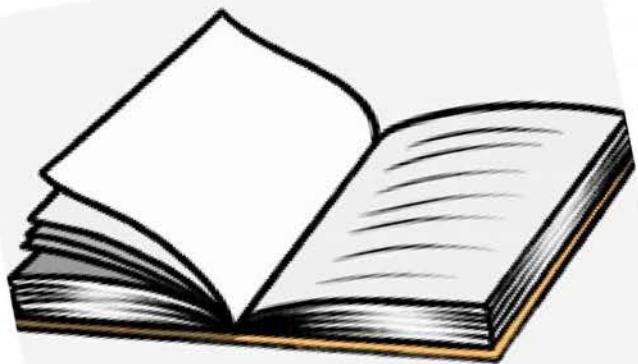




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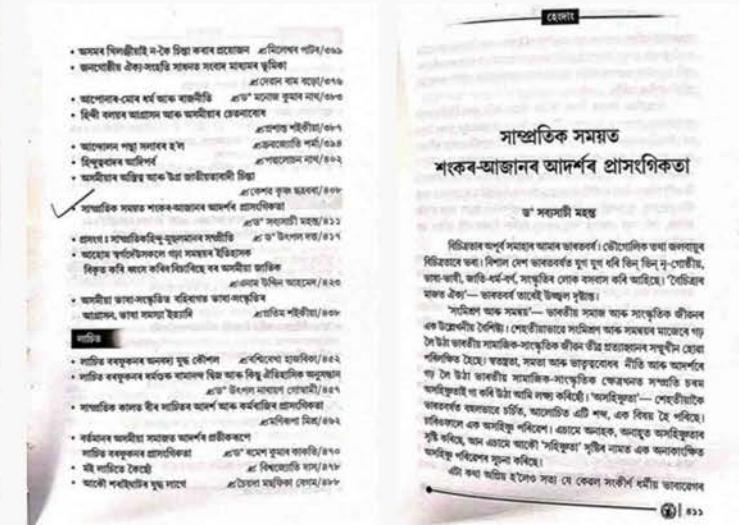
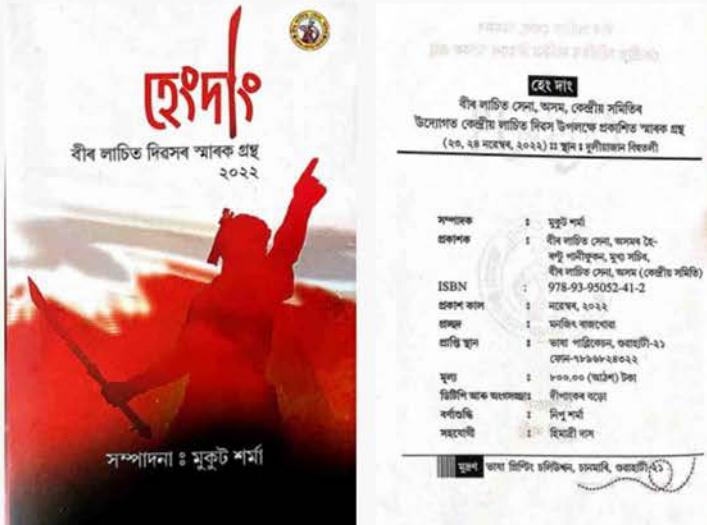
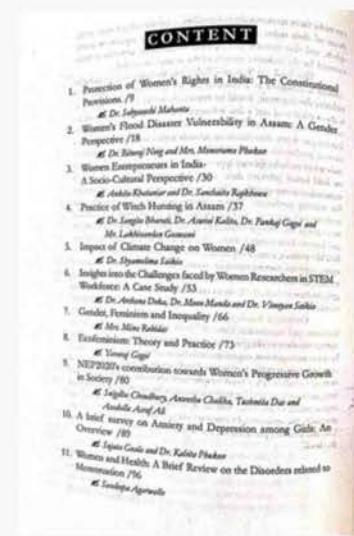
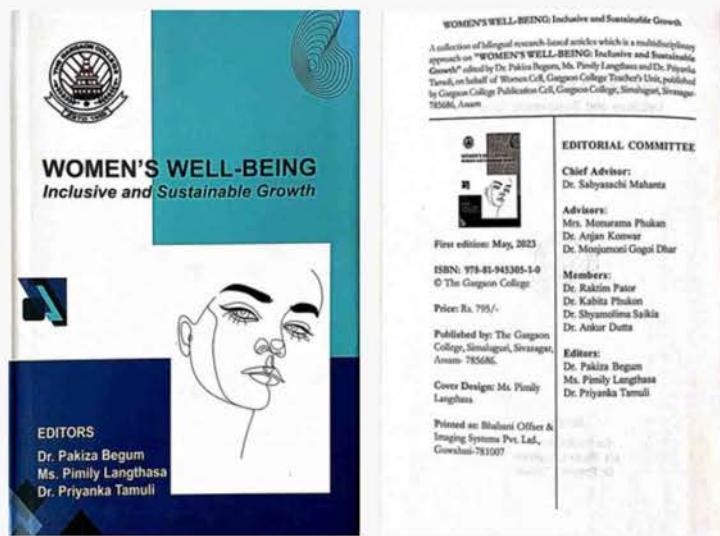
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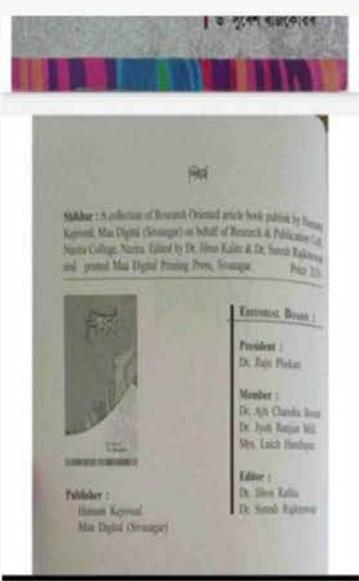
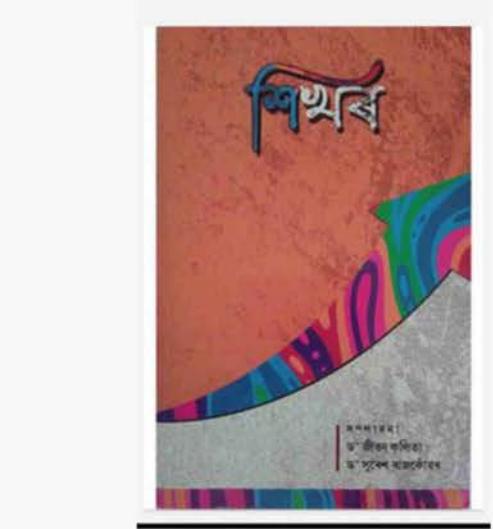
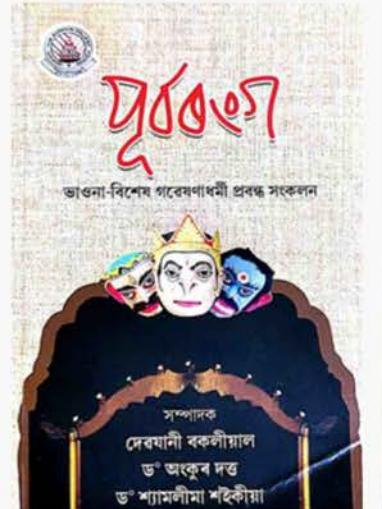




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અનુભૂતિ

ଉପରେ ପରିଚାରକ ପରିମାଣରେ ଏହି ଉପରେ ଅନୁଭବରେ ଯେ କିମ୍ବା କିମ୍ବା ଏହି ଉପରେ ଅନୁଭବରେ ଯେ କିମ୍ବା କିମ୍ବା



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## **WOMEN'S WELL-BEING**

*Inclusive and Sustainable Growth*



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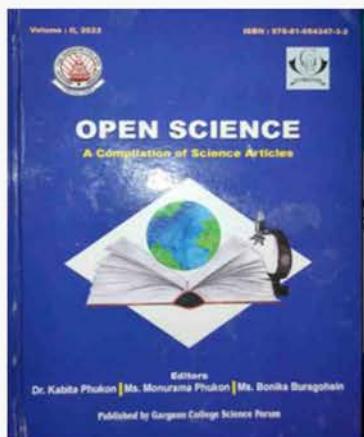
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Miss Sandeepa Agarwalla	Open Science, A compilatio n of Science Articles, Vol.2,	"Ecohydrology : A Review"	Natio nal	2023	ISBN:97 8-81- 954347- 3-2	Gargaon College	Gargaon College Science Forum
Miss Sandeepa Agarwalla	WOMEN'S WELL- BEING Inclusive and Sustainabl e Growth	Women and Health: A Brief Review on the Disorders related to Menstruation	Natio nal	2023	ISBN: 978- 81- 945305- 1-0	Gargaon College	Gargaon College Publicati on Cell, Gargaon College,
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The image shows the front cover of a book. The title 'Principles of Inorganic Chemistry' is at the top. Below it is the subtitle 'A Textbook for Undergraduate Students'. The authors' names are listed as 'By Prof. K. Kabita Phukan, Ms. Monurama Phukan and Ms. Bonika Buragohain, on behalf of Gargyan College Science Forum, Silvassa-785606, Silvassa (Assam), printed at MAA Digital, Silvassa'. The publisher's logo, 'Gargyan College', is in the bottom right corner.

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## **Macrophyte Diversity of Rahdoi Pukhuri, A Freshwater Pond in Sivasagar district, Assam**

**Sangreta Chetia**  
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Gargi College, Sonaguri  
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## ABSTRACT

The present study deals with the study of macrophyte diversity of Raikot pahar. The study was carried out during the period of 2020-21. From the study it was found that macrophyte diversity comprised of 28 species belonging to 16 families. Out of 28 species, 26 species are angiosperms. Among the angiosperms 13 species are dicot whereas 13 species are monocot. The pteridophyte comprised of 2 families and 2 species.

## INTRODUCTION





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NAME	TITLE (BOOK/CHAPTER)	TITLE OF THE PAPER	NAT./INT.	YEAR	ISSN/ISBN	AFFILIATING INSTITUTE	PUBLISHER
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## Review on Different Synthesis Methods of Copper Nanoparticle

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## ABSTRACT

Copper nano particle with antibacterial property has prominent effect in fighting against infectious bacteria. Copper nanoparticles are superior antimicrobial than many antibiotics. Various researches have been done to find effective synthesis procedure for nanoparticles. Green synthesis of metallic nanoparticles is widely used because of its harmless obtaining method. We hereby review the already existing data on different synthesis method of copper nanoparticle.

**Keywords :** *Antimicrobial; Copper Nanoparticle; Plant*

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## **Transparent Wood : Potential Building Material of The Future**

**Pakiza Begum<sup>a</sup>, Pimily Langthasa<sup>a</sup>,  
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Mail ID : [pakizbegum33@gmail.com](mailto:pakizbegum33@gmail.com)

• 第二輯

**ABSTRACT**  
Transparent wood is considered a promising structural and light management material for energy-efficient engineering applications. This humble method of substituting the organic polymer lignin with a distinct blend of epoxidized eliminates the coloring from wood and augments its strength. Though transparent wood may be looked upon simply as an innovative material, its practical benefits are massive. It is a type of *natura* material because the material is non-toxic.

The image shows the front cover of a book. The title 'Biological Spectrum of Northeast India' is at the top. Below it is a photograph of a cluster of purple flowers, likely primroses, growing in a dark, leafy environment. The background is white.

**Home Chandra Majumdar**  
Biological Species of Northeast India (Assam Bionomics) Communication No. 002

- [2] *Groundwater Contamination of Arsenic and its Toxicity*  
*From Polyhalogenated Polychloro-Aromatic Hydrocarbons*,  
*Ph.D. Thesis, Anna University, Chennai, India*

[3] A systematic view of analytical tools traditionally used to monitor trace metals in environmental matrices  
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*Entomol exp appl* 1996; 69: 111-116.  
 -An effective Rohita-Kshamtha, *Antennaria Hispida*  
 -Silk protection of silkworms & revision

[5] *Effect of Diclofenac Sodium from Locally Prepared Formulations on the Survival Rate of *Glossina*, Anopheles*, *Diptera, Anopheles Steppe*

[6] Evaluation of Antimicrobial Activity of Medicinal Extracts and Isolated Compounds - A Review  
*Int J Pharm Sci Res* 2010; 1(1): 10-16.

[7] *Antimicrobial Activity of Some Medicinal Plants*  
*Int J Pharm Sci Res* 2010; 1(1): 17-21.

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## Groundwater Contamination of Arsenic and its Toxicity

*Family Experiments, Political Regimes  
and Economic Reforms, Bookend Dates*

100

Amotz Zahavi is a unique character with distinct physical characteristics and has been reported as rare in public health. Previous reports have suggested that Amotz Zahavi may be associated with a number of diseases, including hypertension, heart disease, stroke, and diabetes. The present study examined the relationship between the presence of Amotz Zahavi and the risk of death from cardiovascular disease. The results suggest that Amotz Zahavi is associated with an increased risk of death from cardiovascular disease, particularly among individuals with a history of hypertension or diabetes.





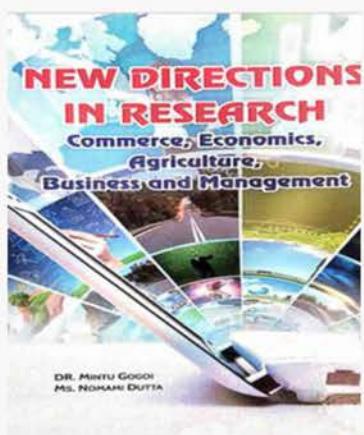
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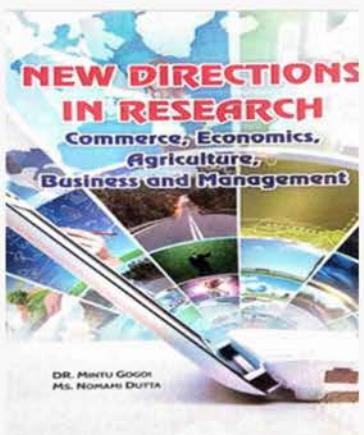
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Inclusive and Sustainable Growth



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## Socio-Economic Condition of Women Workers of Tea Industry in India: Research Indication for the Period from 2000 to 2022

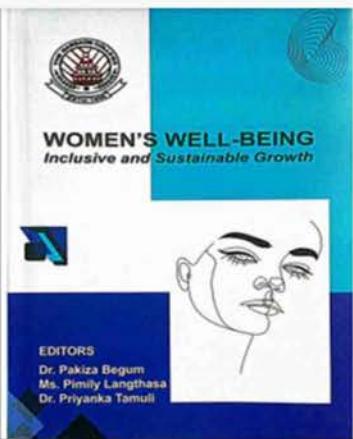
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### ABSTRACT

Socio-economic condition of women is the social condition in regard to an individual or group. It is often measured in a blend of education, income and occupation. The socio-economic condition of women is important to measure to increase its economic, and women's overall economic power and control. The tradition of 'women in tea industry' and 'agriculture' holds several socio-economic and cultural significance. The main objective of this research is to find out that they are working only for their livelihood of their family. However, in spite of the economic contribution, due to women's role in the promotion of the tea industry, there is still a lack of recognition and appreciation. They are not allowed to spend the money earned independently, which is not supposed to be spent. A great majority of the women workers have transferred to the tea industry from other sectors. Women are gradually moving from agriculture to different areas. The present study is an attempt to draw a sketch on the socio-economically backward condition of women workers in India. The study is conducted for the period from 2000 to 2022.

Keywords: Women, Socio-economic condition, Tea Industry, Family living condition

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#### Socio-Economic Condition of Women Workers of Tea Industry in India: Research Indication for the Period from 2000 to 2022

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Assistant Professor, Department of Commerce, Gargao College,  
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#### ABSTRACT

Socio-economic condition or status is the social evidence or category of an individual or group. It is a reflection of a community's level of economic activity and development, the availability of basic necessities, the extent of access to resources, and human related capabilities, power and control. The condition of women has undergone significant changes over the last few decades. The study aims to examine the socio-economic condition of women workers of tea industry and their contribution to the tea industry. The study also analyses their income and expenses for that they are working only for their household of their family. Moreover, in spite of the socio-economic condition of women workers of tea industry, they are also expected to receive the same amount of respect as anyone in the family. She is not even allowed to spend the money earned independently, which is not representative to happen. A great number of the tea workers in India are women. They are contributing to the socio-economic condition of women tea garden workers. There are different areas. The present study to analyse to draw a sketch on the scenario of socio-economic condition of women workers of tea industry across the globe. The study is continued for the period from 2000 to 2022.

**Keywords:** Women, Socio-economic condition, Tea Industry, Society, Social condition

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#### PROBLEMS AND PROSPECTS OF AGARWOOD PLANTERS OF ASSAM—A Study

Mr. GAUTOM HAZARIKA\*

#### Introduction

A sasan is famous for its tea in worldwide. Apart from tea, one of the most valuable plants locally named as Xeeshi is also found in some parts of Assam. It is also known as Aquilaria malaccensis, agar etc. When the heartwood of Xeeshi is infected by a fungus, the infected area becomes Agarwood. Prior to infection, the heartwood is pale yellowish, very light and pale colored. As the fungus started infecting the heartwood, it becomes very dense, dark, hair embedded heartwood. That dark portion of the heartwood of the tree is called Agarwood. The price of that Agarwood is relatively very high in the international market. The Agarwood is used for medicinal, aromatic and religious purposes. Especially in the Middle East Countries, the Agarwood is highly demanded for religious purposes and perfumery uses.

The Agarwood oil that is extracted from the Agar tree has been given three grades namely Bonya, Bona and Khor. There are different rates for each grade in North East market. The

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Dr. Monika Ghosh\*

#### Introduction

Unemployment in India continues to be a source of concern. Since the drafting of the first five-year plan, the Government of India took few initiatives to create job during that time. To achieve the objective of job growth and labor force expansion, this plan established the schemes for rural and sectoral development in various sectors. For rural area, employment was focused at the centre of the planning process. The seventh Five Year Plan (1985-2000), along with quality of life and regional balance. The Eleventh Five Year Plan (2007-2012) placed a strong emphasis on "industrial growth" with employment serving as its central tenet. As a result, since

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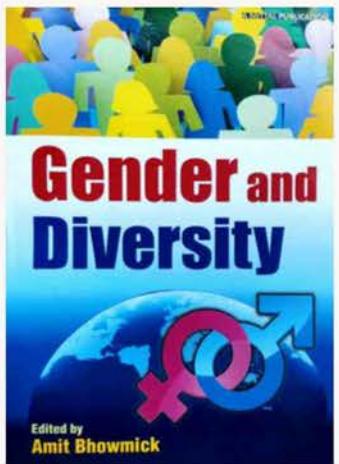
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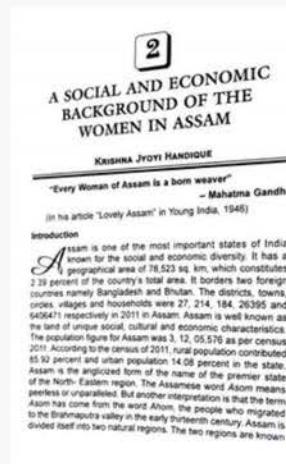
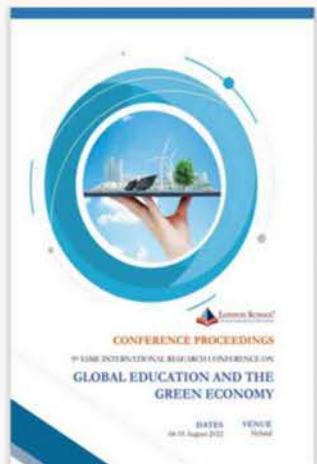
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(in his article "Lovely Assam" in *Young India*, 1948)

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**A**siam is one of the most important states of India known for its natural and economic diversity. It has a total area of 16,752 sq. km, which constitutes 3.3 percent of the country's total area. It borders two foreign countries namely Bangladesh and Bhutan. The districts, towns, villages and households were 27, 214, 186, 62935 and 5046471 respectively in 2011 in Assam. Assam is well known as the land of unique social, cultural and economic characteristics.

The latest figure for Assam was 3,12,05,576 as per census 2011. According to the latest estimate population contributed 8.5 percent and urban population 14.68 percent of the state. Assam is the anglicized form of the name of the greater state of the North-Eastern region. The Assamese word *Assam* means "unsubdued or unparalleled". But another interpretation is that the term Assam has come from the word *Ason*, the people who migrated from the Brahmaputra valley in the early thirteenth century. Assam is divided into two natural regions. The two regions are known





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## ECONOMICS OF MUSHROOM CULTIVATION —A Cost-Return Analysis

By. SWASTIKA BORKOTOKY\* AND DR. SURAJIT SAIKIA\*\*

### Introduction

In the recent world, the consumption pattern of the people has been changed and people prefer high value added agricultural commodities. Production of Mushroom is considered one of the high value added and nutrition rich agricultural commodities. In the developed countries, different research studies have found that 7 out of 10 people eat mushroom regularly and in Indian markets, demand for mushroom is growing at over 25% PA (Data as per MAC Plan by Ministry of Food Processing). In Assam, mushroom farming is not a popular farm enterprise as compared to other states of India. However, the agro-climatic condition in North East are conducive for Mushrooms and the availability of raw material is good for several species of mushroom to be grown in a cost effective manner (Rai, 2008). Further, Mushrooms have the potential to impact livelihoods of poor, landless and marginalized families as it takes much lesser space to grow, as it is cultivated side a house vertically making it ideal for women to pursue.

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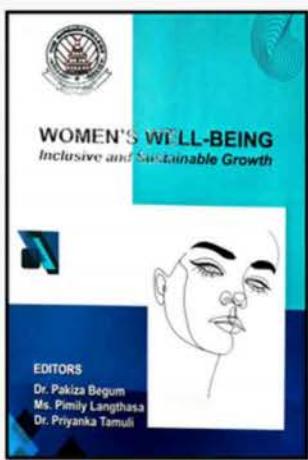
## EXAMINING THE DETERMINANTS OF HEALTH OUTCOME IN INDIA: A STUDY

By. ANKITA DUTTA\*

### Introduction

Good health is an essential sustainable development goal. The significance of ensuring healthy lives and in the fact that good health and well-being at all ages is said to be essential for building a prosperous society. India talk about health and well-being at all ages, one vulnerable section of the population is the children. Almost more than hundred of children die in every nation of the world each year due to health related complications. This makes child health status an important area of discussion in all times. One of the indicators of child health status used in this study is infant mortality. It refers to the death of young children under the age of one year. The World Health Organization (WHO) has also included infant mortality rate as a health status indicator in its Global Reference List of 100 Core Health Indicators (plus health-related SDGs) (2018)<sup>10</sup>.

According to the reports of World Health Organization (WHO), globally, the infant mortality rate has decreased from a reported rate of 65 deaths per 1000 live births in 1990 to 25 deaths per 1000 live births in 2018<sup>11</sup>. If we take the case of



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### Chapter - 13

## Levels And Trends of Adolescent Fertility

Ankita Dutta  
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### ABSTRACT

Childbearing is one of the crucial events in the life cycle of a woman. Whether a woman bears children early or late in their foetal age does make a difference. In this direction one concept that has been widely talked about is that of adolescent fertility. The present chapter aims to examine the levels and trends of adolescent fertility at a global level in general, as well as in India and in Assam in particular based on data from the World Bank Development Indicators and National Family Health Survey (NFHS) reports.

**Keywords:** Childbearing, Adolescence, Adolescent Fertility.

### INTRODUCTION

Childbearing is one of the crucial events in the life cycle of a woman. Given the strong impacts associated with it, women are often encouraged to take necessary measures to ensure a safe and healthy pregnancy and delivery. An important factor related to the timing of childbearing is the timing of childbearing. Whether a woman bears children early or late in their foetal age does make a difference [Sanderson et al. (2014)]. Childbearing during early years of reproductive life is often linked with pregnancy related complications, making both the mother and the child more vulnerable to health risks such as preterm birth, low birth weight, etc.

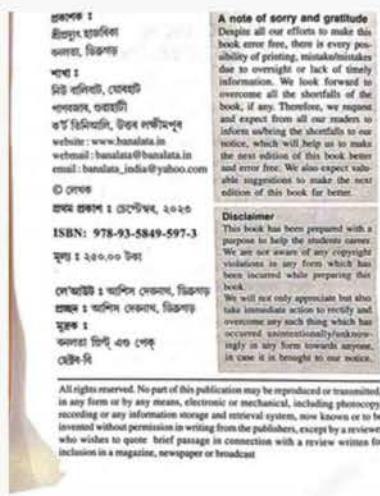
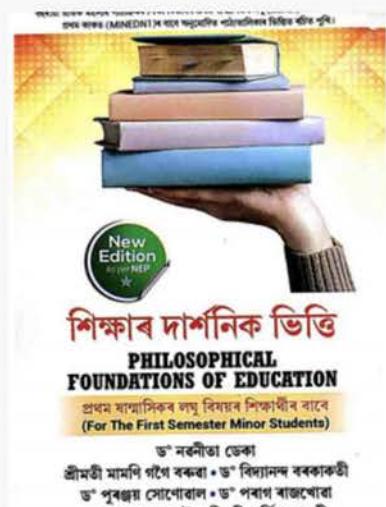
In the direction one concept that has been widely talked about in the recent decades is that of adolescent fertility. Adolescent fertility refers to the childbearing of young women [Dudley et al., 2005].

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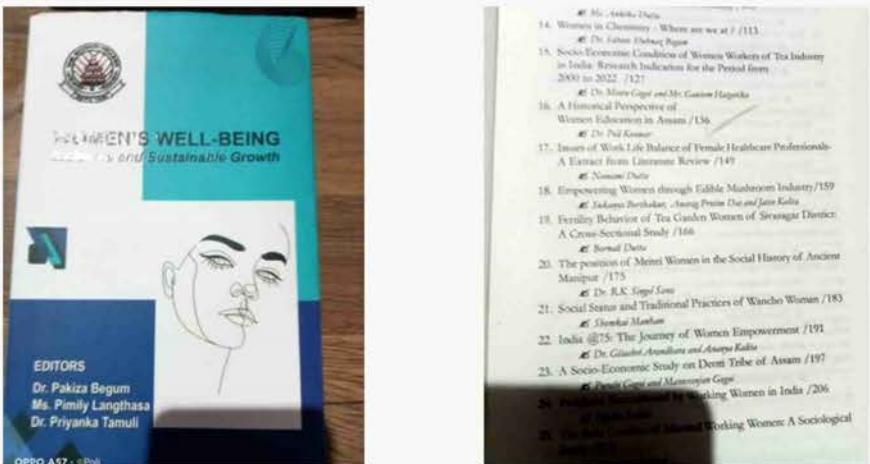
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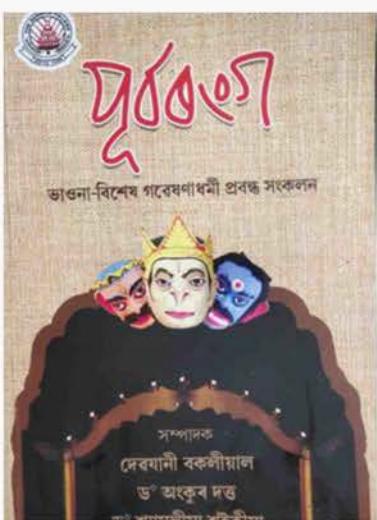
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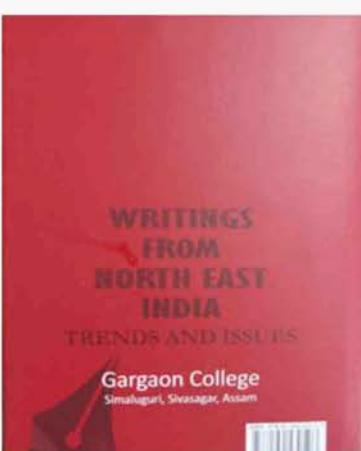
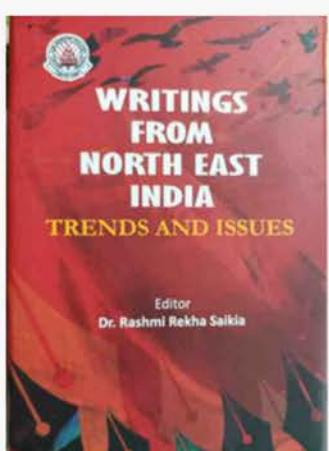
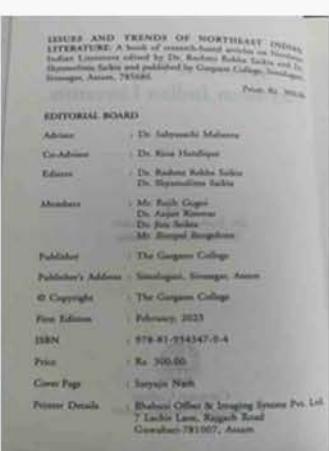
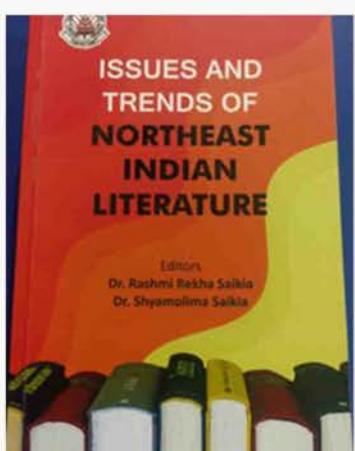


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### DR. RASHMI REKHA SAIKIA



### Feminism in North East India A Critical Exploration

Dr. Indu Swami



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FEMINISM IN NORTH EAST INDIA: A CRITICAL EXPLORATION  
India Swami

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5

Breaking the Silence: A Study of Jahnabi Barua's *Rebirth*

Rashmi Rekha Saikia

#### Abstract

Some writers have specifically contributed on the literary scene of North East by addressing the issues that are pertinent to the region and offer a glimpse into the lives of women and the issues through their narratives. Among the most recent writers, Jahnabi Barua's works invite critical response as a representative of the region. A Bengali based writer, Jahnabi Barua was short in fame but well known after the publication of two of her novels, *Rebirth* and *Unde*. In her novel *Rebirth*, Jahnabi Barua and Assam, Robert by Jahnabi Barua is a touching and poignant story of a lonely mother talking to her unborn child who is yet to birth. *Rebirth* mainly chronicles the journey of a woman Kaben, who moves to Bangalore. The story of maternal love sometimes conflicts in marital life and she goes in another country to give birth to a child. In the second part of the book, we see the process of discrimination, conflicts and intricacies in the relation between the two. Through the character of Kaben, Jahnabi Barua has presented how women in particular are culturally conditioned. Kaben's inability to have a meaningful and fulfilling relationship with her husband and her son, Kaben is in fact with little choices and typically complies with highest pressure. The psychologically wounded Kaben shows all the signs of an alienated being. But Kaben's trajectory from

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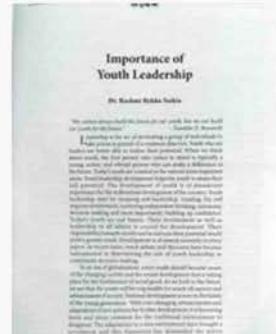
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Project Leader:	Dr. Jean-Pierre Gobat, Institut National de la Recherche Agronomique (INRA), Paris, France
Project Description:	Climate change is one of the major environmental issues of our time. The Mediterranean basin is particularly sensitive to climate change. This project aims at assessing the impact of climate change on the Mediterranean environment.
Project Objectives:	The objectives of this project are to assess the impact of climate change on the Mediterranean environment, to identify adaptation measures, and to promote sustainable development in the Mediterranean region.
Project Activities:	Comprehensive assessment of climate change impacts on the Mediterranean environment, identification of adaptation measures, and promotion of sustainable development.
Project Participants:	Dr. Jean-Pierre Gobat, Institut National de la Recherche Agronomique (INRA), Paris, France; Dr. Michel Bouyoucos, Institut National de la Recherche Agronomique (INRA), Paris, France; Dr. Jean-Pierre Gobat, Institut National de la Recherche Agronomique (INRA), Paris, France; Dr. Michel Bouyoucos, Institut National de la Recherche Agronomique (INRA), Paris, France.
Project Status:	The project is currently in its planning phase.
Project Duration:	2 years.
Project Budget:	€1 million.
Project Funding:	€1 million.
Project Contact:	Dr. Jean-Pierre Gobat, Institut National de la Recherche Agronomique (INRA), Paris, France.
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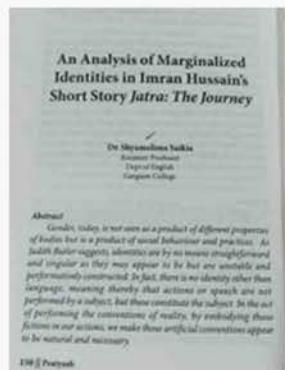
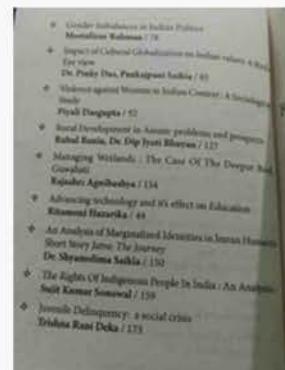
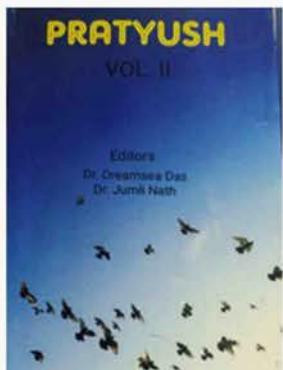
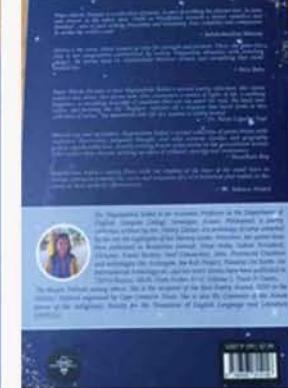
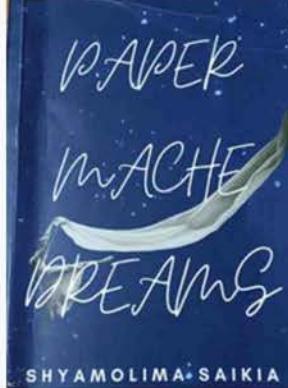
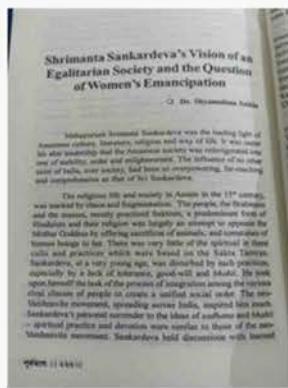
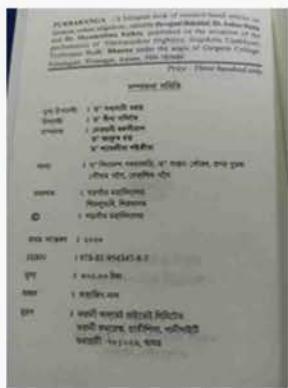
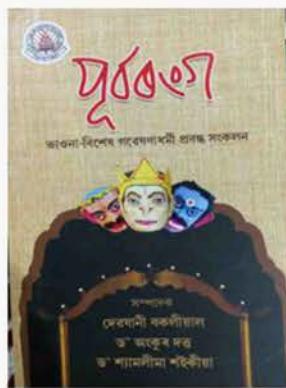
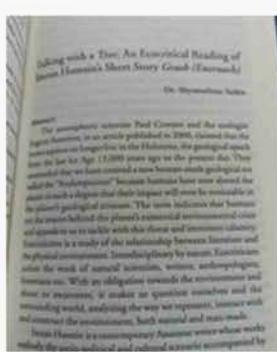
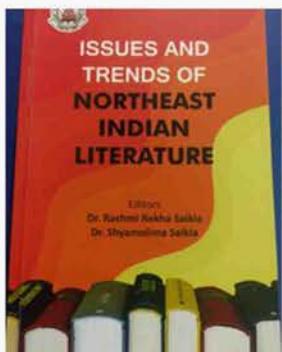
### **Exploring the Muffled Voice in *Fire on the Mountain***

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Douglas is a good example and this one strongly supports his view. The first point is that the contributions of the present study are limited to the identification of the main trends in the development of the post-war economy. The second point is that the author has not tried to explain the causes of these trends. He has not even tried to identify them. He has simply described them. This is a serious omission. The third point is that the author has not tried to predict the future. He has not even tried to identify the factors which will determine the future. He has simply described the past. The fourth point is that the author has not tried to evaluate the past. He has not even tried to identify the factors which have influenced the past. He has simply described the past. The fifth point is that the author has not tried to evaluate the present. He has not even tried to identify the factors which are influencing the present. He has simply described the present. The sixth point is that the author has not tried to evaluate the future. He has not even tried to identify the factors which will influence the future. He has simply described the future.



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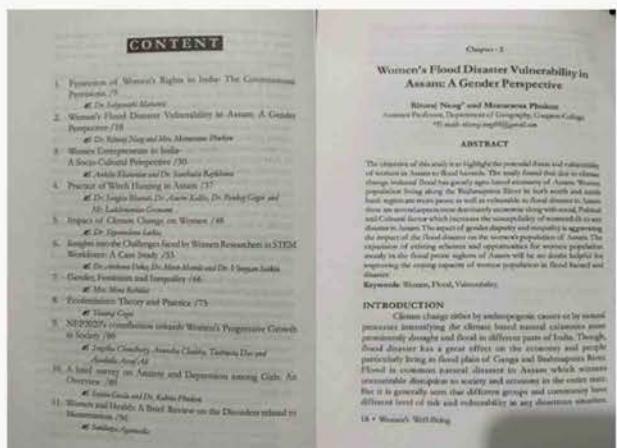
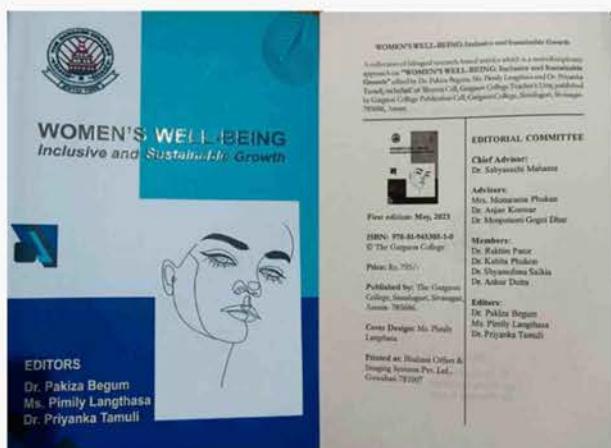


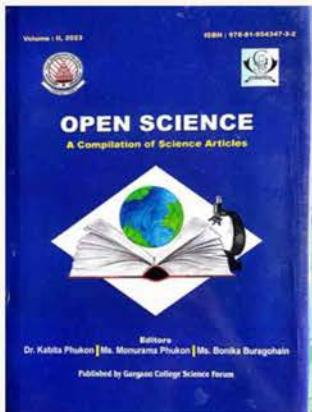


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Rituraj Neog	Bhogdoi	An Assessment of Canopy layer Urban Heat Island effect at Jorhat Urban Environment, India	National	2023	ISSN: 2278-3431	Gargaon College	
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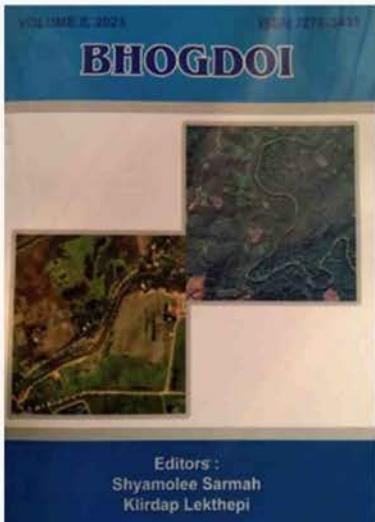
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## Understanding the Pattern of Population Flow to Josbat Town

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## ABSTRACT

Population flow or migration is the common phenomenon that occurs in different parts of the world is varying intensity and degree. Jorhat town is the growing urban centers in the central part of Assam receiving migrants from different parts of the state. The movement of population or migrants is more prominent after 1995 with business and services are the prime cause of migration. Jorhat receives voluminous migrants from the adjacent districts of Sivasagar and Golaghat and nearby states of Bihar and Uttar Pradesh. Apart from the permanent shift or migration of population, Jorhat city also witnessed diurnal flow of population from different urban centers of Assam and Nagaland. Maximum district-flow has been observed from Golaghat, Dibrugarh,



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## An Assessment of Canopy Layer Urban Heat Island Effect (CLUHI) at Jorhat Urban Environment, India

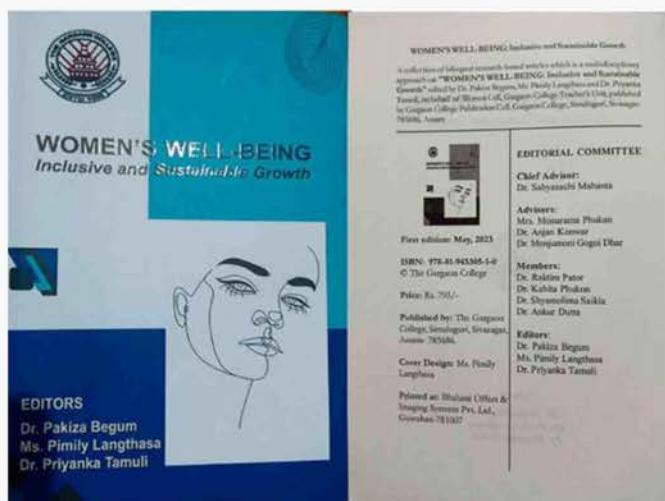
*Kituvaj Neogi\*, Dr. Shukla Acharya\*, Prof. Jiten Hazarika\**

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The study has been conducted using Arctium lappa as an indicator during winter (November–February). Field-based measurement using mobile data logger and recording soil temperature and relative humidity has been carried out in three sowing days using mobile technique method. The study modelled higher air temperature and lower relative humidity over crop areas and relatively opposite trend in the outskirts and urban areas. The differences have been observed at nighttimes. But interestingly even areas with sufficient insolation times displayed lower temperature and higher relative humidity by cooling effect of vegetation. The 5% level of significance at all throughout the study time frame and days. Highs co-efficient of determination ( $R^2$ ) from the correlation co-efficient of relative humidity and air temperature at all time frames and specifically at nighttimes the influence of humidity developed by vegetation in reducing the temperature of the urban environment.

Biographical

**Introduction**  
Rapid urbanization has affected both local as well as regional climate pattern. Various forms of human activity and concrete structure in urban areas develop warming effect (Khosla & Formanek, 1999). People mentally feel relatively higher temperature in urban areas than the adjacent nonurban. This is due to the fact that urban areas have higher heat island (Ahmed, 2017). The urban areas have higher degree day to maximum factor such as days and nights, which absorb more solar heat, due to building wall and canopy effect (Yang, 2004). In addition, lack of green vegetation for evapo-transpiration as well as accumulation of anthropogenic heat from human activities and car pollution (Ahmed, 2017). Additionally, urban



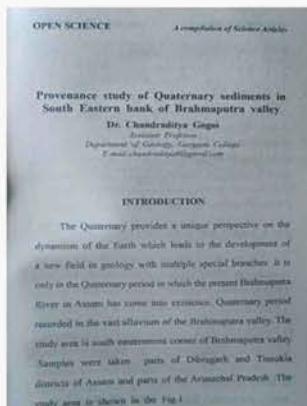
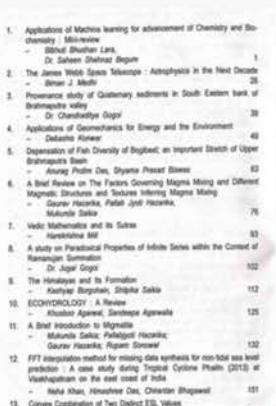
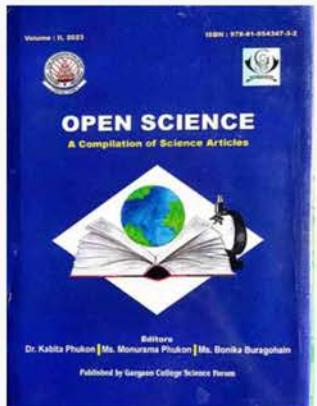
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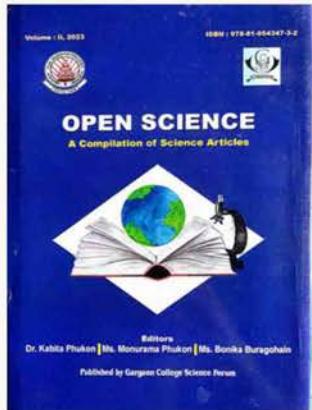


## PUBLICATIONS OF DEPARTMENT OF GEOLOGY

NAME	TITLE (BOOK/CHAPTE R)	TITLE OF THE PAPER	NAT./INT.	YEAR	ISSN/ISBN	AFFILIATI NG INSTITUTE	PUBLISHER
Dr. Chandra ditya Gogoi	Open Science	Provenance study of Quaternary sediments in South Eastern bank of Brahmaputra Valley	National	2023	ISBN: 978-81-954347-3-2	Gargaon College	Gargaon College
Dr. Chirantan Bhagawati	Open Science	FFT interpolation method for missing data synthesis for non-tidal sea level prediction: A case study during Tropical Cyclone Phailin (2013) at Vishakhapatnam on the east coast of India	National	2023	ISBN: 978-81-945305-1-0	Gargaon College	Gargaon College
Ms. Bonika Buragohain	Open Science		National	2023	ISBN: 978-81-945305-1-1	Gargaon College	Gargaon College

### DR. CHANDRADITYA GOGOI





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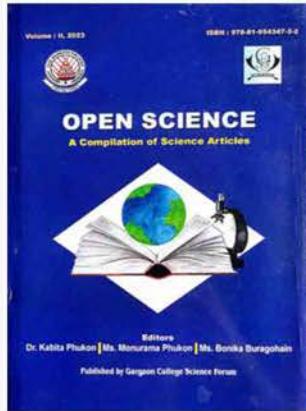
**FFT interpolation method for missing data synthesis for non-tidal sea level prediction: A case study during Tropical Cyclone Phailin(2013) at Visakhapatnam on the east coast of India**

Neha Khan<sup>1</sup>, Hemalatha Das<sup>2</sup>, Christian Bishwajit<sup>3</sup>  
<sup>1,2</sup>Dept. of Applied Geology, Dibrugarh University, Assam, India  
<sup>3</sup>Dept. of Geology, Gargao College, Silongpi, Assam, India  
email address: [christianbishwajit@gmail.com](mailto:christianbishwajit@gmail.com)

## I. INTRODUCTION

A suitable prediction scheme of non-tidal sea level variations due to storm surges is a prerequisite for proper planning and mitigation during the extreme events. The variation of sea level due to non-tidal forcing is often difficult to predict because of missing records in sea level values at the tide gauge instruments often get damaged during the passage of Tropical Cyclones. Therefore, we made an endeavour at developing an empirical model for predicting the missing records of sea level data during extreme event viz. Tropical Cyclone Phailin of 2013 at Visakhapatnam (eastern Ghats).

## MS. BONIKA BURAGOHAIN



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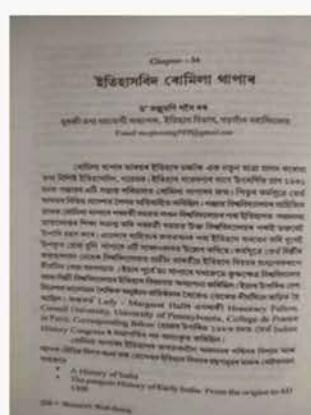
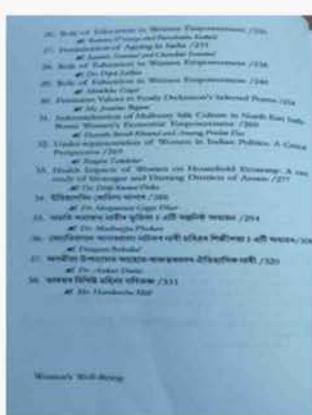
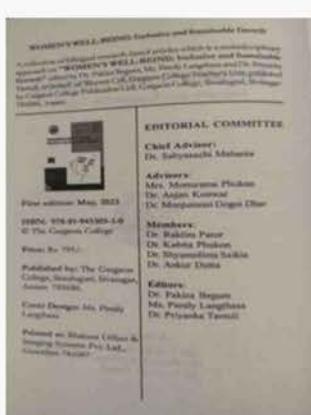
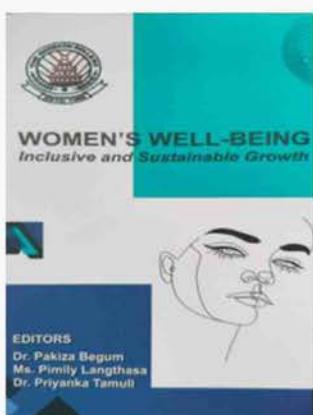
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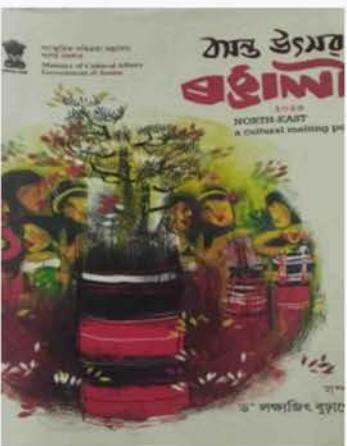
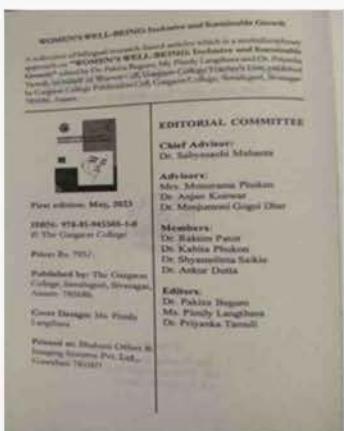
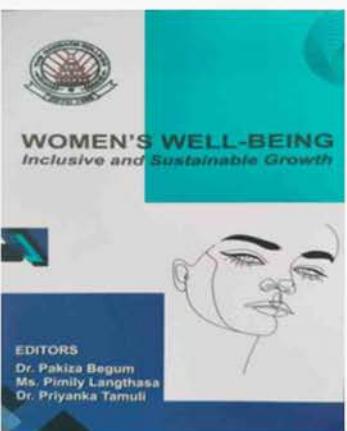
## PUBLICATIONS OF DEPARTMENT OF HISTORY

NAME	TITLE (BOOK/CHAPTE R)	TITLE OF THE PAPER	NAT./INT. YEAR	ISSN/ISBN	AFFILIATI NG INSTITUTE	PUBLISHER
Dr. Manjumoni Dhar Gogoi	Woman's Well Being Inclusive and Sustainable Growth	ItihakBid Romila Thapar	2022	ISBN: 978-81-945305-1-0	Gargaon College	The Gargaon College
Shomkai Manham	Woman's Well Being Inclusive and Sustainable Growth	Social Status and Traditional Practices of Wancho Women.	2022	ISBN: 978-81-945305-1-0	Gargaon College	The Gargaon College
Shomkai Manham	Bakhanta Utsav Rongali	Trade and Tourism between upper Assam and Naga's of Eastern Arunachal Pradesh: A study on Historical Perspective.	2023	ISBN: 978-93-92610-20-2	Gargaon College	Dept. of Cultural Affairs, Govt. of Assam.

### DR. MANJUMONI DHAR GOGOI



## SHOMKAI MANHAM



Chapter - 21

### Social Status and Traditional Practices of Wancho Woman

**Shomkai Manham**  
Assistant Professor, Department of History, Gargao College, Sionvaloag, 783661, Assam.  
E-mail: shomkaimanham@gmail.com

#### ABSTRACT

Transformed the progress and development of a society, one of the crucial indices is how women in that society are being treated. What are their rights, what limitations and opportunities do they have, and what opportunities do they have? Though half the world's population, women are the backbone of society. They carry the same weight as their male counterparts in almost all fields of activities, whether economic or political, social or political participation. They are still struggling in most of the countries in the world to get their rights. This paper attempts to understand and highlight the changes in the social status of women along with their livelihood by analysing their status, rights in property and inheritance, and their education and education among them. Women's social standing and their value can be determined from the perspective of the treatment given to them by society.

Key words: women, patriarchal, customary laws, marriage, status, rights.

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### Trade and Tourism between upper Assam and Naga's of Eastern Arunachal Pradesh: A study on historical perspective

**Mr. Shomkai Manham\***  
Assistant Professor, Department of History,  
Gargao College, Sionvaloag, Assam - 783661  
Email: shomkaimanham@gmail.com

Introduction: Women occupy a special place in every community. Despite playing a vital part as human beings, they are not given equal treatment whenever. Different cultures and traditions give different importance in all states, whether they developed, developing, or underdeveloped. Hence, it is important to have some knowledge of the population in order to have a better grasp of the status of women in Naga's, particularly their property rights, social status and livelihood. Within

the context of the present paper, we will discuss the historical perspective of the trade and tourism between upper Assam and Naga's of Eastern Arunachal Pradesh.

Methodology: The methodology adopted in this study is historical research method. The main sources used for this study are secondary sources and primary sources. The secondary sources include books, articles, journals, and other published materials. The primary sources include interviews, oral histories, and archival documents.

Conclusion: The study concludes that there was significant trade and tourism between upper Assam and Naga's of Eastern Arunachal Pradesh, which played a major role in the socio-economic development of the region.

Keywords: Trade, Tourism, Upper Assam, Naga's, Eastern Arunachal Pradesh.

\*Corresponding Author: Mr. Shomkai Manham, Assistant Professor, Department of History, Gargao College, Sionvaloag, Assam - 783661, Email: shomkaimanham@gmail.com

Introduction: The northeastern state of Assam, an intermixture of various races of old, Indo-Burman, Indo-Iranian and Aryan is a meeting ground of cultures. The Assamese culture is an intricate and diverse fabric that has been woven through centuries. It is the second largest state in eastern India and is the largest state in terms of population in the region. The state is bordered by West Bengal to the west, Tripura, Mizoram, and Bangladesh to the south, Nagaland, Arunachal Pradesh to the north, and the state of Assam to the east. There are three districts of Upper Assam: Dibrugarh with the three districts of eastern Arunachal in Dibrugarh District and Chirang district; The tribes residing in this area are: Bodo, Bodo, Marwari, and Nagas. The state was established in 1972 as a result of a number of indigenous tribes belonging to different culture and linguistic groups. Many of them give rise to the international borders with China, Myanmar and Bhutan known as North East Frontier Agency (NEFA). On 20th January 2014, Assam was renamed as Arunachal Pradesh. In the same year, it became a Union Territory and became a full-fledged state on 26th January 2020.

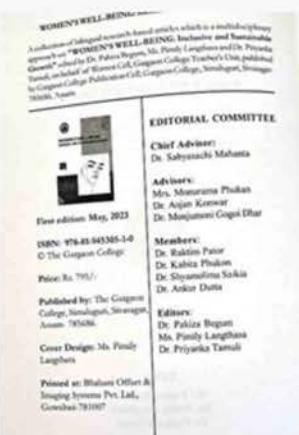
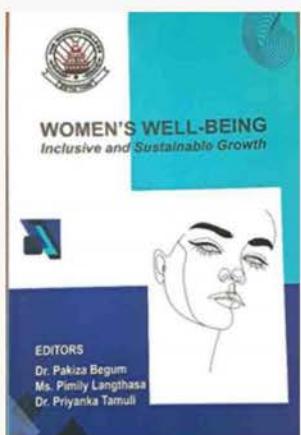
Dibrugarh, Lengpui and Changlang Districts constitute a major part of Arunachal Pradesh. Since the early age, those regions have

been a part of the Northeastern region of India.



## PUBLICATIONS OF DEPARTMENT OF MATHEMATICS

NAME	TITLE (BOOK/CHAPTE R)	TITLE OF THE PAPER	NAT./INT.	YEAR	ISSN/ISBN	AFFILIATI NG INSTITUTE	PUBLISHER
Dr. Kabita phukon	WOMEN'S WELL BEING: Inclusive and Sustainable Growth	A brief survey on Anxiety and Depression among Girls: An overview	Nation al	2023, 1st Editi on, 89	ISBN: 978-81- 945305- 1-0	Gargaon College	Gargaon College
Harekris hna Mili	WOMEN'S WELL BEING: Inclusive and Sustainable Growth	ভারতীয় মহিলা গণিতজ্ঞ	Nation al	2023, 1st Editi on,	ISBN: 978-81- 945305- 1-0	Gargaon College	Gargaon College
Harekris hna Mili	Open Science	Vedic Mathematics and its Sutras	Nation al	2023	ISBN: 978-81- 954347- 3-2	Gargaon College	Gargaon College Science Forum
Sujata Goala	WOMEN'S WELL BEING: Inclusive and Sustainable Growth	A brief survey on Anxiety and Depression among Girls: An overview	Nation al	2023, 1st Editi on, 89	ISBN: 978-81- 945305- 1-0	Gargaon College	Gargaon College
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## A brief survey on Anxiety and Depression among Girls: An Overview

Sujata Govil\* and Dr. Kishna Phukan  
Assistant Professor, Department of Mathematics, Gargao College,  
Email: sujata\_govil@rediffmail.com, kishnak@gargao.edu.in

### ABSTRACT

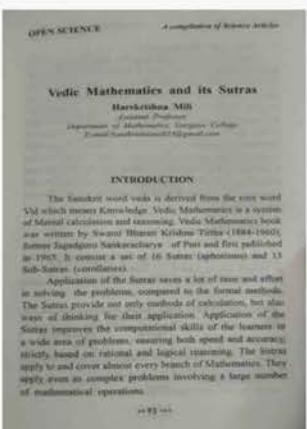
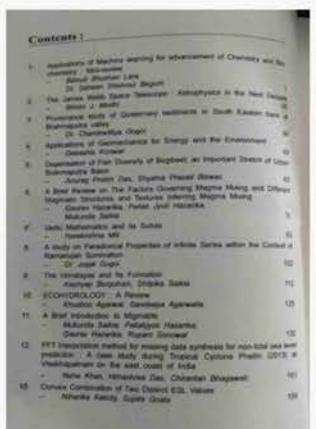
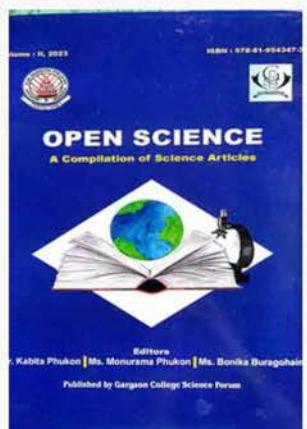
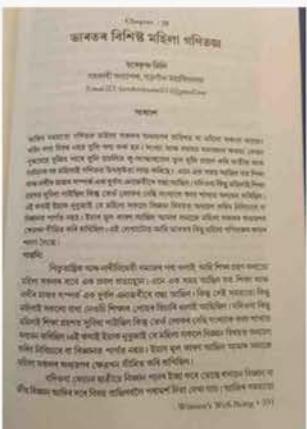
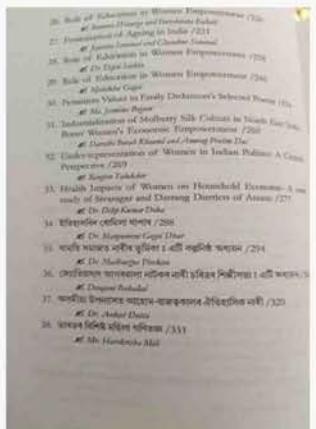
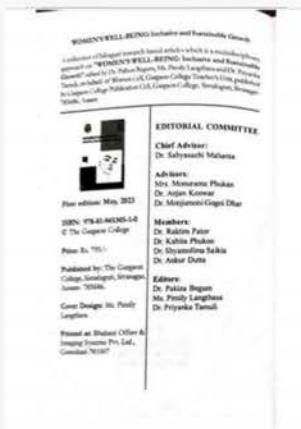
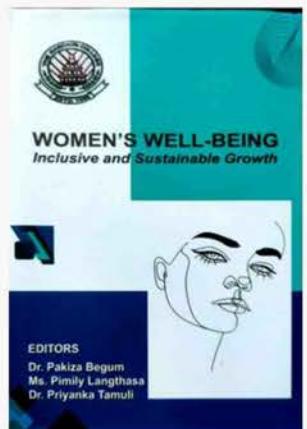
Anxiety and depression affect an individual's perspective related to others while interacting with the world around them. The unexpressed spectrum of the underlying cause and effect of anxiety or depression among young people often leads to mental health issues and loss. The present study aims to explore the various forms of the anxiety and depression in girls. The strength of association between the form of anxiety and depression in girls is analyzed.

**Keywords:** Anxiety, Depression, women, mental health.

### INTRODUCTION

Due to the busy lifestyle and busy schedule of the digital era, the number of mental health problems seems to be increasing among people all over the world. Nowadays the mental health issues are becoming more common among the young, adults, etc., due to, etc. The feeling of isolation, depression, and anxiety, double i.e., an irrational fear of certain things or events, worrying about an anticipated event, and fear in responding to any situation is known as anxiety disorder, etc., affect individual thoughts, feelings, and behaviors and hence, they are termed as common mental health

## HAREKRISHNA MILI



Chapter - 16

## A brief survey on Anxiety and Depression among Girls: An Overview

Sujata Govil\* and Dr. Kishna Phukan  
Assistant Professor, Department of Mathematics, Gargao College,  
Email: sujata\_govil@rediffmail.com, kishnak@gargao.edu.in

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Chapter - 16

## Vedic Mathematics and its Sutras

Harekrishna Mili

Department of Mathematics, Gargao College

Email: harekrishnamili@gmail.com

Chapter - 16

## OPEN SCIENCE: A Compilation of Science Articles

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**INTRODUCTION**

The Sanskrit word vedas is derived from the root word 'vid' which means Knowledge. Vedic Mathematics is a system of Mental calculation and reasoning. Vedic Mathematics book was written by Swami Bharati Krishna Tirtha (1884-1960).

He published his first book 'Vedic Mathematics' in 1965. It consists a set of 16 Sutras (aphorisms) and 13 Sub-Sutras (corollaries).

Application of the Sutras seem a lot of time and effort in solving the problems, compared to the formal methods. The Sutras provide not only methods of calculation, but also ways of thinking that are based on logic. Applications of the Sutras improves the computational skills of the learners in a wide area of problems, ensuring both speed and accuracy.

It is a well-known method for solving data synthesis for non-tidy and non-tidy numbers. A non-tidy number is a number which is not a multiple of 10, 100, 1000, etc.

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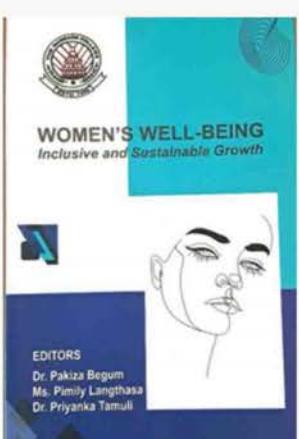




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NAME	TITLE (BOOK/CHAPTE R)	TITLE OF THE PAPER	NAT./INT.	YEAR	ISSN/ISBN	AFFILIATI NG INSTITUTE	PUBLISHER
Jayanta Sonowal	Women's Well-Being	Feminisation of Women in India	National	2023	ISBN: 978-81-945305-1-0	Gargaon College	Gargaon College Publishing Cell
Dr. Gitashri Arandhara	Women's Well-Being	India @75: The journey of Woman Empowerment	National	2023	ISBN: 978-81-945305-1-0	Gargaon College	Gargaon College Publishing Cell
Dr. Bidyut Bikash Hazarika	Panchajanya	Casuality Violation in a Singular Spacetime	National	2023	ISSN: 2230-911X	Gargaon College	Sivasagar Zonal Committee, Assam College Teachers' Association (ACTA)

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Jayanta Sonowal<sup>1\*</sup> and Chandini Sonowal<sup>2</sup>  
<sup>1</sup>Assistant Professor, Department of Physics, Gargaon College  
<sup>2</sup>Assistant Professor, Department of Economics, Jorhat Harsikshak Sarma College, Jorhat  
Email: jsonowal3@gmail.com  
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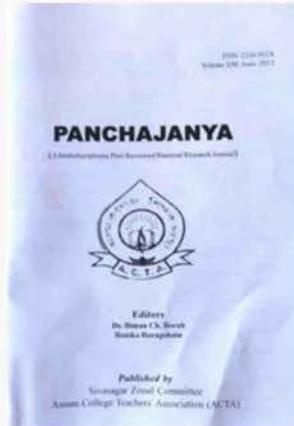
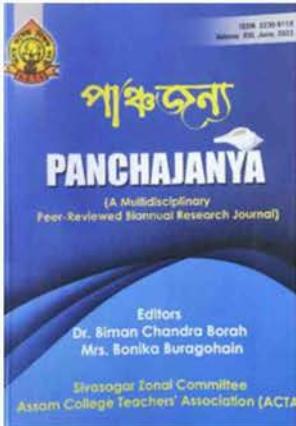
#### ABSTRACT

The population in the world is ageing rapidly and is projected to be doubled by 2050 where 80% of them will be housed by the less developed nations. Due to the longer life expectancy, women comprising the majority of elderly population has a dominant role in the elderly men which leads the world towards the feminisation of ageing. India is not an exception, the census conducted has clearly shown the higher growth rate of elderly women compared to elderly men per decade. People in the elderly stage face many challenges physically, financially, socially and emotionally. Government and NGOs have been working hard to uplift the health condition of the poor needy elderly in India and to promote social well-being for them. Despite their commendable efforts a substantial number of elderly are still facing difficulty in many aspects, which urgently needs the attention of policymakers in this direction.

**Keywords:** Ageing, Elderly, Feminisation.  
**INTRODUCTION**  
The growing ageing population is a distinguishing characteristic of the current century. According to the United Nations (UN) report on the world ageing population, 17% of



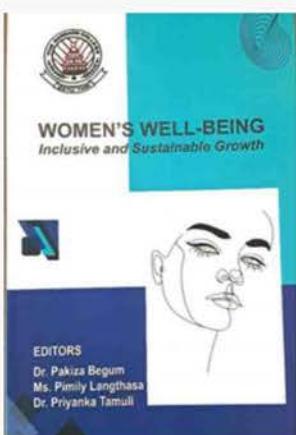
## DR. BIDYUT BIKASH HAZARIKA



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In this work we present an axially symmetric solution of the Einstein field equations. The solution is singular and the matter content represents a pure anisotropic fluid. The spacetime allows for the formation of closed timelike curves (CTCs) due to the presence of singularities. The solution is also shown to have two event horizons at the equator of the solution. The two event horizons are matched with asymptotics. The inner black hole solution of Schwarzschild (1916) and the outer Schwarzschild-like solution of de-Sitter (1917) are matched with the outer Schwarzschild-like solution of CTC's exterior, and vice versa. The exterior Schwarzschild-like solution of CTC's solution should form in some localized regions. These regions are bounded by two event horizons. The Schwarzschild-like solution is bounded by two event horizons. A coordinate singularity exists in this category in the CTC solution.	23
In this work, we present a causality violating solution of the Einstein field equations (EFE). It is a non-singular solution, where the matter energy-	23

## DR. GITASHRI ARANDHARA



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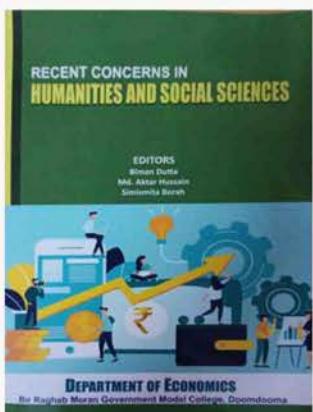
India @75: The Journey of Women Empowerment	
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<b>ABSTRACT</b>	
Women empowerment's integral development of society: A literature review and analysis of a model on a state level dimension by Dr. Gitanjali Arandhara and Ananya Kalita Women empowerment is the process of making women active participants in all spheres of life. The concept of empowerment has gained currency, particularly in the context of women's rights. In the societal level, empowerment refers to the process of self-reliance and self-sufficiency. The term signifies an emanation in the mid-1990s when women across the world mobilized and demanded voting and other political rights.	22
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NAME	TITLE (BOOK/CHAPTER)	TITLE OF THE PAPER	NAT./INT.	YEAR	ISSN/ISBN	AFFILIATING INSTITUTE	PUBLISHER
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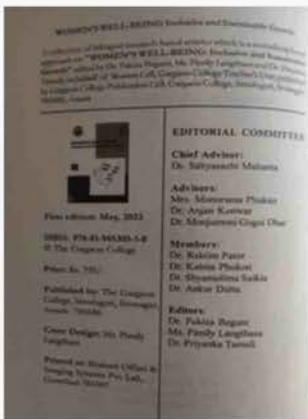
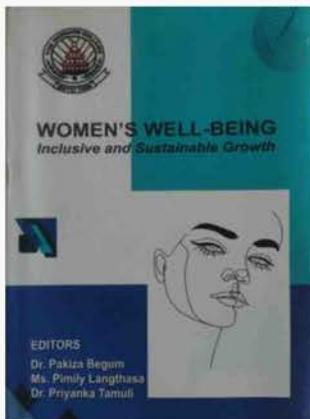




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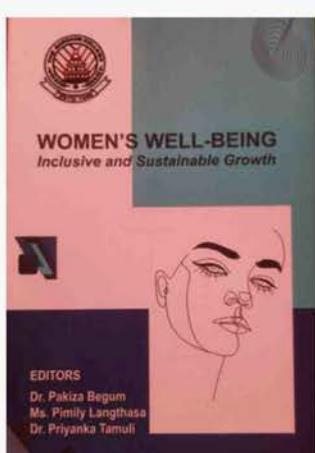




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### MINA ROBIDAS



**WOMEN'S WELL-BEING: Inclusive and Sustainable Growth**  
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Chapter - 7

#### Gender, Feminism and Inequality

Mina Robidas  
 Assistant Professor, Department of Sociology, Gargaon College, Sonapur  
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#### ABSTRACT

In popular usage, the terms are used interchangeably. Nonetheless, each of them has a distinct meaning. Sex refers to biological characteristics, while gender is a socio-cultural construct. Feminism on the other hand, is a political ideology. This article (paper) seeks to briefly explain the meaning and nature of these terms pertaining to inequality.

**Keywords:** Sex, gender, feminism, inequality etc.

#### INTRODUCTION

Gender and sex are frequently perplexing terms in everyday life. In popular usage, the terms are used interchangeably. Nonetheless, each of them has a distinct meaning. Sex refers to biological characteristics, while gender is a socio-cultural construct. Feminism on the other hand, is a political ideology. This article (paper) seeks to briefly explain the meaning and nature of these terms pertaining to inequality.

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## MAHANANDA TAMULI

### Social and Economic Issues (A Book of Research Based Articles)

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#### Abstract

India is a developing nation, it always wanted about economic development and progress. The COVID-19 pandemic has, however, caused India's GDP growth to decline to single digit. PM Modi announced the "Atmanirbharta Abhiyan" on May 12, 2020, to alleviate the current economic crisis. The government announced a programme to boost the economy that would total 20 lakh crore, or 10% of the country's gross domestic product. Although through the programme sought to make India self-sufficient, it has only sometimes been successful. The purpose of this study is to identify the opportunities and significant problems that pose obstacles to accomplishing this goal.

**Key words:** Atmanirbharta Bharta Abhiyan, opportunities, India, self-reliance and challenges

#### Introduction

The COVID-19 has had a significant impact on the world. An economic burden or crisis has been induced by the change in the economy. However, India, a developing economy, aims to save the best from the world and to become a superpower. Moreover, the government has announced the Atmanirbharta Bharta Abhiyan programme. The programme tries to reduce reliance on imports. To put it another way, India will attempt to produce its own goods and services after COVID-19. India also has started manufacturing goods and services for export in addition to those for domestic consumption. The government has stressed people-centric, people-driven, and planet-friendly development (Mishra, 2020). For this

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## DR. PRIYANKA TAMULI

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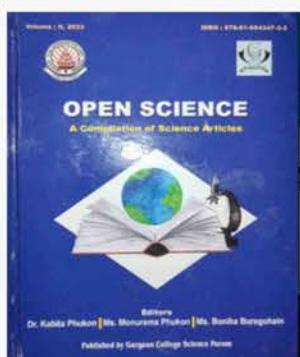
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Dr, Anurag Protim Das	Women's Well-Being	Empowering Women through Edible Mushroom Culture	National	2023	ISBN: 978-81- 945305- 1-0	Gargaon College	Gargaon College Publishing Cell
Dr, Anurag Protim Das	Women's Well-Being	Industrializatio n of Mulberry Silk Culture in North East India: Boost Women's Economic Empowerment.	National	2023	ISBN: 978-81- 945305- 1-1	Gargaon College	Gargaon College Publishing Cell
Dr, Anurag Protim Das	Biological Spectrum of Northeast India.	Traditional Healing Practices of North East India- From the Perspective of Ethnozoology	National	2023	ISBN: 978-93- 92038- 07-5	Gargaon College	EBH Publish

## DR. RINA HANDIQUE



OPEN SCIENCE A compilation of Science Articles

### Water Pollution and its impact on Freshwater Fish species and their Aquatic Environments

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<sup>\*Assistant Professor, Associate Professor</sup>  
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#### ABSTRACT

Pollution is a chief natural resource used for various types of activities in our daily life i.e., for drinking as well as different developmental purposes. An increase in pollution level leads to instability in our natural environment and hence both the physical systems and living organisms depending on the ecosystem are affected. Various types of pollutants in polluted water bodies in the form of invertebrates, pesticides, heavy metals, salts, waste, and crude oil are frequently released into the aquatic ecosystem. When a large amount of these pollutants is released into any water body, causes an acute effect by rapid high scale mortalities of aquatic organisms. Major levels of pollutant discharge result in an accumulation



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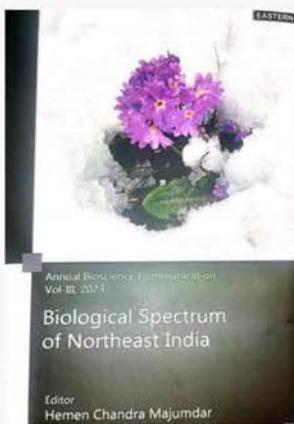
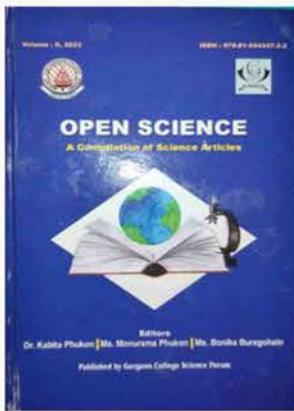
Dr. Priyanka Begum is working as an Assistant Professor in the Department of English, Gargao College, Silvassa (Assam). She did her graduation in English from Chhatrapati Shahu Ji Maharaj University, Dharwad. She completed her M.A. in English from Dibrugarh University, Assam. She did her Ph.D. in English from Dibrugarh University, Assam. She has more than 20 publications in national and international journals. She is currently working as CFA (Consultant Faculty) in a soft skill project. Currently, she is working in the field of water-quality assessment and analysis.

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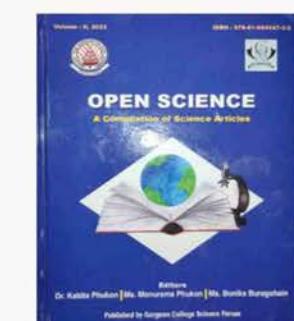
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## **DR. RASHMI DUTTA**



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### Transparent Wood : Potential Building Material of The Future

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### ABSTRACT

Transparent wood is considered as a promising structural and light management material for energy-efficient engineering applications. This humble method of substituting the organic polymer lignin with a distinct blend of epoxides eliminates the coloring from wood and augments its strength. Though transparent wood may be looked upon simply as an innovative material, its practical benefits are massive. It is a type of composite material that has the potential to revolutionise the fields of construction and the manufacturing of various

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### Groundwater Contamination of Arsenic and its Toxicity

Pakiza Begum\*, Sandeep Agarwal, Ranbir Singh

Sandip Agarwal, Ranbir Singh

Abstract

Arsenic (As) is a unique element with distinct chemical characteristics and has been considered as one of the most dangerous pollutants. Various reports have reported increased level of ground water contamination with arsenic worldwide. In India also most of the states have been reported to have As contaminated groundwater. As most of the As contaminated areas are located in rural areas, it is difficult to monitor due to its very high. The toxicity of arsenic varies across the different forms involving carcinogenic, genotoxic, and teratogenic activity of arsenic. Arsenic has been found to be associated in incidence of skin and lung cancer. There are also reports of its significant association to heart, prostate, and bladder cancer. The highest concentration of arsenic is found in the form of inorganic arsenic species (IAs) which play an important role in arsenic self-regulation. The dissolved arsenic (DAs) can lead to chronic exposure which are accumulated in the body for long time. The arsenic self-regulation mechanism is controlled by 2-deoxy-D-glucose-2-O-arsenite (2DA), which is accumulated in a cell by a Na<sup>+</sup> pumping antiporter (ATPase). Therefore, it can be considered as a Na<sup>+</sup> pumping antiporter for arsenic homeostasis. The arsenic self-regulation mechanism is mainly controlled by the Na<sup>+</sup> pump. Although numerous reports have linked As exposure to the development of cancer, the mechanism of carcinogenicity is still not understood. The present study aims to understand the present knowledge on groundwater contamination of As and their effects.

Keywords: Arsenic, Groundwater, Carcinogen, India

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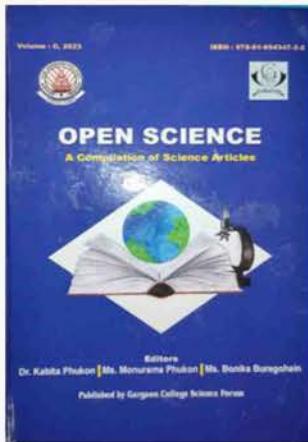
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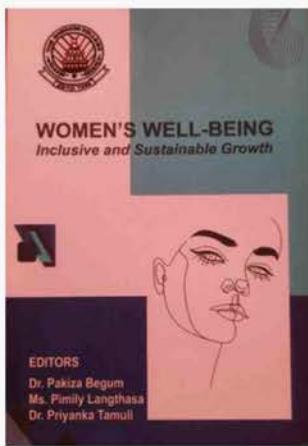
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OPEN SCIENCE	
A compilation of Science Articles	
<b>Deposition of Fish Diversity of Brahmaputra: an Important Stream of Upper Brahmaputra Basin</b>	
Anurag Prasad Das <sup>1*</sup> Shyama Prasad Das <sup>2</sup> <sup>1</sup> Department of Environmental Sciences, Gargaoon College, Dibrugarh University, Assam, India. <sup>2</sup> Corresponding author: anuragprasad@ymail.com	
<b>ABSTRACT</b>	
The concept of sustainable is relatively new concept which amalgamates conservation along with development in ecologically rich area. Owing to the presence of mighty Brahmaputra the northeastern part of India is blessed with rich aquatic resources in the form of fast flowing rivers, meadow wetlands, slow running streams and temporary upland wet areas. Due to rapid urbanisation along with thermal counterparts aquatic habitats are facing tremendous anthropogenic stress. Recent assessment advocates rapid decline of aquatic biodiversity. Islands along with stretches of river are known to harbor rich diversity of native, endemic and rare fishes. The present study deals with assessment of fish diversity of Brahmaputra, an important	
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