

SDG 2030

**INSIGHTS FROM INDIA
FOR A SUSTAINABLE FUTURE**



EDITOR: DR. K K SOMASEKHARAN MA MPhil PH.D

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Gaveshana R& D Cell

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TABLE OF CONTENTS

Introduction.....	i
Chapter One.....	1
Chapter Two	9
Chapter Three	31
Chapter Four	47
Chapter Five.....	55
Chapter Six	70
Chapter Seven.....	103
Chapter Eight.....	112
Chapter Nine.....	127
Chapter Ten	144
Chapter Eleven.....	161
Chapter Twelve.....	176
Chapter Thirteen	185
Chapter Fourteen.....	194

INTRODUCTION

In 2015, 193 member countries of the United Nations (UN) adopted the 2030 Agenda for Sustainable Development, marking a historic global commitment to dignity, peace, and prosperity for both humanity and the planet. This landmark agenda outlines 17 Sustainable Development Goals (SDGs) with specific targets to be achieved by the year 2030. The agenda encompasses a wide range of action areas, including poverty eradication, sanitation, education, health, and economic development, while simultaneously addressing social equity and environmental sustainability. This edited volume is a modest attempt to offer meaningful insights toward building a sustainable future.

It gives me immense pleasure to present this edited book titled *SDG 2030: Insights from India for a Sustainable Future*. This volume is the outcome of a concerted academic effort to compile scholarly contributions that aim to enrich discourse and inspire action toward a sustainable and inclusive future.

The book consists of 14 chapters, each offering diverse perspectives and practical insights on sustainable development.

The first chapter, *How Informal India Hinders the Path to Meeting SDG 2030: An Exploratory Overview for Research*, emphasizes the critical role of social sector investment in development and encourages researchers to explore emerging and underexplored areas related to sustainability.

The second chapter elaborates on the transformative potential of Farmer Producer Organizations (FPOs) in reshaping the

agricultural landscape of rural India and emphasizes their role in promoting rural transformation and collective empowerment.

Chapter 3 analyses how digital technologies are transforming microfinance delivery and enhancing women's access to credit, while also exploring regional variations in adoption behaviour, financial management practices, and social norms that shape empowerment trajectories in Kerala and Tamil Nadu.

Chapter 4 illustrates how SDG 4 (Quality Education) can be achieved through the introduction of progressive educational policies such as the Four-Year Undergraduate Programme (FYUGP). This article offers a theoretical and critical examination of the key features and emerging concerns of the FYUGP in Arts and Science colleges in Kerala.

The fifth chapter explains the transition of women from economic dependence to financial independence through microfinance initiatives. The study proposes policy recommendations aimed at enhancing microfinance initiatives to secure wider and long-lasting benefits for women.

Chapter 6 examines the influence of green brand image, brand credibility, green packaging, eco- innovation, and consumer environmental awareness on green purchasing behaviour among working women professionals in Tamil Nadu. This study further analyses the confidence of women professionals in relation to their propensity to purchase green products.

In Chapter 7, the authors explore Chimamanda Ngozi Adichie's illuminating work *We Should All Be Feminists* as an influential text that resonates with the principles of SDG 5 (Gender Equality) and women's empowerment. The chapter

highlights how Adichie's text raises awareness of persistent gender inequalities and encourages a rethinking of social attitudes in ways that align with the broader goals of SDG 5.

Chapter 8 discusses various government-led initiatives such as the Atal Innovation Mission, Skill India Mission, and Startup India, and their alignment with NEP 2020 objectives to foster innovation, enhance skills, and promote youth employment in line with SDG 4 (Quality Education).

In Chapter 9, the authors examine the impact of government policies on agricultural sustainability, drawing evidence from rural households in Kannur District, Kerala, with a focus on SDG 1 (No Poverty) and SDG 2 (Zero Hunger).

Chapter 10 evaluates the effectiveness of government initiatives such as the Jal Jeevan Mission, Jal Shakti Abhiyan, and Atal Bhujal Yojana, with particular emphasis on Jal Jeevan Mission activities in rural Palakkad, in alignment with SDG 6 (Clean Water and Sanitation).

Chapter 11 analyses the socio-economic and sustainable development impacts of Self-Help Group (SHG) participation on rural women in Kerala, corresponding to SDG 1 (No Poverty), SDG 5 (Gender Equality), and SDG 8 (Decent Work and Economic Growth).

In Chapter 12, the authors highlight the role of Big Data Analytics in Public Health from the perspective of SDG 3 (Good Health and Well-being). This chapter also critically evaluates the ethical and regulatory guidelines associated with Big Data Analytics (BDA) in public health applications.

Chapter 13 examines how literary works not only offer aesthetic value but also provide critical commentary on real-world challenges related to sustainable development. The author reads the renowned novel, *The Hungry Tide* by Amitav Ghosh, in line with SDG 6 (Clean Water and Sanitation).

The final chapter explores the influence of microfinance on women's empowerment, with a special focus on Kudumbashree, Kerala's flagship programme for women's empowerment and poverty alleviation. The chapter also identifies the challenges faced by beneficiaries in achieving independence, self-confidence, and entrepreneurship, thereby underscoring the importance of SDG 5 (Gender Equality).

I would like to wholeheartedly acknowledge the contributors to this edited volume for their valuable scholarly contributions. I extend my sincere gratitude to the Management of Navajyothi College for their constant support and encouragement. I also congratulate the entire Gaveshana (R&D) Team for their dedicated efforts in bringing out this publication in a time-bound manner.

Dr. K K Somasekharan M.A., M.Phil., PhD.

CHAPTER THIRTEEN

Water as a Discourse: Exploring SDG 6 through Amitav Ghosh's *The Hungry Tide*

Ms. Carolin Maria*

1. Introduction

Water is one of the most essential elements for sustaining life, yet a myriad of people worldwide lack access to safe drinking water and adequate sanitation. Just like the famous line from S.T. Coleridge's *The Rime of Ancient Mariner*, 'water, water everywhere and not a drop to drink,' water is around us but not clean or available at all the time. The United Nations' Sustainable Development Goal 6 (SDG 6) aims to "ensure availability and sustainable management of water and sanitation for all" by 2030. This goal not only addresses water scarcity and pollution but also calls for integrated water resource management and the protection of water related ecosystems. Despite progress, achieving SDG 6 remains a challenge, especially in the case of the areas where lack of awareness as well as economic and governance limitations prevail. Water related risks are compounded by climate change, population growth, urbanization, and environmental degradation. In this context, cultural and literary representations of water crisis and ecological vulnerability are essential for fostering a more holistic understanding of water sustainability. While scientific and policy approaches dominate the discourse on SDG 6, literary works offer a unique, unexplored and humanistic perspective.

In this context, Amitav Ghosh's 2004 novel *The Hungry Tide* holds significant relevance in contemporary environmental and

social issues while exploring the complex interplay between human survival and environmental justice. As the story revolves around Sundarbans, which is known for its vulnerable population and a vast network of estuaries, and mangrove forests in Eastern India and Southern Bangladesh, the work engages deeply with issues related to water access, ecological fragility, and human resilience. By delving into the marginalised community, Gosh gradually displays some current global concerns such as climate change, water crisis, displacement due to natural disasters, and the marginalized voices in environmental decision making. Thus, this paper unearths how the chosen novel acts as a water-discourse; relating to SDG 6, besides its aesthetic value.

2. Water: Power, Identity and Survival

The narrative follows three central characters lacking same backgrounds but with the sharing of uncanny instincts for the wave changes, such as, Piyali Roy, a marine biologist of Bengali-American descent studying river dolphins; Kanai Dutt, a sophisticated translator from New Delhi; and Fokir, an illiterate local fisherman. Their lives converge on the tidal landscape of Sunderbans, confronting the intense and powerful nature along with the clashes of personal histories, experiences and culture. It can be noted that everything related to water, like river, tide, Monsoon, or deluge is the one shaping the physical and emotional terrain of the nature. Piyali Roy, Fokir, and Kanai Dutt are all connected to the water in different ways. Everyone representing various socioeconomic classes and struggles is faced with clean water access. As for instance, Fokir, a local fisherman, depends on traditional ecological knowledge to navigate the tides, but his community's access to water is precarious, a situation that mirrors India's ongoing struggles with water scarcity and inequality. The marginalized communities in *The Hungry Tide* struggle to secure

water in an environment that has both natural and political barriers to access.

The Sundarbans' unique tidal ecology, where land is perpetually created and destroyed by water, reflects the instability and unpredictability of human life in the region. The novel captures the paradox of water as both life-giving and life-threatening. For Piya, water is a medium of discovery and scientific exploration. Her work with the elusive Irrawaddy dolphins brings her into close contact with the tidal rivers and their delicate ecosystems. Her interactions with Fokir, who navigates these waters intuitively, reveal the tension between modern scientific knowledge and traditional ecological wisdom. This dynamic embodies SDG 6's emphasis on inclusive knowledge systems and community participation in water management.

Water also symbolizes the socio-political histories submerged beneath the surface. The novel references the 1979 massacre of Bangladeshi refugees on the island of Morichjhanpi, a violent episode triggered by the state's attempt to control access to land and resources. This historical layer reveals the entanglement of water with issues of displacement, state control, and human rights, all of which are integral to a just and equitable realization of SDG 6. Water is more than a setting in *The Hungry Tide*; it is a character, a force, and a symbol.

3. Water Accessibility and Sanitation

One of the core themes in SDG 6 is equitable access to water and sanitation. In *The Hungry Tide*, access to water is portrayed not just as a matter of geography, but of power, caste, and class. The elite, represented by Kanai, experience water as part of leisure or scientific interest, while local communities like Fokir's depend on it for survival. The novel illustrates how infrastructural neglect,

poverty, and political marginalization deny people their basic rights to clean water and sanitation. Fokir's community has no formal water supply, no flood protection, and no healthcare, reflecting real-world conditions in many parts of the Sundarbans. This aligns with global concerns outlined in SDG 6, especially the need to prioritize marginalized and vulnerable populations. The novel also implicitly critiques the developmental models that ignore ecological limits. As the landscape is altered by embankments, deforestation, and climate change, traditional livelihoods become unsustainable. The rising tides, fueled by global warming and poor resource management, endanger not only physical habitats but also cultural continuity.

Sanitation and water-borne diseases are only subtly present in *The Hungry Tide*, yet their absence in infrastructure and public policy is tangible. The health vulnerabilities of Fokir's community, aggravated by frequent floods, brackish water, and lack of sanitation, reflect the systemic neglect that SDG 6 seeks to address. The novel's portrayal of ecosystem interdependence is particularly relevant to SDG 6's target of protecting water-related ecosystems. The Sundarbans' mangroves, rivers, and estuaries form a complex web of ecological services, including water filtration, storm protection, and biodiversity support. However, human interventions and environmental neglect threaten this balance. Ghosh captures this fragility through imagery of eroded shores, dying fauna, and unpredictable storms.

4. Utilisation of Local Knowledge System

One of the key principles of sustainable development is the integration of local knowledge systems into environmental governance. Fokir's deep, intuitive understanding of the tidal ecosystem contrasts with Piya's scientific methodology but proves equally valuable. This convergence of knowledge systems

reflects SDG 6's emphasis on inclusive water governance. The novel honors traditional ecological knowledge not as an artifact of the past but as a living, adaptive strategy. Fokir's navigation skills, weather instincts, and understanding of animal behavior demonstrate the value of indigenous knowledge in managing water resources. His tragic death in a storm, however, underscores the vulnerability of local knowledge in the face of systemic neglect and climate unpredictability.

5. Impact of Climate Change

Although climate change is not overtly discussed in *The Hungry Tide*, it looms in the background as an existential threat to the Sundarbans. Rising sea levels, increasing cyclone intensity, and saltwater intrusion already threaten the habitability of the region. These are precisely the kinds of water-related challenges that SDG 6 seeks to mitigate through sustainable management and ecosystem protection.

The novel's exploration of the Sundarbans is particularly poignant today, as the region faces severe threats from climate change, such as rising sea levels and coastal erosion. The Sundarbans, one of the largest deltas in the world, are extremely vulnerable to the impacts of climate change. Many of the islands are disappearing due to the rising tides, which directly impacts the livelihood of its inhabitants. Ghosh anticipates many of these changes, reflecting the global concerns about climate-induced displacement and the disappearance of coastal habitats. These environmental shifts highlight the real-world urgency of climate action and adaptation. The displacement of communities due to rising waters in the novel reflects similar issues in real-world countries that are at the frontline of climate change, particularly in countries like India and Bangladesh. *The Hungry Tide* serves as an allegory for the climate refugee crisis we are witnessing today,

where people living in ecologically sensitive areas are being forced to migrate or face increasing vulnerability.

6. Social Marginalization and Water Equity

It is a matter of relevance in Ghosh's work that it explores social marginalization through the lens of reservation and political power. The novel touches upon the displacement of Bengali refugees in the Sundarbans during the 'Morichjhanpi massacre' of 1979, an event that involved the eviction of marginalized communities in the name of environmental protection. This action reflects the political struggles and the intersection of environmental justice with social justice. Reservation policies in India, intended to uplift the marginalized castes, communities, and tribes, intersect with environmental struggles in this context. The displaced communities in the novel, who are already disadvantaged socially and economically, face the additional burden of being denied access to critical resources, including water.

In line with the SDGs, addressing water equity becomes crucial in ensuring that these marginalized voices are heard in the management of natural resources. Ghosh's novel exemplifies the way in which environmental policies can impact marginalized populations and highlights the importance of inclusive, fair policies for sustainable development.

7. Indigenous Knowledge and Water Literacy

Ghosh's portrayal of traditional ecological knowledge through Fokir's character also contributes significantly to the discussion of water literacy. Water literacy, defined as the awareness and understanding of water issues, becomes essential in ensuring sustainable water management. Fokir, a fisherman

with deep knowledge of the tides and rivers, represents the vital role of indigenous knowledge in managing natural resources sustainably. In contrast, characters like Piyali Roy, a trained marine biologist, bring a modern, scientific perspective to the region's environmental concerns. This juxtaposition of traditional and modern knowledge speaks to the need for a holistic approach to water literacy, one that respects both indigenous wisdom and scientific advancements.

In the context of India's water crisis, promoting water literacy is essential to empowering communities to take ownership of their water resources, enhance water conservation efforts, and ensure equitable distribution. *The Hungry Tide* encourages this broader understanding, reflecting a global trend towards integrating local, traditional practices into modern environmental governance.

A bunch of real life examples can be seen, in which indigenous people protect water resources with the knowledge developed through years of experience, leading the modern generation in awareness of the necessity of sustainability. Most importantly, those knowledge systems are often under the appreciation of scientists. The story of Kallen Pokkudan, whose name became a synonym for mangrove conservation in India, can be exemplified. Scientists from across the world wrote to him, seeking his advice and viewpoints.

8. Displacement and the Role of Government Policies

The novel's treatment of displacement, both environmental and political, is deeply relevant to the issue of forced migration due to environmental degradation. As sea levels rise and natural disasters intensify, millions of people living in coastal and vulnerable regions face displacement. The portrayal of the Morichjhanpi massacre, the forced eviction of refugees from their

homes, serves as a cautionary tale about the impacts of government policies that disregard the socio-economic needs of marginalized groups. It highlights the tension between government interventions for environmental protection and the rights of displaced communities to access water and land.

This theme resonates with current challenges in India and around the world, where climate-induced displacement is creating refugee crises, particularly in South Asia. As many regions grapple with environmental disasters, the right to water becomes intertwined with the broader human rights discourse. As water security is a basic need, it is important to make humanitarian policies for such displaced populations.

9. Conclusion

Amitav Ghosh's *The Hungry Tide* remains an important literary work for understanding the intricate relationships between water, justice, and the environment. Through its depiction of the Sundarbans, the novel provides a poignant narrative that resonates with the contemporary issues of climate change, water scarcity, social inequity, and displacement. By addressing SDG 6's goals, such as clean water access and water equity, Ghosh's work brings attention to the real-world challenges facing marginalized communities in India, especially in terms of accessing clean and safe water.

The novel also highlights the importance of water literacy and the integration of both indigenous knowledge and scientific expertise in managing water resources. With climate change increasingly threatening water availability, *The Hungry Tide* remains a relevant and insightful critique of environmental justice and the need for equitable policies that prioritize marginalized communities. As the world moves toward achieving the SDGs, the

themes explored in *The Hungry Tide* can inspire more inclusive, sustainable, and socially just approaches to managing water resources. As Amitav Ghosh says in the novel, “To build something is not the same as dreaming of it”(p.178). So, the challenges are yet to be overcome in order to achieve the goals of SDG 6 by 2030.

References

1. Ghosh, A. (2004). *The Hungry Tide*. Harper Collins.
2. Ghosh, A. (2016). *The Great Derangement: Climate Change and the Unthinkable*. Penguin Books.
3. Pal, Sanchari. (2017). “Mangrove Man of India: This Farm Labourer Planted and Protected Coastal Forests for Over 25 Years.” *The Better India*.
<https://thebetterindia.com/88979/kallen-pokkudan-mangroves-conservation-kannur-kerala/>
4. NITI Aayog. (2019). Composite Water Management Index. Government of India. <https://niti.gov.in>
5. Our World in Data team. (2023). “Ensure availability and sustainable management of water and sanitation for all.” <https://ourworldindata.org/sdgs/clean-water-sanitation>
6. United Nations. (2015). Transforming our world: The 2030 Agenda for Sustainable Development.
<https://sdgs.un.org/goals/goal6>
7. National Family Health Survey (NFHS-5). (2021). Ministry of Health and Family Welfare, Government of India.
8. Jal Jeevan Mission. (2024). Annual Report and Dashboard. Ministry of Jal Shakti. <https://jaljeevanmission.gov.in>

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SDG 2030: INSIGHTS FROM INDIA FOR A SUSTAINABLE FUTURE

As the world races toward the United Nations' 2030 deadline, India stands at a critical crossroads in the journey toward dignity, peace, and prosperity. *SDG 2030: Insights from India for a Sustainable Future* provides a powerful examination of the nation's pursuit of the 17 Sustainable Development Goals. Bridging the gap between academic research and practical action, this book is an essential guide for anyone looking to understand or contribute to an inclusive and sustainable tomorrow.

Dr. K. K. Somasekharan, the Principal of Navajyothi College, Cherupuzha, brings over 30 years of distinguished academic and administrative experience to this volume. Throughout his prolific career, he has served numerous prestigious higher education institutions across Kerala, contributing significantly to the state's academic landscape.

A scholar at heart, Dr. Somasekharan holds a PhD in Economics. His extensive research background is reflected in his numerous publications across reputed journals and books, focusing on socio-economic development. This volume, *SDG 2030: Insights from India for a Sustainable Future*, represents his continued commitment to fostering academic discourse and inspiring collective action toward a more inclusive and sustainable world.



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