Int.J.Curr.Microbiol.App.Sci (2020) 9(6): 3781-3786

International Journal of Current Microbiology and Applied Sciences
ISSN: 2319-7706 **Volume 9 Number 6 (2020)**
Journal homepage: http://www.ijcmas.com

Original Research Article https://doi.org/10.20546/ijcmas.2020.906.448

Infection Dynamics of Helminth Parasites in the Silver Carp, *Hypophthalmichthys molitrix* with Reference to Season

G. P. Thakur*, A. N. Jha and B. S. Jha

Department of Zoology, L.N. Mithila University, Darbhanga- 846008, India

**Corresponding author*

Keywords

Helminth parasites, Seasonal variations, Silver carp

Article Info

Accepted:
26 May 2020
Available Online:
10 June 2020

A B S T R A C T

The present study, carried out from September 2018 to August 2019, reports the seasonal fluctuations in the intensity of infection level of helminth parasites in the silver carp, *Hypophthalmichthys molitrix*, reared along with native carps in ponds and other water bodies of Darbhanga , Bihar, India. The host fish were found to parasitize two monogenean ecto-parasites, *Dactylogyrus vastator* (in gill & skin) and *Gyrodactylus elegans* (in skin); one cestode (*Bothriocephalus acheilognathi* in intestine) and one nematode (*Camallanus ophiocephali* in stomach). These parasites revealed seasonal fluctuations in their prevalence percentage, mean intensity and abundance. The overall highest prevalence and abundance were of *Dactylogyrus* (54% and 0.064) followed by *Gyrodactylus* (5% and 0.06) *Bothriocephalus* (3.9% and 0.05) and *Camallanus* (3.3% and 0.05). However, the mean intensity was highest for *Camallanus* (1.5) and lowest (1.18) for *Dactylogyrus*. The highest prevalence and abundance of the parasites were recorded during summer (June-Aug) followed by spring (Mar-May) and autumn (Sept-Nov) and lowest in winter (Dec-Feb) seasons. The winter months did not show infection of any parasites except *Dactylogyrus* which was also minimal. The observed seasonal fluctuations have been attributed to physico-chemical parameters, especially temperature, feeding habits and lifecycle patterns of the parasites.

Introduction

Fishery sector has received due attention of the Govt. and scientific communities during the past few decades in our country. This sector besides providing cheap source of protein has become a source of livelihood for some 14 million people of socioeconomically backward sections and has substantial contribution to the national economy by earning revenue in foreign exchange through export. The efforts taken by the stakeholders of this sector have increased fish production manifold from just 0.75 million tonnes in 1950-51 to 9.04 million tonnes in 2012-13 (Baruah *et al.*, 2015) and 13.7 million tonnes in 2018-19 (The Economic Times, July, 04, 2019). Though a target of 20 million tonnes of fish production by the year 2022 has been set by the Govt. of India (Union Budget, 2020-21), yet this will leave a major gap when compared to growing fish demand.

Even this set target seems very difficult to achieve due to various natural and other constraints faced by this sector. One such important factor is the parasitic infections in fishes which deteriorates their food value and

BIOJOURNAL, DECEMBER - 2021 Vol-16, No.: 1&2
ISSN : 0970 - 9444

MATHEMATICAL GOLDEN RATIO: AGEING MANIFESTATIONS

Bhaweshwar Singh and B. S. Jha
University Department of Zoology
Lalit Narayan Mithila University,
Darbhanga846008 (India)
email:bhaweshwar.singh@gmail.com

Received: 25-7-2021 ***Accepted: 28-8-2021***

ABSTRACT

Recent gerontological studies establish key role of unidirectional ageing in maturational development followed by subsequent functional decline and inescapable death. Senescence- engineered homeostatic disturbances invariably lead to age-associated diseases and dysfunctions with increasing age. Death essentially reflects metabolic events culminating into 'Disorder out of Order'. Definitive pattern in the progression of biological processes in the life of ageing individuals is seemingly poorly understood.

On the other hand, a mathematical Golden Ratio also described as Divine Proportion and depicted by a Greek letter Phiis an irrational number (1.6) seen capable of maintaining balance in natural images and living forms including human body parts such as face, hands and feet. Golden Ratio applications in architectural designs, paintings etc. add to aesthetics and reaffirm its socio-biological implications.

The present paper summarily reviewsbiogerontological relevance of Golden Ratio in the given perspective of high incidence of disabilities and diseases during middle to end of life as a fall out of possible homeostatic and apoptotic instabilitiescontrary to less vulnerable birth-to-puberty age transition in human subjects.

Keywords: *Golden Ratio, Divine Proportion, Ageing, Senescence, Biogerontological*

INTRODUCTION

Biogerontologists have prioritised studies on human longevity in recent years with a view to understand the underlying patterns of unidirectional ageing. An insight into age-specific characteristics atsuccessive stages of the life span has helped a great deal in elucidating physiobiochemical intricacies of senescence-mediated dysfunctions and disabilities accompanying late age. Contrary topre-adulthood progressive ageing ensuring optimized maturational growth and development, post-adulthood degenerative ageing culminates in inescapable homeostatic perturbationsand subsequent functional disabilities.

It seems a matter of great interest to discuss ageing manifestations of the unique Golden Ratio, known to exist in natural objects, human artsand crafts and most strikingly in living systems. It is in this perspective that the presentpaper has been conceptualised. Primarily it attempts toreview biogerontological relevance of Golden Ratio in the given perspective of high incidence of disabilities and diseases during middle to end of life, in every likelihood,marred with inescapable interventions of homeostatic and apoptotic instabilities contrary to less vulnerable birth-to-puberty age transition in human subjects.

GOLDEN RATIO: THE MAGICNUMBER

Golden Ratio (GR) also described as Divine Proportion and depicted by a Greek letter Phi is an irrational number (1.6) seen capable of maintaining balance in natural images and living forms including human body parts such as face, hands and feet. Quite notably, GR describes predictable patterns of in the texture of diversified objects ranging from atoms to huge stars in the sky. The ratio has been derived from Fibonacii sequence and named after its Italian founder,Leonardo Fibonacii. GR was reportedly used for the first time by Martin Ohm (1792-1872). More appropriately, a Golden Ratio of 1.61803394 and roughly denoted as 1.6 maintains order or symmetry of natural or man-made objects.Golden Ratio applications in architectural designs, paintings etc. add to aesthetics and reaffirm its socio-biological implications.

BIOJOURNAL, DECEMBER - 2021 Vol-16, No.: 1&2
ISSN : 0970 - 9444

OBESITY - RELATED ALTERATIONS IN HAEMATOCRIT AND HAEMOGLOBIN CONCENTRATIONS IN OLDER ADULTS

Chaman Ara and Bhaweshwar Singh*
University Department of Biotechnology
* University Department of Zoology
Lalit Narayan Mithila University.
Darbhanga, Bihar (India)
email:chamanara2002@gmail.com

Received: 25-7-2021 ***Accepted: 20-9-2021***

ABSTRACT

Late age confronted with senescence-mediated decrements and disabilities isthought to be the most vulnerable phase of life. Ageing biologists perceive accompanying obesityas potential risk for cardiovascular complications.

In the present study aimed at assessing the possible role of increasing age and obesity in modulating blood vascularity and haemoglobin functionality, Haematocrit(%) and Haemoglobin(gm %) were estimatedusing Haematology Analyzer in the selected age groups(50-59,60-69,70-79 and ≥ 80 years) of randomly sampled older adults(n=360)from both the sexes (AgeRange:50-98 years)inhabiting Darbhanga and its suburbs.Datain respect of four BMI-linked obesity groups (Underweight, Normal Weight, Overweight and Obese) indicated a general trend of overall significant decline in the observed values with increasing age and obesity which might beattributed to altered physiobiochemical perturbations.

The paper primarily attempts to elucidate underlying homeostatic compulsions and haematopoietic implicationsand suggests low fat diet and moderate to high physical activity in late life.

KeyWords: *Age, Ageing, Obesity, Haematocrit, Haemoglobin, Cardiovascular*

INTRODUCTION

Optimization of senile health is probably the greatest challenge before geriatricians aslate age confronted with senescence-mediated decrements and disabilities is probably the most vulnerable phase of human life. It is an established fact that unidirectional ageing is governed by both intrinsic and extrinsic factors. In contrast to chronologicalage perceived as a non-modifiable risk factor, anumber of variablerisk factors of modifiable nature make space for multiple age-associated diseasesenhancing morbidity and mortality manifold. Quite pertinently, weight gain is considered an essential determinant of maturational growth and developmental ageing and is believed to be accomplished by proportionate increases in muscle mass, bone weight and adiposity. To the contrary, disproportionate and damaging obesity generally seen for the first time in middle-aged population with sedentary life style and unhealthy feeding behaviourcontinues to worsen amongst the 'Aged lot' and is perceive as potential risk for a number of age-associated diseases and dysfunctions namely hypertension, diabetes and cardiovascular complications (Singh et al., 2017; Dilman *et al.*, 1989; Volgman *et al.*, 2018, Kumar and Das, 2018). Published data are also suggestive of maximum prevalence of coronary heart disease(CHD) in overweight and obese subjects in the age range of 50-59 years (Singh *et al.*, 2015) and increased risk of aging-associated diseases including cardiovascular disease(CVD) in subjects with high blood pressure, cholesterol, overweight/obesity, diabetes etc. (Costa et al., 2015).

In consideration of facts noted above, we may arrive at a pragmatic speculation that disastrous obesity has devastating impact on one and all developmental parameters including physiologically significant blood constituents and haematologic indices of enormous clinical

BIOJOURNAL, DECEMBER - 2021 Vol-16, No.: 1&2
ISSN : 0970 - 9444

META-ANALYSIS AND SYSTEMATIC REVIEW OF GENETIC VARIANTS ASSOCIATED WITH TYPE 2 DIABETES MAY PROVIDE NOVEL INSIGHTS INTO THEIR RELATIVE ROLES IN ETIOLOGY OF T2DM

[1]Kali Charan Mishra, [2]Putul Banerjee, [3]Parul Banerjee [3*]B. S. Jha
[1]Department of Zoology, MRM College, Darbhanga, Bihar
[2]Department of Zoology, St Josephs College, Bangalore, Karnataka
[3]University Department of Zoology, LN Mithila University, Darbhanga, Bihar
*Corresponding author email id: bsjha19@gmail.com

Received: 25-7-2021 *Accepted: 20-9-2021*

ABSTRACT

Diabetes mellitus (DM) is a chronic metabolic disorder characterized by persistent hyperglycemia (raised blood glucose levels). It is essentially a complex trait with several genes and environmental factors playing a role in its manifestation. Among all its types, type 2 diabetes mellitus, T2DM is most prevalent. In T2DM, the response to insulin is diminished, and this is defined as insulin resistance. The scientific literature is replete with case-control association and GWA studies for identification of markers associated with DM, especially T2DM. Despite a large number of variants discovered using GWAS, the associated variants in total, explains only a small proportion (~10%) of the heritability of T2DM. Optimal power is very important in finding new disease genes. Increased power may be achieved by combining datasets. Meta-analysis is a set of methods that allows the quantitative combination of data from multiple studies. This review attempts to throw light on the importance of meta-analysis in not only identification and establishment of newer genetic variants, but also in unearthing the relative importance of the genetic variants associated with T2DM.

Key Words : *Diabets mellntis T2DM, Case Conted assoiation Studies GWAS, SNPS Mite analiysis.*

DIABETES MELLITUS (DM)

Diabetes mellitus (DM) is a chronic metabolic disorder characterized by persistent hyperglycemia (raised blood glucose levels). While glucose is central to energy consumption and serves as the primary metabolic fuel of mammals, its raised levels in the blood can cause quite a few woes in the body. The cause of raised blood glucose is the inability of glucose to gain entry inside the cell. As a result whilst the cells are glucose starved, the blood has elevated levels of glucose. Apart from being the major energy source, primarily responsible for the generation of ATP through oxidative phosphoryrlation, glucose also serves as the major precursor for the synthesis of different sugars like glycogen, ribose, and deoxyribose, galactose, glycolipids, glycoproteins, and proteoglycans. Therefore, glucose deficit inside the cell and elevation in the blood can cause several functionings of the body to go awry (Sapra and Bhandari , 2021; Goyal and Jialal 2021).

The hormone responsible for causing the entry of glucose into cells is insulin. Deficiency of insulin or its incapability to cause the entry of glucose inside cells or insensitivity to insulin owing to reduction in insulin receptors can therefore lead to high blood glucose levels. Thus the possible causes of diabetes mellitus may be impaired insulin secretion, resistance to peripheral actions of insulin or in some cases both. While these are the ultimate causes, the proximate causes may be different and sometimes with no possible ethiologic association with the condition (Sapra and Bhandari , 2021; Goyal and Jialal, 2021).

TYPES OF DM

DM is essentially a complex trait with several genes and environmental factors playing

BIOJOURNAL, DECEMBER - 2020 Vol-15, No.: 1&2 Page No. :19-31
ISSN : 0970 - 9444

REVIEW ARTICLE
SARS Cov-2 PANDEMIC AND ITS EFFECT OH THE WAY RESEARCH IS PERCEIVED AND CARRIED OUT WITH SPECIAL EMPHASIS ON BIOLOGICAL RESEARCH

Parul Banerjee
University Dept. of Zoology
Lalit Narayan Mithila University, Kameshwaranagar, Darbhanga
Email: parulputul@gmail.com

Received: 02.11.2020 **Accepted:05.12.2020**

ABSTRACT

The Covid era has brought with itself several changes, a number of which reach far beyond the contagion. Thanks to modern technologies, the work from home culture has emerged and is here to stay. However, the most pertient question is, can science be advanced during this time, with the numerous limitations. Will the continuum commanded in science be maintained during this pandemic? The answer is yes, as a whole new world of 'dry laboratory work' has emerged which does not require mixing of chemicals or operation of sophisticated machines, especially in the field of biological sciences. Thanks to latest technology, not just the amount, but the nature of data generated is incredibly diverse and there is a need to annotate and suitably analyze the gargantuan data. At this time the field of bioinformatics comes to our rescue. Studying the genome, looking at the coding regions (also sometimes the non coding ones), comprehending regulation, transcriptomics, understanding protein structure and functioning (proteomics) etc can be carried out comfortably if one is well versed with the required programmes and softwares. Further, dry laboratory work can be hauled deeper and employed to understand metabolomics and drug designing which can pave way for coming up with customized medicines. Thus, tagging knowledge of molecular biology with a sound know-how of bioinformatics is the need of the hour and this review attempts to touch upon the myriads of applications of bioinformatics, which does not require a laboratory setting.

Keywords: SARS- Cov-2 pandemic, work from home, dry laboratory work, bioinformatics.

SARS- Cov-2, ITS MENACE AND THE VIRAL INFLUENCE BEYOND THE CONTAGION

The severe acute respiratory syndrome coronavirus (SARS Cov-2), responsible for the spread of COVID -19 infection has adequately expounded that immensity and huge assortment of artillery are not absolute requirements for waging a war. Perchance, our tryst with the virus should not be called a war at all as the skirmishing parties do not have equal arms! There is definitely a fight and calamities have been there on both sides (we suffer, so do they die in the face of not being able to find a host to be inside), but we are yet to come up with a weapon to shoot them all at once or in huge numbers and they seem to be knowing exactly how to go about the attack! In perhaps the shortest span of time, the virus has spread around the world, taking pandemic proportions (Q Li, 2020, *The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team, 2020*). Viral infections are not uncommon, however, the covid outbreak is comparable to the deadly Spanish Flu pandemic of 1918 which claimed an estimated twenty million to fifty million lives (Petersen and Koopmans, 2020, Javelle and Raoult, 2020). As there are no indications of the abatement of viral spread, it is even speculated that the number of infected individuals may cross the figure set by spanish flu (Faust and Lin, 2020). Trials for the development of vaccines are in full swing around the globe, as the virus trots the world jumping from lung to lung refusing to call it a day.

Social distancing (WHO 2020, Margakis, 2020), seems to be the only means we have to contain the spread of virus. Therefore, in the past few months, a new order has emerged, that of lockdowns, confinements and containments and there is no way around the problem before the development of a vaccine. The only means is to isolate the infected and the virus that he/she carries within and preventing it from landing upon greener pastures. Alas! We are social beings

BIOJOURNAL, DECEMBER - 2021 Vol-16, No.: 1&2
ISSN : 0970 - 9444

TOTAL SERUM CHOLESTEROL CONCENTRATIONS IN MIDDLE-AGED AND GERIATRIC POPULATION OF DARBHANGA, BIHAR

Shazia Zafar and Bhaweshwar Singh
University Department of Zoology
Lalit Narayan Mithila University.
Darbhanga, Bihar (India)

Received: 25-7-2021 ***Accepted: 27-9-2021***

ABSTRACT

Recent global trend of elderly living with multiple age-associated diseases and dysfunctions is disheartening. Comorbidities accompanying late life adversely affect the quality of life.Attainment of optimised healthin late life could be achieved by reducing the burden of disabilities and diseases.Previous gerontological studies related to disease prognosis and premature death risks indicate hypercholesterolemia as a major threat to cardiovascular health.

Keeping in mind increased proneness to metabolic disorders in middle-aged subjects, Total Serum Cholesterol concentrations(mg/dl) were estimated using standardized techniques in randomly sampled human subjects (n=460) from both the sexes residing in Darbhanga, Bihar. Relatively less concern and care for personal health, less time for physical exercise and appetite for high calorie fast food recipes could be thought to have led to higher Mean values in overweight/obese category under the 45- 59 years age bracket contrary to normal weight subjects. Markeddecline in recorded mean valuesin 59-75 years age interval might be attributed to diminished adiposity, muscle mass and bone weight on account of altered food behavior depicting general preference for low fat vegan diet.

Key Words: *Ageing, Obesity, Total Serum Cholesterol, Cardiovascular, Hypercholesterolemia*

INTRODUCTION

Late life with multiple comorbidities appears to be full of discomfort. Quality of life of older adults with age-induced dysfunctions is admittedly very poor. Ageing biologists believe that decelerative interventional impact of inescapable senescence conspicuous in senile population becomes visible in a sizeable number of middle-aged segments also, in every likelihood, attributable to erratic life pattern and food behavior. Attainment of optimized geriatric healthcould be achieved by planning judicious strategies for reduction ofrisk of disease burden in pre-senility as well as reduction of actual disease burden in late life.

Quite notably, increasing obesity with advancing ageisgenerally perceived toaffect the wellness in senility whichis very oftenidentified asthe phase of life confronted with chronic and uncompromising disabilities. Hypercholesterolemia is believed to cause diverse age-associated metabolic diseases including cardiovascular complications (Costa *et al.*, 2015)and often raises premature death riskin human population (Weverling-Rijsburger,1997).Published data areindicative of body weight, visceral adiposity and overall obesity having some definitive role in enhancing morbidity and mortality risk of cardiovascular diseases, diabetes, arthritis and high Blood Pressure (Dilman,1989; Must *et al.*,1999 and Dagenais *et al.*,2005). In the given backdrop, 'Age and Obesity Duo'seems to act as adeterminant of cluster of metabolic syndromes of late age.Taking into considerationsuggestive increased vulnerability of middle-aged population to disease and death, the present study aimed at estimating Total Serum Cholesterol concentrations in chosen obesity groups was undertakento investigatethe possible pathophysiologic role of this blood serum constituent in influencing the pattern of the unidirectional ageing and senescence. The work undertaken appears to be of immensebiogerontological significance in the light of recent observationssuggesting direct correlation of Total Cholesterol and its fractions with high prevalence of coronary heart disease

Variation in Amino Acids Composition in Exotic Major Carps in Darbhanga Region.

Rajesh[1] and Shishir K. Verma

[1]Research Scholar, University Department of Zoology

Lalit Narayan Mithila University, Darbhanga, Bihar

Email: rajeshrids@yahoo.in

Abstract: The present study relates to amino acids composition in three species of exotic major carps *i.e.* **Silver carp (*Hypopthalmichthysmolitrix*), Common carp (*Cyprinuscarpio*) and Grass carp (*Ctenopharyngodonidella*)** in Darbhanga region. **Silver carp**, a freshwater species, mainly feeds on Phytoplankton and occasionally Zooplankton. **Common carp** live in the middle and lower streams of rivers and in shallow confined waters, such as lakes, water reservoirs and thrives well in warm water condition. This species is known to be omnivorous. **Grass carp** is a sub-tropical-to-temperate species and herbivorous in nature. Analysis for amino acids content was done by following AOAC, 2001. The initial studies suggests that protein content was maximum in Silver carp basically a herbivore with occasional intake of Zooplanktons. Maximum number of amino acids were recorded from Silver carp followed by Grass carp and Common carp respectively. Further investigation suggests that Lysin, Isoleucin, Phenylalanine, Valine, Tryptophan and metheonine was common in Silver carp and Grass carp through out the studies. In Common carp amino acids like Arginine, Leucin, Metheonine and threonine were most common. This clearly suggest that Protein/amino acids comparison of fish depend on feeding habits of fish. Further investigation in this regard is underway.

Keywords: Essential amino acids, Exotic carps, Phytoplankton, Zooplanktons, Feeding habits.

IOSR Journal Of Pharmacy And Biological Sciences (IOSR-JPBS)
e-ISSN:2278-3008, p-ISSN:2319-7676. Volume 16, Issue 2 Ser. II (Mar. – Apr. 2021), PP 09-13
www.Iosrjournals.Org

Variation in Proximate Composition of Moisture, Proteins and Fat in Three Exotic Major Carps

Rajesh,[1] Shishir K. Verma[2]
[1](University Department of Zoology, LNMU, Darbhanga, Bihar, 846004)
[2](University Department of Zoology, LNMU, Darbhanga, Bihar, 846004)

Abstract: *The present study relates to proximate composition with reference to moisture, protein and fat in three species of exotic major carps i.e.* ***Silver carp (Hypopthalmichthys molitrix), Common carp (Cyprinus carpio) and Grass carp (Ctenopharyngodon idella)*** *in Darbhanga region.* ***Silver carp*** *is a freshwater species living in temperate conditions (6-28°C) and mainly feeds on Phytoplankton and occasionally Zooplankton.* ***Common carp*** *live in the middle and lower streams of rivers and in shallow confined waters, such as lakes, water reservoirs and thrives well in warm water condition. This species feed all type of content present in water bodies and known to be omnivorous.* ***Grass carp*** *is a sub-tropical-to-temperate species and herbivorous in nature. Analysis for moisture, proteins and fat content was done by following AOAC, 2000. The initial studies suggests that moisture content was maximum in silver carp followed by Grass carp and Common carp (76.5±1.36, 74.1±3.59, 70.3±1.34 respectively). Similaraly Protein content was maximum in silver carp followed by common carp and grass carp i.e. (16.3±1.33, 13.4±0.55, 12.1±3.14 respectively). However fat content reflected variable trend being maximum in common carp (6.1±0.49) followed by grass carp (5.9±1.06) and minimum in silver carp (4.0±1.06). It appears that the present proximate composition in fish flesh relates to the feeding habit of fishes. Further studies in this regar is under way.*

Keywords*: Proximate, feeding habits, exotic major carps.*

Date of Submission: 20-03-2021 Date of Acceptance: 04-04-2021

I. Introduction

Fish meat is a stapled food item due to it's importance both nutritionally and medically. Fish is easily digestible because of short muscles and deficiency of scleroprotein and elastin (Cirkovic *et al.*, 2012). Protein of fish is more beneficial for human health and it has free amino acids (Buchtova *et al.*, 2010). The nutrient quality is dependent on their kind of food and feeding behaviors. Watermann (2000) conducted a research on the proximate composition of fishes and explored that the measurement of proximate contents like protein, carbohydrates, lipids, moisture and ash contents is often necessary to ensure that they meet the requirements of food regulations and commercial specifications. Every component of the body works as good indicator for specific contents (Chatta *et al.*, 1993). Moisture content and water indicates its energy contents relatively such as lipids and protein, in other words water is inversely proportional to these two such as lower percentage of water mean a greater amount of lipids as well as protein and vice versa (Anthony *et al.*, 2000). However, these are not fixed values as they differ considerably, inter specifically and intra specifically. It also varies on the basis of age, size, physical activity, feeding season, reproductive status, fishing season and sexual condition (Deegan, 1986). Fishes also have an organoleptic values on account of its taste, high growth upholding values and is easily digestible (Bowman and rand, 1980). Fish gained high attention due to its effectiveness in cancer, heart ailment, wound healing and prolonging life expectancy studied by Buchtova *et al.* (2010), Cirkovic *et al.* (2012), Deegan (1986), Dhanpal *et al.* (2011) and Jhingran and Pullin (1985)

Hypophthalmichthys molitrix commonly known as Silver carp, is a warm water fish. Frimodt in 1995, points out that this species is famous for being consumed. Silver carp can resist against disease, stress and it develops more rapidly. This fish is highly producable, because of its ability to survive under rough environment. Silver carp is commonly produced with some other Asian carps including *Catla catla* in polyculture (Kolar *et al.*, 2005). The average length of silver carp is 60-100 cm. While its maximum length is 140 cm and can attain a weight upto 50 kg (Maccracken, 2016). This carp is filter feeder and possess a particular device for feeding which may filter even tiny particles measuring of 4 µm. Willink in 2009 studied that its food include Zooplankton and detritus.

Cyprinus carpio populary known as Common carp is a fresh water exotic major carp. According to Tokur *et al.* (2006), Common carp became wide spread throughout the world due to its rapid growth and easy farming. Kim *et al.* in 2001 explained that common carp is economically important fish for stock enhancement. The *C. carpio* is cyprinid fish and live in medium or lower zone of water in rivers and ponds. Their habitations

MICROPLASTICS IN THE SEDIMENTS OF POND IN DARBHANGA REGION

Rakhi Kumari and Shishir K. Verma

Inland Fish and Fisheris Laboratory

University Department of Zoology

L.N.M.University,Darbhanga,846004

ABSTRACT: Microplastics (MPs), a small fragments of plastic which is less than 5mm in size have been detected globally in a wide range of environmental compartments. The number of studies in this area is rapidly increasing, because of small size microplastics have been proved to be a threat to flora and fauna in all aquatic bodies in form of potential aquatic pollutant. The present study focuses on the contamination of sediments samples of one of the largest ponds in Darbhanga region from microplastic.The study includes sediment samples of pond, finding suggests that pond reasonably contaminated with plastic materials in form of Fibres (24-29/m^3), film (4-8/m^3), fragments (4-8/m^3), Coloured (11-15/m^3). The main source of plastic were find to be primarily due to domestic waste flows and secondarily from the materials disposed around the pond. The study needs further ellaborate investigation which is being persued.

KEYWORDS: Microplastic, Emerging pollutants, Plastic debris, Darbhanga pond

INTRODUCTION: In the last decade, environmental problems caused by microplastics have been at the center of scientific interest. MPs have been detected globally in a wide range of environmental compartments. The number of studies in this area is rapidly increasing, especially regarding marine environments, but the focus on freshwaters is moderate compared to oceans and seas. Mechanical/biological fragmentation of plastic polymers such as Polyamides (PA) or Nylons, Polycarbonate (PC), Polyester (PES), Polyethylene (PE), High-density polyethylene (HDPE), Low density polyethylene(LDPE), Polyethylene terepthalate (PET), Polypropylene (PP), Polystyrene (PS), Polyurethanes (PU), Polyvinyl chloride (PVC) leads to the formation of microplastics (<5mm) (Thompson *et. al.*, 2004; Halle *et. al.*, 2016).

Microplastics, generally defined as plastics less than 5 mm diameter, are formed through the breakdown of macroplastics or sourced from the abrasives used in cosmetics and blasting media and are of increasing environmental concern (Thompson *et. al.*, 2004., Fendall and Sewell, 2009., Browne *et. al.*, 2010, 2011). Due to the durability of plastic and its persistence in environments (Sivan, 2011), pelagic microplastics have accumulated steadily (Carpenter and Smith, 1972), and are now noted as an ubiquitous contaminant of the world's oceans (Derraik, 2002., Barnes *et. al.*, 2009) as well as fresh water bodies (Eerkes-Medrano *et. al.*, 2015) Microplastics represent a threat to biota because their small size makes them bioavailable to organisms throughout the food web (Betts, 2008; Thompson *et. al.*, 2009a., Wright *et. al.*, 2013b).Microplastics can also enter rivers and lakes through surface runoff and atmospheric deposition (Dris *et. al.*, 2017). An example is the large amount (with a maximum abundance of 660 units. kg-1) of large-size (1-4 mm) microplastics in sediments downstream of storm drainage outlets that input into the Thames River, UK. After being washed away by rainwater, the microplastics were eventually deposited in the sediments of the Thames River (Horton*et. al.*, 2017). In addition, Klein

IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT)
e-ISSN: 2319-2402,p- ISSN: 2319-2399.Volume 15, Issue 10 Ser. II (October 2021), PP 23-26
www.iosrjournals.org

Microplastic in Freshwater Fish Culture Pond of Darbhanga

Rakhi Kumari and Shishir K. Verma
Inland Fish and Fisheries Laboratory
University Department of Zoology
L. N. M. University, Darbhanga, 846004

Abstract: *Plastic, a synthetic organic chemical product, is being reasoned as one of the most important aquatic pollutant. The present communication deals with assessment of one of the largest fish culture pond of Darbhanga town from microplastics contamination (Less than 500μm in size) point of view is surface water samples. Findings suggests that the pond reasonably contaminated with plastic materials in form of fibre (51-55/m³), film (32-34/m³), foam (0-2/m³), Fragments (29-33/m³) and beads(0-2/m³). The main source of plastic were find to be primarily due to domestic waste flows and secondarily from the materials disposed around the pond or landfills that washes away into the pond. The study needs further elaborate investigation which is being pursued.*
Keywords: *Microplastics, Aquatic contaminants, Fish culture ponds.*

Date of Submission: 14-10-2021 Date of Acceptance: 28-10-2021

I. Introduction

During recent years the plastics are being looked upon as one of the most important aquatic pollutant, due to their worldwide distribution and various applications. Their efficient use particularly in packaging of food materials, almost all medical items, electrical products, construction materials, agricultural industries, fishery products, automobiles and many others have made them increasingly popular in day to day life.

Plastics are synthetic organic chemicals comprised of a variety of materials to meet very different needs. Some common type of plastics include polyethylene terephthalate (PET), Polypropylene (PP), Polystyrene (PS), Polyethylene (PE), Polyvinyl-chloride (PVC), Expanded polystyrene (PS-E), High density polyethylene (HDPE), Low density polyethylene (LDPE). These all products are persistent in nature and pose serious threats to flora and fauna (Shimao, 2001 and Barnes *et. al.*, 2009). Thompson *et al.*, (2004) and Halle *et. al.*, (2016) have emphasized that mechanical or biological fragmentation of all plastic debrises leads to formation of microplastics. It has been also emphasized that microplastics are persistent and accumulate water born contaminants like heavy metals (Ashton *et. al.*, 2010; Wagner *et. al.*, 2014 and Brennecke *et. al.*, 2016). Besides, deposition of pesticides and organic pollutants have also been reported on plastic debrises making them far more toxic than expected (Barnes *et. al.*, 2009).

The plastic industry in India, since its establishment in 1960s has observed a steady growth. According to a study indicates that plastic industries in India has grown at a compound annual growth rate of 10% in term of volume (FICCI, 2017). Current per capita consumption of plastic in India is about 11 kg per annum (NRI, 2019). Eerkes-Medrano *et. al.*, (2015) in his recent review on microplastics have listed twelve studies on the occurrence of microplastics in freshwater system of which five studies were on freshwater sediments. The present study however, deals with surface microplastics in one of the largest pond of Darbhanga Town routinely used for fish culture and popularly known as Dighi pond. The pond is located in middle of the town with domestic house hold all around receives a huge quantity of domestic sewage discharge. It has a rectangular shape and measure about 731m in length and 365m in width. This study has been conducted to estimate the presence of microplastics in surface water of Dighi pond and identify their nature.

II. Materials And Methods:

Parameters like general appearance of the pond and water color were usually observed and registered. The depth was measured using routine technique with the help of boat. Temperature, pH, total alkalinity, Dissolved oxygen and redox potential were measured by employing portable water analyser (Systronics) and Gri pH meter (Hana, Japan).

The water samples were collected through plankton net (50-300μm). The water surface was meshed with the floating microplastics by using a boat run across at the speed of 10km/hr. The volume of the water filtered was recorded with a flow Meter (10-100LPH, Ocean star Make) fixed at the net opening as suggested by Loader

Published since March 1, 2000

International Journal of Nonlinear Sciences and Numerical Simulation

ISSN: 2191-0294

Impact Factor: 2.007

About this journal

The *International Journal of Nonlinear Sciences and Numerical Simulation* is to become the *Journal of Nonlinear, Complex and Data Science.*

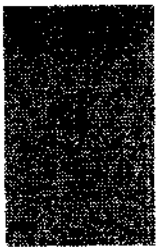
De Gruyter is happy to announce a new chapter for the *International Journal of Nonlinear Sciences and Numerical Simulation.* Starting from the 2023 volume, the journal will be transitioning to a new title, *Journal of Nonlinear, Complex and Data Science*, that expands the scope of the journal to all subjects relevant to nonlinear, complex and data science and numerical simulations.

Abstracting and Indexing

International Journal of Nonlinear Sciences and Numerical Simulation is covered by the following services:

- Baidu Scholar
- Cabells Journalytics
- Chemical Abstracts Service (CAS) - CAplus
- Chemical Abstracts Service (CAS) - SciFinder
- CNKI Scholar (China National Knowledge Infrastructure)
- CNPIEC - cnpLINKer
- Dimensions
- EBSCO (relevant databases)
- EBSCO Discovery Service
- Engineering Village
- Genamics JournalSeek
- Google Scholar
- Inspec

Abhimanyu (Math)



Numerical Algorithms

Editorial board Aims & scope

The *Numerical Algorithms* journal offers high quality papers containing material not published elsewhere. The journal presents original and review papers on all aspects of numerical algorithms and numerical analysis: new algorithms, theoretical results, implementation, numerical stability, complexity, parallel computing, subroutines and applications, interpolation, approximation, quadrature, numerical linear algebra, differential equations (ordinary, partial, fractional), optimization, CAGD, integral equations, linear and nonlinear programming, variational inequalities, systems of nonlinear equations, software, etc. Papers on computer algebra related to obtaining numerical results are also included. Articles presenting new methods only based on numerical results and without any theoretical justification cannot be considered for publication. — show all

Editor-in-Chief

Claude Brezinski

Publishing model

Hybrid (Transformative Journal). How to publish with us, including Open Access

3.041 (2020)

Gender, Place & Culture >
A Journal of Feminist Geography
Latest Articles

Research Article

Dam-induced displacement and resettlement and masculinities: the case of India and Malaysia

Gaurav Sikka & Yong Ooi Lin Carol

Received 12 Jul 2020, Accepted 20 Apr 2021, Published online: 18 Jul 2021

Download citation https://doi.org/10.1080/0966369X.2021.1931047 Check for updates

Abstract

Dams are the biggest 'development' displacement agent. In this paper, we explore the gendered processes and structures of dam-induced displacement and resettlement on Indigenous communities and how displaced men conceptualise masculinities and gender relations within those communities. Drawing upon results of previous research undertaken in India and Malaysia, these two disparate cases allow us to examine how

displacement affected men and changed their lives, and subsequently how they (re)constructed and (re)negotiated masculinities and gender-social relations in post-

Ambio 2022, 51:531–545
https://doi.org/10.1007/s13280-021-01574-2

KUNGL. VETENSKAPS-AKADEMIEN
THE ROYAL SWEDISH ACADEMY OF SCIENCES

RESEARCH ARTICLE

Air pollution perception in ten countries during the COVID-19 pandemic

Baowen Lou, Diego Maria Barbieri, Marco Passavanti, Cang Hui, Akshay Gupta, Inge Hoff, Daniela Antunes Lessa, Gaurav Sikka, Kevin Chang, Kevin Fang, Louisa Lam, Brij Maharaj, Navid Ghasemi, Yaning Qiao, Solomon Adomako, Ali Foroutan Mirhosseini, Bhaven Naik, Arunabha Banerjee, Fusong Wang, Andrew Tucker, Zhuangzhuang Liu, Kasun Wijayaratna, Sahra Naseri, Lei Yu, Hao Chen, Benan Shu, Shubham Goswami, Prince Peprah, Amir Hessami, Montasir Abbas, Nithin Agarwal

Received: 23 October 2020 / Revised: 17 January 2021 / Accepted: 9 May 2021 / Published online: 21 June 2021

Abstract As largely documented in the literature, the stark restrictions enforced worldwide in 2020 to curb the COVID-19 pandemic also curtailed the production of air pollutants to some extent. This study investigates the perception of the air pollution as assessed by individuals located in ten countries: Australia, Brazil, China, Ghana, India, Iran, Italy, Norway, South Africa and the USA. The perceptions towards air quality were evaluated by employing an online survey administered in May 2020. Participants (N = 9394) in the ten countries expressed their opinions according to a Likert-scale response. A reduction in pollutant concentration was clearly perceived, albeit to a different extent, by all populations. The survey participants located in India and Italy perceived the largest drop in the air pollution concentration; conversely, the smallest variation was perceived among Chinese and Norwegian respondents. Among all the demographic indicators considered, only gender proved to be statistically significant.

Keywords Air quality · COVID-19 pandemic · Environmental pollution · Pollution perception · Psychometric perception

INTRODUCTION

Background

Air pollution is a global environmental issue, which has been steadily increasing during the last decades due to urban sprawl and anthropogenic activities (Yang et al. 2018; Li et al. 2019a) causing severe health diseases (Lelieveld et al. 2015; Cohen et al. 2017; Burnett et al. 2018) and reducing people's Subjective Well-Being (SWB) to a significant degree (Li et al. 2018). On average, approximately 4 million deaths per year can be linked to poor air quality and pollutants (i.e. particulate matter PM, which is usually referred to according to an aerodynamic diameter of less than 2.5 μm $PM_{2.5}$ or 10 μm PM_{10}, ozone O_3, nitrogen oxides NO_x, carbon monoxide CO and sulphur dioxide SO_2), especially in major developing countries (WHO 2016).

Facilitated by globalisation and our hypermobile society (Acter et al. 2020; SanJuan-Reyaes et al. 2020; Sarkar et al. 2020), the COVID-19 pandemic has become another grave issue for humanity as a whole, forcing radical changes in many social, economic and hygienic behaviours (WHO 2020a, b; Passavanti et al. 2021; Wu 2021). In order to curb the spread of the COVID-19 virus, a significant amount of the global population has been requested to comply with restrictions to economic and mobility activities (De Vos 2020; Wilder-Smith and Freedman 2020; Barbieri et al. 2021). Although essential industries have been operating continuously (Wang et al. 2020a b), the massive decline in the global pattern of energy demand (i.e. crude oil and

Supplementary Information The online version contains supplementary material available at https://doi.org/10.1007/s13280-021-01574-2.

IGU-YECG Special Issue: Geospatiality And Sustainable Development Goals

Gaurav Sikka, Komali Yenneti, Ram Babu Singh

https://doi.org/10.24057/10.24057/2071-9388-2020-212

FULL TEXT:

PDF (ENG)

ABSTRACT

The rapid human development and the conflicts between society, economy and environment has greatly hindered the implementation of sustainable development strategy. The '*2030 Agenda for Sustainable Development*' and the Sustainable Development Goals (SDGs) provides a universal framework for addressing the issues identified in previous development agendas and achieving policy goals in social, economic and environmental spheres. However, the governments and decision-makers across the world have been facing challenges related to monitoring and assessing the progress of SDGs. The use of geospatial science and spatial data architectures can address these challenges and support holistic monitoring and evaluation of SDGs. This editorial paper discusses the role of geospatial science in implementation of SDGs by drawing on the scholarly works published in the special issue titled 'Geospatiality and Sustainable Development Goals'. The issue provided a platform for research publications by young and early career geographers from

Impact of COVID-19 pandemic on mobility in ten countries and associated perceived risk for all transport modes

Diego Maria Barbieri , Baowen Lou , Marco Passavanti , Cang Hui , Inge Hoff , Daniela Antunes Lessa , Gaurav Sikka , Kevin Chang , Akshay Gupta , Kevin Fang , Arunabha Banerjee , Brij Maharaj , Louisa Lam , Navid Ghasemi , Bhaven Naik , Fusong Wang , Ali Foroutan Mirhosseini , Sahra Naseri , Zhuangzhuang Liu , Yaning Qiao , Andrew Tucker , Kasun Wijayaratna , Prince Peprah , Solomon Adomako , Lei Yu , Shubham Goswami , Hao Chen , Benan Shu , Amir Hessami , Montasir Abbas , Nithin Agarwal , Taha Hossein Rashidi

Published: February 1, 2021 • https://doi.org/10.1371/journal.pone.0245886

Abstract

The restrictive measures implemented in response to the COVID-19 pandemic have triggered sudden massive changes to travel behaviors of people all around the world. This study examines the individual mobility patterns for all transport modes (walk, bicycle, motorcycle, car driven alone, car driven in company, bus, subway, tram, train, airplane) before and during the restrictions adopted in ten countries on six continents: Australia, Brazil, China, Ghana, India, Iran, Italy, Norway, South Africa and the United States. This cross-country study also aims at understanding the predictors of protective behaviors related to the transport sector and COVID-19. Findings hinge upon an online survey conducted in May 2020 (N = 9,394). The empirical results quantify tremendous disruptions for both commuting and non-commuting travels, highlighting substantial reductions in the frequency of all types of trips and use of all modes. In terms of potential virus spread, airplanes and buses are perceived to be the riskiest transport modes, while avoidance of public transport is consistently found across the countries. According to the Protection Motivation Theory, the study sheds new light on the fact that two indicators, namely income inequality, expressed as Gini index, and the reported number of deaths due to COVID-19 per 100,000 inhabitants, aggravate respondents' perceptions. This research indicates that socio-economic inequality and morbidity are not only related to actual health risks, as well documented in the relevant literature, but also to the perceived risks. These findings document the global impact of the COVID-19 crisis as well as provide guidance for transportation practitioners in developing future strategies.

Citation: Barbieri DM, Lou B, Passavanti M, Hui C, Hoff I, Lessa DA, et al. (2021) Impact of COVID-19 pandemic on mobility in ten countries and associated perceived risk for all transport modes. PLoS ONE 16(2): e0245886. https://doi.org/10.1371/journal.pone.0245886

Editor: Amir H. Pakpour, Qazvin University of Medical Sciences, ISLAMIC REPUBLIC OF IRAN

Received: October 23, 2020; **Accepted:** January 10, 2021; **Published:** February 1, 2021

Data Availability: All survey data is available from the Harvard Dataverse database at https://doi.org/10.7910/dvn/eiquga.

Funding: The authors received no specific funding for this work.

Competing interests: The authors have declared that no competing interests exist.

Introduction

The COVID-19 (coronavirus disease 2019) pandemic presents a major challenge for all of humanity and is a huge calamity of the 21st century [1]. Initially spreading in China [2] and facilitated by our hypermobile society and transportation hubs [3–6], this new highly transmissible respiratory syndrome severely broke out in Italy and Iran in March 2020 and then spread at extraordinary rates to other countries, with the United States having the most number of infected patients by May 2020 [7].

The lack of vaccine or clinically effective medical interventions have prompted unprecedented health, social and economic challenges and disruptions [8, 9], thus stressing the need for reshaping the overall design of global resilience [10]. As the greatest risk for infectious diseases spreading within shared travel modes, such as air travel and mass transit, is related to the fact that individuals are in close proximity in a confined environment [11, 12], a number of mobility restrictions have been enacted in most countries to slow down the transmission of the COVID-19 (i.e., social distancing, complete/partial lockdown, required/voluntary quarantining and closure of schools and workplaces) and ease the pressure on health facilities [13–15].

Notwithstanding the "Stay-At-Home (SAH)" message promoted across the globe and the "Work-From-Home (WFH)" reality subsequently achieved whenever possible [16], it is still unclear to what extent individuals have modified their attitude in response to the bans on free movement [17]. As mobility is closely connected to regular habits and reproducible patterns [18], the restrictive

Moving Beyond Economic Analysis: Assessing The Socio-Cultural Impacts Of Displacement And Resettlement By Sardar Sarovar Project, India

Gaurav Sikka

https://doi.org/10.24057/2071-9388-2019-165

FULL TEXT:

PDF (ENG) | **HTML** | **XML**

Article

About the Author

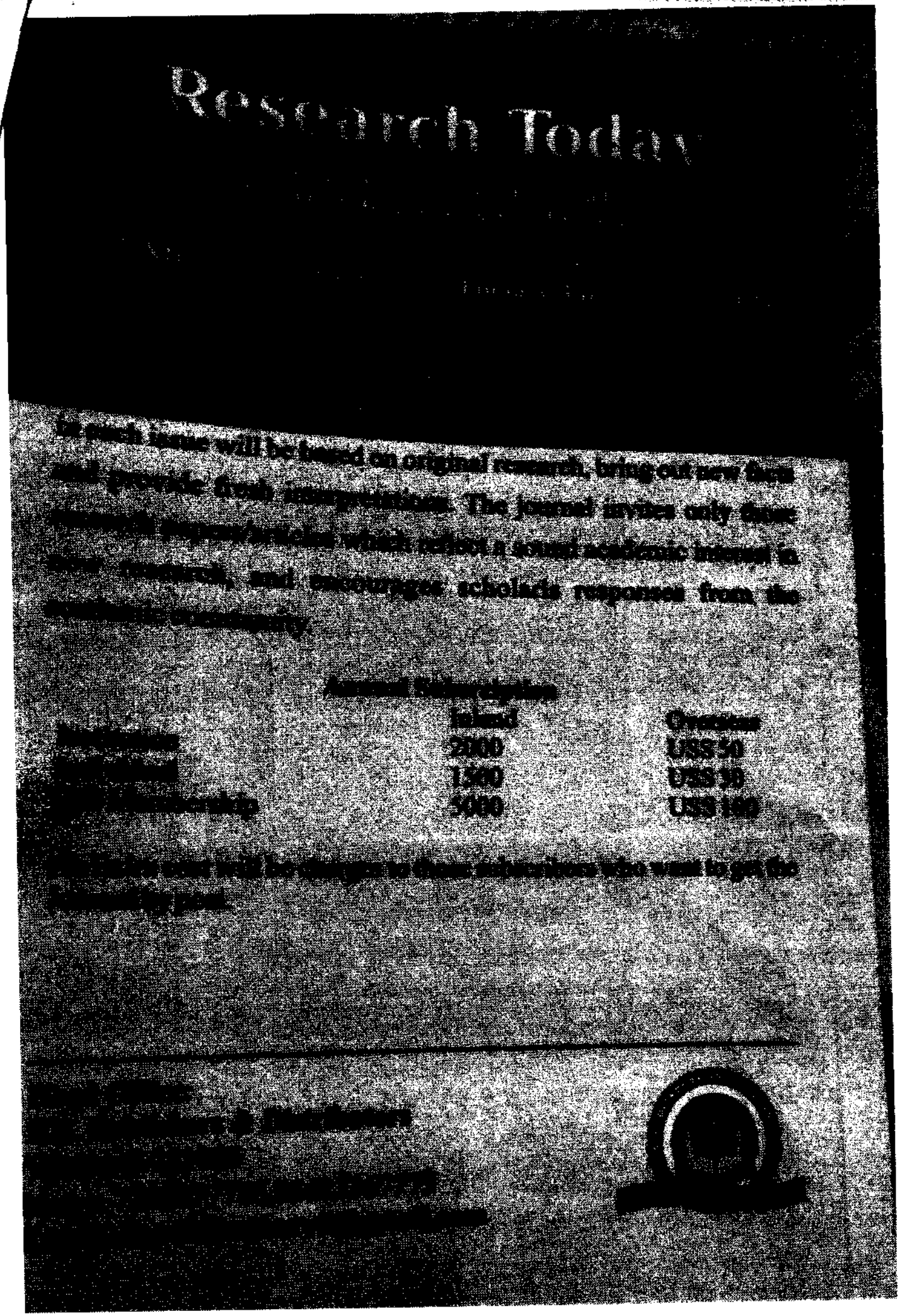
ABSTRACT

The large scale development projects like dams have been justified for a greater economic benefit of the nation. However, the development projects have become synonymous with land acquisition leading to dispossession and forced migration of a large number of people and their involuntary resettlement. Unfortunately, too much focus on the economic benefits of such large scale projects has omitted many relevant tangible and intangible socio-cultural aspects and ignored the impacts of development policies that shape forced migrations. The present paper asserts to move beyond the 'limited' economic analysis of large projects and includes the critical social and cultural implications of forced migration and displacement. The paper presents views of respondents displaced from the states of Gujarat, Madhya Pradesh and Maharashtra and were resettled inGujarat. Perhaps, it is the most unique aspect of this paper to understand the socio-cultural adjustment in context of the spatial origin. The resettlement caused by the Sardar Sarovar

Research Today

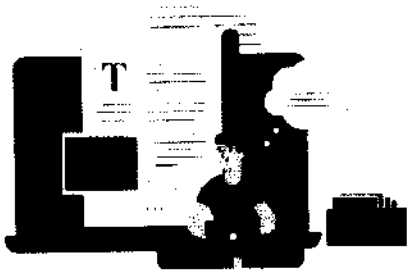
[redacted]

[redacted]


Research Today
Annual subscription
Inland
Overseas
2000
US$ 50
1500
US$ 35
5000
US$ 100

IMPACT FACTOR: 7.86

ISSN 0976 - 8165



THE CRITERION

AN INTERNATIONAL JOURNAL IN ENGLISH

12th Year of Open Access

Bi-Monthly Refereed and Peer-Reviewed
Open Access e-Journal

Vol. 12, Issue - 6 (December 2021)

The Criterion

www.the-criterion.com

AboutUs: http://www.the-criterion.com/about/

Archive: http://www.the-criterion.com/archive/

ContactUs: http://www.the-criterion.com/contact/

EditorialBoard: http://www.the-criterion.com/editorial-board/

Submission: http://www.the-criterion.com/submission/

FAQ: http://www.the-criterion.com/fa/

Rabindranath's Deeper Bond with Earth: Rereading his Select Poems

Sanjit Sarkar
Ph.D Research Scholar,
L. N. Mithila University,
Kameshwaranagar, Darbhanga, Bihar 846004, India.
&
Dr. Kulanand Yadav
Professor,
University Department of English,
L. N. Mithila University, Bihar, India.

Article History: Submitted-30/11/2021, Revised-29/12/2021, Accepted-30/12/2021, Published-31/12/2021.

Abstract:

Rabindranath Tagore realized the world of Nature in the inmost shrine of his heart and intuitively perceived the stream of multitudes of lives passing through his veins and consciousness. He apprehended the profound feeling of oneness and inter-being with endless life-circles of the wider earth. The poet felt an inseparable bond with Earth, and this eternal bond is the source of joy in his life and his works. His heart throbs through millions of hearts of the tiniest plants and species. Tagore comprehended the primordial language of nature and heard the great cadence of the world. He understood the mathematics of beauty of ecology and her lesson on how-to live-in harmony with her. Thus, he realized intrinsic and inherent value in nature; above all, her law and rhythm, her moods and pulse. For Rabindranath, Earth is a living existence: a source of his aesthetic beauty and poetic inspiration, and a source of his joy and meaning of life. In his poetic aesthetics, there is a unique realization of Earth, which can tune readers in harmony with Earth from a deeper core. The paper explores Tagore's deeper bond with Earth.

Keywords: Self-realization, Aesthetics, Oneness, Earth, Nature, Spirituality.

Rabindranath Tagore (7 May 1861-7 August 1941), the Novel laureate, is referred to as the 'Bard of Bengal'. He is known greatly for his poetry, though he wrote novels, dramas, essays, short stories, travelogues, and thousands of songs. Tagore also wrote autobiographies and non-fiction grasped with linguistics, history and spirituality. Above all, he wrote thousands of pages on Environment and Nature. Nature and Earth form an inseparable part of Tagore's oeuvre. His writings on Nature and Earth are marked by the deep interface between the spiritual

and the human. The close contact with Nature gives him unlimited solace and joy for life. For the poet, as he has said, "The earth, water and light, fruits and flowers, to her were not merely physical phenomena to be turned to use and then left aside. They were necessary to her in the attainment of the ideal perfection, as every note is necessary to the completeness of the symphony." (quoted in M.N. Thakur 31). So, nature holds a special place in Tagore's heart because it connects him to the way of international bonding and also to the infinity. He was influenced greatly by the *Vedas* and *Upanishads*, which see nature as sacred.

Deepening interface with the world-nature infuses in the poet's poetic mind the world consciousness. The feeling of interbeing and oneness with the whole universe is the very feature of Tagore's poetic flow. His poetic consciousness is inseparable from Earth consciousness. His Earth-consciousness and aesthetics come from his realization that the whole universe is a whole. This whole consciousness intensifies his uniquely all-inclusive ecological worldview. For Rabindranath, Earth is fraught with wisdom, beauty, and humanity. "We find that life around him flows into him and is transformed into art. His life is a continuous essay in experiencing and turning that experience into things of beauty." (Umashankar Joshi 115).

The world consciousness of Rabindranath Tagore is not an isolated incident in his poetic life. This world consciousness in his poetic expressions is inseparable from his life consciousness. In his early childhood, he used to watch a banyan tree and a pond. Through this narrow passage of window, Nature beaconed him, but he had not his means to go out. His sensitive mind could not be prevented from watching and enjoying the banyan tree and the pond. Afterward, Tagore's tour to the Himalayas with his father gave him a wide opportunity to see the vast universe during his childhood, and he had his unique Earth-realization there. This Earth-consciousness again intensifies when Tagore was living in a boat-house on River Padma and its tributaries. In course of time, in his feeling he finds himself unified amidst water-land-sky-river-mountains. His realization widens with the uninterrupted and eternal time stream. The poet feels in himself the life pulse of most primitive species.

Tagore's fascination for Earth-consciousness first finds unique poetic expression in his poem, "Ahalyar Prati" of *Manasi* (a collection of poems). Here the poet wants to know *Ahalya* from his unified whole Earth-realization and consciousness:

Chilo ki pasantale asprasta chetana?

What was un-manifested consciousness under stone?

The Creative Launcher
URL: https://www.thecreativelauncher.com
ISSN: 2455-6580
Vol. 6 & Issue 4, (October-2021)
Publisher: Perception Publishing
Published on 30th October 2021

Representation of the Namasudras in Literature

Joylal Das
Research Scholar,
Department of English,
Lalit Narayan Mithila University,
Darbhanga, Bihar, India
Email Id: joylaleng@gmail.com
ORCID Id: https://orcid.org/0000-0002-0788-5185
DOI: **https://doi.org/10.53032/tcl.2021.6.4.34**

Dr. Kulanand Yadav
Professor,
Department of English,
Lalit Narayan Mithila University,
Darbhanga, Bihar, India
Email Id: kulanandyadav08@gmail.com
DOI: **https://doi.org/10.53032/tcl.2021.6.4.34**
Pages: 230-235

Abstract

In Bengali Dalit literature, the Namasudra writers and poets play a crucial role in combating the complete social marginalization of Dalits, their movements, iconography, experiences, and worldview. According to Manohar Mouli Biswas, "It is a counter cultural movement that has been aiming to undo the age-old caste ridden oppressions against the dalits by representing their lives, deprivations, struggles, histories and promoting their culture and liberation through literature" (Biswas XXV). There have recently been many books written

National Council of Churches in India

NCC REVIEW

Vol. CXLI
No.10
November 2021

UGC-CARE List ISSN 0975 - 1882

The National Council of Churches Review (NCC Review)
The Organ of the National Council of Churches in India
UGC approved Journal
Formerly published as "The Harvest Field" since 1862

Vol. CXLI **No.10** **November 2021**

Contents

Editor, Publisher & Printer: Rev. Dr. Asir Ebenezer, National Council of Churches in India, P.B. No.: 205, Civil Lines, Nagpur - 440 001, Maharashtra India, ***Phone:*** +91-712-2531312, 2561464 *Fax:* +91-712-2520554 ***Email***: <nccreview@ncci1914.com> **Managing Editor:** Rev. Dr. Abraham Mathew, Executive Secretary, Policy, Governance and Public Witness. **Printed at:** Shyam Brothers, Near ST Stand, Ganeshpeth, Nagpur **Owner:** Rev.Dr.Asir Ebenezer, National Council of Churches in India **Place of Publication:** National Council of Churches in India, P.B. No.: 205, Civil Lines, Nagpur-440 001, Maharashtra, India **Place of Printing:** Shyam Bros, Near ST Stand, Ganeshpeth, Nagpur **Website:**https://ncci1914.com/ncc-review/

Registration No. 33/2019

EDITORIAL

Democratic Dilemmas Exposed...

"We have decided to repeal all three farm laws and will begin the procedure at the Parliament session that begins this month," declared India's Prime Minister Narendra Modi on Friday, the 19th of November, informing us of his government's decision to scrap the three controversial farm laws. It is being considered a historic victory of the common farmers of India. "At last, all of our hard work paid off ... I salute the farmer brothers who were martyred in this battle," said Rakesh Tikait, the farmer leader.

The resilience of farmers against the bill and the way they overcame several hardships and challenges over the last one year is inspirational. They braved the cold winters and summer heat in addition to all the different hurdles created by government machinery and the media- the false narratives, their being branded as anti-national so on. Even tear gas, barricades, lathis and water cannons could not dampen their spirits. Their solidarity for a cause and optimism in their togetherness made it possible for them to win their battle.

However, it has been highlighted by many that the Prime Minister's decision to roll back the laws and make a rare public apology is tied to the upcoming state elections in Uttar Pradesh and Punjab, where farmers form a crucial proportion of the "vote bank", and farmers' unions hold significant power and influence. This exposes the possible and dangerous flip side of democracy. If democracy is all about electoral politics and factors influencing it, then democracy shrinks to the level of mobocracy. The powerless and less influential will not get the required consideration in democratic governance, resulting in democracy being solely an affair of majoritarian communities.

It is to check this tendency within an electoral democracy that the architects of our constitution included Article 15(1) & (2), which prohibit discrimination against citizens on grounds of religion, race, caste, sex or place of birth. The spirit behind the inclusion of these articles along with other articles which ensure the minimum guarantee of a dignified life for minorities could very well have emerged from their foresight about the tendency of majorities to acquiesce in the

www.TLHjournal.com Literary Herald ISSN: 2454-3365
An International Refereed/Peer-reviewed English e-Journal
Impact Factor: 6.292 (SJIF)

Deep Ecology: Indian Perennial Paradigms

Sanjit Sarkar
Ph.D. Research Scholar
L. N. Mithila University
Darbhanga, Bihar 846004, India.

Dr. Kulanand Yadav
Professor
University Department of English
L. N. Mithila University, Darbhanga
Bihar, India.

Abstract

COVID-19 has revealed and reproved that human beings are not special creation on earth. It has proved our position on this planet as important as millions of species like Coronavirus. The pandemic has challenged arrogant anthropocentricism and has signalled us to co-live and co-evolve with countless species in harmony for survival. The environmental abnormalities and calamities remind us to fundamentally change our attitude towards nature for overcoming the evolutionary crisis. Deep ecology offers a new spiritual discipline for the basic solution to ecological degeneration. It means any integrated philosophy of Nature and 'earth wisdom' of ecological harmony and believes in the experience of Self-realization and in the intrinsic or inherent value of nature. Indian cultural paradigms and spiritual literature, which run through *The Vedas, The Gita, the Upanishads, and the Puranas*, etc. present the spiritual metaphysics and ethics which are very rich with deep ecological ethos, which can offer a solution to the environmental crisis through a radical shift in human consciousness, and through a fundamental change in the way people relate with nature. The paper explores the Indian deep ecological ethos which can be a new way of life in the post-Covid era for the next survival.

Key Words: Deep ecology, Intrinsic value, Spirituality, Vedanta.

Deep ecology is a spiritual philosophy that preaches a new world view to save the world from the present ecological degradation and degeneration. In response to the anthropocentric shallow environmentalism, Deep ecological consciousness has now emerged as a new spiritual discipline. By 'ecosophy' or Deep ecology Naess(1973), the founder of the deep ecology movement, means any integrated philosophy of Nature and an 'earth wisdom'-of ecological harmony. It believes in the experience of Self-realization or identification with the whole nature. For this, a deeper metaphysical and mystic relationship between the Self and nature is to be established through self-realization or through unfolding the Self outwards into the environment. Greg Gerrad says:

(Vol. V & Issue V (December) 2020) (ISSN-2455-6580) www.thecreativelauncher.com
The Creative Launcher
An International Peer Reviewed Refereed E-Journal in English

Issues of Alienation and Racial Prejudice in Kamala Markandaya's *The Nowhere Man*

Dr. Sanket Kumar Jha
Assistant Professor of English
M.K.S College, Trimuhan
L L.N.M.U, Darbhanga, India

Abstract

When a person migrates to an alien land, he instantly turns into an outsider –a pariah. He has to struggle a lot both for his new identity and to overcome his feelings of nostalgia. Being accustomed to a social and cultural life, he desires acceptance of the society and assimilation to the new culture. But what he gets is a sense of loss and alienation and hence suffers from insecurity and identity crisis. Gradually, he attempts to adapt to the new ways of life and the new milieu of that adopted land and tends to forget his past. But the irony starts when he returns to his native land only to find himself an alien in his own culture. Hence a migrant who returns finds himself a nowhere man. Markandaya's novels depict diasporic dilemma arising due to migration and the consequential rootlessness, loneliness and anxiety. This article traces alienation and its aftermath as depicted by Kamal Markandaya in her novel *The Nowhere Man.*

Keywords: Migration, Settlement, Cultural conflicts, Dislocation, Alienation,

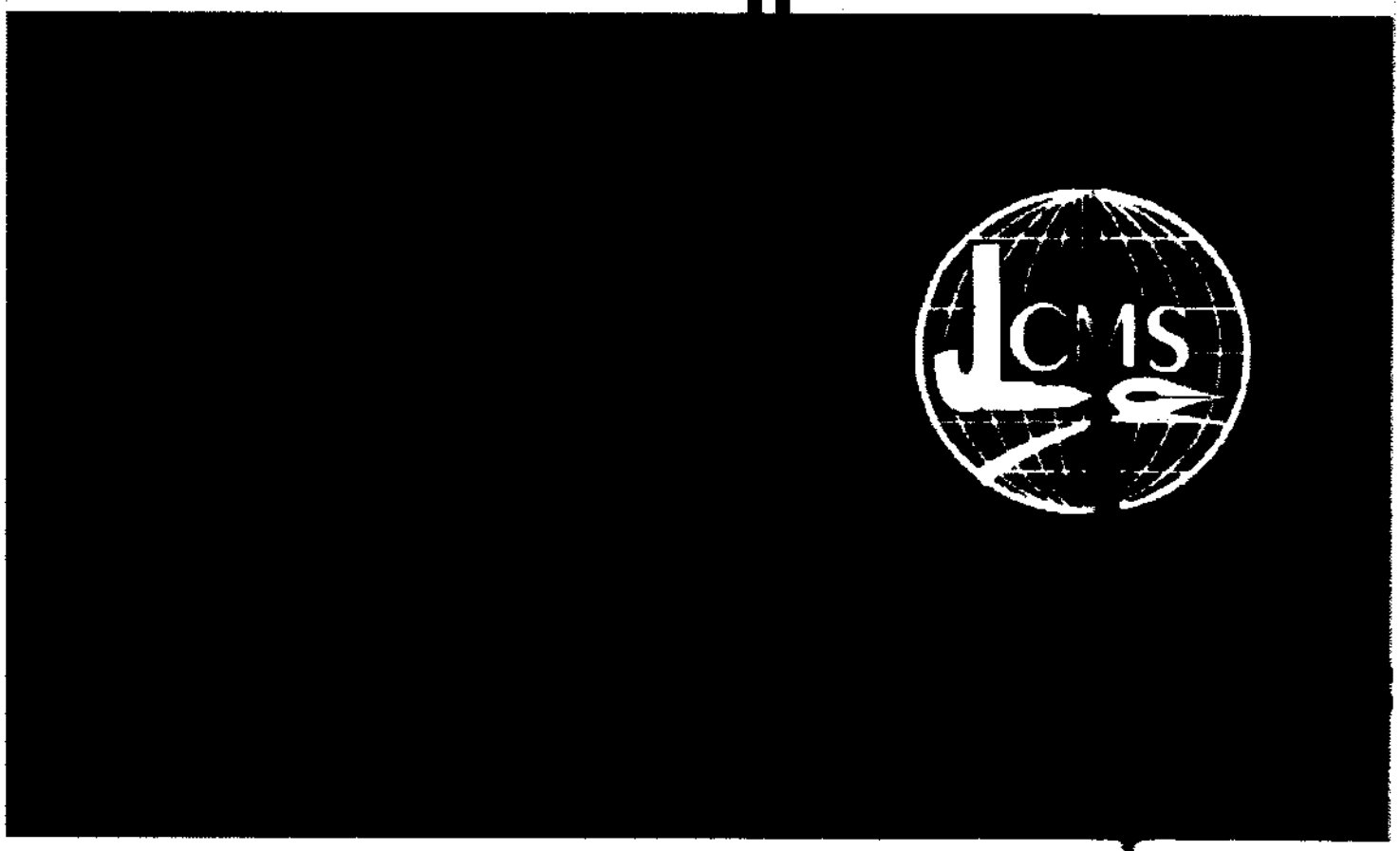
1. Introduction

Among the Indian writers who have explored the cross-cultural theme in their fiction Kamala Markandaya carved a permanent place for her novels. Markandaya's cynicism of the immigration and the assimilation process is reflected in her stories and her characters. Markandaya depicts the gloom and confrontations of the "Nowhere Man". Markandaya understands that reminiscence obstructs the mission of integration, but she is patient with those who long for the homeland. Markandaya's The Nowhere Man(1972) tells the story of Shrinivas, an UN-accomodated Asian, facing a great deal of hostility and intense loneliness in the country of his adoption and self-exile. Unlike Mukherjee, who considers such longing a product of an idealistic, inaccurate, romanticized memory, Markandaya empathizes with the pain of losing a place called "home." In fact, she does not even consider memory to be fallible. It is the early years which are most deeply etched, and the memories persist and are not subject to fluctuation. Srinivas, in *The Nowhere Man*, is an alien, rootless and outsider whose alienation results from the estrangement from his native culture and his failure to adopt the westernized manner and mode of living. Throughout the novel, he is probing for his root and identity.

Commenting on the novel, Madhusudan Prasad writes, *"The Nowhere Man*, is the most powerful and the maturest of the novels of Markandaya. Although it again depicts the East-West encounter (in a new perspective altogether), it is basically a moving elegy on England's recent racialism which still continues rather unabated". (152)

ISSN-0974-7192

Journal of
Literature, Culture And Media Studies



Journal of Literature, Culture & Media Studies

(ISSN-0974-7192)

Vol. XI & XII, Issues 21-24, 2019-2020 (Combined)
Website : http//www.i-scholar.in
Zindese.php/JLCMS/Index

Journal of Literature, Culture & Media Studies (ISSN-0974-7192) is published twice a year in summer and in winter. It is a Multidisciplinary International Peer Reviewed Research Journal of Higher Education on Literature and Literary Theory, Art & Aesthetics, Cultural & Media Studies, Linguistics & English Language Teaching, Philosophy & Education, Hypertext & Communication Studies, Humanities & Social Sciences.

Manuscripts should be written in 3000 words, prepared according to the latest *MLA Handbook* style. Author's name should appear on the cover page only. Manuscripts should be submitted in MS-Word along with two copies, double space throughout and accompained by duly stamped, self-addressed envelope. All the papers submitted for publication will be evaluated by the Journal's referees. Only those papers which receive the favourable comments will be published. For book reviews, two copies of the book should be sent to the Editor-in-Chief. All enquiries should be made to either of the following addresses:

The opinion and observation of the writers are their own and editors do not share their opinion.

Prof. N.D.R. Chandra
Dept. of English, Post Box-480
Nagaland (Central) University,
Kohima Campus, Pin-797001
Phone-03702291470, 9436604508
Email : chandra592001@yahoo.com

Prof. N.D.R. Chandra
B-19, Central Avenue
Smriti Nagar, Dist.-Durg
Chattisgarh, Pin-490020
Cell- 8839846685
Cell- 9436830377
kcchandra06@gmail.com

Website of the journal : http//www.i-scholar.in, Zindese.php/JLCMS/Index

Cheques/Money Transfer etc. are acceptable at either of the above addresses		
Subscription for life member	Rs. 5000/-	(Individual)
Subscription for life member	Rs. 10000/-	(Institutional)
Subscription for 5 years	Rs. 3000/-	(Individual)
Subscription for 5 years	Rs. 5000/-	(Institutional)
Annual membership	Rs. 500/-	(Individual)
Annual membership	Rs. 1000/-	(Institutional)
Single copy	Rs. 250/-	(Individual)
Single copy	Rs. 500/-	(Institutional)

संगीत और मनोविज्ञान
प्रायोगिक दृष्टिकोण

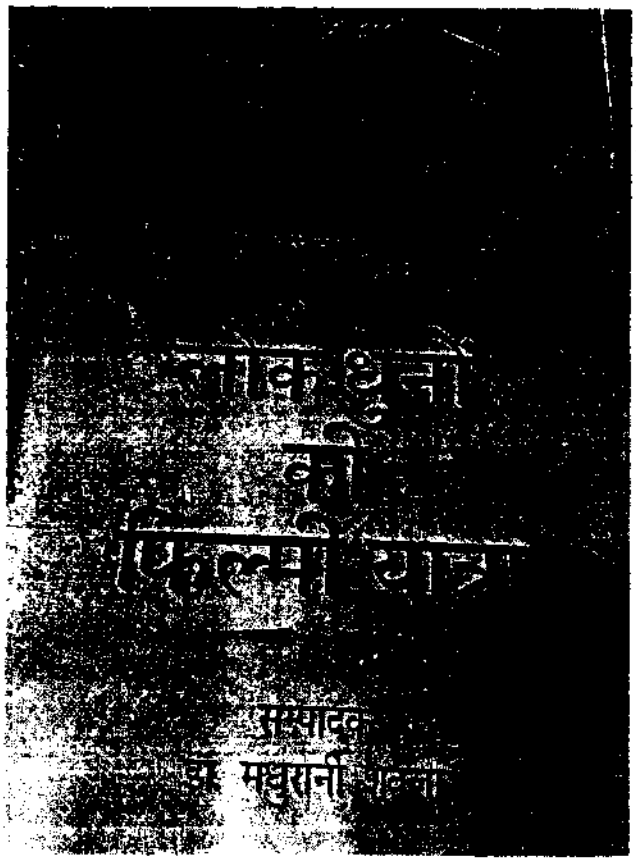
प्रो० पुष्पम नारा
डॉ० रामचन्द्र पाण्डा

वर्णरत्नाकर में संगीत के सप्त स्वर : ज्योतिरीश्वर

प्रो० पुष्पम नारायण

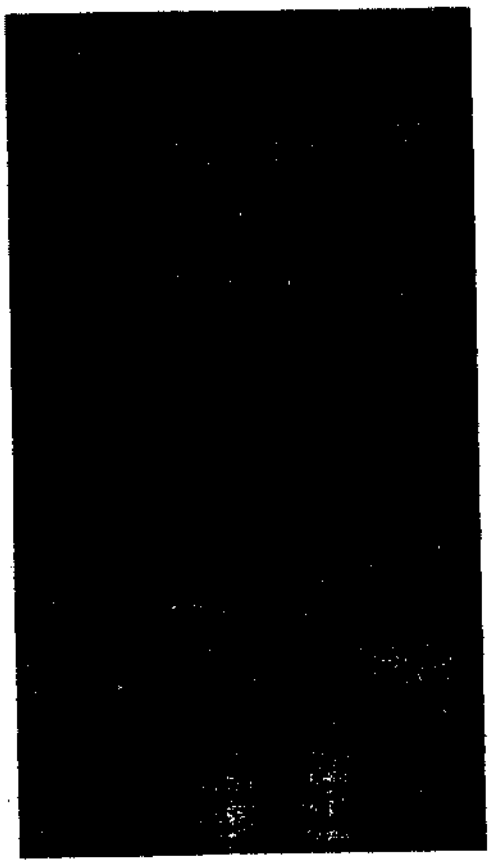
वर्णरत्नाकर में संगीत
प्रो० पुष्पम नारायण

vanya
at 10:23 am



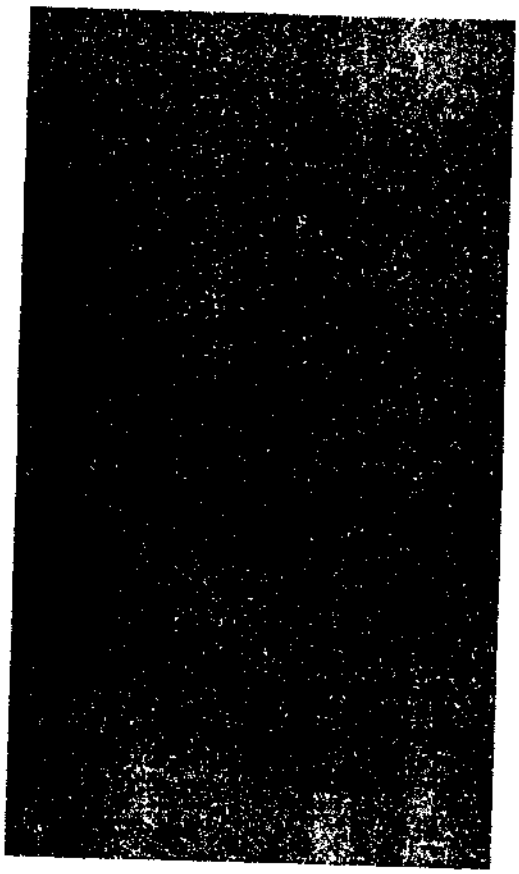
a

21 am

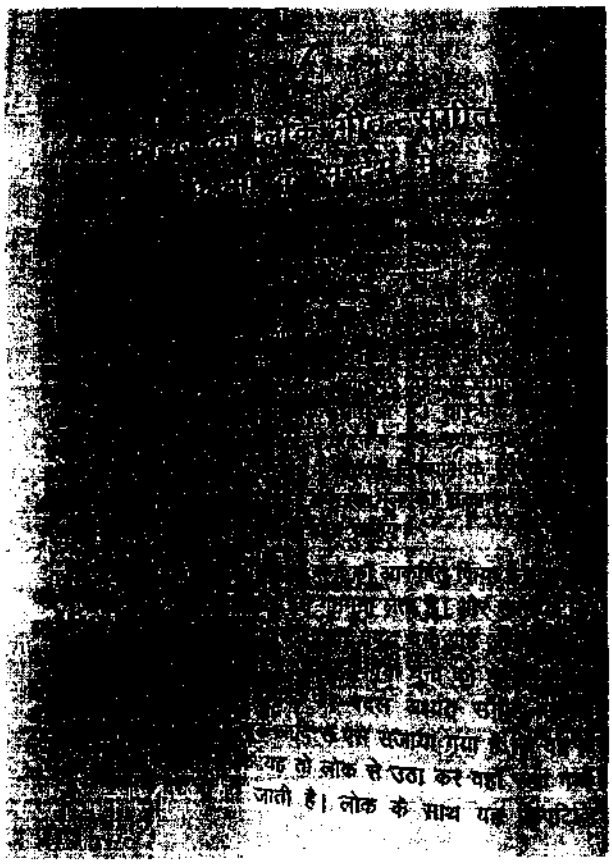


[redacted]nya

10:21 am

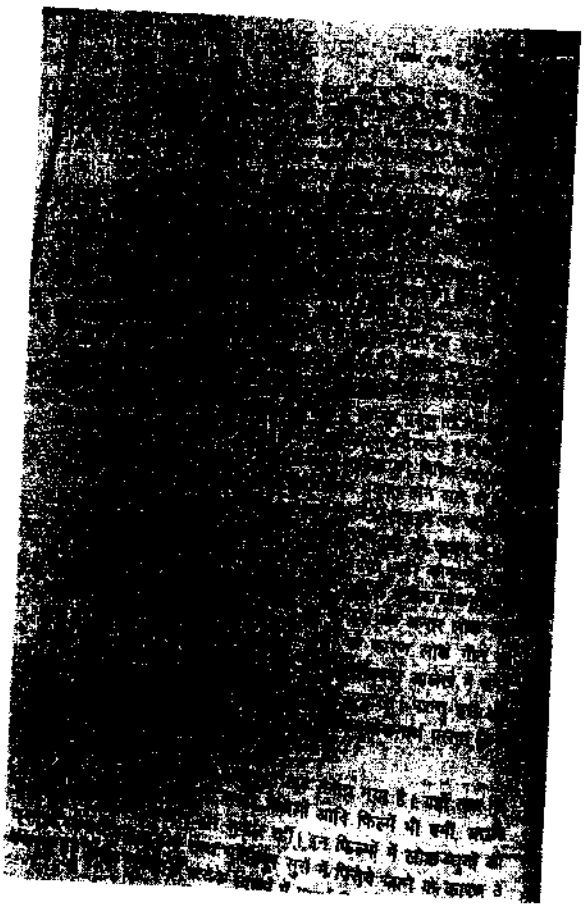


Pr. Lawanya
today at 10:23 am



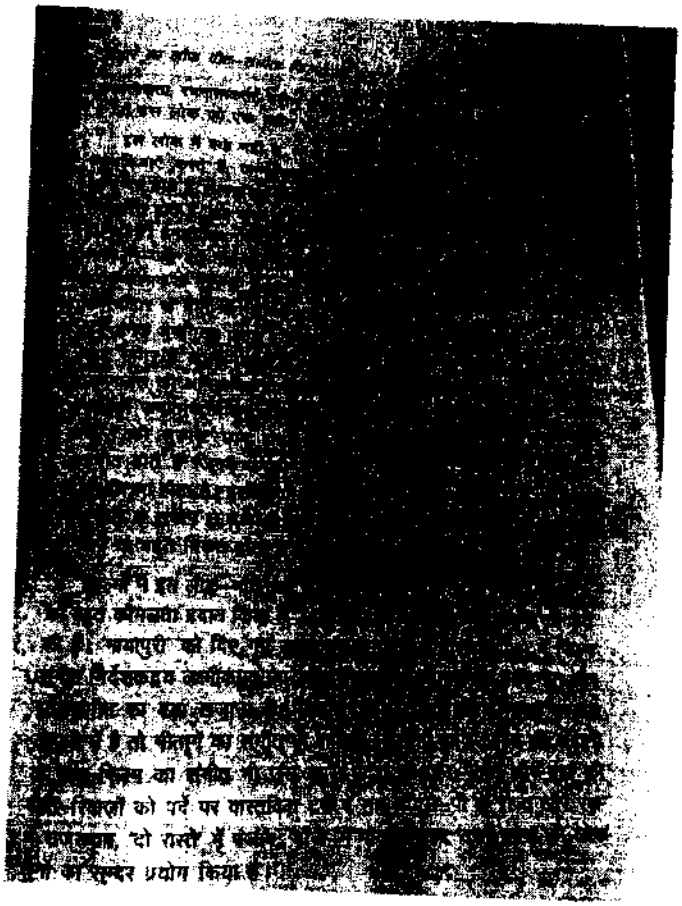
awany

y at 10:23 am



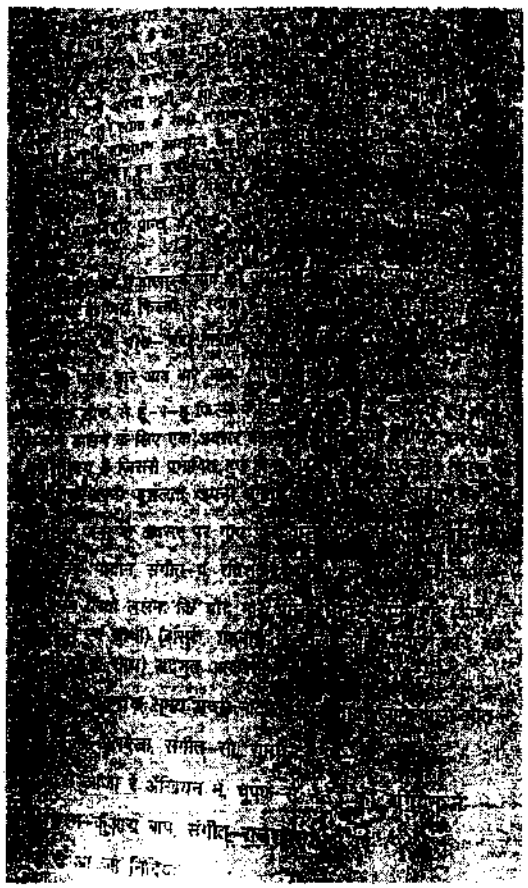
Lawanya

day at 10:23 am



Pr. Lawanya

...day at 10:23 am



ISSN 2229-4546

कोसल-12

KOSALA-XII

YEAR-2021

Directorate of Culture and Archaeology
Government of Chhattisgarh
Raipur

कोसल-12

KOSALA-XII

YEAR-2021

Journal of the Directorate of Culture and Archaeology

Chief Editor

Vivek Acharya

Director

Directorate of Culture and Archaeology

Govt. of Chhattisgarh

Editor

J.R. Bhagat

Deputy Director

Directorate of Culture and Archaeology

Govt. of Chhattisgarh

Assistant Editors

Dr. Pratap Chand Parakh

Deputy Director

Directorate of Culture and Archaeology

Govt. of Chhattisgarh

Prabhat Kumar Singh

Supervisor

Directorate of Culture and Archaeology

Govt. of Chhattisgarh

Publication Officer (I/C)

A.L. Paikara

Deputy Director

Directorate of Culture and Archaeology

Govt. of Chhattisgarh

Directorate of Culture and Archaeology

Government of Chhattisgarh

अनुक्रम
Contents

हिन्दी खण्ड (Hindi Section)

अंग्रेजी खण्ड English Section

Saudi Journal of Humanities and Social Sciences (SJHSS)

Journal Name: Saudi Journal of Humanities and Social Sciences (SJHSS)
Abbr. Title: Saudi J. Humanities Soc. Sci.
ISSN(Print): 2415-6256
ISSN(Online): 2415-6248
Frequency: Monthly
Language: English
Chief Editor: Dr. Anis Ahmad
Publisher: Scholars Middle East Publisher
Country of Origin: UAE

April 25, 2022

Legal Protection for Trade Secret Holders under the Laws of the Republic of Indonesia Number 30 of 2000 on Trade Secrets

Henry Aspan, Syaiful Asmi Hasibuan, Ari Prabowo

Page Numbers : 149-154
DOI : 10.36348/sjhss.2022.v07i04.006

sciendo

DOI 10.2478/sbe-2021-0028
SBE no. 16(2) 2021

IMPACT OF HIGH-PERFORMANCE WORK-SYSTEM (HPWS) ON EMPLOYEE-PERFORMANCE: A CASE STUDY

KAUR Harjinder
L.N. Mithila University, Darbangha, Bihar, India

PANI Biswajyoti
School of Mech. Engg., KIIT-DU, Odisha, India

SINGH Saranjit
School of Mech. Engg, KIIT-DU, Odisha, India

JHA Divakar
Univ. Dept. of Com & Bus Admn, L. N. Mithila University, Bihar, India

Abstract:

Present article aims to summarize the impact of 'High-Performance Work-System' (HPWS) on employee performance. The research evaluates and establishes the link between HPWS best practices and corporate performance by investigating the evidence of the effects of these practices on the employee's overall attitudes on the basis of the concept of 'Black Box'. Further, the study contributes empirically by providing possible corrective measures and suggestions to the management of the company, which can be adopted to attain the status of a 'World Class Organization' by the company. Initially, the skewness and kurtosis tests were performed on the survey data to examine the normality of the data. Basis this, the correlation tests were designed and executed. In the present analysis, the bivariate analysis between the various variables (both independent and dependent) as chosen were performed to explore this inter-relationship. The present research uses "Hierarchal Multiple Linear Regression" (HMLR) analysis to examine the net effect on the employee attitudinal measures due to each bundles of the HPWS best practices as highlighted in nine hypotheses. At the end, summary of the recommendations to the general users has also been listed.

Key words: *High-Performance Work-System (HPWS), Employee Performance, Correlation, Regression Analysis*

1. Introduction

The majority of the HRM studies has emphasized on high levels of achievement, and sustainability of corporate performance of the organization which primarily depends on

Juni Khyat
(UGC Care Group I Listed Journal)
ISSN: 2278-4632
Vol-10 Issue-10 No.02 October 2020

A REVIEW OF INDIAN RURAL AND ECONOMIC DEVELOPMENT PROGRAMMES

Prof. Dr. Hare Krishna Singh
Head University department of commerce and Business administration
Director Management program,
Lalit Narayan Mithila University, Darbhanga,
Bihar - 846008

ABSTRACT

Rural development generally refers to the process of improving the quality of life and economic well-being of people living in relatively isolated and sparsely populated areas like village . Mahatma Gandhi National Rural Employment Guarantee program (MGNREGA) is considered as a "Silver Bullet" for eradicating rural poverty and unemployment, by way of generating demand for a productive labor force in villages area. It provides an alternative source of livelihood which will have an impact on reducing migration from rural area, restricting child labor, alleviating poverty, and making villages self-sustaining through productive assets creation such as road construction, cleaning up of water tanks, soil, and water conservation work, pond and greenery development etc. For which it has been considered as the largest anti-poverty program in the world. In this paper, based on the secondary data, an attempt has been made to comprehensively understand the development effort to rebuild the rural life and livelihood based on various secondary data.

Keywords: *India; Rural development; Development; Development projects.*

INTRODUCTION

In India, out of the total population of 132 crores, 85.3 crores live in rural areas (Census of India, 2017/18). Thus, nearly 70 percent of India"s population lives in rural areas. These rural populations can be characterized by mass poverty, low levels of literacy and income, high level of unemployment, and poor nutrition and health status. To tackle these specific problems, many rural development programs are being implemented to create opportunities for improvement of the quality of life of these rural people. The term rural development" is the overall development of rural areas to improve the quality of life of rural people. And it is a process leading to sustainable improvement in the quality of life of rural people especially the poor (Ramesh, 2012). The rural developmental programs intend to reduce the poverty and unemployment, to improve the health and educational status, and to fulfill the basic needs such as food, shelter, and clothing of the rural population. To improve the conditions of rural people, the Government of India launched some schemes through the planning commission of India such as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Rashtriya Sama Vikas Yojana (RSVY), Indira Awas Yojana (IAY), Sampoorna Grameen Rozgar Yojana (SGRY), Integrated Tribal Development Project (ITDP), Pradhan Mantri Gram Sadak Yojana (PMGSY),

ScienceDirect

Sensors and Actuators B: Chemical
Volume 327, 15 January 2021, 129011

A dual optical probe with larger stokes shift for simultaneous detection of Cu^{2+} and Zn^{2+} ions and aggregation induced enhanced emission empowering selective detection of Cu^{2+} ions

Avinash Kumar Sonkar [a, 1], Abhishek Rai [b, 1], Kamini Tripathi [a], Richa Yadav [a], Manjari Shukla [c], Brijesh Singh Chauhan [d], S. Srikrishna [d], Lallan Mishra [a]

https://doi.org/10.1016/j.snb.2020.129011

Highlights

- A novel AIEE-active probe **1** with a large stokes shift of 190 nm has been developed.
- Probe **1** detects Cu^{2+} ions colorimetrically and Zn^{2+} ions fluorometrically.
- **1** forms nanoaggregates in H_2O:CH_3OH (80:20, v/v) which also detects Cu^{2+} ions selectively, with low detection limit.
- The probe **1** and **n1** have been successfully applied in bioimaging the guts of *Drosophila*.

Abstract

A new aggregation induced enhanced emission (AIEE) active probe (**1**) has been synthesized via single step condensation reaction of 2-amino-3-benzyloxypyridine with 3-allylsalicylaldehyde in