

RESEARCH PAPERS

2021-2022



Department of Assamese



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Department: Assamese

DOI/link to paper: https://gargaoncollege.ac.in/pdf/iqac/aqar-data/2022-

23/Pranab%20Dowreah.pdf

Title of paper: Sivasagar Zilar Garu Jabagusthi Homaj Aru Sanskriti

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 Dr. Lalit Chandra Rabha
 Dr. Neeva Rani Phukan

মুখ্য সম্পাদক (অবৈতনিক) সম্পাদকছয় (অবৈতনিক) ড° উপেন ৰাভা হাকাচাম
 ড° ললিত চক্ৰ ৰাভা
 ড° নিভা ৰাণী ফুকন



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শিৱসাগৰ জিলাৰ গাৰো জনগোষ্ঠীৰ সমাজ আৰু সংস্কৃতি ঃ এক ক্ষেত্ৰ ভিত্তিক অধ্যয়ন

🗆 প্ৰণৱ দূৱৰা

সহকাৰী অধাপক, অসমীয়া বিভাগ, গড়গাঁও মহাবিদ্যালয়, শিমলুঙৰি, শিৱসাগৰ আম্ভাব : ১৪০৫০৪৯৬০১

ৰীক্ষ শব্দ হ নৃ-গোষ্ঠী, গাৰো, বকতা মৌজা, পশ্চিমবঞ্জি গাঁও, সমাজ, সংস্কৃতি।

০,০০ অবতৰণিকাঃ ০,০১ বিষয়ৰ পৰিচনঃ

আমাত কোনাস কৰা অন্যোষ্টী সমূহৰ ভিতৰত চীন-তিবুতীয় পৰিয়ালৰ অন্তৰ্গত গাৰোসকল অন্যতম জনাগোষ্টী।
বৃহত্তৰ অসমীয়া জাতি গঠনত গালো সকলৰ অবদান অপৰিসীম। চীন দেশৰ তিবাত পৰ্বতমালাৰ পৰা প্ৰৱেজন কৰা এই
গালোসকল কোনো এক সময়ত মেখালাৰ পাৰো পাহাৰত কদবান কৰিছিল আৰু পৰৱৰ্তী সময়ত অসমৰ বিভিন্ন ঠাইলৈ
সামেতি সিন্ধান স্থাপাত শিবসাগৰ জিলাত খিতালি লয় কোনাস কৰিছিল আৰু কাৰাৰ কমান্তৰ্গত আন্তৰ্গত কিবসাগৰ জিলাত খিতালি লয় কোনাস নিবসাগৰ জিলাব একমান্তৰ্গত পাৰো গাঁও খন খালাব কিবসাগৰ সমাৰ কৰিব পৰা ভিতৰণ জ্বলাত বিভালত আন্তৰ্গত। শিবসাগৰ কাৰাৰ পৰা ভিতৰণ জ্বলোগী তপ মান
বান্ধীয় খাই পথেবে পূৰ্বলৈ প্ৰায় ৪০ কিঃ মিঃ অভিজন্মি পোৱা গ্ৰেপন তিনিআলিব পৰা ব্যক্তিৰ দিশে ছাছ ছাছ বিভামি

Department of Chemistry



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Department: Chemistry

DDOI/link to paper: https://doi.org/10.2166/wh.2021.267

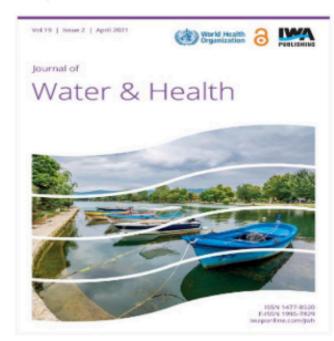
Title of paper: Nature of sorption of trivalent arsenic on novel iron oxyhydroxide stabilized

starch/OMMT composite: A mechanistic approach Name of the Journal: Journal of Water and Health Link of the Journal: https://iwaponline.com/jwh

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Volume 19, Issue 2

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ISSN 1477-8920 EISSN 1996-7829 **In this Issue**

Editorial

Nature of sorption of trivalent arsenic on novel iron oxyhydroxide stabilized starch/OMMT composite: A mechanistic approach P. Gogoi, M. Das, P. Begum and T. K. Maji ABSTRACT treatment are highly required. In this study a hybrid material (SICC) of aminated starch, oxyhydr 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 for below detects limits. All binding interactions during material preparation and arsenic sorption were exclusively characterized with FT-8F, XRD and other spectroscopic tools. A molecular modeling on the basis 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 tudied in detail. The thermodynamic parameters viz. a6 (>-11 kJ/mol), AH (42.48 kJ/mol), AS (177.6 K-1 mol-1) and E a (59.16 kJ/mol) determined the feasibility of the process, its endother 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 = 0.061) with a $q_{\rm max}=2.04$ at 303 K. The binding of Au(iii) on the material was governed by a pseudo second order kinetic model.

Key wards | chemisorption, endothermic, leasibility, hybrid material, molecular modeling HIGHLIGHTS Properties of the hybrid material were enhanced synergistically Suspended materials were negligibly small in hybrid material. Material with 10% clay loading accompanied by tronditi oxythydroxide stabilization was found Arsenic on SCC was predominantly chemisorbed accompanied by ion exchange to some extension. The sorption process was spontaneous and endothermic in nature.

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Department of Commerce



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Department: Commerce

DOI/link to paper: https://www.tojqi.net/index.php/journal/article/view/8473/6015

Title of paper: Problems and Prospects of Marketing of Assam Tea

Name of the Journal: Turkish Online Journal of Qualitative Inquiry (TOJQI)

Link of the Journal: https://www.tojqi.net/

Anil Tanti

Turkish Online Journal of Qualitative Inquiry (TOJQI) Volume 11, Issue 4, October 2020: 1174-1183

Research Article

Problems and prospects of Marketing of Assam Tea

Anil Tanti

Senior assistant professor, department of Commerce, Gargaon College, Sivasagar, Assam, E-mail: a.tanti72@gmail.com

ABSTRACT

Tea is considered one of the key export commodities for India. The state of Assam produces more than 50% tea in India. Tea Industry is played vital role in the economy of the Assam and contributing about 15 per cent of the state's total income and 3% GDP. Along with the organized sector, the production of small tea cultivation in Assam has created vast employment opportunities in the rural areas giving economic movement as well as employment generation. About three to four million people engaged in this industry and approximately 6000 crores rupees deposited into national exchequer. The consumption of tea in India in the domestic market has increased at a faster rate compared to its production. It is known from auction market official that most of the good quality tea dose not enters into the auction market and owing to this reason the price setting of tea has been low at the auction market. The study covered to evaluate the present scenario of tea market in India Including Assam and its problems and prospects in Assam.

Key Words: Export, Economy, Market, Employment, Price, Consumption

Introduction: Tea is such type of beverage which is most popular in the world and drink next to water. It plays a vital role in improving the socioeconomic condition of the state of Assam as well as India. "Assam has the largest tea growing area in the world, accounting for around one-seventh of global tea production and over 53 per cent of India's overall tea production. The tea industry of Assam is about 190 years old. According to Tea Board of India, there are 765 big tea growers with covering 232399.35 areas in hect. and 101085 numbers small tea growers with covering 10529135 area in hect. that total covers 337690.35 an area in hectares of land in Assam. It has been producing some of the finest teas in the world. Indian tea industry has recorded the highest ever production as well as exports in the financial year 2018. The total tea production was 1325.05 million kgs, — an increase of 74.56 million kgs as compared to 2016-17. In percentage terms the increase is around 6%. The total quantity of tea exported during the financial year 2017-18 stood at 256.57 million kgs, while the foreign exchange realized from exports of Indian tea was \$ 785.92 million. In rupee terms, the total value of the exports was pegged at Rs. 5064.88 crores during 2017-18, Indian Chamber of Commerce). Thus, Assam contributes a remarkable

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Department: Geography

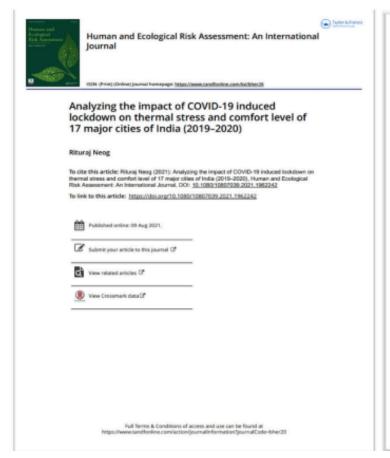
DOI/link to paper: https://doi.org/10.1080/10807039.2021.1962242

Title of the paper: Analyzing the impact of COVID-19 induced lockdown on thermal stress and

comfort level of 17 major cities of India (2019-2020)

Name of the Journal: Human and Ecological Risk Assessment: An International Journal

Link of the Journal: https://www.tandfonline.com/toc/bher20/current





Department of Geography



Department: Geography

DOI/link to paper: https://doi.org/10.1080/00167223.2022.2053999

Title of the paper: Understanding the influence of COVID-19 induced lockdown on urban

thermal environment of Ranchi city, India

Name of the Journal: Geografisk Tidsskrift Danish Journal of Geographyt Link of the Journal: https://www.tandfonline.com/toc/rdgs20/current





ment. The urban areas witnessed a dense concentratio built-up areas. The built-up areas consist of the mate such as asphalt, concrete, and brick, etc., which are cap-able of absorbing and storing solar sadiation during the daytime and releasing it gradually at night (Maithani et al., daytime and releasing it gradually at night (Maithani et al. 2020). Thus, LST rises in cities as a result of expansion of the concrete structures or the built environment. The LST me concrete structures or the built environment. is chiefly based upon land surface composition a radiation (Guha et al., 2018; Peng et al., 2016). The with dense vegetation cover develops lower LET without converte

with dense vegetation cover develops lower LST, wherea urban concrete areas develop higher LST (ii. et al., 2017). The LST is also related to the air temperature and humidity pattern of an area. There is a higher positive correlation

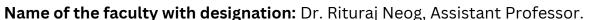
50% of the world's population resides in urban areas (Mohanta & Sharma, 2017). These effects of climate change

have become more prominent during the last 50 years as a result of rapid urhanization, innovative bethnologies, and materials for development (Parishwad and Shinker, 2017). Cities are the house of all kinds of socio-economic activities that lead to dimante change (Livingstone, 2006). The trend of climate change was preceded by urhanization and indus-trialization, which ultimately paved the way for the altera-tion of land surface temperature (9,57) and atmospheric components (Grimm et al., 2006). Rapid urhanization, land on shown and ICT make this way to the socio-processor.

use change and LST make the urban thermal environment unsuitable and uncomfortable for healthy human habita-

ion. LST is the key indicator to understand urban thermal environment. (Yao et al., 2020). The urban thermal CONTACT Rituraj Neog 🔘 rituraj neoglikingmail.com 🔘 Gargaon College, Sivasagar, India

Department of Geography



Department: Geography

DOI/link to paper: https://doi.org/10.1007/s40808-021-01294-2

Title of the paper: Understanding the influence of traffic volume on RST (road surface

temperature) in Dibrugarh city of India

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Modeling Earth Systems and Environment. https://doi.org/10.1007/s40808-021-01294-2

ORIGINAL ARTICLE



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

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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-moresoon 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 - Truffic volume - Air temperature - Relative humidity - Correlation

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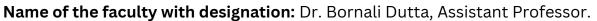
Introduction

The study of road surface temperature (RST) in urban areas has become an integral part to deal with the effects and magnitude of urban beat 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

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Department of Statistics



Department: Statistics

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Accident Deaths in India

Name of the Journal: Thailand Statistician

Link of the Journal: https://ph02.tci-thaijo.org/index.php/thaistat



Thailand Statistician January 2022; 20(1): 26-35 http://statassoc.or.th Contributed paper

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

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Abstract

Now-a-days, road traffic accident increases day by day and becomes burning problem in India. With the use of statistical methods and models it is possible to predict the future occurrence of road accident or deaths with the available data. The present study talk about the development of a exponential smoothing state space innovation model for the annual deaths due to road accident in India considering the period from 1967 to 2015 and to forecast the number of annual deaths expected to occur in forthcoming days. The researchers' collected data from National Crime Record Bureau, Ministry of Home Affairs, India. After examining all the probable models, it is observed that exponential smoothing state space model (A, A, N) is suitable for the given data set. Further, study also shows that forecasted number of deaths for the upcoming 10 years from the proposed model also reveals an upward trend.

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

1. Introduction

Technology has significant impact on transportation system. Ancient time's people are moving from one place to another on foot or by sea which is time consuming. But, due to enormous development of technology, people can easily move from one place to another by bus, train or airplane. Transportation through road is easily accessible to the common people. Further, Afere et al. (2015) also suggested that the development of all forms of trade and industry and community activities is incorporated with road transport. Due to the expansion of economic and financial condition of the people number of motor vehicles also increases which leads to overcrowding on road. Moreover, Sivakumar and Krishnaraj (2015) also state that overcrowding on road leads to traffic accident. Finally, accident creates in injury, deaths, damage to property of the victims. Sometimes, injuries causes from the accident make many people physical or mental disability. Finally, the lost due to accident adversely affect the family and the nation.