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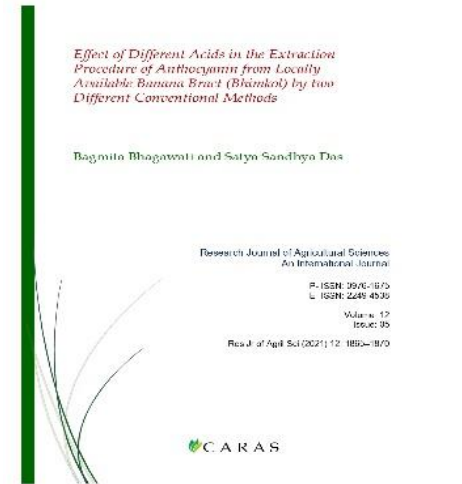
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Supporting documents related to Research Innovation, and Extension under Criterion III for

Number of research papers published per teacher in the Journals notified on UGC website is

provided as follows

3.3.2 Number of research papers published per teacher in the Journals notified on UGC website during the last five years

Sl No	Title of the paper	Link of the paper/ Supporting document
1.	Evaluation of the potential yield and associated component traits of lowland Boro rice cultivars in Assam, India	https://www.springer.com/journal/42535
2.	Transcriptomic Analysis Revealed Reactive Oxygen Species Scavenging Mechanisms Associated With Ferrous Iron Toxicity in Aromatic Keteki Joha Rice	http://dx.doi.org/10.3389/fpls.2022.798580
3 and 4	Effect of Different Acids in the Extraction Procedure of Anthocyanin from Locally Available Banana Bract (Bhimkol) by two Different Conventional Methods	 <p>Res. J. of Agric. Sci. (Sep-Oct 2021) 12(15): 1865-1870 www.rjas.org</p> <p>Effect of Different Acids in the Extraction Procedure of Anthocyanin from Locally Available Banana Bract (Bhimkol) by two Different Conventional Methods</p> <p>Bagmita Bhagawati* and Satya Sandhya Das²</p> <p>Received: 01 Aug 2021 Revised accepted: 21 Sep 2021 Published online: 19 Oct 2021 © CARAS (Centre for Advanced Research in Agricultural Sciences) 2021</p> <p>ABSTRACT</p> <p>Anthocyanin, a coloured natural pigment possesses many pharmacological activities along with various health benefits, so can be used as colourant in food and as crude in nutraceutical industry. In this study anthocyanin was extracted from banana bract of Bhimkol, confirmed by TLC and colour test. The Total Anthocyanin Content (TAC) was determined using pH-differential method and correlated by using UV-visible spectrophotometry under different extraction conditions. The findings of the study reveal that TAC is found to be 43.35 mg/200g in the studied banana bracts using 50% ethanol acidified with 3% citric acid, a naturally occurring antioxidant. The extraction conditions used in this study is mild, avoid degradation of anthocyanins and environmentally benign too. The solvents used are cheap, easily available in common laboratory and can be reused by recovering it using simple distillation technique.</p> <p>Key words: Bhimkol, Banana Bract, Anthocyanin, TLC, pH-differential method, TAC</p> <p>Banana is one of the most important and popular agricultural crop which all over the world that provides nutritious foods. Bract [1]. The banana bract or banana sheath, also known as banana bract or banana leaf sheath is a bract of banana plant. The central-axial part (core) of banana flower are used in the preparation of variety of dishes in our country whereas, the peripheral or inner bract (sheath) are generally disposed off after harvesting the banana plant. Different research groups have investigated the presence of different type of pigments in banana bract by using conventional and HPLC chromatography [2-4] revealed that the colors of bract are due to the presence of polyacylated anthocyanidin pigments. Anthocyanins are the subclasses of flavonoid which belong to the phenolic group having a flavanone skeleton. They are the most abundant natural pigments in vegetables and fruits. They are also known as natural food colorant derived from variety of edible sources in which as they have antioxidant and antimicrobial properties and possessing without health benefits. They show important pharmacological activity due to the presence of certain beneficial phytochemicals. It is reported that natural food colorants are more expensive than synthetic ones, with a</p> <p>* Bagmita Bhagawati 1. Centre for Advanced Research in Agricultural Sciences 2. Department of Chemistry, Pragathi College, Guwahati-781006, Assam, India</p> <p>Research Journal of Agricultural Sciences An International Journal P-ISSN: 0970-1870 L-ISSN: 2484-4539 Volume: 12 Issue: 15 Res. J. of Agric. Sci. (2021) 12: 1865-1870</p> <p>CARAS</p> <p>Full Length Research Article</p> <p>CARAS</p>

5. A crowdsourced global data set for validating built-up surface layers,

scientific data

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OPEN

DATA DESCRIPTOR

A crowdsourced global data set for validating built-up surface layers

Linda See^{1,2,3}, Ivelina Georgieva⁴, Martina Duerauer⁵, Thomas Kemper⁶, Christina Corbane⁷, Luca Maffenini⁷, Javier Gallego⁷, Martino Pesaresi⁷, Flavius Sirbu⁸, Rehib Ahmed⁹, Kateryna Blyshchuk⁹, Brigitte Magori⁹, Volodymyr Blyshchuk⁹, Oleksandr Melnyk⁹, Roman Zadorozhniuk⁹, Marian-Trajan Mandicic⁹, Yuan-Fong Su¹⁰, Ahmed Harb Rabiaa¹¹, Ana Pérez-Hoyos¹², Roman Vasylyshyn¹³, Chandra Kant Pawe¹⁴, Svitlana Bilous^{15,16}, Serhii B. Kovalevskyi¹⁷, Sergii S. Kovalevskyi¹⁸, Kusumbor Bordoloi¹⁹, Andrii Bilous²⁰, Kripal Panging²¹, Valentyn Bilous²², Reinhard Prestele²³, Dhrubajyoti Sahariah²⁴, Anjan Deka²⁵, Nityarajan Nath²⁶, Rui Neves²⁷, Viktor Myroniuk²⁸, Mathias Kerner²⁹ & Steffen Fritz²⁹

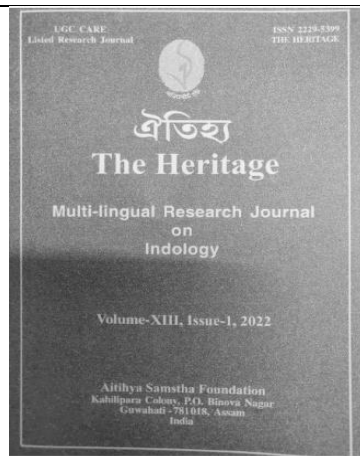
Several global high-resolution built-up surface products have emerged over the last five years, taking full advantage of open sources of satellite data such as Landsat and Sentinel. However, these data sets require validation that is independent of the producers of these products. To fill this gap, we designed a validation sample set of 50 K locations using a stratified sampling approach independent of any existing global built-up surface products. We launched a crowdsourcing campaign using Geo-Wiki (<https://www.geo-wiki.org/>) to visually interpret this sample set for built-up surfaces using very high-resolution satellite images as a source of reference data for labelling the samples, with a minimum of five validations per sample location. Data were collected for 10 m sub-pixels in an 80 × 80 m grid to allow for geo-registration errors as well as the application of different validation modes including exact pixel matching to majority or percentage agreement. The data set presented in this paper is suitable for the validation and inter-comparison of multiple products of built-up areas.

Background & Summary

At present, around 35% of the world's population lives in cities, which is predicted to increase to 68% by 2050¹. Cities are currently responsible for between 71–76% of global CO₂ emissions and they consume 67–76% of the world's energy despite taking up only a small share of the Earth's land surface². With the effects of climate change (i.e., urban heat islands, sea level rises and increases in the frequency and magnitude of extreme events), cities are even more vulnerable as many are located on the coast or on the floodplains of major rivers^{3,4}. Mapping the location of urban areas is increasingly important for high resolution climate modelling⁵, for climate change

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16 Assessment of Inter District Disparity in maternal and Child Health in Assam: Evidence from the National family Health Survey (NFHS)-5(2019-20)



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ASSESSMENT OF INTER-DISTRICT DISPARITY IN MATERNAL AND CHILD HEALTH IN ASSAM : EVIDENCE FROM THE NATIONAL FAMILY HEALTH SURVEY (NFHS)-5 (2019-20)

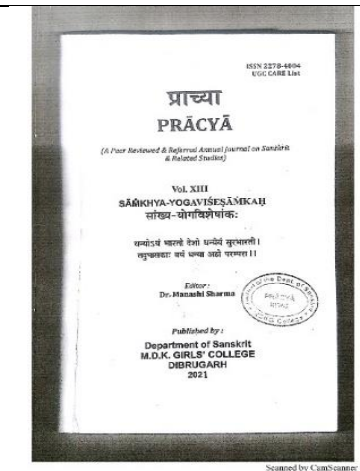
Ira Das
Dept. of Economics, Praggyoth College, Gauhati, Assam

Abstract: Maternal and child healthcare is defined as the health service provided to mothers and children. In this paper, an attempt has been made to analyze the inter-district disparity in maternal and child health in Assam on the basis of the recently published NFHS-5 report. Whether there is any change in maternal and child health status of different districts over a period of time is also examined in the paper. It is found from the study that Shivasagar, Dibrugarh, Jorhat, Nalbari and Kamrup districts are the five well performing districts regarding maternal and child healthcare and West Karbi Anglong, Chokor, Jhalakandi, Kokrajhar, and Sonitpur districts are found as the five worst performing districts in the state. Although some socio-economic parameters affecting the maternal and child healthcare have shown improvement in most of the districts, the most shocking fact is that anaemic children and mothers have increased significantly during the study periods in all the districts in Assam.

Key words: Districts in Assam, maternal and child health, NFHS, inter-district disparity, socio-economic parameters

INTRODUCTION
There is an increasing concern and interest in maternal and child healthcare throughout the world, especially in the developing countries. According to International Covenant on Economic, Social and Cultural Rights (ICESCR), the health, encompassing reproductive and government need to take the necessary actions for better maternal and child health as according to United Nations Economic and Social Council, 2000, "Investing in the health of women and children is a vital part of the right to the highest attainable standard of health, encompassing reproductive and child health care".

17 Concept of Moksha in Samkhya Philosophy: A Study in the Light of Samkhya Karika



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Concept of Moksha in Sāṅkhya Philosophy
A Study in the light of Sāṅkhya Kārikā

Kabita Doloi

Sāṅkhya philosophy promotes the metaphysical dualism between Prakriti and Puruṣa. The idea of dualism is the fundamental category of Sāṅkhya system. According to Sāṅkhya philosophy the world is not created by God, but by the interaction between Prakriti and Puruṣa. Prakriti elaborately discusses the three kinds of pain namely sāttvika, rājasa and tāmasika. According to it by overcoming these three types of suffering an individual may be liberated in his life. To fulfil this purpose one must have right knowledge about the determination of Prakriti and Puruṣa. Sāṅkhya system considers salvation or moksha as only phenomenal, because it holds that bondage does not belong to Puruṣa. Actually, Prakriti does not bind Puruṣa, but it binds itself in various shapes. Puruṣa is regarded as entirely free from the operations of merit and demerit. If there are the objects which conceal the real nature of Puruṣa or soul, no one can attain liberation. But when Prakriti stops to act and as a result the modifications of intellect also come to an end and then the Puruṣa assumes its natural form.

Keywords: Sāṅkhya, Prakriti, Puruṣa, moksha.

Introduction:
Sāṅkhya philosophy is one of the ancient Indian philosophical schools. Sāṅkhya system mainly gives importance on the relation between Puruṣa and Prakriti. Kapila is the founder of Sāṅkhya system and his Sāṅkhya-Sūtra is the first work of this system. Again, The Sāṅkhya-


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Understanding Puranic Goddesses of Early Assam
 Dr. Gulzar Ahmed

Abstract: The study aims to understand the role of Puranic goddesses in the religious system of Assam. It traces the evolution of Puranic goddesses from their early forms in the Vedas to their later forms in the Puranas. It also discusses the role of Puranic goddesses in the religious system of Assam.

Introduction
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Conclusion
 The study concludes that Puranic goddesses played a significant role in the religious system of Assam. They were worshipped as deities and their worship was an integral part of the religious system of Assam.