of 'Agricultural and Pastoral Castes'. The term 'animist' was used in the next two censuses by Risley and Gait respectively. The head 'Tribal Religion' replaced 'animism' in 1921. 'Primitive Tribe' was replaced by 'Forest Tribe' in 1931 census. Their religion 'animism'

was replaced the 'tribal religion' by Ruttom.⁷ These were not without lacuna and the biases. Ghurye observed :

"Even if a tribe has a Hinduized section and a non-Hinduized one, the whole tribe is included in the category of 'forest' or 'primitive' tribe, however large the Hinduized section may be."⁸

In the same way, the residence and the language were also not taken into consideration. Ghurye quotes Marten's view and says, "...even when a large section of it lives in the plains amidst other sections of Indian population, is included in the category of "Forest" or "Primitive" tribe ⁹.

He further observed:

"It is not religious affiliation which determines whether a tribe is to be included in this category or to be excluded from it. Nor again the language is the test. Neither the Baigas nor the Bhils, for example, speak tribal tongues, and yet they are grouped under the category of "Forest" or "Primitive" tribes¹⁰.

The ancient writers did not distinguish between the castes and the tribes. The Census officers also found it difficult to distinguish. The reason was obvious. Both the social categories were created in India ignoring the existing social continuum. Those who believed in the dichotomy were more confused. I would analyse in this case, the views of Debiprasad Chattopadhyaya. He writes:"...the ancient writers, like the modern census officers, were not always clear as to whether a particular backward people was to be called a caste or a tribe. The obvious corollary is that the caste organisations, beginning from early times, continued, as it still continues, very strong relics of the tribal."¹¹

The following statement of the writer makes his perception of the tribe clear:

"The tribe is endogamous, though it contains sub-divisions within it, called the clans that are strictly exogamous. All the members of a clan have a strong belief in common descent; the original ancestor being usually imagined to be a plant or an animal, from which the clan borrows its name. Lastly, the council is the great feature of the ancient society; all the affairs of the clan are managed by the clan council; similarly, at the tribal level there is the council of tribe with the supreme authority over all the members of the tribe. Expulsion from the tribe is the major form of tribal punishment."¹².

The writer is conscious of the fact that above-mentioned features do not distinguish the tribe from the caste. He observes:

“We have mentioned these features of the tribal organisation because all these are found to characterise the basic features of the caste organisation”¹³.

The difficulty with Chattopadhyaya lies in the fact that he is searching something which does not exist. He defines tribe, knowing fully well that the same applies to the caste also and yet he does not refute caste tribe dichotomy.

Chattopadhyaya’s above-mentioned statement shows his ignorance about the basic characteristics of the tribal society. The Kuki-Chin tribes – the Mizos, the Paites, the Hmars, the Zous, the Thadous, the Gangtes, the Simtes, the Koms, etc. – the Nagas of Tui and many other tribal groups do not follow clan-exogamy. A large number of clans of the numerous tribes do not believe in the totem and totemism. Except for the traces, the tribes of Nagaland, Meghalaya, Mizoram, Arunachal Pradesh, Assam, Manipur, Tripura, and Sikkim neither claim their descent from the plants and the animals, nor have totemic clan names. The tribes lack a uniform pattern of the village polity. The tribal councils are not essential features of all the tribes. The Nishings do not have their tribal council. Some tribes have very weak standing councils. The feature of the tribal society mentioned by Chattopadhyaya, therefore, suffers from over-generalisation.

Totemism is often described as an important trait of the tribal society. Two points need to be kept in mind in this case, which are:

- Personal names based on the names of the months, days of the week, rivers, animals and plants are commonly found in India. The elements of totemism are also present in the greater traditions.¹⁴ The names of some of the Rishis providing clan (gotra) names, such as Kashyapa (tortoise), Gotam (Cow), Vatsa (Calf), Sunaka (dog), Bharadwaja (a kind of bird), Mudgala (a kind of fish), Sandilya (a kind of bird), indicate the same.
- Totemism is a regional phenomenon. It is practised by a large number of tribes and the castes of Chhota Nagpur and Orissa. Even the Brahmans of Orissa are not free from the same.¹⁵ It is interesting to observe that many castes have totemistic clans in that region, but not elsewhere. Thus, totemism does not break the caste-tribe continuum.

The castes and the tribes do not form the two ends of the continuum. There is considerable overlap in the middle range. The distinguishing traits are missing in most of the cases. Most of the castes and tribes

are endogamous and have exogamous clans. The cross-cousin marriage is not favoured by the majority of castes and tribes; nevertheless, it is practised by a large number of them.¹⁶ The joking relationship pattern of the castes and tribes is identical.¹⁷ Marriage ceremony in a large number of cases, is identical.¹⁸ The seclusion and purificatory bath after child-birth¹⁹ and death²⁰ the naming of child²¹ seclusion of the women during the menstrual cycle²² are common.

The disposal of the dead by cremation and burial is practised by the tribes and the castes²³. A section of the Nagas practised platform burial in the recent past. It is pertinent to note that the Indian scriptures allowed cremation, burial and the platform burial as the modes of disposing of dead²⁴.

It is often emphasised that the caste society is organic and the tribal society is segmental²⁵. Numerous examples show otherwise. Rigid stratification is the characteristic feature of the Apatani society of Arunachal Pradesh²⁶. The Ong clan of the Chang Nagas is priestly. The other clans – Kangahou, Lomau, and Kudamji – also have their specific functions²⁷. The Semas, Mizos, Thadous, Konyaks, Ganchos, Reangs, Chakmas, Tripuris, Hmars, Paites, Khamtis, Singphos, etc. have their chiefs and the commoners²⁸. The Wanchos have the chiefs (Wangham), commoners (Wangpen), Wangsa and Wangeu sections. The descendants of the Wangham chief and the commoner girls are known as Wangsas, and the descendants of Wangsas become Wangsus. Only the person with the pure Wangham blood becomes a Wancho chief²⁹. The same is the case with the Ang chiefs of the Konyaks. The Akas have khulos (slaves) as a separate class among them³⁰. Sherdukpens are divided into the Thong and Chhao sections. The latter section has inferior status and sits at a lower position behind the Thongs during the religious ceremonies, and food and the religious offerings are not allowed to be distributed by them³¹.

The Gond society has its vertical stratification as well as the horizontal divisions³². The Bhuiya,³³ the Bhumij,³⁴ the Kewat,³⁵ the Koch³⁶, the Tharu³⁷, the Tiyar³⁸, and many other tribal communities do not exhibit segmental social structure and behave like caste clusters. The resident group of untouchables serve the Konds of the Baderi villages of Orissa³⁹.

Bhumihar Khunt (maximal clan) is the most privileged section of the Oraon tribe. They have Rajavillages, Praja villages, Dewan (minister) villages, and Panrey (clerk) villages. The⁴⁰ Namsoon clan has superior

status among the Khamti clans.⁴¹ All the Ao clans did not have equal privileges.⁴² The Kiaku-had, Murmu-had, Saran-had, and the Mardi-had are the kings, priests, soldiers and farmers among the Santhals. This is just like the varna system.⁴³

The tribal society of the Nilgiri hills consists of the Badaga cultivators, the Toda pastoralists, the Kurumba sorcerers, and the Kota musicians. A Jajmani-like relationship existed between the four tribal groups. They were interdependent and part of the system of organic nature. The Kotas provided music for funerals and worked in leather. They handled carcasses and ate the flesh of cows and buffalo. They were considered to be defiling inferiors by the Badagas, and the Kotas were fed separately at the Badaga ceremony in separate utensils and were not allowed into the inner parts of the Badaga house. They did not go near the sacred things and used to make formal gestures of respect to a Badaga or a Toda as from a subordinate to a superior.⁴⁴

Many tribes enter into a jajmani relationship with the serving castes. The Oraons of Chhota Nagpur require the services of other serving castes like any other Hindu caste and have a jajmani relationship with them. Julahas and turis supply them with clothes and baskets, the Kumhars supply earthenware pots and tiles for roofing, and the Lohars supply and repair the iron implements. The Ahirs tend cattle, and the Goraitis act as the village orderly and musicians.⁴⁵ Ros,⁴⁶ Kharwars,⁴⁷ Savaras,⁴⁸ Kisans,⁴⁹ Bathudis,⁵⁰ etc have a jajmani relationship with the serving castes. Many tribes, such as the Lohars, the Mahlis, the Chik-Baraikis, the Koras, the Banjaras, the Baigas and the Turis serve the tribes and castes of Chhota Nagpur and have jajmani relationships with them.⁵¹ This clearly indicates that the castes and the tribes do not differ considerably on this count.

The people of this country have the capacity to adjust to the changed situation. There are regional and cultural variations in this country, and a person or group changes according to the changed situation without, of course, altering the overall framework. Aghareahs of Chhota Nagpur claim to be the Kshatriya migrants from Agra. Dalton wrote about them :

“They were there, they say, Kshatriyas, but having been subjected to some persecution by the ruler of the state, they left it, and taking up new lands in a new country, cast aside their sacred thread with all its privileges and obligations, and took to ploughing. Their appearance favours their pretensions to be of good blood. Tall, well-made with high Aryan features and tawny complexion, they look like Rajputs, but are

more industrious and intelligent than the generality of the fighting tribe. They are orthodox Hindus in most customs, but they allow widows to remarry, and they bury the dead, but at any time when the bones are dry, the principal joints and the parts of the skull are taken up and conveyed by the representatives of the deceased to the Ganges.”⁵²

This clearly shows the vast range within which the change takes place. It includes the changes in status, profession, and customs. Other examples of such changes are not lacking in North-East India and in other parts of the country. Nandelbaum has quoted the opinion of Hookings about the Badagas of the Nilgiri Hills. The Badagas were a jati people and became a tribe after they migrated to their present habitat sometime after the twelfth century. They might have acquired some tribal characteristics during their stay in the isolated Nilgiri Hills.⁵³ Buchanan Hamilton, in his ‘Accounts of Gorakhpur’, has mentioned that there are many Nagbangsis in that district considered Rajputs and acknowledging the Raja of Chutia Nagpur as the head of the family.⁵⁴

Many communities of North-East India claim Kshatriya status. This includes Rajbansas,⁵⁵ royal section of the Tripuri tribe and the Jamatiyas⁵⁶, Tiwa/Lalung,⁵⁷, etc. Rajbansis’s other synonyms are Bhanga-Kshatriya, Patita-Kshatriya, Kahatri-Sankoch, and Surajbansi.⁵⁸ They claim to be the remnant of the Kshatriyas scattered by Parasurama, who cast off their sacrificial threads, hid themselves in the swampy jungles to save themselves from his wrath.⁵⁹ The Parasurama legend is shared by the Lalungs⁶⁰, Poliyas⁶¹, and many other communities.

The Parasurama legend is fully described in the Indian scriptures. The claim of the Rajbansis, Poliyas, Desis, Lalunga, etc., may not, therefore, be summarily rejected as fabrication by the Brahman priests. There is mention of the Kshatriyas of the Kirata (Indo-Mongoloid) and Dravidian origin in the Mahabharat.⁶² Thus, there is no basis to reject their claim on a racial basis, as is done by the scholars of the colonial tradition.

The Indian scholars of colonial tradition often declare a caste as a tribe on as flimsy a ground. The tribal traits among the Bhumij, according to one of them, are the following:

- They drink liquor and eat chicken;
- Remarriage of women is allowed, and the women dance at ceremonies.
- They follow burial, rather than cremation; the bones of the deceased are later reinterred in a custom which is common among many tribes.⁶³

In this connection, it is pertinent to note that liquor is consumed by a large number of the castes, and many of them eat chicken. Widow remarriage is prevalent among the majority of castes. The women danced with Shri Krishna in the famous Rasa dance. Lastly, as stated earlier, the Indian scriptures allowed burial.

Shifting cultivation/jhuming is described as one of the features of the tribal society. It should not be forgotten that jhuming depends on the topography of the area. Many tribal communities practise permanent cultivation. The Angamis, Chakhesanga, Maos, Mopas, and Apatanis have excellent terraced fields and mostly go for permanent cultivation along with some jhuming.⁶⁴ Miniyonga, Milangs, Koirenga, Tangkhuls, Maghs, Kacharis and Eastern Rengmas practise both permanent and jhum cultivation.⁶⁵ Sherdukpens plough the level land with the traction using crossbreeds of mithan and ordinary cattle and practise jhuming on the hill slopes.⁶⁶ The tribals in the plains plough their land like all other castes. On the other hand, the castes and the tribes in the hills, say in Sikkim, go for jhuming.

The caste tribe continuum is a reality in India. Many communities claim to be the castes and are labelled as tribes. There is need for realistic re-appraisal.

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India-Bangladesh Relations Heading for a Reset

Pinak Ranjan Chakravarty*

India and its Neighbourhood

The importance of the geographical neighbourhood is a significant construct in a country's foreign policy. This aspect recurs in India's strategic thought, ever since Kautilya wrote the *Arthashastra*. The Partition of India, the 1948 and 1965 wars with Pakistan, and the India-China conflict in 1962 created new border disputes. The 1971 war led to a major geopolitical change in the neighbourhood with the creation of Bangladesh.

The post-independence consensus that the overall objective of India's foreign policy is to ensure the transformation of India into a secure, stable, developed, and prosperous nation has endured. This imperative also underlined India's adoption and adherence to "strategic autonomy" and shunning alliances till today. An unstable neighbourhood distracts India from pursuing its primary foreign policy goals, one of which is the pursuit of a peaceful, politically stable and economically secure geographical periphery, built on a suitable architecture for peace and stability that helps resolve differences in the sub-continent and promotes trade and economic development. Impeding these objectives is the geopolitical competition for hegemony by some major powers, with their proxies in tow.

Indian sub-continent

Geographically, dominates the sub-continent, comprising 80% of land area, population, GDP and other indices. Except for Afghanistan and Pakistan, no other country shares a border with any other country.

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India's democracy, its institutions, economic growth, soft power, and social developments also influence India's neighbours. An enduring paradox in the sub-continent is that despite a shared civilizational heritage, the region lacks meaningful integration and connectivity. The physical asymmetry and the overhang of history and geography incubate sensitivities, fears, and complexes that contribute to a certain mindset that influences the perception of India's neighbours.

India has not sought hegemony in its neighbourhood. India has consistently supported bilateral and regional cooperation for the common benefit. Traditionally, India has been reluctant to rely on hard power, except when necessary. India, therefore, has sought to balance bilateral and plurilateral options, upgrading development partnership and committing more funds for grants and low-interest loans for building regional infrastructure, energy availability, public utility projects, education, and cultural exchanges without insisting on reciprocity. India has acted as the "first responder" for disaster management, offering humanitarian assistance and funding for economic crises, development loans, and capacity-building programmes. All these factors have been integrated into the "neighbourhood first" policy.

Bangladesh

The ouster of PM Sheikh Hasina's government in Bangladesh in August 2024 was a reminder of the continuing fragility of democratic institutions and the fractious democratic political discourse in the country. It was also a result of an aspirational new generation's anger with unemployment, bitter opposition to rampant corruption, and elite privilege. The geopolitics of big power rivalry and Pakistan's proxy role for big powers was evident in the regime change in Bangladesh. Hasina had annoyed the USA, and Pakistan was itching to get rid of her.

Bangladesh has been through unprecedented turbulence since August 2024, under an unconstitutional Interim Government [IG] planted in Dhaka. The IG is headed by Prof Muhammad Yunus, a Nobel Peace Prize awardee in 2006, with close ties to the American establishment. Other members of the IG have strong American connections or affiliations with the Jamaat-e-Islami [JeI], the largest Islamist organisation, with deep links to Pakistan and the global Islamist network. The IG has presided over attacks on civil society activists, cultural institutions, academics, teachers, the media, Hindu community leaders, and anyone holding liberal and secular values. Many have been summarily arrested

and dumped in prison, without recourse to bail, though convicted terrorists and criminals have been freed from prison. The Judiciary has been weaponised by the IG to pursue its political agenda of silencing opposition.

Awami League [AL] leaders and workers have been hunted down and killed, and their properties destroyed. Many AL leaders and workers have sought refuge in India. These attacks are organised by the Islamists and criminal elements. Revenge is the primary motivation. Under the Yunus regime's patronage, the JeI and other radical Islamist groups have aggressively captured institutions and dictated terms to the IG. The Military and the Police have become mute bystanders. The IG has displayed classic attributes of Fascism.

Bangladesh is increasingly becoming more Islamist, less secular, and increasingly intolerant. Hindus and other non-Muslim minorities have been frequently attacked and brutally. Yunus has dismissed atrocities on Hindus as "propaganda" and sometimes as not communally motivated or simply isolated incidents, despite a flood of evidence. Orchestrated mobs have also attacked India's Missions in different cities, compelling India to temporarily stop issuing visas. Bangladesh has also stopped issuing visas in India, acting more out of pique and pandering to anti-India sentiments. Controversy has also affected cricketing ties.

Bilateral Ties

Relations with India have turned frosty, though trade, electricity, and diesel supplies have continued. The Yunus regime's attitude has shaped by its alliance with Islamist forces and pathological hatred of Hasina. India's productive relations with the Hasina government, her seeking refuge in India, imposition of the death sentence by a manipulated trial in a kangaroo court, and India's ignoring extradition demands have been exploited to fuel anti-India rhetoric, which suits Pakistan, China, and the USA. Yunus has functioned as a tool for anti-India forces.

Elections have been scheduled for February 2026. The people of Bangladesh are looking forward to casting their vote, hopefully in free, fair, inclusive, and credible elections. As Bangladesh heads towards the election in February 2026, the Bangladesh Nationalist Party's [BNP] acting chairman, Tarique Rahman, has returned to Dhaka, ending more than 17 years of forced exile in the UK. His arrival is likely to

galvanise the BNP and improve its chances in the elections. With the AL banned and excluded from the elections, there are doubts about whether the election will be credible.

India's Reaction

India's reaction to developments in Bangladesh has been marked by strategic restraint. There will be a recalibration of policy since there are compelling geopolitical factors. PM Modi's condolence message on Begum Khaleda's demise and the External Affairs Minister attending her funeral are signals that convey India's willingness to work with a post-election new government. India's core dilemma is how to promote bilateral ties with neighbours, support stability when political volatility diverts attention from its primary policy objectives that are constantly challenged by terrorism, religious radicalism, illegal migration, historical grievances, and environmental stress. India's security interests are paramount. Bangladesh has to factor in the consequences of adopting policies that are inimical to India's interests. Hence, Bangladesh's future trajectory remains crucial, given the inter-dependence and security overhang in India's eastern theatre.

Financial Education: Current Trends and Practices in the Indian Education System

Anita* and Prof. (Dr.) Yamini Agarwal**

Introduction

In recent years, financial education and financial literacy have gained significant attention from the Indian government, financial institutions, educational bodies, media, and other national and international organisations. As a result, several studies, initiatives, and strategies have been developed, and financial literacy is gradually being integrated into the Indian school education system. This study aims to present the current status of financial education in Indian primary and secondary schools and, based on surveys, highlights the level of financial knowledge among Indian high school students.

Many countries, including India, are prioritising financial education and literacy. One notable example is the work done by the Organisation for Economic Cooperation and Development (OECD), which initiated a financial education project in 2003 in response to low levels of financial literacy among its member countries. Following the global financial crisis, the International Network on Financial Education (INFE) was established in 2008 to promote and support financial education strategies in member states. Similarly, the Reserve Bank of India (RBI) and other institutions have launched initiatives to improve financial literacy across the nation.

The OECD defines financial education as “the process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction, and/or objective advice, develop the skills and confidence to become more

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aware of financial risks and opportunities, make informed choices, know where to seek help, and take effective actions to improve their financial well-being” (OECD, 2005, p. 26).

India, like other countries, is working on its national strategy for financial education, aiming for a systematic approach to strengthen the financial literacy of its citizens. The National Centre for Financial Education (NCFE) in India, in collaboration with regulatory bodies such as RBI, SEBI, IRDAI, and PFRDA, has developed a National Strategy for Financial Education (NSFE). This strategy focuses on enhancing financial awareness and literacy across all sections of the population, especially targeting students and the underserved. The table below illustrates the current status of various financial education initiatives in India, highlighting the efforts by government bodies, regulatory institutions, and educational organisations to promote financial literacy. It outlines key initiatives, their objectives, target audiences, and the progress made in empowering different sections of society with essential financial knowledge and skills.

Table 1: Status of Various Financial Education Initiatives in India Source: Author’s own Compilations

Initiative/ Organization	Year Introduced	Description/Objective	Target Audience	Current Status
National Strategy for Financial Education (NSFE)	2013 (Updated in 2020)	Aimed at promoting financial education across all sections of society by integrating financial literacy into schools and conducting mass awareness programs.	General public, students, low-income groups	Ongoing, with special focus on school curricula and digital platforms for outreach.

Reserve Bank of India (RBI) Financial Literacy Centres (FLCs)	2012	Set up Financial Literacy Centres across India to provide financial education to underserved sections of society.	Rural and semi-urban population	Active in rural areas, with ongoing financial literacy camps and programs.
NCFE – National Centre for Financial Education	2013	Set up by financial sector regulators (RBI, SEBI, IRDAI, PFRDA) to implement financial literacy programs in India.	Students, women, small businesses	Implementing financial literacy campaigns and content for schools.
Financial Literacy Week (FLW)	2016	An annual initiative by RBI to raise awareness on financial literacy topics such as digital payments, credit, and savings.	General public, rural and semi-urban population	Held annually in June, thematic awareness campaigns are ongoing.
SEBI’s Financial Education Resource Persons (FERPs)	2010	Educates investors about financial markets and investments through certified resource persons across the country.	Investors, students, retail traders	Active through workshops, webinars, and campaigns.

School Curriculum Integration of Financial Literacy (NCERT)	2017	Financial literacy is introduced as part of the curriculum in schools through textbooks and extracurricular activities.	School students (classes 6 to 10)	Financial literacy content integrated into NCERT textbooks, programs running in schools.
Pradhan Mantri Jan Dhan Yojana (PMJDY)	2014	A financial inclusion initiative aimed at providing every Indian with access to banking, insurance, and pension services.	Unbanked and underbanked population	Successfully ongoing, with over 450 million bank accounts opened as of 2023.
Pradhan Mantri Vaya Vandana Yojana (PMVVY)	2017	Provides financial literacy and security to senior citizens through pension schemes and awareness programs.	Senior citizens	Active, financial literacy for senior citizens integrated into pension schemes.
Digital Literacy Campaigns (Ministry of Electronics and IT)	2016	Promotes digital and financial literacy, focusing on safe usage of digital payment systems post-demonetization.	General public, rural India	Ongoing, through digital and financial literacy programs across India.

The “National Strategy for Financial Education (NSFE): 2020-2025” document was released by the Head of the Technical Group on Financial Inclusion and Financial Literacy (TGFIFL), who is also the Deputy Governor of the Reserve Bank of India (RBI), on August 20, 2020. This strategy provides a comprehensive framework for enhancing

financial literacy among Indian citizens, recognising it as a critical component for financial inclusion and economic well-being.

The NSFE outlines financial literacy as the knowledge, skills, and attitudes that enable individuals to make informed financial decisions, manage their financial resources effectively, and understand the various financial products and services available in the market. It emphasises the importance of financial literacy in ensuring personal and family financial stability and encourages active participation in the financial system.

Documents from various countries, including the United States, United Kingdom, Canada, Australia, and the OECD, utilise terms such as “financial capability,” “financial literacy,” and “financial education” in diverse contexts, reflecting their unique socio-economic environments. For instance, the NSFE distinguishes between financial capability and financial literacy, viewing financial capability as a broader concept that encompasses:

- Financial knowledge and understanding
- Financial skills and competence
- Financial responsibility

In India, individuals are considered financially literate if they possess a fundamental understanding of financial markets, can comprehend basic financial terminology, recognise the significance of various financial products, and manage their personal and family finances effectively.

To analyse the financial capabilities of Indian citizens, the NSFE specifies essential competencies that financially literate individuals should possess, including:

- A clear understanding of their current financial situation
- The ability to create and monitor a family budget
- Planning expenses at least a month in advance
- Preparedness for unforeseen financial emergencies, such as a loss of income
- Additionally, financial literacy is associated with other critical abilities related to financial products and reserve management, such as:
 - Building cash reserves through regular savings
 - Planning for retirement and old age
 - Evaluating multiple options when selecting financial products
 - Understanding basic financial product portfolios
 - Recognising and appreciating the risks associated with different financial products

Overall, the NSFIE aims to establish a systematic approach to improve the financial literacy of the Indian population, ensuring they are equipped to make informed financial decisions in an increasingly complex financial landscape.

This topic immediately raises several questions regarding the actual level of financial capability among both adults and students, as well as the conceptual methods used for educating and training teachers responsible for imparting financial education in schools. Understanding the effectiveness of current financial literacy programs and the preparedness of educators to deliver this content is crucial. These issues are partially addressed in this study, which explores the gaps in financial literacy and the pedagogical approaches that can enhance financial education in Indian schools.

Literature Review

The significance of financial education and literacy has garnered increasing attention in recent years, particularly as economic complexities grow and the need for informed financial decision-making becomes critical. Numerous studies have explored the levels of financial capability among different demographic groups, including adults and students, revealing a persistent gap in financial knowledge and skills that necessitates targeted educational interventions.

Financial Capability among Adults and Students

Research indicates that many adults lack essential financial literacy skills, which can lead to poor financial decisions and increased vulnerability to financial crises. For instance, a study by Lusardi and Mitchell (2014) highlights that inadequate financial knowledge can result in poor investment choices, insufficient retirement planning, and high levels of debt. Similarly, findings from the National Financial Literacy Assessment in India revealed that a significant proportion of the adult population lacks basic financial understanding, emphasising the urgent need for improved financial education (NCFE, 2020).

In the Indian context, studies such as those by Jha and Gupta (2018) have shown that financial literacy among young adults is alarmingly low, with many lacking knowledge about banking products, investments, and budgeting. The Financial Literacy and Inclusion survey conducted by the Reserve Bank of India (2021) further corroborates these findings,

indicating a critical gap in financial knowledge among both urban and rural populations.

When it comes to students, various studies have pointed out that while financial literacy programs are being integrated into school curricula, the effectiveness of these programs varies widely. Research by Mandell (2008) found that students who receive financial education tend to demonstrate better financial behaviours, such as budgeting and saving, compared to those who do not. However, the overall financial literacy levels among students remain low, indicating a need for more effective teaching methodologies and comprehensive curricula (Kerr et al., 2020). In India, research by Sinha and Saha (2020) highlights the challenges in implementing financial literacy programs in schools, noting that many educators feel inadequately prepared to teach financial concepts.

Conceptual Methods of Education

The methodologies employed in financial education are crucial for fostering financial literacy. A review by Worthy (2018) suggests that interactive and experiential learning methods, such as simulations and real-life case studies, are more effective in engaging students and enhancing their understanding of financial concepts compared to traditional lecture-based approaches. Additionally, teacher training is pivotal in ensuring that educators are equipped to deliver financial education effectively. According to a study by Fuchs and Haecck (2019), ongoing professional development and resources for teachers significantly improve the quality of financial education provided in schools.

In India, the National Strategy for Financial Education (NSFE) emphasises the need for innovative teaching methods and resources to make financial education more accessible and engaging for students. Studies such as that by Sharma and Kumar (2021) advocate for the inclusion of technology-based learning tools, such as mobile applications and online platforms, to enhance financial literacy among students.

Teacher Training and Financial Education Implementation

The role of teachers in financial education cannot be overstated. Research has shown that teachers' own financial literacy levels directly impact their ability to teach financial concepts effectively. A study by Hira and Mugenda (2014) emphasises the importance of training teachers not only in financial content but also in pedagogical strategies that

foster critical thinking and practical application of financial knowledge. Furthermore, the National Strategy for Financial Education (NSFE) in India recognises the necessity of equipping teachers with the skills and resources required to impart financial education, thus reinforcing the link between teacher preparedness and student outcomes.

Research conducted by Sahu and Kumar (2020) highlights the positive effects of teacher training programs in financial literacy on educators' confidence and effectiveness in teaching these concepts. This aligns with findings from international studies, suggesting that well-prepared teachers are critical for the successful implementation of financial education initiatives.

The literature suggests that while there is a growing recognition of the importance of financial education, significant gaps remain in the financial capability of both adults and students. Effective conceptual methods and teacher training are essential components in addressing these gaps. This study aims to explore these dimensions further, assessing the current status of financial literacy in India and providing insights into improving educational practices and outcomes.

The Need for Financial Education

The necessity for financial education has become increasingly apparent in today's complex economic landscape. Rapid advancements in technology and the growing availability of diverse financial products underscore the urgent need for individuals to possess robust financial literacy skills. Increasing financial complexity means individuals are faced with numerous options regarding savings, investments, loans, and insurance, particularly with the advent of digital financial services. Research indicates that those lacking adequate financial education may struggle to navigate these complexities, resulting in poor financial choices that can adversely impact their long-term financial well-being (Lusardi & Mitchell, 2014). Moreover, rising levels of household debt in India highlight the pressing need for enhanced financial literacy. Reports from the Reserve Bank of India show a significant increase in personal loans and credit card debt among consumers, many of whom lack the necessary understanding to manage their debt effectively (RBI, 2021). Financial education can empower individuals to make informed borrowing decisions and manage debts responsibly.

Achieving financial inclusion is also a critical objective for the Indian government, aimed at ensuring that all citizens can access financial

products and services. However, access alone is insufficient; individuals must also comprehend how to utilise these services effectively. Financial education is vital for empowering marginalised communities, enabling them to participate in the formal financial system, thereby improving their economic stability (Sahu & Kumar, 2020). Furthermore, as life expectancy increases and economic conditions evolve, individuals must prepare for various financial challenges, including retirement planning and unexpected financial emergencies. Financial education equips individuals with essential skills such as budgeting, saving, and investment planning, fostering financial resilience (Jha & Gupta, 2018).

Financially literate individuals contribute to broader economic stability. Studies show that when citizens possess a solid understanding of financial principles, they are better equipped to make informed decisions that promote economic growth (Mandell, 2008). Additionally, despite efforts to integrate financial education into school curricula, significant gaps remain in students' financial knowledge. Early exposure to financial concepts can instil responsible financial habits from a young age, preparing students for real-world challenges (Sinha & Saha, 2020). By embedding financial literacy into educational programs, we can equip students with the skills necessary to navigate their financial futures with confidence. In conclusion, the need for financial education is imperative in addressing the challenges posed by an evolving financial landscape, ultimately empowering individuals to make informed decisions and contributing to the overall economic stability of the nation.

The Objectives and Purpose of the Study

The purpose of this study is to examine the current state of financial education in Indian primary and secondary schools and to advocate for the incorporation of such instruction as a vital tool for preventing unhealthy household debt and addressing negative phenomena associated with inefficient personal finance management.

Additionally, this research aims to present findings from a study focused on understanding how students in high schools without specialised economic curricula perceive the need for and importance of the knowledge and skills that constitute financial literacy, as outlined by established Financial Literacy Standards. These standards set forth the ideal levels of financial literacy for various educational stages in India, guiding curriculum development.

The specific research objectives are to:

- Assess students' perceptions of the usefulness of financial education in schools for their future practical needs.
- Evaluate the current level of financial literacy against the benchmarks set by the Financial Literacy Standards, which reflect the expected outcomes of financial education.
- Describe the existing state of financial education within Indian schools, highlighting gaps and areas for improvement.

Through this study, we aim to contribute valuable insights into the role of financial education in equipping students with the necessary skills to manage their finances effectively, ultimately fostering a more financially literate society.

Research Methods

To obtain the necessary findings and conclusions for this study, we conducted a questionnaire survey among high school students across India and performed a content analysis of relevant national and international strategic documents. We utilised a comparative method to link our findings specifically to students' knowledge of financial literacy topics, with pertinent educational frameworks and guidelines.

The questionnaire was administered to 248 high school students selected through quota sampling in schools interested in organising lectures on basic financial literacy subjects. These lectures not only introduced the importance of financial literacy instruction in schools but also covered individual topics aligned with the Financial Literacy Standards. Key topics included household economics, the use of various payment methods, awareness of pricing strategies, the fundamentals of inflation, and consumer rights.

Data collection and analysis occurred during the 2023-2024 academic year, adhering to the lecture schedules of participating schools. The sample consisted of senior students from ten high schools. The survey was conducted immediately after the lectures, ensuring that the students' responses were informed by the preceding discussions on relevant economic concepts.

We employed a quantitative research approach to maximise the number of respondents and gather significant data with minimal time and financial resources. The selected method included a questionnaire consisting of 23 closed questions that allowed respondents to answer on a three-point scale (yes, no, I don't know). At the end of the

questionnaire, we included a question to assess the perceived level of financial literacy knowledge the students had gained during their education. The questions focused on the importance of financial instruction, the practical application of financial concepts in real life, and the assessment of knowledge on specific topics, all of which align with the desired outcomes outlined in the Financial Literacy Standards. The questionnaires were administered face-to-face, achieving a response rate of 100%.

Findings

Current State of Financial Education In Indian Primary and Secondary Schools

Financial education in Indian schools has not received the attention it deserves, and many teachers approach the subject with uncertainty, often due to a lack of training in financial literacy during their university education. However, a significant number of teachers (approximately 73%) have attended financial education workshops in the last year, indicating a commitment to addressing this crucial issue. Typically, financial literacy instruction is delivered by teachers of mathematics or social studies, and in some schools, the head teacher takes on this responsibility.

A noteworthy development occurred with the introduction of the “National Strategy for Financial Education” (NSFE): 2020-2025, which mandates the inclusion of financial literacy in the school curriculum. However, financial literacy is often integrated into subjects like Social Studies, Civics, and Mathematics rather than being taught as a standalone course. The allocation of hours for financial education varies greatly; some schools may dedicate only ten hours over four years, while others offer up to one hour weekly.

Currently, there is no uniform methodology for teaching financial literacy, and the decision on how to implement it often lies with the school management, based on teachers’ recommendations. While most schools (89%) include financial literacy content within existing subjects, the most common teaching methods involve practical problem-solving and real-life applications. Other methods include didactic games and group activities, along with visits to financial institutions.

Schools are encouraged to adopt a new approach to financial literacy while incorporating the Financial Literacy Standards into

their educational programs. Some primary schools also have access to resources like the “Money for Schools” initiative to support financial education. The interdisciplinary nature of financial education is evident, as it often combines elements of social sciences, mathematics, and technology, reflecting findings from international surveys such as PISA.

Familiarity with Financial Literacy Topics Among Indian High School Students

The results from our questionnaire survey revealed that students generally find financial education desirable and useful for their future. A significant percentage (67%) fully agree, while 25% somewhat agree with this perspective. The survey also assessed the current level of financial literacy that students are expected to acquire through their education, in alignment with the Financial Literacy Standards.

The findings include:

- **Usage of Debit Cards:** 73% of respondents knew how to use a debit card or current account.
- **Understanding Exchange Rates:** 46% understood exchange rates and money exchange processes.
- **Knowledge of Pricing:** Only 42% understood how prices are set and what they include.
- **Awareness of Pricing Strategies:** 78% recognized price differences based on customer, place, or season.
- **Knowledge of Pricing Tricks:** Only 56% were aware of pricing tricks such as VAT exclusion and promotional offers.
- **Recognition of False Offers:** 52% could identify misleading offers.
- **Inflation Awareness:** Just 18% knew effective ways to combat inflation.
- **Household Budgeting:** 64% could prepare a family budget.
- **Strategies for Budget Deficits:** 46% could suggest solutions for potential budget deficits.
- **Investment Choices:** 39% felt they could select favourable investment products.
- **Loan Knowledge:** Only 36% understood how to choose appropriate loan products.

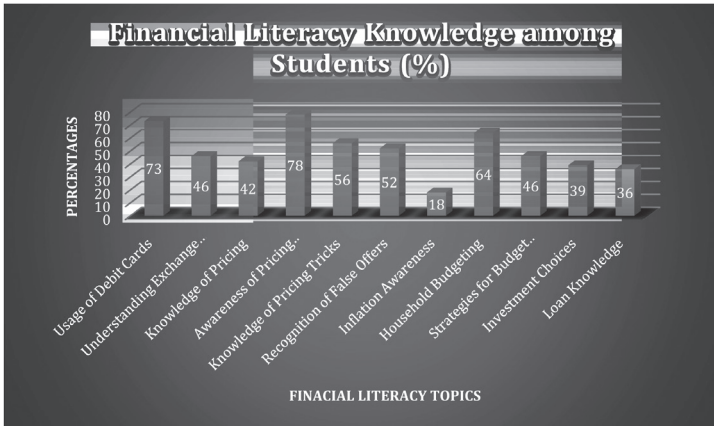


Fig 1: Financial Literacy Knowledge among Students %
Source: Author's own Data Collection Compilation

These findings indicate that the level of financial literacy among high school students is inadequate for their future needs. The research suggests that only about 50% of their financial literacy knowledge is derived from formal education, with the rest influenced by personal experiences and environmental factors such as family and media.

Conclusion

The responses from students indicate a pressing need for robust financial literacy education in schools, as many individuals lack sufficient knowledge about managing their finances and the risks of debt. This gap can lead to serious consequences, such as foreclosures and personal bankruptcies. Educating new generations about financial literacy is one effective way to mitigate these issues.

This study aimed to highlight the current state of financial literacy education in Indian primary and secondary schools and to underscore its importance. Financial education is inherently interdisciplinary, integrating elements from social studies, mathematics, and information technology. While there is potential for expanding the curriculum with financial literacy topics, the existing approach often lacks cohesion, with schools independently choosing their materials without a standardised framework.

Despite these challenges, there are numerous resources available that align with the Financial Literacy Standards. Schools can utilise

these resources to enhance students' engagement and understanding of financial concepts. The need for financial education in schools is clear, and fostering financial literacy among future generations offers a viable path to improving personal and family financial management within society.

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From Exclusion to Empowerment: The Transformative Role of Microfinance in the Social Empowerment of Marginalised Groups

Vishnu P K* and Anil P V**

Introduction

Microfinance has been conceived as a revolutionary method through which financial exclusion and socially effective empowerment can be addressed towards the disadvantaged or marginalised communities, especially in developing nations. SCs, STs, and Persons with Disabilities (PwD) have traditionally been denied access to formal financial services and have thus remained poor and excluded. Microfinance institutions with new models such as Self-Help Groups (SHGs) and community-based lending (CBL) have given these segments of the population the much-needed access to microcredit, savings, and capacity-building inputs. By promoting entrepreneurship, expanding employment opportunities, and encouraging collective behaviour, it reduces economic insecurity and acts as a catalyst for wider social empowerment, shaking up old, deep-seated social hierarchies and relations and promoting diversity.

Microfinance is the delivery of financial services such as savings, credit, and insurance to people who do not have access to traditional banking, especially the poor and socially excluded (Kabeer, 2001). Microfinance as a poverty reduction and development tool has been celebrated worldwide (Yunus, 2007). In India, microfinance efforts such as the SHG-Bank Linkage Program have reached millions; most of them

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are female, and a sizable minority are from SC and ST communities. Currently, it has been reported by studies conducted by NABARD (2021) and the National Sample Survey Office (2019) that microfinance has had a significant socio-economic development for the marginalised society by helping them enter into productive economic activities, such as engaging in businesses, improving access to better education, and achieving greater equality in their societal status. Empowerment is a multi-dimensional social process that helps people gain control over their own lives by people can exert choices, perceptions, and aspects (Kabeer, 1999; Mayoux, 2001). Several aspects of economic empowerment are central to microfinance, which encompass greater access to resources, self-reliant income, and enhanced control over decision-making within the family and the community. Sinha et al. (2012) and Adjei et al. (2009) observed that microfinance programmes have a high impact on economic empowerment, asset ownership, and control of household finances.

Social empowerment extends beyond economic benefits, which also involves status improvement, involvement in community matters, and the freedom to protest against social customs (Hoque & Itohara, 2009; Rocca et al., 2008). Microfinance, particularly through group credit mechanisms, contributes to empowering women through forming social capital, enhancing self-confidence, and growing expression in the local democracy. Research by Garai et al. (2012) and Mahmud (2003) reveals that microcredit is associated with increased dignity, access to the state, and greater ability to make decisions, at least for women and disadvantaged people. In addition, microfinance has been associated with declines in domestic violence and changes in discriminatory behaviour, solidifying its position as an agent of social change. SCs, STs, and PwD have remained out of the loop of the economic and social mainstream because of caste discrimination, geographical separateness, and physical disability. Microfinance programs that reach these populations have been promising in poverty reduction and social inclusion. Recent studies found that 43% of microfinance borrowers were from SC and ST communities, highlighting that the sector has reached the most excluded. Microfinance, moreover, has been identified as a very promising tool for the advancement of people with disabilities, since it allows providing the latter with customised financial products and promoting their access to self-employment.

The review of literature clearly establishes that microfinance acts as a catalyst for economic and social empowerment of the disadvantaged

sections of society, such as SC, ST, and PWD. By filling the void between marginalisation and empowerment, microfinance allows them to have a say in their lives, better their condition, and play a greater role in society. But challenges such as over-indebtedness, low financial literacy, and stubborn social norms demonstrate the importance of holistic, inclusive, and sustainable microfinance models.

Microfinance and Social Empowerment: A Critical Analysis

Microfinance has become an important instrument for poverty alleviation and empowerment, especially among disadvantaged people. Microfinance refers to the practice of offering microloans or other financial services to poor people, who normally would not be able to access traditional banking services. Grameen Bank, founded by Muhammad Yunus, is the pioneer of microfinance in Bangladesh (Patel, 2023). Microfinance institutions provide financial and non-financial services to the poor segment of society (Rahman et al., 2015). The combination of digital technology and financial services contributes to the possible expansion of the coverage of financial services through a process called digital finance (Li & Zhang, 2024).

Microfinance continues to show effects on wider economies, especially in countries lacking strong institutional frameworks (Alimukhamedova & Hanousek, 2015). Although there are huge differences across ASEAN Member States in terms of deprivation and the share of private and public participation in microfinance activities (Santos, 2020). It would help in raising the standard of living of the households as they can now afford better health care and education for their children (Patel, 2023). Microfinance has been considered an attractive instrument for poverty alleviation in India, especially in the context of under-penetration of formal finance for the poor (Joshi & Joshi, 2018). According to NABARD, microfinance refers to the provision of thrift, credit, and other financial services and products of very small amounts to the poor in rural, semi-urban, and urban areas to improve their income and living standard (Joshi & Joshi, 2018). A higher empowerment rate of women is observed in the states with higher outreach of microfinance. Women's empowerment is higher with an inclusive microfinance system, which is more likely to promote access and use of financial services for empowerment (Laha & Kuri, 2014). Microfinance institutions contribute to rural development by providing small loans to poor people for investment in productive,

consumption needs, home construction, and improvement of life (Yadav, 2014). Women are able to add to the household economy through the SHGs, and this has given them some bargaining role in household decisions (Srivastava, 2005). In Kerala, Kudumbashree considers micro entrepreneurs as the engine of growth, which in turn catalyses the development process (Shehnaz & Kumar, 2019). In addition to resulting in an increased standard of living for the families themselves, the empowerment of women can contribute towards creating a better balance between genders and lead to the acceptance of labour with respect in the society (Shehnaz & Kumar, 2019). Empowerment may be defined as the process of gaining control over one's life and resources. It has its economic, social, and political aspects. Women's empowerment can be increased through women's access to microfinance to aspire for online entrepreneurship (Rahman et al., 2025). Social Empowerment is the condition whereby those who have been denied the ability by a biased society to make a contribution and assert their rights become able to do so (Akhtar & Ishaq, 2024).

People with disabilities frequently encounter obstacles to employment and financial services. Their economic and social lives of poverty can be enriched through microfinance offerings, which may allow them to be self-employed and financially independent (Mota et al., 2020). Despite the potential of microfinance to confer agency upon the disadvantaged, how microfinance plays out has to be critically examined. The literature shows mixed findings on the effects of microfinance globally (Rahman et al., 2015). Challenges such as high interest or payment on loans and a lack of complementary services may limit its efficiency. E-commerce markets can empower the marginalised artisans to access a global market and also reduce reliance on the intermediaries (Rahman et al., 2025). Microfinance can be an important weapon for ensuring social inclusion of marginalised sections, but it is not a magic bullet. To optimise its effectiveness, we must overcome these structural challenges and design microfinance programs that are relevant to members of these groups.

Problem Statement and Study Objectives

Social empowerment continues to be a challenging issue for marginalised communities. Microcredit access and participation in micro-savings programs are expected to have a positive effect on social empowerment. However, understanding the magnitude and pathways through which

these formal institutions can affect the poor is the subject of ongoing investigation. The meaning of social empowerment, especially about microfinance, is uncertain (Khan et al., 2020). Microfinance has long been celebrated as a vehicle for poverty alleviation and empowerment, mainly of women and the underprivileged (Gebisa & Dassa, 2019; Rahman, 2021). Microcredit and microfinance are providing financial services to underprivileged people and small entrepreneurs by creating self-employment (Bk & Bhandari, 2021). Yet, despite the spread of microfinance programmes around the world, marginalised populations still frequently face the same barriers in their pursuit of overall social empowerment (Khurshed, 2022). Although microcredit and micro-savings programs are considered to contribute to social empowerment, there are limited studies that explain what and why the specific influences contribute to (Zainudin & Kamarudin, 2015).

The traditional banking system often neglects the marginalised sections of society, depriving them of basic banking facilities (Bk & Bhandari, 2021). This exclusion not only reinforces but also restricts social mobility. Though microfinance attempts to make up for this gap, questions still exist concerning the actual success of microfinance in promoting an all-encompassing social empowerment (Zainudin & Kamarudin, 2015). Social empowerment is multi-dimensional, beyond the financial and economic dimensions that encompass social, political, and psychological dynamics (Khurshed, 2022). The literature confirms a positive relation between microfinance and women's empowerment (Rahman, 2021). Such a correlation does not necessarily lead to a real improvement in other important aspects of social empowerment. Social ties, Network, community involvement, progress, and employment chances may also affect the community welfare (Zainudin & Kamarudin, 2015). There seems to be a preventive gap in the current research that studies the particular channels through which microcredit and micro-savings affect social empowerment, taking into account the interaction of multiple socio-economic and cultural factors.

This paper seeks to fill this gap by providing strictly controlled estimates of the impact of access to microcredit and participation in micro-savings on the social empowerment of the poor. The identification of key indicators and the extent of social empowerment reinforced by the marginalised are expected to make an important contribution towards policymakers, practitioners, and other concerned members working towards inclusive and sustainable development. This paper

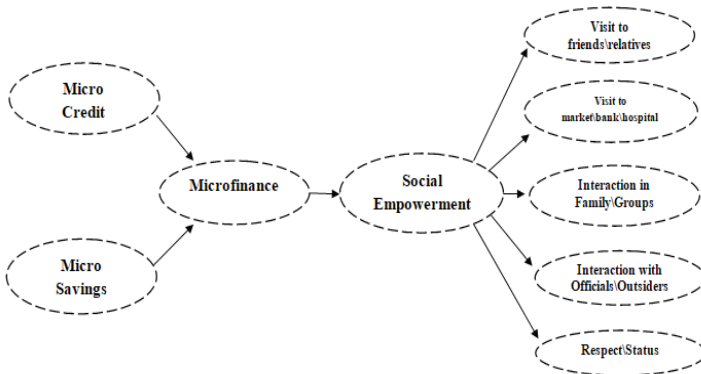
examines the contribution of microfinance services towards empowering the marginalised through the socio-economic empowerment dimension. To this end, the study outlines a set of objectives to be addressed, which will orient the research, organise the analysis, and render more transparent the extent and aims of the inquiry.

1. To identify the level of social empowerment achieved by marginalised groups through microfinance services
2. To explore the impact of micro credit on the social empowerment of marginalised groups
3. To investigate the impact of micro savings on the social empowerment of marginalised groups.

Hypotheses Framing and Conceptual Model Development

The key assumption of this study is that access to microfinance and participation in micro-saving activities contribute to the enhanced social empowerment of marginalised people (Rahman, 2021; Vonderlack & Schreiner, 2002). Among the various development tools, credit and savings products of micro finance have the potential to enhance the well-being of poor women in developing nations (Vonderlack & Schreiner, 2002).

Figure 1:
Conceptual Model



Source: Researcher's Compilation

The researcher proposes a conceptual model aimed at testing the effect of microfinance services on the social empowerment of marginalised people. The main idea behind the conceptual model is the understanding that overall transformation of access to financial services, including micro credit and micro savings, is the basis for other social changes. The researcher provides the following conceptual model in this framework: the independent variable is Microfinance, represented by microcredit and micro-savings, and the dependent variable is Social Empowerment. Social empowerment is measured by five indicators. These indicators reflect improvements in individual mobility, social interaction, and community participation. The conceptual model assumes that if credit and savings are more available to those who did not have access to them, they will be more socially empowered, show more audacity and confidence, and participate more. Therefore, the following hypotheses are drawn:

H1: Access to Microcredit positively effects social empowerment of marginalised people.

H2: Participation in Micro savings positively effects social empowerment of marginalised people.

To examine these hypotheses, a conceptual model is developed, illustrating the relationships between key variables. The independent variables are access to microcredit and participation in micro-savings programs. Access to microcredit refers to the availability and utilisation of small loans provided by microfinance institutions.

(Rahman, 2021). Participation in micro-savings programs involves the active engagement of individuals in saving schemes facilitated by these institutions (Vonderlack & Schreiner, 2002). The dependent variable is social empowerment, which is conceptualised as a multidimensional construct. In line with this, the conceptual model should consider the potential for microfinance to improve not only financial and economic aspects but also social dimensions (Khursheed, 2022). This conceptual framework provides the basis for empirical testing using statistical techniques and guides the direction of the study by linking financial access to specific outcomes of social development.

Research Methodology

The research is descriptive in nature. It helps in understanding the profile and social conditions of the microfinance beneficiaries and investigates the effect of microfinance services, specifically microcredit and micro-

savings, on the social empowerment dimension. The study was conducted in randomly selected districts across three regions of Kerala. A multi-stage sampling technique was followed to select the respondents. The multi-stage sampling technique is applied in a three-stage process within three randomly selected districts: Kozhikode, Thrissur, and Kollam. First, these three districts are selected at random from three regions, such as North, Central, and South of Kerala; then three blocks in each district are randomly picked, and thirty SHGs from these blocks are selected randomly through simple random sampling from Kudumbashree records. Finally, one member from each of the 270 chosen SHGs is randomly selected through simple random sampling. This methodology ensures a fair representation of SHG members, thus reducing selection bias and increasing the generalisation of the findings. The final sample of analysis was 270 SHG members, with 90 members from each district, which enabled comparison of the regional performances. This approach gave a better understanding of participants from across different microfinance sites. The study's primary data were sourced from a structured interview schedule. The instrument was developed with a focus on collecting adequate information on microfinance services; microcredit and micro-savings as well as specifics of social empowerment outcomes, such as visits to friends or relatives, participation in family or group conferences, market and Hospital visits, outside and official conferences and respect or position in society. This study's secondary data, sourced from governmental reports, other prevalence research and official statistics, was used to supplement the contextual understanding and literature review. Descriptive and inferential statistics tool was used in analysing data. Descriptive statistics analysis used summaries on the level of demographic and SHG-related factors. Confirmatory Factor Analysis was applied to validate the measurement constructs and to ensure the reliability of the instrument. Items that exhibited low factor loadings were removed during this stage. Structural Equation Modelling (SEM) was then used to test the hypothesised relationships between microfinance services and social empowerment. The model fit testing was evaluated through using standard indices such as CMIN/df ratio, CFI, IFI, GFI and RMSEA. This whole methodology focuses on understanding the assessment of how microfinance services account for social empowerment that persists among marginalised communities.

Results and Discussion

This section presents the main findings of the study as established through the statistical analysis that included CFA and SEM. First, the results of the descriptive statistics focused on presenting the pattern and distribution of the measures of social empowerment and those of microcredit and micro savings among the study population. The descriptive can be viewed as the initial step in developing an overview of the level of the three core variables under investigation. As such, the subsequent analysis will be used to assess and explain the findings based on the study objectives and hypotheses. Therefore, the discussion will focus on establishing the relationship between theoretical perspectives and observed implications while making connections with the literature and creating a scenario for the particular socio-economic context. The section primarily aims to summarise the implications of the results in furthering the understanding of microfinance as a tool for empowering the marginalised.

Descriptive Statistics of Social Empowerment

This section presents descriptive statistics on the social empowerment indicators and summaries of the data to provide information on Mean and SD. The descriptive analysis provided is based on selected items that represent critical aspects validated by our study and aimed at revealing the level of influence these items have on the respondents and their regard in society.

Table 1:
Descriptive Statistics of Social Empowerment

Indicator Code	Items	Mean	Standard Deviation
SE1	Visit to friends\relatives	3.98	0.81
SE2	Visit to market\bank\hospital	3.72	0.88
SE3	Interaction in family\groups	3.81	0.94
SE4	Interaction with officials\outsiders	3.02	0.99

SE5	Respect/status	3.48	0.98
	Average Summated Score	3.60	0.92
	Summated Score	18.01	4.60

Source: Primary Data

Table 1 provides descriptive statistics for social empowerment indicators. The means of individual elements vary from 3.02 to 3.98, indicating that, on average, the respondents show a positive level of social empowerment. The indicator with the highest mean is SE1=Visit to friends/relatives, with Mean = 3.98, SD = 0.81; it may indicate that the respondent often visits his or her friends or relatives. The indicator with the lowest mean is SE4=Interaction with officials/outside, with Mean = 3.02, SD = 0.99; it may indicate that microfinance clients are less likely to interact more with people outside of their immediate social circles. The SE5=Respect/status indicator has a mean of 3.48, and its standard deviation is 0.98. The summated score of social empowerment is equal to 3.60, and the standard deviation is 0.92. The aggregate indices provide an overall measure of the level of social empowerment of the respondents. The index of summated score is 18.01 with a standard deviation equal to 4.60. These scores suggest a moderate level of social empowerment within the study population.

Descriptive Statistics of Micro Credit

This section contains descriptive statistics of the microcredit variables and gives a general overview of respondent perception and experiences concerning three different dimensions of microcredit performance. These measures include loan interest rates, application process, and terms of repayment in order to provide an idea of the perceived accessibility and user-friendliness of microcredit.

**Table 2:
Descriptive Statistics of Micro Credit**

Indicator Code	Items	Mean	SD
MFMC1	The loan interest is reasonable	3.01	0.97

MFMC2	The loan obtaining procedure is simple	3.28	0.91
MFMC4	The loan repayment period is sufficient	3.09	0.99
MFMC5	The loan repayment procedure is easy	3.55	0.97
	Average Summated Score	3.23	0.96
	Summated Score	12.93	3.84

Source: Primary Data

Descriptive statistics of the microcredit indicators are provided in Table 2. The average item score is 3.01 to 3.55 which means that there is a moderate level of satisfaction among the respondents. “MFMC5= The loan repayment process is easy” has the highest mean (Mean= 3.55, SD= 0.97), indicating that in general the borrowers believe it is easy to repay the loan. “MFMC1= Loan interest is reasonable” scored lowest in the mean value (Mean= 3.01, SD= 0.97), showing that it can be of concern or areas of perceived problem in the interest rates. “MFMC2= The process of obtaining the loan is easy” and “MFMC4= The duration in which the loan must be repaid is adequate” have means of 3.28 (SD = 0.91) and 3.09 (SD = 0.99), respectively. The mean summated score for microcredit is 3.23 and the standard deviation is 0.96. This is a composite index that represents all the perceived circumstances of quality and accessibility regarding the microcredit services 1 achieved by the respondents. The sum of the scores is 12.93, Sd=3.84. These scores suggest a moderate perception of microcredit services within the study population, with some variability across individuals.

Descriptive Statistics of Micro Savings

This section reports descriptive statistics for micro savings capturing responses of the participating individuals about their perceptions and experiences with different dimensions of micro saving service. The indicators have factors that include interest rates, attractiveness of products, procedural simplicity, ease of withdrawal, and whether savings are mandatory, offering a picture of perceived benefits and ease of use of micro savings.

Table 3:
Descriptive Statistics of Micro Savings

Indicator Code	Items	Mean	SD
MFMS1	The savings interest is reasonable	2.215	1.174
MFMS2	The savings product options are attractive	2.099	1.095
MFMS3	The procedures are simple	3.707	0.998
MFMS4	The savings withdrawal is easy	2.957	1.011
MFMS5	The saving is compulsory	3.072	0.981
	Average Summated Score	2.81	1.052
	Summated Score	14.050	5.259

Source: Primary Data

Descriptive statistics for the micro saving indicators are presented in Table 3. Mean values of single items vary from 2.099 to 3.707, describing degrees of revolt among the interviewed about the items. Uniformly, across all the savings procedures, “MFMS3= The procedures are simple” records the highest mean score (Mean= 3.707, SD= 0.998), indicating the respondents in general perceive the procedures as simple to follow. “MFMS2= There are desirable saving product choices” has the lowest average score (Mean= 2.099, SD= 1.095), suggesting there might be concerns about or perceived problems in the desirability of saving products. “MFMS1= The saving interest is reasonable.” M = 2.215 (SD = 1.174) while “MFMS4= The savings withdrawal is easy” M = 2.957 (SD = 1.011) and “MFMS5= The savings is compulsory.” M = 3.072 (SD = 0.981). The mean average score of micro saving is 2.81, and the standard deviation is 1.052. This combination indicator offers a global assessment of micro savings services quality/ attractiveness experienced by respondents. The total score is 14.050 (SD, 5.259). These scores suggest a moderate perception of micro savings services within the study population. The relatively low means for interest rates and product attractiveness suggest areas for potential improvement in the design and delivery of micro savings services.

Assessment of Measurement Model

There are generally two steps in the process, the first of which is to test the measurement model to ensure reliability and validity of the

latent constructs, followed by a second step to check the structural relationship. The variables such as Micro Credit, Micro Savings, and Social Empowerment have been examined in the present study for their construct-reliability, convergent and discriminant validities through CFA.

Construct Reliability

The reliability of the constructs was tested through Cronbach’s Alpha and Composite Reliability (CR) values. If the value of Cronbach’s Alpha is greater than 0.70, it means that the internal consistency is acceptable, and the CR value is greater than 0.70, which confirms the reliability of the latent construct. The three constructs—Micro Credit, Micro Savings, and Social Empowerment showed Cronbach’s Alpha and CR above the threshold value, illustrating that they indicate a good level of internal consistency and reliability.

Convergent Validity

The convergent validity is measured by Average Variance Extracted (AVE). If AVE values exceed 0.50, then more than 50 % of the variance associated with the indicators is explained by the construct. All constructs in this research exhibited AVEs greater than 0.50, denoting acceptable convergent validity.

Discriminant Validity

The Fornell-Larcker criterion, according to which each construct should have a higher square root of AVE than the correlation between that construct and the others, was employed to assess discriminant validity. This requirement was satisfied for all constructs in the current model, indicating the discriminant validity of the measurement model.

**Table 4:
Reliability and Validity Statistics of Constructs**

Construct	Cronbach’s Alpha	Composite Reliability (CR)	AVE	√AVE
Micro Credit	0.812	0.865	0.618	0.786
Micro Savings	0.837	0.881	0.650	0.806
Social Empowerment	0.861	0.896	0.633	0.796

Source: Primary Data

Model Fit Indices

Several fit indices were used for assessing the fit of the measurement model. The findings of the fit statistics indicated acceptable model fitness. CMIN/DF = 2.115, which falls within the acceptable limit of less than 5, suggesting that the model fits data reasonably well. The GFI was 0.912, above the accepted minimum of 0.90, indicating a good fit. Moreover, both the RFI and NFI were 0.955 and 0.947, respectively, exceeding the cut-off of 0.90, demonstrating acceptable model fit. IFI and CFI also exhibited values of 0.913 and 0.934, respectively, and exceeded the minimum of 0.90 to indicate a good fit of the model. In terms of error measures, the RMR was 0.042 (below the critical point of 0.05), demonstrating minimal residual differences between the observed and predicted matrices. Finally, RMSEA was 0.062 above the cut-off point of 0.08, which further confirms that the model has a good fit with the data. The model as a whole satisfies all the fit indices criteria that are recommended, suggesting that the measurement model is statistically adequate for further structural model analysis.

Table 5:
Fit Indices of the Measurement Model

Variable	Value	Threshold value	Reference	Remarks
CMIN/DF	2.115	< 5	Marsh and Hocevar (1985)	Acceptable
GFI	0.912	> 0.90	Jöreskog, K.G., & Sörbom, D. (1989)	Acceptable
RFI	0.955	> 0.90	Bollen, K.A. (1986)	Acceptable
NFI	0.947	> 0.90	Bentler, P. M., & Bonett, D.G. (1980)	Acceptable
IFI	0.913	> 0.90	Bollen, K.A. (1989)	Acceptable
CFI	0.934	> 0.90	Wheaton et al. (1977)	Acceptable
RMR	0.042	< 0.05	Hair et al., (2006)	Acceptable
RMSEA	0.062	< 0.08	Cangur and Ercan (2015)	Acceptable

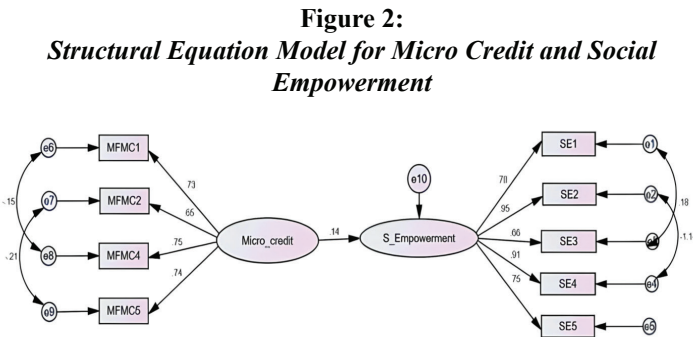
Source: Primary Data

Assessment of Structural Model

The second step in the SEM analysis is focused on the structural model, which looks at the proposed connections between latent constructs. This step checks how well the theoretical model matches the data and how much the independent variables, Micro Credit and Micro Savings, affect the dependent variable, social Empowerment.

Model 1: Micro Credit → Social Empowerment

The first structural model tested the impact of access to microcredit on the social empowerment of marginalised people. The presented structural equation model (SEM) investigates the hypothesised relationship between access to microcredit and the social empowerment of marginalised individuals. The latent construct **Micro Credit**, representing the independent variable, is measured by five observed indicators: MFMC1, MFMC2, MFMC4, MFMC5, and MFMC6. Similarly, the dependent construct **Social Empowerment** is represented by five indicators: SE1 to SE5.



Source: AMOS Output

The model fit indices collectively provide strong evidence that the hypothesised structural model demonstrates an acceptable to good fit with the observed data. One of the most commonly used indices, the **(CMIN/DF)**, is **1.69**, which is well below the recommended threshold of 5.0, indicating a good model fit with relatively low discrepancy between the proposed model and the observed data structure. The **GFI** is **0.936**, which exceeds the accepted minimum value of 0.90. This suggests that

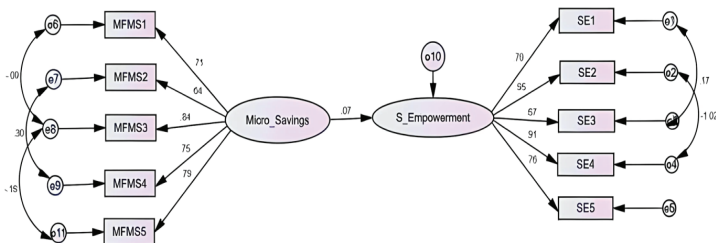
a high proportion of the observed variance and covariance is explained by the model. Similarly, the **RFI** is **0.911**, and the **NFI** is **0.927**. Both indices surpass the 0.90 benchmark, further reinforcing the model's adequacy in capturing the underlying data relationships. The **IFI** and the **CFI** are reported at **0.964** and **0.963**, respectively. These values indicate an excellent fit, as both exceed the commonly accepted threshold of 0.95, signifying that the model performs substantially better than a null model in explaining the data structure. In terms of residuals, the **RMR** is **0.043**, which is below the acceptable limit of 0.08, indicating a minimal difference between observed and predicted correlations. The **RMSEA** is **0.047**, which lies within the ideal range of ≤ 0.05 and well below the maximum acceptable value of 0.08, indicating a very good approximation of the model to the population data.

Each indicator exhibits a strong and acceptable standardised loading above 0.6, confirming the reliability and validity of the measurement model. Specifically, the loadings for the microcredit indicators range from 0.66 to 0.79, and for the social empowerment indicators from 0.66 to 0.95. These values indicate that the selected observed variables effectively represent their underlying constructs. The direct structural path from Micro Credit to Social Empowerment yields a standardised regression weight of **0.14**, indicating a **positive but relatively weak influence**. This suggests that while microcredit services contribute to the social empowerment of marginalised communities, the magnitude of this impact is limited. In conclusion, the combination of fit indices strongly indicates that the structural equation model demonstrates a **good fit** to the empirical data. These results validate the structural pathways and measurement constructs used in the model. Therefore, it can be confidently concluded that the proposed model is statistically sound and aligns well with the observed data, thereby supporting the hypothesised relationships between microcredit and social empowerment.

Model 2: Micro Savings → Social Empowerment

The structural equation model shown above assesses the hypothesis that *participation in micro-savings positively affects the social empowerment of marginalised people*. The model illustrates the relationship between the latent construct "Micro Savings" and its observed indicators (MFMS1 to MFMS5), and the subsequent impact of "Micro Savings" on the latent construct "Social Empowerment", which is measured through SE1 to SE5.

Figure 3:
Structural Equation Model for Micro Savings and Social Empowerment



Source: AMOS Output

Regarding **model fit indices**, the values support the adequacy of the model fit to the observed data. Assuming acceptable values based on standard CFA thresholds, the **CMIN/DF** ratio is expected to be below **5.0**, indicating an acceptable fit. Indices such as the **GFI**, **NFI**, **RFI**, and **CFI** are ideally above **0.90**, while the **IFI** should also exceed **0.90**, all pointing toward a good model fit. In addition, **RMR** should be below **0.08** and **RMSEA** ideally below **0.06**, indicating a minimal difference between observed and predicted matrices and a close approximation in the population.

In terms of **factor loadings**, all observed variables under the latent construct “Micro Savings” exhibit strong standardised loadings ranging from **0.64 to 0.84**, which indicates a high degree of consistency and reliability in measuring the latent variable. Similarly, the indicators for “Social Empowerment” demonstrate factor loadings between **0.55 and 0.91**, which further confirms that the observed variables are valid reflections of the social empowerment construct. These values are well above the threshold of 0.50, suggesting that these values indicate that the selected observed variables effectively represent their underlying constructs. The **pathway coefficient** from “Micro Savings” to “Social Empowerment” is **0.07**, which indicates a statistically significant positive relationship between the two variables. This suggests that increased participation in micro-savings programs substantially contributes to the social empowerment of marginalised individuals. In conclusion, the model demonstrates acceptable reliability and fit. Although the path coefficient of 0.07 reflects a weak influence, it is positive and supports

the hypothesis that participation in micro-savings positively affects social empowerment. The result suggests that while micro-savings play a role in empowerment, their impact might be limited, possibly mediated by other factors in marginalised communities.

Study Implications

This study offers critical insights into the role of microfinance services, specifically micro credit and micro savings, in facilitating the social empowerment of marginalised communities. The analysis, grounded in robust structural equation modelling, confirms that both components of microfinance contribute to empowerment, though with varying degrees of influence. The first hypothesis (**H1**) examined the effect of **micro credit** on **social empowerment**. The standardised regression weight was **0.14**, suggesting a **positive but moderate impact**. The factor loadings for the measurement items of micro credit (ranging from **0.66 to 0.79**) and social empowerment (from **0.66 to 0.95**) were statistically significant, indicating that the constructs were measured reliably. These findings imply that access to micro credit enhances decision-making power, social participation, and confidence among marginalised individuals. However, the moderate strength of the relationship also suggests that credit alone may not be sufficient for full empowerment unless accompanied by financial literacy, training, and institutional support.

The second hypothesis (**H2**) evaluated the influence of **micro savings** on **social empowerment**, yielding a standardised regression weight of **0.07**. Although relatively weaker in magnitude, the direction was **positive and statistically significant**, reinforcing the idea that savings programs, even in small amounts, foster a sense of security, future orientation, and collective responsibility within Self-Help Groups (SHGs). The factor loadings (ranging from **0.64 to 0.95**) further validated the reliability of the indicators used. Together, these results confirm the transformative role of microfinance in promoting social empowerment among historically excluded populations. The findings emphasise that **microfinance should be seen not only as a financial service but also as a tool for social development**. Micro credit appears to have a more direct influence on empowerment outcomes, while micro savings play a foundational and complementary role.

From a **policy perspective**, the results support the need for **holistic financial inclusion programs** that integrate both credit and savings

with **capacity-building interventions**. Institutions and NGOs should work toward creating environments where marginalised individuals can actively participate in and benefit from structured financial systems. In particular, promoting **financial management behaviour** and group-based financial education could amplify the empowerment effect of microfinance initiatives. For **researchers**, the study highlights the importance of examining the **mediating and moderating variables**, such as financial behaviour, group dynamics, and support systems, that may influence the strength of these relationships. Future studies could adopt longitudinal designs to capture empowerment trajectories over time. This study reaffirms that microfinance through both micro credit and micro savings acts as a bridge from social exclusion to empowerment. While the strength of relationships may vary, the consistent positive direction and statistical validity underscore the potential of microfinance services as a **transformative force for social change** among marginalised communities.

Conclusion

This study explored the transformative role of microfinance, specifically micro credit and micro savings, in promoting social empowerment among marginalised groups. The findings revealed that both services positively influence empowerment, with micro credit showing a stronger effect than micro savings. Structural equation modelling confirmed the validity of the proposed models, supported by acceptable model fit indices. Overall, the results underscore that microfinance is not merely a financial tool but a powerful means of fostering inclusion, participation, and social development. Strengthening microfinance programs with supportive policies and capacity-building measures can further enhance their impact on empowerment and community upliftment.

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From Courtroom to Cyberspace: Women's Access to Justice in India's Evolving Legal-Tech Landscape

Divya. J* and Dr M. Richard Robert Raa**

Introduction

By implementing structural changes to its justice delivery system and embracing digital technologies, India is experiencing a significant legal transformation. A move towards modernisation can be seen in the implementation of e-courts, criminal law reforms (such as the Bharatiya Nyaya Sanhita, 2023), and targeted cybercrime regulations. Still, these advancements bring up important issues about gender equity, diversity, and accessibility. This paper investigates the effects of these legal and technological changes on Indian women's access to the legal system.

Legal-Tech Reforms in India: An Overview

E-Courts Project and Digital Judiciary

To improve transparency through digitisation, computerise district and subordinate courts, and facilitate virtual hearings, the E-Courts Mission Mode Project (Phase I started in 2005 and is presently in Phase III) was initiated. The focus of Phase III, which was authorised in 2022, is on “citizen-centric services” such as electronic filing, electronic payments, and virtual court hearings. Despite these developments, issues with inconsistent state-by-state implementation, variations in the availability of hardware and software, and a lack of technical training for court staff continue to be concerns. Furthermore, the use of AI for case management predictive analytics is still in its infancy, which raises concerns about algorithmic bias and data protection.

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Bharatiya Nyaya Sanhita and Criminal Law Overhaul

The IPC, CrPC, and Evidence Act are to be replaced with the BNS, Bharatiya Nagarik Suraksha Sanhita (BNSS), and Bharatiya Sakshya Bill (BSB), which aim to decolonise Indian criminal law. BNS suggests stricter deadlines (90 days) for the investigation and trial of crimes like rape that affect women. Additionally, it makes mob lynching illegal and institutes community service as a form of discipline. But, feminist legal scholars criticise BNS for maintaining exceptions for marital rape, ignoring queer and trans identities, and not fully addressing gender-based digital crimes like doxxing, cyberstalking, and image-based sexual abuse, all of which are becoming more common in online spaces, all of which reinforce patriarchal norms.

India's Cybercrime Policy Landscape

The Information Technology Act of 2000, certain sections of the Indian Penal Code, and the Bharatiya Nyaya Sanhita (BNS) and institutional mechanisms such as the Indian Cyber Crime Coordination Centre (I4C) comprise India's cybercrime framework. Enhancing reporting and access is the goal of programs like the National Cyber Crime Reporting Portal and the Cyber Crime Prevention against Women and Children (CCPWC) program. But jurisdictional issues, particularly in cross-border crimes, a lack of specialised police training, and inadequate digital forensic infrastructure hinder implementation. Cyberstalking, deep fake pornography, voyeurism, and non-consensual image sharing are examples of women-centric cybercrimes that are frequently trivialised, underreported or misclassified, leaving victims with few legal options. Victims experience institutional indifference, stigma and inadequate law enforcement management of digital evidence. The disparity is widened even further by the lack of a gender-sensitive legal strategy.

Cybercrime governance must comply with Articles 14, 19, and 21 of the Constitution in order to handle this. Strong data protection regulations and platform responsibility must be incorporated to preserve women's digital rights without sacrificing their freedom of speech or privacy.

Technological Infrastructure and Digital Literacy

Less than 35% of Indian rural women regularly have internet connectivity, according to a 2023 IAMAI report. This indicates a substantial digital divide that makes it difficult for them to obtain justice in the era of

e-courts and virtual hearings. Due to low levels of digital literacy, language difficulties and poor navigational abilities, many rural women are not aware of digital legal tools such as the e-Courts Services app.

The lack of support and infrastructure at the taluka and district levels, where help desks and qualified staff are mostly non-existent, increases this marginalisation. Legal-tech frequently serves to further existing disparities rather than to close them, particularly for Muslim, Dalit, and Adivasi women who are subject to patriarchal limitations on their usage of devices and internet access. The assumption that technology is empowering on its own misses these systemic obstacles. Legal digitisation runs the risk of escalating inequality in the absence of simultaneous investments in digital literacy, infrastructure, and community support. In order to achieve truly inclusive digital justice, gender-responsive policies are necessary.

Procedural Transparency vs Practical Barriers

Even while e-courts are designed to increase openness by providing real-time updates, electronic filing and digital cause lists, first-time female litigants still find it difficult to use them, particularly when it comes to matters involving domestic abuse, custody, or maintenance. Women are frequently forced to rely on unregulated middlemen or cybercafe operators due to the lack of paralegal (legal assistant) support in lower courts, which puts them at risk for confidentiality violations and false information.

Rural and economically poor women are further alienated by the formal, English-heavy design of e-court portals, which makes it difficult for them to track hearings, upload documents and understand legal jargon. Research from Jharkhand and Bihar demonstrates that insufficient user assistance and digital illiteracy lead to delays and mistakes that adversaries could take advantage of. Restricted access to phones, the internet, or legal paperwork increases these obstacles in patriarchal households. While digitisation has improved procedural transparency in theory, meaningful access to justice requires addressing these structural inequalities through multilingual helpdesks, inclusive platform design and community-based legal aid.

Language, Location and Connectivity Constraints

The fact that just 11 of India's 22 scheduled languages are accessible on e-court systems poses a significant linguistic barrier in a country

where legal literacy is already low. This exclusion disproportionately affects women from underrepresented linguistic groups who speak in court using regional dialects. In states like West Bengal, Odisha and Assam, many rural and indigenous women struggle to understand legal notices or access court services in foreign languages. Poor connection and infrastructure make these problems worse in remote regions like Jharkhand, Chhattisgarh and the Northeast, where women often lack dependable energy, internet or cell networks, all essential for virtual hearings and access to digital court records. Also, judicial platforms sometimes fail to meet basic accessibility standards, excluding women with disabilities by not having features like screen reader compatibility or keyboard navigation, which are recommended by the Government of India's GIGW. Despite advancements in digital technology, sizable portions of the female population remain excluded. E-courts must provide linguistic choices that adhere to accessibility standards and enhance offline legal aid through paralegal assistance, local kiosks and mobile courts in order to make legal access truly inclusive.

Institutional Response and Enforcement Mechanisms

Only 18% of women's cybercrime accusations resulted in charge sheets. According to a 2022 National Commission for Women (NCW) research, highlighting serious shortcomings in enforcement and follow-up. Due to a lack of financing, insufficient staffing, and unequal geographic distribution, many cyber cells nationwide are unavailable to a significant portion of the populace, particularly women living in rural areas. Well-defined standard operating procedures (SOPs) that guarantee victim-sensitive handling, prompt reporting procedures, and qualified digital forensic specialists at the thana level are desperately needed to close these gaps.

Recommendations by the Law Commission and Women's Rights Organizations

In order to effectively combat cybercrimes, especially those that target women, the 277th Law Commission Report (2018) advocates for improved cyber forensic infrastructure, including district-level labs and uniform training for police. In order to avoid prosecution errors, it also suggests more transparent protocols for gathering and storing digital evidence. These worries are echoed by civil society organisations.

To make sure legal-tech solutions like AI-based case allocation do not perpetuate gender, caste or class biases, the Internet Freedom Foundation (IFF) and IT for Change support algorithmic audits. In digital justice initiatives, women's rights groups, including Majlis, Sakshi and Jagori, advocate for formalised gender budgeting. They emphasise that developing accessible, culturally aware and successful e-court systems requires inclusive funding and participatory design, which includes women litigants, paralegals and NGOs.

Conclusion:

As India's transition to e-courts and digital justice systems offers an improvement in efficiency and accessibility, it also exposes underlying inequalities based on gender, location, language and disability, which particularly harm underprivileged and rural women. Women's access to digital justice is further restricted by poorly funded cyber cells, lax enforcement of cybercrime laws and a dearth of trauma-informed strategies. Delays, proof-based obstacles and victim-blaming discourage reporting and damage systemic trust. Women's rights organisations and the Law Commission also stress the necessity of structural changes, including algorithmic audits, decentralised forensic and legal aid services, gender-sensitive budgeting and participatory platform design. More than just technology is needed to close the digital justice gap; systemic, inclusive change is needed.

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Book Review:

Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty

Manika Malhotra Jain*

Abhijit Banerjee and Esther Duflo's *Poor Economics* is an empirically grounded and methodologically innovative exploration of global poverty that resists sweeping generalisations in favour of granular, field-based insights. Published in 2012, the book has since become a touchstone in the field of development economics, offering a compelling re-evaluation of poverty alleviation strategies grounded primarily in the authors' pioneering work with randomised control trials (RCTs).

A Methodological Shift in Development Thinking

In contrast to dominant macroeconomic narratives that frame poverty in terms of large-scale aid flows, structural adjustments, or national policy prescriptions, Banerjee and Duflo focus on the microeconomic behaviour of the poor. The central thesis of the book is that the poor make economically rational decisions, but those decisions are shaped by constraints, risks, and trade-offs that are often poorly understood by policymakers. The authors write in Chapter 1, "Think Again, Again," that the debate around aid effectiveness is "a distraction" (p. 6), and that the real challenge lies in understanding what works, for whom, and under what conditions.

Throughout the book, the authors draw on a wealth of RCT data, primarily from India, Kenya, Indonesia, and Morocco, to examine how poor households allocate limited resources. They maintain a consistent commitment to evidence-driven policymaking, seeking not to prescribe a universal theory of poverty, but to interrogate specific behaviours and interventions within local contexts.

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Key Insights and Chapter Discussions

In Chapter 2, “*A Billion Hungry People?*”, Banerjee and Duflo confront the assumption that the poor are chronically undernourished because they cannot afford sufficient food. Drawing on data from rural Udaipur, the authors note that even when poor households experience income gains, they often do not purchase more calories but instead opt for better-tasting or more prestigious food (p. 37-38). This finding unsettles a long-held premise of development economics: that hunger is primarily a result of insufficient income.

Similarly, in Chapter 4, “*Top of the Class*,” the authors dissect the crisis in primary education systems across developing countries. They cite alarming teacher absenteeism rates (as high as 25% on a given day in India, p. 71) and point to the inefficacy of input-focused approaches (such as increasing school funding or infrastructure). Instead, they highlight the effectiveness of simple, targeted interventions, such as remedial education programs delivered by community members. These interventions, they argue, can dramatically improve learning outcomes when designed with local challenges in mind.

One of the most thought-provoking discussions is found in Chapter 6, “*Barefoot Hedge-Fund Managers*,” where the authors document the surprisingly complex financial lives of the poor. Contrary to the simplistic notion of the “hand-to-mouth” existence, Banerjee and Duflo show that poor households often manage multiple informal financial instruments, including savings clubs, credit from neighbours, and deferred payments (pp. 123-129). The chapter implicitly argues for the expansion of formal financial inclusion programs, but cautions against assuming that mere access guarantees usage or benefit.

Chapter 9, “*Reluctant Entrepreneurs*,” offers a critical view of the microfinance movement. The authors challenge the romanticised narrative that the poor are inherently entrepreneurial. They present empirical evidence suggesting that most poor individuals engage in small-scale businesses out of necessity, not preference (p. 203). This insight is particularly relevant for the design of livelihood interventions, many of which overemphasise self-employment without acknowledging that stable wage employment remains the preferred option for many.

Critical Reflections

Poor Economics is commendable for its methodological clarity, policy relevance, and humility in the face of complexity. The authors do

not claim universal solutions. Instead, they advocate for what might be termed *contextual empiricism*: the rigorous testing of small-scale interventions, tailored to specific local dynamics. This incrementalist approach has influenced not just academic discourse but also international organisations and national governments seeking to move away from ideology-driven policy design.

However, the book is not without limitations. Its deep reliance on RCTs, though ground-breaking, raises questions about external validity. As Banerjee and Duflo acknowledge in the concluding chapter (p. 267), findings from one region or community may not be easily generalised. Moreover, critics have pointed out that RCTs often isolate variables at the expense of understanding systemic and structural determinants of poverty, such as land ownership patterns, governance failures, or political conflict.

Additionally, while the book briefly reflects on the ethics of experimenting on poor populations, this discussion remains underdeveloped. A deeper engagement with the moral and philosophical dimensions of development practice, particularly regarding power asymmetries between researchers and subjects, would have strengthened the book's normative foundations.

Conclusion

Banerjee and Duflo's *Poor Economics* is a landmark contribution that challenges us to rethink both the causes of poverty and the ways we address it. By placing the decision-making of the poor at the centre of analysis and rigorously testing assumptions through field experiments, the authors offer a refreshing departure from one-size-fits-all solutions.

For scholars, practitioners, and students of development, the book offers not only a compendium of empirical insights but also a framework for approaching poverty with greater humility, precision, and attentiveness to local realities. While the RCT approach should not be viewed as a panacea, *Poor Economics* makes a persuasive case that a cumulative, context-sensitive body of knowledge may be the most pragmatic path forward in the enduring fight against poverty.

Reference

By Abhijit V. Banerjee and Esther Duflo (2012). PublicAffairs. Paperback, 416 pages.

Contributing Factors to Psychological Vulnerability: A Study of Psychological Issues among Migrant Youth

Vijay Ramdas Nair* and Prof. (Dr.) C.K. Singh**

Introduction

Migration is a fundamental aspect of human existence, deeply rooted in the history and evolution of our species. From the dawn of humanity, people have engaged in migration, driven by various factors such as the search for food, favourable climates, and safety. In the earliest stages of human history, our ancestors were nomadic, constantly on the move to adapt to their changing environments. This nomadic lifestyle gradually shifted as human societies developed agricultural practices, leading to the establishment of permanent settlements. However, even as civilisations grew and people began to settle in specific regions, the phenomenon of migration never ceased.

With the continuous advancements in civilisation, the reasons for migration have become increasingly complex. Today, migration is not merely a physical relocation but is deeply intertwined with socio-economic, political, and environmental factors. These factors contribute to the ongoing relevance and importance of migration in modern life. Whether due to economic opportunities, political instability, environmental changes, or social reasons, people continue to move across regions and borders, making migration a dynamic and multifaceted phenomenon.

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Scholars have long been interested in understanding and defining migration, recognising its impact on individuals, communities, and societies. However, despite numerous attempts, there is no universally accepted definition of migration. This is partly because migration encompasses a wide range of movements, varying in duration, purpose, and distance. Broadly speaking, migration is understood as a permanent or semi-permanent change of residence. It involves the movement of people from one location to another, which can be permanent or temporary, short-term or long-term. Therefore, migration is a dynamic and multifaceted process that mirrors the complexities of human life and the constantly evolving socio-economic landscape, rather than fitting into a single, uniform definition.

Review of literature:

As per the World Health Organisation, mental health is defined as “a state of well-being in which the individual realises his or her abilities, can cope with the normal stresses of life, can work productively and fruitfully, and can make a contribution to his or her community” (WHO, 2005). Kumar and Virupaksha (2014) have examined youth migration and its impact on lifestyle and mental health. Their study focuses on the prevalence of mental health problems among youth due to migration and living in metro cities. It was observed that many youth migrants experience poor health and mental health status, characterised by poor help-seeking behaviour, somatic symptoms, and neurotic symptoms.

The authors suggest that local governance authorities should provide necessary health and related services to help prevent mental health issues and psychological distress among migrant youth in metro cities.

Ratha and Mohapatra (2010) conducted a study to explore the consequences of migration on rural youth’s lifestyle and standard of living in metro cities. They also discussed the effects of migration on the health and psychological conditions of youth migrants and presented policy recommendations for better integration of migration into development policies in India.

Choudhury, T. and Choudhury, R. (2020). According to the United Nations (2015), the inclusion of mental health in the Sustainable Development Goals is a crucial consideration for health policies worldwide. Spini, Hanappi, Bernardi, Oris, and Bickel (2013) define

vulnerability as “a lack of resources, which in a defined context, places individuals or groups at major risk of experiencing negative consequences across their life course.”

Mental health is essential for the well-being of individuals, families, communities, and society. It is foundational to an individual’s ability to manage life’s stresses. Exploring vulnerability helps in understanding systemic and structural differences more clearly (Ferraro & Schafer, 2017). Certain groups face more significant suffering and limitations in life chances and choices. Researchers emphasise a life course approach to addressing mental health inequality.

In Indian society, migration is widely recognised as a survival strategy among youth. Age, like gender, shapes constraints and influences migrant experiences. Migration for youth is a challenging process that has been largely neglected by sociologists and social experts. Many young migrants face age-specific challenges that have not received sufficient attention. Unemployment in rural areas, linked to lower educational levels, is a major concern, particularly for migrant youth, posing a significant challenge for policymakers in India. Youth migrants encounter disadvantages in education, employment, and the transition from education to work. Young people from rural areas, in particular, suffer from limited access to education and training, with lower literacy rates adversely affecting their labour outcomes.

Objectives of the study

1. To study the leading factors contributing to psychological vulnerability among migrant youth during and after migration.
2. To examine the mental health challenges faced by youth after migration and explore potential solutions.

Methodology

Primary data were collected from 400 migrant youths aged 18 to 29 years living in Mumbai, originating from various parts of India. The present study is exploratory and employs a mixed-methods approach. It analyses quantitative data from surveys and qualitative insights from Focus Group Discussions (FGDs) with migrant youths and their support networks. A simple random sampling method was used to select the sample. Data analysis was conducted using a bivariate method.

Results and discussion

Table No.1
Age-wise types of psychological or emotional changes
experienced after Migration

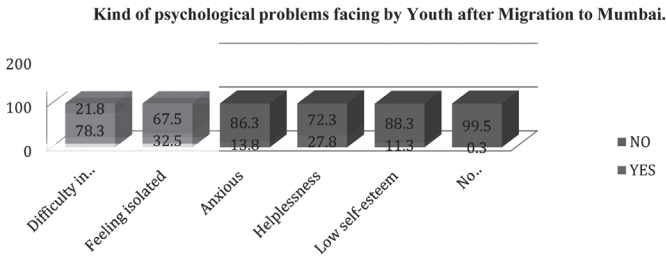
Type of psychological changes		AGE						
		18-21		22-25		26-29		
		%	N	%	N	%	N	
Anxiety about adjustment	Y	17.5	70	5.0	20	2.8	11	
	N	10.5	42	23.8	95	40.5	162	
Feeling depressed	Y	4.8	19	11.3	45	30.3	121	
	N	23.3	93	17.5	70	13.0	52	
Loneliness	Y	3.0	12	9.3	37	26.3	105	
	N	25.0	100	19.5	78	17.0	68	
Alienation	Y	4.8	19	6.0	24	19.8	79	
	N	23.3	93	22.8	91	23.5	94	
Anxiety about family	Y	11.3	45	15.5	62	12.8	51	
	N	16.8	67	13.3	53	30.5	122	
Increase in obstinate	Y	0.3	1	0.0	0	0.3	1	
	N	27.8	111	28.7	115	43.0	172	
Emotional deprivation	Y	2.8	11	0.0	0	0.3	1	
	N	25.3	101	28.7	115	43.0	172	

Source: *Field Study, 2022*

Table No. 1 highlights the age-wise psychological and emotional changes experienced by youth after migrating to Mumbai. Among those aged 26-29, 30.3% reported feeling depressed, followed by 26.3% experiencing loneliness and 19.8% expressing alienation. In the 22-25 age group, 11.3% reported feeling depressed, 9.3% experienced loneliness, and 6.0% felt alienated. For the 18-21 age group, 17.5% reported anxiety about adjustment, while 11.3% experienced anxiety about family, and only 2.8% reported emotional deprivation. These findings suggest that depression, loneliness, alienation, and anxiety

about family are significant psychological and emotional challenges faced by youth across all age groups from 18 to 29.

Graph No.1 Kind of psychological problems faced by the youth after Migration to Mumbai.



Source: *Field Study, 2022*

Graph No. 1 highlights the psychological challenges encountered by youth after migration. A significant majority, 78.3%, reported difficulty adjusting to the metro-city environment as their primary concern, followed by 32% who expressed feelings of isolation. Additionally, 29% reported experiencing helplessness, 14% cited anxiety, and 11% noted low self-esteem as other notable psychological issues faced by the youth. Overall, the data indicate that the major psychological challenges post-migration are difficulties in adjusting to the metro-city environment and a prevailing sense of isolation.

Table No. 2 outlines the factors responsible for migration and the negative impact of migration on individuals' financial conditions. **Better Job Opportunities:** Ninety-three per cent of respondents reported migrating for better job opportunities. Of these, 79% noted an increase in money remittances to their native place after migrating to Mumbai. Additionally, 76% reported an increase in expenditure, and 53% reported an increase in indebtedness. This indicates that while migrants seeking better job opportunities are generally in a position to remit more money to their native place, they also face increased expenditure and indebtedness as a result of migration.

Table No.2
Factors Responsible for Migration and Factors Impacted
Negatively After Migration

Factors Responsible for Migration	<i>Only Yes</i>		Negative Impacts of migration on the financial condition								
	%	N	Y	Increase in Expenditure	Increase in indebtedness	Increase in money remittance to the Native Place	N	%	N	%	N
Better Job Opportunity	93.0	372	Y	76.0	304	53.5	214	79.5	318		
			N	17.0	68	0.5	2	13.5	54		
Improving Quality of Life	81.5	326	Y	68.3	273	48.3	193	68.8	275		
			N	13.3	53	33.3	133	12.8	51		
Indebtness	41.0	164	Y	33.5	134	29.8	119	35.3	141		
			N	7.5	30	11.3	45	5.8	23		
Economic Development	29.3	117	Y	26.0	104	0.3	1	19.5	78		
			N	3.3	13	29.0	116	9.8	39		

Source: *Field Study, 2022*

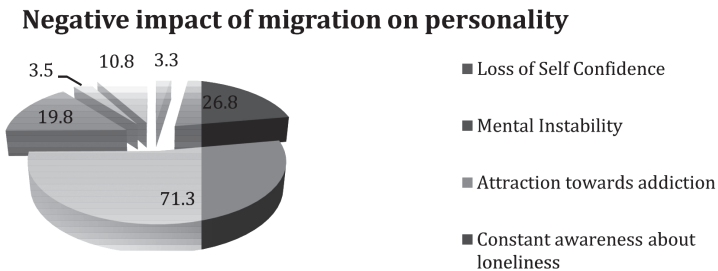
Improving Quality of Life: Eighty-one per cent migrated to improve their quality of life, with 69% reporting an increase in money remittances to their native place after moving to Mumbai. Furthermore, 68% experienced an increase in expenditure, and 48% reported an increase in indebtedness. This suggests that individuals migrating for a better quality of life are financially stable enough to send money home but also face increased expenditure and indebtedness.

Indebtedness: Forty-one per cent migrated due to existing indebtedness. Among these, 35% reported an increase in money remittances to their native place after migrating to Mumbai. Additionally, 33% reported an increase in expenditure, and 30% noted an increase in further indebtedness. This implies that while migrants who initially moved due to debt are in a better financial position to remit money, they continue to experience issues with increased expenditure and further indebtedness.

Economic Development: Twenty-nine per cent of respondents migrated for economic development. Among these, 26% reported an increase in expenditure after migrating to Mumbai, and 19% reported an increase in money remittances to their native place. This indicates that individuals migrating for economic development are financially stable enough to increase their expenditure and remittances, though this stability also comes with increased expenditure.

In summary, individuals who migrated for better job opportunities, to improve their quality of life, or due to existing indebtedness are generally in a financially stable position to remit money to their native place, but also experience increased expenditure and further indebtedness. Conversely, those migrating for economic development primarily face increased expenditure but are still able to remit money home. These observations underscore the major negative impacts of migration on financial conditions.

Graph No. 2



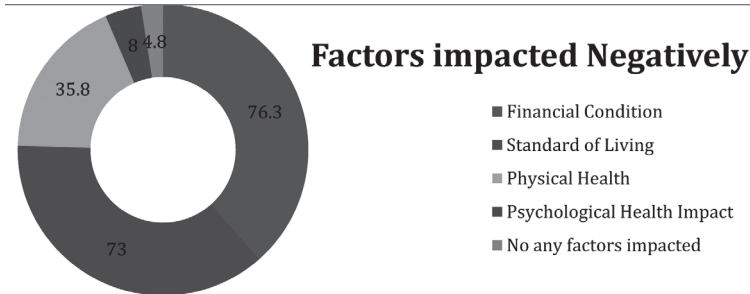
Source: *Field Study, 2022*

Negative impact of migration on personality *Multiple Answer Question Only ‘Yes’*

Graph No. 2 illustrates the adverse effects of migration on the personal lives of migrant youth. The majority, comprising 71%, reported becoming attracted to addiction after migrating to Mumbai. This is followed by 27% who reported experiencing a loss of mental stability. Additionally, 20% reported a constant awareness of loneliness, while only 3% reported a loss of self-confidence. This suggests that the major negative impacts

on the personal lives of migrant youth after migration are attraction to addiction, mental instability, and persistent feelings of loneliness.

Graph No.3 Opinion on factors that negatively impact life due to migration



Source: *Field Study, 2022*

Graph No. 3 highlights the opinions of youth regarding the negative impacts of migration on their lives. The majority, 76%, reported that their financial condition did not improve as a result of migration, leading to a negative impact on their overall well-being. Additionally, 73% noted a decline in their living standards, while 36% reported adverse effects on their physical health. Furthermore, 8% mentioned negative consequences for their psychological health.

In conclusion, migration has had a negative impact on the financial condition of youth, which in turn affects their living standards. This decline in living standards contributes to psychological issues, which are further linked to physical health problems. Financial difficulties create a cycle of poverty, leading to poor living conditions, which adversely affect psychological health and consequently, physical health.

Table No.3
Factors Responsible for Increasing Psychological Problems and the Types of Psychological Problems Faced by Youth

Kind of psychological problems Youth face	Only Yes		Major factors responsible						
	%	N	Separation from family/native place		Exposure to new and unfamiliar city culture		No issue		
			%	N	%	N	%	N	
Difficulty in adjusting to the metro-city environment	78.3	313	Y	71.0	284	64.0	256	0.5	2
			N	7.2	29	14.2	57	77.8	311
Feeling isolated	32.5	130	Y	30.0	120	25.8	103	0.3	1
			N	2.5	10	6.8	27	32.3	129
Anxious	13.8	55	Y	10.3	41	9.3	37	0.3	1
			N	3.5	14	4.5	18	13.5	54
Helplessness	27.8	111	Y	26.0	104	22.3	89	0.3	1
			N	1.8	7	5.5	22	27.5	110
Low self-esteem	11.3	45	Y	10.0	40	7.0	28	0.0	0
			N	1.3	5	4.3	17	11.3	45
No problem/issues-	0.3	1	Y	0.3	1	0.0	0	0.0	0
			N	0.0	0	0.3	1	0.3	1

Source: *Field Study, 2022*

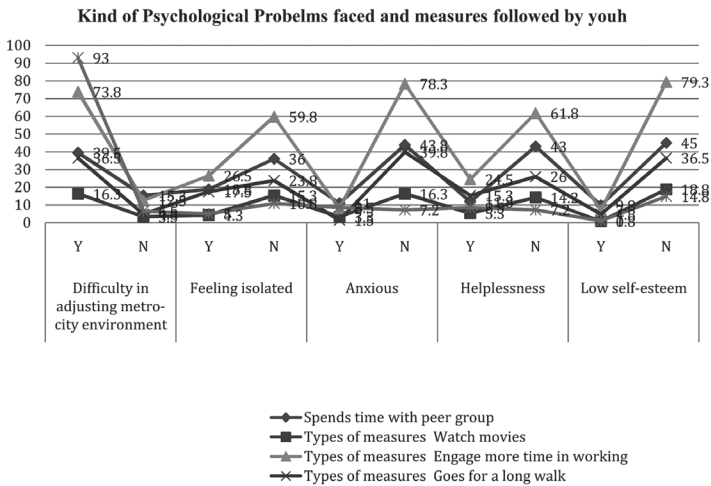
Table No. 3 highlights the primary factors contributing to the increased psychological problems faced by youth after migration. Following migration, a significant majority (78.3%) reported difficulty adjusting to the metro-city environment. Among these, 71% attributed this challenge to separation from family or their native place, while 64% identified exposure to the new and unfamiliar city culture as a major contributing factor.

The second major issue faced by the youth was feelings of isolation (32%). Of those who experienced this, 30% attributed it to separation from family or their native place, and 26% cited exposure to the new and unfamiliar city culture as a major factor.

In terms of feelings of helplessness (29%), the primary factors contributing to increased psychological problems after migration were separation from family or their native place (26%) and exposure to the new and unfamiliar city culture (22%).

In summary, the data indicate that the primary psychological challenges post-migration are difficulties in adjusting to the metro-city environment, feelings of isolation, and helplessness. These challenges are significantly influenced by factors such as separation from family or their native place and exposure to the new and unfamiliar city culture.

Graph No. 4



Source: Field Study 2022

Graph No. 4 illustrates the types of psychological problems faced by youth and the primary factors contributing to the increased psychological challenges following migration. After migration, 78.3% of respondents reported difficulty adjusting to the metro-city environment. Among them, 74% mentioned working more, 39% spending time with their peer group, 36% going for long walks, and 16% watching movies as ways to overcome psychological problems.

The second major problem was a feeling of isolation, reported by 32% of youth. Of these, 60% did not engage in additional work, 36%

did not spend time with their peer group, 24% did not go for long walks, and 15% did not watch movies to alleviate their psychological issues.

Additionally, 28% of respondents reported feelings of helplessness as a major factor contributing to their psychological problems after migration. Among these, 62% did not engage in additional work, 43% did not spend time with their peer group, 26% did not go for long walks, and 14% did not watch movies to address their psychological challenges.

During the Focus Group Discussion (FGD) on entertainment, it was noted that individuals engage in various leisure activities such as resting, washing clothes, or socialising with friends at hotels. They also spend their free time on mobile phones, communicating with friends and relatives, and browsing online. Additionally, some people play cards and drink alcohol for entertainment.

Regarding sexual needs, approximately 10% of single individuals reported visiting sex workers. For married individuals, it was observed that they typically return to their villages every 2 or 3 months to meet their sexual needs. Some unmarried youth are involved in romantic relationships with girlfriends.

Source: *Field Study 2022 FGD Summary*

Table 4
The kind of psychological problems youth face and who they get psychological support from to overcome them.

Kind of psy- chological P r o b l e m s Youth face	Only Yes		From whom do you get psychological support when you have a problem						
	Family mem- bers		Friends		Counsellor of NGOs				
	%	N	%	N	%	N	%	N	
Difficulty in adjusting to the metro-city en- vironment	78.3	313	Y	58.8	235	65.8	263	17.5	70
			N	11.5	46	14.5	58	5.0	20
Feeling isolated	32.5	130	Y	23.3	93	25.8	103	8.5	34
			N	47.0	188	54.5	218	14.0	56

Anxious	13.8	55	Y	4.5	18	8.5	34	2.3	9
			N	65.8	263	71.8	287	20.3	81
Helplessness	27.8	111	Y	20.5	82	20.8	83	12.0	48
			N	49.8	199	59.5	238	10.5	42
Low self-esteem	11.3	45	Y	8.8	35	7.8	31	1.5	6
			N	61.5	246	72.5	290	21.0	84

Source: *Field Study, 2022*

Table No. 4 provides insights into the sources of psychological support available to youth facing various problems. The majority, 78%, identified difficulty adjusting to the metro-city environment as a major issue. Among those experiencing this challenge, 66% reported receiving psychological support from friends, 59% from family members, and 17% from counsellors at NGOs.

The second major problem reported was feelings of isolation, experienced by 32% of the youth. In this situation, 26% stated they received psychological support from friends, 23% from family members, and 8% from counsellors at NGOs.

The third major psychological problem reported was helplessness, affecting 27% of youth. Of those facing this issue, 21% received psychological support from friends, 20% from family members, and 12% from counsellors at NGOs.

Additionally, 14% of the youth reported feeling anxious. During such times, 8.5% stated they received psychological support from friends, 4.5% from family members, and 2.3% from counsellors at NGOs.

Furthermore, during the Focus Group Discussion (FGD) regarding NGO support, all participants affirmed that only one NGO in the area is the sole NGO providing assistance to migrants on health issues. This includes guiding migrants on HIV/AIDS and providing medical support in case of health issues.

Source: *Field Study, 2022 Focus Group Discussion*

Findings

Psychological and Emotional Changes after Migration:

Youth aged 18-21 experienced the highest anxiety about adjustment, while those aged 26-29 reported the most depression, loneliness, and alienation. Anxiety about family was most common in the 22-25 age group, and issues like obstinacy and emotional deprivation were minimal across all age groups.

Psychological Problems and Challenges:

A significant majority of youth (78.3%) struggled with adjusting to the metro-city environment, while 32% felt isolated and 29% experienced helplessness. Additionally, 14% reported anxiety and 11% suffered from low self-esteem post-migration.

Factors Responsible for Migration and Financial Impacts:

The majority of migrants moved for better job opportunities (93%) or to improve their quality of life (81.5%), leading to increased expenditure, indebtedness, and higher money remittances. Those migrating due to existing debt (41%) also faced further financial strain, while migrants seeking economic development (29.3%) experienced increased expenditure and remittances.

Negative Impacts on Personality:

Post-migration, 71% of youth reported being drawn to addiction, 27% experienced a loss of mental stability, and 20% felt persistently lonely. Only 3% reported a loss of self-confidence.

Conclusion

After migration, individuals encounter significant psychological challenges, including difficulties adapting to the metro-city environment, feelings of isolation, and helplessness. Surprisingly, many youths resist commonly recommended coping strategies such as working more, spending time with peers, going for long walks, or watching movies, suggesting a need for further psychological investigation. Typically, sharing concerns with friends and engaging in these activities are effective ways to address such issues, but in this case, youths seem to react negatively to these approaches.

Key findings show that high levels of acculturation stress are linked to increased psychological distress, while social support and community involvement enhance resilience and coping abilities. The study underscores the importance of educational aspirations and mentoring in fostering a sense of belonging and hope among migrant youth. These insights call for targeted interventions to address the specific needs of this population, improve their mental health, and facilitate successful integration into host societies. The implications are crucial for developing policies and support systems aimed at reducing the psychological vulnerabilities of migrant youth.

Recommendations

1. NGOs and both state and national governments should initiate efforts to create a comprehensive database on the psychological vulnerabilities and mental health issues of migrant labourers.
2. Public health facilities should provide psychological and mental health support or establish links with health facilities at the workplace.
3. The Migrant Welfare Board should enhance its outreach efforts to effectively address psychological and mental health issues by utilising the services it offers.
4. Social science research institutions should further investigate this issue to gain a deeper understanding of migration as a phenomenon and explore the potential applications of social work interventions to promote the well-being of migrants.

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Unveiling Narratives: Kashmiri Women Writers and the Transformative Landscape of Feminist Discourses

Dr. Farheen Farid

Introduction

Women's writings have become potent catalysts in Kashmir's rich literary and cultural landscape, transforming feminist discourses and reshaping the contours of women's spaces within the region and igniting revolutionary changes in feminist discourses. The stories penned by Kashmiri women writers have influenced and redefined the collective consciousness in the societal and political spheres and the domains of personal reflection. Through the use of their voices to express experiences, viewpoints, and difficulties specific to their gender within the socio-political context of the region, women from Kashmir have recently carved out a unique niche for themselves in the literary world. These literary works have acted as a prism, reflecting the nuanced realities that women in society experience. They are a fusion of personal narratives with socio-political commentary.

The potential of women's writings to question and undermine ingrained patriarchal systems and conventional norms in Kashmiri society is indicative of their transformational power. Not only have these writers brought attention to the tenacity and agency of Kashmiri women, but they have also revolutionised feminist discourse by taking on subjects like social evils, gender-based violence, and conflict. Through textual expression, they have elevated the diverse roles fulfilled by women, surpassing the restrictive narratives enforced by cultural norms.

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Additionally, within the more extensive sociological and literary traditions of Kashmir, the contributions made by them have been crucial in establishing a unique place for women. These writings have become a means of reclaiming narratives, providing a platform for unheard voices, and fostering a sense of solidarity among women in the region. The establishment of this women's space has not only extended beyond the pages of literature, but it has also influenced other areas of life, helping Kashmir's gender dynamics to change over time gradually.

Overall, Kashmiri women's writings have emerged as a force to be reckoned with, upending stereotypes and encouraging a more complex understanding of women's lives in the area. These women have created venues that empower and elevate women's voices in Kashmiri culture through their creative expressions, adding to the richness of the region's literary heritage while acting as change agents.

Women's Voices in Literature

“To find a voice (voix) is to find a way (voie)”
(Lanser 1992: 3).

The term ‘voice’ is a metaphor for the ability to speak up and to be heard. As an expression of individuality and a symbol of power and autonomy, it is necessary to give people with less privilege a voice and a platform to express themselves. As a result, speaking out is essential to advocating for one's rights and advancing collective interests. For women, their writings and the urge to publish them are “a quest for discursive authority: a quest to be heard, respected, and believed, a hope of influence” (Lanser 1992: 7). Such efforts threaten all the ingrained mechanisms that keep marginalised voices from being heard. Power relations produce complicated customs that influence women's writings and narrative structures (Lanser 1992: 14). However, their writings also show a desire to rebel against those established conventions and break free from them.

Literature reflects and has the power to shape a society's values, beliefs, worldviews, and attitudes. As such, it provides an understanding of the historical and sociocultural setting in which it was created. Literary texts provide insights into people's experiences of love, conflict, goals, dreams, anxieties, and social injustice. It can also show how privilege and power are distributed in society and how underprivileged groups have failed to receive acknowledgement or a voice. Additionally, it helps

reveal power abuses, injustices, and inequality in society and culture (Martinez and Rubenstein 2016: 208–24). In addition to bringing about beneficial change, literature can substantially impact society by upending pre-existing conventions and beliefs, encouraging critical thought and discussion, and motivating action. Literature is a vital platform for women to express their experiences and concerns whenever they have been denied access to public discourse. Through their protagonists and storytelling styles, they establish themselves as authorities. As a result, according to Lanser (1992: 11), “women’s language becomes a calculated response to alienation and censorship.”

Women’s voices in the literature provide a space of representation for women and challenge their misrepresentations. In order to better comprehend the women’s question in Kashmir, Kashmiri women use literature to share their viewpoints, dispel prejudices, and further our knowledge of women’s lives via their experiences and stories. Women’s voices through written expression have the power to spur societal change as well. Their writings reflect the shifting poetics of resistance in Kashmir. Studying literary works of women offers insight into women’s perspectives, roles in social development, intellectual prowess, and cultural contributions. According to Adrienne Rich, “when women write their language, they write their silence, is a paradox which has provided a powerful slogan for women writers (McKluskie 1983: 53).

Unquestionably, women’s works reflect the realities of women’s lives and challenge the established canon. Despite women’s extreme difficulties, they demonstrate perseverance in their work by expressing the fleeting setbacks and hopes they experience daily and the long-lasting impacts of conflict on their lives. They portray the intersections of conflict, gender, and identity powerfully. According to Bhikhu Parekh (2008: 33-34):

Women not only have interests and needs, which others might be able to articulate for them, but also their place in society, and they should speak for themselves and their voice. This establishes them as a distinct and self-determining social subject capable of actively shaping society and its culture. Their identity gives them a distant reference point, perspective, and sphere. It also provides a common ground where they can meet as women to share their experiences, articulate their common concerns, arrive at a view of the kind of society they want and the best way to promote it, and ways to raise their level of self-consciousness.

Their gender identity enables them to ask how women viewed themselves in the past, link up with the struggles and experiences of those women, and construct an inspiring historical narrative. The collective of self-consciousness and the sense of solidarity this generates give women's identity a historical and cultural depth and reinforce their sense of subjecthood. It recovers their privatised and semi-forgotten experiences, makes this part of the society's shared collective memory, and opens up vistas that would otherwise remain obscure and unexplored.

When viewed through the prism of New Historicism, the literary works of Kashmiri women expose and contest the dominant societal ideals and power structures. It also emphasises how literature and history are interrelated and demonstrates that texts of all kinds are both products and elements of social and political institutions (Brannigan 1998: 3). Since they bridge political, social, and cultural forms, their texts operate as political vehicles. Their writings also function as literature of resistance, challenging and opposing established conventions, ideologies, and forces. Resistance literature seeks to highlight and combat the injustices and inequalities that exist in society. The celebration and affirmation of minority identities and experiences are often seen as characteristics of resistance writing. Additionally, resistance literature views itself as a direct and immediate opponent of prevailing ideologies and cultural production processes (Harlow 1987: 28–29). In this light, Kashmiri women's writings establish an arena for cultural opposition. Their stories serve as a coordinated and collective response against hegemony and tyranny. Furthermore, they are stores of traditions; these traditions, representing a sense of shared history and conflicts, include their dreams and concerns.

The oppressed and marginalised cannot speak within the power structures due to a lack of representation and communication disparities, according to Gayatri Spivak's work "Can the Subaltern Speak?" Dominant discourse silences and excludes subaltern voices. Spivak's work emphasises the necessity for new forums where various groups can converse and contest prevailing narratives (Morris 2010: 66–111). In this context, the writings of Kashmiri women become a valuable resource for understanding their struggles and experiences. However, they also catalyse these women to rebel against their marginalisation and oppression by charting their own path and departing from prevailing customs and cultures.

Elaine Showalter's approach to literary criticism is centred on the writing styles and works of women in order to comprehend how they both created and consumed literature. In *Feminist Critique*, she discusses how stereotypes about women have been perpetuated via literature by depicting female characters following social norms. However, she thinks that female readers can alter how literature is read by rejecting the historical narrative, rereading the codes that exploit and degrade women, and being aware of female sexual codes, which can help them read a text differently and derive different meanings. Women's writings are significant components of their reality; the theory's premise is to analyse women's literature using a framework solely based on female tradition to read female experiences and disprove masculine hypotheses (1984: 29–43). This is how women's writings from Kashmir can also be situated within the canon of literature.

Men's and women's memories function differently in maintaining their identities, which is reflected in how women's literature portrays characters and narrative processes (Gardiner 1981: 358). Women often remember details that men purposefully ignore or downplay. The complicated relationship between gender hierarchy and women's suffering—a theme that extends beyond the current male-dominated literary discourse—unites these works by Kashmiri women. Women writers inspire other women to look for and discover their voices.

The majority of Kashmiri literature has consistently downplayed or concealed women's experiences and presence. Earlier works by women writers were about socio-political issues, and when they talked about women, in many instances, works were presented as part of a committed literature that was socially conscious but male-dominated (Mohi-ud-din 1977). There was a massive void after them, and Kashmiri women writers were either not writing at all or many were not getting published, even though many early poets like Lal Ded, Habba Khatoon, Rupa Bhawani, Arnimaal, and many others wrote extensively on their personal experiences and social issues (Mattoo 2019). A handful of the writings by female authors became widely accessible for reading after the 1950s. Their writings primarily addressed gender-related concerns and sociocultural facets of Kashmiri society. Early prose writers included Taj Begum Renzu and Shamla Mufti. Renzu published a weekly Kashmiri newspaper in the 1970s named *Koshur Akhbar* (*A Kashmiri Newspaper*). In the late 1990s, when the political climate in the valley was unstable, and women were being abused, activist

Atiqa Bano launched a monthly publication that she named *Miraas* (Kaul 1957). The paucity of female writers is a reflection of Kashmiri women's marginal status and notable exclusion from both the global community of women's voices and the literary canon.

Since they have included fresh vocabulary and symbols that accurately capture Kashmiri life and culture in their writing, contemporary women writers from the region have made significant contributions to this changing literary scene. However, even with their noteworthy contributions, more Kashmiri women's voices still need to be included in the canon of literature. Their works provide a deeper awareness of the many obstacles and victories women confront by providing insights into the feelings, struggles, and day-to-day realities that women face. In conflict-affected areas like Kashmir, women's writing often incorporates the idea of "Double Narration." With this storytelling technique, two connected storylines are addressed by female writers simultaneously. They examine the many facets of conflict, including its causes, effects, and the perspectives of those impacted personally and collectively. On the other hand, they also delve into the unique and often complex experiences of being a woman in a society grappling with conflict. These dual narratives manifest in various ways within their stories, settings, and writing styles.

Redefining Identity and Agency in Kashmiri Women's Writings

Feminist theorists assert that the personal is political, implying that political structures already in place influence and are transformed by subjective experience. Additionally, it has tried to investigate how individual behaviours carry out and duplicate political and cultural systems (Butler 1988: 522). For women in Kashmir, culture is that aspect of society with intricate and nuanced relationships to their freedom, rights, and interests. Cultural standards that have been established are rife with attitudes and customs that subjugate women and further patriarchal agendas. A gendered identity is thus "in no way a stable identity or locus of agency from which various acts proceed; rather, it is an identity tenuously constituted in time - an identity instituted through a stylized repetition of acts," according to Simone de Beauvoir, who asserts that "one is not born, but, rather, becomes a woman" (Butler 1988: 519). Furthermore, gender must be interpreted as the everyday ways in which physical gestures, movements, and enactments of all

types create the appearance of a persistently gendered self since gender is established through body stylisation.

Numerous narratives originating from Kashmir depict women as weak, docile, and passive victims of sexual abuse, with their identity solely depicted in relation to their duties as spouses, mothers, and daughters in society. However, women writers also subvert this idea via their stories, forging their paths and claiming spaces in the context of the patriarchal structure and conflict. It is critical to comprehend how women participate in conflict as front-line workers and players, what drives them to persevere, rebel, and speak up, and how challenging it is to carve out a place for themselves within this larger framework. The circumstances in Kashmir made mothers honour their dead or missing sons and made widows and half-widows take on the role of the men who had disappeared from their lives by putting in much effort to provide for their families. The conflict also taught the valley's women to defend themselves by banding together during raids, to avoid sexual harassment, to fight for justice, and to handle the negative impacts of conflict on their relationships, careers, and personal lives. Additionally, it gave them a chance to challenge patriarchy, resist conflict and advocate for a free space to talk about their experiences as women.

These writers use diverse genres, employ many plots, and portray a variety of characters to tell their own versions of the Kashmir conflict that place women firmly at the centre. Through the presentation of distinct stories set against a dynamic historical, socio-political, and literary context, the writers want to represent a range of voices and viewpoints via fiction, memoirs, and poetry. Despite all the constraints that conflict and patriarchy impose on them, these women offer a multitude of expressions to convey their message of resilience, strength, and courage. Contrary to conventional literature in Kashmir that largely ignores women and gender issues, these writings by women also emphasise the importance of gender in understanding the Kashmir conflict and discussing its resolution prospects. Collectively, they also challenge stereotypes about Kashmiri women in unique ways.

These Kashmiri women poets and authors address female autonomy, individualism, and self-affirmation issues. They try to shed some light on how different social institutions determine and give identities to people. Women's questions are discussed in conjunction with socio-political and cultural aspects. In addition to describing the harsh reality of Kashmiri women's lives, their writings also beautifully convey their

sincere wish for peace. Women's experiences are categorised in these works based on the pivotal moments in Kashmir's political history. Young girls' perspectives are emphasised differently from those of their mothers and grandmothers. Their shared experiences of conflict, the inflexible patriarchal systems and their resilience are the only things that unify them.

Essentially, literature becomes a medium for exposing the hidden dynamics of society. The unique strength of literature is its capacity to portray human emotions in various chronological and spatial circumstances, from love and dreams to fears and aspirations. A crucial role of literature is to highlight the dynamics of power and powerlessness within society. Exploring issues related to social justice, inequality, and systemic oppression, it sheds light on why certain groups may be marginalised or voiceless. Women's lives are represented in all aspects of these women's writings from Kashmir, both within and outside of the spaces they inhabit. Nonetheless, the writings provide an understanding of the type of life that many women lead in the valley.

Understanding female identity is essential to comprehending modern writing by women. The idea of identity can help explain why men and women approach writing differently because it encompasses a variety of factors. When identity theory is applied to Nancy Chodorow's psychoanalytic discoveries, it is found that every facet of a woman's experience is different from a man's in terms of how males define identity (Gardiner 1981: 349). According to Chodorow, since social structures influence psychological processes and help shape an individual's identity, the emphasis should be on comprehending these structures. Her analysis indicates that gender variations in personality are historically variable rather than biological (Gardiner 1981: 352). Women writers express their sense of identity by exalting paradoxes of sameness and difference, through comparison with other women, with men, and with socially prescribed roles for women, such as those derived from literary canons. It is common for women's writing to differ from the generic structure of men's writing (Gardiner 1981: 355). Women typically approach texts in a different way than men do, both as authors and readers. Women writers recreate the female experience in a variety of ways. Their determination to live in the face of overwhelming adversity is a recurring theme in their writing. The texts emphasise women's emotions, sentiments, assertions, diversity of experiences, and opinions on Kashmir's conflict, patriarchy, and political

climate. Throughout these narratives, the authors express their struggles for identity and resistance to oppression. Their writings aim to liberate women by tearing down the walls that confine them.

Women writers from Kashmir have produced literary works sensitive to women's concerns. In addition to talking about the female 'self' and feelings, they also place the experiences of their female protagonists in the context of their social realities. Most of the characters are intelligent and conscious of their surroundings. They are aware of how national and political concerns affect them personally. As they are aware of their histories, they wish to pass them on to future generations. Through their writings, Kashmiri women writers have attempted to convey, without giving in to orientalist tropes, the realities of marginalisation, hardships, and oppression that Kashmiri women face. They question and highlight the ways that female bodies are depicted, being patronised and owned by men, and chart their suffering because of the values of honour attached to them. Their works critique the social reality in which the expectations and attitudes of a patriarchal society, attitudes about women's bodies, stereotypical perspectives, and the pervasive male gaze weigh down the female "self." These authors use various strategic narratives to disseminate their ideas about female identity and propose new ways of thinking about women through their heroines. Many stories have an allegorical element, and the female characters highlight the complexity of women's experiences.

Through her work, *Tearful Pages* (2016), Azra Mufti speaks out against misogyny and patriarchy while discussing everyday experiences. The narrator used to believe that life was beautiful and that she could fulfil her dreams in this haven. However, it was a massive blow when she discovered the burden of customs and conventions that limited her ability to fly above the predetermined bounds. According to her, women can only truly be freed when society recognises them for who they are—individuals with distinct talents and abilities who are not the family's property and are capable of supporting themselves. In her collection of poems, Sairah Rasheed discusses how her ability to maintain patience and optimism made her a beautiful person. Her struggles were what gave her strength and fortitude. Her closing line, "I embraced my share of calamity, / Found I peace in my agony," perfectly captures the essence of her poetry collection (2016: 10). She views "Autumn" as "the phase of action" and a season "that bears fruits of satisfaction" rather than as a time of death and decay (2016: 27).

In *Neither a Shadow Nor a Reflection* (2017), Naseem Shafaie discusses women's assertiveness, identity, and individuality. Her writings express her desire to claim her identity by rejecting all the descriptors society had applied to her. She objects to the terms "shadow" and "reflection" connected to her. As a free individual, she is neither a shadow nor a reflection, but rather a powerful entity capable of asserting herself. She attempts "to awaken the societal sensibilities and hopefully pave the way for a new beginning" (2017: viii), stepping outside the strict limits set by society. She criticises how the idea has been instilled in women to view the world and themselves through the lens of men. The following lines are an example of how women are lured into blindly following and believing what men want them to and Shafaie wants them to look beyond those words, she says, "sold at the shop of Adam / with deceit he has been selling from eternity, / and from eternity you have been the buyer, / at the cost of your life" (2017: 27). Shafaie wants women to see past the words which exemplify how women are tricked into mindlessly adhering to and believing what men want them to.

Throughout *Lost in Terror* (2016), Nayeema Mahjoor portrays a woman caught between the forces of the outside world and the forces within. The story revolves around her struggle to survive in the midst of conflict in Kashmir. The plot of *Lost in Terror* centres on a working woman who sees changes in her daily life as the violence progressively seeps into Kashmir's streets, residences, and hearts. In her memoir, *Rumours of Spring: A Girlhood in Kashmir* (2021), Farah Bahir sheds light on some of the conventional roles played at home by men and women. The gendered roles were consciously or subconsciously perceived as final and inflexible through simple actions, such as her mother cooking food and her father just sitting and not contributing to the household chores. In her poem "Odd Girl Out," Sairah Rasheed writes about how others criticise her for being who she truly is. It took her a very long time to have the confidence to face the world and not let other people's opinions stop her. Many saw her as a strange girl because she lived her life on her terms and disregarded their rules. Her declaration of independence, refusal to live within socially prescribed boundaries, and openness about her sentiments alarmed them. She questioned the strict system of inequities in place and showed little regard for hierarchy as she writes:

*People sentence; the eccentric, odd girl out,
Judges, are they? I doubt.*

*Took so long, so much,
To become a stone-hearted hunch.
Took countless tears tending infinity,
Drying my eyes completely.
Now I have no masks to wear,
This straightforward act, people fear. (Rasheed 2019: 2)*

In many works, writers describe the unhappiness caused by daughters and a desire for male heirs as a major theme running across narratives from Kashmir. In her work, Sairah Rasheed describes the birth of a girl who was not embraced happily by her family. She was viewed as the family's symbol of misfortune and a curse (Rasheed 2019: 5). In *Beyond Silence: Women's Stories*, the narrator describes how girls around her were called ugly and were made to feel unwanted (Mahjoor 2022: 12). Mahjoor introduces the character of Malmasa to highlight the patriarchal beliefs of Kashmiri society, where women were considered pious if they suffered in silence without speaking. Malmasa is not happy with how outspoken the women of Kashmir have become.

In her poem "A Wanton Fury," Syeda Afshana discusses the significance of her "scream," which is her only defence and a powerful symbol of strength that can resonate beyond boundaries and across the heavens. In her scream, she finds her voice and knows her worth. This, for her, is the weapon whose power is unsurpassed. (Afshana 2013: 27). In *The Fugitive Sunshine*, Afshana describes how, despite all that life had to offer—including the hardships of being a woman and residing in a conflict area like Kashmir—she never gave up. Through her poetry, she expresses her will to carry on despite seeing the light turn to darkness, cradles change into coffins before her eyes, passing through abandoned buildings that once held a large population, and walking down thorny paths. She did not stray from her path, leaving her mark as blood drops for others to follow so they would not get lost.

As Sairah Rasheed puts it, "Over the horizon, has she the rebirth, / rises from ashes, a figure of worth" (2019: 13), she speaks of how her experiences have empowered her and made her much more robust over the years, even though her oppressors had turned her to dust. She has risen out of her ashes, much like a phoenix. Similarly, Sumairah Sultan conquers her worries and travels over "the endless cosmos" and rips "through the dismal clouds" after seeing a bird soar high into the far distances and attempting to learn her secrets for never giving up and

being committed to reaching heights (2020: 25). She is resolved to stay put, fly through the heavy clouds, and, at the end, kiss the sunshine because she finds inspiration in the little bird's journey. She writes:

*To meet the gleaned sun shines
whirling, a bit trembling
You kiss your end
And thrill with pride for
What you have done. (Sultan 2020: 25)*

Likewise, after being rendered blind by pellets, Muskaan, the young girl from *A Flash of Hope* (2019), never gives up on her goals and finishes schooling. In Farah Bashir's (2021) memoir, the two sisters have mastered soothing one another to sleep during search operations at night. Despite being caught in a vicious cycle of despair and uncertain situations, the protagonist of *Lost in Terror* (2016) raised a vegetable garden that attracted people from around the neighbourhood. The garden was a haven of hope and faith, where people could gather, find inspiration to keep trying to improve their lives, and take a break from their ordinary lives, wherein they shared their joys and learned to face hardships together. In a similar vein, the narratives of mothers and daughters featured in these literary writings highlight the subtleties of their relationships while offering insight into these women's diverse and individual experiences. Kashmiri women's individual experiences are intricately entwined with the turbulent political environment in which they occur, making them impossible to read in isolation. For instance, in Naseem Shafaie's (2017) poems, daughters take great satisfaction in displaying the bruises on their bodies, which are a testament to the experiences their mothers and grandmothers shared with them that have imbued the same bravery and tenacity in them.

In conclusion, Kashmiri women writers have woven intricate narratives that transcend the pages of literature, leaving a lasting impression on the region's socio-cultural landscape. Their transformative influence on feminist discourses, social dynamics, and literary traditions demonstrates their resilience and agency. They have not only challenged established norms but also become architects of a paradigm shift in feminist discourse by courageously addressing issues like conflict and patriarchy. As well as providing a powerful platform for marginalised voices and fostering solidarity, their writings have played a pivotal role in creating a distinct women's space. It is through the literary

contributions of Kashmiri women that narratives and lived experiences continue to develop, contributing to the evolution of gender dynamics in the region.

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A Study on Unraveling Climate-Induced Soil Degradation in the Sundarbans Coastal Belt India

Tanmoy Mondal* and Dr. Biplab Tripathy**

Introduction

The Sundarbans, spanning parts of India and Bangladesh, are ecologically fragile and highly sensitive to climate variability. Climate change is a long-term shift or alteration in the climatic regime of a region or the entire world, leading to natural hazards and changes in human activity. Climate change has emerged as a significant and alarming factor that exacerbates the potential for natural disasters in India (Mondal et al., 2023). Coastal areas of the world are the most vulnerable regions due to climate change. The local people, who live near the coastal areas, are suffering from the sea-level rise and extreme weather events, also vulnerable due to poor socioeconomic conditions (Datta et al., 2023). The Indian Sundarbans is considered one of the most vulnerable zones in the world in terms of climate change (L. Das et al., 2023). Several geomorphological and geo-hydrological factors have made the region highly vulnerable due to storm surges and severe floods caused by climate change (Chaudhuri et al., 2021). The Indian Sundarbans, a vast deltaic region located on the coastline of the Bay of Bengal with a complex network system of mangrove forests, tidal rivers, estuaries, and rich biodiversity, which experiences significant impacts of climate change (Sánchez-Triana et al., 2016).

The region is facing several water-related threats due to the impacts of climate change, which is a severe challenge for endangering the ecological integrity of the area and also the livelihoods, about 4.43 million people (Datta et al., 2023). The impact of climate change could

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hinder development and delay the processes in social and environmental conditions in these areas (Haldar & Debnath, 2014).

Climate is one of the major factors of soil formation, along with other factors like parent material, organisms, time, and relief. Temperature and moisture of climatic variables influence on chemical, physical, and biological processes in soil formation. Due to the climate, soil develops faster in warm areas and more slowly in cold areas. According to Vasily Dokuchaev (1883) Russian geologist, soil formation occurs over time under the influence of climate, vegetation, topography, and parent material, and he developed the soil forming equation in 1898. ("Wikipedia," 2025)

$$S = f(cl, o, p) t_r$$

Where, cl or c = climate, o = biological processes, p = parent material, t_r = relative time (young, mature, old)

Another soil scientist, *Hans Jenny* (1941), stated an equation for the factors of soil formation. (*Jeffrey, 1987*) geomorphology and geochemistry. In the present context of understanding how soils form, the state factor equation of Jenny (1941).

$$S = f(cl, o, r, p, t, \dots)$$

(where: S = soil formation, cl = Climate, o = Organisms, r = Relief or topography, p = Parent material, t = Time)

The soil of Sundarbans mainly consists of various organic and inorganic materials, including sand, silt, and mud. The soil of the Sundarbans region consists of 5% sand, 90% silt, and 5% mud. River-borne sediments, tidal water-borne sediments have played an important role in the formation of Sundarbans soils. The organic matter in the soil of Sundarbans consists of various plant and animal parts. Plant leaves, flowers, and fruits are decomposed by soil microorganisms, and a large amount of inorganic matter is added to the soil. Thus, essential elements like nitrogen, phosphate, calcium, potash, organic carbon, etc. return to the soil through geo-biochemical processes. According to the chemical nature, four types of soil are generally seen in the Sundarbans, namely: 1. Saline Soil, 2. Non-Saline Soil, 3. Alkaline soil and 4. Degraded Alkaline Soil (P. K. Mandal, 2024).

The intensity of natural hazards in the Indian Sundarbans delta (ISD) has increased, which is why it faces several challenges. Due to rising levels, deltas are disappearing, and the increasing salinity in the

water and soil has severely threatened the health of mangrove forests, the quality of soil, and crops. Simultaneously, frequent cyclones and erratic monsoon rain patterns are damaging ecology and humanity in the Sundarbans region. (Mahadevia Ghimire & Vikas, 2012). The Indian Sundarbans region is also experiencing rising sea levels, rising salinization, and waterlogging in many islands due to climate change. The changing of the monsoon pattern has caused frequent droughts and floods in the region. The rate of sea-level rise in the Sundarbans is 2.2 mm per year in comparison to the global average of 1 mm per year due to climate change (G. K. Das, 2022). The Sundarbans are under threat from climate change, along with a combination of natural factors and human actions. Sundarbans inhabitants have faced climate-induced displacement for decades. Lohachara was one of the first inhabited islands to disappear under the sea in 1996 (PTI, 2024). So, due to climate change Sundarbans coastal region faces various impacts like sea level changes, salinization of fresh water sources, frequent occurrences of destructive cyclones, increased variability of monsoonal rains and temperature conditions, fall in groundwater levels, crop losses, change in agricultural patterns, and increased pests.

Climate change is expected to lead to an increase in soil erosion. (Eekhout & de Vente, 2022) In a different region in India. Climate change most likely causes an increase in infiltration excess surface runoff, promoting rill and (ephemeral) gully erosion. Soil erosion is one of the main causes of land degradation, which affects the fertile topsoil in the Sundarbans region. The real problem of soil erosion from the increase in water levels due to climate change in the 53 islands of the Sundarbans. According to satellite data analysis by the ISRO report that from 2004 to 2014, 9,990 hectares of land mass in the Sundarbans delta had been lost due to erosion (Ray Kumar, 2019). Many people have lost their cultivable land due to soil erosion, and the remaining land is used for the cultivation of betel leaves and rice. During the monsoon season, saline water enters the fields, making it difficult to cultivate this region. Soil erosion has forced the people to move elsewhere permanently from Ghoramara, Sagar Island in the Sundarbans region. Due to soil erosion, the Lohachara and Khasimara were swallowed by the saline water due to climate change. Due to salinisation of rivers and groundwater decline, the availability of fresh water.

Objectives

The objective of this study

1. To show the major indicators and impacts of climate change
2. To identify the key climate-induced factors contributing to soil degradation in the Sundarbans.

Methods & Materials

To analyze climatic variation and extreme weather situations, the mean monthly temperature and rainfall data over the past 35 years (1989–2023) were collected from NASA. The annual Cyclonic Data collected from the IMD and the MDPI Research Paper. Data for the sea level (1948–2012) of Diamond Harbour (near Sagar) were obtained from the National Oceanography Centre. Data related to river water salinity was collected from the World Bank organization, and other data were collected from various types of journals. The study area map was prepared in QGIS.

Details of the Study Area

The Sundarbans mangrove forest area is one of the largest forests in the world, which is situated near the coast of the Bay of Bengal. Sundarbans deltas are formed by the confluence of the Ganga, Brahmaputra, and Meghna rivers. It comprises closed and open mangrove forests, which are covered by the complex tidal river network. The name of ‘Sundarbans’ comes from the ‘Sundari’ tree, which is the dominant tree of this forest area. UNESCO announced it as a World Heritage site in the year 1987. It lies between 21°27′30″, 22°30′00″ N latitude and 89°02′00″, 90°00′00″ E longitude. The Sundarbans mangrove forest covers an area of about 10,000 km² in India and Bangladesh, 60% of this forest is covered in Bangladesh, and 40% in India, which is near about 4,000 sq. km. According to main mainland of India, only 0.12 % covered by the Sundarbans area. The land area occupies 70% and water bodies occupy 30% in the Sundarbans region (UNESCO, n.d.).

The human population in the Sundarbans increased rapidly, especially following the partition of India and Bangladesh. About 4.5 million people live in Indian Sundarbans area. The people of Sundarbans area are dependent upon the natural resource for their livelihood. Fishing, Cultivation, and forestry is the main occupation the people who lived in the Sundarbans area.

Location of Sundarbans in India

The Sundarbans area is located in South 24 Parganas and North 24 Parganas of West Bengal, India. This area is the eastern part of India where the Ganga River joins the Bay of Bengal. The Indian Sundarbans region occupies 4,200 sq. km of reserved forest along with 5,400 sq. km of non-forest area, that's a total 9600 sq. km and only 2585 sq. km for tiger reserve. The Indian Sundarbans spread over about 21°40'04", 22°09'21" N latitude, and 88°01'56", 89°06'01" E longitude. Sundarbans covers 6 administrative blocks of North 24 Parganas and 13 administrative blocks of South 24 Parganas. (Mondal & Tripathy, 2022).

The entire area is a conglomeration of river channels, creeks, and islands, which total about 102 in number. Of these, 54 islands are inhabited, and the rest 48 islands are forested. (Mahadevia Ghimire & Vikas, 2012). The table no of 1 & 2 show the total block with the area of the Sundarbans region.

Table No 1. Block of North 24 Parganas:

Block	Area (sq km)
Haroa	152.8
Hasnabad	155.4
Hingaljanj	230.4
Minakhan	157.1
Sandeshkhali-1	181.2
Sandeshkhali-2	197.27
Total	1074.17

Source: Department of Sundarbans Affairs, Government of West Bengal.

<https://www.Sundarbansaffairswb.in/>

Table No 2. Block of South 24 Parganas:

Block	Area (sq km)
Canning-I	187.9
Canning-II	214.9
Mathurapur-I	147.3
Mathurapur-II	227.4

Joynagar-I	131
Joynagar-II	186.2
Kultali	306.2
Basanti	404.2
Gosaba	296.4
Kakdwip	252.7
Sagar	282.1
Namkhana	370.6
Pathar Pratima	484.5
Total	3491.4

Source: Department of Sundarbans Affairs, Government of West Bengal.
<https://www.Sundarbansaffairswb.in/>

Near about 1074.17 sq. km in North 24 parganas and approximately 3491.4 sq. km in south 24 parganas of West Bengal lying Sundarbans area in India. Maximum part of South 24 Parganas occupied the Sundarbans area, where a total 9,960 sq. km land in South 24 Parganas of West Bengal (Mondal & Tripathy, 2022). The fig no 1 show the location map of Sundarbans.

LOCATION MAP OF SUNDARBANS

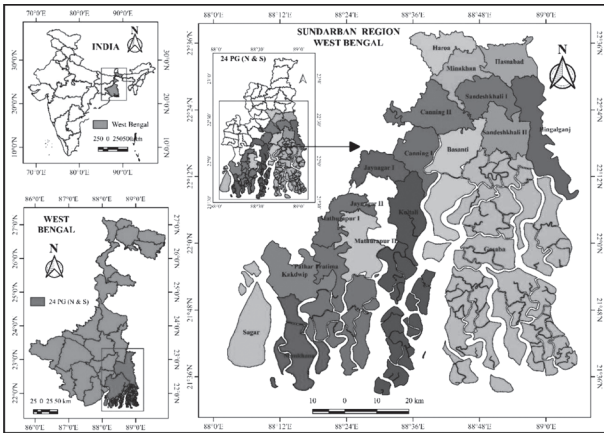


Fig No 1. Location map of Sundarbans.

Result & Discussion

Major Indicators and Impact of Climate Change

● *Increasing Temperatures*

The trend of the global warming impact on the Indian Sundarbans (Chakraborty et al., n.d.). Due to climate change, the daily maximum temperature and annual count of summer days are increasing, and the percentage of winter season is decreasing in the Sundarbans region. The temperature has risen 6.14% in the western sector and 6.12% in the eastern sector of the coastal Sundarbans over the past 27 years. (Mitra et al., 2009).

The temperature near Gosaba (fig 2) has increase 1.51°C from 1989 to 2023 and in Sagar Island (fig no 3) the temperature 1.26°C from 1989 to 2023. From 2022 to 2023 the temperature increased 1.71°C (fig no 2) and 1.26 (fig no 3) in the Sundarbans region. The fig no 2 & 3 show that an increase of temperature and climate change have a positive relation in the Sundarbans region.

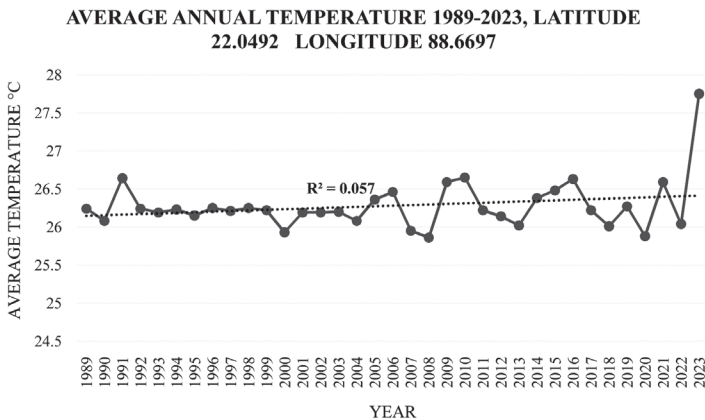


Fig No: 2. Temperature graph (Near Gosaba), Source: <https://power.larc.nasa.gov/data-access-viewer/>

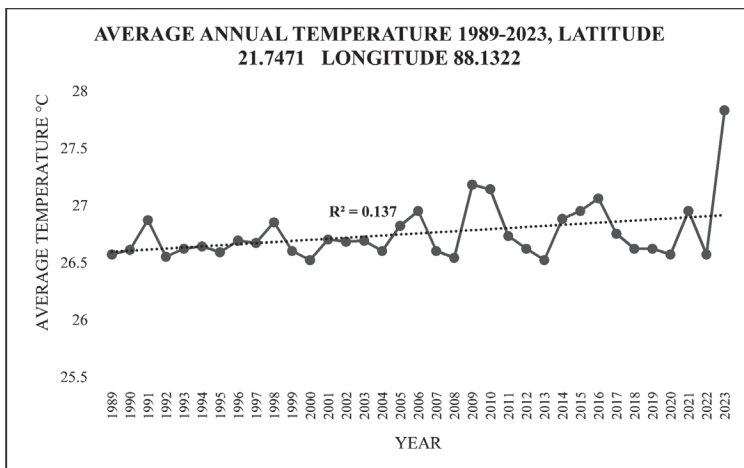


Fig No.: 3. Temperature graph (Sagar Island), Source: <https://power.larc.nasa.gov/data-access-viewer/>

Between 1989 to 2023, it has been observed that the temperature of Sagar Island has increased by 1.26°C and near Gosaba has increased by 0.51°C per year in the Sundarbans region, so in Sagar Island, the temperature has increased more than in the Gosaba area. This accelerated increase in temperature impact on aquatic life, groundwater, sea surface temperature, mangrove ecosystems and also its greatly impact on the economic activity of the Sundarbans area.

- **Sea level rise**

Sea-level rise due to climate change is a major threat to the biodiversity and fragile ecosystem of the coastal belt of the Sundarbans. (G. K. Das, 2022). Due to sea level rise (SLR), the total area of the Sundarbans had shrunk by 210 km² since 1967, and by 451 km² since 1904. The average of three centimetres of sea level has risen over the past twenty years, and the area has lost almost 12% of its shoreline (Briefing, 2022). Rapidly, the sea level of the Sundarbans coastal area is rising. According to tide gauge records of the Sundarbans region confirm that, the annual mean sea level is rising. Climate change-induced sea-level rise will be 88 cm and is expected to reduce biodiverse areas from 60% to 30% in the year 2100 (Jabir et al., 2021). The rate of relative sea level rise is

presently approaching 3.14 mm per year near Sagar Island. (Raha et al., 2013). The relative sea level rise of the Sundarbans delta is more intense than some other large deltas of the world. (Gibson et al., 1993).

The fig 4 show that the sea level increases due to climate change. Sea level at Dimond Harbour near Sagar Island in India has been recorded as higher due to cause of climate change. The Sen’s slope indicated that the rate of sea level changes for four stations, Diamond Harbour, Garden Reach, Haldia and Gangra in the Hugli estuary. (U. K. Mandal et al., 2018). The observation from the graph (fig 4) it is clear that the sea level is rising rapidly in the Sundarbans region. The analysis of tide gauge records, it is confirms that the annual mean sea level around the Sundarbans region is rising. (Jabir et al., 2021). It is a great threat of coastal erosion and permanent inundation in ISD. Climate change introduces sea level increase, expected to reduce biodiversity shortly in the Sundarbans region.

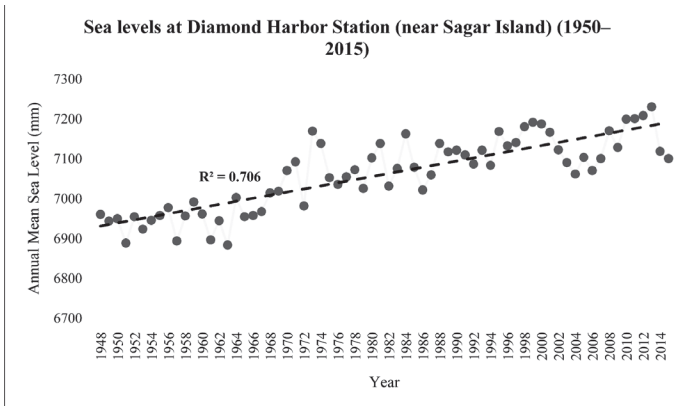


Fig No: 4. The sea levels at Diamond Harbour Station. Source: <https://psmsl.org/data/obtaining/stations/543.php>

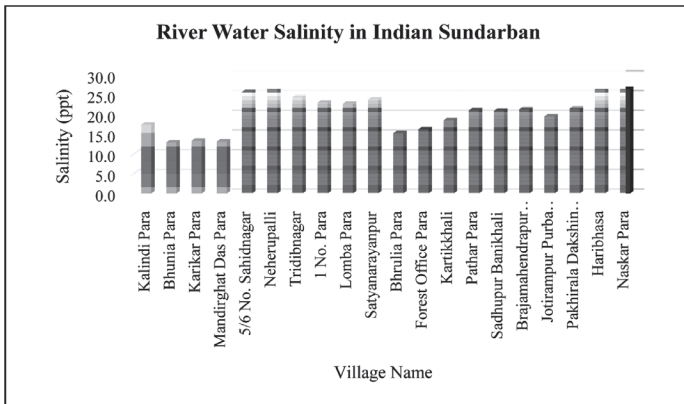
- **Increased salinity**

Increased salinity, causing land degradation and negatively impacting the sustainable development in the Sundarbans area. The intersection of salinity, effect on agriculture, women’s health, local economy and also effect on family systems. Increasing salinity has also led to a severely degraded mangrove ecosystem, affecting biodiversity and loss of forest reserves, which sustain local communities.

Saline water will gradually intrude into the coastal hinterland, which will reduce freshwater availability. Salinity of both water and soil will increase with time. Production of crops, fruits, and vegetables will be decreased. Saline water intrusion changes the mineral content of soil and water, which helps to generate typical mangrove species alongside the riverbank of freshwater rivers like Hugli. Ecological degradation due to salinisation has also affected the productivity of the crops and freshwater fish cultivation. (Haldar & Debnath, 2014). In Mousuni Island, 80% villagers are suffering from skin disease caused by salty water in the Sundarbans region. (Briefing, 2022). Distinct tidal variations of salinity were observed in the western sector of ISD, with the salinity difference (1.4 to 2.0 ppt) between high and low tides. (Chakraborty et al., n.d.). The salinity of Bidya, Matla, Hooghly, and Raimangal Rivers in the Sundarbans region was in the range of 13-27ppt. (Dasgupta et al., 2020)

The fig no 5 show the increase of salinity in the village of Sundarbans region due to uneven rainfall which is the cause of climate change.

(A)



(B)

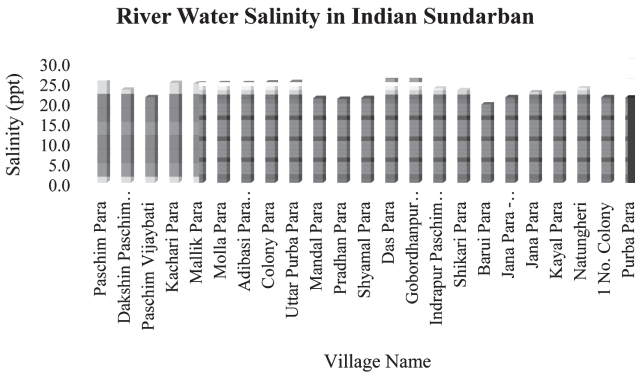


Fig No: 5. (A & B): River water salinity (ppt) in different villages of the Indian Sundarbans, February–May 2019. Source: <https://datacatalog.worldbank.org/search/dataset/0038270>

● **More frequent cyclones in Sundarbans**

The Sundarbans region lies near the Bay of Bengal, is one of the most disaster-prone regions in India. The tropical cyclone is a regular phenomenon in the Sundarbans region, now a day it's increasing day by day. According to the Indian Meteorological Department, the average return period of cyclones in Sundarbans is 2.61 years. The past two cyclones, AMPHAN occurred on 20th May 2020 with 125 km/hr. storm velocity, storm surge 5-meter and flood height 3-meter and YAAS 26th May 2021 with 135km/hr storm velocity, 6-meter storm surge and 4-meter flood height (BDO Office, Gosaba). The high-intensity storm surge is the main cause of the bank erosion in the Sundarbans.

Over the past 15 years, the Sundarbans has experienced the notable frequency and intensity of cyclones like Aila (2009), Fani (2019), Bulbul (2019), Amphan (2020), Yaas (2021), Jawad (2021) (Chourey, 2024).

The fig no 6 shows the occurrence of cyclonic storms in the Sundarbans region from 2000 to 2021. The cyclonic storms have increased since 2013. A total of seventeen cyclonic storms, including five very severe cyclonic storms, were affected from 2013 to 2021. Also, two extremely severe cyclonic storms occurred in the Sundarbans region.

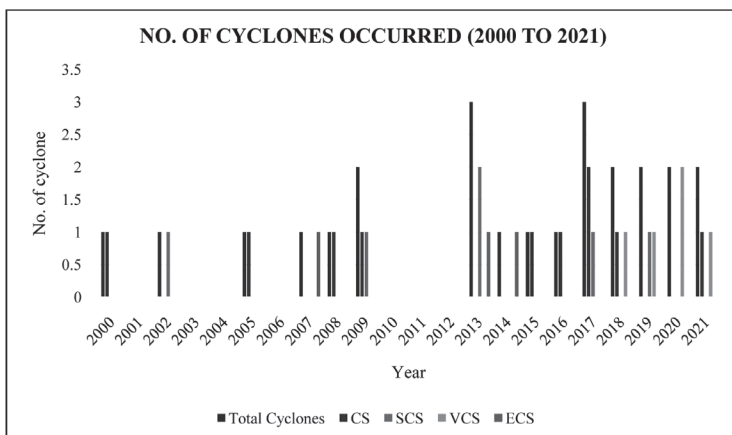


Fig No: 6. Intensity of cyclonic storms in India. 1. Total Cyclones (CS); 2. Severe Cyclonic Storm (SCS); 3. Very Severe Cyclonic Storm (VSCS); 4. Extremely Severe Cyclonic Storm (SSCS). Source: <https://www.mdpi.com/2073-4441/14/5/823>

Table No. 3. Showing Date and Year of Cyclone in Sundarbans

Cyclone	Date	Wind speed (km/hour)	HTL (High Tide Level)	Category
Aila	25 May 2009	110-120 km. gusting to 130 km/hr at landfall	4.20	Severe Cyclone
BulBul	9 November 2019	110-120 km. gusting to 135 km/hr at landfall	4.77	Severe Cyclone
Amphan	20 May 2020	155-165 km. gusting to 185 km/hr at landfall	4.67	Very Severe Cyclone
Yaas	26 May 2021	130-140 km. gusting to 155 km/hr at landfall	7.50	Very Severe Cyclone

A major cyclone which hit recently in ISD. Most cyclones were severe or very severe cyclones. Due to the rise of sea surface temperature as a result of climate change, the VSCs originate in the Bay of Bengal.

Source: IMD and SPMP, Kolkata.

- **Bank erosion**

The erosion process is a natural phenomenon in the Sundarbans Island, but climate change has introduced extreme climate events, which are the cause of greater erosion. Due to erosion, Lohachara, Bedford, Kabasgadi and Suparibhanga have already vanished from the map, and some islands like Sagar, Ghoramara, Dakshin Surendranagar, Mousuni, Namkhana, Dhanchi, Dalhousie, Bulchery, Bhangaduni and Jambudwip are the most vulnerable. The western banks of the river are more vulnerable to erosion than the eastern bank along the sea-facing shorelines.

Due to severe erosion of the soil on the island, it has been observed that the total area of the Sundarbans island is decreasing. The total island area, 157 km² was decreased from 1967 to 2001 (fig 7). In the year 2015-16, it decreased by 53 km² from 2001. So, it is clear that due to excessive erosion, the island's area is being eroded in features.

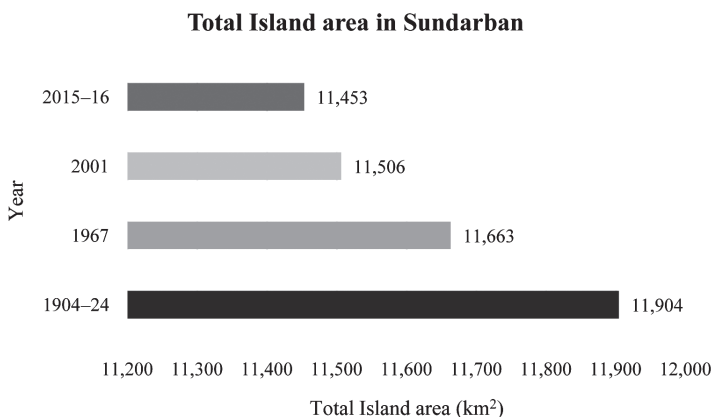


Fig No: 7. Decrease of total island area in Sundarbans due to climate change. Source: <https://documents1.worldbank.org/curated/en/660891605066712888/pdf>

During 2001-2009, the total land area of 6402.09 km² of the Indian Sundarbans in the year 2001 has reduced to 6358.05 km² in 2009. This amounts to net land loss of 44.04 km², which includes erosion of 64.16 km² and the accretion of 20.12 km². Sagar Island has suffered

the bulk of erosion, with an area loss of 30 sq. km and only marginal accretion. (Chand et al., 2012).

Due to bank erosion and floods, the people of the Indian Sundarbans have shifted frequently from their homeland. According to Kalyan Rudra, Chairperson of the West Bengal Pollution Control Board, “Some of the islands are not safe for human habitation because of erosion” (PTI, 2024). West Bengal recorded the longest stretch of bank erosion in India, at 63 per cent, with 99 sq. km of land lost due to coastal erosion between 1990 to 2016. This has a direct impact on the landless, marginal residents of the Sundarbans who reside closest to the riverbank.



Pic No: 4. Bank erosion of Matla River. Source: Self Click

Comparison between 1904–24 topographical maps and 2015–16 satellite images highlights the extent of erosion along nearly the entire surface of the western delta and accretion in the interior parts, mainly in the west. (Bandyopadhyay et al., 2020).

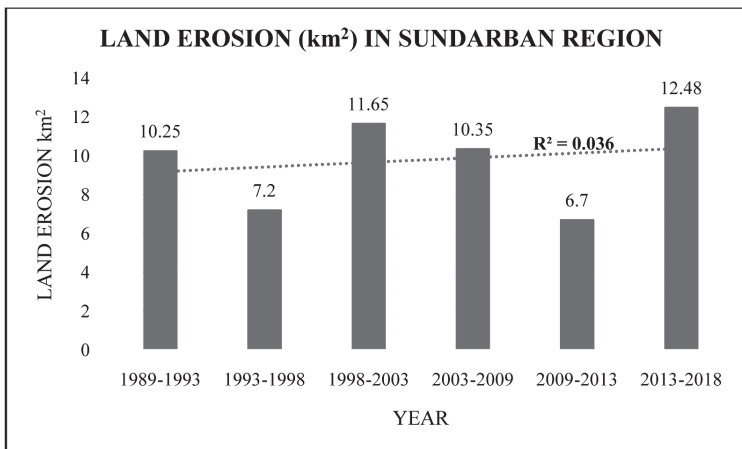


Fig. No: 8. Land losses along the Sundarbans coastal region between 1989 to 2018.

Source: <https://www.sciencedirect.com/science/article/pii/S1018363921001136#0025>

It has been observed that from 1989 to 2018 (fig 8), due to coastal erosion, the Sundarbans region has lost approximately 58.63 km². The maximum land loss of 12.48 km² between 2013 to 2018. It has been observed that 2.23km² land loss from 1989 to 2018 in the Sundarbans coastal land due to increased erosion. The trend line represents that the soil erosion is increasing in ISD.

● ***Erratic monsoon patterns in Sundarbans***

The rainfall pattern in the monsoon season has changed due to climate change. The pre- and post-monsoon rainfall has sharply declined in the Sundarbans region; as a result, the soil salinity levels have increased.

The long-term analysis of the rainfall data (1989-2023) indicates that latitude 22.0492 longitude 88.6697 (Near Gosaba) receives 4.84 mm mean annual rainfall, and latitude 21.7471 longitude 88.1322 (Sagar Island) receives 5.37 mm mean annual rainfall. The highest rainfall was 7.96 mm in 2017 near Gosaba and 8.6 mm in 2021 on Sagar Island. From 1996 to 2016 the rainfall is decrease in the both part of ISD but due to climate change from 2017 the rainfall is increased. So according to fig no 9 & 10 show that there is positive relation between

climate change and rainfall, it is very clear that due to climate change the rainfall pattern is changing in the Sundarbans region.

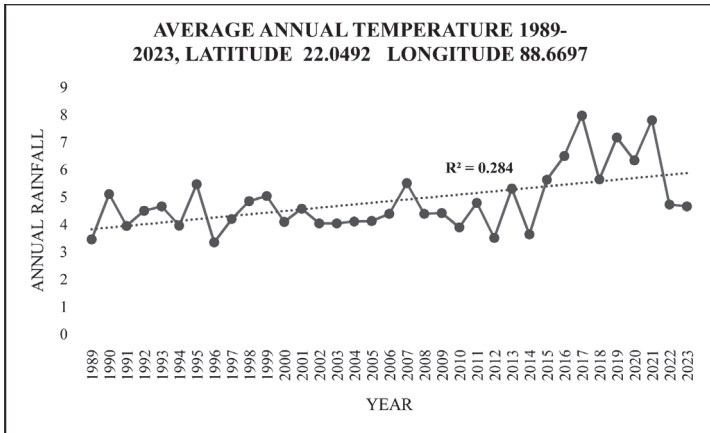


Fig No: 9. Rainfall graph (Near Gosaba), Source: <https://power.larc.nasa.gov/data-access-viewer/>

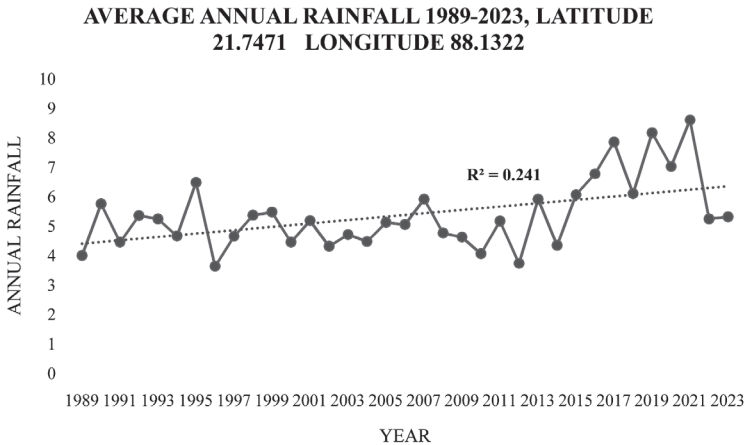


Fig No: 10. Rainfall graph (Sagar Island), Source: <https://power.larc.nasa.gov/data-access-viewer/>

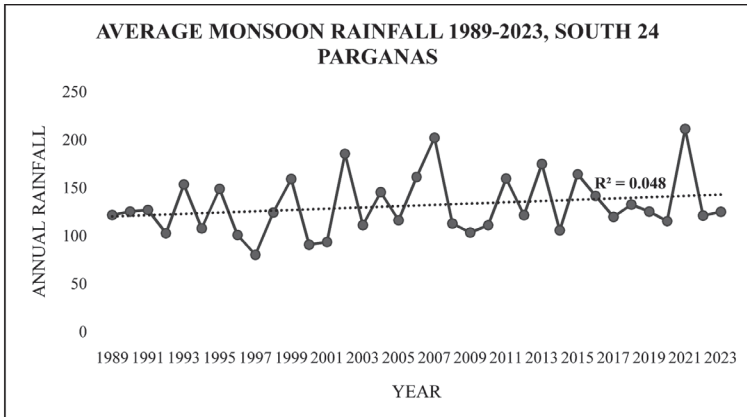


Fig No: 11. Showing the average monsoon rainfall trend of south 24 pargana district. Source: <https://www.ijsrp.org/research-paper-0922.php?rp=P12912412>

During the monsoon season the average rainfall is very high in south 24 pargana including the Sundarbans region. The monsoon rainfall tends in the period from 1989 to 2023, the maximum monsoon rainfall records 211.19 cm in 2021 and minimum rainfall was 80 cm in 1997. The graph (fig no 11) represented that the irregular distribution pattern of the monsoon rainfall in south 24 pargana, it was observed that the rainfall in monsoon season increased in some and decreased in some year. The overall regression trend line represents the increase of rainfall in the period from 1989 to 2023 of south 24 pargana and Sundarbans in India.

● **Increase the sea surface temperature**

The surface water temperatures of the Indian Sundarbans have a significant rise in the pre-monsoon and monsoon periods. The signature of climate change in terms of sea surface temperature is felt uniformly in the entire Sundarbans region; the temperature has risen by 6.14% in the western sector and by 6.12% in the eastern sector (Raha et al., 2013). The annual sea surface temperature of the Bay of Bengal near Sagar Island during the period 2003-2009 varied from 28.02°C in the year 2004 to 29.38°C in the year 2009. During the period the sea surface temperature showed rising trend at the rate of 0.045°C per year (Hazra & Samanta, 2016). The surface water temperature is increased

at a rate of approx. $0.05^{\circ}\text{C}/\text{year}$ in the western Sundarbans (Mitra et al., 2009). Rising sea surface temperature is directly related with the increased frequency and severity of cyclonic storms and depression in the Bay of Bengal. The rapid increase in sea surface temperature is symbol of climate change and it has significant impact on ecology of the Sundarbans.

Climate Change & Effects on Soil in Sundarbans

Climate change directly affects soil, which is the main cause of land degradation in the Sundarbans. Due to climate change increase the extreme climatic events and rainfall, which is a major cause of soil erosion (D. Mandal & Roy, 2024). Land degradation in the form of soil erosion, salinization, desertification etc., is a consequence of climate change (Singh et al., 2022).

i Soil Salinization in Sundarbans

Soil salinization in the Indian Sundarbans is an environmental issue caused by climate change and human activity. Due to a low-lying coastal area, the region experiences regular tidal influx, storm surges, the salt deposition onto the soil surface. The rising sea levels due to climate change exacerbate the problem. The frequent cyclones like Aila and Amphan, as a result of climate change, bring saline water from rivers to land, and also due to erratic monsoon, the salt increases in soil. The salinization impacts on soil biodiversity, which affects agriculture and plants. The increased frequency of severe cyclones, tidal waves, sea-level rises, and human activities such as the blocking of freshwater river mouths to the sea are the major causes of the increase in soil salinity in Sundarbans region (Choubey, 2023).

The picture shows that soil salinity in the Sundarbans increased day by day. The sample was collected from Kachuberia in Diamond Harbour and East Sundarbans. The salinity of East Sundarbans is very high. Due to irregular rainfall as a result of climate change, the salinity of Sundarbans region is increasing. In this figure, the soil salinity of Jharkhali is very high, where the soil salinity of Kachuberia is very low.

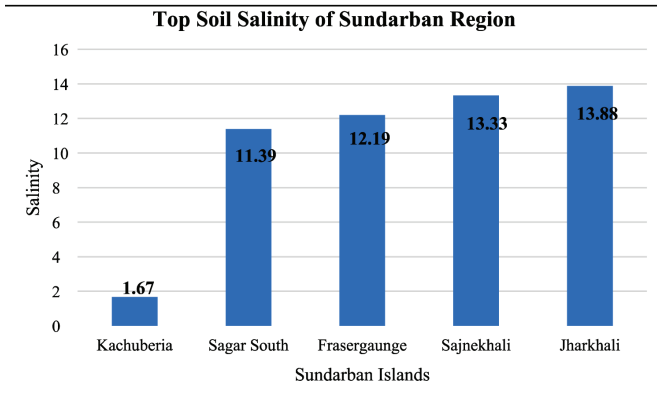


Fig No: 12. Soil Salinity of Sundarbans region.

Source: <https://www.cseindia.org/living-with-changing-climate-9075>

ii Soil Erosion from the island and the river bank of Sundarbans

The Sundarbans islands are experiencing very high soil erosion caused by climate change. Due to the temperature rise, increasing the water level has affected the coast of Sundarbans, ultimately causing large-scale soil erosion. Sea level Rising, tidal activity, and accelerated soil erosion from riverbanks and also from the islands of Sundarbans. The erratic rainfall patterns and storm surges wash away nutrient-rich topsoil. The deforestation in coastal areas, the gully and sheet erosion increase in the monsoon season, and also the loss of mangrove. The tidal forces directly hit the soil, which is one of the main causes of soil erosion.

The rate of soil erosion is rising due to various climate change factors like floods, storms, etc, in Sundarbans (Mukherjee, 2024). The inhabited islands, non-inhabited islands, and the protected forest of Sundarbans have lost a significant amount of land (A. Ghosh et al., 2021). Over the last few centuries, Ghoramara Island lost almost half of its area between 1968 and 2014 by erosion (A. Ghosh et al., 2015). The south-west part (Beguakhali) of Sagar Island has also experienced excessive erosion (T. Ghosh & Thakur, 2018). At present, the forest area is converted into farming land, built-up areas, which is leading to soil erosion during the monsoon season.

iii Loss of organic matter from soil

Soil organic matter is the most important component of the soil, which influences the soil structure, water-holding capacity, soil stability, nutrient storage, etc. The decline of organic matter increases soil erosion. Organic matter is important for soil fauna and microflora, which play a critical role in soil health and productivity. Due to climate change, the content of soil organic matter is decreasing and leading to erosion.

The Sundarbans is highly vulnerable to climate change, which is leading to a significant loss of soil organic matter (SOM). Rising temperatures, erratic rainfall, and increasing salinity are accelerating SOM depletion, affecting soil fertility.

Due to the soil erosion and frequent cyclones, a result of climate change, which wash away topsoil rich in organic material (OM). Extreme weather events have led to large-scale land degradation. Additionally, salinization due to rising sea levels disrupts microbial activity that helps in organic matter decomposition (OMD) and also reduces nutrient availability.

The rising temperatures also accelerate the decomposition of organic matter. The soil releases the carbon into the atmosphere, but due to high temperatures, the carbon is stored in the soil. As a result, soil also contributes to greenhouse gas emissions. The changes in precipitation patterns, as a result of prolonged droughts or intense rainfall, affect soil moisture balance which leading the excessive oxidation and leaching of nutrients from top to bottom. As organic matter declines, the Sundarbans' soil loses its ability to support mangrove regeneration, increasing vulnerability to erosion and biodiversity loss.

iv Increase the temperature and dryness in the soil of Sundarbans

Sundarbans is facing severe threats from climate change. Rising temperatures have led to an increase in heat waves, accelerating soil dryness in the region. The soil ecosystem is disrupted by the higher temperature, causing excessive evaporation and reducing soil moisture, which leads to soil dryness.

Climate change has led to erratic rainfall patterns, either causing prolonged droughts or intense cyclones, both of which negatively impact soil health. The encroachment of saline water due to rising sea levels depletes the soil's fertility, making it unsuitable for vegetation, which is the cause of mangrove loss.

v Mangrove loss and soil erosion in Sundarbans

Climate change is accelerating mangrove loss and soil erosion in the coastal regions of Sundarbans. Rising temperatures and changing weather patterns contribute to these problems by increasing the frequency of extreme natural events such as cyclones, storm surges, rising sea levels, etc.

Mangroves are natural barriers against soil erosion, but climate change-induced sea level rise leads to prolonged waterlogging and salinization; as a result, the roots weaken and fall during storm surges.

Without mangrove forests, the coastline becomes more vulnerable to soil erosion, tidal currents, and large waves that wash out the soil from the land. Additionally, during the monsoon season, the loose soil washes out with water from the open land, also due to higher temperatures and reduced freshwater flow from rivers, which increases the soil dryness, making it more prone to erosion.

iv Waterlogging and altering soil properties

Climate change is significantly altering the soil properties through increased waterlogging and salinity encroachment in Sundarbans. Rising sea levels, frequently cyclones, and erratic rainfall patterns contribute to prolonged water content, which affects soil composition and fertility.

Waterlogging occurs when excessive salt water or rainwater is trapped on land for a long term which leading to oxygen depletion. This lack of oxygen affects root respiration, hinders plant growth, and weakens the mangrove ecosystem. As a result, the trees fall and increase the soil erosion.

Additionally, due to rising sea levels, the saline water intrusion in the soil alters the soil chemistry. High salinization of the soil leads to reduced microbial activity, nutrient imbalance, and poor water holding, making it unsuitable for mangroves and agricultural activities.

The frequent cyclones and storm surges deposit large amounts of silt and debris, which alter the soil's physical structure. This leads to compaction, reduced permeability, and increased vulnerability to erosion. As the soil becomes more saline and waterlogged, it loses its natural fertility, making ecological restoration more challenging.

Recommendation

To address the escalating challenge of climate-induced soil degradation in the Sundarbans, a comprehensive, multi-pronged approach is essential:

- 1 Promote Climate-Resilient Agriculture:
 - Introduce and support the cultivation of saline- and flood-tolerant crop varieties.
 - Promote organic farming practices to restore soil health.
 - Encourage crop diversification and integrated farming systems.
- 2 Strengthen Coastal Infrastructure:
 - Upgrade and maintain embankments to prevent saline water ingress.
 - Deploy eco-engineering approaches such as bio-shielding with mangroves.
 - Improve drainage and irrigation infrastructure to manage water-logging.
- 3 Sustainable Land and Water Management:
 - Adopt integrated watershed management and soil conservation practices.
 - Encourage rainwater harvesting and freshwater storage for irrigation.
 - Implement zoning regulations to protect vulnerable soil zones.
- 4 Geospatial Monitoring and Early Warning Systems:
 - Establish real-time soil and climate monitoring systems.
 - Develop early warning systems for cyclones and floods using satellite data.
 - Use GIS-based planning tools for vulnerability assessment and adaptation.
- 5 Community Participation and Capacity Building:
 - Empower local communities through training in climate-smart agriculture and sustainable practices.
 - Promote participatory decision-making in land and resource management.
 - Develop livelihood diversification programs to reduce dependence on climate-sensitive sectors.
- 6 Policy and Institutional Interventions:
 - Integrate soil conservation and climate adaptation into regional planning policies.
 - Strengthen coordination among environmental, agricultural, and disaster management agencies.
 - Ensure financial and technical support through government and international programs.

Conclusion

The Sundarbans world's largest contiguous mangrove forest, is facing unprecedented challenges due to climate change and Soil erosion. Sea levels rising, increased salinity, frequent and intense cyclones, irregular monsoon patterns, and temperature fluctuations are already impacting the regions. Sundarbans is the most affected area due to climate change. People who live near the bank are suffering from natural disasters such as flooding, land erosion, and saltwater (Halder et al., 2022).

After the analysis it is found that, climate change has disrupted monsoon precipitation patterns, caused sea-level rise, increased sea surface temperatures, extreme weather events, storm surges, flooding, erosion, waterlogging, salinization and other challenges in Indian Sundarbans, and it is also clear that, the soil of ISD region is badly effect by the salinization, erosion, loss of organic matter, soil dryness etc. The MSL is rising along with the temperature and the sea level; that's why the coastal soil erosion has increased in Sundarbans. The overall trend line represents that the extreme events are increased in the Sundarbans region due to climate change (fig no 2, fig no 3, fig no 4, fig no 8, fig no 9, fig no 10, and fig no 11).

Due to limitations in the availability of surface water temperature, soil erosion, and other data, the accurate analysis could not be determined. The rise of the soil temperature disrupted organic matter; as a result, the soil is weak and loose, making it more prone to erosion. Also, salinity degrades the soil quality and makes it less capable of supporting vegetation and agriculture. Salinity protects microbial activity, reducing the organic matter, which has a direct effect on mangrove, and can't barrier to soil erosion.

Addressing these challenges, the strategies implemented require an integrated approach to conservation and sustainable land management. The afforestation programs can help stabilize coastal soils and reduce erosion. Sustainable agricultural practices, such as organic farming and controlled irrigation, can improve soil health while minimizing the impact of salinity intrusion. The conservation of this extraordinary ecosystem will depend on the collective actions of governments, communities, and the international community to address the growing threats posed by climate change.

Presently, the climate crisis and soil erosion in the Sundarbans are a horrible threat to the environment and human populations. Without urgent intervention, the degradation of soil organic matter, increased

salinity, and loss of land will have devastating long-term consequences in Sundarbans. However, through sustainable conservation strategies, policy support, and community engagement, it is possible to safeguard the Sundarbans' ecosystem for future generations.

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