



গড়গাঁও মহাবিদ্যালয়
GARGAON COLLEGE



Linkages/Collaborations

Gargaon College

2021-22



List of Collaborations, 2021-22

Sl.No	Parent Institution	Collaborating Institutions	Nature of Work	Year of Activity
1	Gargaon College	DK.D.College, B.P.Chaliha College, DHSK College, and Dibrugrah University, Assam	Research Paper	2021
2	Gargaon College	Sipajhar College & Tezpur University, Assam	Research Paper	2021
3	Gargaon College	Dibrugarh University	Research Paper	2022
4	Gargaon College	Moran College, Assam and KVK, Arunachal Paradesh	Book Chapter	2022
5	Gargaon College	Rajiv Gandhi University, Arunachal Pradesh	Book Chapter	2022
6	Gargaon College	IIT Guwahati	Research Paper	2022
7	Gargaon College	Dibrugarh University	Book Chapter	2022
8	Gargaon College	D R College, Golaghat, Assam	Book Chapter	2022
9	Gargaon College	Moran College	Book Chapter	2022
10	Gargaon College	Dibrugarh University	Book Chapter	2021
11	Gargaon College	Dibrugarh University	Book Chapter	2022
12	Gargaon College	Sibsagar Girls College, Assam	Faculty Exchnage Programme	2022



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Sl.No	Parent Institution	Collaborating Institutions	Nature of Work	Year of Activity
13	Gargaon College	Dibrugarh University	Faculty Exchnage Programme	2021
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15	Gargaon College	Dibrugarh University	Book Chapter	2022
16	Gargaon College	THB College, Sonitpur and Tengakhat College, Dibrugarh, Assam	Book	2022
17	Gargaon College	DDR College, Dibrugarh and Tengakhat College, Dibrugarh, Assam	Book	2022
18	Gargaon College	Tinsukia Women's College, Assam	Book Chapter	2021
19	Gargaon College	Raha College, Assam	Book Chapter	2022

1. Collaboration between Gargaon College & DKD College, Jorhat, B.P Chaliha College, DHSK College, and Dibrugarh University, Assam



Outline of the Activity

Collaborative Research
Rituraj Neog
Department of Geography
, Gargaon College
With
Priti Gogoi
D.K.D College, Dergaon
Biman Lahkar
B.P.Chaliha College,
Juri Baruah
D.H.S.K College &
Arundhati Phukan Dibrugarh University, Assam
Title of Work: Understanding the influence of traffic volume on RST (road surface temperature) in Dibrugarh city of India

Photograph of the Activity

[Home](#) > [Modeling Earth Systems and Environment](#) > [Article](#)

Understanding the influence of traffic volume on RST (road surface temperature) in Dibrugarh city of India

Original Article | Published: 05 October 2021

Volume 8, pages 3247–3261, (2022) [Cite this article](#)

Rituraj Neog , Priti Gogoi, Biman Lahkar, Juri Baruah & Arundhati Phukan


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Abstract

The basic objective of the study is to analyze the potential role of traffic and transportation volume on RST (road surface temperature) in the streets of Dibrugarh city. Additionally, the study evaluates the role of meteorological parameters on RST of the city. The experiment is accomplished by field measurement using HTC Non-contact IR thermometer over 11 selected streets of Dibrugarh city of Assam for a period of 4 months (August to November 2019). Diurnally, maximum RST is recorded in the mid-afternoon period (1.30–2.00 pm) in the month August and September. But interestingly, peak RST has been noticed in the late morning phase (11.30–12.00 pm) in the subsequent months of October and November. Seasonally, Monsoon acquires maximum positive growth of RST till mid-afternoon and rapid negative growth in the later periods. But post-monsoon reveals negative growth of RST since morning period. The study also found a varying



Understanding the influence of traffic volume on RST (road surface temperature) in Dibrugarh city of India


Rituraj Neog¹  · Priti Gogoi² · Biman Lahkar³ · Juri Baruah⁴ · Arundhati Phukan⁵

Received: 26 May 2021 / Accepted: 23 September 2021
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Abstract

The basic objective of the study is to analyze the potential role of traffic and transportation volume on RST (road surface temperature) in the streets of Dibrugarh city. Additionally, the study evaluates the role of meteorological parameters on RST of the city. The experiment is accomplished by field measurement using HTC Non-contact IR thermometer over 11 selected streets of Dibrugarh city of Assam for a period of 4 months (August to November 2019). Diurnally, maximum RST is recorded in the mid-afternoon period (1.30–2.00 pm) in the month August and September. But interestingly, peak RST has been noticed in the late morning phase (11.30–12.00 pm) in the subsequent months of October and November. Seasonally, Monsoon acquires maximum positive growth of RST till mid-afternoon and rapid negative growth in the later periods. But post-monsoon reveals negative growth of RST since morning period. The study also found a varying degree of coefficient of correlation between traffic volume and mean RST. The degree of correlation is found as moderately positive in the morning and afternoon episodes during August. While September encountered moderately positive correlation only during afternoon and weaker towards the later part. Evidently, October maintains moderately strong correlation in the morning and evening sections, whereas stronger positive towards the later periods. And finally, November surprisingly displayed weak positive correlation in the morning periods to negative correlation in the successive episodes. Meteorologically, air temperature and relative humidity evidenced strong correlation with RST. Air temperature and RST accounted for a strong positive correlation with r value of 0.80 and 0.77 in monsoon and post-monsoon season, respectively. While relative humidity dominates strong negative correlation with RST with r value of -0.80 and -0.55 . Therefore, maximum traffic volume with higher air temperature and lower relative humidity is chiefly accountable for development of RST.

Keywords RST · Traffic volume · Air temperature · Relative humidity · Correlation


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Introduction

The study of road surface temperature (RST) in urban areas has become an integral part to deal with the effects and magnitude of urban heat island, especially for surface heat intensity. Furthermore, RST is useful procedure to predict and detect of the spatial pattern of nocturnal RST over an area (Thornes 1991) and developing thermal mapping of the urban areas. Such thermal mapping using RST data were initially used for detection of cold section of the road surface for deicing policies (Chapman and Thornes 2005). Nowadays, thermal mapping is also used as valuable tool for road weather forecasting and in maintenance of winter road (Todeschini et al. 2016). In addition to these, the thermal mapping is also used to spot the distinctiveness of RST distribution on individual routes. The results of such mapping also help to understand the segment differences

Published online: 05 October 2021

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2. Collaboration between Gargaon College & Sipajhar College & Tezpur University

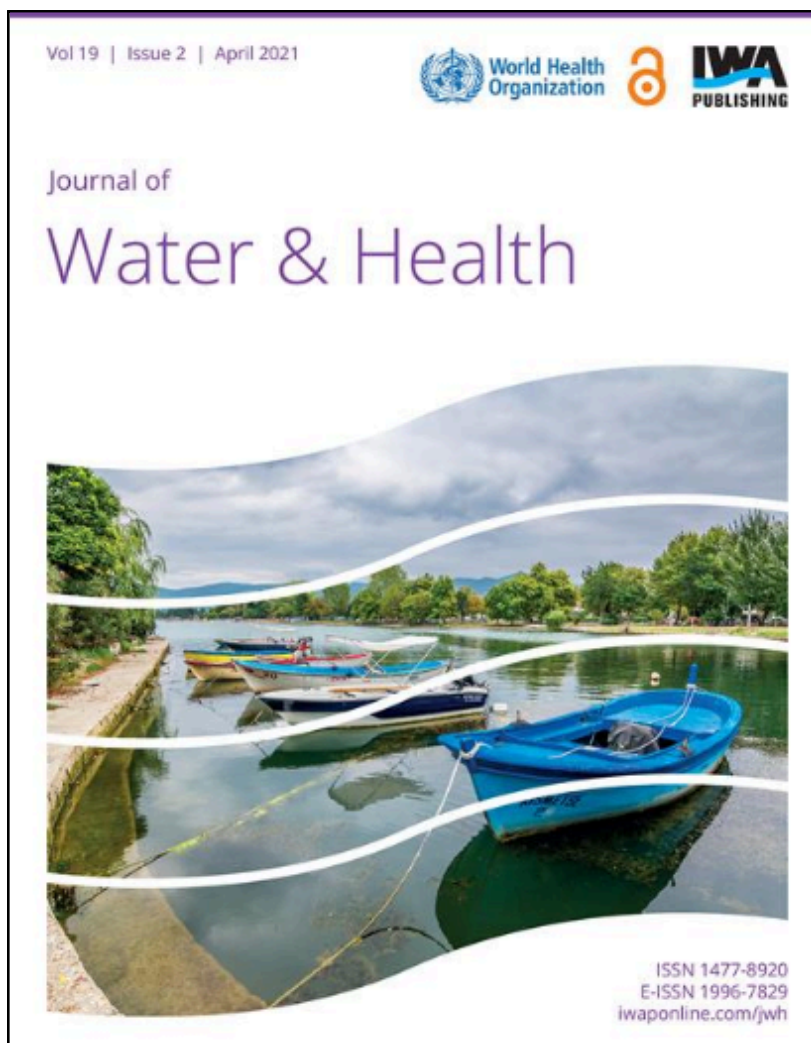


Outline of the Activity

Collaborative research
Pakija Begum
Department of Chemistry, Gargaon College
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Sipajhar College, Darrang
with
M. Das & T K Maji
Tezpur University, Assam

Title of Paper: Nature of sorption of trivalent arsenic on novel iron oxyhydroxide stabilized starch/OMMT composite: A mechanistic approach

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Volume 19, Issue 2

1 April 2021



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RESEARCH ARTICLE | MARCH 25 2021

Nature of sorption of trivalent arsenic on novel iron oxyhydroxide stabilized starch/OMMT composite: A mechanistic approach

P. Gogoi; M. Das; P. Begum; T. K. Maji

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J Water Health (2021) 19 (2): 336–350.

<https://doi.org/10.2166/wh.2021.267>

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Abstract

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Materials which are chemically, energetically and operationally acceptable for arsenic water treatment are highly required. In this study a hybrid material (SICC) of aminated starch, oxyhydroxide of iron and OMMT clay has been demonstrated for arsenic treatment. This new material was highly efficient in arsenic water treatment which could reduce arsenic concentration far below detection limits. All binding interactions during material preparation and arsenic sorption were exclusively characterized with FT-IR, XRD and other spectroscopic tools. A molecular modeling on the basis of density functional theory was carried out to verify the above findings. Influence of material dose, treatment time, initial ion concentration, varying temperatures, etc., on extent of sorption was studied in detail. The thermodynamic parameters viz. ΔG (>-11 kJ/mol), ΔH (42.48 kJ/mol), ΔS (177.6 JK⁻¹ mol⁻¹) and E_a (59.16 kJ/mol) determined the feasibility of the process, its endothermic behavior and most importantly the chemical nature of the sorption accompanied by ion-exchange to some extent. The sorption followed a monolayer chemisorption pattern as determined by the Langmuir model ($R^2 = 0.973$, $R_L = 0.081$) with a $q_{max} = 2.04$ at 303 K. The binding of As(III) on the material was governed by a pseudo second order kinetic model.



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3. Collaboration between Gargaon College & Dibrugarh University & Assam Agricultural University, Assam

Outline of the Activity

Collaborative research
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Manas Pratim Barman
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Arnab Narayan Patowary
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Title of Paper: Exponential Smoothing
State Space Innovation
Model for Forecasting
Road Accident Deaths in
India

Photograph of the Activity

THAILAND STATISTICIAN
ISSN (Online) 2351 - 0676

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Exponential Smoothing State Space Innovation Model for Forecasting Road Accident Deaths in India

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Keywords: Akaike information criteria, Kolmogorov-Smirnov test, mean absolute percentage error, mean absolute scaled error

Abstract

Thailand Statistician
Vol.20 No.1 January 2022

ISSN (Print) 1685 - 9057
ISSN (Online) 2351 - 0676

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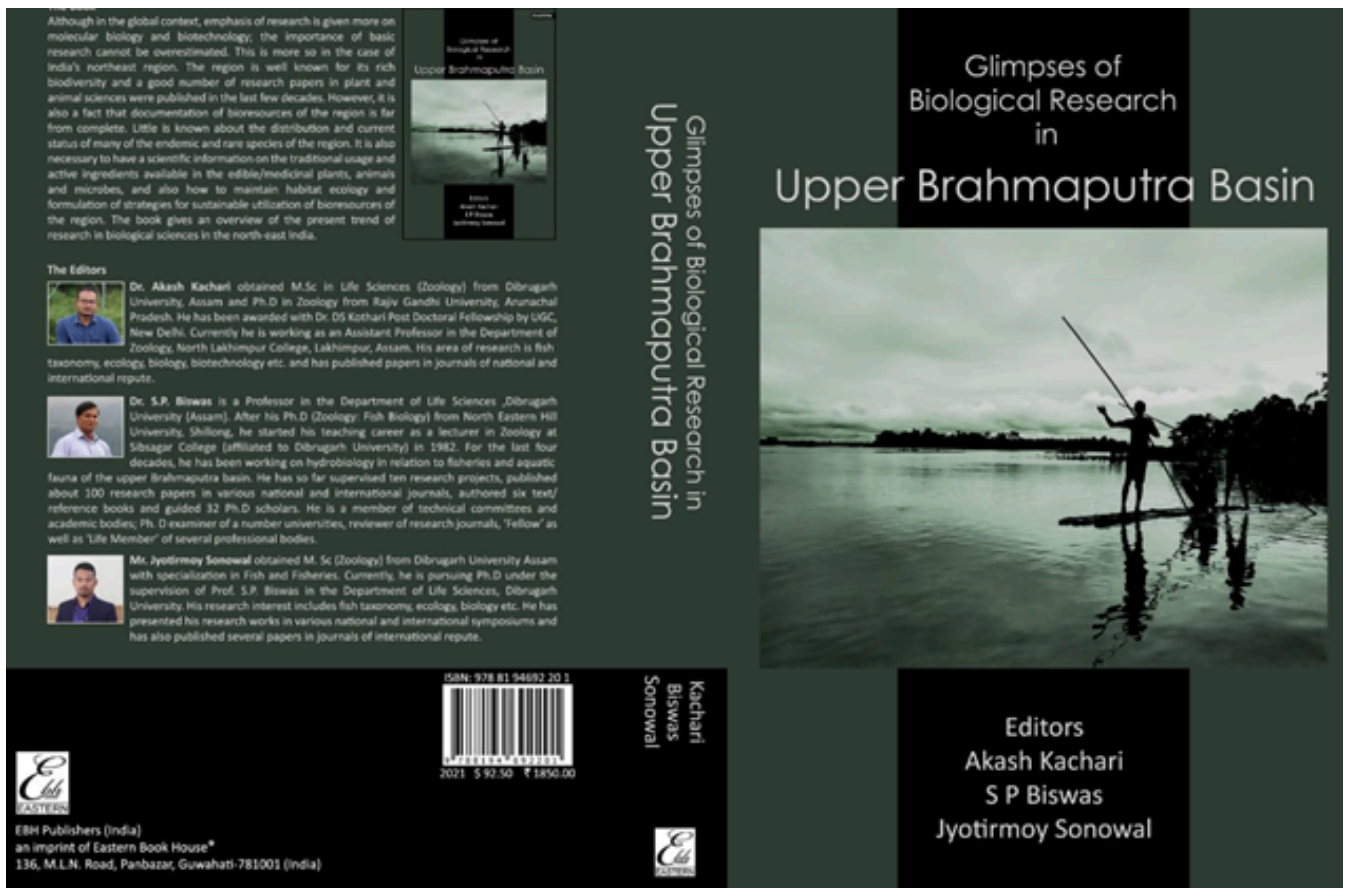
4. Collaborative research between Gargaon College with Moran College, KVK, Arunachal Pradesh and Rajiv Gandhi University



Outline of the Activity

Collaborative research
Rashmi Dutta
Department of Zoology, Gargaon College
&
Budhin Gogoi
Moran College
with
Vivakananda Safi
KVK, Papum Pare, Arunachal Pradesh
& Debangshu Narayan Das, Rajiv Gandhi University, Arunachal Pradesh
Title of Paper: Aquafarming Scope in Arunachal-Assam Border: An exploration in the Foothill Wetlands

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Aquafarming Scope in Arunachal-Assam Border: An Exploration in the Foothill Wetlands

*Budhin Gogoi
Rashmi Datta
Vivekanand Safi
Debangshu Narayan Das*

Abstract

Physico-chemical parameters viz. and the plankton community in the wetlands were analyzed for two years to delineate the possibility and potentiality of resource utilization for aquaculture productivity. A total of 64 genera of phytoplankton and 51 genera of zooplankton were identified in the wetlands. The livelihood issue is a great challenge on the available land resource, as more than 70% of the population relied on agricultural production. This paper is aimed to focus on the status of wetland and possibilities of resource utilization for socio-economic development of both the state.

Keywords: *Aquaculture, fishery, plankton, water quality, wetland.*

Introduction

Wetland bears immense production potentials because of its wide ranges of resources, ecological niches, nutrient status, and carrying capacity. These are the most productive ecosystems in terms of nutrient recycling and storage, plant and animal harvest, and species conservation (Lampert and Sommer, 2007; Mitsch *et*

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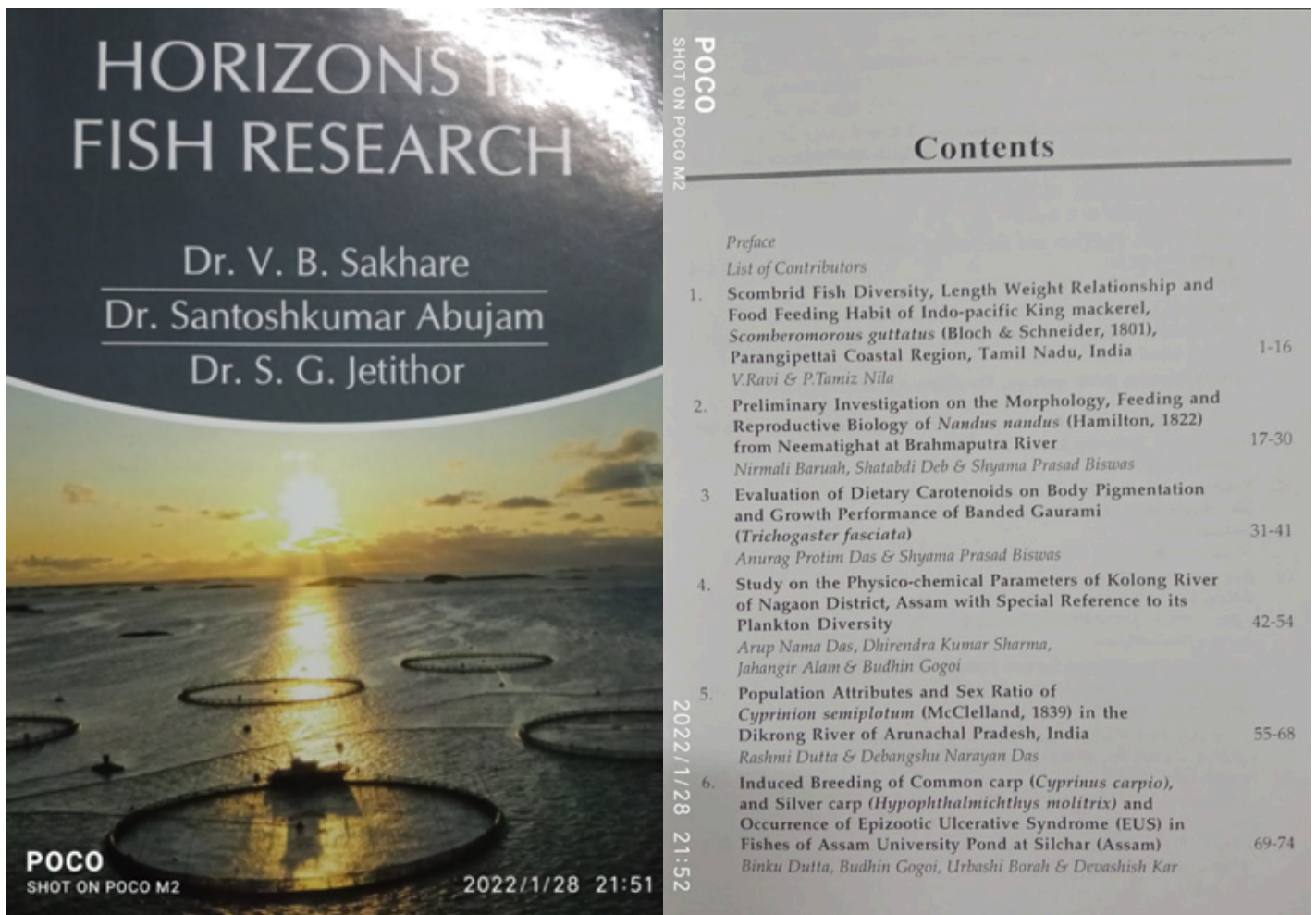
5. Collaborative research between Gargaon College and Rajiv Gandhi University



Outline of the Activity

Collaborative research
Rashmi Dutta
Department of Zoology, Gargaon College
&
Debangshu Narayan Das,
Rajiv Gandhi University, Arunachal Pradesh
Title of Paper: Population Attributes and Sex Ratio of *Cyprinion semiplotum* (McClelland, 1839) in the Dikrong River of Anunachal Pradesh, India

Photograph of the Activity



Horizons in Fish Research

Pages: 55-68

Editors: V.B. Sakhare; Santoshkumar Abujam; S.G. Jetithor

ISBN: 978-93-88854-86-3

Published by: Discovery Publishing House Pvt. Ltd., New Delhi (India)



Population Attributes and Sex Ratio of *Cyprinion semiplotum* (McClelland, 1839) in the Dikrong River of Arunachal Pradesh, India

Rashmi Dutta & Debangshu Narayan Das

ABSTRACT

The population attributes of *Cyprinion semiplotum* from river Dikrong and others revealed that their sizes were ranged in size from 35.00-300.42 mm total length (TL). The total length of female ranged from 142.02 to 300.42 mm TL, and total length of male ranged from 122.40 to 285.00 mm and juvenile total length ranged from 35.00 to 118.00 mm TL. The TL of female and male of *C. semiplotum* were significantly different ($P < 0.01$). The juvenile (55%) fishes were dominant in pre-monsoon and post-monsoon season and mature fishes were dominant (65%) only in monsoon season at both the sampling sites in Dikrong river. Percentage of catches depicted higher value in winter compared to pre-monsoon, monsoon and early post-monsoon from the river Dikrong. The species once distributed widely in the foothills streams and rivers of Arunachal Pradesh but the population has now been fragmented and discontinuously distributed only in some pockets of many rivers. The sex ratio (male: female) of the species was found to be skewed toward male ($P < 0.05$). The male fish population was dominated throughout the year. A total of 393 individuals were sexed, showed 236 (60.05%) males and 157 (39.94%) females indicating overall sex ratio as 1.5:1 (Male: Female) and was significantly differed from the expected 1:1 ratio.

Keywords: Assamese king fish, Population, Dikrong River, Sex ratio.



6. Collaborative research between Gargaon College and IIT, Guwahati, Assam



Outline of the Activity

Collaborative research
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&
Nikita Chakraborty & Bhishma Kumar Patel
IIT, Guwahati, Assam

Title of Paper: Counterbalancing common explosive pollutants (TNT, RDX, and HMX) in the environment by microbial degradation

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From Chakraborty, N., Begum, P., Patel, B.K., 2022. Counterbalancing common explosive pollutants (TNT, RDX, and HMX) in the environment by microbial degradation. In: Shah, M.P., Rodriguez-Couto, S. (Eds.), *Development in Wastewater Treatment Research and Processes: Microbial Degradation of Xenobiotics through Bacterial and Fungal Approach*. Elsevier, pp. 263–310.
ISBN: 9780323858397

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Counterbalancing common explosive pollutants (TNT, RDX, and HMX) in the environment by microbial degradation

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¹Department of Chemistry, Indian Institute of Technology Guwahati, North Guwahati, Assam, India; ²Department of Chemistry, Gargaon College, Gargaon, Assam, India

13.1 Introduction

The survival and quality of different life forms on the planet earth inevitably depend on the overall quality of the environment in which it exists. With advancements in science and technology, several environmental problems have arisen due to synthetic processes' interference with the natural phenomenon. The massive deployment of natural resources and industrial synthesis of many chemicals has led to incorporating different synthesized compounds into ongoing biological cycles. Large-scale manufacture, use, and disposal of synthesized chemicals such as insecticides, plasticizers, dyes, drugs, detergents, turn up as a significant cause of environmental contamination. The number of contaminants existing in the current environment is enormous, and the majority of these arise from various processes and materials used in modern-day industrial activities. Most of them are toxic and mutagenic to humans and other life forms. Their unplanned intrusion into ecosystems is a serious threat to various life forms, causing severe ecological problems. The health and ecological threats caused by these human-made contaminants are grave concerns and have led to various studies on the remediation strategies of these common xenobiotic compounds.

Among the environmental contaminants, explosives waste generated from the use and dissemination of common military explosives is severely toxic. World War I and II saw a massive increase in explosive production worldwide, which continued after the war. Over the next 50 years, their production rates in many countries increased exponentially. Consequently, these extensive usages with improper handling and disposal techniques led to severe contamination of soil, surface, and groundwater to the levels that threaten the existence and quality of life forms.

^a These authors contributed equally toward this work.

Development in Wastewater Treatment Research and Processes, <https://doi.org/10.1016/B978-0-323-85839-7.00012-8>
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Development in Wastewater Treatment Research and Processes, First Edition, 2022, 263–310

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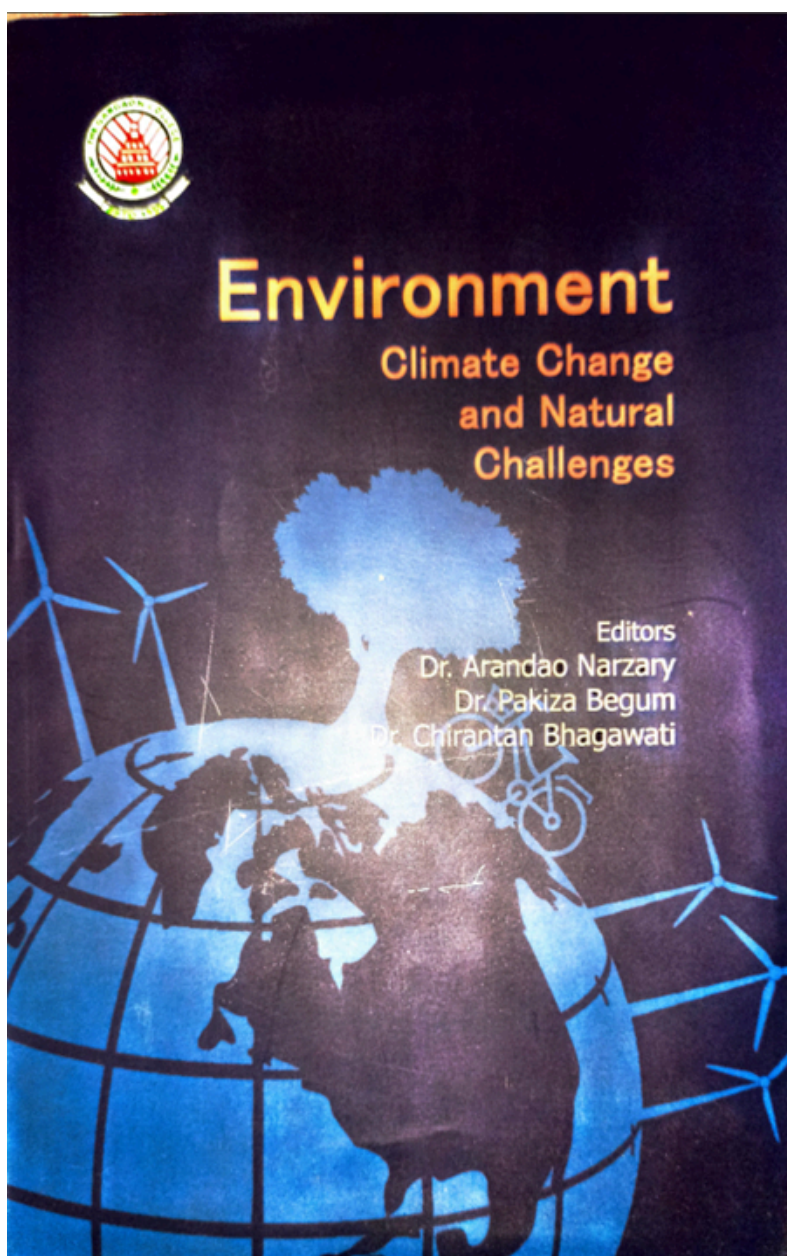
7. Collaborative research between Gargaon College and Dibrugarh University, Assam



Outline of the Activity

Collaborative research
Sandeepa Agarwala
Department of Botany
& Dimbeshwar Das
Gargaon College
&
Dipika Rajput
Department of Life sciences, Dibrugarh University, Assam
Title of Paper: Phytochemistry of *Dioscorea alata* : A review

Photograph of the Activity



Phytochemistry of *Dioscorea alata*: A Review

Sandeepa Agarwalla¹, Dipika Rajput², Dimbeshwar Das*

Abstract

Dietary plants are traditionally used as medicine from ancient to modern times all over the world and Assam is no exception. The purpose of this study is to evaluate the phytochemicals of *Dioscoreaalata* tuber locally called kath aloo (Assamese). It is one of the widely consumed tuber crops. Certain phytochemicals present in *D. alata* includes saponins, flavonoids, terpenoids, diosgenin etc. Diosgenin extracted from the tubers is used as precursors for the synthesis of hormones and corticosteroids. Flavonoids is expected to be an active component having an antidiabetic effect.

Keywords: Phytochemicals, *Dioscoreaalata*, Tuber, Medicine, Assam, Antidiabetic

1. INTRODUCTION

Dioscorea sp. widely known as yam belongs to the family Dioscoreaceae. It is a large genus comprising of around 600 species is distributed throughout the world. They are an important staple food specially in the tropical countries. Soaring to the world population, there has been always a scarcity of food. Yam is one of the widely consumed tuber crops. Since a long time human is dependent directly or indirectly on the crops but a few times they fail to distinguish between the edible and non-edible ones. Gradually with the understanding, ethnobotany has contributed in raising our knowledge on the use of

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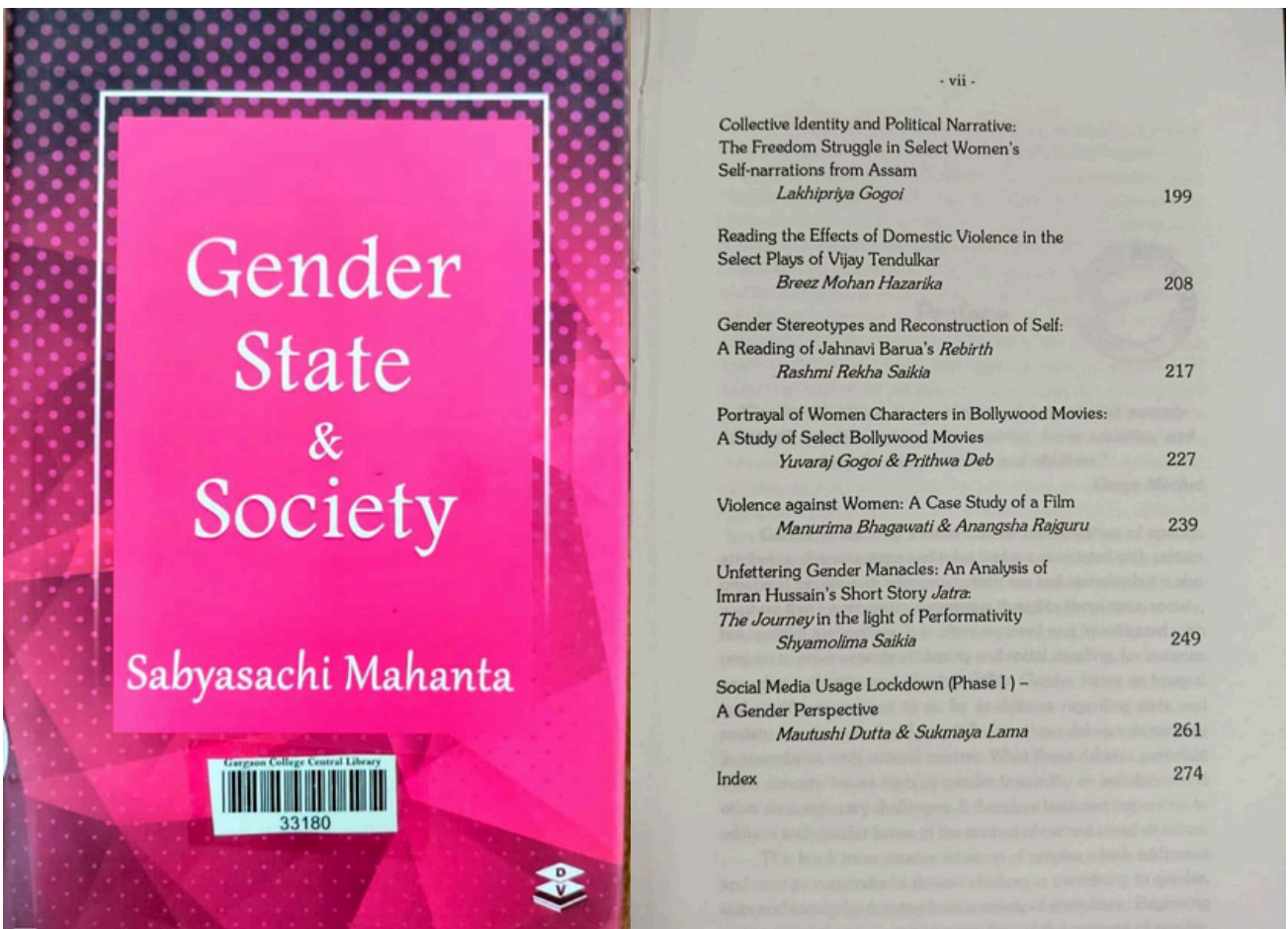


8. Collaborative research between Gargaon College and Debraj Roy College, Golaghat, Assam

Outline of the Activity

Collaborative research
Yubraj Gogoi
Department of Political Science
Gargaon College
&
Prithwa Deb
Department of English, Debraj Roy College, Golaghat, Assam
Title of Paper: Portrayal of Women Characters in Bollywood Movies: A Study of Selected Bollywood Movies

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Portrayal of Women Characters in Bollywood Movies: A Study of Select Bollywood Movies

Yuvaraj Gogoi
Prithwa Deb

Introduction

Cinema is the most popular and emotion ridden medium which has a stronghold in the lives of all people. It is an art form that invokes pleasure, as well as pain. The making and consumption of films came into existence long ago and it continues to thrill the spectators. Cinema is not only an art but at the same time it is also a cultural form and Indian cinema has contributed a lot to the entire gamut of celluloid in terms of cultural issues. The realistic representations in Indian cinema certainly revolutionized the idea of cinema as a montage of popular culture but at the same time, it has maintained the common linking thread of cinema as a product of the consumer culture and entertainment industry. Having said this, the idea can be furthered by focusing on the portrayal of women characters in Indian cinema and blending both the genre and the portrayal of women who become an object of the consumer culture is the pivotal point of the present study. However, apart from this, the study shall attempt to look at the multifaceted portrayals of women (for example the representations of strong and bold women) in Indian cinema spanning from the 1970s till the 21st century. The representation of gender issues has been popular amongst the

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9. Collaborative research between Gargaon College and Moran College, Assam



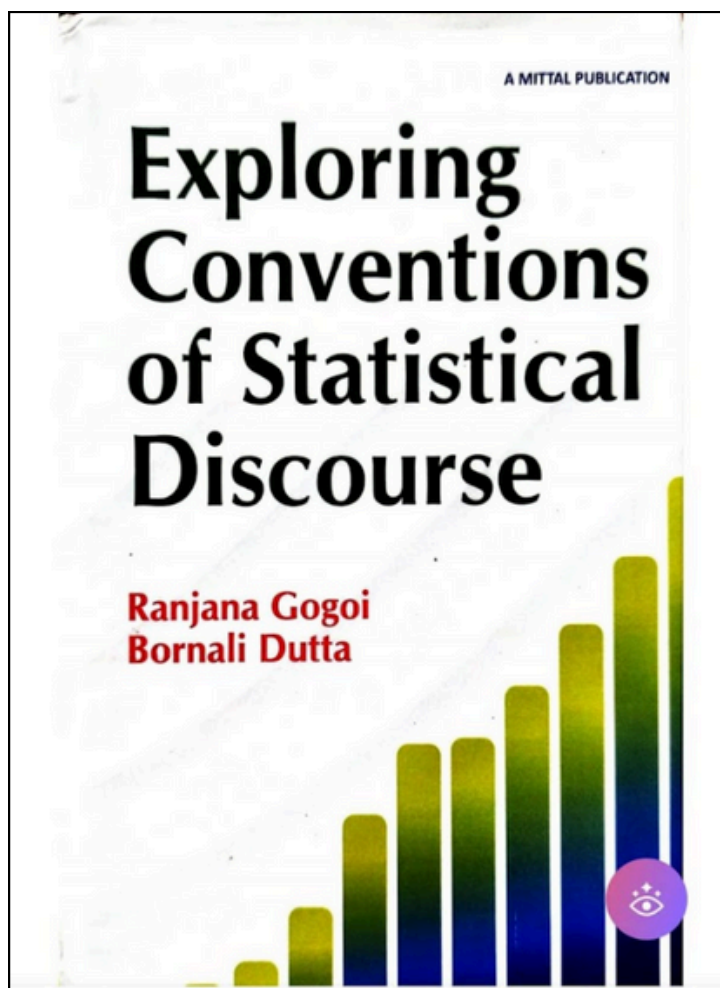
Outline of the Activity

Collaborative research
Kabita Phukan
Department of Mathematics
Gargaon College
&
Jugal Gogoi

Department of Mathematics, Moran College, Assam

Title of Paper: A study of some mathematical models in population biology with the help of differential Equation

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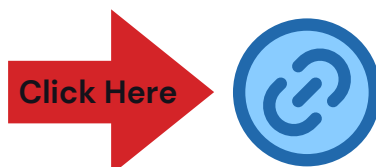
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A STUDY OF SOME MATHEMATICAL MODELS IN POPULATION BIOLOGY WITH THE HELP OF DIFFERENTIAL EQUATION

KABITA PHUKON AND JUGAL GOGOI

1. Introduction

In science, we understand our real-world phenomenon by observation, collecting data, find rules inside or among them and finally, we want to explore the truth behind and to apply it to predict the future. This is the technique by which we can improve our scientific knowledge. If the above rules are in terms of mathematics, then they are called mathematical models. One important such models is the ordinary differential equations^[1]. It describes relations between variables and their derivatives. Such models appear everywhere in the real-world. For instant, population dynamics in ecology and biology^[2], mechanics of particles in physics, chemical reaction in chemistry, economics, etc. In modern science, we have many advance tools to collect data and powerful computers to analyze them. To utilize the latest tools and techniques of science and technology, it is very useful to learn about the theory of ordinary differential equation, which is an important language of mathematics. In this article, we will mainly focus on two important classes of mathematical models



10. Collaborative research between Gargaon College and Dibrugarh University, Assam




Outline of the Activity

Collaborative research
Sujata Gowala
Department of Mathematics
Gargaon College
&
Dr. Surajit Borkotokey
Department of Mathematics, Dibrugarh University, Assam
Title of Paper: The efficient, symmetric and linear values for cooperative Games and their Characterization

Photograph of the Activity

The Efficient, Symmetric and Linear Values for Cooperative Games and Their Characterizations



Sujata Goala and Surajit Borkotokey

Mathematics Subject Classification: 91A10 · 91A12

1 Introduction

A cooperative game with transferable utilities or a TU game, in short, describes situations where players make binding agreements to generate some worth or profit together. The problem is then how to share the profit among the players in a rational manner. The value is a function that prescribes a scheme of sharing the profit among the players. The most popular value in TU games till date is the Shapley value [20] which gives every player the average of her marginal contributions stemming out from all possible coalitions she can make with her peers under the given binding agreements. The Shapley value is the unique value that satisfies four properties, namely, efficiency, symmetry, linearity, and dummy axiom or the null player property. Another very popular value found in the literature is the equal division rule (ED) that splits the profits equally among the players irrespective of their productivities. The ED also satisfies efficiency, symmetry,¹ and linearity. There is a large class of values that satisfies these three properties, we call them ESL values.

In this paper, we survey the recent developments in the ESL values and their characterizations. We also make a brief discourse of some of the subclasses of the ESL values that build on these characterizations. We show some interesting results

¹In many occasions, the symmetry we are considering here is called equal treatment to equals and symmetry is another axiom where the permutation of a player does not effect her payoff till she generates the same worth under different permutations in a coalition, however, for linear and efficient values, the two axioms are equivalent ([13], Theorem 2).

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Department of Mathematics, Dibrugarh University, Dibrugarh 786004, India

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S. Borkotokey et al. (eds.), *Game Theory and Networks*, Indian Statistical Institute Series,
https://doi.org/10.1007/978-981-16-4737-6_7 119

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11. Collaborative research between Gargaon College and Dibrugarh University, Assam

Outline of the Activity

Collaborative research
Dimbeswar Das & Sandeepa Agarwala
Department of Botany, Gargaon College
&
Bijoy Neog, Ajanta Baruah Das
Department of Life Sciences, Dibrugarh University
Title of Paper: **A review on *Lasia spinosa*: Ethnobotany,
Phytochemistry, Pharmacology and
Karyomorphology**

Photograph of the Activity

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Chapter 2

A Review on *Lasia spinosa*: Ethnobotany, Phytochemistry, Pharmacology and Karyomorphology

Dimbeshwar Das^{1*}, *Bijoy Neog*², *Ajanta Baruah Das*³
and *Sandeepa Agarwalla*¹

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Medicinal plants serve as a great source for the synthesis of conventional drugs. Proper analysis, awareness and knowledge about the pharmacological activities of plants is required which can be done by various experiments. From this one can ensure safety and can claim various therapeutic benefits. *Lasia spinosa* is an important aroid. It is a potent plant which still needs investigation on different pharmacological activities as it contains various phytochemicals like alkaloids, phenols, tannins, saponins, etc. Besides it is also a good source of dietary.

Keywords: Conventional, Pharmacological, *Lasia spinosa*, Phytochemicals, Dietary.

Introduction

L. spinosa is one of the species of *Lasia* belonging to Araceae family (commonly known as aroids). They are locally known as Chengmora in Assam. They are also known by various other vernacular names all over India. The plant

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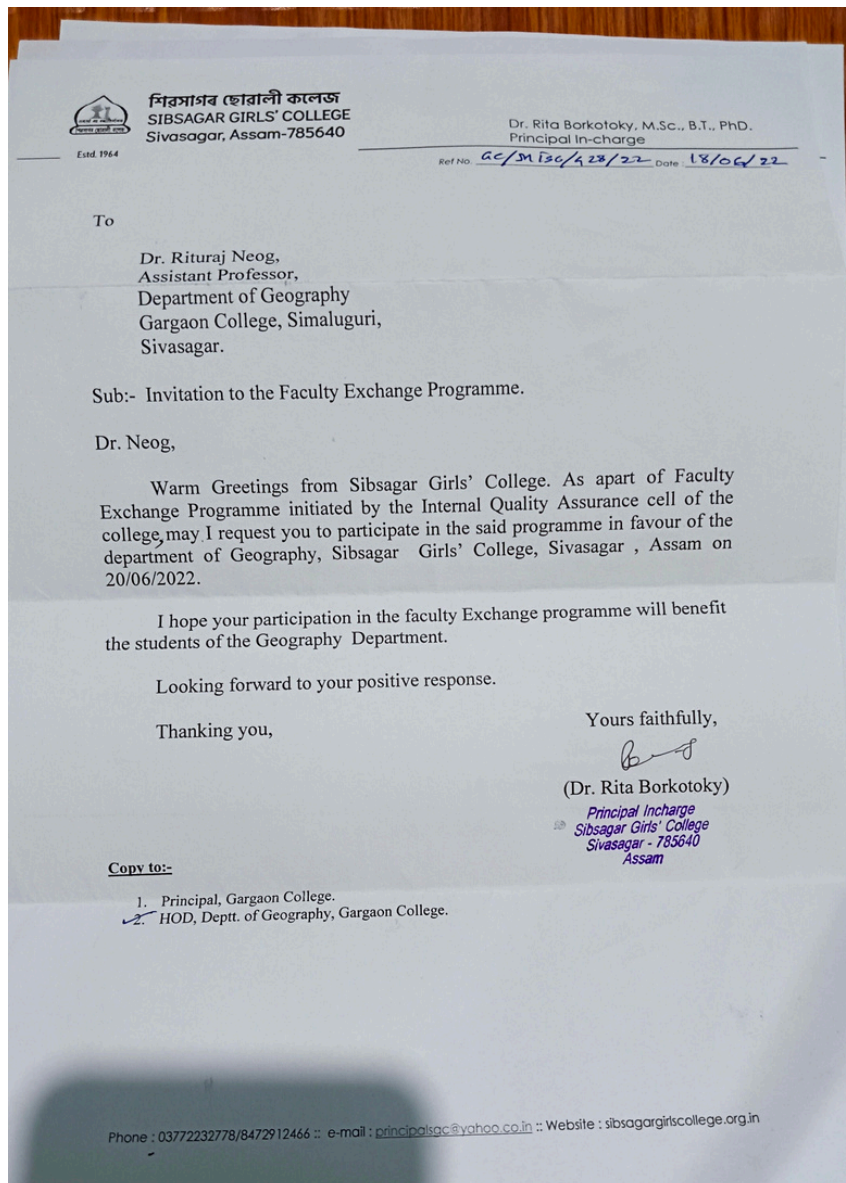
12. Faculty Exchange between Gargaon College and Sibsagar Girl's College



Outline of the Activity

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Department of Geography
Gargaon College
&
Department of Geography, Sibsagar Girl's College, Assam
Resource Person: Dr. Rituraj Neog, Department of Geography, Gargaon
College
Date of Programme: 20/06/2022

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13. Faculty exchange between Gargaon College and Dibrugarh University



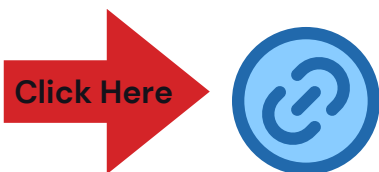
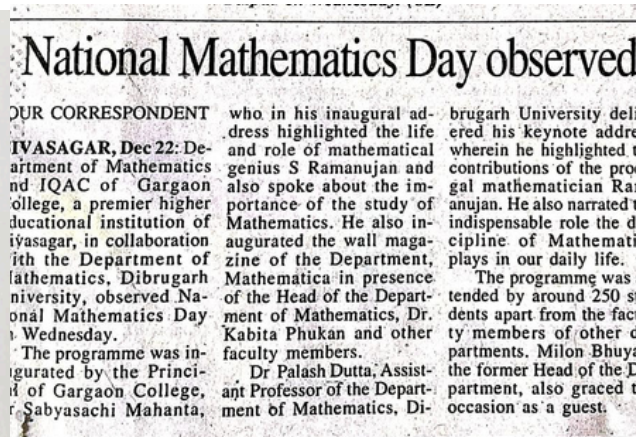
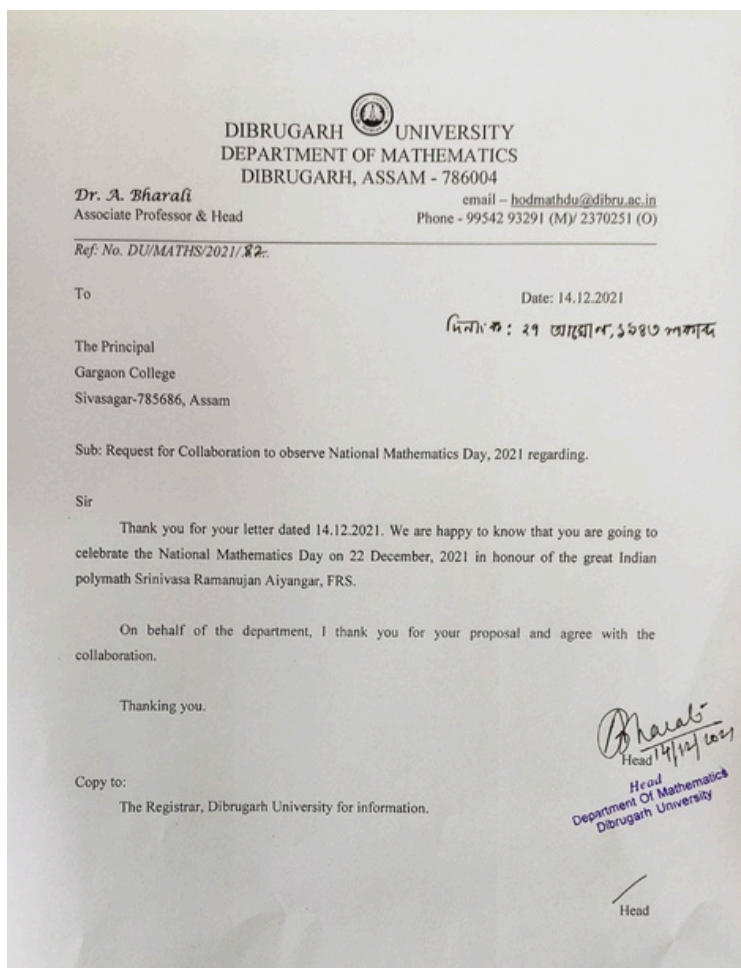
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Resource Person: Dr. Palash Dutta, Department of Mathematics,
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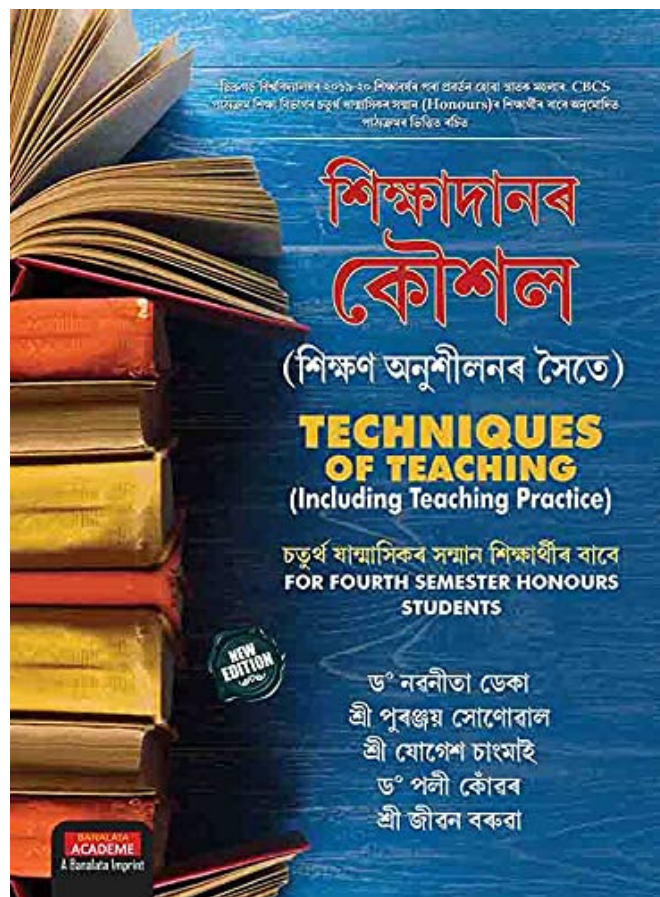
14. Collaborative Research between Gargaon College with Women's College, Tinsukia, Pub Dikrong College, Dibrugarh, D.C.B College, Jorhat and C.K.B College, Jorhat, Assam



Outline of the Activity

Collaborative research
Dr. Poly Konwar
Department of Education
Gargaon College
&
Dr. Nabanita Deka
Department of Education, Women's College, Tinsukia, Assam
with
Puranjoy Sonowal
Department of Education, Pub Dikrong College, Dibrugarh, Assam
Jogesh Changmai
Department of Education, D C B Girls College, Jorhat, Assam
Jibon Boruah, Department of Education, C K B College, Teok, Jorhat,
Assam
Title of Paper: Techniques of Teaching (Book)

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15. Collaborative Research between Gargaon College with Tengakhat College, Dibrugarh and DDR College, Dibrugarh, Assam



Outline of the Activity

Collaborative research

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Gargaon College

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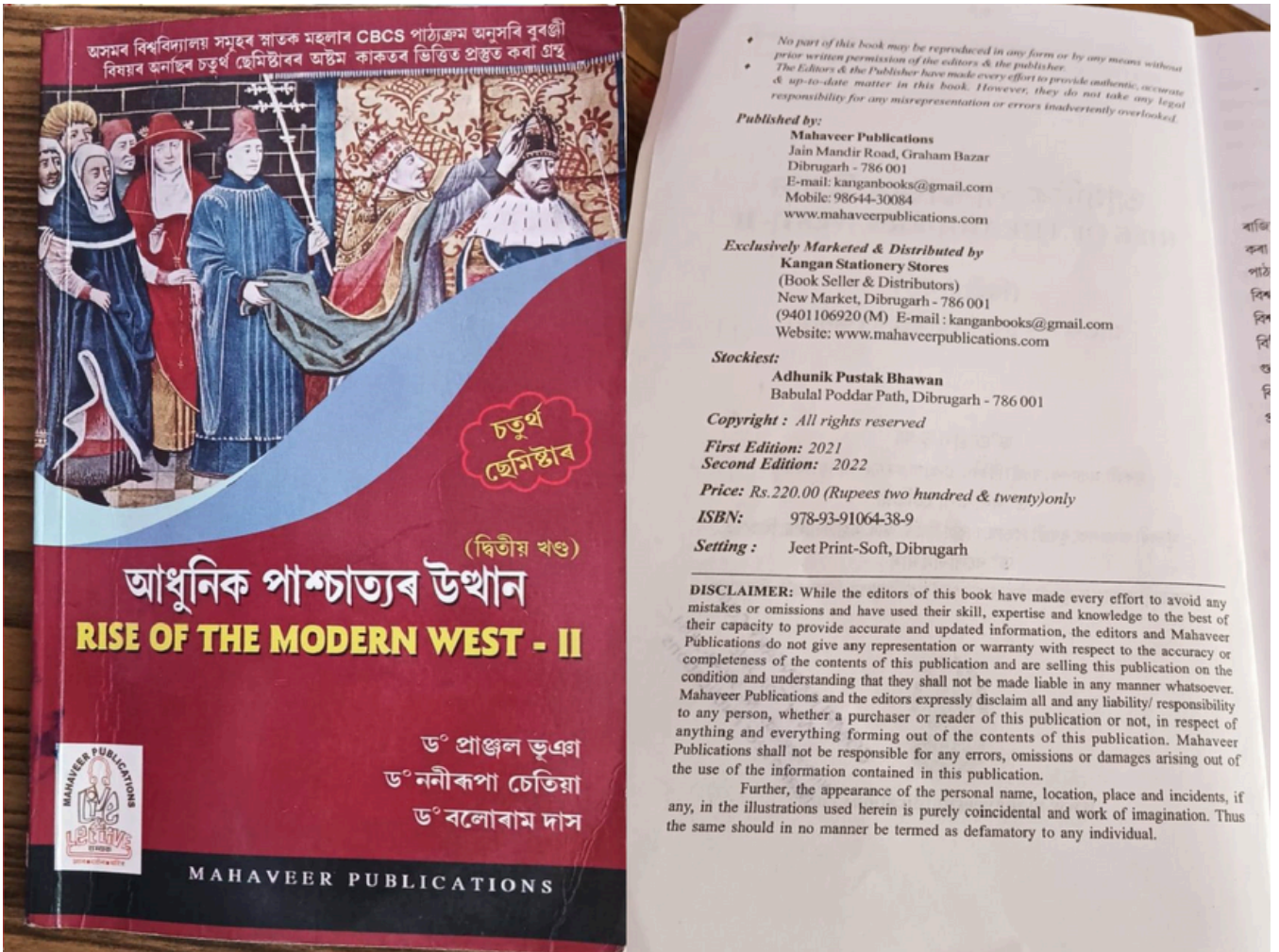
Pranjal Bhuyan

Department of History, Tengakhat College, Dibrugarh, Assam
with

Nanirupa Chetia, Department of History, DDR College, Dibrugarh, Assam

Title of Paper: Rise of Modern West-II

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16. Collaborative Research between Gargaon College with Tengakhat College, Dibrugarh and THB College, Sonitpur, Assam



Outline of the Activity

Collaborative research

Dr. Boluram Das, Department of History
Gargaon College

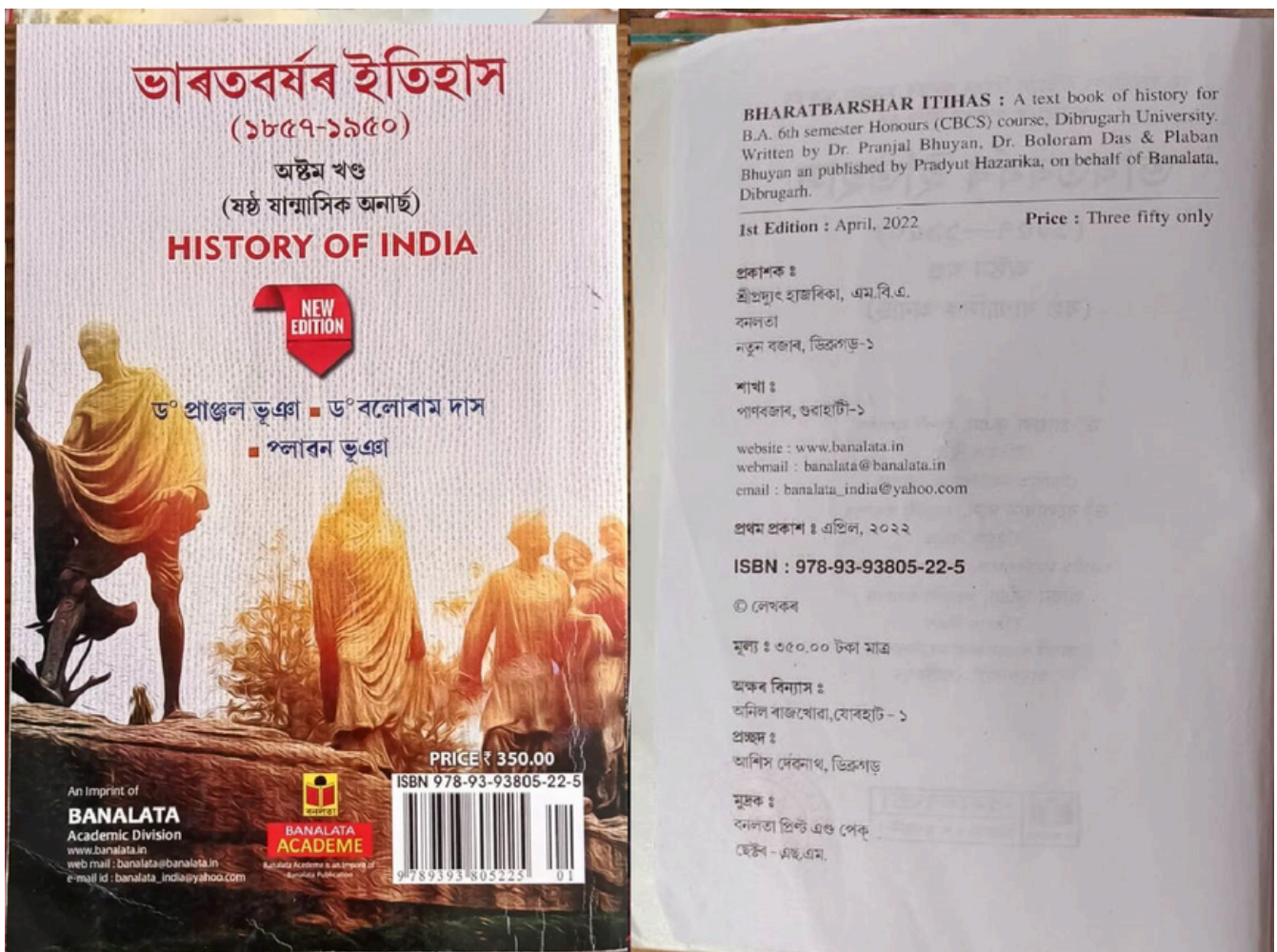
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Plaban Bhuyan, Department of History, THB College, Sonitpur, Assam
with

Pranjal Bhuyan, Department of History, Tengakhat College, Dibrugarh,
Assam

Title of Paper/Book: History of India-VIII (1857-1950)

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17. Collaborative Research between Gargaon College with Tengakhat College, Dibrugarh and DDR College, Dibrugarh, Assam



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Department of History
Gargaon College

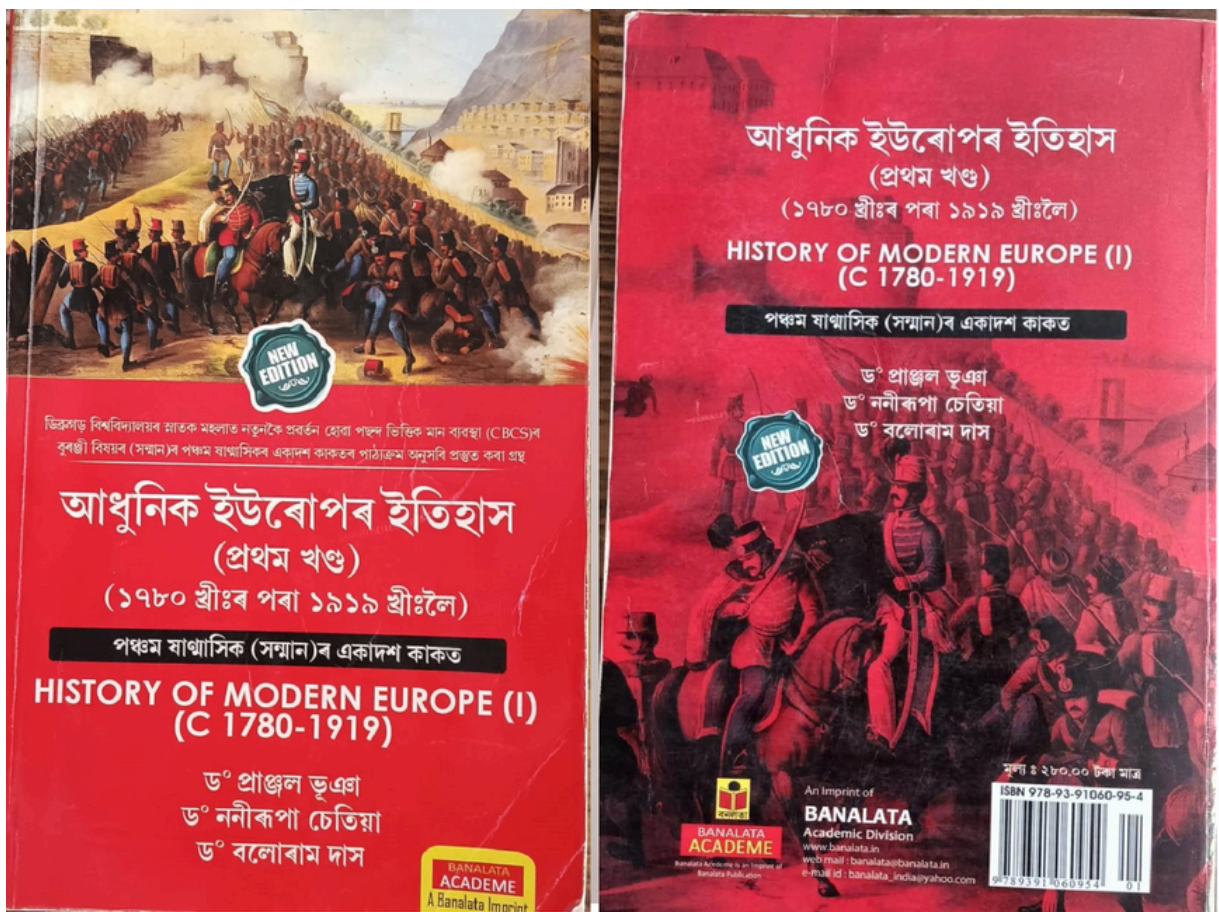
&

Nanirupa Chetia
Department of History, DDR College, Dibrugarh, Assam
with

Pranjal Bhuyan, Department of History, Tengakhat College, Dibrugarh, Assam

Title of Paper/Book: History of Modern Europe-I (C1780-1919)

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Bharatborsor Itihas (Pratham Khanda) : A textbook on history (Core) for Three Year Degree Courses prepared as per new Choice Based Credit System (CBCS) Syllabus for 5th Semester, 11th Paper Written by Dr. Pranjal Bhuyan, HoD, Dept. of History Tengakhat College, Dibrugarh; Dr. Nonirupa Chetia, HoD, Dept. of History, DDR College, Chabua and Dr. Baloram Das, Asst. Professor, Dept. of History, Garhgaon College, Simaluguri. Sibsagar and published by Sri Pradyut Hazarika on behalf of Banalata, Dibrugarh.

First Edition: October, 2021 Price: Two Hundred Eighty Only

প্রকাশক :

শ্রীপ্রসূৎ হাজরিকা, এম. বি. এ.
কলতা, ডিব্রুগড়-১

শাখা :

পানবজার, গুৱাহাটী-১

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প্রথম সংস্করণ : অক্টোবর, ২০২১

ISBN : 978-93-91060-95-4

মূল্য : ২৮০.০০ টাকা মাত্র

ডি. টি. পি. : পবিত্র হাজরিকা

প্রচ্ছদ : আশিস দেবনাথ, ডিব্রুগড়

মুদ্রক :

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DIBRUGARH UNIVERSITY SYLLABUS

Paper XI

Course Code: HISHC1011

Course Title: History of Modern Europe- I (c. 1780-1919)

- I. The French Revolution and its European Repercussions**
 - (a) Crisis of Ancient Regime
 - (b) Intellectual Currents, Social Classes and Emerging Gender Relations.
 - (c) Phases of the French Revolution 1789 - 99.
 - (d) Art and Culture of French Revolution.
 - (e) Napoleonic Consolidation - Reform and Empire.
- II. Restoration and Revolution: c. 1815 - 1848**
 - (a) Forces of Conservatism and Restoration of Old Hierarchies.
 - (b) Social, Political and Intellectual Currents.
 - (c) Revolutionary and Radical movements, 1830
 - (d) Revolutionary and Radical movements, 1848
- III. Capitalist Industrialization and Social and Economic Transformation: Late 18th century to AD 1914**
 - (a) Industrial Revolution: Origin and Background
 - (b) Process of Capitalist development in Industry and Agriculture: Case Studies of Britain, France, the German States and Russia.
 - (c) Evolution and Differentiation of Social classes: Bourgeoisie, Proletariat, Land Owning Classes and Peasantry.
 - (d) Changing Trends in Demography and Urban patterns.
- IV. Varieties of Nationalism and the Remaking of States in the 19th and 20th Centuries.**
 - (a) Intellectual currents, popular movements and the formation of National identities in Germany, Italy, Ireland and the Balkans.
 - (b) Specificities of Economic Development, Political and Administrative Reorganization - Italy
 - (c) Specificities of Economic Development, Political and Administrative Reorganization - Germany
- V. World War I :**
 - (a) Growth of Power Blocks, Militarism and Alliances in Europe in late 19th and early 20th century
 - (b) Balkan Wars
 - (c) First World War: Background

ESSENTIAL READINGS

Gerald Brennan: The Spanish Labyrinth: An Account of the Social and Political Background of the Civil War.



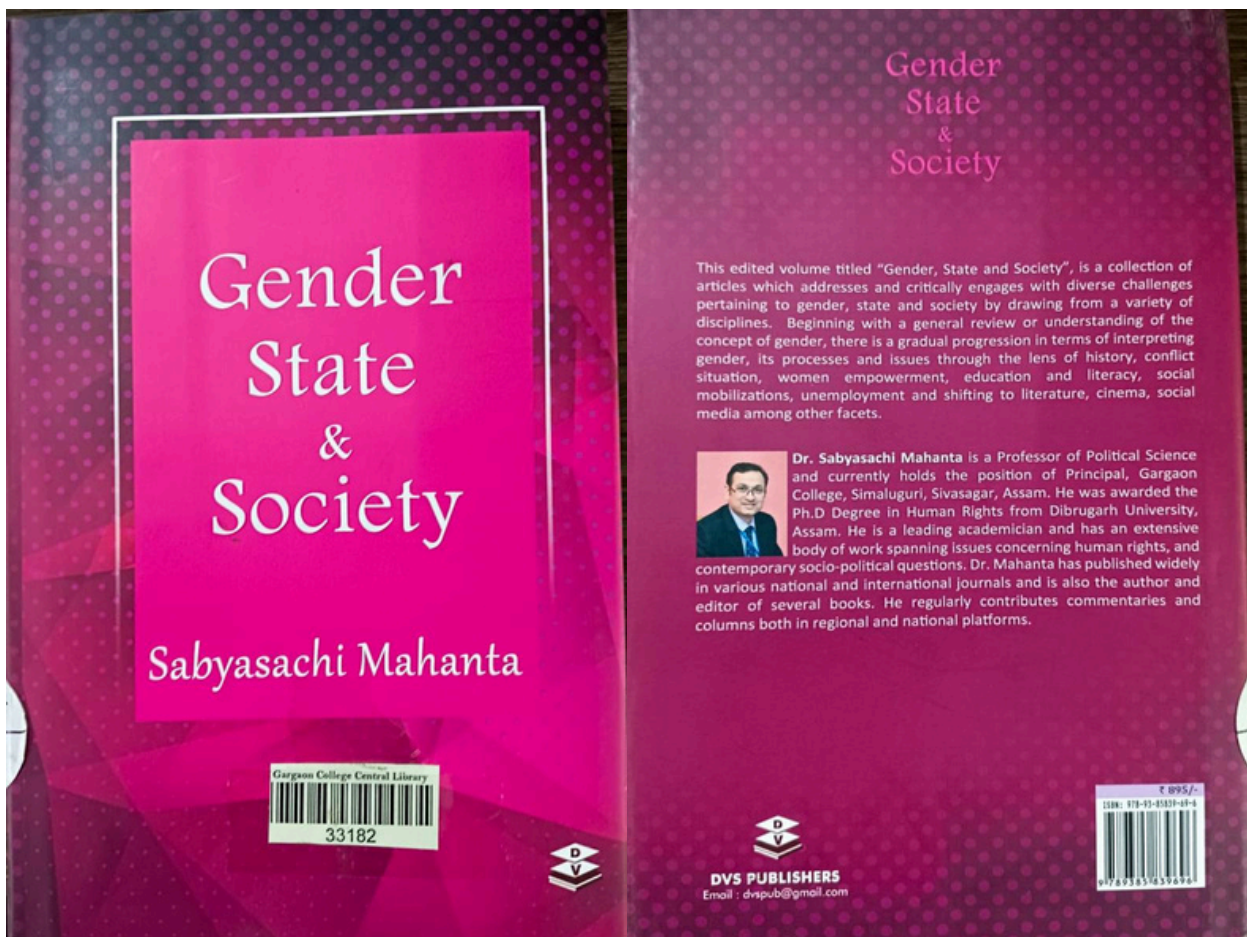
18. Collaborative Research between Gargaon College with Women's College, Tinsukia, Assam



Outline of the Activity

Collaborative research
Dr. Surajit Saikia
Department of Economics, Gargaon College
&
Bhagyalakhi Gogoi
Department of Economics, Tinsukia Women's College, Assam
Title of Paper: Globalization and issue of Female Employment in India

Photograph of the Activity



Globalisation and the Issue of Female Employment in India

Surajit Saikia
Bhagyalakhi Gogoi

The process of globalization in India was executed in the year 1991. After the execution of the model of globalization all over the world as well as in India on a large scale, the issue of globalization and resource use efficiency, globalization and economic growth, globalization and employment, globalization and human development indicators (education, health etc.), globalization and income inequality etc., have begun to be discussed widely among the social scientists who perceive the process of globalization in positive or negative terms. However, the emerging issue of globalization and women employment has not been discussed to a wide extent in context to the Indian economy. Some studies found in the literatures have tried to highlight some of the key issues of globalization and women employment. In the literatures, two types of school of thoughts have been found. One school of thought opined that globalization has positive impact on the employment of women and the other school of thought believes that it has negative impact on women employment.

United Nations in 1999 opined that over the past 30 years, the driving forces of globalization such as, greater trade openness, growing global economic integration and interdependence, the

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19. Collaboration between Gargaon College with Raha College, Assam

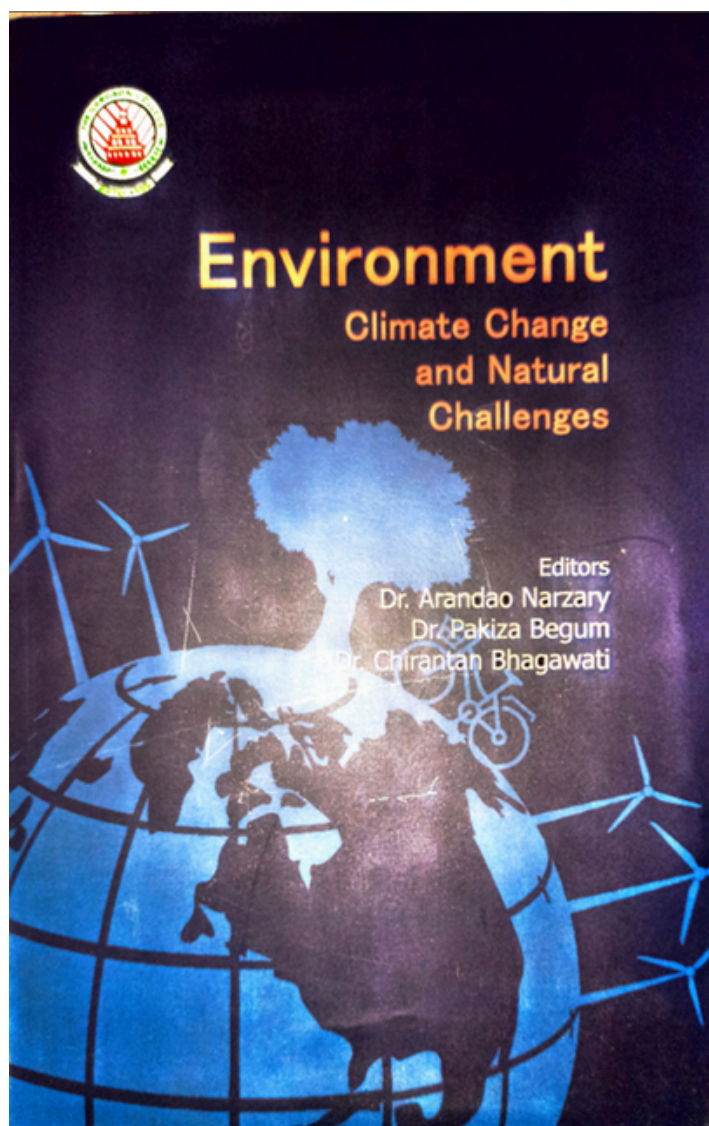


Outline of the Activity

Collaborative Research
Saheen Shehnaz Begum
Assistant Professor
Department of Chemistry, Gargaon College
&
Bibhuti Bhushan Lara
Department of Chemistry, Raha College, Assam

Title of the Book Chapter: **Trends and Challenges in non-metallic cancer drug development: a review**
Title of the Book: **Environment, Climate change and natural challenges**

Photograph/video link of the Activity



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Trends and Challenges in non-metallic Cancer Drug Development - A brief review

Bibhuti Bhushan Lara¹, Saheen Shehnaz Begum^{2*}

Abstract

Human civilization has made significant progress in sciences, particularly in medicine, despite remarkable achievements in eradicating smallpox with the last known case in 1978 and a little over a thousand cases of polio worldwide, we are still constantly challenged by many diseases that affect the quality of life. In such circumstances, the identification and trial of new drugs have become a necessity. There is a persistent lack of novel drug discovery and one such area is the discovery of anti-cancer drugs. The most popular strategies in cancer treatment are surgery, radiotherapy, immunotherapy, laser therapy among other procedures and the only way to deal with secondary tumours/ metastatic cancers is chemotherapy. When most cancers can metastasize to varying degrees, treatment of the entire body is the only option to destroy cancerous cells in multiple locations. While we have seen progress in cancer treatment and research in the past decades, the toxicity involved with traditional chemotherapeutic agents is a major challenge. With recent developments and understanding in cancer biology, new drugs and strategies hold great potential over conventional practices.

Keywords: Anti-cancer drugs, Cancer treatment, Precision Therapy, Immunotherapy

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