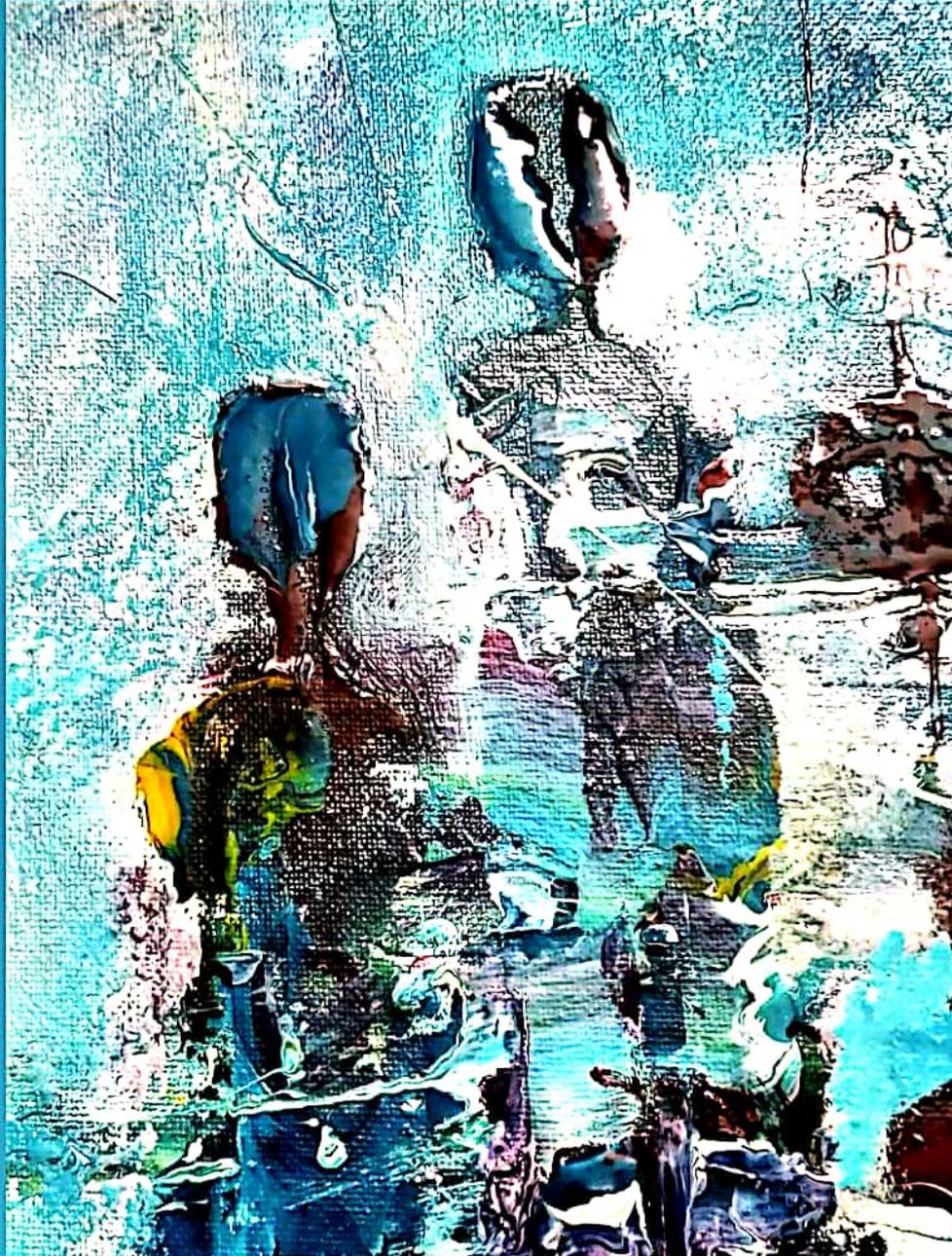




ISSN: 2278-8670  
ISSUE-22, DEC. 2022  
VOLUME-I

**INTERNATIONAL JOURNAL  
OF  
INTEGRATED RESEARCH AND DEVELOPMENT  
(Peer Reviewed and Multi-Disciplinary)**



**Artist: Basudev Mondal. Title: Blue Horizon.**

**BARIN KUMAR ROY**  
Editor-in-Chief

**DEBABRATA DAS**  
Additional Editor

**BISWAJIT MAITI**  
Managing Editor



Volume: /2 Issue: 22/Dec 2022-ISSN: 2278 8670

# International Journal of Integrated Research and Development

ISSN: 2278-8670

## **Editor-in-Chief: Barin Kumar Roy**

Associate Professor, Department of Economics, Maulana Azad College, Kolkata; Ex Officer-in-Charge, Gorubathan Govt. College; Fagu, Kalimpong. Ex H.O.D. Department of Economics, Darjeeling Govt. College; Life Member, Bengal Economic Association, Kolkata; Member, Indian Society of Engineers, Kolkata; Honorary Member, Bar Association of City Civil Court & High Court, Kolkata, West Bengal, India.

## **Managing Editor: Biswajit Maiti**

Associate Professor, Department of Physics, Maulana Azad College, Kolkata; Ex H.O.D. and Associate Professor, Department of Physics, Govt. General Degree College, Kharagpur-II, Paschim Medinipur; Ex H.O.D. Department of Physics, Darjeeling Govt. College; Member, National Science Congress, India.

## **Additional Editor: Debabrata Das**

H.O.D. and Associate Professor, Department of Botany, Govt. General Degree College, Lalgah, Binpur-I, Lalgah, Jhargram; Member, Indian Bird Conservation Network, Mumbai; Reviewer of a dozen of International Journal Committee, India.

## **PEER REVIEW BOARD:**

**President: Sudhir Chakraborty** Sahitya Academy Awarded Eminent Bengali Scholar, India.

**Vice-President: Prabir Kumar Das** Retd. WBSES, Former Member Secretary, Higher Education Council, Govt. of W.B., India.

## **Honorable Members:**

### **From Abroad**

**1. Andrew Nicholson** Professor, Department of Asian American Studies, Stony Brook University, USA, 11794.

**2. Hans Harder** Professor of Modern South Asian Languages and Literatures (Modern Indology). Haidelberg, Head of the Department of Modern South Asian Languages and Literatures, Haidelberg University, Germany.



Volume: /2 Issue: 22/Dec 2022-ISSN: 2278 8670

3. **Madhab Prasad Pokhrel** Professor, Department of Linguistics, Tribhuvan University, Nepal.
4. **Niaz Ahmed Khan** Chair Professor, Department of Development Studies, University of Dhaka, Bangladesh.
5. **Toni Guerra** Teacher, Autonomous University of Mexico, University of Guadalajara, Jalisco; Chief Executive Officer and Founder Director of Exagono (Independent Fine Arts Workshop); Member of the Modern Art, Center of Guadalajara, Jalisco, Mexico.
6. **A.H.M Mahbubur Rahman** Professor, Department of Botany, University of Rajshahi, Rajshahi-6205, Bangladesh.

### **From India**

1. **Mohd. Shahid Hussain** Professor, Centre for Indian Languages, SLL & CS, Jawaharlal Nehru University (Urdu & Persian), Academy Awarded Scholar, New Delhi, India.
2. **Nandalal Chakraborty** Associate Professor, Political Science, Presidency University, Eminent Scholar and writer about Netaji, India.
3. **Goutam Kumar Chatterjee** President, Abhinavagupta Academy, Department of Journalism and Mass Communication, Banaras Hindu University and Film maker of Theory of Aesthetics, U.P., India.
4. **Rampratap Sinha** Associate Professor in WBES, Department of Economics, Government College of Engineering and Leather Technology, W.B., India.
5. **Parimal Bhattacharyya** Associate Professor in W.B.E.S, Department of English, Eminent writer, W.B., India.
6. **Muktish Acharyay** Associate Professor, Department of Physics, Presidency University, W.B., India.
7. **Shyam Kumar Mollay** IFS, Divisional Forest Conservator, North Division, Siliguri, W.B., India.



Volume: /2 Issue: 22/Dec 2022-ISSN: 2278 8670

- 8. Raghunath Ghosh** Honorary Director, ASC and Retired Professor & Head, Dept. of Philosophy, North Bengal University, W.B., India.
- 9. Sudip Basu** Professor, Department of Bengali, Viswa Bharati University, W.B., India.
- 10. Pankaj Kumar Roy** Principal, Jogesh Chandra Chaudhuri College, W.B., India.
- 11. Madhusudan Mondal** Retired Scientist and Additional Director, Botanical Survey of India, W.B., India.
- 12. Debabrata Chowdhry** Textile Engineer (Manchester), MBA (PE, Chartered Engineer FIE (I) FII Prod., FCA & FIV, General Secretary: INDIAN SOCIETY OF ENGINEERS, Kolkata, W.B., India.
- 13. Sibsankar Pal** Officer-in-Charge, Govt. General Degree College at Tehatta, W.B., India.
- 14. J K De** Scientist-D (Retired), Zoological Survey of India, Govt. of India, West Bengal, India.

#### **BOARD OF ASSOCIATE EDITORS:**

##### **SOCIAL SCIENCE**

- 1. Tapas Kumar Pal** Associate Professor Bidhannagar Gov. College, W.B., India.
- 2. Preetam Ghoshal** Associate Professor, Department of Philosophy, Jadavpur University, W.B., India.
- 3. Arun Mahata** Associate Professor, Department of Philosophy, Jadavpur University, W.B., India.
- 4. Biswajit Roychoudhury** Assistant Professor of Geography, Vidyasagar College, Kolkata, W.B., India.
- 5. Sanjit Kumar Das** Vice-Principal and Associate Professor of Commerce, Bhairab Ganguly College, Kolkata, W.B., India.



Volume: /2 Issue: 22/Dec 2022-ISSN: 2278 8670

6. **Sorajit Sengupta** Assistant Professor, Department of Commerce, Bhairab Ganguly College, W.B., India.
7. **Aditi Patra** Assistant Professor, Department of Philosophy, Hooghly Mohsin College, W.B., India.
8. **Nusrat Jahan** Assistant Professor, Department of Philosophy, Presidency University, W.B., India.
9. **Susmita Mandal** Department of Geography, South Calcutta Girls' College, W.B., India.
10. **S. Gayatri Devi** Associate Professor and Head, Department of Psychology, Avinashilingam University, Tamil Nadu, India.

## **SCIENCE AND TECHNOLOGY**

1. **Phalguni Gupta** Associate Professor, Department of Physics, Dinabandhu Andrews College, Kolkata, W.B., India.
2. **Rabindranath Bhattacharyay** Associate Professor (Retd.), Deptt. of Biological Science, Presidency University, W.B., India.
3. **Swapan Kumar Ghosh** Associate Professor, Department of Physics, Durgapur Govt. College, W.B., India.
4. **Ipshit Chakraborty** Associate Professor, Department of Zoology, Dinabandhu Andrews College, Kolkata, W.B., India.
5. **Partha Sarathi Singha** Officer-in-Charge, Govt. General Degree College, Kharagur-II, W.B., India.
6. **Pampi Ghosh** Assistant Professor, Department of Botany, Seva Bharati Mahavidyalaya, W.B., India.
7. **Pranabananda Santra** Sub-Assistant Engineer, Electrical, WBEDCL, Darjeeling, W.B., India.
8. **S. S. Sherpa** IFS, DFO, Directorate of Forest, Govt. of West Bengal, India.
9. **A. K. Nandi** Associate Professor, Department of Botany and Forestry, Vidyasagar University, W.B., India.



Volume: /2 Issue: 22/Dec 2022-ISSN: 2278 8670

10. Binod Sharma Associate Professor, Department of Botany, A.B.N. Seal College, W.B., India.
11. Chandan Bhattacharya Professor, Department of Genetics and Plant Breeding, Faculty of Agriculture, RRS, BCKV, Jhargram, West Bengal, India.
12. Nirmali Gogoi Department of Environmental Science, Tezpur University, Napaam, Tezpur District, Sonitpur, Assam, PIN: 784208, India.

### **LANGUAGE, LITERATURE AND ARTS**

1. Ujjal Gangopadhyay Associate Professor, Department of Bengali, Suri Vidyasagar College, Birbhum, W.B., India.
2. Kabir Basnet Associate Professor, Department of Nepali, Darjeeling Govt. College, Darjeeling, W.B., India.
3. Suparna Sengupta Assistant Professor, Department of Sanskrit, Nibedita Girls' College, Kolkata, W.B., India.
4. Sanghamitra Mukherjee Assistant Professor, Department of Sanskrit, Ramkrishna Sarada Mission Vivekananda Vidya Mission, W.B., India.
5. Tanwi Mukhoadhyay Assistant Professor, Department of Bengali, Bethune College, W.B., India.
6. Asit Sain Artist, Nandalal Basu Art Academy, Mecheda, Purba Medinipur, W.B., India.
7. Basudev Mondal Assistant Professor & H.O.D, Bengali, Dr. B. R. Ambedkar Satabarshiki Mahavidyalaya, Helencha, W.B., India.

### **EDITORIAL BOARD:**

1. Asin Md. Ansari Assistant Professor, Department of History, Gorubathan Govt. College, Kalimpong, W.B., India.
2. Arpana Kalden Assistant Professor, Department of History, Gorubathan Govt. College, Kalimpong, W.B., India.



3. **Varun Kumar Roy** Assistant Professor, Department of History, University of North Bengal, Darjeeling, W.B., India.
4. **Pratit Tamang** Assistant Professor, Department of Political Science, Gorubathan Govt. College, Kalimpong, W.B., India.
5. **Ujjal Das** Assistant Professor, Department of English, Gorubathan Govt. College, Kalimpong, W.B., India.
6. **Sumana Bandyopadhyay** CWTT (Govt. Approved), Deptt. Of Commerce, Bhairab Ganguly College, W.B., India.
7. **Sandipan Talukdar** Assistant Professor, Department of Zoology, Gorubathan Govt. College, Kalimpong, W.B., India.
8. **Rabin Ghosh** Assistant Professor, Department of Bengali, Gorubathan Govt. College, Kalimpong, W.B., India.
9. **Subhra Kanti Mandal** Assistant Professor, Department of Chemistry, P. R. Thakur Govt. College, Thakurnagar, W.B., India.
10. **Raju Subba** Assistant Professor, Department of Chemistry, Gorubathan Govt. College, Kalimpong, W.B.
11. **Rajendra Mistri** Assistant Professor, Department of Economics, Gorubathan Govt. College, Kalimpong, W.B., India.
12. **Sangeeta Yonzon** Assistant Professor, Department of Economics, Govt. General Degree College at Mominpur, Kolkata, W.B., India.
13. **Dipa Goswami** Assistant Professor, Department of Philosophy, Chandernagore Govt. College, Chandernagore, Hooghly, W.B., India.
14. **Madhumita Chatterjee** Assistant Professor, Department of Philosophy, Barasat Govt. College, 24 Parganas (North), W.B., India.
15. **Sangeeta Das** Assistant Professor, Department of Botany, Bahona College, Jorhat, Assam, India.
16. **Barun Kumar Roy** Ex Assistant Professor of Physics, J.B.M.J College, Sundargarh, Odisha; Ex Research Scientist, Laboratory M/S Tata Refractories Ltd.; Senior Manager



Volume: /2 Issue: 22/Dec 2022-ISSN: 2278 8670

**International Marketing, M/S South Asian Petrochem Ltd. India.**

- 17. G. Maheswari** Assistant Professor (SS), Department of Zoology, Avinashilingam University, Tamil Nadu, India.
- 18. Natesan Payer Nadimuthu** Assistant Professor, Deptt. of Botany, Tagore Government Arts and Science College, Lawspet Puduchery 8, India.
- 19. Debasree Bhattacharya** Assistant Professor, Department of Philosophy, Maulana Azad College, Kolkata, West Bengal, India.
- 20. Madhuri Ray** Assistant Professor, Department of Philosophy, Niswambalananda Girls' College, Hooghly, West Bengal, India.
- 21. Namramita Bhuiya** Assistant Professor, Department of Philosophy, Kishore Bharati Bhagini Nivedita College, Kolkata, West Bengal, India.

**COVER:**

- Basudev Mondal** Assistant Professor & H.O.D, Bengali, Dr. B. R. Ambedkar Satabarshiki Mahavidyalaya, Helencha, W.B., India.



## PREFACE

December, 2022 issue of our journal has been published and the credit goes to the members of our journal society. We have placed another beautiful digital painting of renowned artist Basudev Mondal on the cover page of the journal as usual. The title of the painting is 'Blue Horizon'. The justification of the title of the painting in today's perspective is that we have recovered from the adverse situation and a new journey begins.

Basudev Mondal is Assistant Professor & H.O.D, Bengali at Dr. B. R. Ambedkar Satabarshiki Mahavidyalaya, Helencha, W.B. Apart from his teaching profession he is a renowned artist. He is one of the members of the board of associate editors of our journal. He has achieved various awards and honours in the field of art and painting. Some of the achievements are mentioned here:

### Awards:

1. Triple Champion Medalist, Calcutta University.
2. Honour and Felicitiation from Kolkata Theatre for Human Development at Rabindra Sadan Kolkata.
3. Bina Pani Samman from Barasat Suti Sanskriti Sanstha, 24 Pgs(N).
4. Honour and Felicitiation from Bongaon Charukala Parsad, 24 Pgs(N).
5. Honour and Felicitiation from Cultural Unit of Duttafulia, 24 Pgs(N).
6. Honour from 'DOUR' Bengali Magazine, 24 Pgs(N).
7. Honour from 'NOUKA' Bengali Magazine at Bangla Academy, Kolkata.
8. Honour from 'BALMIKI' Bengali Magazine at Bangla Academy, Kolkata.
9. Honour and Felicitiation from 'AMAR EKUSHE' Bengali Magazine, 24 Pgs(N).
10. Honour and Felicitiation from 'EKATA SANGHA' 24 Pgs(N).
11. West Bengal Govt. CRIRA O YUBAKALYAN BIVAG Award (2<sup>nd</sup>).
12. Certificate of Proficiency (1<sup>st</sup>) C. R. Roy Memorial Art Contest.

### Solo Exhibition:

1. 2012 AJANTA ART GALLERY, Kolkata-124.
2. 2009 EKATA SANGHA, Mandapghata, 24 Pgs(N).
3. 2007 Barasat Suti Sanskriti Samsad, 24 Pgs(N).

### Invited Exhibition:

1. 2012 All India Annual Paintings Exhibition, Ajanta Art Gallery, Kolkata-700124.
2. 2011 Boi Mela Exhibition Ashoknagar, 24 Pgs(N).
3. 2010 Charukala Prasad, Bongaon, 24 Pgs(N).
4. 2010 Book Fair Exhibition Ashoknagar, 24 Pgs(N).
5. 2009 Book Fair Exhibition Ashoknagar, 24 Pgs(N).
6. 2009 Charukala Parsad, Bongaon, 24 Pgs(N).

### Group Exhibition:

1. 2012 All India Annual Painting Exhibition, Ajanta Art Gallery, Kolkata-700124.
2. 2011 Japan, Tokyo-CHUWA GALLERY, Tokyo-104-0061 Japan.
3. 2011 Birla Academy of Art and Culture.
4. 2011 Academy of Fine Arts, Kolkata.
5. 2011 Kala Mela Academy of Fine Arts, Kolkata.
6. 2011 Bongaon Charukala Parsad, 24 Pgs(N).
7. 2010 Academy of Fine Arts, Kala Mela Kolkata.
8. 2010 Chemould Art Gallery, Kolkata.



Volume: /2 Issue: 22/Dec 2022-ISSN: 2278 8670

9. 2010 Banipur Art Society, 24 Pgs(N).
10. 2009 Birla Academy of Art and Culture, Kolkata.
11. 2009 Barasat Sanskriti Sanstha, 24 Pgs(N).
12. 2009 Charukala Parsad, Bongaon, 24 Pgs(N).
13. 2009 Book Fair Exhibition Ashoknagar, 24 Pgs(N).

Our effort is to present a good quality journal before the society as a whole and before the intellectual community in particular.

Thank you.

**Dr. Barin Kumar Roy,  
Editor-in-Chief, IJIRD.**



### EDITORIAL-1

Gradually we are recovering after the pandemic situation of COVID-19 that persisted for more than two years. The Indian education system has been afflicted by the CPVID-19 pandemic and its aftereffects can be observed from the new Unified District Information System for Education (UDISE) Plus Report 2021-22 by the Ministry of Education. The said report is an extensive study that provides information on the number of teachers in schools, the enrollment rate in schools, and the availability of important facilities such as toilets, buildings, and electricity. While it was launched in 2018-19, there has been some important additional performance indicators recorded for the first time, including the availability of integrated science labs, co-curricular activities rooms, sustainable development activities related to the environment, such as solar panels, rainwater harvesting and kitchen gardens.

The UDISE Plus Report 2021-22 provides a comprehensive overview of current developments in the Indian education system, which will undoubtedly be beneficial for improving all necessary aspects and requirements of the system. However, despite reports like the UNICEF poll and the Annual Status of Education Report (ASER) survey indicating that dropout rates increased in India during the pandemic, UDISE Plus data does not reflect this reduction and goes on without mentioning the probable causes of some detrimental changes like the decline in the number of teachers. Henceforth, although the study provides a comprehensive assessment of the condition of the Indian education system, it requires more scrutiny and improvement in terms of obtaining reliable and accurate data as well as providing the probable causes of the specified changes in the system. Even though there are a few flaws, the report does a fine work of providing a detailed analysis of the important facets of the system. It additionally signifies the change in these aspects and possibly provides hope for a greater change as demonstrated by the parity in promotions, an increase in enrollment rate in all sections of society, and an improvement in providing students with basic amenities and learning facilities, as outlined in the new national education policy's roadmap.

**Dr. Barin Kumar Roy,  
Editor-in-Chief, IJIRD.**



## EDITORIAL-2

Government of India has just floated National Education Policy (NEP), 2023. The main focus of the policy is on foundational literacy and numeracy that is to provide all the students the most basic learning requirement of reading, writing and arithmetic. So, there is a revamp of school education and examination system with examinations at 2<sup>nd</sup>, 5<sup>th</sup> and 8<sup>th</sup> grade, though the board examinations of 10<sup>th</sup> and 12<sup>th</sup> standards are retained. The board examination will be conducted twice a year and a student is given two chances to pass the examination. Interdisciplinary and multilingual mode is adopted to provide individual attention to the students giving special emphasis to their needs and ability. But, the school education in India, at present, does not have that infrastructure to accommodate the changes forthwith. We have lack of school premises, books and educational kits and above all, the number of teachers and mentors to cater the interdisciplinary and multilingual mode Government of India has just floated National Education Policy (NEP), 2023. The main focus of the policy is on foundational literacy and numeracy that is to provide all the students the most basic learning requirement of reading, writing and arithmetic. So, there is a revamp of school education and examination system with examinations at 2<sup>nd</sup>, 5<sup>th</sup> and 8<sup>th</sup> grade, though the board examinations of 10<sup>th</sup> and 12<sup>th</sup> standards are retained. The board examination will be conducted twice a year and a student is given two chances to pass the examination. Interdisciplinary and multilingual mode is adopted to provide individual attention to the students giving special emphasis to their needs and ability. But, the school education in India, at present, does not have that infrastructure to accommodate the changes forthwith. We have lack of school premises, books and educational kits and above all, the number of teachers and mentors to cater the interdisciplinary and multilingual mode of teaching.

In higher education sector, four year undergraduate degree programme is proposed to be introduced both in general as well as professional and vocational degree courses with multiple exit options. This will provide easy options to the students in obtaining a degree -

- A certificate after completion of 1 year of study
- A diploma after completion of 2 years of study
- A Bachelor's degree after completion of 3-year of study
- A 4-year multidisciplinary Bachelor's degree after completion of 4-year of study with some preferred subjects

MPhil has been discontinued and a student may enrol to PhD programme after completing 4-year Bachelor's degree.

Though it is a very good option to the students, but the lack of infrastructure and unavailability of teachers may deter its implementation.

We now waiting for the government to take necessary steps to develop the infrastructure, laboratory facilities and recruitment of teachers and teaching assistants in proper proportion, so that the programme will not appear to be burden to the existing education fraternity. Before implementation, we hope, government must take correct and positive steps to improve the existing facilities and that will yield good result of NEP-2023.

**Dr. Biswajit Maiti,  
Managing Editor, IJIRD.**



**EDITORIAL-3**

I feel immense pleasure that the International Journal of Integrated Research and Development (IJIRD) December, 2022 volume will be released soon. During New Normal, all authors are trying to focus on research and development for the betterment of the society in addition to the normal work of his/her own desk. Therefore, a good look and diverse theme of papers through multidisciplinary research journals have to be released for the readers and researchers soon. I convey my best wishes to all committee members of the journal society, IJIRD and researchers abroad for their own contribution as a whole. I convey my sincere thanks and gratitude to all senior personalities for the best work and advice to make the journal a finest one. Not only that, I also convey my thanks to the authority of the printing division who has taken effort to make it complete in a stipulated time without any delay. Last but not least, thanks goes to the general members, advisory committee members, IJIRD for their direction to make the journal a complete one at the end of the year 2022 and before the onset of January, 2023. Hope all will benefit from this volume and be inspired to write articles for the next issue in a new year, 2023.

Thanks to all

**Dr. Debabrata Das,  
Additional Editor, IJIRD.**



Volume: /2 Issue: 22/Dec 2022-ISSN: 2278 8670

## INDEX

1. Migration from Nepal to India with Special Reference to Gorkhaland	Anandita Biswas	01 – 11
2. Karma in the light of the Bhagabad Gita: A Discourse	Dr. Netai Chandra Das	12 – 16
3. A Study on Issues and Challenges of Women Empowerment in Secondary Schools in Chinsurah, Hooghly District, West Bengal	Mandira Saha Sikdar	17 – 27
4. অনুবাদক বিদ্যাসাগর : সীতার বনবাস	Dr. Rabin Ghosh	28 – 35
5. Historical Roots and Geographical Imagination: Understanding North-east and India's Look East Policy upto 2009	Anjan Saha	36 – 46
6. Minor irrigation scenario: A Case Study of Krishnanagar and Tehatta Sub Division of Nadia District, West Bengal	Susmita Mandal	47 – 62
7. Special Birds of Himalayan Foothills and Its uniqueness to qualify the ecosystem functioning and for Bird watching in North Bengal, India	Dr. Debabrata Das and Atmaja Avirupa Das	63 – 84



## Migration from Nepal to India with Special Reference to Gorkhaland

**Anandita Biswas**

Assistant Professor, Department of Political Science,  
Diamond Harbour Women's University, West Bengal.

E-Mail: [ananditabiswas.polsc@gmail.com](mailto:ananditabiswas.polsc@gmail.com)

### Abstract

*Migration is an age-old phenomenon. It is a worldwide trend since time immemorial. People cross boundaries for a variety of reasons and different states devise their immigration law that encourages certain forms of border crossing while at the same time restricting others. Generally, migrants move from areas having less opportunity to areas of high opportunity as happened in the case of Nepali migration to India. The turmoil and the outburst revolving round the hilly terrain of Darjeeling dates back to a hundred and twenty years old separatist demand. While dealing with the issue of national identity of 'Indian Nepalis', it is pertinent to understand the actual status of the Nepalis, a large immigrant community from another sovereign state. Nepal and India share a unique and peculiar relationship. The geographical continuity and contiguity, shared culture and language, political and economic interdependence have motivated both the countries to build an intimate relationship. The political ties have also facilitated migration. In contemporary Indian politics, Gorkhaland imbroglio posits a real challenge to governance and identity discourse. This paper endeavors to throw light on the trajectory of the demand and its challenges to the Indian polity. The primary motive of the paper is to unravel the issue of Nepali migration with its effect on Indian Nepalis and identity predicament related to the Gorkhaland issue.*

**Keywords:** Identity, Migration, Nation, Gorkhaland.

(Paper published on 1<sup>st</sup> December, 2022.)

### Introduction

History is the volcanic tale of politics in its diverse incarnation. It is therefore, logical and pertinent to look at history for a proper understanding and interpretation of politics in reality. Thus, to delve into the politics of Gorkhaland movement and the issue of Nepali migration to India, it is rather imperative to look into the history of the region, the people and other important variants involved in the game of politics.

Darjeeling is the northern most district of the state of West Bengal that contains hills and plains both. Two hill subdivisions (namely Darjeeling Sadar, and Kurseong) and Kalimpong district constitute the hilly portion while Siliguri subdivision represents the plain portion. Till very recently, the territorial parameter of the proposed Gorkhaland state was confined only to the hilly subdivision of the district. But gradually, the ambit of the demand started engulfing even the plain areas of Siliguri and even Doars (located in the adjacent



district of Jalpaiguri) and Terai (located in the plain areas of the district of Darjeeling). The urge to attain a separate state is historically rooted (Sarkar, 2013, p. 6).

Darjeeling, as we know it today excepting the Kalimpong sub-division, formed a part of the Gorkha Empire that was established by military conquest from 1788 to 1815. Prior to 1788, Darjeeling formed a part of the kingdom of “*Sikkimpati Raja*”. For a period of almost 28 years, the Gorkha rulers enjoyed the territory (Samanta, 2000, p. 1).

### Origin of the crisis

The political history of the hills can be traced back to the year 1642 when it was occupied by the Sikkim king Phuntsog Namgyal. He founded the Namgyal dynasty in Sikkim as its first consecrated king, known as Chogyal, that implied temporal and spiritual head. Along with the hills, some parts of the plains just beneath the foothills, known as eastern Morang (now known as Siliguri subdivision) also came under Sikkim’s suzerainty. Though the hills were mostly uninhabited, some tribes inhabited the plains. Apart from the Lepchas, some Bhutias were in the hills, particularly in Kurseong.

Formerly, the Lepchas possessed all the hill country of Darjeeling and Sikkim, but when the Tibetans, almost 250 years ago invaded their country and drove them into the lower valleys, they lost their predominance over the area. Furthermore, in 1706, the Lepchas further lost their strength in the tract east of the Tista, which is now conquered by Bhutanese. The Lepchas had always been a timid and peaceful lot. History says that human habitations in Darjeeling began when Lepchas, persecuted by Bhutias who had to leave Sikkim and got divided into two groups. One part of the influx settled in the Ilam area of Nepal on the Sikkim-Nepal border and the other in the Darjeeling hills, now known as the ‘Lepcha-Jagat’ which is a few kilometers away from Ghoom. History marks the year as 1828. The enmity between the Lepchas and the ruling Bhutias reached its extreme point when the Lepcha Prime Minister of Sikkim, Bho-Lod was brutally murdered. With his death, the curtain was drawn forever for the Lepcha power in Sikkim. But Bagchi claims that history suggests the setting of Lepcha community in the Kalimpong region, under the tutelage of Bhutanese rule since 1706.



Originally, descending from Tibet, Lepchas developed a culture of their own. Their scripts, regarded as one of the oldest living scripts in the Himalayan region are unique because of its intimate relationship with nature. The Lepchas became psychologically averse to the advent of modern civilization that involved the destruction of nature. They were gradually receding back and the void was filled by the Nepali migrants from the neighbouring Nepal. The Nepali migrants who are more adaptable and flexible transformed the culturally sensitive Lepchas to politically insignificant lot. The Lepchas are a kind of placid and indolent people who are gradually supplanted by the self-assertive Nepalis.

Another group that deserves mention is the Bhotias of Darjeeling. The word Bhotia properly means an inhabitant of Bhot or Tibet, and is synonymous with Tibetans. The native name of Tibet is Bod, and the Sanskrit form of this word was Bhot. The Sanskrit speaking races of India have accordingly called the inhabitants of this region Bhotias.

However, the dominant race in Darjeeling is the Nepalis, accounts for more than half the population. They are capable, cheerful and alert people, and are characterized as a virile race. Though quick-tempered and keen to resent, they are significantly willing and loyal, if treated with consideration. Nepalis are a people characterized by diversity of culture, language, religion etc. they have a high degree of mobility especially within South Asia, which has further enhanced their diversity.

### **A Brief History of the Gorkha Rule**

The expansionist policy of Nepal under the Gorkhas continued bringing her into direct confrontation with Tibet, China, Sikkim and ultimately East India Company. Between 1804 and 1812, the relationship between Nepal and British India continued to deteriorate till war was declared in November 1814. After quite a Herculean endeavour, the British took possession of the whole territory between the Kali and the Sutlej rivers which had been annexed by Nepal. The Gorkha troops withdrew and the East India Company established direct control of the Himalayan districts of Kumaon and Garhwal. The remainder of the hill country was restored to the rajas (of whom Sikkim's was one) and chiefs from whom Nepal had wrested these territories. All this was done by the Treaty of Segauli in 1816. The East India Company's relation with Sikkim may be traced to the Anglo-Nepalese war. The British had sought Sikkim's support during the war due to its strategic position. It is essential to



point out here that Darjeeling was originally a part of Sikkim. From the 1780s till the early 1800s Sikkim was the victim of several inroads by the Gorkhas. At the end of the Anglo-Nepalese war the East India Company restored to Sikkim, by the Treaty of Titaliya in 1817, the territories that had been occupied by Nepal for quite some time. It included the hill lands east of the Mechi and part of the Terai between the Mechi and the Teesta. Henceforth, the East India Company assumed a position of paramount importance in Sikkim; the Company's arbitration was to be sought in any dispute between Sikkim and her neighbouring states. Sovereignty of Sikkim was further circumscribed when she was restricted to enter into hostility or friendship with the neighbouring state without British intimation.

In spite of all the claims made by the Nepali authors and activists, it is generally believed that when British, in 1816, restored Darjeeling and its adjacent areas to Sikkim, it was a Lepcha-Bhutia tract. The Lepchas were considered as aboriginals of Sikkim and Darjeeling hills. The presence of Europeans in the hills with their never ending wants and demands for labour offered splendid job opportunities which the Nepalis were prompt to grab. To the timid, peace-loving Lepchas and Bhutias inhabiting particularly the tract of the Teesta were added the pushy, assertive Nepalese who flocked in hundreds from Nepal in search of employment. Moreover, due to its geographical location, Nepal was closely linked with the defense interests of the British Empire. The mercenary spirit of the Nepalis made the British recast their recruitment policy and there evolved a new concept of martial race which included both Sikhs and Gorkhas.

### **British Policy of 'Divide and Rule'**

British policy of 'divide and rule' proved to be too successful than it was thought to be. Even after seventy years of independence, Indians are still bearing the brunt of such a policy. British motive behind isolating a genius, loyal, prowess, indomitable, bold and courageous race from consorting with the mainstream nationalism remained successful even years after they left India; with the blood wrenching the whole body politic since the last couple of decades. The British policy of confining Darjeeling within the fencing of the strategic 'excluded' or 'scheduled' or 'non-regulated area' bred a sense of separatism, isolationism, and feeling of humiliation and relative deprivation in the minds of the Gorkhas.



British, in order to enjoy the climatic pleasure and exploit the virgin area for economic benefit, followed a policy of exclusion towards the Darjeeling hills. They adopted a segregationist policy by highlighting the 'natural' difference between the hills and the plains. They categorized Darjeeling as a 'separate administrative unit', as a 'distinctive linguistic zone', 'as a unique economic formation', as a 'separate culture area' and finally as a 'separate region as a whole'.

Administrative tags like the 'Backward Tract', 'Scheduled Area', 'Excluded Area', 'Partially Excluded Area' and 'Waste Land' were various tactful devices through the employment of which, the British sought to play its dastardly game of 'divide and rule' by not only segregating a martial race by way of a segregationist policy, but also by excluding them from establishing any familial companionship with the so-called mainstream folk and thus in a way annihilate any scope for nation-building and challenging British.

British intention behind declaring Darjeeling a secluded area was to quarantine the Nepalis population from getting affected and effected by the overwhelming vigour of nationalism that was swaying whole of India. Had the British been true and sincere to their motive of rendering protection to the tribes they would not have permitted such an extraordinary inflow of Nepalis migrants from Nepal to settle in and around Darjeeling and consequently outnumbering the original inhabitants like the Lepchas and Bhutias. The British wanted to turn the hill into a sanatorium when the Europeans being tired and exhausted by the heat of the plains would take rest and refresh themselves.

The British rulers were aware of the importance and strategic significance of the region. Encircled by countries like China, Tibet, Bhutan, Sikkim and Nepal, the hills besides being of strategic importance, had the potentiality to provide the much-sought trade routes in South-East Asia. Moreover, the tea estates were budding in the region which was mostly owned by the English people.

Darjeeling attained the form of a district by 1866 when the British government treated Darjeeling as a "non-regulated district", as against the "regulated one". In regulated area, all laws and regulations relating to land and land revenue were in force. But in non-regulated areas, such powers are concentrated in the hands of the executive. Therefore, after much permutation and combination, the British innovated the concept of non-regulation, first



applied in the case of the Darjeeling hills during the rule of Lord William Bentinck. This peculiar administrative system kept the region outside the purview of the codified laws that were operative in other parts of British India.

The British administrators hovered round various ideas that could be applied to regulate lands that were unique in terms of the ethnic compositions and traditional jurisprudence. Thus, there emerged the mechanism-The Scheduled District Act or The Scheduled Tracts Act, 1874 that was assumed to be appropriate for the time and situation of the Darjeeling hills. This Act empowered the British government to frame sets of laws, keeping in view the peculiar demand of a particular region, independent of the general regulations operating in different parts of the country. This terminology was, however, modified as the Excluded Area Act in 1919. This was also applied in case of Darjeeling hills. The hills were declared as Backward Tracts under the Act. It was around this time, that the demand for the separation of the Darjeeling hills from the province of Bengal was raised. This separate arrangement, further embroiled the peaceful hills. However, the British could not afford to get involved in another volatile situation by partitioning the Bengal province once again.

Presently, Gorkhaland denote a state carved out of the present district of Darjeeling and parts of the district of Jalpaiguri in West Bengal. In precise terms, it implies the formation of the state of Gorkhaland out of the subdivisions of Darjeeling, Kurseong, Siliguri (from the district of Darjeeling) Kalimpong district and parts of the subdivisions of JalpaiguriSadar, Malbazar, and Alipurduar (from the district of Jalpaiguri) (roughly 3828.7 sq. km.). The territorial limits of the proposed state of Gorkhaland would thus be 6246 sq. km.

### **Indo-Nepal Friendship Treaty: Area of concern**

Historically, culturally, linguistically, the present Gorkhaland imbroglio is entangled with neighbouring country Nepal. The reference of Nepal is inevitable whenever there crops up serious issues in the hill politics. The reason certainly is the controversial 1950 Indo-Nepal Friendship Treaty and its two contentious articles. The concern regarding the identity and status of the Gorkhas originate from Article VI and Article VII of the Indo-Nepal Friendship Treaty of 1950. Article VI of the treaty states that



“Each government undertakes, in token of the neighbourly friendship between India and Nepal, to give the nationals of other, in its territory, national treatment with regard to participation in industrial and economic development of such territory, national treatment with regard to participation in industrial and economic development of such territory and to grant of concessions and contracts relating to such development”.

Article VII of the treaty states that,

“The Government of India and Nepal agree to grant, on a reciprocal basis, to the nationals of one country in the territories of the other the same privileges in the matter of residence, ownership of property, participation in trade and commerce movement and other privileges of a similar nature” (Kaushik, 2013, p. 49).

Articles VI and VII of the Indo-Nepal Treaty is the primary brand of discord of the Nepali identity question. According to the provisions of the Treaty, both the Government of India and Nepal, will grant on reciprocal basis, to the nationals of country in the territories of the other, the identical privileges in matters of residence, ownership of property, participation in trade and commerce, movement and so on, apart from rendering special treatment to the citizens from one country in the other regarding industrial and economic development. The nationals of one country can settle, own property, opt for a living and move freely in the territory of the other. Yet, the settlers would not be granted any citizenship and political rights nor can they vote or participate in the public life of that country. The treaty was meant for the wellbeing of the masses on both sides of the borders. But, its applicability created undaunted problems for the Nepalis on both sides aggrandizing the sufferings of the Indian Nepalis by shearing them off their Indian national identity. Thus, it led to an identitarian crisis for the Indian Nepalis.

The supporters as well as the opponents advocate the abrogation of the treaty. The supporters, who do not vehemently object to the treaty as a whole, express its objection only on the ground that the treaty dilutes the identity of the Nepali community. According to them, the treaty seriously compromises the status of the Nepali-speaking Indians. The opponents of the treaty, on the other hand are vocal to nullify the treaty on the ground of unhindered migration from across Nepal and other neighbouring countries that benefit from the



advantages guaranteed in some clauses in the treaty that ultimately leads to demographic imbalance of the territory. These liberal provisions of 1950 treaty operates conversely to the interests of the Gorkhas with Indian citizenship as they can be easily mixed up with the 'reciprocal' Nepalis i.e. the citizens of Nepal residing in India. It further pointed out that this happens simply because there is no clear cut demarcation to differentiate an Indian Gorkha from a 'reciprocal' Nepalis. There is no doubt that identitarian cause has been the main factor that has sustained the Gorkhaland crisis for more than a century. Behind this identitarian issue, the citizenship-identity crisis created by this treaty has provided the much-needed fodder for it to remain burning over such a long period. The treaty, in all probability has diluted the citizenship parameter of both the Indian-born Nepalis and Nepalis from Nepal. Indian Nepalis are aware of the fact that neither 'Nepali' nor 'Gorkha' completely dissociate them from the neighbouring country Nepal which is believed by Indians to be the source of all Indian Nepalis and the country to which they belong. That is the reason, while the labels like "foreigner", "migrants", and "aliens" and so on are used to refer to Indian Nepalis. With the huge influx of Nepalis from across the border, the identity of the Gorkhas who are the genuine Indian citizens, is blurred and compromised as they are being muddled together with the non-citizens migrants, the beneficiaries of the treaty (Bagchi, 2012, pp. 79-80).

According to the Indian law, all foreign citizens have to get them registered under Registration of the Foreigners' Act and fetch a Registration certificate from the registration office. But the Indo-Nepal treaty has utterly refuted the India laws regarding foreigners. The Nepali migrants from Nepal are exempted from getting registered resulting in a huge inflow of unidentified obtrusive elements within the territory of India.

However, it is also true, that the period when the Indo-Nepal treaty was ratified, there was no citizenship regulation act within India and Nepal. Citizenship act came into being in India in 1952 and the Government of India, applied citizenship rights to those persons who settled in India before 26<sup>th</sup> January 1950, i.e. the date our constitution was implemented.

According to T.B. Subba, Indian Nepalis are very much aware of the fact that there are many migrants among them. Thus, they ask for the state's help to segregate them from those who cross the border everyday and get mixed up into their society and all of a sudden leave, resulting in a mess to be siphoned out by the Indian Nepalis. Indian Nepalis also argue that many among them are descendants of original inhabitants of Indian territory, viz. Sikkim



and Darjeeling, which is now a part of West Bengal. Indian Nepalis are fighting against two types of labeling: one, the labels like “foreigners”, “migrants” and “aliens” that take away their claims of legitimacy as Indian nationals and at another level, the labels like “Kancha”, “bahadurs” and “chowkidar”. This situation is driving the Indian Nepalis to search for a label that would differentiate them from the Nepal’s Nepalis, who come and go without having any roots in Indian soil but coincidentally resemble the look of the Indian Nepalis. They are not stakeholders in India and allegedly commit crimes and go back to Nepal leaving the Indian Nepalis in doldrums (Subba, 1992, pp. 385-386). There are thousands of settlers who have already registered their names in the voters’ list of the country. But they cannot be considered as citizens of India in the right sense of the term. But they are taking part in election, have fetched many required identity proofs.

Many Nepali migrants resorted to unfair means to get their names registered in the voters’ list. The friendship treaty that tried to bind the two countries with the thread of friendship and amicability became anguish for the authentic Nepali speaking Indian citizens. They are eagerly trying to differentiate themselves from their Nepali counterpart. This process of regular proving that they are Indians and not Nepalis, is in fact, humiliating and tragic endeavour on the part of many respectable Indian citizens.

One of the most perplexing issues, involved in this citizenship imbroglio is the fact that the inflow of Nepali migration is continuing unabated and they are settling in the hills and the plains at the cost of genuine Nepali speaking Indian citizens, who have been residing here for generations even before India attained independence. The Nepali critics opine that the treaty has enabled India to interfere in the internal affairs of the country including defense and security affairs. The Indian critics, on the other hand, vehemently opposed the treaty as some provisions of the treaty jeopardize the security question in India. Moreover, the migrants in the Darjeeling hills and the Terai-Dooars region have outnumbered the local population, resulting in ethnic tensions and sometimes even to violence.

The Nepalis in India are undoubtedly a migrant community. Many Nepalis have migrated to this country more than a century and a half ago settling in the remote, uninhabited areas by clearing forests and making the place habitable. They have also contributed to the enhancement of regional economy by transforming unaccountable hectares of land into tea gardens and agricultural fields and contributing physical labour in the



infrastructural development of the region. However, the central area of concern is the question of their identity as Indian Nepalis as distinguished from the Nepalis of Nepal.

The provision of reciprocal recognition in the Indo-Nepal Peace Treaty 1950 extinguished the differentiation between Indian born and Nepal Born Nepalis. Consequently, the Indian born Nepalis/Gorkhas were considered as foreigners. In fact, ex-Prime Minister Morarji Desai even addressed Nepali as a foreign language and made a controversial statement "If you want Nepali; go to Nepal". When Indian Nepalis are humiliated on the streets of Indian capital as 'foreigners' and slogans like 'go back to Nepal' are chanted, it actually portrays the unfreedom they experience in their day to day life. The ironical part is that their grandparent/parents/siblings are part of the Indian security force. Humiliations on ground of their Mongoloid feature have led many young Gorkhas to alienate from the Indian mainstream which in turn instigates separatist tendency. They strongly feel that if they had a home they wouldn't have been asked to go back to Nepal.

Anxieties of eviction, non-recognition of their identity, existential crisis and grave humiliation by every single authority and mainstream populace coupled with falling economic and job opportunities prompted the Gorkhas to demand 'Gorkhaland' which they consider not only as a state but a sanctuary, that will bestow on them an Indian identity and distinguish them from their Nepali counterpart. When Indian Nepalis are humiliated on the streets of Indian capital as 'foreigners' and slogans like 'go back to Nepal' are chanted, it actually portrays the unfreedom they experience in their day to day life. The ironical part is that their grandparent/parents/siblings are part of the Indian security force. Humiliations on ground of their Mongoloid feature have led many young Gorkhas to alienate from the Indian mainstream which in turn instigates separatist tendency. They strongly feel that if they had a home they wouldn't have been asked to go back to Nepal. Therefore, individual along with his group become significant in any governance and development discourse. The constraints regarding the establishment of the Indian identity surely and persistently have acted as a major unfreedom in the course of development of the Gorkha population in India.

A transformation in posture and attitude on the part of both Indian majority population and the Indian Nepalis are some of the urgent necessity the country demands for utilizing the potentiality of the once most courageous martial race. A re-location, a re-



questioning and a re-modeling of identitarian issue of the Indian Gorkhas vis-à-vis the Indian majority needs to be addressed.

### References:

- Bagchi, R. (2012). *Gorkhaland: Crisis of Statehood*, Sage, New Delhi.
- Basu, S. (2012). 'Gorkhas, Adivasis and Others in North Bengal', *Economic and Political Weekly*, Volume XLVII, No. 35, September 1.
- Ghosh, A. (2009). 'Gorkhaland Redux' in *Economic and Political Weekly*, Volume XLIV, No. 23.
- Kaushik, A. (2013). *Gorkhaland: A Study of Ethnicity from Peace Approach*, Kalinga Publications: Delhi.
- Khanduri, C.B. and Fabi, F. (1997). *A Rediscovered History of the Gorkhas*, GyanSagar Publications, Delhi.
- Mukherji, S. (2014). *Gorkhaland: The Dormant Volcano*, APH Publishing Corporation, New Delhi.
- Paul, B. (2008). 'Hill Dilemma', *The Statesman*, (Kolkata), July 2.
- Samanta, A. K. (2000). *Gorkhaland Movement: A Study in Ethnic Separatism*, APH Publishing House, New Delhi.
- Sarkar, S. (2013). *Gorkhaland Movement: Ethnic Conflict and State Response*, Concept: New Delhi.
- Subba, T.B., (1992). *Ethnicity, State and Development: A Case Study of Gorkhaland Movement in Darjeeling*, Har-Anand Publications, New Delhi.



## Karma in the light of the Bhagabad Gita: A Discourse

**Dr. Netai Chandra Das**

Assistant Professor of Philosophy (stage-3),  
Nayagram Pandit Raghunath Murmu Govt. College,  
E-Mail: [srinetaichandradas@gmail.com](mailto:srinetaichandradas@gmail.com).

### Abstract

*It is a well known fact that the Bhagabad Gita has finely embodied the spirit of the Upanishada. There is a famous saying, "You will become as diligent as Krishna". The exhortations given by Lord Krishna to Arjuna revolve around the supreme importance of Karma which is actually the niskam karma and does not simply denote perseverance. The Gita upholds the Satwik quality in repudiation of the Tamasik and Rajasik propensities of human beings. The chief sermonic teaching of the Gita relates to the glorification of the Satwik quality which makes our Karma ideally perfect as it is in itself the principal object of human life. Gyana and Bhakti are related closely to Karma.*

**Keywords: Satwik quality, Karma, Niskama-karma, Gyana, Bhakti**

(Paper published on 1<sup>st</sup> December, 2022.)

The present article proposes to embark upon a discourse with specific interpretations of the value of Karma from the perspective of the teachings of the Bhagabad Gita which sums up the essence of the Upanishada to highlight the different strands of Karmayaga. The oft-quoted proverb with regard to the Karma in Sanskrit is "कर्मण्येवाधिकारस्ते मा फलेषु कदाचन । मा कर्मफलहेतुर्भूर्मा ते संगोऽस्त्वकर्मणि ॥" Its meaning is extremely relevant to our life. We have to carry on our work without anticipating the result and we must not be inclined towards the outcome without doing labour. Therefore, the prime focus of human beings must be hard work i.e. Karma. What the Gita has emphasizes is the combination of the Karma, Gyan and Bhakti. Bhakti is the dedication to God's will to ordain our activities through which we can gain knowledge. Therefore, Karma and Gyana bear a close nexus with each other as we can gather knowledge only when we perform our karma with devotion to God. The understanding of Karma



as enunciated by the Gita goes beyond the lucid dictionary meaning of the term i.e. 'to perform a task'. The Gita negates the concept of hankering after the consequence. This nullification gives importance to the notion of desire less acts which do not bind us with the earthly greed. We have to look upon ourselves as merely the slaves to God who loves his honest followers. The disciplined disciples project themselves as the lively karmayogis who unify themselves with the Gyana of divinity through their Bhaktiyoga.

In the Bhagavad Gita, Krishna says: tasmad asaktah satatam karyam karma samacara asak to hy acarana karma param apnoti purusha .

Therefore, without being attached to the fruits of activities, one should act as matter of duty , for by working without attachment one attains the Supreme. Krishna then goes on to describe how Arjuna should surrender the fruits of his actions(good or bad)to him ,Krishna (as the Supreme Person or avatar):

Therefore, O Arjuna , surrendering all your works unto Me, with full knowledge of me, without desires for profit , with no claims to proprietorship, and free from lethargy, fight.

Many celebrated philosophers like Vivekananda, Aurobindo and Mahatma Gandhi talked about the relevance of Karma in every sect of our life, be it society or family or the entire nation. It is the Gita which exercised great impact on the formulation of the philosophical ideas of these famous thinkers. They took pains in enlightening society with the notion of Karma propounded in the Bhagavad Gita. Swami Vivekananda looked upon the divine idea of Karma as the fountain of novel thoughts to avert failure and to march for the abolition of maladies from society. Swamiji put forward his views of Karma in the light of the loksamgraha of the Gita and with this beneficial target in mind he founded the Ramkrishna Mission to bring humanity to the path of virtue and to stand by the needy and the poverty-stricken people. Not only that but also he



motivated the youths to embark upon the life of activities and to shun the life of indolence and slothful ease. The chief objective of the Ramkrishna Mission is to disseminate the principles drawn from the niskamakarma or karmayoga of the Bhagavadgita for the sake of the well-being of human beings. The missionaries show the pragmatic application of the ideology of karma for the attainment of salvation and spirituality. In this connection, Vivekananda states:

Let me tell you in conclusion a few words about one man who actually carried this teaching of Karma-yoga into practice. That man is Buddha. He is the one man who ever carried this into perfect practice. All the prophets of the world, except Buddha, had external motives to move them to unselfish action. The prophets of the world, with this single exception, may be divided into two sets--- one set holding that they are incarnations of God come down on earth, and the other holding that they are only messengers from God; and both draw their impetus for work from outside. But Buddha is the only prophet who said, "I do not care to know your various theories about God. What is the use of discussing all the subtle doctrines about the soul? Do good and be good. And this will take you to freedom and to whatever truth there is".

This is, of course, a brilliant saying of Swamiji who gained an in-depth insight into the inner significance and meaning of Karma. He always taught his disciples the values of truth, justice, peace and love in association with the equanimity of the mind to be maintained by Karma-yoga. Swamiji's firm conviction was that the essence of Karmayoga inspired others to render social services namely educational activities, health and family welfare, cultural works, community outreach activities etc. Impressed by the philosophy of Karmoyoga Vivekananda dedicated himself to the service and well being of others and propagated the ideals in the overseas



countries also. He came back from abroad winning the laurel of India. Apart from the close scriptural analysis of the Gita he also arranged informal discussion groups in which he interacted with his disciples at a more personal level. At the subjective level, he at first realized his teachings and then he motivated the youths to abide by the ideology of providing succor to the needy, the poverty-stricken, penurious people experiencing suffering, hardship, misery and trouble. In the philosophy of Swamiji, the actual intellectual deliverance is the belief in the Karmoyoga that carries the spirit of modernity. Without it the light of modernity can never enlighten the minds of the citizens of any nation. It promotes the philosophy of non-profit works that bear evidence of genuine whole-hearted devotions and dedication.

Sri Aurobindo gave a new dimension to the analytical reading of the Bhagavadagita and highlighted the pragmatic approach of the Gita in its clarification of the karmayoga. Aurobindo believed that karmayoga is linked to the nationalistic ideals that make citizens country lovers and philanthropists. The perfect path to gain divinity is the yoga associated with meditation. Sri Aurobindo's putting emphasis on heavenly radiance was the result of his being deeply influenced by the Lokasamgraha of the Bhagavadagita. He had great faith in the infinite power of the conscious karmayoga which innervates an individual's latent spirit of talent and action.

It was the father of the nation, Mahatma Gandhi who connected the philosophy of niskama karma as articulated in the Gita with the socio-cultural and socio-political turmoil in our country. He took the path of non-violence that was inspired mainly by the philosophical teachings of the Bhagavadagita. Gandhiji had the conviction that karma created the spirit of the due performance of responsibilities via a single window i.e. Ahimsa and Satyagraha which partook of the idea of Swadharma. Then, a calm state of the mind will always be maintained and it will lead to a point of liberty, equality and fraternity.



Balgangadhar Tilak put forward a novel concept of social activities and Lokasamgraha. He supported the matter of war in Kuruksetra which he thought to be the focus of the religious sanctity i.e. dharma and socio-political justice. The judgment of moral and immoral activities can be suitably done through the ideal application of the Karmayoga didactic lesson propounded by the Bhagavadgita.

Thus, the vital role played by the Gita has been discussed above briefly to take note of pertinent applicability of the Karmayoga particularly the Niskama yoga philosophy. Every human being ought to embrace the teaching so as to uplift morally, socially and educationally.

#### Works consulted

1. Krishnananda, Swami, (1995); *The Philosophy of the Bhagabat gita*, The Divine Life Society.
2. Sivananda, Swami, *The Bhagabat Gita*, The Divine Life Society, 1995
3. Prabhananda, Swami, *The Bhagabat Gita: Song of God*, Signet Classics, 2002
4. Gandhi, M. (1983); *The Bhagavad Gita*. Delhi: Orient Books.
5. Ghosh, J. C. (1972); *Srimad Bhagavad Gita*. Kolkata: Presidency Library.
6. Godyandka, J. (2007); *The Secrete of Karmayoga*. Gorakhpur, India: Gita Press.
7. Minar, R. N. (1984). *Modern Indian Interpretation of the Bhagavadgita*. Albany, New York: State University of New York.
8. Tilak, B. (1935); *Srimad Bhagavadgita Rahasya or Karmayoga Sastra*. Delhi: Low Price Publication.
9. Aurobindo. (1950). *The Ideal of Karmayogin*. Pondicherry: Aurobindo Ashram Press
10. Vivekananda, S. (2001). *Karmayoga*. Bagbazar, Kolkata: Udhodhan Karyalaya.



# A Study on Issues and Challenges of Women Empowerment in Secondary Schools in Chinsurah, Hooghly District, West Bengal

**Mandira Saha Sikdar**  
Chinsurah College of Education  
E-Mail: [mandirasikdar.ms@gmail.com](mailto:mandirasikdar.ms@gmail.com)

## Abstract

*Education is the empowerment and the freedom for excellence for the human society. Nevertheless, the role of education in the half of the population of the women folk is lagging behind. It is especially more concern when talks in the sense of women from marginalized section of society, their empowerment, status, position in the society. Furthermore, to identify the obstacle in the path of women empowerment this paper attempts to analyze the status of Women Empowerment in India and highlights the Issues and Challenges of Women Empowerment. Today the empowerment of women has become one of the most important concerns of 21st century. But practically women empowerment is still an illusion of reality. We observe in our day to day life how women become victimized by various social evils. Women Empowerment is the vital instrument to expand women's ability to have resources and to make strategic life choices. Empowerment of women is essentially the process of upliftment of economic, social and political status of women, the traditionally underprivileged ones, in the society. It is the process of guarding them against all forms of violence. The study is based on purely from primary sources. The study concludes by an observation that access to Education, Employment and Change in Social Structure are only the enabling factors to Women Empowerment. Women empowerment is a continuous process in which women have control over the physical and mental resources that include human intellectual, financial, the self, beliefs and moral attitudes. The objective of this paper is to analyze and understand how secondary education can enhance the strength of women in the society especially for the girls in Hooghly district, west Bengal, India. The data has been collected from various schools in Chinsurah and analysis is based on information regarding the school and the results in HS exam from girls higher secondary schools. The paper is concluded with the information that the secondary level education to the girls provides the kick starting for their empowerment.*

**Keywords:** *Women, education, empowerment, secondary school, Hooghly.*

(Paper published on 1<sup>st</sup> December, 2022.)

## Introduction

Women's role in economic development, in most countries of the world, cannot be undermined. Although women constitute almost half of the total population of the world, their social, economic and political status is lower than that of men and they are subjected to the tyranny and oppression of a particular order for centuries and de facto even today. They are customarily expected to confine themselves to household environs and play a passive role as daughters, daughter-in-law, wives and mothers. They are typically considered as weaker than men. This attitude has constrained their mobility and consequently lack of opportunities for the development of their personalities.



Women belonging to underprivileged and poorer sections irrespective of their social strata or region are by themselves, in no position to unravel their problems. They are subject to discrimination and exploitation and occupy a lower status in domestic, political and economic scenario. Women particularly, in rural areas have proportionately least possessions, skills, educations, social status, leadership qualities and capabilities for mobilizations which determines the degree of decision making and power, and as a result, their dependence on men increases. They have been confined to the four walls of the household, overburdened with domestic work and controlled of their mobility and personal freedoms by the men of the household since time immemorial. So they have lagged behind in the fields of education, skill development, employment and as a result, their work is greatly undervalued in economic terms.

As far as their social status is concerned, they are not treated as equal to men in all the places. In the Western societies, the women have got equal right and status with men in all walks of life. But gender disabilities and discriminations are found in India even today. The paradoxical situation has such that she was sometimes concerned as Goddess and at other times merely as slave.

### **Review of Literature**

H. Subrahmanyam (2011) compares women education in India at present and past. Author highlighted that there has a good progress in overall enrolment of girl students in schools. The term empower means to give lawful power or authority to act. It is the process of acquiring some activities of women.

M. Bhavani Sankara Rao (2011) has highlighted that health of women members discuss among themselves about health related problems of other members and their children and make them aware of various Government provisions specially meant for them.

Doepke M. Tertilt. M (2011) Does Female Empowerment Promote Economic Development? This study is an empirical analysis suggesting that money in the hand of mothers benefits children. This study developed a series of non cooperative family bargaining models to understand what kind of frictions can give rise to the observed empirical relationship.

Duflo (2011) Women's Empowerment and Economic Development, National Bureau of Economic Research Cambridge The study argues that the inter relationships of the Empowerment and Development are probably too weak to be self-sustaining and that continuous policy commitment to equality for its own sake may be needed to bring about equality between men and women.

Sethuraman K (2008) The Role of Women's Empowerment and Domestic Violence in child Growth and Under nutrition in a Tribal and Rural Community in South India .This research paper explores the relationship between Women's Empowerment and Domestic Violence, maternal nutritional status and growth over six months in children aged 6 to 24



months in a rural and tribal community. This longitudinal observational study undertaken in rural India included tribal and rural subjects.

### **Concept of Women Empowerment**

Empowerment is a multi-dimensional process, which should enable women or group of women to realize their full identity and power in all spheres of life (Surekharao and Rajamanamma, 1999). It consists of greater access to knowledge and resources, greater autonomy in decision making to enable them to have greater ability to plan their lives, or to have greater control over the circumstances that influence their lives and free from shocks imposed on them by custom, belief and practice. Generally development with justice is expected to generate the forces that lead to empowerment of various sections of population in a country and to raise their status especially in case of women.

“Empowerment comes from Women’s groups who seek to empower themselves through greater self-reliance. They have right to determine their own choices in life. They also seek to gain control and access to resources”. Empowerment is process, which helps people to gain control of their lives through raising awareness, taking action and working in order to exercise greater control. Empowerment is the feeling that activates the psychological energy to accomplish one’s goal ( Indiresan, 1999).

### **Objectives of the Study**

- To know the need of Women Empowerment.
- To evaluate the Awareness of Women Empowerment in India.
- To dissect the Factors affecting the Economic Empowerment of Women.
- To study the Government Schemes For Women Empowerment.
- To distinguish the Hindrances in the Path of Women Empowerment.
- To offer valuable Suggestions in the light of Findings.

### **Present Situation of Women**

New Delhi: Being equivalent to their male partners is still a long ways for Indian women. In addition to the fact that they are minimal as open figures a normal Indian women can barely make major decisions at home or outside. In 2012, women possessed just 8 out of 74 clerical positions in the union committee of pastors. There were just 2 women judges out of 26 judges in the Supreme Court and there were just 54 women judges out of 634 judges in different high courts. Stunning Facts: As per 2013,UNDP report on Human Development Indicators, all south Asian Countries with the exception of Afghanistan, were positioned preferable for women over India It predicts: an Indian girl child aged 1-5 years is 75% more prone to bite the dust than the boy child. A woman is assaulted once in each 20 min and 10%



of all wrongdoings are reported. Women's structure 48% of India's Population, just access to formal credit.

### **Need for Empowerment of Women**

Women in India have had to face the worst form of humiliation and discrimination over the years. Women's Potential for development remains far from fully utilized due to socio economic constraints. Their role is limited merely as the caretakers of family and its homestead activities Ideological preferences to sons and males in the family led to discrimination in nutrition, health and education of girls and women.

Women must possess the self worth, confidence and freedom to choose what they may with regard to their private and professional choices alike. Gender bias is unreasonable and wrong on so many levels, curbing potent individuals from not only striving towards their best but from living an independent life free of domination and fear. Women empowerment helps in fighting this backwardness in ways mentioned below:

#### **RULING OUT UNDER-EMPLOYMENT AND UNEMPLOYMENT**

Around 50 per cent of the world population consists of the women population. Unemployment of women and unequal opportunities in the places of work cause great problems around the world, because true potential is left from being harnessed.

#### **RECOGNISING THAT WOMEN ARE EQUALLY INTELLIGENT**

It is important to realise and understand that women in the modern era are not only equally competent but often times even ahead of men in several socio-economic fields, thus making their presence in the work front extremely important.

#### **AND A STOREHOUSE OF IMMENSE TALENT**

Women empowerment is essential today because earlier, women were not allowed to receive higher education, the society was backward and the times were different. But now the times have changed. Women take up the same responsibilities as men and do a wonderful job in showcasing their talents when given an opportunity to. It is necessary that they are given a chance to compete on the same level as men only to be able to benefit the employment and job spheres of our country.

#### **TO PROMOTE AN OVERALL DEVELOPMENT OF SOCIETY**

Gender shouldn't be an unreasonable determining factor curbing potential candidates from performing where they ought to. This shall not only prove advantageous to the women concerned but also to the society that should in no way be deprived of adequate development.

#### **TO REDUCE SCOPE DOMESTIC VIOLENCE AND SEXUAL EXPLOITATION**

As mentioned in the previous point, when independence is acquired all sorts of mistreatment can be dodged. Mistreatment includes domestic violence and sexual exploitation even in marriage.



It is important that women understand what unacceptable behaviour is, in order to fight against it. This is why education is very important and education is another great key towards women empowerment, and also the result of women empowerment.

#### TO ERRADICATE CORRUPTION

Corruption addressed to women or to the society in general, shall be reduced when women are permitted to receive education equal to men. So women empowerment is also necessary, in order to bring about peace and justice to the society with women being equally equipped to fight against the wrongs by perhaps participating in movements, raising their voices single handed or joining groups and civil service jobs to serve their fellow country mates in the same manner as men.

#### TO GET RID OF POVERTY

While women empowerment serves in granting economic independence to women, it also serves in contributing to the economic benefits of the household and the society as a whole. Pressure on one individual to earn a family's living can be too much to bear, which is why it is rightful to share the burden amongst one another to provide for a better living condition to their family members and also to gradually uproot poverty from the country by facilitating proper distribution of wealth per household.

#### TO FACILITATE NATIONAL DEVELOPMENT

Women have exhibited potential in the National and even International levels. Women like Sakshi Malik (wrestler), Dipa Karmakar (gymnast) and Manushi Chhillar, (the girl who recently bagged the Miss World crown) have all portrayed extraordinary potential and rose to International recognition even, let aside national.

These are the women who inspire and back women empowerment movements even further to purport the talents of women which look forth to be appropriated in the best possible manner. This is why women empowerment is necessary, so that not one or two women accidentally get a chance to justify their potential and contribute to National pride but so that many other women fearlessly are able to take part in anything and everything that a man takes part in, to discover themselves. There shouldn't be any hint of discrimination.

#### REALISE THE ADVANTAGEOUS PROSPECT OF WOMEN OVER MEN

Certain jobs in fact can't reach up to their best capacities without the participation of women. It is the very sentiment of nurturing, softness and warmth in some women that is necessary in fields like Non Governmental Organizations, Nursing, teaching and other similar sorts of jobs where along with the participation of men, female involvement is vital for the smooth functioning of the system in order to achieve the ideals they seek to achieve.

#### GOVERNMENT SCHEME FOR WOMEN EMPOWERMENT

The Government programmes for women development began as early as 1954 in India but the actual participation began only in 1974. At present, the Government of India has number of schemes for women operated by  
 Rastriya Mahilakosh (RMK) 1992-1993.  
 Mahila Saridhi Yojana (MSY) October, 1993.  
 Indira Mahila Yojana (IMY) 1995.



Women Entrepreneur Development programme given top priority in 1997-98.

Mahila Samakhya being implemented in about 9000 villages .

Support to Training and Employment Programme for women.

Beti Bachao Beti Padhao :- To eliminate female foeticide and to promote education for girl children.

STEP (Support to training cum Employment for women) – To increase the self-reliance and autonomy of women by enhancing their productivity & enabling them to take up income generation activity.

SSA (SarvaShikshaAbhiyan) – For girl child education. It lead to increase in the Gender Parity Index (GPI).

The National literacy Mission or Saakshar Bharat – Literacy of women. Literacy is the critical instrument of women's empowerment.

National Rural Health Mission – Educating women on health care. It has resulted in the decline in fertility rates, Maternal mortality rates (MMR), Infant mortality rates (IMR).

SHG (Self Help Groups) – For economic development in women by giving micro finances.

GB (Gender budgeting) – Identifying the felt needs of women and re-prioritizing and increasing expenditure to meet these needs.

NMEW (National Mission for Empowerment of Women) – To ensure economic & social empowerment of women.

Swayamsidha scheme – To ensures total development of women.

Swadhar scheme – Basic necessities to marginalized women & girls.

Kishori Shakti Yojana – Empowerment of adolescent girls.

MahilaSamridhiYojana – For women empowerment.

Maternity Benefit Scheme – Payment of Rs.500/- to pregnant women for the first two births only if the woman belongs to BPL (Below Poverty Line) category.

RastriyaMahilaKosh – To provide micro loans for women.

Scheme for working women hostel – To promote availability of safe & conveniently located accommodation fro working women.

Development of women & children in Rural Areas (DWCRA)– Creation of groups of women for income generating activities on self sustaining basis.

SABLA – Empowerment of adolescent girls.

### Methodology

This study was done on quantitative and qualitative method and procedure to collect and analysis data. Priority was given to quantitative data with qualitative used to elucidate the qualitative findings. Data were collected from 10 secondary schools through the use of questionnaires, interviews and discussion. From each schools 10 students were selected to participate in the study for giving a total of 100. The data collected through questionnaires were analyzed using statistical software package SPSS version 21 in terms of description statistics including frequencies, mean values, percentiles, and standard deviation .The data are presented in tables and qualitative data from the interviews are used to elaborate the issues under discussion.



### Data Analysis and Interpretation

The status of 10 secondary schools learning environment in Chinsurah in Hooghly district are mentioned here. Learner empowerment Learner empowerment is the process where learner have to develop the habit of develop the habit of taking responsibility and leading a disciplined life( MOE,210:20).Empowerment of learners can be achieved through taking active part in different activities in teaching learning process and responsive to their classes. Students will also gain empowerment through expressive toward their teachers lesson and by giving feedback to their teachers and also by taking active participation in group activities like different cultural programmes and sports. Students' empowerment can also be determined by taking responsibility of their work. Students can acquire adequate benefit from teachers when they use various teaching technique and use sufficient teaching learning materials. Students' empowerment may also be saluted by developing self regulations within and beyond the classroom and by observing the behaviour of students academic success and regular attendance and also maintenance of rules, regulations and behaviour in school campus. In the study, the questionnaire sought to determine whether have developed the habit of taking responsibility and leading a disciplined life and also from their school records in secondary examination. For this purpose 10 students were selected from each school and the data were collected through qualitative open ended questionnaire and then analyzed through statistical analysis .The results are presented at Table 1 below.

Table 1:Statistical analysis of collected data

School No	No of students N	Mean	Standard Deviation
School 1	10	14.30	2.002
School 2	10	13.90	1.663
Schools 3	10	13.70	2.057
School 4	10	14.80	1.813
School 5	10	14.80	2.616
School 6	10	13.00	2.260
School 7	10	14.10	1.791
School 8	10	14.70	2.668
School 9	10	14.30	3.056
School 10	10	13.10	2.514



In case of School 1 (Sugandhya Saradmoni Girls School) the result (mean =14.30,SD=2.002) indicate that at 0.05 level  $H_0$  is rejected and the observed results are considered significant .So the result is significant that mean the issues regarding women empowerment in the school showing significant result.

In case of School 2 (Polba Girls High School) the result (mean = 13.90, SD=1.663) indicate that at 0.05 level  $H_0$  is accepted and observed results are considered not significant .So the result is not significant that mean the women empowerment in that school showing not significant result.

In case of School 3 (Chinsurah Balika Siksha Mandir High School) the result (mean=13.70, SD= 2.057) indicate that at 0.05 level  $H_0$  is rejected and observed results are considered as significant that mean the school showing significant result in case of girl learner empowerment.

In case of School 4 (Meyar Behr Ramkrishna Siksha Niketan) the result (mean=14.80, SD=2.61) indicate that at 0.05 level  $H_0$  is accepted and observed results are considered as not significant that means the school showing not significant result.

In case of School 5 (Dharampur Adarsha Viyalaya) the result (mean =14.80 , SD= 2.616) indicate that at 0.05 level  $H_0$  is rejected and observed results are considered as significant that means the school showing significant result.

In case of School 6 (Binodini Girls High School) the result (mean13.00, SD= 2.260) showing that at 0.05 level  $H_0$  is rejected and observed results are considered as significant that means the school showing significant result.

In case of School 7 (Pearabagan Saradmoni Girls High School) the result (mean=14.10,SD= 1.791) showing that at 0.05 level  $H_0$  is accepted and observed results are considered as not significant that means the school showing not significant result.

In case of School 8 (Kashwara Yeasin Mondal Siksha Niketan) the result (mean=14.07,SD=2.668) showing that at 0.05 level  $H_0$  is rejected and observed results are considered as significant that means the school showing significant result.

In case of School 9 (Chinsurah Deshbondhu Memorial Girls High School) the result (mean =14.30, SD= 3.056 ) showing that at 0.05 level  $H_0$  is rejected and observed results are considered as significant that means school showing significant result.

In case of School 10 (Chinsurah Girls Banimindir School) the result (mean =13.10, SD = 2.514) showing that at 0.05 level  $H_0$  is rejected and observed results are considered as significant that means school showing significant result.



### **Findings of the Study**

Based on the data collected from 10 different schools and their analysis it can be said that school 2, school 4, school 7 showing not significant result means these schools not providing adequate learning environment for empowering their students. It is believed that a school with a good learning environment contribute to stir up expected outcomes of learning that will facilitate good academic performance by encouraging effective teaching and learning. In case of school 1, school 3, school 5, school 6, school 8, school 9 and school 10 showing significant result. So it can be said that these schools providing good learning environment to their students for expected outcomes of learning and good academic records. From the study of the collected data that the students are not fully expressing the purpose of their learning. These results show that students are not yet fully empowered. Of the study revealed that there are problems in the school and learners are worried about their future job opportunities. The challenges that learner face in their learning environment need to be addressed if learners are to succeed in their studies.

### **Challenges**

There are a few limitations that check the procedure of women empowerment in India. Social standards and family structure in creating nations like India, shows and sustain the subordinate status of women. One of the standards is the proceeding with inclination for children over the introduction of a girl child take which in present in all social orders and groups. The general public is more one-sided for male boy child in appreciation of instruction, sustenance and different open doors. The underlying driver of this sort of state of mind lies in the conviction that male boy child acquires the tribe in India with a special case of Meghalaya. women frequently disguise the conventional idea of their part as common in this manner delivering a treachery upon them. Destitution is the truth of life for by far most women in India. It is another variable that postures challenge. There are a few difficulties that are Targeting tormenting the set issues will straight for wardly profit the empowerment of women in India as well as in Hooghly district.

**Education:** While the nation has developed from a far cry since freedom where instruction is concerned. The hole amongst women and men is extreme. While 82.14% of grown-up men are instructed, as it were 65.46% of grown-up women are known not proficient in India. The sex inclination is in advanced education, particular expert trainings which hit women hard in business and accomplishing top authority in any field.

**Poverty:** Destitution is viewed as the best risk to peace on the planet, and annihilation of neediness ought to be a national objective as critical as the annihilation of lack of education. Because of this, women are misused as household makes a difference.

**Wellbeing and Safety:** The wellbeing and security worries of women are foremost for the prosperity of a nation and is an imperative variable in gaging the women of empowerment in a nation. However there are disturbing concerns where maternal social insurance is concerned.



**Proficient Inequality:** This imbalance is rehearsed in occupation and advancements. women face innumerable debilitations in male altered and ruled environs in Government Offices and Private ventures.

**Profound quality and Inequality:** Due to sexual orientation inclination in wellbeing and sustenance there is bizarrely high ethical quality rate in women diminishing their populace encouraged particularly in Asia, Africa and china.

**Family Inequality:** Household relations show sexual orientation inclination in imperceptibly little however huge conduct the whole way across the globe, all the more along these lines, in India e.g. sharing weight of housework, childcare and humble works by alleged division of work.

### Suggestions

1. The most importantly need ought to be given to the instruction of ladies, which is the grassroots issue. Thus, training for ladies must be given careful consideration.

2. Awareness projects should be composed for making mindfulness among ladies particularly having a place with weaker areas about their rights.

3. Women ought to be permitted to work and ought to be sufficiently given wellbeing and backing to work. They ought to be given legitimate wages and work at standard with men so that their status can be lifted in the general public.

4. Strict execution of Programs and Acts ought to be there to check the mal-rehearses predominant in the general public.

### Conclusions

Based on the study it was concluded that the learning environment in these secondary schools have significant relationship with academic performance of secondary school students. The results from the questionnaires, interviews concur that there are many challenges hindering learning in the secondary schools, which include lacking innovative instructional leadership style, absence of collaboration between school communities, teachers, learners, and parents separate restrooms for boys and girls, clean drinking water, lack of recreational places for students, poorly stocked libraries and unhygienic toilets. These challenges negatively affect the performances of the school and it can be concluded that these learning environment can results in poor academic performance of the students. Empowerment is a concept principally described through self esteem, awareness, consciousness and confidence. The empowerment to women starts at school level, right from primary, secondary and higher secondary level. As education plays a vital role in empowering women. Girls grows as women, women empowerment should start at girls level, especially in schools where they are molded motivated nourished. The paper has taken into account the education to the girls in Hooghly district. The study has brought out some statistical measures from 10 government girls higher secondary schools in Chinsurah in Hooghly. The analysis identified that the girls are empowered through secondary education though they are facing many challenges.



### References

- Baruah B. Role of Electronic Media in Empowering Rural. (2013)
- Baruah, B. Role of Electronic Media in Empowering Rural Women Education of N.E. India. ABHIBYAKTI: Annual Journal, 1, 23- 26. (2013)
- Deshpande, S., and Sethi, S., Role and Position of Women Empowerment in Indian Society. International Referred Research Journal, 1(17), 10-12. (2010)
- Dr. DasaratiBhuyan “ Empowerment of Indian Century” Women: A Orissa challenge Review,of 21. 2006.
- Duflo E. Women’s Empowerment and Economic Cambridge Development,. (2011) .
- Goswami, L. Education for Women Empowerment. ABHIBYAKTI: Annual Journal, 1, 1718. (2013).
- <http://www.slideshare.net/puneetsharma5688/women-empowermentpuneet-sharma>.
- India: Women’s- IFAD Empowerment/OE. The Republic of India; Tamil Nadu Women’s Completion Evaluation, Report 340 –IN Rome, April. 2000.
- Kadam, R. N. Empowerment of Women in India- An Attempt to Fill the Gender Gap. International Journal of Scientific and Research Publications, 2(6), 11-13. (2012).
- Kishor, S. and Gupta, K. (2009), Gender Equality and Women’s Empowerment in India, NATIONAL FAMILY HEALTH SURVEY (NFHS-3) INDIA, 2005-06, International Institute for Population Sciences, Deonar, Mumbai.
- Pankaj Kumar Barol & Rahul Sarania “Employment and EducationalA Peer-Reviewed Indexed International Journal of Humanities & Social Science.
- Suguna, M., (2011). Education and Women Empowerment in India. ZENITH: International Journal of Multidisciplinary Research, 1(8), 19-21.



## অনুবাদক বিদ্যাসাগর : সীতার বনবাস

ড. রবিন ঘোষ

(Dr. Rabin Ghosh)

সহকারী অধ্যাপক, বাংলা বিভাগ,

মেজিয়া গভঃ কলেজ, বাঁকুড়া

E-mail – [rabinghosh08@gmail.com](mailto:rabinghosh08@gmail.com)

### Abstract

ঊনবিংশ শতাব্দীর গোড়ার দিকে যাঁর আবির্ভাব, একবিংশ শতাব্দীর গোড়ায় যাঁর জন্মের দু-শত বছর উদযাপন পর্ব সাঙ্গ হল সেই পুরোধা পুরুষ সামান্য নন। এই অসামান্য ব্যক্তিত্বের অধিকারী বিদ্যাসাগরের অবদান অনস্বীকার্য। বিবিধ ভাষার জ্ঞানাদিকারী বিদ্যাসাগরের অনুবাদ প্রশংসনীয়। বিদ্যাসাগর অনূদিত গ্রন্থে সিদ্ধহস্ত তা যে কোনো সহৃদয় রসিক পাঠক মাত্রই বুঝবেন। নারীদের সামগ্রিক উন্নতি ও অগ্রসরের জন্য বিদ্যাসাগরের কর্মকাণ্ড নমস্যা ও প্রণম্য। হিন্দি, ইংরেজি ও সংস্কৃত ভাষা থেকে অনুবাদে বিদ্যাসাগর নজির গড়েছেন তা বলাই বাহুল্য। ‘সীতার বনবাস’ গ্রন্থের কিয়দংশ আলোচনা করার যথাসাধ্য চেষ্টা করেছি, যে গ্রন্থ অনূদিত হলেও কীভাবে তা মৌলিকত্বের দাবী রাখে তা পাঠ করে সত্যিই বিশ্বয় জাগে।

**সূচক শব্দ (Key Words) :** করুণরসোদ্বোধক, অগ্নিপরিণোদিকাণ্ড, মঙ্গলানুষ্ঠান, হরধনু, অমৃতায়মান, চরিত্রমাহাত্ম্য।

(Paper published on 1<sup>st</sup> December, 2022.)

‘সীতার বনবাস’ গ্রন্থের প্রথম ও দ্বিতীয় পরিচ্ছেদের অনুবাদ করেছে ভবভূতির ‘উত্তররামচরিত’ নাটকের প্রথম অঙ্ক অবলম্বনে। ‘সীতার বনবাস’ গ্রন্থের বাকি ছয়টি পরিচ্ছেদ ‘বাল্মীকি-রামায়ণে’র অন্তিম কাণ্ড ‘উত্তরকাণ্ড’ অবলম্বনে রচিত। আমরা লক্ষ্য করবো ‘সীতার বনবাস’ গ্রন্থটি কতখানি অন্য দুই গ্রন্থ থেকে নেওয়া, সম্পূর্ণ হুবহু অনুবাদ নাকি গ্রন্থ দুটির কাহিনি অবলম্বনে রচিত একটি মৌলিক গ্রন্থ। বিদ্যাসাগর ‘সীতার বনবাস’ গ্রন্থে গুরুত্ব প্রথমেই বিজ্ঞাপন অংশে বলেছেন “ঈদৃশ করুণরসোদ্বোধক বিষয় যে রূপে সঙ্কলিত হওয়া উচিত, এই পুস্তকে সেরূপ হওয়া সম্ভাবনীয় নহে; সুতরাং সহৃদয় লোকে পাঠ করিয়া সন্তোষ লাভ করিবেন, এরূপ প্রত্যাশা করিতে পারি না। যদি, সীতার বনবাস, কিঞ্চিৎ অংশেও পাঠকবর্গের প্রীতিপ্রদ হয়, তাহা হইলেই, আমি চরিতার্থ হইব।”<sup>১</sup> ভবভূতির উত্তররামচরিত নাটকের প্রথমে নান্দী শ্লোক আছে সংস্কৃত নাটকের নিয়মানুসারেই। সূত্রধার ও নটের সংলাপ আছে। প্রস্তাবনার আগেই এই সংলাপ উল্লেখ্য।



“নট - বলা উচিত - অত্যন্ত দুর্জন। কারণ, দেবী বৈদেহী সম্পর্কেও লোকেরা নিন্দায় মুখর। রাক্ষসগৃহে অবস্থানই এর মূল।

অগ্নিশুদ্ধিতেও সন্দেহ উপস্থিত হয়েছে।

সূত্রধার - এই জনশ্রুতি যদি আবার মহারাজ শোনে তবে তা হবে কষ্টের।”<sup>২</sup> এই অংশের অর্থাৎ নট ও সূত্রধারের সংলাপ বিদ্যাসাগর উল্লেখ করেননি, কিন্তু মূল অনুবাদে যাবার আগে একটি সংক্ষিপ্ত প্রেক্ষাপট রচনা করেছেন। বিদ্যাসাগর ‘শকুন্তলা’ গ্রন্থের প্রথম পরিচ্ছেদেই মূল কাহিনির বা গ্রন্থের বিষয়বস্তুর মূল পর্বে প্রবেশের আগে বলা যায় মুখকথা বা গৌরচন্দ্রিকা করেছেন। সেখানে মূল ‘উত্তররামচরিত’ গ্রন্থ থেকে বিদ্যাসাগর অনুবাদ করেননি। সম্পূর্ণ অংশটি মৌলিক রচনা।

নাটকের আঙ্গিক অর্থাৎ সংলাপ ভঙ্গিতে ভবভূতি ‘উত্তররামচরিত’ নাটকটি লিখেছেন। বিদ্যাসাগর সংলাপ বাদ দিয়ে আখ্যান তথা কাহিনিমূলক গ্রন্থ হিসেবে রচনা করলেন ‘সীতার বনবাস’। আমরা লক্ষ করবো দুই গ্রন্থের মধ্যে আনুবাদিক তারতম্য। মূল গ্রন্থ থেকে বিদ্যাসাগর কতখানি গ্রহণ করেছেন এবং কতখানি পরিবর্তন করেছেন সেটিই আমাদের আলোচ্য বিষয়। মূলগ্রন্থ প্রথম অঙ্কের প্রথম দৃশ্যে লক্ষ করবো রাম-সীতার কথোপকথন। প্রথম অঙ্কের প্রস্তাবনা অংশে উল্লেখ্য -

“রাম -দেবী বৈদেহী, তুমি আশ্রয় হও। এই গুরুজনেরা আমাদের ত্যাগ করতে পারে না। অনুষ্ঠানের নিত্যত্বে স্বাধীনতা থাকে না।

সাম্প্রদায়িকের গার্হস্থ্য ধর্ম প্রত্যবায়হেতু কলুষিত হতে পারে।

সীতা - জানি আশ্রয়গ্রহণ, জানি। কিন্তু বন্ধুজনের বিচ্ছেদ সন্তাপের কারণ হয়ে থাকে।

রাম - তা ঠিক। সংসারের এই সকল বিষয়ই মর্মভেদী, যার প্রতি বিরূপ হয়ে মনীষীরা সমস্ত কামনা বিসর্জন দিয়ে অরণ্যে (এসে) বিশ্রাম করেন।”<sup>৩</sup>

বিদ্যাসাগর তাঁর ‘সীতার বনবাস’ গ্রন্থের প্রথম পরিচ্ছেদ শুরু করেছেন অর্থাৎ অনুবাদ আক্ষরিক অর্থে শুরু করেছেন দ্বিতীয় অনুচ্ছেদ থেকে। “কালক্রমে জানকীর গর্ভলক্ষণ আবির্ভূত হইল। তদর্শনে রামের ও রাজ জননী কৌশল্যার আহ্বাদের সীমা রহিল না; সমস্ত রাজভবন উৎসবে পূর্ণ হইল; পুরবাসিগণ, অচিরে রাজকুমার দেখিব, এই মনের উল্লাসে স্ব স্ব আবাসে অশেষবিধ উৎসবক্রিয়া করিতে লাগিল।”<sup>৪</sup>

বিদ্যাসাগর প্রথমেই রাম-সীতার কথোপকথন দিয়ে পরিচ্ছেদ শুরু করেননি, সীতার গর্ভলক্ষণা, কৌশল্যার খুশির বহিঃপ্রকাশ দিয়ে পরিচ্ছেদের আরম্ভ দিয়ে শুরু করেছেন। ঊনবিংশ শতাব্দীর তৎকালীন সমাজ তথা পাঠক সমাজের দিকে লক্ষ রেখেই বিদ্যাসাগরের অনুবাদে এই পরিবর্তন। ভবভূতি সংলাপের আকারে নাটক শুরু করেছেন, বিদ্যাসাগর রাম সীতার সংলাপ বাদ দিয়ে ব্যাখ্যা ও বর্ণনামূলক কাহিনি দিয়ে অনুবাদ করেছেন।

ভবভূতির গ্রন্থের প্রথম অঙ্কের প্রস্তাবনায় কঞ্চুকী, রাম, সীতা ও অষ্টাবক্রের একটি সংলাপ লক্ষ করবো।

“কঞ্চুকী - রামভদ্র..... (অর্ধেক বলে সভয়ে) মহারাজ।

রাম - (স্মিতহাস্যে) আর্ষ! কিন্তু আমার পিতার পরিজনের পক্ষে ‘রামভদ্র’ এই সম্বোধনই শোভন। ঠিক আছে, আপনি যেভাবে অভ্যস্ত সেভাবেই বলুন।

কঞ্চুকী - স্বাম্যশৃঙ্গের আশ্রম থেকে অষ্টাবক্র মুনি এসেছেন।

সীতা - আর্ষ! তাহলে বিলম্ব করেছেন কেন?

রাম - শীঘ্র প্রবেশ করান। (কঞ্চুকীর প্রস্থান)”<sup>৫</sup>

বিদ্যাসাগর রামচন্দ্রকে কখনোই কঞ্চুকীর মুখে রামভদ্র বলে সম্বোধন করানো হয়নি। লক্ষ করবো ভবভূতির রামচন্দ্র কঞ্চুকীকে আশ্রয় করছেন যে কঞ্চুকীর অভ্যাস বদলানোর দরকার নেই। আমরা লক্ষ করবো বিদ্যাসাগর তাঁর ‘সীতার বনবাস’ গ্রন্থে কঞ্চুকী রামচন্দ্রকে রামভদ্র বলে সম্বোধন করেনি এবং তাই রামচন্দ্রের আশ্বাসবানীও লক্ষ করি না।

আমরা ভবভূতির ‘উত্তররামচরিত’ গ্রন্থের প্রথম অঙ্কে লক্ষ্য করবো রাম, সীতা, লক্ষণের একটি সংলাপ বিশেষ অংশ।



“রাম – মিত্রাবরণের পুত্র ভগবান বশিষ্ঠের যা আদেশ। প্রজাদের মনোরঞ্জনের জন্য স্নেহ, দয়া, সৌখ্য – এমনকি সীতাকে ভাগ্য করতেও আমার দুঃখ হবে না।

সীতা – এজন্যই আৰ্যপুত্র রঘুকুলশ্রেষ্ঠ। .....

লক্ষণ – আৰ্যার অগ্নিপরীক্ষা শুদ্ধি পর্যন্ত।

রাম – থাক, বন্ধ কর। (মধুর বাক্যে) যিনি জন্ম থেকে পবিত্র, অন্য কিছু দ্বারা তাঁর পবিত্রতার কি প্রয়োজন? তীর্থের জল এবং অগ্নির বিশুদ্ধতার জন্য অন্য কিছু প্রয়োজন হয় না।”<sup>৬</sup> আমরা ভবভূতির নাটকের সংলাপ লক্ষ্য করলাম। এখানে রাম তাঁর পত্নীকে গুরু বশিষ্ঠের আদেশে ভাগ্য পর্যন্ত করতে পারেন। নারীর বেদনা তথা সম্মান নিয়ে ভবভূতির রাম এখানে চিত্তিত নন। এখানে রামের গুরুবাক্য শিরোধার্য লক্ষ্য করা যাচ্ছে।

আমরা বিদ্যাসাগরের ‘সীতার বনবাস’ লক্ষ্য করবো। এখানে রাম, লক্ষণ ও সীতার কথোপকথনের দিকে দৃষ্টি দেব। “লক্ষণ বলিলেন, আৰ্য জানকীর অগ্নিপরিভ্রিকাগু পর্যন্ত। রাম শুনিয়া সাতিশয় ক্ষুধ হইয়া বলিলেন, বৎস! তুমি আমার সমক্ষে আর ও কথা মুখে আনিও না; ও কথা শুনিলে অথবা মনে হইলে আমি সাতিশয় কুষ্ঠিত ও লজ্জিত হই; কি আক্ষেপের বিষয়! যিনি জন্মপরিগ্রহ করিতে জগৎ পবিত্র হইয়াছে, তাঁহাকেও আবার অন্য পাবন দ্বারা পূত করিতে হইয়াছিল। হায়, লোকরঞ্জন কি দুরূহ ব্রত! সীতা বলিলেন, নাথ! সে সকল কথা মে করিয়া আপনি অকারণে ক্ষুধ হইতেছেন কেন? আপনি তৎকালে সন্ধিবেচনার কর্মই করিয়াছিলেন; সেরূপ না করিলে চিরনির্মল রঘুকুলে কলঙ্কস্পর্শ হইত, এবং আমারও অপবাদ বিমোচন হইত না।”<sup>৭</sup>

বিদ্যাসাগরের রচনায় রামচন্দ্র ও সীতাদেবী যেন ঊনবিংশ শতাব্দীর তৎকালীন সমাজেরই কোনো সাধারণ দম্পতি। লক্ষণের কথায় রাম ক্ষুধ হয়েছেন। সীতার অগ্নিপরীক্ষা সংক্রান্ত কথার তীব্র প্রতিবাদ করেন শ্রীরামচন্দ্র। নারীজাতির অপমান তথা নারীর নারীত্ব বা সতীর সতীত্ব প্রমাণের প্রয়োজন নেই তা দৃঢ়কণ্ঠে শুনতে পাই রামচন্দ্রের বক্তব্যে। বিদ্যাসাগর নিজে নারীর যন্ত্রণা-বেদনা বুঝতেন, কতটা লেখক নিজে নারী সম্পর্কে সচেতন হলে রামের বক্তব্যে এই ধরণের কথা শোনা যায়। বিদ্যাসাগর উনিশ শতকের তৎকালীন সমাজের পাঠকের দিকে লক্ষ্য রেখেই অনুবাদে এই পরিবর্তন করেছেন। ভবভূতির রচনা ও বিদ্যাসাগরের রচনার মধ্যে বিষয়বস্তুগত পরিবর্তন না থাকলেও, রচনার উপস্থাপনাগত অনুবাদে পরিবর্তন লক্ষণীয়।

ভবভূতির ‘উত্তররামচরিতের’ প্রথম অঙ্কের একটি সংলাপ অত্যন্ত গুরুত্বপূর্ণ। আলেখ্যদর্শনের দৃশ্য দেখার সময়ে রাম, সীতা ও লক্ষণের মধ্যে একটি কথোপকথন উল্লেখ্য।

“সীতা – এখানে গোদান মঙ্গলানুষ্ঠান সমাপ্তির পর বিবাহকর্মে দীক্ষিত তোমরা চার ভাই। আমার মনে হচ্ছে – আমি যেন সেখানে সেই সময়েই বর্তমান।

রাম – হে সুন্দরি! আমিও যেন সেই সময়েই উপস্থিত হয়েছি যখন তোমার কঙ্কন শোভিত এই সুন্দর হাত (পুরোহিত) গৌতম আমার হাতে অর্পণ করেছিলেন, যে হাত মূর্তিমান মহোৎসবের মত আমাকে আনন্দ দিয়েছিল।

লক্ষণ – ইনি আৰ্য (সীতা), ইনিও আৰ্য মাগুবী, আর ইনি বধু শ্রুতকীর্তি।

সীতা – বৎস, এই অন্যটি কে?

লক্ষণ – (সলজ্জ হাস্যে স্বগত) ও! আৰ্য উর্মিলার কথা বলছেন। ঠিক আছে, অন্যদিকে যাই। (প্রকাশ্যে) আৰ্যে! এই দর্শনীয় বিষয় দেখুন। ইনি ভগবান ভার্গব।”<sup>৮</sup>

বিদ্যাসাগর তাঁর ‘সীতার বনবাস’ গ্রন্থে রাম, লক্ষণ, সীতার কথোপকথনটি হুবহু অনুবাদ করেননি। আমরা তাঁর অনুবাদটি দেখব। ‘সীতার বনবাস’ গ্রন্থের প্রথম পরিচ্ছেদে উল্লেখ্য “সীতা দেখিয়া ষৎপরোনাস্তি আহ্বাদিত হইয়া বলিলেন, তাই ত ঠিক যেন আৰ্যপুত্র হরধনু উত্তোলিত করিয়া ভাস্কিতে উদ্যত হইয়াছেন, আর পিতা আমার, বিশ্বয়াপন্ন হইয়া অনিমিষ নয়নে নিরীক্ষণ করিতেছেন। আ মরি মরি, কি চমৎকার চিত্র করিয়াছে। আমার, এদিকে বিবাহকালীন সভা; সেই সভায় তোমরা চারি ভাই, তৎকালোচিত বেশভূষায় অলঙ্কৃত হইয়া, কেমন শোভা পাইতেছ। চিত্র দেখিয়া বোধ হইতেছে, যেন সেই প্রদেশে ও সেই সময়ে বিদ্যমান রহিয়াছি।”<sup>৯</sup>



বিদ্যাসাগর সীতার মনের উৎফুল্লতাকে প্রকাশ করেছেন রামের হরধনু ভাঙ্গার দৃশ্য মনে করিয়ে দিয়ে। সীতার মনের আনন্দ প্রকাশ করেছেন বিদ্যাসাগরের 'আহা ! মরি মরি' শব্দবন্ধ প্রয়োগের মাধ্যমে।

বিদ্যাসাগর অনুবাদের একটু কৌশল করেছেন এই অংশে "চিত্রপটের স্থলান্তরে অঙ্গুলিনির্দেশ করিয়া লক্ষণ বলিলেন, এই আর্থা, এই মাণ্ডবী, এই বধু শ্রুতকীর্তি ; কিন্তু তিনি লজ্জাবশতঃ উর্মিলার উল্লেখ করিলেন না। সীতা বুঝিতে পারিয়া, কৌতুক করিবার নিমিত্ত, হাস্যমুখে উর্মিলার দিকে অঙ্গুলিপ্রয়োগ করিয়া লক্ষণকে জিজ্ঞাসিলেন, বৎস ! এদিকে এ কে চিত্রিত রহিয়াছে " <sup>১০</sup> বিদ্যাসাগর রাম, সীতা, লক্ষণের সম্পর্কে সাধারণ ঘরের দাদা-ভাই, দেওর-বৌদির সম্পর্কের মধ্যে সীমাবদ্ধ রেখেছেন। সীতা যেন ঘরের বৌদি যিনি দেওর লক্ষণকে জিজ্ঞাসা করেছেন কৌতুকবশত লক্ষণের বৌ-এর কথা। সে কথা শুনে লক্ষণের লজ্জা ধরা পড়েছে। বিদ্যাসাগরের অনুবাদে এই অভিনবত্ব লক্ষণীয়।

ভবভূতির উত্তররামচরিত গ্রন্থের প্রথম অঙ্কে সীতা ও লক্ষণের সংলাপটি উল্লেখ্য।

"সীতা - (সাক্ষনেদ্রে, স্বগত) হায়, সূর্যবংশের আনন্দস্বরূপ আপনি আমার জন্য এত ক্রেশ ভোগ করেছিলেন।

লক্ষণ - (রামকে দেখে কাতর কণ্ঠে) আর্থা কি হল ? আপনার এই অশ্রুবিদ্যুৎগুলি স্থলিত মুক্তাহারের মত মাটিতে পড়ে বিভিন্ন ধারায় প্রবাহিত হচ্ছে। আবেগ নিরুদ্ধ হলেও আপনার অধর ও নাসিকার কম্পনের দ্বারা অপরে অনুমান করতে পারে যে আপনার হৃদয় আবেগ-স্তম্বিত।"<sup>১১</sup>

বিদ্যাসাগর অনুবাদের ক্ষেত্রে ব্যাখ্যা বা বিবৃতি-বর্ণনার দিকে বিশেষ ঝোঁক দেননি। বরং মূলগ্রন্থের কিছু অংশ নিয়ে প্রয়োজন মতো পরিবর্তন করেছেন, অবশ্যই তা তৎকালীন পাঠককুলের দিকে নজর রেখেই। 'সীতার বনবাস' গ্রন্থের অংশটি উল্লেখ্য "সীতা, লক্ষণের মুখে এই সকল কথা শুনিয়া, অশ্রুপূর্ণ নয়নে মনে মনে বলিতে লাগিলেন, হায় ? এ অভাগিনীর জন্যে আর্থপুত্রকে কতই ক্রেশভোগ করিতে হইয়াছিল। সেই সময়ে, রামেরও নয়নযুগল হইতে বাষ্পবারি বিগলিত হইতে লাগিল।" <sup>১২</sup> আমরা দেখব বিদ্যাসাগর ভবভূতির বর্ণনার উপমাও ব্যাখ্যা কোনো কিছুই গ্রহণ করেননি, তিনি নারী হৃদয়ের স্বাভাবিক বেদনার অনুভূতিকে সরলভাবে বর্ণনা করেছেন।

ভবভূতির 'উত্তররামচরিত' গ্রন্থের প্রথম অঙ্ক থেকে বিদ্যাসাগর 'সীতার বনবাস' গ্রন্থের দ্বিতীয় পরিচ্ছেদটিও রচনা করেছেন।

বলা যায় দ্বিতীয় পরিচ্ছেদটি বিদ্যাসাগর হুবহু অনুবাদ প্রায় কোন অংশেই করেননি। দ্বিতীয় পরিচ্ছেদের প্রথম অনুচ্ছেদটি এইরকম ".... প্রিয়ে ! তোমার বাহুল্য তার স্পর্শে, আমার সর্ব শরীরে যেন অমৃতধারার বর্ষণ হইতেছে; ইন্দ্রিয় সকল অভূতপূর্ব রসাবেশে অবশ হইয়া আসিতেছে, চেতনা বিলুপ্তপ্রায় হইতেছে; অকস্মাৎ আমার নিদ্রাবেশ, কি মোহাবেশ উপস্থিত হইল, কিছুই বুঝিতে পারিতেছি না। সীতা, রামমুখবিনিঃসৃত অমৃতায়মান বচনপরস্পরা শবণগোচর করিয়া হাস্যমুখে বলিলেন, নাথ ! আপনি চিরানুকূল ও স্থিরপ্রসাদ। যাহা শুনলাম, ইহা অপেক্ষা স্ত্রীলোকের পক্ষে আর কি সৌভাগ্যের বিষয় হইতে পারে। প্রার্থনা এই যেন চিরদিন এইরূপ স্নেহ ও অনুগ্রহ থাকে।" <sup>১৩</sup> বিদ্যাসাগর রাম ও সীতার এই কথোপকথনটি অতিরিক্ত সংযোজন করেছেন। রামের কোমল বক্তব্যে তথা সীতার প্রতি রামের প্রেমমূলক সংলাপের ফলে সীতার মনে আনন্দের আভাষ লক্ষণীয়। উনিশ শতকের সমাজে নারী-পুরুষ তথা স্বামী-স্ত্রীর সম্পর্কে উন্মুক্ত করার জন্যই হয়তো রামচন্দ্র ও সীতার প্রেমমূলক কথোপকথনটির অভিনব সংযোজন ঘটিয়েছেন।

আমরা লক্ষ্য করবো ভবভূতির 'উত্তররামচরিত' গ্রন্থের প্রথম অঙ্কের রামচন্দ্রের সংলাপ ও সীতার অনুভূতির প্রকাশ।

"রাম - হে কমললোচনে, তোমার মধুর কথাগুলি আমার জ্ঞান জীবনকুসুমকে বিকশিত করে তুলছে, আমাকে আনন্দিত করছে, সকল ইন্দ্রিয়কে মুগ্ধ করছে। কথাগুলি আমার কর্ণের অমৃততুল্য এবং মনের রসায়নস্বরূপ।

সীতা - ওগো প্রিয়ংবদ, আসুন শয়ন করি।

রাম - কিছু খুঁজছ কি ? বিবাহের পর থেকে গৃহে বা অরণ্যে, শৈশবে বা যৌবনে রামের এই বাহু তোমার ঘুমানোর সময় উপাধান হয়েছে, অন্য কোন কিছুর আশ্রয় নিতে হয়নি।"<sup>১৪</sup>



এই অংশটি বিদ্যাসাগর 'সীতার বনবাস' গ্রন্থে অনুবাদ করেছেন "সীতার মৃদু মধুর মোহন বাক্য কর্ণগোচর করিয়া রাম বলিলেন, প্রিয়ে ! তোমার কথা শুনিলে, শরীর শীতল হয়, কর্ণকুহর অমৃতসরে অভিষিক্ত হয়, ইন্দ্রিয় সকল বিমোহিত হয়, অন্তঃকরণে সজীবতা সম্পাদিত হয়। সীতা লজ্জিত হইয়া বলিলেন, নাথ ! এই নিমিত্তই সকলে আপনাকে প্রিয়বন্দা বলে। যাহা হউক, অবশেষে এ অভাগিনীর যে এত সৌভাগ্য ঘটবেক, যাহা স্বপ্নের অগোচর।" <sup>১৫</sup> বিদ্যাসাগর তাঁর গ্রন্থে অনুবাদের এই অংশটিকে কিছুটা পরিবর্তন করেছেন। নারীর সৌভাগ্য যে পুরুষের ভালোবাসায় বিদ্যাসাগর অনুভব করেছেন। নারীর বেদনা ও আভ্যন্তরীণ মনোকষ্ট বোঝার সূক্ষ্ম অভাগিনী প্রতিপন্ন করেছেন এবং বিদ্যাসাগর উনিশ শতকের তৎকালীন সমাজে নারীর অবস্থার কথা খেয়াল রেখেই অনুবাদে পরিবর্তন করেছেন।

ভবভূতির 'উত্তররামচরিত' গ্রন্থের প্রথম অঙ্কে রামচন্দ্রের একটি সংলাপ উল্লেখ্য।

"রাম - একি, মধুরবচনা (সীতা) আমার বুকেই ঘুমিয়ে পড়ল ! (ভালো করে দেখে) ইনি আমার গৃহলক্ষ্মী, আমার চোখের কাজলবর্তিকা, ঐর এই স্পর্শ আমার দেহে চন্দনরসতুল্য, আমার কণ্ঠে ঐর বাহু মুক্তামালার মত শীতল ও মসৃণ। তাঁর সম্পর্কে কোন্ বস্তুই বা প্রিয় নয় ? কিন্তু তাঁর বিরহ অসহ।"<sup>১৬</sup> বিদ্যাসাগর রাম-সীতার এই কথোপকথনটি একটু পরিবর্তন করেছেন। পরিবর্তনটি লক্ষণীয়।

".....রাম বলিলেন, প্রিয়ে ! এখানে অন্যবিধ শয্যার সঙ্গতি নাই ; অতএব, যে অনন্যসাধারণ রামবাহু বিবাহসময় অবধি, কি গৃহে, কি বলে, কি শৈশবে, কি যৌবনে, উপাধানস্থানীয় হইয়া আসিয়াছে, আজও সেই তোমার উপাধানকার্য সম্পন্ন করুক। এই বলিয়া, রাম বাহু প্রসারিত করিলেন; সীতা তদুপরি মস্তক বিন্যস্ত করিয়া তৎক্ষণাৎ নিদ্রাগত হইলেন।" <sup>১৭</sup> রাম-সীতার এই সম্পর্ক বিদ্যাসাগর একটি নিদ্রা যাবার অবস্থাকে তুলে ধরেছেন। ভবভূতি উপমা দিয়ে বিস্তারিত ব্যাখ্যা করেছেন, কিন্তু বিদ্যাসাগর রামের বাহুকে সীতার শয়ন-শয্যার বালিশ করেছেন এবং তা ঐ সময়ের নিরিখে তা সত্যিই প্রশংসনীয়।

বিদ্যাসাগর 'সীতার বনবাস' গ্রন্থের দ্বিতীয় পরিচ্ছেদে একটি অতিরিক্ত অনুচ্ছেদ সংযোজন করেছেন, তথা রামচন্দ্রের প্রেম-প্রণয় সম্পর্কে একটি অনারকম সংলাপ যেটি মূল গ্রন্থে প্রায় নেই এমন একটি অংশ উল্লেখ করব। "..... রাম প্রেমভরে প্রফুল্ল কলেবর হইয়া বলিতে লাগিলেন, আহা ! অকৃত্রিম প্রেম কি পরম পদার্থ। কি সুখ, কি দুঃখ, কি সম্পত্তি, কি বিপত্তি, কি যৌবন, কি বার্ধক্য, সকল অবস্থাতেই একরূপ ও অবিকৃত। ঈদৃশ প্রণয়সুখের অধিকারী হওয়া অল্প সৌভাগ্যের কথা নহে। কিন্তু আক্ষেপের বিষয় এই, এরূপ প্রণয় জগতে নিতান্ত বিরল ও একান্ত দুর্লভ; যদি এত বিরল ও এত দুর্লভ না হইত, সংসারে সুখের সীমা থাকিত না।"<sup>১৮</sup> বিদ্যাসাগর রামচন্দ্রের মনের কামনা, প্রেম প্রণয় সম্পর্কে মনোভাব এবং স্বামী হিসেবে একজন নারীর প্রতি কীরূপ অনুভূতি থাকা প্রয়োজন তা বিদ্যাসাগর ঊনবিংশ শতাব্দীর সমাজের পাঠকদের দিকে লক্ষ রেখেই অনুবাদের এই পরিবর্তন করেছেন।

ভবভূতির 'উত্তররামচরিত' গ্রন্থে রামচন্দ্র ও দুর্মুখের কথোপকথনের একটি অংশ লক্ষ করবো। রামচন্দ্রের কানে কানে দুর্মুখ রাজা দশরথ ও অন্য বিষয়ক একটি কথা বলেন যেটি সীতার কলঙ্ক সম্পর্কে। যা শুনে রামচন্দ্র মুর্ছা যান। তারপর দুর্মুখের মুখে আশ্বস্ততার কথা শুনে রামচন্দ্র বলেন যে উক্তি তা নিম্নরূপ।

"রাম - (জ্ঞানলাভ করে) হায়, সীতার পরগৃহবাসের কলঙ্ককে দিক, যা অদ্ভুত উপায়ে প্রশমিত হয়েছিল। কিন্তু দেবদুর্বিপাকে সেটাই আবার উন্মত্ত কুকুরের বিষের মত চতুর্দিকে ছড়িয়ে পড়েছে।

মন্দভাগ্য আমি এখন কি করি ? (চিন্তা করে, করুণ স্বরে) অথবা কিই বা করি ! যে কোন উপায়ে লোকের আরাধনাই সজ্জনদের ব্রত, আমাকে এবং প্রাণকে ভাগ করে পিতা তা পালন করে গিয়েছেন।

সম্প্রতি ভগবান বশিষ্ঠও এই আদেশ পাঠিয়েছেন। তাছাড়া সূর্য বংশের লোকমান্য রাজারা যে চরিত্রমাহাত্ম্য উজ্জ্বল করে গিয়েছেন তা যদি মদ্বিষয়ক লোকোপবাদে কলঙ্কিত হয়, তবে ভাগ্যহীন আমাকে দিক।"<sup>১৯</sup>

বিদ্যাসাগর 'সীতার বনবাস' গ্রন্থে এই অংশটির অনুবাদ রামচন্দ্র ও দুর্মুখের সংলাপের ব্যাখ্যার মাধ্যমে করেছেন। গ্রন্থে উল্লিখিত অংশ "রামের নির্বন্ধাতিশয় দর্শন সাতিশয় শঙ্কিত হইয়া দুর্মুখ মনে মনে বিবেচনা করিতে লাগিল, আমি কি বিষম সঙ্কটে পড়িলাম ? কি রূপ রাজমহিষীসংক্রান্ত জনাপবাদ মহারাজের গোচর করিব ? আমি অতি হতভাগ্য ; নতুবা এরূপ কার্যের ভার গ্রহণ করিয়াছি, তখন প্রভুর



নিকটে অকপটে প্রকৃত কথাই বলা উচিত।”<sup>২০</sup> বিদ্যাসাগর অনুবাদ পরিবর্তন করেছেন। রামের বক্তব্যকে দুর্মুখের মুখ দিয়ে বলিয়েছেন এবং যৌথভাবে সংলাপটিকে শেষ করেছেন। দুর্মুখ এখানে নিজেকে হতভাগ্য বলে মনে করেছে। রামচন্দ্রের কাছে অকপটে স্বীকারোক্তির কথা বলা হয়েছে। প্রভুর প্রতি ভূতের এই আনুগত্য বিদ্যাসাগর দেখিয়েছেন, অবশ্য সমসাময়িকতাকে খেয়াল রেখেই হয়তো এইভাবে উপস্থাপন করেছেন।

ভবভূতি ‘উত্তররামচরিত’ গ্রন্থের প্রথম অঙ্কে রামচন্দ্রের একটি সংলাপ উল্লেখ্য।

“রাম – হয় কি কষ্ট ! অত্যন্ত বীভৎস কাজ করে আমাকে নৃশংস হতে হচ্ছে। যে প্রিয়াকে আমি শৈশব থেকে পালন করেছি, প্রেমের বশে যে আমাকে ছেড়ে অন্য কোথাও থাকেনি, তাকেই আমি গৃহপালিত পাখির প্রতি কসাই এর মত কৌশলে মৃত্যুর হাতে তুলে দিচ্ছি।

....

হায় ! সমস্ত জীবলোক বিপর্যস্ত। আজ রামের জীবনের প্রয়োজন নিঃশেষিত। জগৎ এখন জীর্ণ অরণ্যের ন্যায়, সংসার অসার, শরীর কাষ্টতুল্য। আমি নিরাশ্রয়। আমি কি করব ? কোথায় যাব ? অথবা – দুঃখভোগ করার জন্যই রামের মধ্যে চৈতন্য সঞ্চারিত হয়েছিল। বঙ্গনির্মিত কীলকের মত আমার প্রাণ মর্মভেদ করছে।”<sup>২১</sup> বিদ্যাসাগর রামচন্দ্রের এই বক্তব্যটির অনুবাদ করেছেন, সেই অনুবাদে মূলগ্রন্থের ছাপ দেখতে পাবো না। বিদ্যাসাগর ঊনবিংশ শতাব্দীর তৎকালীন সমাজ ও পাঠকদের মনোগ্রাহীতার দিকে খেয়াল রেখেই তাঁর অনুবাদে পরিবর্তন ঘটিয়েছেন তা বলাই বাহুল্য।

বিদ্যাসাগর ‘সীতার বনবাস’ গ্রন্থের দ্বিতীয় পরিচ্ছেদের শেষাংশে অংশটির অনুবাদ করেছেন। “.... হায় কি হইল বলিয়া, নিরতিশয় কাতর বাক্যে বলিতে লাগিলেন, হা মাতঃ ! হাঁ তাত জনক ! হা দেবি বসুন্ধরে ! হা ভগবতি অরুন্ধতি ! হা কুলগুরো বশিষ্ট ! হা ভগবন বিশ্বামিত্র ! হা প্রিয়বন্ধো বিভীষণ ! হা পরমোকারিন্ সখে সুগ্রীব ! হা বৎস অজ্ঞানহৃদয়নন্দন ! তোমরা কোথায় রহিয়াছ, কিছুই জানিতে পারিতেছি না; এখানে দুরাঘা রাম তোমাদের সর্বনাশে উদ্যত হইয়াছে। অথবা, আর আমি তাদৃশ মহাত্মাদিগের নামগ্রহণে অধিকারী নহি; আমার ন্যায় মহাপাতক নামগ্রহণ করিলে, নিঃসন্দেহ তাঁহাদের পাপস্পর্শ হইবেক।”<sup>২২</sup> আমরা লক্ষ করবো বিদ্যাসাগর রামের বক্তব্যকে অনুবাদ করতে গিয়ে কিছুটা পরিবর্তন করেছেন। বিদ্যাসাগরের রাম বেশি হতাশাগ্রস্ত ও বলা যায় নারীর প্রতি শ্রদ্ধাবান। রাম নিজে এখানে অপরাধবোধে বিদ্ধ।

ঊনবিংশ শতাব্দীর সমাজ ও তৎকালীন পাঠককুলের প্রতি খেয়াল রেখে এবং বিদ্যাসাগর নিজে প্রয়োজনানুযায়ী ভবভূতির ‘উত্তররামচরিত’ মূলগ্রন্থের ‘চিত্রদর্শন’ নামক প্রথম অঙ্ক থেকে ‘সীতার বনবাস’ এর প্রথম ও দ্বিতীয় পরিচ্ছেদে রচনা করেছেন তথা অনুবাদ করেছেন। ভবভূতির ‘উত্তররামচরিত’ গ্রন্থের প্রথম পরিচ্ছেদের শেষাংশ সীতা ও দুর্মুখের কথোপকথন দিয়ে সমাপ্ত হয়েছে। ভবভূতির ‘উত্তররামচরিত’ গ্রন্থের প্রথম অঙ্কটি ‘চিত্রদর্শন’ নামাঙ্কিত। বিদ্যাসাগর এই অঙ্ক থেকে ‘সীতার বনবাস’ গ্রন্থের প্রথম ও দ্বিতীয় পরিচ্ছেদ অনুবাদ করেছেন নয়, বরং বলা ভালো রচনা করেছেন। কারণ সেই রচনায় মূলগ্রন্থ থেকে হুবহু বঙ্গানুবাদ নেই, বিদ্যাসাগর অধিকাংশ জায়গায় হুবহু অনুবাদ করেননি। কোথাও অতিরিক্ত সংযোজন অথবা কোথাও মূলগ্রন্থ থেকে বিয়োজন করেছেন। আমরা দেখব ‘সীতার বনবাস’ গ্রন্থের প্রথম ও দ্বিতীয় পরিচ্ছেদ দুটি মৌলিক পরিচ্ছেদের দাবী রাখে, তা যে কোনো সহৃদয় রসিক পাঠক মাত্রই বুঝবেন তা বলাই বাহুল্য।



❖ উৎস পরিচয় ও অনুষঙ্গ -

১. সম্পাদক - গোপাল হালদার ও সত্যেন্দ্রনাথ সেন, বিদ্যাসাগর রচনা সংগ্রহ, পশ্চিমবঙ্গ নিরক্ষরতা দূরীকরণ সমিতি, কলকাতা, ১৩৭৯, পৃ - ২৩৮।
২. সীতানাথ আচার্য শাস্ত্রী ও ড. দেবকুমার দাস (সম্পাদিত), 'উত্তররামচরিত' ; সংস্কৃত পুস্তক ভাণ্ডার, প্রথম সংস্করণ, এপ্রিল - ১৯৯৮, কলকাতা, পৃ - ২।
৩. তদেব, পৃ - ২
৪. সম্পাদক - গোপাল হালদার ও সত্যেন্দ্রনাথ সেন, বিদ্যাসাগর রচনা সংগ্রহ, পশ্চিমবঙ্গ নিরক্ষরতা দূরীকরণ সমিতি, কলকাতা, ১৩৭৯, পৃ - ২৩৯।
৫. সীতানাথ আচার্য শাস্ত্রী ও ড. দেবকুমার দাস (সম্পাদিত), 'উত্তররামচরিত' ; সংস্কৃত পুস্তক ভাণ্ডার, প্রথম সংস্করণ, এপ্রিল - ১৯৯৮, কলকাতা, পৃ - ২ - ৩।
৬. তদেব, পৃ - ৩ - ৪।
৭. সম্পাদক - গোপাল হালদার ও সত্যেন্দ্রনাথ সেন, বিদ্যাসাগর রচনা সংগ্রহ, পশ্চিমবঙ্গ নিরক্ষরতা দূরীকরণ সমিতি, কলকাতা, ১৩৭৯, পৃ - ২৪০ - ২৪১।
৮. সীতানাথ আচার্য শাস্ত্রী ও ড. দেবকুমার দাস (সম্পাদিত), 'উত্তররামচরিত' ; সংস্কৃত পুস্তক ভাণ্ডার, প্রথম সংস্করণ, এপ্রিল - ১৯৯৮, কলকাতা, পৃ - ৫।
৯. সম্পাদক - গোপাল হালদার ও সত্যেন্দ্রনাথ সেন, বিদ্যাসাগর রচনা সংগ্রহ, পশ্চিমবঙ্গ নিরক্ষরতা দূরীকরণ সমিতি, কলকাতা, ১৩৭৯, পৃ - ২৪১।
১০. তদেব, পৃ - ২৪৫।
১১. সীতানাথ আচার্য শাস্ত্রী ও ড. দেবকুমার দাস (সম্পাদিত), 'উত্তররামচরিত' ; সংস্কৃত পুস্তক ভাণ্ডার, প্রথম সংস্করণ, এপ্রিল - ১৯৯৮, কলকাতা, পৃ - ৭।
১২. সম্পাদক - গোপাল হালদার ও সত্যেন্দ্রনাথ সেন, বিদ্যাসাগর রচনা সংগ্রহ, পশ্চিমবঙ্গ নিরক্ষরতা দূরীকরণ সমিতি, কলকাতা, ১৩৭৯, পৃ - ২৪২।
১৩. তদেব, পৃ - ২৪৪।
১৪. সীতানাথ আচার্য শাস্ত্রী ও ড. দেবকুমার দাস (সম্পাদিত), 'উত্তররামচরিত' ; সংস্কৃত পুস্তক ভাণ্ডার, প্রথম সংস্করণ, এপ্রিল - ১৯৯৮, কলকাতা, পৃ - ৯।



১৫. সম্পাদক - গোপাল হালদার ও সত্যেন্দ্রনাথ সেন, বিদ্যাসাগর রচনা সংগ্রহ, পশ্চিমবঙ্গ নিরক্ষরতা দূরীকরণ সমিতি, কলকাতা, ১৩৭৯, পৃ - ২৪৪।
১৬. সীতানাথ আচার্য শাস্ত্রী ও ড. দেবকুমার দাস (সম্পাদিত), 'উত্তররামচরিত' ; সংস্কৃত পুস্তক ভাণ্ডার, প্রথম সংস্করণ, এপ্রিল - ১৯৯৮, কলকাতা, পৃ - ৯।
১৭. সম্পাদক - গোপাল হালদার ও সত্যেন্দ্রনাথ সেন, বিদ্যাসাগর রচনা সংগ্রহ, পশ্চিমবঙ্গ নিরক্ষরতা দূরীকরণ সমিতি, কলকাতা, ১৩৭৯, পৃ - ২৪৪।
১৮. তদেব, পৃ - ২৪৫।
১৯. সীতানাথ আচার্য শাস্ত্রী ও ড. দেবকুমার দাস (সম্পাদিত), 'উত্তররামচরিত' ; সংস্কৃত পুস্তক ভাণ্ডার, প্রথম সংস্করণ, এপ্রিল - ১৯৯৮, কলকাতা, পৃ - ১০।
২০. সম্পাদক - গোপাল হালদার ও সত্যেন্দ্রনাথ সেন, বিদ্যাসাগর রচনা সংগ্রহ, পশ্চিমবঙ্গ নিরক্ষরতা দূরীকরণ সমিতি, কলকাতা, ১৩৭৯, পৃ - ২৪৫।
২১. সীতানাথ আচার্য শাস্ত্রী ও ড. দেবকুমার দাস (সম্পাদিত), 'উত্তররামচরিত' ; সংস্কৃত পুস্তক ভাণ্ডার, প্রথম সংস্করণ, এপ্রিল - ১৯৯৮, কলকাতা, পৃ - ১১।
২২. সম্পাদক - গোপাল হালদার ও সত্যেন্দ্রনাথ সেন, বিদ্যাসাগর রচনা সংগ্রহ, পশ্চিমবঙ্গ নিরক্ষরতা দূরীকরণ সমিতি, কলকাতা, ১৩৭৯, পৃ - ২৪৭।



## Historical Roots and Geographical Imagination: Understanding North-east and India's Look East Policy upto 2009

**Anjan Saha (WBES)**

Assistant Professor of History  
Maulana Azad College, Kolkata  
E-Mail : saha.anjan76@gmail.com

### Abstract

*Many observers see a relation involving political troubles and insurgency of Northeast India, and her underdeveloped economy along with infrastructural bottleneck. But it would be naive to think that successful counter-insurgency and a lot of money would on their own get the Northeast out of its present predicament. In many essay I have drawn attention to historical instances of the Northeast's connectivity and underline the need for a bold vision to link the investments made herein today with the opportunities, that have become available in this era of globalism. The article is about the gaze that India's Look East Policy casts particularly on the Northeast and how it constitutes and imagines a space that extends beyond the region.*

Keywords: Northeast, Look East Policy (LEP) Silk Road, Region States, Association of South East Asian Nations (ASEAN), Kunming Initiative.

(Paper published on 1<sup>st</sup> December, 2022.)

The economic literature on India's Northeast often attributes its backwardness to perceived neglect of the area by the central government right from the days of independence. And the Government of India is called upon to compensate the 'neglect' done to it through some means of special protection. Indian policy in the Northeast from the early 1950s has been governed by the imperative of protecting her inhabitants from the outsiders from within India or without, irrespective of whether it had actually helped them or not. Inner Line / Special Area Permit, Excluded/ Partially Excluded Areas, Sixth Schedule etc. are some of the legal instruments of privileging the natives over the outsiders. In the economic sphere it means providing special assistance to the states, enabling them to catch up with the national mainstream in terms of their GDP, per capita income, literacy and other conventional indicators of economic development. But the 'neglect theory' seems to be facing criticism in recent years and it is being argued that per capita expenditure incurred by the central government in the Northeast has been very high - much of which simply gets wasted through fiscal indiscipline, abysmal corruption, extortion, insurgency etc.



The case for a regime change in policy, therefore had been advocated by bureaucrats, scholars, activists, journalists and legislators. While this region had living linkages almost through out its history both on the east and the west, it was only with the Partition (1947) of India and the consequent reorganisation of international borders, turned into a sensitive border region precariously connected with the rest of India through ‘Siliguri Corridor’ popularly known as chickens neck. Disruption of trade, commerce and communication due to the Partition as well as India’s import substitution strategy of industrialization and gradual erection of barriers to international trade have shattered economies, that till 50 years ago were well integrated and deprived the Northeast from the gains of trade based on comparative advantage. Underlining the adverse impact of partition upon the Northeastern states, David Ludden argues, ‘it cuts old routes of communication and mobility across new national borders more dramatically than almost anywhere in the world. The Bengal-Assam railway tracks from Guwahati to Dhaka were torn up at the Cachar-Sylhet border in 1965. Now it is much easier to communicate by phone or mail between Dhaka and London than between Dhaka and Guwahati’ (Ludden 2002:21). The region, consequently, became South Asia’s third landlocked ‘state’ after Bhutan and Nepal. However, on the east and the north, Northeast India’s isolation from its neighbourhood has much older roots: that which came about as a result of the advent of western dominance over sea routes and over global networks of trade and more particularly the British conquest of the region – drawing lines between the hills and plains, putting barriers between Assam and Bhutan and treating Myanmar as British India’s strategic frontier/buffer against French Indo-China. While the British colonial rulers built major new transportation infrastructure primarily aimed at taking tea and other resources out of Assam, the disruption of old trade networks remained colonialism’s enduring negative legacy.

North East India was on the southern trails of the ‘silk road.’<sup>1</sup> French historian Francoise Pommaret provides a useful picture of Northeast’s place in these routes. Hsuan Tsang, the 7<sup>th</sup> century Chinese traveller who visited Kamrupa, had testified that, the journey to southwestern border of Szechuan took about two months over difficult geographical terrain including mountains and rivers. This route had been used even as late as the 19<sup>th</sup> century. Assamese merchants used to go as far as Yunan in China through Sadia, Bisa and across the Patkoi range of mountains. The Mon-yul corridor in Arunachal



Pradesh was another link between Northeast and Tibet, passing through to Tawang and was the shortest route between Tibet and the plains of Assam (**Pommaret 1999: 8-10**). Apart from merchandise, the Silk Road also carried ideas, art and culture. It facilitated spread of Buddhism across Asia. Assamese town of Hajo became an important Buddhist pilgrimage site, frequented by believers from Bhutan, Tibet, Ladakh and Southwestern parts of China<sup>a</sup> (**Aris 1979: 113**) – as it was believed to be ancient Kusinagara where Buddha breathed his last. The nearby town of Sualkuchi became an important centre of silk trade (**Pommaret 1999: 11-12**). Even the world of spices bears the traces of Northeast's palace in ancient trade routes. The cultivation of cinamon in Southern China goes back centuries before the Christian era, which found its way from the Khasi hills. Modern experiments have shown that the cinamon bark of the eastern Himalayas is substantially identical to Chinese cinamon bark (**Baruah 2005: 214**).

Nowadays production of goods and services and their marketing take place on a global scale thanks to the forces and process of globalisation. The Northeast has about 4500 kms. of International border with China, Myanmar, Bangladesh, Bhutan and Nepal – which often tends to distort if not destroy the basic institutions of free market, now regarded as the locomotive of economic development. But borders may also be contemplated not as boundaries but as gateways to opportunities of international trade and commerce. It is in this context that India's Look East policy becomes very relevant - the overtures since the 1990s towards Southeast Asian countries holding promise of historic proportions for transnational region building in the area. The region in question is not only the northeastern borderlands of South Asia, but may also be conceptualised as northwestern frontier of Southeast Asia. Assam, for instance, has a large population of tribal and minority groups whose languages are more closely aligned with the same of Southeast Asia than to those of the Indian subcontinent. Their cultures, too, resemble the cultures of their neighbours in Southeast Asia. Like the southern boundary of China, India's Northeastern border also does not mark off a cultural or linguistic area (**Kunstadter 1967: 205**).

The idea of South Asia being a discrete geographical region separated from Southeast Asia is a fiction. There are no natural geographical boundaries separating South Asia from the Southeast along the Indo-Myanmar border. In territorial terms today's South Asia substantially corresponded to the entity called British India. Northeast India's



ties – historical, cultural, social and economic, therefore don't stop at these international boundaries. The Japanese occupation of Burma (Myanmar) is a critical episode that led to the Indo-Myanmar border becoming the dividing line between South and Southeast Asia. Myanmar was subsequently placed within the ambit of South East Asian Command (SEAC) by the Allied Powers. South East Asia derived coherence after 1945 from 'act of collective self imagination undertaken by the region's nationalist political elite in the wake of liberation from European and American colonialism' (Acharya 2003: 24). Yet, our era of globalisation presents opportunities for the region to relate to her transnational neighbours on the east culturally and economically.

Japanese management consultant Keniche Ohmae critically observes of nation states as representing 'no genuine, shared communities of economic interest; it defines no meaningful flows of economic activity. In fact, it overlooks the true linkages and synergies that exist' (Ohmae 1995: 78). The lines that matter on the global economic map are those defining what he called 'region states' i.e. natural economic zones, which may or may not cover more than one countries. Among the regions that illustrate his point are Catalonia in Spain, Hongkong and adjacent areas of southern China, the area combining the Canadian province of British Columbia and the US state of Washington, Banglure Metropolitan area in India. The backdrop to these development is what is commonly called globalisation which demands that some of the rigidities of political borders like tariffs and customs will have to go. Whether this really happens or not is another matter. But the pressures on boundaries often created during the colonial era and reinforced by the nation states are clear. When national boundaries define economic space, decisions about locating economic enterprises often go against border regions. This has been the source of some Northeast Indias part tensions with the Government of India. Producers avoid locating industries near a border since trade barriers limit the market for goods and the area that supplies inputs. It is more rational to locate in an area that is closer to the core of the domestic market. But if one begins to imagine the economic integration of Northeast India with surrounding areas in neighbouring countries, then the calculations would obviously be different. Frontier areas then will cease to be as such in any meaningful economic sense. No one would claim that integration of Northeast's economy with Bangladesh Bhutan or Myanmar would immediately produce effects like the relocation of industries akin to Mexican or Canadian frontier adjacent to USA after the signing off North American Free Trade Agreement (NAFTA). But when a natural



economic region is allowed to emerge without the constraints of national boundaries, the locational advantages and disadvantages are very different from those when border effects are in full force.

Soon after P.V. Narasimha Rao became Prime Minister, he launched the 'Look East Policy' (LEP) in 1992. Its implementation during the 1990s focussed particularly on engagement with Southeast Asia and ASEAN (Association of South East Asian Nations). Alongside its new efforts to capitalize on Southeast Asia's economic success, India now sought politico-military engagement with the region, in part impelled by the need for new friends and partners after the disintegration of USSR in 1991, and probably worrying about China's first growing links across Asia (**Ganguli and Pardesi 2009: 13-14**). The broad objectives of LEP during the 1990s were to institutionalize linkages with ASEAN, with its member states and to prevent Southeast Asia falling under the influence of any one major power.<sup>2</sup> Since the turn of the century, the LEP has been reinvigorated featuring greater consistency and focus of effort. Meanwhile, Southeast Asia also woke up to India's increasingly impressive growth rates of the late 1990s. Yashwant Sinha, the then Foreign Minister of India, distinguished between the two phases of the LEP in 2003, 'The first phase of India's Look East Policy was ASEAN-centred and focussed primarily on trade and investment linkages. The new phase of this policy is characterized by an expanded definition of East, extending from Australia to East Asia, with ASEAN at its core. The new phase also marks shift from trade to wider economic and security issues, including joint efforts to protect the sea-lanes and co-ordinate counter-terrorism activities' (**Sinha 2003**).

Geographically India's Northeast opens not to the 'powerhouses' of South East Asia, but to Myanmar — a country that continues to reel under ethnic strife, political turmoil and economic backwardness and is subjected to protracted diplomatic isolation and ostracism by the international community. Myanmar is the gateway to South East Asia and the only Association of Southeast Asian Nations (ASEAN) country with which India shares a 1643 km long land border and a coastline of 1930 km. — wide open on the Andaman Sea and the Bay of Bengal posing strategic challenge to India's eastern frontier. Hence, the country has to be accorded a special position in her foreign policy. The Northeast will have to come to terms with Myanmar — if it were to benefit from India's Look East policy. The Indian policy towards Myanmar is marked by a dilemma: While



she finds it difficult to renege on her earlier commitment to democracy and democratic ideals, she seems unable to give up the option of maintaining good relations with the established government of an important neighbour at a time when India continues to Look East. At one level, Indian interests in Myanmar are guided by the following considerations: One, containment of Chinese economic and strategic influences in South East Asia in general and Myanmar in particular; two, helping Myanmar in exploring her virgin gas fields and thereby exploiting the energy resources; three, getting the military junta to come down heavily on the Northeast insurgents and rebel groups that have been holed up and taken shelter there; and four, to obtain inter-modal transit facility for the goods and services being traded between India and other South East Asian countries (**Das 2010: 348**). These considerations led India to enter into a number of mainly economic arrangements with Myanmar. Both these countries have opened up border trade from 12 April 1995. According to this arrangement, trade is conducted through two points: One is the Moreh (Manipur) – Tamu (Myanmar) point and another is the Champhai (Mizoram) – Hri (Myanmar) point. India is involved in a variety of cross-border development projects with Myanmar, primarily aimed at improving connectivity between Northeastern India and Western Myanmar and expected to give impetus to the local economies and bilateral trade. Probably among the most important is the Kaladan Multi-modal Transit and Transport Facility, which envisages connectivity between Indian ports on the eastern seaboard and Sittwe port in Myanmar and then through riverine transport and by road to Mizoram. This will provide an alternative route for transport of goods to Northeastern India. The upgrading of Kalewa-Kalemyo Road in Myanmar across Manipur has already been completed. Overcoming initial difficulties work is in progress on the Trilateral Highway Project, which proposes to connect Moreh in Manipur to Mae Sot in Thailand via Bagan in Myanmar. This trilateral Highway will eventually become part of the Trans-Asia Highway, mooted by the World Bank Connecting Indo-China region (Vietnam, Laos and Cambodia) with India. India and the ASEAN signed a Free Trade Agreement in August 2009, covering 11 countries including Myanmar with a combined GDP of over \$2 trillion. It covers only trade in merchandise and excludes services and investments, but eliminated tariffs on about 4000 products accounting for more than 80% of the trade in goods involving the two sides (**Archana 2009**).

As India's Northeast seeks to open itself to the countries of Southeast Asia, new hopes are created amongst the people of this region for establishing various kinds of



linkages with their ethnic cousins living across the borders. Even a cursory reading of the history of reorganisation of international borders in the region tends to suggest that the political borders seldom coincide with the cultural borders. Insofar as the international borders are drawn on an otherwise culturally continuous landscape; economic, political and cultural linkages across the international borders are expected to come to a complete halt or at least be authoritatively mediated through the concerned nation-states. Some of these communities living on the borders, for example, have reportedly been feeling upbeat about the prospect of meeting their ethnic cousins. Such sentiments are frequently expressed in the media and in literary writings of the region. As Anand Oinam observes: '... Manipur will be no longer a landlocked state in the 21<sup>st</sup> century. Our sons and grandsons will find it easier to visit our long lost brothers and sisters in Myanmar in the coming decades' (Das 2010: 350). The 'natural' connection between South and Southeast Asia in history has already led a section of intellectuals and rights activists to raise the demand for people's 'natural' right to migration across international borders. While the LEP may have raised people's hopes and expectations, the way the policy itself is crafted and designed by the mandarins of New Delhi has very little in it to address and cater to them. The policy envisages the flow of things and not that of people. Historically established cultural linkages are nevertheless constantly invoked in order to accelerate the flow of goods and services across the borders. As Former Prime Minister Dr. Manmohan Singh puts it: 'Full advantage may be taken of the LEP of the Government of India. ASEAN markets provide big opportunities for NEER, particularly in areas such as horticulture floriculture and medicinal herbs. Affinity in the cultural background will make our products acceptable and saleable once the connectivity is improved' (Singh 2005). Thus, Northeast's development is envisaged in terms of its ability to cater to the seemingly expanding foreign markets in these countries. Cultural affinities are seen only as a means adding to the 'acceptability' and 'salability' of Northeast's products. After all people belonging to the same ethnic and racial stock are likely to use the same consumables as much, as they share more or less the same family language that can level off differences and bring prosperity and peace. The new geopolitical imagination triggered off by the LEP defines connection in terms of flow of goods and services and incorporation of South and Southeast Asian countries into a common market, while there are others who tend to define it as one established between peoples separated long back by the political imperative of administration and government. The asymmetry is too sharp to be bridged even in the long run.



In recent years China's expansive economy has drawn India's South Asian neighbours into its economic orbit. Not surprisingly this has made many Indians nervous. Myanmar's trade with both India and China has expanded since 1989, but the trade with China has grown much more rapidly than trade with India. Even China's trade with Bangladesh has exceeded India's by a small but significant margin. Apart from the economic sphere, Chinese influence in Myanmar in military and political terms has been phenomenal. The Kunming initiative and the BCIM (Bangladesh, China, India and Myanmar) Forum that it gave rise to, advocate regional cooperation by the four countries. There is enormous potential for following up on the Kunming Initiative, especially the proposal to rebuild the Stilwell Road — the road from Ledo in Assam to the Myanmar Road that connects to Kunming — constructed with American money during World War II. Since Kunming is already connected with Hong Kong by an express highway, North East India could establish direct road link with Hong Kong if the Stilwell Road is well developed. Apparently only a short stretch of the road — about 100-120 miles from the border of Arunachal Pradesh to Myitkyina in Myanmar — needs rebuilding. Beyond Myitkyina the road is well developed all the way to Kunming. Given its route and the rail and road networks linking that part of the road to provinces of south and central Myanmar that borders Laos, Thailand, Malaysia and Singapore, the Stilwell Road, can connect North East India and the mainland with the entire South East Asian countries (**Baruah 2005: 227**). To be sure, the sources of the security anxieties are real. Apart from the China factor and the insurgencies, roads through Myanmar are sure to bring drugs, illegal migrants, infectious disease, and small arms more easily than before. Already there are signs that smuggling routes for drugs through the Golden Triangle have become more diversified because of the availability of new corridors. Improved roads are sure to worsen India's HIV/AIDS crisis. Yet one of the peculiar challenges of our global era, is that old-fashioned notions of border control to obtain security may be a cure worse than the disease.

India's security anxieties might stand in the way of a robust LEP that includes the vision of a transnational region. But, it is important to recognize that in a dynamic transnational economic region there will never be enough inspectors or sufficient hours of the day to inspect all cargo in any busy border crossing. To handle the security challenges, under these conditions, there will have to be a 'paradigm shift' in the way we



think of border control. Rather than controls at international borders, security will have to be tightened within the transportation and logistics system so that the risk of anyone in the transportation chain serving as conduits for criminals or terrorists is reduced. Transparent systems for tracking regional and global commercial flows could allow 'virtual' audits of inbound traffic before it arrives. Increased intelligence and data managing capacities of border agents can ensure that inspectors would target only high-risk goods and individuals (Flynn 2000: 58). Only close, comprehensive, and enduring relationships with our trading partners would allow such a paradigm change in border control. 'A positive embrace of risk', writes sociologist Anthony Giddens, 'is the very source of that energy which creates wealth in a modern economy. Risk is the mobilizing dynamic of a society bent on change, that wants to determine its own future rather than leaving it to religion, tradition, or the vagaries of nature'. Risk As Giddens explains is not the same as hazard or danger. 'It comes into wide usage only in a society that is future-oriented – which sees the future precisely as a territory to be conquered' (Giddens 2000: 40-42). If the LEP is to live up to its potential of becoming Northeast India's road to peace and prosperity, we will have to face up to the risks that exist and actively assess and manage them. That would mean taking a long-term view and synchronizing our foreign policies towards China, Myanmar, ASEAN as well as towards Bangladesh and Bhutan — and our domestic policies vis-à-vis Northeast India. Building roads can deliver results only if they are part of a comprehensive transnational region-building project informed by a long-term strategic vision.

### NOTES

1. The name owes its origin to the 19<sup>th</sup> century German Geographer Baron Von Richthofen, but it was neither a single trade route nor was used for transporting silk only. The term refers to a network of trails connecting the western region of China through Central Asia to the Mediterranean. Along the way there were other branch routes leading to separate destinations.
2. In practice this meant China.



### Reference

1. Acharya, Amitava. 2003. 'Southeast Asia: Imaging the Region', *Himal South Asia*, Vol. 16, No.1.
2. Archana, Vani. 2009. 'Look Southeast Policy: The ASEAN FTA could propel India's trade to another level'. *Indian Express*, August 22.
3. Aris, M. 1979. *Bhutan: The Early History of a Himalayan Kingdom*. Warminster (U.K.), Aris and Philips.
4. Baruah, Sanjib. 2005. *Durable Disorder: Understanding the Politics of Northeast India*. New Delhi: Oxford University Press.
5. Das, Samir Kumar. 2010. 'Indias Look East Policy, Imagining a New Geography of Indias Northeast', *India Quarterly*. Vol. 66, No.4.
6. Flynn, Stephen. 2000. 'Beyond Border Control', *Foreign Affairs*, Vol. 79, No.6.
7. Ganguly, Sumit et al. 2009. 'Explaining Sixty Years of India's Foreign Policy', *India Review*, Vol. 9, No.1.
8. Giddens, Anthony. 2000. *Runway World: How Globalisation is Reshaping our Lives*. London: Profile Books.
9. Kunstadter, Peter. 1967. *South East Asian Tribes, Minorities and Nations, Volume 1*. Princeton: Princeton University Press.
10. Ludden, David E. 2002. *India and South Asia, A short History*. Oxford: Oneworld Publications.
11. Ohmae, Kenichi. 1995. *The End of the Nation State, the rise of Regional Economies*. New York: Simon & Schuster.



12. Pommaret, Françoise. 1999. 'Traditional Values, New Trends', in *Bhutan, a Fortress on the Edge of Time, Selected papers of the Bhutan Seminar 1998*. Vienna: VIDC – Austrian Development Corporation.
13. Sinha, Yashwant, 2003. 'Resurgent India in Asia'. Available on <http://meaindia.nic.in>, accessed on 07.07.2022.
14. Singh, Manmohan. 2005. 'Northeast 2020', *Yojna*, December, 2005.



## **Minor irrigation scenario: A Case Study of Krishnanagar and Tehatta Sub Division of Nadia District, West Bengal**

**Susmita Mandal**

Department of Geography,  
South Calcutta Girls' College,  
E-mail: [susmitascgc@gmail.com](mailto:susmitascgc@gmail.com).

### **Abstract**

*Global water resources are rapidly depleting, and most of this resource is used for agricultural purposes. In developing countries like India, agricultural crops consume the largest amount of fresh water and 80% of it used for irrigation. Irrigation is facing a challenge for access to low-cost, good quality water. As per Indian rules, no permission is needed to collect the water from a groundwater source or from a nearby river, which create a big environmental problem and health issues. In study area arsenic contamination is a big problem. Irrigation is very much necessary but obviously in sustainable manners.*

*Keywords: irrigation, ground water, agriculture, arsenic.*

(Paper published on 1<sup>st</sup> December, 2022.)

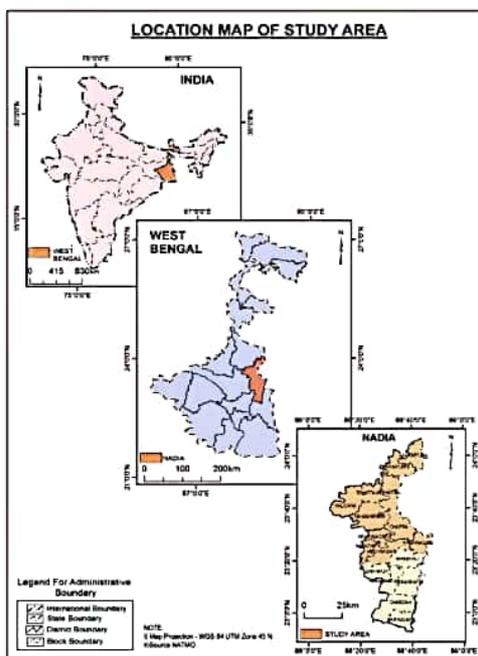
### **Introduction**

Rapid agricultural development can be observed in Nadia district. Within few decades, the mono-cropped area has changed into multi-cropped land. The development of irrigation systems and the availability of modern technology including the introduction of HYV seeds can be attributed to this change. Very high intensity of cropping can be noticed within this district over the last two decades. Two subdivisions namely Krishnanagar and Tehatta of the Nadia district are primarily dependent on agriculture and hence have been chosen for the study. Till 1967-68 the net irrigated area was only about 3%. As per the 1981 census, 22.87 % of the total cultivable land came under irrigation however as of 2015-16, it has increased to over 85% of the net cropped area. Therefore, the area faces severe problems of groundwater depletion and subsequent arsenic contamination. Pre-monsoonal rate of groundwater depletion was 1.01 m, and the post-monsoonal rate was 1.64 m (ten years average). As a result, during the Rabi season of maximum irrigation, some of the drinking water sources are completely dried up.

Drinking water levels of arsenic have changed over time and space. According to World Health Organization (WHO), the amount of arsenic concentration was 200 g/L in 1958, and it decreased to 50 g/L in 1963, but high concentrations of arsenic were harmful to health. So it was again fixed to 10  $\mu\text{g} / \text{L}$  in the year of 1993. As per the Bureau of Indian Standards (2012) and WHO guidelines, the maximum amount of arsenic in drinking water is 0.01 mg/L or 10g/L. If there is no alternative source of drinking water available, the permissible limit is 50 g/L. There are 86 Indian districts where people are forced to drink water that contains more than 50 grams of arsenic per litre, Nadia district is one of these districts.

### Study Area

There are four subdivisions in Nadia district – Kalyani, Ranaghat, Krishnanagar and Tehatta: Krishnanagar and Tehatta two subdivisions are mainly dependent on agricultural practice. The author of the paper has chosen the study area which consists of two subdivisions, Krishnanagar and Tehatta. The study area is surrounded by Bangladesh in the east, Bardhaman and Murshidabad in the northern part Hooghly and Bardhaman in the



western part and Ranaghat block of the same district in the southern part (MAP NO-1) and extends from 23°18'N to 24°11'N latitudes and from 88° 09'E to 88° 48'E longitude and covers an area of about 2523 sq. km. Major soils are deep loamy and deep clayey loam. The land area shows a flat surface with a gentle gradient towards the south-east. There are 6 rivers flowing over the district, though Bhagirathi and Jalangi are the most prominent. Main economic activity is agriculture.

FIG -1 – Location Map of the study area



## Objectives

The objectives of the study have tried to analyse the

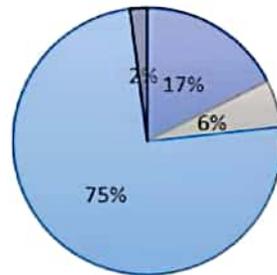
- The intensity of irrigation.
- Over utilization of groundwater and its impact on the environment.

## Irrigation Scenario

Nadia district represents a very large tract of the agroecological zone of West Bengal. The hot and humid climate and the fine-textured soil with proper NPK ratio make the district one of the most productive districts of West Bengal. The district always shows a moderate to high intensity of crop production. The only calamity, the district faces is high-intensity floods. The high rainfall is very helpful for agro-production. But with the growing demand for agricultural products, the intensity of production must reach a level which is far more than the natural product. That is why irrigation has become a must for the agricultural system. The irrigation potential is also quite high in this district as a whole and in the Tehatta and Krishnagar sub-divisions. From the decade of 1970s, the expansion of irrigational facilities started in a rapid manner with proper planning from the State Government. Both types of irrigational development, such as lift irrigation from groundwater and open water bodies, are practised in Nadia. Paddy Cultivation and Vegetables are hugely influenced by the expansion of effective irrigation facilities.

Groundwater is the major source of irrigation; the water is collected from different depths or different aquifers by pipe either manually or by machines. For irrigation purposes tube wells are established under govt schemes under the supervision of the Agri- Irrigation Department

SOURCE WISE IRRIGATED AREA IN STUDY AREA  
2017-18



■ DEEP TUBEWELL ■ RLI ■ SHALLOW TUBE-WELL ■ OTHER

FIG -2 Different sources of irrigation water.

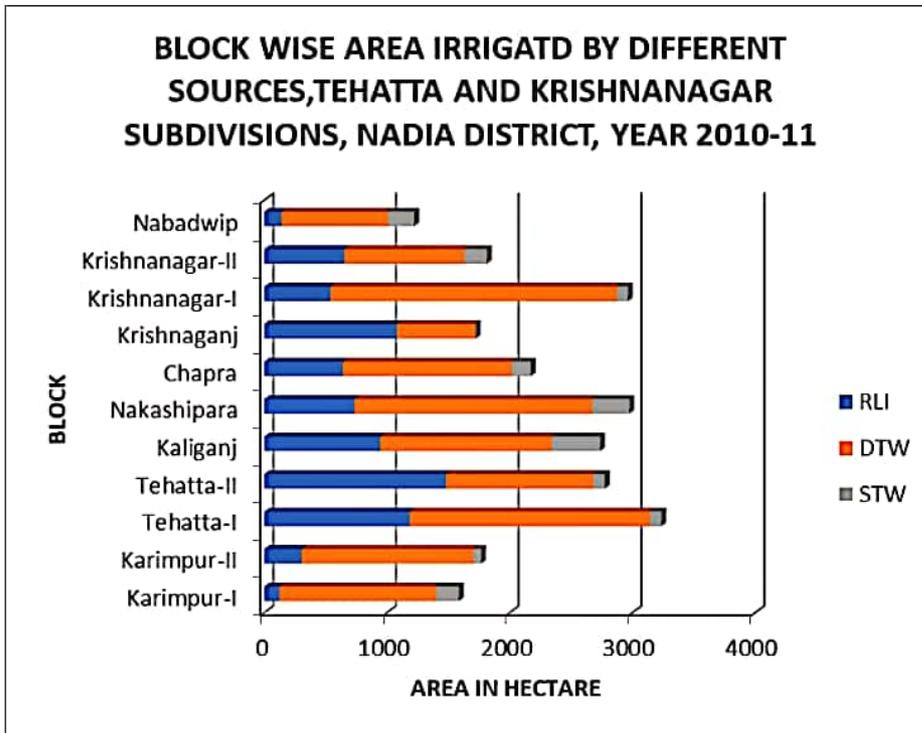


FIG -3 Block wise area irrigated by different sources. Data source: Krishnanagar (A-M) Division.

MINOR IRRIGATION SCHEMES: -

**A. Deep tube well –**

These tube wells are established where no option for utilization of surface water and water level located below seven meters. A mainly electrically operated submersible pump is required for this kind of scheme. Easily it can extract a huge amount of water by tube well and distribute it over the land by either pipeline or natural or artificial drainage system. There are two types of Deep Tube Wells:

I). Heavy-duty tube well (HDTW): -This kind of tube well extracts 200 cubic meters per hour to irrigate an area of about 40 hectors through the underground pipeline from and elevated



distribution chamber. As per state government policy, these types of structures are handed over to the users for management and maintenance.

II). Medium-duty Tube well (MDTW): - These can extract 100 cubic water per hour and irrigate about 20 hector lands through underground pipelines from an elevated distribution chamber. Many MDTWs are being operated by the Agri irrigation dept but these are also handed over to the users for management and maintenance.

**B. Shallow Tube well: -**

I) Light-duty tube well: - This structure is suitable for areas where water is found over 7 meters. This can lift water about 30 cubic meters per hour and can irrigate 4 to 6 hectares through open channels. 5 to 6 tube wells are installed in clusters. These are easily managed by users.

II) Shallow tube well (Electric and Diesel): - These schemes are suitable for areas where the water table is located within 7 meters below ground level. Water can be lifted with a pump set run by an electric motor shade or diesel engine.

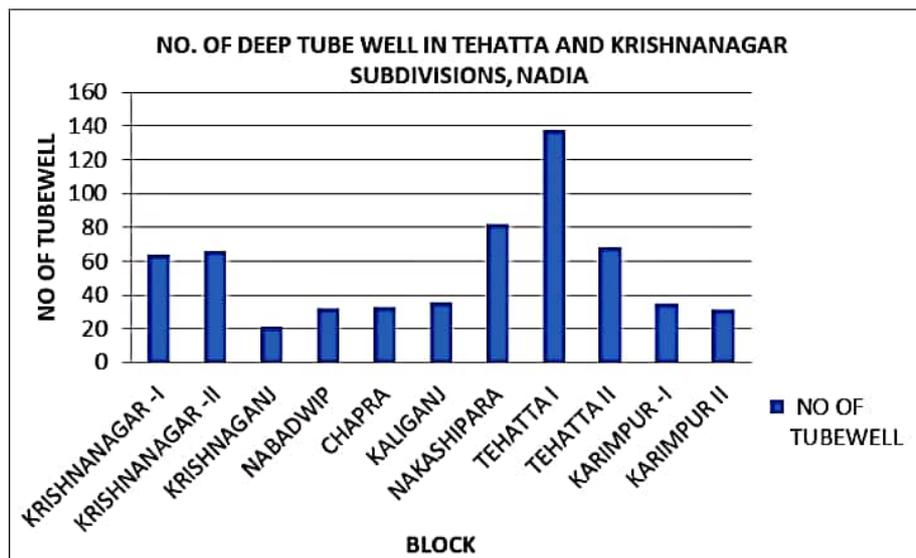




FIG -4 Block wise distribution of deep tube well. Data source: Krishnanagar (A-M) Division.

Block-wise irrigated areas under govt schemes are found the maximum amount in Tehatta I block which is followed by, Nakashipara, Tehatta –II, Krishnanagar I, Krishnanagar II, Karimpur I Kaliganj, Karimpur II, Chapra, Nabadwip and Krishnaganj blocks respectively.

Withdrawal of underground water varies season-wise. earlier agriculture in this area was dependent on rain or manual irrigation, but during various five-year plans, these schemes have been established in this study area. Other than govt projects there is a number of shallow deep tube wells mainly private and there is no control of Govt on the indiscriminate withdrawal of groundwater, which is harmful to the environment.

### **C. River Lifting Irrigation (RLI)**

River lifting irrigation is a special kind of irrigation by which water is supplied to agricultural land by using a pump and pipe. In our study area, this is one of the important methods. River lifting irrigation is found in all blocks of the study area because almost all blocks have the accessibility of either river or Bill. Power sources for this mechanism are two types - diesel and cheaper electric.

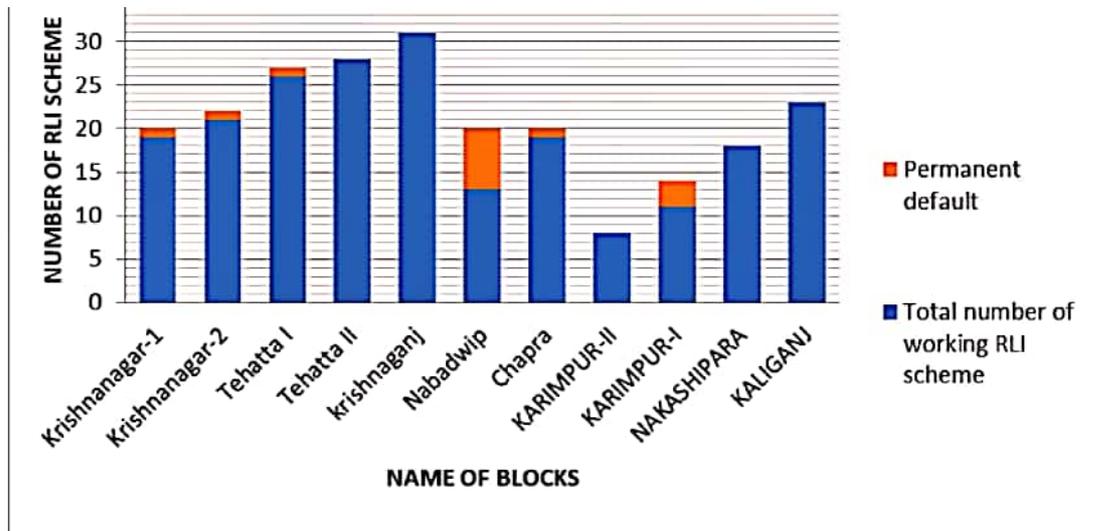


Fig -5 Block wise total number of RLI Scheme, study area. Data source: Krishnanagar (A-M) Division.

Name of the blocks	SOURCE	Total number of RLI scheme
Krishnanagar-1	Jalangi, Kalinga Bill, Palda Bill, Bhagirathi,	19
Krishnanagar-2	Jalangi, Ghateswar Bill.	21
Krishnaganj	Palda Bill, Mathabhanga, Hurni, Ichamati,	31
Nabadwip	Bhagirathi, Jalangi, Palda Beel,	13
Chapra	Palda Beel. Jalangi, Jidha Beel,	19
Tehatta I	Jalangi	28
Tehatta II	Jalangi	28
KARIMPUR-II	Jalangi, Shealmari.	08



KARIMPUR-I	Mathabhanga, seal mari, Jalangi,	11
NAKASHIPARA	Jalangi, Ghateswar bill.	18
KALIGANJ	Churni, Pagla chandi. Bhagirathi,	23

Data Source: Data source: Krishnanagar (A-M) Division.

The maximum number of RLI schemes found in the Krishnanagar block, the numbers are 31. The Sources of water are Palda bill, the river Mathabhanga, Churni and Icchmati. The total number of RLI scheme found in Tehatta II blocks are 28. Tehatta I block has 8 diesels and 18 electric runs RLI scheme. among them, one found permanently default. The source of water for Tehatta I and II is only the Jalangi river. Krishnanagar I is depending on 19 electric run RLI scheme they collect water from rivers Jalangi river Bhagirathi Kalinga bill and Palda bill. Krishnanagar II has 21 RLI schemes the sources of water are rivers Jalangi and Ghateswar bill. Nabadwip has only 6 schemes in running condition and 7 are permanent default. Sources of water are Bhagirathi, Jalangi and Palda bill. In Chapra, there are 18 working RLI schemes sources of water are Palda bill river Jalangi and Jidha bill. River Jalangi and Shiyalmari bill are the primary water sources for the Karimpur II block there are only 8 schemes. Karimpur II has 8 working and 3 non-working schemes. The sources of the water are the Mathabhanga River, Shiyalmari and Jalangi. in Nakashipara block there are 18 running schemes and the sources are the river Jalangi and Ghateswer bill. Kaliganj block has a total of 23 schemes the sources are Churni, Paglachandi and Bhagirathi.

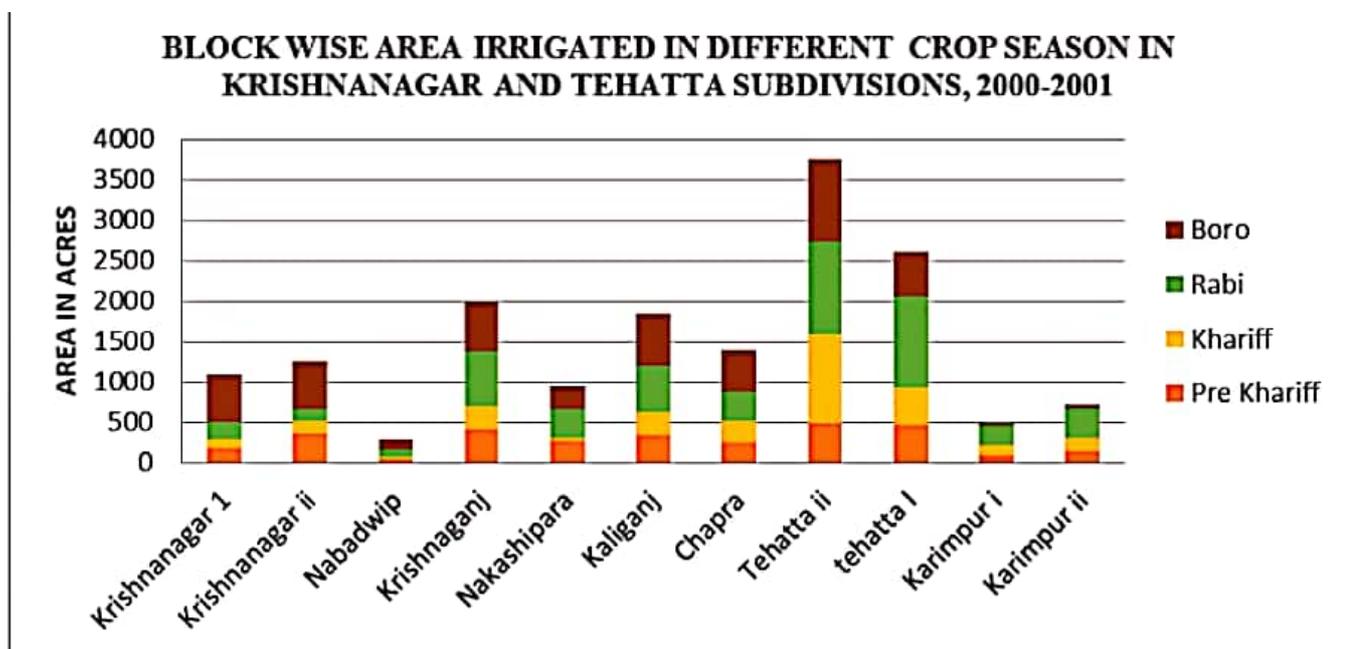


Fig -6 Block wise area irrigated in different season, 2000-2001.

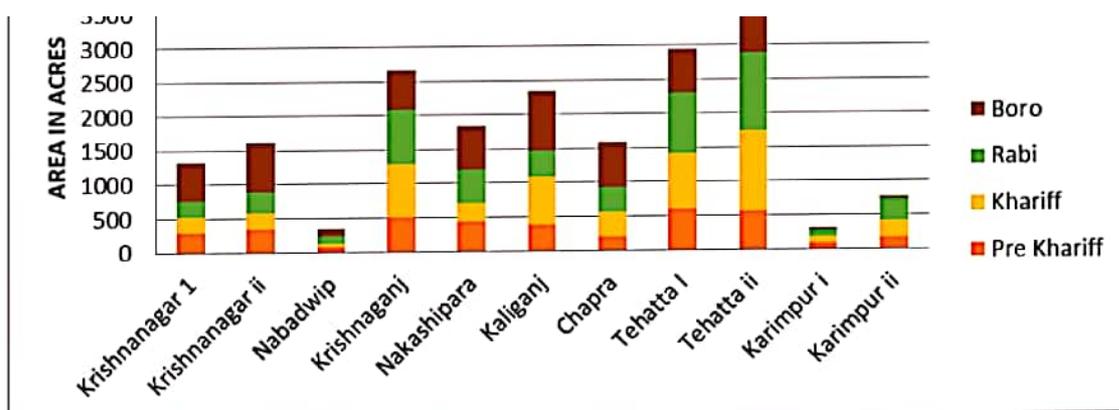


Fig -7 Block wise area irrigated in different season , 2010-2011. Data source: Krishnanagar (A-M) Division.

In the year 2010-2011, the amount of irrigated land increased almost in every block except Nabadwip and Karimpur. The maximum amount of irrigated water collected by Tehatta II followed by Tehatta I, Krishnaganj, Kaliganj, Nakashipara, Krishnanagar II, Krishnanagar I, Karimpur II, Karimpur I and Nabadwip respectively. The requirement for rabi cultivation and Kharif cultivation is almost the same in the two highest irrigated blocks water is needed throughout the year in the almost same amount for every block for good cultivation.

#### **Advantages of irrigation**

Multiple cropping throughout the year is only possible with the help of an irrigation facility.

Irrigation helps to increase agricultural production than achieved rain-fed agriculture.

For HYV seeds irrigation is very much important. With the increasing irrigation facilities farmers are inclined to crop diversification. Rice is the main crop which is cultivated almost throughout the year. Wheat, jute, pulses, sugar cane, and oilseeds are mainly grown in



multiple-cropped lands. Other crops are vegetables like brinjal, potato, cabbages, cauliflower, ginger, chilli, onion etc. produced here. Various fruits and flowers are also grown here.

A shallow tube well is the most available technology to provide irrigation throughout the year. It usually extracts available contaminated water for agricultural practice, and the arsenic is easily incorporated with rice and vegetables.

A huge amount of water is required in the study area during Boro cultivation or winter cultivation and therefore the Boro rice carries more arsenic than the Aus paddy (Bhattacharya, S. 2012)

### **Impact of Irrigation on Ground Water**

- There has been a steady decline in the water table in recent years in different blocks of Nadia district as an effect of the huge exploitation of groundwater for irrigation.
- The groundwater resource is in semi-critical condition six blocks from the area. These are Chapra, Karimpur-I and Karimpur-II, Tehatta- I, Tehatta- I I.
- The groundwater level is decreases at an alarming rate. It was 1.05 m in pre monsoonal season and 1.71 m in post monsoonal season in 2018 at an average of eighteen years.
- There has been a steady decline in the water table in recent years in different blocks of Nadia district as an effect of the huge exploitation of groundwater for irrigation.
- The groundwater resource is in semi-critical condition six blocks from the area. These are Chapra, Karimpur-I and Karimpur-II, Tehatta- I, Tehatta- I I.
- Another problem in the study area is arsenic contamination. Its level has changed over time and has mainly increased in nature. All seventeen blocks in Nadia district are arsenic affected and about 15.43% (the surveyed year was 2005-06) people suffered



from arsenicosis, it was mainly caused by drinking water contaminated with arsenic. The Nadia district has high arsenic concentrations in shallow aquifers within quaternary sediments. The depth ranges from 20 to 80 meters. Through aquifers, contaminated water can spread vertically and horizontally.

- The main occupation of this region is agriculture, and the groundwater used for irrigation is often arsenic-contaminated. The arsenic in this water is incorporated into crops, primarily rice and vegetables (Biswas, A et al, 2011). Various kinds of research show that food is the second largest contributor to arsenic intake after drinking water.

### Conclusion

In the study area, irrigation is very significant for agricultural purposes. However, excessive water use causes a serious problem, so drip irrigation and sprinkle irrigation should be promoted to achieve sustainable use of water. Agricultural water use must continue to improve, and will also tend to be more targeted at higher value crops.

### References

- Adeyemi, O., Grove, I., Peets, S., Norton, T, Advanced Monitoring and Management Systems for Improving Sustainability in Precision Irrigation. *Sustainability* 2017, 9(3), 353; <https://doi.org/10.3390/su9030353>
- All India Institute of Hygiene and Public Health (1996) Newsletter of Indian Training Network and All India Institute of Hygiene and Public Health Vol. 3pp. 1–12. <http://www.iisc.ernet.in/currsci/jan102002/38.pdf>



- ATSDR (2000). Toxicological profile for arsenic. Agency for Toxic Substances and Drug Registry, U S Department of Health and Human Services, Atlanta, GA .
- Bhattacharya, S., Gupta,K. Debnath S,et al (2012) Arsenic bioaccumulation in rice and edible plants and subsequent transmission through food chain in Bengal basin: a review of the perspectives for environmental health : *Toxicological & Environmental Chemistry* ISSN 0277–2248 print/ISSN 1029–0486 online, © 2012 Taylor & Francis <http://dx.doi.org/10.1080/02772248.2012.657200>  
<http://www.tandfonline.com>.
- Das, A., Joardar, M., Chowdhury, N.R. *et al.* Arsenic toxicity in livestock growing in arsenic endemic and control sites of West Bengal: risk for human and environment. *Environ Geochem Health* 43, 3005–3025 (2021).  
<https://doi.org/10.1007/s10653-021-00808-2>
- Datta B K, Bhar M K, Patra P H, Majumdar D, Dey R R, Sarkar S, Mandal T K, and Chakraborty A K (2012) Effect of Environmental Exposure of Arsenic on Cattle and Poultry in Nadia District, West Bengal, India. *Toxicol Int.* Jan-Apr; 19(1): 59–62.doi: 10.4103/0971-6580.94511
- District Statistical Handbook, Nadia, Bureau of applied Economics and Statistics ,(1975-76), Govt of West Bengal.
- District Statistical Handbook, Nadia, Bureau of applied Economics and Statistics ,(1981-82) Govt of West Bengal.
- District Statistical Handbook, Nadia, Bureau of applied Economics and Statistics ,(1996) Govt of West Bengal.
- District Statistical Handbook, Nadia, Bureau of applied Economics and Statistics ,(2009-10) Govt of West Bengal.



- Economic Review (2011-12), Govt of West Bengal.
- Franzblau A and Lilis R (1989). Acute arsenic intoxication from environmental arsenic exposure. *Archives of Environmental Health*, 44: 385-390.
- Forouzani, M., Karami, E. (2011) Agricultural water poverty index and sustainability. *Agronomy Sust. Developm.* 31, 415–431 (2011). <https://link.springer.com/article/10.1051/agro/2010026>
- Garrett, J.H.E., (1910) Bengal District Gazetteer Nadia, W. B. Govt., Reprint 2001. Kolkata . Pp 1-28,51-57.
- Ghosh, B.K., (2011) Essence of Crop Diversification: A Study of West Bengal Agriculture. *A.J.A.R.* 5: 28-44.
- Ghosh, N., & Singh, R. D. (2010). Groundwater Arsenic Contamination in India : Vulnerability and Scope for Remedy. *Environmental Science*. Published.
- Guha Majumder, D. N. (2010). Arsenic Contamination of Ground Water and its Health Impact on Population of District of Nadia, West Bengal, India. *Indian Journal of Community Medicine*. Published.
- Knox, J.W., Kay, M.G., Weatherhead, E.K. (2010) Water regulation, crop production, and agricultural water management—Understanding farmer perspectives on irrigation efficiency, *Agricultural Water Management*, Volume 108, 2012, Pages 3-8, ISSN 0378-3774, <https://doi.org/10.1016/j.agwat.2011.06.007>.
- Pfeiffer, L., Lin, C (2014) Does efficient irrigation technology lead to reduced groundwater extraction? Empirical evidence. *Journal of Environmental Economics and Management*. Elsevier, <https://doi.org/10.1016/j.jeem.2013.12.002>



- Rahaman, M. M., Sengupta, M. K. et al.(2005) Arsenic contamination of groundwater and its health impact on residents in a village in West Bengal, India. *Bulletin of the World Health Organization* 2005;83:49-57. Published
- Rahaman, M. M., Mondal, D., & Das, B. (2013). Status of groundwater arsenic contamination in all 17 blocks of Nadia district in the state of West Bengal, India: A 23-year study report. *Journal of Hydrology Xxx (2013) Xxx–Xxx*. Published.
- Singh , N., Kumar, D., Sahu, A.P., (2000) Arsenic in the environment: Effect on human health and possible prevention *J. Environ. Biol.* 28(2) pp.359-365.
- State agricultural plan for West Bengal (2014) , Agricultural Department, Govt. Of West Bengal.
- Wu, MM, Kuo TL, Huang YH and Chen CJ (1989). Dose-response relation between arsenic concentrations in well water and mortality form cancers and vascular. *American Journal of Epidemiology*, 130: 1123-1132.
- [www.archive.india.gov.in/citizen/agriculture/index.php?id=25](http://www.archive.india.gov.in/citizen/agriculture/index.php?id=25)



## Special Birds of Himalayan Foothills and Its uniqueness to qualify the ecosystem functioning and for Bird watching in North Bengal, India

Dr. Debabrata Das<sup>1</sup> and Atmaja Avirupa Das<sup>2</sup>

<sup>1</sup>Associate Prof. of Botany, Lalgarh Govt. College, Lalgarh, Jhargram, W.B. 721 516

<sup>2</sup>Individual Birder & Researcher, Barisal Colony, Sepoy Bazar, Paschim Medinipur, 721101

E-mail: [abc9800301026@gmail.com](mailto:abc9800301026@gmail.com)

### Abstract

*Green covers in the globe consisting of photosynthetic organisms i.e. from algae to angiosperms up to gymnosperms as a whole called vegetation globally. Vegetation is unique because it protects us even we get food from the photosynthetic organisms in our area. Small to smaller and large to larger organisms exhibit their importance as they are producers and we depend upon them as we are the consumers. Different levels of consumers depend upon different producers and or consumers for their need. It is unique that level of ecosystem is different from producers to consumers because the flow of energy and their constitutional components are diverse and versatile through different microclimatic conditions make them fit for the same environment. Vegetation is important for all living creatures because of food, shelter and assistance. Microorganisms grow on soil, water, and atmosphere and on plants and inside the plants to make the process functional through biogeochemical process. Surface runoff of minerals and nutrition, even logical conversion of important forces are due to energy trapped from solar energy and thereafter conversion from one level to another level and so on. Always vegetation is important for our mother earth because cooling process and heating process takes place through green environment. Animals are consumers and depend upon producers and consumers. Like all animals, birds are important in the ecosystem and help us in many ways. So, bird study is important to know the quality environment. Birds are unique creatures of nature for their potential importance. They live in ecologically diverse habitats as they directly and indirectly act and play a crucial role for productivity in any ecosystem; they play a vital role to balance the ecosystem functions. Watching and study of birds is called ornithology. Nature trails and jungle trails are within this because during study and research, field observation and record of birds and their behaviour study is important. During study of vegetation and its characteristics study, interactions study with local people is essential. It is also important because in the same habitats birds take help from plants in many ways with the indirect help of local people. In this communication authors are trying to discuss on interesting birds of Himalayan Foot Hills which is famous for bird watching because it is ecotone zone that are well managed which can help outsiders to study birds. Similarly dense and thick vegetation cover and its true ecological nature will be a prime object of this study for interesting birds. Hope that birders and researchers will take opportunity from this work which is unique for the people in and abroad the country.*

**Key words:** Himalayan Foot Hills, Interesting Birds, Vegetation, management.

(Paper published on 1<sup>st</sup> December, 2022.)



## Introduction

Vegetation is a common composition of green plant components in a specific habitat. Therefore terrestrial and aquatic are the types of vegetation which are different because of land having no water and aquatic vegetation with water. Both the types of vegetation help birds for their nesting materials, egg lying ground bed preparation even for the supply of food materials. Small twigs, fruits, seeds are used by the birds. These are the prime resource to grow and live the birds in a particular habitat.

Birds are the best gift of the nature as they stood high position for their genius value. The uniqueness is due to their colour, behaviour, role in the ecosystem including indirect significance. The amazing entities make the environment clean, green and eco-friendly as there are so many evidences on the diverse mutuality befitted component in the environment. Birds play a role for different activities, the best known as owl that significantly controls the pests (rats and mice) to protect paddy, wheat and other important crops in our periphery. Coucals controls the population of snakes and reptiles in an ecosystem. Vulture controls the spread of pathogens from dead bodies of big animals and helps our environment clean and healthy.

Bird is important in our environment. Protection of birds automatically protect pests over the globe and increase crop production and yield activity. Crows and vultures collect dead carcasses and clean the environment pollution free. The impact of the birds in the environment not only economical but it gives us valuable episode regarding charming and removes the monotony from baby to old aged persons. Good example is mini zoo, zoo, botanic garden, national parks, sanctuary and specific bird watching sites or birding fields. Our environment is our mother ground but the impact is more distant from other who gives us various activities by singing, chirpings and to make a melodious knowledge time to time even seasonally diverse situations. Each state or country selected one bird as their state or national bird for their special kind. We always awake up in the dawn from bed through chirping sounds made by our neighbours and stop to play and back to home in the dusk. So, a component and the plea of their conservation are essential to protect the environment eco-friendly. Keeping these ideas in mind the present paper has been made for birders or environmentalists or common students who want to study birds in lower foothills of Himalayan part in eastern side of the country.

Lower foothills of Eastern Himalaya i.e. Mahananda Wildlife Sanctuary has been selected for such study. It is situated in Darjeeling District of West Bengal, India. The part is lower tract of Eastern Himalaya. A large number of diverse species compositions have been found in the vegetation due to alteration of altitude and climatic factors.

The Mahananda Wildlife Sanctuary (MWS) is situated on the West bank of the River Tista in the Terai region of Darjeeling district that lies between latitudes  $26^{\circ}55'33''$  N and  $26^{\circ}47'54''$  N and longitude  $88^{\circ}33'31''$  E and  $88^{\circ}23'36''$ E. Area notified of the sanctuary is 127.22 sq km. It was first



notified as a protected area during 1949. "Protection" at that time however was limited only to restrict the hunting of wild animals. The reserved forest in the lower catchment of Mahananda River had been declared as a Wildlife Sanctuary by Government of West Bengal in June 1976, under the Administrative control. A major part of the sanctuary was brought under the administrative control of Wildlife Division I, Darjeeling by Principal Chief Conservator of Forests in November 1995, all the notified blocks of MWLS have been placed under the direct management of Wildlife wing on Reorganization of Forest Directorate in September, 1995. The total area is divided into 33 forest blocks under four ranges viz. East, West, North and South range. The forest blocks are: Punding, Bandar jhola, Jogi jhora, Kuni, Choklong, Upper Champasari, Gulma valley, Silihhita, West Sevoke, East Sevoke, North Sevoke, Jhenaikuri, Lower Ghoramara, Upper Ghoramara, Gola, Ruyem, Andera, Chawa, Samaardanga, Lower Champasari, Singimari, Gulma, Mahanadi, Sukna (Part 1), Rongdong, Kaklong, Mohorganj, Panchenai, Hatisar, Kyananuka, Adalpur, Chumta and Laltong. All blocks are tagged together as a lower to higher plains and hills under different elevation.

### **Geographical Boundary**

Mahananda Wildlife Sanctuary (MWS) covers 60 % of the forest in hilly region in the foot hills of the Eastern Himalaya. MWS is characterized by moderate, steep to precipitous mountain slopes and high ridges toward the north and then sloping to almost flat stretch of the terai and alluvial plains towards the south region. There are two broad ecological subdivisions i.e. the Hill tract and the Bhabar tract. Gradual conversion of the higher hills into tea estates and Cinchona plantations has fragmented the ecological boundary in the north. Famous Tista River in the east forms a physical barrier against movement of terrestrial wild lives of the Bhabar tract which is gently sloping and covered with sal forests. The river and khola belts act as valuable biotope for wildlife. The sal (*Shorea robusta*) forest in the south forms an ecological continuum with Laltong block and Baikunthapur Division. A thin strip of forest makes the boundary in the rest of the portion in Hatisar, Mohorganj and Panchenai blocks. There are cultivated fields, labor colonies in the south. In the west, after the junction of Hill Cart Road and River Mahanada, the tea gardens and habitations limit the forest extant. All the habitats completely make a continuum as ecological habitat qualifies different lifeforms under varied categories.

### **Vegetation Composition:**

MWLS, a treasure house of biodiversity falls in the transition zone between Peninsular Indian sub-region and Indo-Malayan sub-region of the Oriental region. The phyto-geographical position, irregular and undulated topography with lofty hill ridges and deep valleys accompanied by wide variation in climate and soil have resulted into the formation of varied rich vegetation.



Grasses mainly of *Phragmites karka*, *Saccharum bengalense*, *S. spontaneum* etc. are found in river beds. In Khair-Sissoo forest mainly *Albizia* spp., *Erythrina* sp., *Trewia* sp. are recorded. The undergrowth consists of *Chromolaena odorata*, *Mimosa himalayana*, *Saccharum spontaneum* and *Mikania scandens*. In Simal-Siris forest, species available are *Haldina cordifolia*, *Bischofia javanica*, *Erythrina* sp., *Lagerstroemia parviflora*, *Tetrameles nudiflora*, at the top storey. The lower storey is composed of *Premna bengalensis*, *Mallotus philippensis* etc. The undergrowth is composed of *Chromolaena odorata*, *Lantana camara* and *Mikania scandens*. *Mimosa himalayana*, *Clerodendrum infortunatum* and *Leea* sp. are also recorded. The climbers are mainly of *Tinospora sinensis*, *Dalbergia stipulacea*, *Clematis* spp.

Sal species occurs gregariously in deep loamy soil under different categories. The associates of Sal in the *East Himalayan lower Bhabar subtype* are different from those in the *East Himalayan upper Bhabar subtype*. *Eastern Bhabar subtype* can be further subdivided into Bamba Sal and Sevoke Sal. Bamba Sal occurs in Lower Ghorama, Gulma valley, Choklong and Upper Champasari forest blocks. The associates of Bamba Sal are: *Schima wallichii*, *Garuga pinnata*, *Tetrameles nudiflora* etc. The under storey is composed of *Macaranga* spp., *Dillenia pentagyna*, *Careya arborea* Roxburgh, *Premna bengalensis* etc. Ground flora includes *Chromolaena odorata*, *Clerodendrum infortunatum*, *Coffea benghalensis*, etc. Climbers are rarely found. Another sal is Sevoke Sal occurs in North Sevoke, West Sevoke and East Sevoke forest blocks. The Sal forest of this type is associated with *Terminalia crenulata*, *Toona ciliate*, *Chukrasia tabularis* etc. Undergrowth is dominated by *Chromolaena odorata*, *Leea* spp., *Coffea benghalensis*, *Clerodendrum infortunatum*, *Urena lobata*, etc. Climbers are *Bauhinia vahlii*, *Mikania scandens*, *Milletia* spp. Eastern Terai Sal type occurs in Shilibhita blocks. This type occurs in wet areas with ferns and canes. The associates of Sal are *Lagerstroemia parviflora*, *Sterculia villosa*, *Haldina cordifolia*, *Garuga pinnata*, etc. The under storey is composed of *Bauhinia purpurea*, *Premna bengalensis*. The undergrowth is dominated by *Chromolaena odorata*, *Clerodendrum infortunatum* etc. Climbers are *Bauhinia vahlii* and *Parthenocissus* spp.

#### Other Vegetation Type

Dry Mixed Forest: Sal is common in this forest. The associates are *Dillenia pentagyna*, *Careya arborea*, *Terminalia crenulata*, *Gmelina arborea*, *Lagerstroemia parviflora*, *Albizia* spp. The lower story is composed of *Ocotea lancifolia*, *Alstonia scholaris*, *Macaranga* spp., *Cinnamomum tamala* etc. The undergrowth is composed of *Ageratum* spp., *Clerodendrum infortunatum*, *Chromolaena odorata*, *Dendrocalamus hamiltonii*, etc. The climbers are *Bauhinia vahlii*, *Mikania*



sp., *Tinospora sinensis*. This type is found in North Sevoke, West Sevoke, Lower Ghoramara, Gulma valley, Choklong, Jogijhora, Upper Champasari and Punding forest blocks.

Wet Mixed Forest: This type of forest occurs in Samardanga, West Sevoke and Shlibhita forest blocks. The species are found to grow like *Dillenia indica* Linnaeus, *Eugenia* spp., *Tetrameles nudiflora*. The lower storey is composed of *Callicarpa arborea*, *Wrightia arborea*, *Premna bengalensis*, *Macaranga* spp. Ferns and cane breaks are common. Climbers are *Tinospora sinensis*, *Mikania* sp., *Piper* spp., *Cissus* sp.

Hill Forests: Hill forests can be grouped into *Lower hill forests* (up to 800 m elevation) and *Middle hills forests* (800 m and above). Lower hill forests can be grouped into (i) Lower hill Sal forests, (ii) Lower hill dry mixed forests, and (iii) Lower hill wet mixed forests.

(i) *Lower hill Sal forests*: This type of forest is found to grow in Gulma valley, Punding, Jogijhora, Gola, Chawa and Ruyem forest blocks. The Sal forest is associated with *Schima wallichii*, *Terminalia crenulata*, *Lagerstroemia parviflora*, *Careya arborea*. The lower storey is composed of *Macaranga* spp., *Castanopsis* spp., *Ocotea lancifolia*, *Ficus* spp., etc. The undergrowth consists of *Chromolaena odorata*, *Clerodendrum infortunatum*. Climbers are *Bauhinia vahlii*, *Mucuna* sp., *Parthenocissus Semicordata* etc.

(ii) *Lower hill dry mixed forests*: The forest blocks like Chawa, Gola, Upper Ghoramara, Kuhi, Bandarjholia and Andera comprises of this type of forests. The dominant species are *Toona ciliate*, *Terminalia crenulata*, *Tetrameles nudiflora*, *Castanopsis* spp. The lower storey comprises of *Bauhinia purpurea*, *Wrightia arborea*, *Mallotus philippensis*, *Pterospermum acerifolium*, etc. The ground flora is composed of *Chromolaena odorata*, *Clerodendrum infortunatum*, *Leea* spp., *Coffea benghalensis*, ferns including canes. The climbers are *Tinospora sinensis*, *Clematis* pp., *Mikania* sp. etc.

(iii) *Lower hill wet mixed forests*: This type of forests occur in small patches in moist areas along Mahananda slopes, banks along the Jogijhora, Gulma, Ghoramara and Choklong etc. The dominant species are *Acrocarpus fraxinifolius* Arnott, *Toona ciliate*, *Cinnamomum* spp., *Duabanga grandiflora*, *Callicarpa candicans*, *Bischofia javanica*, *Actinodaphne obovata*, *Pandanus* spp., canes and ferns. The climbers are *Tinospora sinensis*, *Parthenocissus semicordata*, *Cissus repanda*, *Bauhinia* spp., etc.

Middle hill forests (800 m and above): This type is found in Kuhi and Latpanchar forest



blocks. The species are *Schima wallichii*, *Betula alnoides*, *Castanopsis* spp., *Phoebe attenuate*, *Acrocarpus fraxinifolius* etc. The lower storey comprises of *Cinnamomum bejolghota*, *Macaranga* spp., *Wrightia arborea*, and bamboos. The thick under growth comprises of *Desmodium* spp., *Maesa* spp., ferns and epiphytes.

### **Bird composition**

Many migratory birds like Asian Open Bill Storks, black headed ibis, Indian ibis, Taiga flycatcher and ruby throats are recorded during winter. The common bird species are Myna, Parakeet, Rock pigeon, pond heron including bitterns that are common though bat is found during winter to summer. During monsoon to post monsoon huge migratory birds like Open bill storks are available. Little Cormorant, Night heron, Indian Roller, King fisher, Sparrow, Scaly breasted Munia, various tits, Dove, Mourning Dove, and Starling are available when there are sufficient available food found in the field. A fresh water reservoir is a permanent water resource that attracts large number of birds time to time. Therefore, it may be a new horizon for birding that love birds and love environment. Freshwater aquatic bodies and streams show good habitats for local birds. But to see the interesting species of birds need time and frequent visit seasonally to know the actual visitors at different sites of Mahananda Wildlife Sanctuary (MWS).

### **Area under Study**

The study area is MWS at foothills of Eastern Himalaya in West Bengal. Nearby agricultural land, tea gardens, ponds, canals, streams, waterfalls, trenches, top of the huts, houses, cemented pillars, holes of trees and crop fields were taken to study and record the ecology including behaviour study of the birds specially interesting birds. Study was conducted with local people for socio-structure of their daily-activities and even the scenario of cultivation practice. Study at forest was also conducted to know the migratory behaviour of some forest species including interactions of bird species for roosting and nesting.

### **Materials and Methods**

Vegetation study was made using quadrat study. Ten study sites were selected randomly and quadrat basis information was recorded. Method of bird studying was divided in to 6 aspects but first three aspects used were to study the birds of MWS in west Bengal and to record the behaviour in natural habitats. Photographs were taken from field by ordinary

digital Canon and Nikon Cameras. Altimeter, Abenys Level, Temperature meter, GPS, Lux meter, Tape, and Stand of Camera including Binoculars were carried out in field during bird watching. Generally dawn and dusk were selected for each day visit in field with local map of the area though more or less regular watching of birds was made to know the situation thereby in different seasons. General list of the plants and about the pattern of vegetation record floras were consulted from earlier publications<sup>(1-67)</sup>. Different websites were visited to compare the record references. A check list has also been prepared about the common birds available in West Bengal and published earlier online basis. Some Bird sanctuaries of West Bengal and local preservation plots were selected to study and record the photography day by day to make an inference to compare the habitats and species behaviour. All the characters from field and from the photographs were taken from some common books on birds and treatise made by Zoological Survey of India (ZSI) published time to time. Interesting micro bird habitats were marked for general study of watching and roosting of bird including nesting. Some net work resource was also studied well to know better about the bird watching. These are: (i) British trust for Ornithology, (ii) Royal Society for the Protection of Birds, (iii) American Birding Association and (iv) Cornell laboratory of Ornithology at Ithaca, New York, North America. Other literature and resource was consulted was Wildlife Rescue & Rehabilitation centre (WRRC), Bangalore, India. Literature<sup>1-67</sup> used for the study mentioned at reference part.

#### Photographs of Interesting Birds







**Fig. 10 Snowy-brown Flycatcher**





Fig. 16 Streaked Spiderhunter



Fig. 19 Black Baza



Fig. 20 Jerdon's Baza



**Fig. 22 Chestnut-headed Bee-eater**



**Fig. 25 Spangled drongo**



**Fig. 23 Greater racket-tailed Drongo**



**Fig. 26 Chestnut-tailed starling**





**Fig. 28 Scarlet Minivet**



**Fig. 29 Indian Peafowl**



2	Blue-bearded bee-eater	<i>Nyctyornis athertoni</i>	Common
3	Asian barred owlet	<i>Glaucidium cuculoides</i>	Rare
4	Asian fairy-bluebird	<i>Irena puella</i>	Most Common
5	Banded bay cuckoo	<i>Cacomantis sonneratii</i>	Common
6	Rufous Sibia	<i>Heterophasia capistrata</i>	Common
7	Black-crested bulbul	<i>Rubigula flaviventris</i>	Common
8	White-rumped shama	<i>Copsychus malabaricus</i>	Common
9	Greater Yellownape	<i>Chrysophlegma flavinucha</i>	Common

22	Chestnut-headed bee-eater	<i>Merops leschenaultia</i>	Common
23	Greater racket-tailed Drongo	<i>Dicrurus paradiseus</i>	Common
24	Golden-fronted Leafbird	<i>Chloropsis aurifrons</i>	Common
25	Spangled drongo	<i>Dicrurus bracteatus</i>	Common
26	Chestnut-tailed starling	<i>Sturnia malabarica</i>	Common
27	Grey-capped pygmy woodpecker	<i>Picoides canicapillus</i>	Rare
28	Scarlet Minivet	<i>Pericrocotus speciosus</i>	Common
29	Indian Peafowl	<i>Pavo cristatus</i>	Common
30	Dark-sided flycatcher	<i>Muscicapa sibirica</i>	Common
31	Greater flameback	<i>Chrysocolaptes guttacristatus</i>	Common
32	Grey-headed woodpecker	<i>Picus canus</i>	Common
33	Pin-tailed green pigeon	<i>Treron apicauda</i>	Rare

## RESULTS AND DISCUSSION

Result revealed that 33 interesting bird species were recorded from Foothills of MWS in different habitats along with 20 common bird species (Table 1, 2). In the present study some common birds were watched regularly but in a specific study which was conducted on the basis of relationship of birds with special habitats as migratory bird species. Study revealed 53 birds were present in the surrounding of MWS (Fig.1-33). The study also revealed that 20 common birds visited regularly at MWS nearby the Siliguri, W.B. (Table 2). All the birds presented in the table are our neighbouring birds (Table 2) though a few are migratory kinds. Sunbirds, doves, kingfisher, blue-tailed bee-eaters and crows were important birds because they act as pollinating agents, settlement of weeds, and used as scavenger birds respectively. More or less all birds are important in the ecosystem for dispersal of fruits and seeds and

Asian Koel	Kokil	<i>Eudynamys scolopacea</i>
Blue-Throated barbet	Bara Basanta Bouri	<i>Megalaima asiatica</i>
Coppersmith Barbet	Basanta Bouri	<i>Megalaima haemacephala</i>
Green bee-eater	Banspati	<i>Meropus orientalis</i>
Purple Sun bird	Moutusi	<i>Nectariana asiatica</i>
Black-hooded oriole	Halde boni	<i>Oriolus xanthornus</i>
Tailor bird	Tuntuni/Durga tuntuni	<i>Orthotomus sutorius</i>
Red-vented bulbul	Bulbuli	<i>Pycnonotus cafer</i>



pesticides and insecticides on birds through tea gardens and agricultural fields may be studied to access the real status of the environment and to draw a conclusion on birds and the local environment. Social study should also be included in near future to develop the people's participation. Hope that Government will take some initiatives to protect the eco-habitat and conserve the nature along with tribal people. Before the work each and every worker should record the research components and study in a particular way to know more about the vegetation, components and birds in the same geographical territory.

### **Recommendations**

Vegetation is the key functional unit of any habitat that qualify the characteristics fauna. Therefore birders should have kin knowledge on vegetation before study or birding. Not only that he/she should study the types of vegetation, birds and insects even seasonal influence upon environment at microclimate basis. To know the kinds or types of plant species available there are important to record the avifauna as they roost, prepare nests and hide themselves within greenery. During winter and summer deciduous trees shed off their leaves and they become canopy less show birds sitting in the branches. The visibility of bird species or sighting them, exhibit full appearances of birds are possible during late winter study. It helps birders to record or take photographs of these bird species.

Good camera, lens, tripod, binocular, scoop, call recorder, GPS, Lux meter, note-book, pen, field guide book and guide are required in each trip with pre-planned information.

In protected places prior permission for entry as well as for photography is mandatory, special permission is required if you visit for research.

Accommodation for halting, prior permission, assistance of local people, and permission from forest range offices are highly recommended because at least 2-3 days required for good birding with local guide to locate or sighting birds. At the last but not least prior data is required to study before the onset of field trip. As a whole, thorough study is essential before field trip. Keep assistants during your visit and always be careful during trip following animal movement because after 3 p.m. big animal movement begins at sanctuary or National Park and it can hamper your work.

We can introduce 'A home stay concept' to promote birding and to develop economy without hampering the natural beauty and natural resource to protect the environment clean, green and eco-friendly. In this way we can conserve the real habitats of birds and their vegetation because local people protect it for the wealthy vegetation which would support the



local habitats that automatically will preserve the bird species in a natural way along with natural vegetation.

### Acknowledgements

We acknowledge to our Indian pioneer Ornithologists Late Salim Moizuddin Abdul Ali (12.11.1896 to 20.06.1987) and Sri Humayun Abdul Ali, Cousin of Dr. Salim Ali for their amazing work in the field from which we took kith and kin interest. We conveyed our sincere thanks to students of local Schools and Colleges for their active assistance during birding. We convey our deep and sincere thanks to some College teachers, Foresters, Researchers and social workers for their active help to prepare the manuscript. We are thankful to OIC, GGDC Lalgah, Jhargram. Special thanks go to DFOs, Range Officers and staff for their cooperation during study. Thanks go to Dr. J K De, Retd. Scientist of ZSI and Dr. Debjani Basu, Retd. Botanist, BSI, for their assistance and help.

### References

- [1] Ali, S. 1996. The Book of Indian Birds, (Third Edition-Hard Cover), Salim Ali Centenary Edition, Oxford University Press, India.
- [2] Ali, S. 1997. The Book of Indian Birds, 12<sup>th</sup> Revised Enlarged Centenary Edition, Bombay natural History Society, Oxford University Press, India.
- [3] Ali, S and Dillon Ripley, S. 2013. Hand Book of the Birds of India and Pakistan, Vol. I-10, Oxford University Press India, 3121 pp.
- [4] Arnold, N. 2015. Collins Field Guide: Birds of India (Hard Cover), Harper Collins Publications.
- [5] Ambasht, R. S., Singh, M. P. and Sharma, E. 1984. An environment study of soil and water conservation through herbaceous plants, *National Academy of Science Letters*, 6 (5): 143.
- [6] Anonymous. 1997. Flora of West Bengal, Vol.-I , BSI, Kolkata, Flora of India, Series-2.
- [7] Anonymous. 2005. Medicinal Plant Resources of South West Bengal, Vol.-I, Research Wing, Directorate of Forests, Govt. of West Bengal.
- [8] Anonymous. 2010. Medicinal Plant Resources of South West Bengal, Vol.-II, Research Wing, Directorate of Forests, Govt. of West Bengal.



- [9] Anonymous. 2018. Perspectives in Plant Ecology, Evolution and Systematics, ISSN:1433-8319, Editors, Peter J. Edwards, Claus Holzapfel, Elvira Horandl, Florian Jeltsch, Diethart Matthies, Kirk A. Moloney, George Perry .Elsevier publication.
- [10] Anonymous, 1996. *Survey of Flora and Fauna of Mahananda Wildlife Sanctuary*. Forest Department, Govt. of West Bengal, Calcutta.
- [11] Banerjee, S. & Maiti, G.G. 2011. Taxonomic study of the genus *Hyptis* Jacq. (Labiatae) of India. In Ghosh, C & Das, A.P., *Recent Studies in Biodiversity and Traditional Knowledge in India*. Sarat Book House, Kolkata. Pp. 9-22.
- [12] Bentham, G. & Hooker, J.D, 1862-1883. *Genera Plantarum* Vols. 1-3. London.
- [13] Biswas, K.P. 1966. *Plants of Darjeeling and Sikkim Himalayas*. Calcutta. Vol. 1.
- [14] Bestelmeyer, B.T., Trujillo, D.A., Tugel, A. J., and Havstad, K. M. 2006. A Multi-Scale classification of Vegetation dynamics in arid lands: What is the right scale for models, monitoring, and restoration?, *Journal of Arid Environments*, **65**: 296-318.
- [15] Chakraverty, R. K. & al. in Mudgal. V & Hajra, P.K. (Eds.), 1999. Floristic Diversity and Conservation strategies in India. 3: 1603 – 1604. BSI, Calcutta.
- [16] Paul, T.K and Kumar, A. 2014. A sketch on the vegetation and its components of Mahananda Wildlife Sanctuary, Darjeeling District, West Bengal, India, *Pleoina*, **8**(20): 320-330.
- [17] Choudhury, T and Roy, P.P. 2020. Habitat destruction and its probable impact on wildlife in Mahananda wildlife sanctuary, Tom-3, No. 3, pp.-549-562.
- [18] Cox, J.1999. *Bird Watching Basics*, The Florida Fish and Wildlife Conservation Commission.
- [19] Das, D. 2007. Study of Vegetation ecology of forests of Southwest Bengal with special reference to Non-timber Forest Produce Productivity, Ph.D. Thesis, Awarded from Vidyasagar University, Midnapore, Paschim Medinipur, W.B.
- [20] Das, D. 2016. Ecological Studies on Jhitka Forest under Medinipur Forest division, *IJSART*, **2**(12): 296-302.
- [21] D. Das. 2017. Spectrum of Vegetation in March at Lalgah Forest of Jhargram District in West Bengal, India, *Indian J. Appl. & Pure Biol.*, **32**(2): 217-226.
- [22] Das, D. 2017. Present Day Scenario of Forest ecosystem in Lalgah for Sustainable Development in Paschim Medinipur District of West Bengal, National Conference on Nonlinear Dynamics and Its Applications (CNDA-16), Feb. 07-09, Department of Physics, Durgapur Govt. College, West Bengal.



- [23] Das, D. 2021. Vegetation structure and ordination of Nayagram forest in West Bengal, *Indian J. Applied & Pure Bio. Spl. Vol 1(1)*: 109-114.
- [24]. Das, D. 2021. Vegetation study at Rakhalmara forest in Kapgari Beat of West Bengal, *Indian J. Applied & Pure Bio. Spl. Vol 2(1)*: 207-213.
- [25] Das, D. 2022. A Contribution to the Vegetation of Laljole in Jhargram District of West Bengal, *Indian J. Applied & Pure Bio. 37(1)*: 59-63.
- [26] Das, A. A. and Das, D. 2016. Preliminary Studies on Common Birds of West Bengal with Special Reference to Vegetation Spectrum, India , *IOSR-JESTFT*, **10** (11): 12-34.
- [27] Das, D. 2014. Community study of plants species in coastal areas of Mohana and old Digha of Purba Medinipur District with special reference to Eco-sustenance, *Indian Journal of Applied and Pure Biology*, **29** (2): 255-266.
- [28] Das, D. 2007. Study of Vegetation Ecology of Forests of South West Bengal with special reference to Non-Timber Forest Produce (NTFPs) Productivity, Ph. D Thesis awarded from Vidyasagar University, West Bengal, 2007, (Work From CNH, Botanical Survey of India, Shibpore, Howrah, West Bengal).
- [29] Das, D. 2009. Ecological status of plants in sacred groves of southwest Bengal (Midnapore, Bankura and Purulia District) of West Bengal, Final UGC-Project Report, 2009, PSW-160/06-07(ERO) dated 19.02.2007.
- [30] Das, D. 2015. Final Project Report on 'Ecological studies of Vegetation in coastal areas of Purba Medinipur under stress for sustenance of life', UGC-Project report (No. PSW-087/11-12 (ERO), Kolkata, dated 23.04.2013.
- [31] Das, D. 2016. Ecological Studies on Jhitka Forest Under Medinipur Forest Division, *IJSART*, **2** (12): 296-302.
- [32] Das, D and Das, M. 2014. Vegetation Ecology of Coastal belt of Khejuri area of Purba Medinipur District with special reference to Hijli Coast, West Bengal, India, *IOSR-Jour of Pharmacy*, **4(2)**: 2319-4219.
- [33] Das, D and Ghosh, P. 2014. Ecological Studies of Ecosystem Health Indicators at Nayagram of Paschim Medinipur District in Lateritic forests of Southwest Bengal, India, *IOSR-Journal of Environmental Science, Toxicology and Food Technology*, **8** (6): 48-63.
- [34] Das, D. 2016. Eco-tourism and Eco-degradation in Darjeeling Himalaya, West Bengal, Abstract and Full Length Paper in a seminar-Variation and prospects of Eco-Tourism at Darjeeling and Dooars, 20<sup>th</sup> December, 2016, funded by Higher Education Department, Govt. of W.B., at Gorubathan Govt. College, Darjeeling.



- [35] Dash, M.C. and Das, S.P. 2010. Fundamentals of Ecology, Third Edition, The *McGraw-Hill* Companies, Tata McGraw-Hill Education Private Limited, New Delhi., 2010, pp.1-562.
- [36] Das, D. Study of June Vegetation at Lalgah forest of Jhargram District in West Bengal, India, *IJSART*, 3(7): 163-171.
- [37] Das, D. 2018. *Chromolaena odorata (Eupatorium odoratum)*-An Exotic weed used in Lalgah, Jhargram, West Bengal for Fuel wood purpose, *IJSART*, 4(11): 924-930.
- [38] Das, D; Ghosh, R. B and Mishra, T.K. 2002. Biological spectrum of the Vegetation in the Campus of Vidyasagar University, Midnapore, West Bengal, *Vidyasagar University Journal of Biological Sciences*, 8: 87-91.
- [39] Das, D. 2022. Vegetation study and Ordination analyses for theory and Practice in Ecology, ESDPPM, Editors-Das, D; Ghosh, P and Maheswari, G, ISBN: 978-93-94779-43-3, Bharti Publications, New Delhi. Pp. 239-256.
- [40] De, D. K. 2002. Grass Flora of Medinipur District, Ph.D- thesis, Vidyasagar University, West Bengal. 2002.
- [41] Field Trip Leader Manual, DFO Field Trip Leader Development Committee, (Edit. Kay niyo).
- [42] Haines, H. H. (1921-25). The Botany of Bihar and Orissa, Vol. I-IV, BSI, Calcutta.
- [43] Holland, M. M., Risser, P. G. and Naiman, R. J. 1991. Ecotones: The role of land scape boundaries in the management and restoration of changing environments, Chapman & Hall., New Delhi.
- [44] Hooker, J. D. 1892-1897. Hooker, J. D. Flora of British India, Vol. 1-VII, 1892-1897, BSI, Calcutta.
- [45] Hazmierczak, K. 2008. A Field Guide to the Birds of the Indian Sub-continent (Paper Back), Illustrated by Ber Van Perlo, Oriental Bird Club, A & C Black Pub. Ltd.
- [46] Leeuwis, T; Peel, M and de Boer, WF. 2018. Complexity in African savannas: direct, indirect and cascading effects of animal densities, *PLoS ONE*, 13(5): e0197149.doi:10.1371/journal.pone.0197149.
- [47] Inskipp, C; Richard, G and Inskipp, T. 2011. Birds of the Indian Sub-Continent (Paper Back),OUP India.
- [48] Jorgensen, S.E., Xu, fu-liu and Costanza, R. 2010. Hand Book of Ecological Indicators for Assessment of Ecosystem Health, Second Edition, CRC Press, New-York, pp.-484.



- [49] Maji, S. and Sikdar, J. K. 1984. Sedges and grasses of Midnapore district, West Bengal. *J Econ Taxon Bot.* 4 (1): 233-254.
- [50] Margalef, R. 1958. Information Theory in Ecology, *Gen. Syst.*, 3: 36-71.
- [51] Mishra, R. 1968. Ecology Work Book, Oxford and IBH Publishing Company, New Delhi.
- [52] Mitsch, W.J. and Gosselink, J. G. 1993. The role of riparian corridors in maintaining regional Bio-diversity, *Ecol. Appl.* 3: 209-212.
- [53] Muller-Dombois, D and Ellenburg, H. 1974. Aims and methods of vegetation ecology, John Willey & Sons inc., New York.
- [54] Niklaus, P.A; Leadley, P.W; Schmid, B and Korner, C. H. 2001. A long term field study on Biodiversity x elevated Co2 interactions in grassland, *Ecological Monographs*, 71: 341-356.
- [55] Ali, S and Laeeq Futehally. 1967. (Reprint, 2015). Common Birds, National Book Trust, India, pp. 126, ISBN: 9788123710327.
- [56] Pandey, B.N and Kulkarni, G.K. 2006. Biodiversity and Environment, S.B. Nangia, APH Publishing Corporation.
- [57] Pielou, C. 1966. Species diversity and Pattern diversity in the study of Ecological succession, *Jour. of Theor. Biol*, 10: 370-383.
- [50] Price, P. W. 1975. Insect Ecology, John Wiley and Sons.
- [58] Sarma, P and Das, D. 2015. Application of Shannon's Index to Study Diversity with reference to Census data of Assam, *Asian Jour. of Management Research*, 5(4): 620-628.
- [59] Shannon, C.E. 1948. A mathematical theory of Communication, *Bell System Technical Journal*, 27: 379-423.
- [60] Simpson, E. H. 1949. Measurement of Diversity, *Nature*, 163: 688-699.
- [61] Sorensen, T. 1948. A method of establishing groups of equal amplitude in plant sociology based on similarity of species and its application to analyzes of the vegetation on Danish commons, *Biologiske Skrifter/Kongelige Danske Videnskabernes*, 5: 1-34.
- [62] Popradit, A., Srisatit, T., Kiratiprayoon, S., Yoshimura, J., Ishida, A., Shiyomi, M., Murayama, T., Chantaranothai, P., Outtaranakorn, S; and Phromma, I. 2015. Anthropogenic effects on a tropical forest according to the distance from human Settlements, *Scientific Reports*, 5-14689: pp. 1-10 doi.: 10.1038/srep14689.
- [63] Prain, D. 1963. Bengal Plants, Vol.-I-II, (Revised Edn.), BSI, Calcutta.



[64] Rao, R. R. and Sharma, B. D. 1990. A Manual for Herbarium Collections, BSI, Brabourne Road, 1990, Kolkata-1.

[65] Raunkiaer, C. 1934. The-life forms of plants and statistical plant Geography, *Oxford University Press*, Oxford.

[66] Sax, D.F. 2002. Equal diversity in disparate species assemblages: a comparison of native and exotic woodlands in California, *Global Ecology and Biogeography*, 11: 49-57.

[67] von Saltza, K; Slingshy, P and Hundertmark, C. 2016. Denver Field Ornithologists (DFO)

## GUIDELINE TO THE AUTHORS FOR SUBMISSION OF PAPERS

### **GENERAL & TECHNICAL REQUIREMENTS:**

Full length article/paper may be typically of about 3000 words (minimum) or six to eight pages. The Authors are requested to send their paper with an abstract in 100 to 150 words. The paper should be written in single line-spaced, fully justified format in 12 point Times New Roman font. One line space is to be kept between paragraphs and no indent is to be provided at the first line of a new paragraph. First level heading is required to be consequently numbered like 1., 2., etc. left justified and bold. Second level heading should be numbered consequently like 1.1., 1.2., etc. left justified and bold. Other than English language authors are requested to send their paper in both PDF and Word format. Font size should be eye soothing or 12/14 font size. Title should appear at the top centre of the paper in bold font. The name of the author is to appear next in a separate line along with name of the organization/institution, place of affiliation(s) with full address of the organization/institution and E-Mail ID or Phone No. All figures and tables are to be numbered sequentially and should be placed above the table. Tables and figures should be distinct and readable even after some amount of reduction.

### **BIBLIOGRAPHY:**

Bibliography should be arranged/maintained as per the International norms. List of References will be as per the examples given below corresponding to a book [1], Journal/Magazine/Paper [2], Conference proceedings [3] and the website and other media [4].

- [1] Bhattacharyya, Nabarun, Herbert, Deys Publishing, Kolkata, ISBN 978-81-29-16-6, Pp 32-33, 1<sup>st</sup> ed., 2004.
- [2] Ganguli, Su, Solar Thermal-A versatile Technology, Reason-A Technical Magazine, Vol. XI, pp 8-10, 2012, ISSN 2277-1654.
- [3] Baserville, T.A., Allard, J., Wayman, C. & Douglas, A. J. Dopamine oxytocin in penile erection. Proceedings of 22<sup>nd</sup> International Conference of Neuroscience, New York, USA, 2012.
- [4] Socio-affective Neuroscience & Psychology 2013. 2013 Donald L. Hilton. This is an Open Access article distributed under the terms of the Creative Commons Attribution 3.0 License (<http://creativecommons.org/licenses/by/3.0/>).

### **DECLARATION:**

A declaration form is needed to be signed by the corresponding author and/or on behalf of other author (if any) along with the submission of the manuscript for consideration for publication in the journal which is mandatory.

### **PROCESSING FEES:**

The processing fee for publication in the journal is INR 2000.00 (INR Two Thousand only) / US \$ 100.00 (US Dollar One Hundred only). For color plates or color photos extra charges of INR 1000.00 (INR One Thousand only)/ US\$ 50.00 (US Dollar Fifty only) has to be paid.

Hard copy of the journal may be available by paying INR 300.00 (INR Three Hundred only) / US \$ 20.00 (US Dollar Twenty only).

**Exchange Price: 300 INR (\$20.00)**

### **CORRESPONDENCE:**

Dr. Barin Kumar Roy  
Editor-in-Chief  
Mobile: 09433128121  
E-mail: barinkp1969@gmail.com  
Or editor.ijird@gmail.com

Dr. Biswajit Maiti  
Managing Editor  
Mobile: 09836952605  
E-mail: bmkgec@gmail.com

Published by SOCIETY FOR JOURNAL OF INTEGRATED RESEARCH AND DEVELOPMENT OF NADIA, REGD NO. S/2L/48105 OF 2015-16; T-1/9B, KRISHNAGAR SENTRUM, KRISHNAGAR, NADIA, W.B. PIN-741101, INDIA.