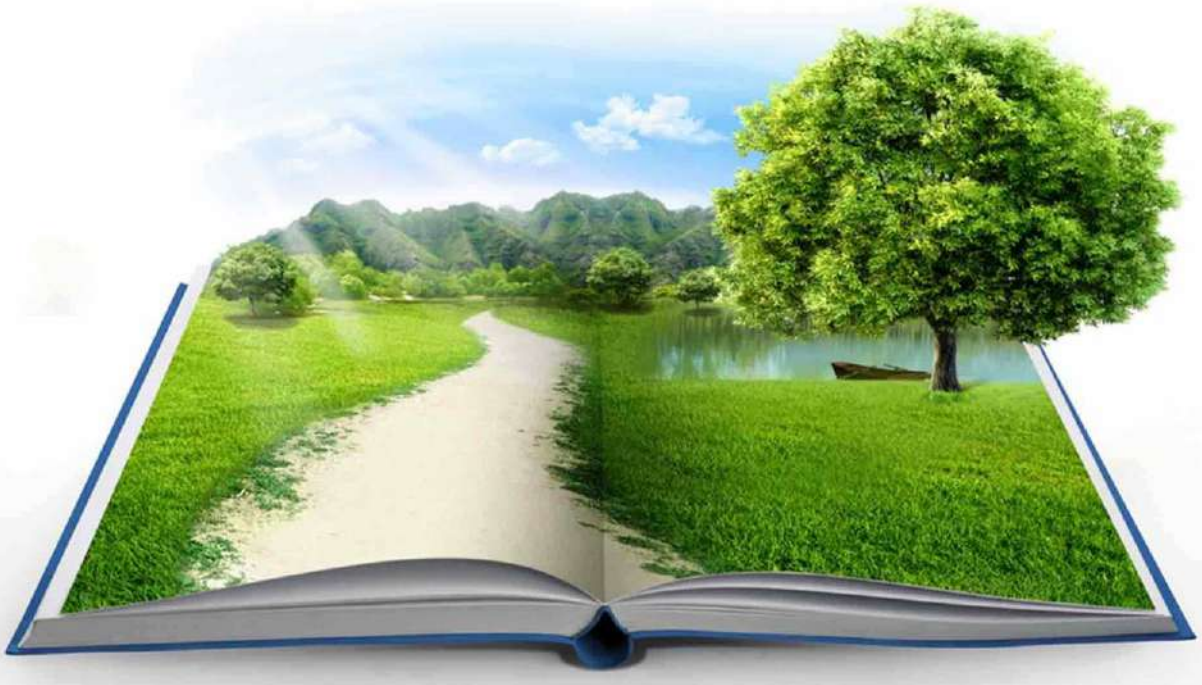
Abstract Booklet

International Conference

On

Environmental Edification: Everywhere for Everyone

5th -6th December, 2022



Department of Lifelong Learning
University of Rajasthan, Jaipur

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Prof. Rajeev Jain

(Hon'ble Vice-Chancellor)

Patron

Prof. Prakash Sharma,

(Director, Department of Lifelong Learning**)**

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International Conference

On

Environmental Edification: Everywhere for Everyone

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Abstract Booklet

Organized by

Department of Lifelong Learning,

University of Rajasthan, Jaipur

टीकाराम जूली
मंत्री
सामाजिक न्याय एवं अधिकारिता
एवं कारागार विभाग

सत्यमेव जयते

आजादी का अमृत महोत्सव

Jaipur, Dated : 25.11.2022

Message

I am pleased to know that the Department of Life Long Learning, University of Rajasthan is organizing an International Conference on 5th and 6th December, 2022 at jaipur on the theme "Environmental Edification: Everywhere for Everyone".

I am sure that resource person specialized in area of environment will enlighten the participants on the advanced knowledge in the area of their specialization.

Icongratulate the members of the faculty as well as students of the university on this occasion and hope; the university would continue its glorious traditions towards academic excellence with an added zeal and enthusiasm in the year to come. I appreciate the efforts of the department of Life Long University of Rajasthan, Jaipur for selecting such an innovative and appropriate theme for the conference.

I wish the conference a grand auccess.

(Teekaram Jully)

Prof Prakash Sharma,
Director, Department of Life Long Learning
University of Rajasthan,
J.L.N. Marg, Jaipur

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प्रो. राजीव जैन
Prof. Rajeev Jain

कुलपति
Vice-Chancellor
राजस्थान विश्वविद्यालय, जयपुर
University of Rajasthan, Jaipur

19th November 2022

Message

It is quite gratifying to note that the Department of Life Long Learning of our University is hosting an International Conference on "Environmental Edification: Everywhere for Everyone" on 5th and 6th December 2022.

Organising such an event at this point of time reinforces our objective of developing an environment for the exchange of ideas towards environmental humanities. Organising an event does not come without effort. It requires vision, mission and hard work. Conferences of such nature provide a great opportunity to academic fraternity not only to update knowledge and keep abreast of the latest developments in the respective field, but also an occasion for the resource persons, delegates to exchange ideas and interact with each other.

There have been unprecedented numbers of quality papers that are to be presented in the conference. I am sure that this occasion will provide an affable environment for the researchers and academicians to freely exchange the views and ideas with others. I thank all the national and international delegates who have come from various parts of the country and across the globe. We consider it a privilege and honour to have all of you here.

I am honoured to write this message to be included in the souvenir to be brought out on the occasion of this conference. While felicitating the Director of DLL and the Coordinators of the conference for their endeavours for bringing experts in their fields to share their knowledge with the faculty and the students..

I wish them all success.

(Rajeev Jain)

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J.L.N. Marg, Jaipur-302004, Rajasthan, INDIA

Smt. Neelima Takshak

Registrar
University of Rajasthan,
Jaipur
J.L.N. Marg, Jaipur-302004,
Rajasthan, INDIA

Message

It gives me immense pleasure to know that the International Conference On "*Environmental Edification: Everywhere for Everyone"*will be held with the initiative of the Department of Lifelong Learning, University of Rajasthan, Jaipur,during 5th -6th December, 2022.

I am sure the Conference will help to draw a connection between the environment and disciplines such as art, literature, education, law, health, science, and technology. I hope the conference will be useful and will be beneficial for all the participants.

I extend my best wishes for successful organization of the conference.

(Smt. Neelima Takshak)

Prof. Dileep Singh

Member, Syndicate
University of
Rajasthan, Jaipur
J.L.N. Marg, Jaipur-302004,
Rajasthan, INDIA

Message

It gives me pleasure to know that the Department of Life Long Learning, University of Rajasthan, of India is organizing an International Conference on 5th and 6th December, 2022 at Jaipur on the theme Environmental Edification: Everywhere for Everyone where a large number of eminent faculty members including professionals, Directors, Research Scholars and Academicians would deliberate on various important themes of the Conference. I am sure that interaction of academicians of India with various internationally renewed counterparts in this conference will go a long way in sharing of the knowledge and best practices.

The Institute also proposes to bring out a Souvenir on the occasion of the Conference containing the programme, special articles and write-ups on the theme of the conference. I wish all the success to the University and the Organizers of the International Conference.

(Prof. Dileep Singh)

Mr. Ravi Solanki

सत्यमेव जयते

Chief Engineer
State Water Resources and
Planning Department
Government of Rajashan

Message

I am pleased to know that the Department of Life Long Learning, University of Rajasthan is organizing an International Conference on 5th and 6th December, 2022 at Jaipur on the theme "*Environmental Edification: Everywhere for Everyone*".

Given the excellent talent pool available with Departement of Life long Learning and status of the participants, the conference will throw up excellent ideas for research scholars, academicians and all others stake holders.

I congratulate the organizers of the conference and wish the event all success. It is sincerely hoped that the souvenir being brought up on this occasion will be found extremely topical and useful by all.

(Ravi Solanki)

Director,
Department of Lifelong Learning
University of Rajasthan,
Jaipur
J.L.N. Marg, Jaipur-302004,
Rajasthan, INDIA

Prof. Prakash Sharma
Patron

Message

I am immensely pleased to invite you to the international conference on "Environmental Edification: Everywhere for Everyone" on 5th and 6th December 2022 to be held at department of Life Long Learning, University of Rajasthan, Jaipur.

We are organizing the International Conference with a vision, important for professionals as well as academia. The enthusiasm, dedication and commitment of the organizing team will spare no efforts in meeting your expectations and making this conference a successful event.

The Conference will helps to draw a connection between environment and disciplines such as art, literature, education, law, health, science and technology; it will be an informative resource for anyone concerned about our planet. This interdisciplinary Conference aims for a higher level of coherence and integration where different disciplinary perspectives will be integrated to create "own theoretical, conceptual and methodological identity" Being Patron in Chief of the Conference, I shall greatly appreciate the active participation of all the distinguished International & National Speakers, Faculty, Research Scholars and Students to participate in this International Conference. We welcome you all and will try to ensure that you carry a rich experience.

(Prof. Prakash Sharma)

Dr. Barkha Rani
Conference Director

Assistant Director,
Department of Lifelong Learning
University of Rajasthan, Jaipur
J.L.N. Marg, Jaipur-302004,
Rajasthan, INDIA

Message

It is my pleasure to welcome all the invited speakers and delegates to department of lifelong learning, University of Rajasthan for conference with the theme of "Environmental Edification: Everywhere for Everyone" on 5th and 6th December 2022.

The theme of the conference addresses the new environmental revolution which has forced the forced environmental education to enter a new era. This conference will helps to draw a connection between environment and disciplines such as art, literature, education, law, health, science and technology. The horizons are broadening and a co-ordinate approach is required from various facets of higher education institutes. Conferences offer wonderful platforms for interaction and exchange of scientific initiatives and ideas. It will provide a great platform to further explore the ever-expanding horizons of academic and industrial collaborative research. I hope this conference will help in combating the bottlenecks and expanding the knowledge of researchers, scientists and academicians. The organizing committee has worked hard to make this conference a memorable one. It has been a good learning experience for the students as well for their endless hard work of months to make this conference a grand success. I hope this event will motivate everybody. I assure you that we will make your time spent with us in the conference a memorable one.

Barkha

(Dr. Barkha Rani)

Dr. M. L. Vasita
Convener

Department of Business Administration
University of Rajasthan, Jaipur
J.L.N. Marg, Jaipur-302004, Rajasthan, INDIA

Message

"Education is the most powerful weapon which you can use to change the world." Academic Conferences are one of the effective means of communicating advances taking place in Theory and Practice so that knowledge becomes socially useful and relevant. The Department of Lifelong Learning, University of Rajasthan, Jaipur is organizing an International Conference on 'Environmental Edification: Everywhere for Everyone' on 5-6 December, 2022. Environment is a multidisciplinary academic field that systematically studies human interaction with the environment. Environmental studies connect principles from the physical sciences, commerce/economics, the humanities, and social sciences to address complex contemporary environmental issues. It is a broad field of study that includes the natural environment, the built environment, and the relationship between them. The field encompasses study in basic principles of ecology and environmental science, as well as associated subjects such as ethics, geography, anthropology, policy, politics, urban planning, law, economics, philosophy, sociology and social justice, planning, pollution control and natural resource management.

The main objective of this Conference is to provide a Forum to Scholars, Industrialists, Faculty Members and Students to express their views on their specialized field and also to bring to light their research achievements. This will be a great opportunity to interact with experts coming together from across the world. All contemporary issues in Environment shall be discussed in these two days.

We take this opportunity to thank all Faculty Members, Participants, Advertisers and students of the university who contributed unanimously to make this conference a success.

Warm wishes to all the delegates.

(Dr. M. L. Vasita)

Dr Akhil Kumar
Organizing Secretary

Department of Law
University of Rajasthan, Jaipur
J.L.N. Marg, Jaipur-302004, Rajasthan, INDIA

Message

I welcome you all to the International Conference on "Environmental Edification: Everywhere for Everyone" at the department of Life Long Learning, University of Rajasthan, Jaipur. I am very enthusiastic about the Session and the thoughts of various Eminent Speakers, Research Scholars and the teaching fraternity will bring into our fold.

Achieving Environmental goal will demand the acceptance of responsibility by citizens and communities and by enterprises and institutions at every level, all sharing equitably in common efforts. Such an interdisciplinary environmental program will strive for a multidisciplinary synthesis whereby knowledge from several disciplines will be brought together to understand the complex environment we live in. Our conference serves as a global platform for various forms of knowledge sharing irrespective of differences in time and geography.

The enlisted topics shall set up a platform of spreading light of the recent technologies and enable us to grow by way of learning from knowledge reserves and absorbing expertise from treasury of learned academicians.

I am highly grateful to the members of the team for exercising painstaking effort in making this conference successful.

(Dr Akhil Kumar)

Significance of Human-Environment interdependence: Prerequisites for future of human well-being

Dr Alita Beniwal
Apex Institute of management & science, college, Jaipur, Rajasthan

Despite attempts in recent decades to tackle environmental problems, our Mother Earth is currently facing a plethora of concerns. Issues such as pollution, land degradation and global warming still persist, due to the exploitation of earth at an alarming rate Notwithstanding continuous efforts in recent decades to tackle environmental problems, Earth at present is facing a plethora of issues such as environment pollution, land degradation and global warming, due to over exploitation of nature at an alarming rate. Human civilization depends upon environment for its every life support facility. However, some people are of the view that nature has everything in abundance and free of cost which cannot deplete in near future. But this is not true, as it is the rule of nature that everything has its price, while we do not pay for nature's services directly, we have to pay considerably for damaging and harming environment in terms of wastewater treatment facilities, suspensions on greenhouse gases, increased rate of diseases, reduced soil fertility and deterioration of the quality of our vital force which is fundamental to very existence of human life i.e. air quality. Though much has been written and synthesised, little is understood about the well-being benefits of the natural environment and its ecosystem services. The interwoven relationship of ecosystems and human well-being needs to be adequately recognized in the broader philosophical, social, and economic well-being literature. In this research article, we have examined the human-nature interdependence and significance of sustainable environment for survival of human existence.

Environmental Accounting : A vital tool for the accounting of natural resources

Dr Amar Nath Agarwal
SCRS Govt PG College Sawai Madhopur

Environmental accounting may also be called as "green accounting", "sustainability accounting", "social accounting" or "resource accounting", its target is to incorporate the economic as well as environmental information. Environmental accounting is the process of identification, measurement, generation and communication of environment related information with the aim to improve environmental decision making. Environmental accounts provide the data which signifies the contribution of natural resources to the economy of a country along with the costs imposed due to use and degradation of natural resources being used by them . Environmental cost- benefit analysis (CBA) can be use full for a business entity in respect of sustainable development and CSR (Corporate Social Responsibility). An attempt has been made in this paper to identify the various costs and the benefits on implementation of environment friendly processes and use of equipments helpful in reducing emissions. (Key Words: Environmental Accounting, social accounting, sustainable development, cost-benefit analysis 'CBA')

Oxidation of Benzhydrol by Halochromate: A Kinetic study

Ammilal Rao
Department of Chemistry, University of Rajasthan, Jaipur, Rajasthan, India

The oxidation of benzhydrol by imidazolium dichromate [IDC] has been investigated. The experimental results suggest the formation of an intermediate complex between the benzhydrol and IDC, which decomposes in the rate-determining step to yield the product. The final oxidation product of benzhydrol was identified as the corresponding benzophenone. The reaction has a first-order dependence on IDC and a fractional first-order dependence on benzhydrol. The reaction is catalyzed by hydrogen ions. The solvent effect analyzed using the Kamlet's and Swain's multi-parametric equations. The thermodynamic parameters such as activation energy, enthalpy of reaction, entropy of reaction, and Gibb's free energy of reaction were evaluated. A mechanism of reaction has been proposed.

Social issues in Sustainable Development

Dr.Anita Jyani
Seth RL Saharia Government PG College, Kaladera, Jaipur

The sustainable development concept has emerged as the priority vision for the future of our planet and the development of human civilization based on universal norms and social values. Human beings are a social species that is capable of adapting to new environments, and these factors are the key determinants of social and economic growth. Humans live in social groups, and they cooperate to achieve common goals and resolve shared problems. Recent years have witnessed a shift in attitudes towards social and economic growth and a renewed interest in the notion of the common good, which is manifested by social responsibility for a clean and healthy environment. Nearly all human activities exert an impact the environment, the economy and the society, and they influence our well-being, quality of life, and the survival of the human species . A participatory approach to sustainable development is consistent with the principle of subsidiarity which posits that decisions should be made as closely as possible to the citizens. The ultimate goal of sustainable development can be reached only through the cooperation of all stakeholders, which is why the principle of participation should be incorporated into the concept of extended social responsibility that requires broader and more active participation of all social entities . All citizens should be made aware that responsible attitudes towards consumption, production, environmental protection and progressive social values will determine the survival of the current and future generations.

Environmental Pollution and Its Impact on Human Health

Anita Kumawat
Government Girls College Chomu, Jaipur

Environment and health are inextricably interlinked. Environmental health is a key part of any comprehensive public health system. Environmental pollution poses the major threat to global health in the world. The pollution produces harmful effects not only on human health (respiratory disease, cardiovascular disease, asthma, etc.) but also influence the plants and animals. The physical environment, such as drinking water, sanitation, housing, and air, has considerable effects on the health status and well-being of people. Environmental change and its attendant health impacts are driven by many factors, including economic growth, population growth and movements. The three broad trends- the intensification of agriculture, industrialization, and rising energy use- which stand out in terms of their profound impacts on the physical environment and their enormous potential for influencing human health. In India, premature death and illness due to major environmental health risks accounts for nearly 20 Percent of the total burden of disease in India. Proper environmental management is the key to avoiding the quarter of all preventable illnesses which are directly caused by environmental factors. There is an immediate need to tackle environmental health issues. Problems such as unsafe water, sanitation and hygiene, and air pollution are major contributors to the worldwide disease burden.
Keywords: environmental pollution, air pollution, human health, physical environment, environmental health.

Environmental Ethics: Issues in India

Dr. Anjana Yadav
G.D. Government College for Women, Alwar (Rajasthan)

Environmental protection is part of Indian cultural values and traditions. Earth is our paradise and it is our duty to protect nature. Ethics are the moral principles that let us distinguish between right and wrong or good and bad. Environmental ethics has been described as having a conscience that reflects one's commitment and responsibility towards the environment as well as towards the present and future generations of people. It is a relationship between human beings and the natural environment which are having anthropocentric, bio-centric, and eco-centric approaches. environmental ethics refers to the issues, Features principles, and guidelines relating to human interactions with their environment.

The present article explores and describes the major environmental ethical issues in India such as consumption patterns and equitable utilization, gender equity, preserving resources for future generations, rights of animals, and environmental awareness.

The research revealed that an equitable sharing of resources forms the basis of sustainable development. Everyone has an equal right to earth's natural resources but In Indian society, unfortunately, men play the decisive role as compared to women. Cruelty to animals is no ethically different from cruelty to another human being every animal has the right to live in a dignified way, and their well-being and liberty must be respected. Environmental awareness will conserve beauty, and ensure the support sustainable society.

Access to justice, complete justice, Environmental justice and National Green Tribunal Act 2010: A Critical Study

Dr. Anjay Kumar
Faculty of Law, University of Delhi, Delhi

Law and justice related to each other. Access to justice is a precondition to make the realization if rights and more than just court access. To study law without studying the justice is like having a wallet without money. Bothe goes hand in hand. The 'Complete justice' in broadly interpretation means that the court is exercising law-making powers and narrowly would mean that the court could allow the law to become an instrument of oppression and not justice. 'Environmental justice' is the fair treatment and meaningful involvement of all people, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Environmental justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.

With the establishment of the National Green Tribunal (NGT), under the National Green Tribunal Act, 2010, India became the first developing country and third country in the globe to set up a specialized environmental tribunal, after Australia and New Zealand. National Green Tribunal Act is a specialized judicial body equipped with expertise solely for the purpose of adjudicating environmental cases in the country. The purpose of establishment of NGT is for the effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources.

The Constitution for any state is a breathing document which breathes with its own principles. Every provision of the Indian constitution is rule of law it runs like a golden thread in the entire Constitution. Through the principle of judicial review the judiciary plays dual role as the protector of the Constitution and the guardian of fundamental rights. Right from its inception, the NGT Act invited criticism and several points. In this paper the NGT, Act, 2010 analyzed especially the functioning of the NGT along with the environmental justice. Now it is the right time to shift from 'rule of law' to 'the role of law' and 'access to justice' to 'quality of justice' for the dignified life.

Requirement of Green Economy: a case study of Jaipur city

Dr. Ankita Gupta
Government Girls College, Sikandra,Dausa

A green economy is defined as low carbon, resource efficient and socially inclusive. In a green economy, growth in employment and income are driven by public and private investment into such economic activities, infrastructure and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services.

These green investments need to be enabled and supported through targeted public expenditure, policy reforms and changes in taxation and regulation. UN Environment promotes a development path that understands natural capital as a critical economic asset and a source of public benefits, especially for poor people whose livelihoods depend on natural

resources. The notion of green economy does not replace sustainable development, but creates a new focus on the economy, investment, capital and infrastructure, employment and skills. In Jaipur city Green Economy is essential for Sustainable Consumption, Production, Resource Efficiency, and overall Sustainable Development. The overall objective of this paper is to discuss a number of challenges for green economy in Jaipur city. The Green Economy provides a macro-economic approach to sustainable economic growth with a central focus on investments, employment and skills.

Keywords: green economy, sustainable development, environment, employment, investment.

BIOREGIONALISM -AN OVERVIEW

Dr. Archana Kalra
S.P.N.K.S Govt P.G College, Dausa

Bioregionalism can be briefly defined as a social movement which seeks to recover a sense of place and a sense of community by revitalising ecologically sustainable and culturally diverse societies in the context of their local geographical areas, or "bioregions." Bioregionalism shares certain affinities with environmental determinism, the largely discredited theory that geographical features determine all aspects of a society's cultural, economic, and political development. The objective of bioregionalism is to achieve a co-adaptive fit between local cultures and local environments.

The goals of bioregionalism are to "restore natural systems, satisfy basic human needs, and develop support for individuals". Nature, society, and self can be seen in transactional terms, with each mutually constituting and influencing the other. A corresponding bioregional ethic aims to integrate local environments and local communities in ways that are ecologically sustainable, socially just, and humanly satisfying .

In contrast to the "industrioscientific paradigm," which favours unlimited economic growth, centralized forms of decision-making, and cultural homogenisation at the national/ global levels, the "bioregional paradigm" advocates the devolution of economic, political, and social power to local communities. Bioregionalism is perhaps more compatible with social anarchism and more participatory forms of democracy that place ultimate decision-making power in the hands of local communities. Power would flow not from the global to the local, but from the local to the global. Distinguishing itself from main- stream environmentalism, bioregionalism adopts a proactive, prefigurative politics. Promoting biological and cultural diversity at the local level enables bioregional communities to both preserve their natural environments and prevent them from being exploited by others. Bioregionalism shares overlapping concerns with movements promoting permaculture and community agriculture, worker and consumer cooperatives, community finance and local currencies, ecovillages and transition towns, among others.

EQUITABLE LEGAL HARMONY OF ENVIRONMENT

Dr. Archna Singh
University of Lucknow, Lucknow

An environment is a complex and multidimensional phenomenon. When it comes to the flora and fauna as well as their contemporary and progressive future, it exchanges the complementary aspect of nature and mankind. Nature does not judge the mankind's action as negative or positive, good or bad, right or wrong, merits or demerits, it only knows 'how to balance the environment'?

People remove the forest for their snobbism then the nature replicates in the form of flood, drought, earthquake, and other natural calamities. Emphasizing the **'environmental composite culture'** in the phase of ethical moral, noble, righteous and Virtuous attitude towards conforming of being civilized and welfare state, the objective has been diluted. Ethos and conscience of mankind towards nature is in dilemma that 'who are dominating over whom'?

According to anthropocentric and eco-centric approach the greed of human are overshadowing the interdependency of nature and mankind. Environmental laws trying hard to put check on the manmade destruction. Due to industrialisation, urbanization, globalisation, population over blast, mismanagement and over exploitation of natural resources, disruption of natural ecological balance which resulted into the climate change, ground water collapse, endangerment of several species of wildlife , pollution of rivers, soil erosion. Unplanned and uncalculated use of natural resources are one of the provital exponent, which are highly responsible for ecological imbalance. The cure is not only strict legislation but ultimate **philosophy of self restraint**, in manner of use of natural resources would make it possible to overcome with this Universal problem. The World Commission on Environment and Development, (Brundtland Commission) Report 1987 defined sustainable development as **"Sustainable development is development that meet the need of the present without compromising the ability of future generation to meet their own needs"**. It requires meeting the basic needs of all and extending to all the opportunity to satisfy their aspiration for better life.

In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it. In reference of the environmental jurisprudence, the precautionary principle, public trust Doctrine, polluter pay principle, intergenerational equity and non-corruption are emphasized by the international legal expert as facets of sustainable development.

Keywords: Environmental composite culture, Philosophy of self restraint, Equitable Legal Harmony Of Environment, Public trust Doctrine, Environmental jurisprudence

Green Finance- An Imperative for Sustainable Development

Arushi Mehta
Department of Management Studies, Faculty of Management Studies, Jamia Millia Islamia

It is now well recognized that environment friendly and climate resilient technology and projects are key to sustainable development. However, ensuring this requires huge financial resources. The issue was thoroughly deliberated in the recently concluded 27th Conference of Parties (COP27) at Sharm el-Sheikh, Egypt. The cover decision, known as the Sharm el-Sheikh Implementation Plan, highlighted that a global transformation to a low-carbon economy is expected to require investments of at least USD 4-6 trillion a year. Delivering such funding will require a swift and comprehensive transformation of the financial system and its structures and processes, engaging governments, central banks, commercial banks, institutional investors and other financial actors. Such massive investment is required to be raised and provided at cheaper costs. India has already taken several steps in this direction with a number of entities issuing green bonds over a period of time. Government of India also recently issued sovereign green bond framework. The funds raised through these bonds will be used for financing projects in the areas such as renewable energy, climate change mitigation, promotion of public transport through electrification, etc. As part of green finance initiative, the Reserve Bank of India had earlier included the small renewable energy sector under Priority Sector Lending scheme. As per (Gilbert 2012) Green finance is a broad term that can refer to financial investments flowing into sustainable development projects and initiatives, environmental products, and policies that encourage the development of a more sustainable economy.

Keywords: *Environment Friendly, Climate Resilient, Conference of Parties, Sustainable Development, Green finance, Reserve Bank of India*

ROLE OF INTEGRATED CHILD DEVELOPMENT SERVICES (ICDS) SCHEME TO ACHIEVE SUSTAINABLE DEVELOPMENT GOALS

Arvind Choudhary
Department of Business Administration, University of Rajasthan, Jaipur

ICDS Scheme is world's largest flagship programme that was launched in India in the year 1975 with the aim to improve early Childhood care Developments with the help of Healthcare, Nutrition and early Education Services. All Children below 6 years of age, pregnant women and lactating mothers are eligible for availing of services under this Scheme. The Scheme is universal for all categories of Beneficiaries and in its coverage. From the year 2013 it is not only a part of National Food Security Act 2013 that provides the Right to Food to Indian Citizens it also covers the Social Dimension Goals of Sustainable Development Goals (Goals - 1 to 6). Mainly it covers Goal No. 1(No Poverty), Goal No. 2 (End Hunger), Goal No.3 (Good Health and Well Being), Goal No. 4 (Quality Education) and contributing to achieve their Targets. Convergence is basically its Main Feature it offers package of six

services under the Platform of Anganwadi Centres. It is a Mission mode Programme that that have National State and District level. The framework to monitor the Performance of SDG's is also having these same levels.

Keywords - National Food Security Act 2013, Social Dimension, Sustainable Development Goals , NO Poverty, End Hunger, Good Health and Well Being,

WILDLIFE CONSERVATION ANIMAL WELFARE WITH SPECIAL REFERENCE TO NATIONAL GREEN TRIBUNAL.

Atendri Devi, N.L.Gurjar

The state of the inhabitants of the world may be determined largely by examining the IUCN Red Data List. It is a significant tool to guide environmental policies and actions. Data pertaining to species distribution, population numbers, habitats and ecology, usage and commerce, risks, and conservation measures are provided to aid in making conservation decisions. According to the updated IUCN Red List on July 21 and December 8, 2022, the IUCN Red List will be updated with thousands of new species evaluations and reassessments. India is one of the megadiverse nations with 2.4% of the land area, accounting for 7-8% of the species on the planet, including roughly 91,000 species of animals and 45,500 species of plants that have been cataloged in its ten bio-geographic zones, garnering them the moniker "megadiverse". Of these 12.6% of mammals, 4.5% of birds, 45.8% of reptiles, 55.8% of amphibians, and 33% of Indian plants are endemic, meaning they can only be reported in India. According to National Wildlife Database, There are 565 extant wildlife sanctuaries in India, encompassing an area of 122560.85 km2, or 3.73% of the nation's geographic areas (National Wildlife Database, May. 2022). Another 218 sanctuaries encompassing a total area of 16,829 km2 are recommended in the Protected Area Network. For wildlife conservation, The National Green Tribunal was constituted by the Indian government in 2010. (NGT). For wildlife conservation, The NGT is a "quasi-judicial" body that solely deals with civil environmental matters. Before the NGT was established, there had been two prior efforts to construct green courts in India. These laws were the National Environment Tribunal Act of 1995 (NETA) and the National Environment Appellate Authority Act of 1997 (NEAA). But in 2010, the NGT, the most effective environmental court, was established. The NGT has overcome several environmental issues since its inception and has garnered overwhelmingly good comments from all quarters. In this study, NGT decisions from their inception in October 2010 through December 2013 were empirically analyzed. It looks at how NGT and conflict hotspots affect the world. In particular, the cases involving the administration of the Coastal Zone that were settled in NGT are emphasized. Even if the NGT Act and its procedures have many drawbacks, they may nonetheless be seen as a positive step towards environmental justice in India.

Keywords: Environmental Justice, National Green Tribunal Act, India

Women Empowerment and Sustainable Development in India

Beena
S.D.C.G.J. Govt. College Behror

Women and girls make up more than half of the world's population but they always remain the most vulnerable group of society. Women have to face various forms of discrimination in achieving their economic, political and socio-cultural rights. Therefore gender equality has become essential for the upliftment of economic, social and political status of women. Gender equality is not only a basic human right but it also essential to boost up the process of sustainable development. Gender equality and women empowerment is one of the significant goal among 17 sustainable development goals approved by UN General Assembly in 2015. UN Report 1991 also says that 'ensuring sustainable development requires women's empowerment and their full, equal and beneficial involvement in decision making process related to sustainable development'. Women empowerment is essential to achieve sustainable economic growth and development as well as environmental sustainability.

Hence, the paper discusses the various plans and measures to achieve the women empowerment and gender equality in India and the role of women in achieving sustainable development goals. The paper finds that in order to achieve sustainable development goals, sincere efforts have been made by the Indian government to curb the gender inequality. But proper implementation of these efforts has been needed.

Keywords: Women empowerment. Gender equality, Sustainable development goals, Human rights, Economic growth.

Environment edification with education: through everywhere and everyone

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"Environment is no one's property to destroy, its everyone's responsibility to protect."
Mohith agad.

We won't have a society if we destroy the environment. Saving our planet, lifting people out of poverty, advancing the economic growth, these are one and same fight, we must connect dots between climate change, water scarcity, energy shortage, global health food security, everyone knows that flawer are sold but fragrance, soul is not sold and sky, air priceless, at present ecologislation and sustainable development are developing trend stragegis exist verywhere. Sustainable development is understood like very good balanced socio-economic-environment development.

However it is not separated from environment consciousness, feeling and knowledge.

It is pleased that there is progress in environment edification and education in india. Knowledge of areas environments protection and generation must must be developed and enlarged for benefit of future generation.

Detrimental Impacts Ozone of Layer Depletion

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There are many situations where human activities have significant effects on the environment. Ozone layer damage is one of them. The chlorofluorocarbon and the halons are potent ozone depletors. One of the main reasons for the widespread concern about depletion of the ozone layer is the anticipated increase in the amounts of ultraviolet radiation received at the surface of the earth and the effect of this on human health and on the environment. It is revealed that introduction of Chloroflourocarbons (CFCs) in the environment is the most rated cause of said depiction. Ozone depletion is allowing the UV radiation to earth surface. The exposure to these radiations is severely affecting all life forms on earth, especially the humans. Permanent or temporary blindness, skin cancer and immunity suppression are the main effects of these radiations reported by various researchers on humans. In the absence of other changes, stratospheric ozone abundances should rise in the future as the halogen loading falls in response to regulation. However, the future behaviour of ozone will also be affected by the changing atmospheric abundances of CH_4, N_2O, water vapour, sulphate aerosol, and changing climate. The prospects of ozone recovery are still undiscovered. The current situation of ozone depiction demands urgent remedial measures to protect lives on this earth.

Keywords: CFCs, Halons, Immunity depression, Skin cancer, Climate change

A Socio-Legal Study on Environmental Education and Law In India: With Social Reference to The India Constitution

Alpika srivastava

India is one of the nations affected by environmental deterioration, and concern for the environment is increasing. Nobody obeys rules and regulations unless they are threatened with a penalty. On the other hand, life is dependent on the environment. Environmental degradation, pollution, diseases, and stress must be identified and remedied locally, beginning with our own houses. If we are aware, we must educate others for continued advancement. Everyone desires that the people who will succeed them will live in a safe, tranquil environment with all of the essentials. Formal and informal education on our legal obligations and responsibilities is now necessary. Environmental education is needed in both high school and college, but we need to clarify the regulations, how they are enforced, and possible curriculum adjustments. As a required subject in any field, environmental education may raise awareness The purpose of this article is to make readers aware of the significance

of a shared discipline in all courses of study and a personal path of study that includes legal studies. This benefits students intellectually and in terms of rights and responsibilities. In this paper, the author focuses on the remedies provided under the Constitution of India for a safe and clean environment and deals with the present law and education system in India for a clean and safe environment.

जहाँगीर काल में प्राकृतिक चित्रण"

दीबा खान
चित्रकला विभाग
राजस्थान विश्वविद्यालय
जयपुर।

सार
भारतीय चित्रकला के इतिहास में मुगल चित्रकला का एक विशिष्ट स्थान माना जाता है। मुग़लो ने जहाँ एक और रणभूमि पर अपना परचम लहराया वहीं दूसरी ओर सृजनात्मक धरातल पर भी विभिन्न नवीन स्वरूपों को अंकित किया जिसने भारतीय कला जगत में नवीनता प्रवाहित कर दी। अकबर के पश्चात जहाँगीर के शासक बनते ही चित्रकला का स्वर्ण युग भी प्रारंभ हो गया। वह सौंदर्य उपासक व प्रकृति प्रेमी था। जहाँगीर ने इन विषयों को ही अपने समय की चित्रकला का प्रधान उद्देश्य बनाया था उसके समय में जितना सजीव चित्रण प्रकृति का हुआ था उतना किसी अन्य बादशाह के समय नहीं हुआ। जहाँँगीर कालीन चित्रकार मंसूर,मुराद और मनोहर प्रकृति चित्रण में अत्यंत कुशल थे। अपनी दिल्ली-आगरा से कश्मीर तक की यात्राओं के मार्ग में अनेक मनोरम दृश्यो व फूल पत्तियों, पशु पक्षियों का चित्रण जहाँगीर ने कुशलता से करवाया जिससे कि प्रकृति का महत्व और द्विगुणित हो गया।
मुख्य शब्दः- जहाँगीर, प्रकृति चित्रण, मुगल चित्रकला।

IMPACT OF DIGITAL ECONOMY AND INFORMATION AND COMMUNICATION TECHONOLOGY ON ENVIRONMENT

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The challenge of climate changes and environmental degradation are not national issues now, but these are a global challenge and cross the national border. Issues related to climate change have been top priorities of researchers because they are one of the greatest challenges faced by developing as well as developed economies. All developing and developed economies are facing changing weather patterns and sea level, which badly interrupt people's lives and structure of economies. According to the Inter-governmental Panel of Climate Change (IPCC), the release of greenhouse gas (GHGS) and climate change are increasingly considered to be a serious environmental problem, which has a long-term adverse impact on wellbeing. The increase in greenhouse gas in the atmosphere is the most important determinant of climate change and global warming. As stated by National Aeronautics and Space Administration (NASA), with rise in GHGS emissions (i.e., per capita ecological footprints and carbon emissions), global warming has augmented by 1.6 degree Fahrenheit (◦F) since the Industrial Revolution, which is a very alarming situation for life on this planet.

The United States Environmental Protection Agency stated that, since 1990 to 2010, the global emissions increased by 40%, reaching nearly 46 billion tons. These extreme climate changes result in global warming and extreme weather-related events, for instance, heavy rainfall, heat waves, hot spell, and drought repeatedly seen in the last few years. These climate changes significantly influence our ecosystem and human lives. . To handle these severe issues of climate change and environmental degradation, numerous global agreements and treaties came to pass, such as United Nations Framework Convention on Climate Change—1992 (UNFCCC-1992), Kyoto Protocol-1997, and Paris Climate Agreement—2015 (PCA-2015). These agreements are based on coping with the growth of global warming below 2 degrees centigrade (◦C), while, to accomplish this goal, many developed and developing nations have signed to obstruct inefficient energy structure. Nevertheless, regardless of these accords, global warming was on the highest peak and carbon footprints were still growing at the rate of 2.8% in 2018. Growing carbon footprints compelled the social scientists, researchers, and environment economists to identify the factors influencing ecological unsustainability.

Deleterious IAP: Its Sources, Influence on Health and Mitigation Measures

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Most of the research around the world has been pursued on outdoor air pollution, but in India we have a more severe problem of Indoor Air Pollution (IAP) which means the degradation of indoor air quality by harmful chemicals and other materials; it can be up to 10x worse than outdoor air pollution. This is because contained areas enable potential pollutants to build up more than open spaces. Statistics suggest that in developing countries, health impacts of indoor air pollution far outweigh those of outdoor air pollution. The foremost factor cited for is burning of fossil fuels for cooking. Among the 70% of the country's rural population, about 80% households rely on biomass fuel making India to top the list of countries with largest population lacking access to cleaner fuel for cooking. 4 million deaths and 5% disability-adjusted life-years is an upshot of exposure to IAP from unhealthy cooking making it globally the most critical environmental risk factor. India alone bears the highest burden (28% needless deaths) among developing countries. Moreover, about ¼ of ambient $PM_{2.5}$ in the country comes from household cook fuels. As there are no specific norms for IAP in India, urgent need has arisen for implementing the strategies to create public awareness. Moreover improvement in ventilation and modification in the pattern of fuel will also contribute to eradicate this national health issue. These considerations have prompted the discussion of the present knowledge on the disastrous health effects of pollutants emitted by biomass combustion in India. Additionally, Particulate Matter as an indoor air pollutant is highlighted with main focus on its spatial temporal variation and some recent Indian studies are further explored.

Keywords: IAQ, IAP, Biomass fuel, Particulate matter, Cook stove initiatives, Exposure determinants

THE INTEGRATION OF HUMAN RIGHTS AND ENVIRONMENTAL LAW IN INDIA

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In recent years, more and more people have become concerned about protecting the environment. Human rights and a healthy environment go hand in hand and help each other. It is important to look closely at these two ideas if you want to help the environment and promote sustainability. The issue of health is a bridge between environmental law and law about human rights. In the 40 years since the Stockholm Conference, the link between human rights and the environment has grown, and more international agreements and conventions have been made to protect both. Because of poverty and the denial of basic human rights, there is a lot of stress on the environment. This article will look at how human rights and environmental regulations relate to each other, as well as how the courts have helped shape environmental law. The report then looks at the many agreements and projects that different organisations and countries have started to protect human rights and make the environment better. The study also looks at what the government does and how the courts interpret international laws and agreements.

पर्यावरण संरक्षण पर सर्वोच्च न्यायालय के महत्वपूर्ण निर्णय

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भारतीय संस्कृति में पर्यावरण को विशेष महत्व दिया गया है। धर्मशास्त्रों में पृथ्वी को माता के रूप में माना गया है। वृक्षों में भगवान का वास माना गया है। स्कन्द पुराण में पीपल के वृक्ष को सर्वोच्च माना गया है तथा वराह पुराण में नियमित वृक्षारोपण को मनुष्य को स्वर्ग प्राप्ति का साधन बताया गया है।
भारत का संविधान हमारी संस्कृति और देश की जनता की आकांक्षाओं का दर्पण है तथा यह देश की सर्वोच्च विधि है। इन्ही बातों को ध्यान में रखकर संविधान में पर्यावरण से सम्बन्धित विभिन्न प्रावधानों को समाविष्ट किया गया है जिसमें -

- राज्य लोक स्वास्थ्य के सुधार का प्रयास करेगा तथा इसे अपने प्राथमिक कर्तव्यों में मानेगा। अनु. 47
- राज्य देश के पर्यावरण संरक्षण तथा संवर्धन का और वन तथा वन्य जीवों की रक्षा करने का प्रयास करेगा। अनु0 48क

- भारत के प्रत्येक नागरिक का यह कर्तव्य होगा कि वह "प्राकृतिक पर्यावरण की जिसके अन्तर्गत वन, झील, नदी और वन्य जीव हैं, रक्षा करें, उनका संवर्धन करे तथा प्राणी मात्र के प्रति दया भाव रखें। अनु. 51क (छः)

अनु. 21 के अनुसार "किसी भी व्यक्ति को उसके प्राण एवं दैहिक स्वतंत्रता से विधि द्वारा स्थापित प्रक्रिया के अनुसार ही वंचित किया जायेगा अन्यथा नही।"

मेनका गांधी बनाम भारत संघ के वाद (1978) में सर्वोच्च न्यायालय ने निर्णीत किया कि प्राण के अधिकार के अन्तर्गत मानव गरिमा के अनुसार मनुष्यवत जीवन जीने का अधिकार है।

एम.सी.मेहता बनाम भारत संघ (1986) 2 एस.सी.सी. 176, में उच्चतम न्यायालय ने दिल्ली के आवसीय क्षेत्र में स्थित श्रीराम फूड एण्ड फर्टीलाईजर कम्पनी की एक इकाई को ओलियम नामक खतरनाक गैस का उत्पादन करने से रोक दिया जब तक कि कम्पनी उन सभी सुरक्षा उपायों को नहीं अपनाती है जो गैस को निकलने से रोकने के लिये उपयुक्त और आवश्यक हैं।

एम.सी.मेहता बनाम भारत संघ (1988) 2 उम नि.प. 229 - उच्चतम न्यायालय ने कानपुर स्थित चर्मशोधन शालाओं को तुरन्त बंद करने का आदेश दिया क्योंकि इनके अपशिष्ट से गंगा प्रदूषित हो रही थी।

इण्डियन काउन्सिल फॉर इन्वायरमेन्टल लीगल एक्शन बनाम भारत संघ (1996) 5 एस.सी.सी. 281, में सर्वोच्च न्यायालय ने (Polluter Pays("प्रदूषित करने वाला भुगतान करता है" सिद्धान्त को लागू करते हुये प्रदूषण निवारण के लिये किये गये खर्च को प्रदूषण करने वालों से प्राप्त करने के आदेश दिये।

लाल बहादुर बनाम उत्तर प्रदेश राज्य ए.आई.आर. 2018 एस.सी. 200, में न्यायालय ने सरकार के द्वारा जारी अधिसूचना जिसमें हरित पट्टिका को आवासीय क्षेत्र में परिवर्तित किया गया था, उसे अभिखण्डित कर दिया गया। न्यायालय ने कहा कि यह अनुच्छेद 21, 48क तथा अनुच्छेद 51क (छः) का जवलन्त अतिक्रमण है।

Bioremediation of Agro-Based Pulp & Paper Mill Effluent Employing Autochthonous Bacteria

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Small-scale agro-based pulp and paper mills are characterized as highly polluting industries & are highly water intensive. Concomitant with water consumption, agro- based industries generate large volumes of effluents (~150–200 m^3 effluent/ton of paper produced) composed of bio-degradable organic pollutants in the country, standing next only to the domestic sewage. The nature of pulp and paper industry effluent is quite complex as it contains a number of organic components, viz. lignin, tannic acid, resin, cellulose, and hemicellulose which are released into the environment. The environmental impact of wastewater emanated from small-scale pulp and paper mills is therefore of particular concern. Lack of infrastructure, technical manpower, and R & D facilities restricts these mills to recover these

chemicals. Therefore, the COD of the emanating stream is quite high. In the above context, efforts were diverted to isolate specific novel bacteria which can survive under such extreme environment and can effectively degrade organic matter present in the pulp and paper industry effluent. Present study exploits biodegradable potential of autochthonous bacteria (e. g. *Pseudomonas, Bacillus, Pannonibacter,* and *Ochrobacterum*) to treat the industrial effluent from agro-based small-scale pulp and paper mills to bring the wastewater characteristics within the permissible limits involving less retention time. These bacteria were found capable of reducing COD up to 85%–86.5% in case of back water and 65-66% in case of back water : black liquor (60 : 40), respectively, after acclimatization under optimized conditions (pH 6.8, temperature 35°C, and shaking 200 rpm) when the wastewater was supplemented with N and P as trace elements.

Keywords: Effluent; Organic components; COD; Autochthonous bacteria; Lignin; Wastewater

INDUSTRIAL WASTE INCLUDING CALCIUM AND MAGNESIUM, AN UNUSUAL SOURCE OF ACID SOIL AMENDMENT

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The article discusses a potential method for enhancing acidic soil's fertility by adding alkaline compounds that are rich in important and trace elements. This method led to the commercial production of magnesium carbonate and oxide from dolomites and soapstone. The two mineral sources are byproducts of the magnesium products sector and have significant magnesium and calcium levels in addition to low amounts of trace elements like iron, copper, manganese, and zinc. The two fold magnesium content, which was discovered for the crust deposits, is what distinguishes the two waste types. The two waste types can be revalued in agriculture as amendment on acid soils due to their alkaline reaction and nutritional components composition. a buffering impact on the acid soil reaction and an increase in the amount of important and trace elements in the treated soil. The process of pH buffering and the enrichment of critical and trace elements in soil by alkaline waste sources creates soil and improves soil fertility globally. In terms of the soil reaction and calcium-magnesium concentration, the research illustrates the impacts of treating the soil with four different doses of industrial waste. The acquired results show that soil reactivity changes from acid to neutral, and that the highest investigated waste dose created increases in calcium soil content and magnesium soil content.The use of these wastes, which are a byproduct of the manufacturing of magnesium products, as a soil amendment is what makes this paper unique.

KEYWORDS: Magnesium carbonate, Buffer, Magnesium oxide, Enrichment and Soil fertility

Environmental History: Ecology and Culture

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Environmental history related the history of human interaction with the nature .This is the relationship between human societies and the nature on which they depended .The subject matter of environmental history can be divided into three components. First nature itself, second how humans use nature and third, how people think about nature. Environmental history has been deals variously as the interdisciplinary study of the relations of nature, culture and technology through time.

Environmental history emerged as a new field of study as environmental problems began to rise up in1960and 1970.Primary goal of environmental study is to show how environment and human actions are correlated .Ecology and culture are very important part of environment . Ecology is the study of the relationship between organisms and their environment. Ecology helps us to understand how organism related with nature. As the ecology related to the environment, culture is also correlate with environment. The environment and culture both are important in human beings life .Culture itself is a part of environment .Culture is very important factor, which indicates social environment.

THE POLITICS OF EFFORTS BEING MADE AT THE GLOBAL LEVEL TO SAVE THE ENVIRONMENT

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The cause of climate change is the technology provided by modern science which has been used to harness the explosive power of coal and petroleum. Whatever methods science has suggested curbing climate change are not acceptable to international politics. Political power does not want to accept the fundamental truth that climate change is the cause of carbon burning industrial development and industrial development will have to be curtailed to prevent it. For 40 years, international agreements on the reduction of green house gases are repeated and then broken.

Efforts being made by international conferences are being done by all the countries looking at their national interest. The precious time to save the earth has been lost to the power politics. The power politics of North and South has brought this crisis to this point. All efforts have been centered on developed and developing countries, mitigation and adaptation. No attempt was made to take it to the level of individual and community. Even today, efforts are being made to save the environment at the local level in the world, which still have not been made a topic of discussion.

Keywords: Mitigation, Adaptation, Climate change, Power politics, Green house gases

Impact of Street Vendors on Urban Environment: An Analytical Study with Special Reference to the State of Rajasthan

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Informal Sector is the most significant part of the workforce in India. There are many informal sectors in our country working for earning livelihood. They have to work frequently and regularly to earn their daily bread. Street hawker and the vender is one of the vast sections of unorganized sector. In the informal sector Hawkers present their effort to sell goods and services on the street as they are self-employed workers. The research intends to analyze the overall state and livelihood of street vendors, with an emphasis on Jaipur and Ajmer, the city's most populated market districts. Furthermore, the objective of this research is to explore the influence of street selling in the context of the urban environment and the sellers themselves. Street vendors are considered as "victims" of urban space concerns, while another saw them as "criminals" who cause problems in urban areas.

This paper explores the experiences of street vendors in Rajasthan. The paper describes the street vendor livelihoods with particular focus on challenges to their right to livelihood. The paper also uncovers a situation where vendors face persistent challenges including forced removals, exploitation, extortion and considered as environment polluters.

Key words: informal economy, urban space, livelihood, street vendors. hawkers

Microfauna as an indicator of environmental pollution.

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The presence of a substance whose chemical makeup or amount interferes with the operation of natural processes and results in unintended environmental or health consequences is referred to as pollution. It causes negative effects on human health, deteriorates the biota, and ultimately harms the ecosystem's structure. Water is one of the most essential and necessary resources for the sustainability of all life on Earth. Human pursuits, including the burning of fossil fuels, mining, and agriculture have an impact on the quality of the water. There are several instances of dangerous substances being released directly into water systems, including garbage, sludge, and dyes, agricultural waste that contains pesticides and fertilizers. Industrial trash that is nonbiodegradable and contains hazardous chemicals and heavy metals such As, Pb, Ni, Zn, Cd, Cr, Hg, and Cu is also dumped into bodies of water. This causes a build-up of toxic substances in the food chain, posing a serious threat to both humans and the aquatic ecology. Plankton is organisms that live suspended in the water bodies such as lakes, ponds, rivers, and seas and they are not able to swim against the currents of water. The Phytoplankton and Zooplankton communities make up the plankton community. Planktons are essential in the bio-monitoring of pollution. Pollution has an effect on plankton composition and distribution; as pollution levels rise over time, plankton diversity and abundance decrease. Since they respond quickly to changes in aquatic environments, such as water quality, pH, colour, odour, and taste, for their brief life cycles, they are used as indicators of their habitats' general health or condition.

Keywords: Pollution, Planktons, Zooplanktons, Phytoplanktons, Bio-Monitoring.

Utilization of agro-waste for the green synthesis of nanoparticles

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Agro-waste is the non-edible part of biomass including waste from crop fields, wheat and rice husk , fruits and vegetables peels, produced abundantly across the globe, about 2 billion per annum. So, there is an urgent need for the management of such type of waste. Lot of research has been done to utilize these agro-waste for the fabrication of nanoparticles as they are enriched with biomolecules like phenolics, proteins and flavanoids that acts as capping agents for the synthesis of nanoparticles and offers various advantages like highly biocompatibility, high stability, high reactivity and less toxicity. Various nanoparticles has been reported which synthesized from organic waste, which includes metal based such as Ag, Au ,Zn, and C based nanoparticles like graphene oxide (GO), fullerene, carbon rods. These green synthesized nanoparticles are the suitable candidates for so many domestic and commercial applications in catalysis, imaging, sensing, energy based research, medical and environmental protection owing to their remarkable physiochemical properties and large surface area and offers wide scope for the future technology.
Keywords: Nanoparticles, Agrowaste, Capping agents, Flavanoids, Green synthesis

A STUDY ON DEVELOP THE HIGH-PERFORMANCE WIDE - BAND LNA FOR USE WITH IEEE FREQUENCY

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In this research, a low-noise amplifier (LNA) with uniform growth, silent operation, and absolutely brilliant uniformity is suggested to be utilized in bandwidth transmitters, with a comparative channel capacity (RBW) of 110%. To enhance extended the reach, researchers present a cascode with dual feedbacks and a wide bandpass (BPDWB) matching network formed from bias and parasitic characteristics. The techniques for constructing a corresponding networking are also shown, and measurements indicate that the channel's resonance frequency is a great pairing for the required resistance in the range from through 3.5 GHz. Resistance matched precision and efficiency in prediction are both boosted by the envisaged BPDWB networks. Paper presents a low amplifiers (LNA) in 0.25 m GaAs father made high mobility electrons semiconductor (GaAs pHEMT) developers and researchers NF0.55 at mhz. Additionally, for the range of frequency of 8.5-20 MHz, overall bit error rate (NF) is somewhere between 2.19 to 3.23 dB, while another NF maximum (vase: internet: mia2bf00852: mia2bf00852-math-0012) varied between 1.55 - 2.91 db. At top of just that, a

two-tone test with a frequency separation of 50 MHz demonstrates that the suggested LNA may accomplish high IIP3 of 0.96 frequency range.

Keywords: - low-noise amplifier, channel capacity, matching network, bit error rate, High-Performance Wide**.**

Developing Wireless Communication Technique for Usage in IoT Applications

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The Internet of Things (IoT) is another registering worldview that imagines standard ordinary articles being changed into significant items. In view of its benefits over wired advancements, like simpler arrangement, less expensive structures, compact help, flexibility, and straightforwardness of association, remote innovations will be the best option for interfacing IoT gadgets. There are assortments of remote advances that can be utilized for IoT; these innovations cover a wide scope of distances, from a couple of centimeters to numerous kilometers. The Internet Engineering Task Force (IETF) introduced the 6LowPAN convention in this article, and the ZigBee association set up the ZigBee convention over the low-power IEEE802.15.4 standard. Sensors are gathered in remote sensor networks applications to illuminate sensor centers. Commonly, battery power is utilized to drive these center points. In IoT applications, these centers should keep going for quite a long time without waiting be re-energized. IoT helps with settling on choices in view of genuine information gathered from a colossal number of ordinary gadgets that have been improved with information through the expansion of detecting, handling, and correspondence capacities. Remote correspondence is for the most part utilized by IoT gadgets to speak with different gadgets.

Desertification : A Status study of Rajasthan

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The Thar Desert of Rajasthan is spread across the districts of Hanumangarh, Sriganganagar, Bikaner, Jaisalmer, Barmer, Jalore, Sirohi, Pali, Jodhpur, Nagaur, Churu, Sikar & Jhunjhunu covering about 61% of the total area of Rajasthan. The problem of desertification is increasing and it ranks among the greatest environmental challenges in Rajasthan.

Desertification problem in western Rajasthan, is caused by accelerated and natural processes and manifested through degraded features like sand sheets, drifting sand, active dunes, deflation hollows, rills, gullies, soil crust, salt encrustations, impeded drainage conditions, poor vegetation cover, low plant density and low biomass production under different rainfall zones, has been highlighted in this paper. In the less than 300 mm rainfall zone, wind erosion/deposition, salinisation and waterlogging are the dominant processes of

desertification. In the more than 300 mm rainfall zone, water erosion and wind deposition are the major processes leading to degradation of the croplands and grazing lands.
Key Words: Desertification, Degraded features,Wind erosion, Degradation , winds

PREVENTIONS OF ENVIRONMENTAL POLLUTION THROUGH RIGHT TO SPEECH AND EXPRESSION

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Environment and ecology system is necessary for a healthy life. Healthy environment are depends on the environmental ethics. Ethics or moral philosophy is the branch of Philosophy that involves. Systematizing, defending and recommending concepts of right and wrong conduct. Environmental ethics is the discipline in philosophy that studies the moral relationship of human beings to and also the value and moral status of the environment its nonhuman contents. Part third of constitution of India provides us fundamental and basic rights those are essential for human life with human dignity. The right to freedom of expression includes within it the right to anonymous speech, i.e. In order for a person to express his/her thoughts and ideas, political, ethical, or otherwise a person requires a safe private sphere free from State or private interference. It means That is, right to expression plays an important role in order to save the environment and to awaken the awareness of the environment. There are right to Information is the integral part of right to speech which is played an Important role for answerability of private and government department. Many peoples filed RTI and Get information for save environment. Article 21 is also very important regarding healthy environment. In this following case healthy environment is our fundamental right-:

Murli S. Deora V/S Union of India

The Supreme Court ruled that passive smoker's right to life is violated when they smoke in public place.
Key words – Moral relationship, Information, Principle, RTI, Pollution

Synthesis, characterization and antimicrobial activities of ZnO nanoparticles synthesized using extract of Petals of Rosa indica

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ZnO nanoparticles were synthesized by sol gel method. These films were characterized by x-ray diffraction (XRD), Fourier transform Infrared (FT-IR) spectroscopy, Scanning electron microscope (SEM) and antimicrobial activities. The XRD verifies that this sample is in wurtzite phase with hexagonal crystal structure. The average crystallite size of ZnO nanoparticles is calculated using Scherer equation and is about 40 nm and is well matched with JCPDS card (No. 37-1493). Powder X software was used to determine the lattice

parameters. FT-IR shows various characteristics functional group present in the prepared ZnO nanoparticles. Further FT-IR confirmed the presence of bioactive functional groups involved in the reduction of zinc nitrate to zinc oxide nanoparticles. The spectral peaks at 683-500 cm^{-1} and 698-505 cm^{-1} proposed the formation of ZnO nanoparticles. The morphology of ZnO nanoparticles was analyzed by scanning electron microscope. The structure of ZnO nanoparticles was found spherical in shape. Rosa indica leaves extract mediated ZnO nanoparticles showed strong antibacterial activities against both gram positive and gram negative bacteria. Disc diffusion method was used to check antibacterial activities against gram positive (Staphylococcus aureus) and gram negative bacteria (Escherichia coli, and Klebsiella pneumonia) under dark and white light. Minimum inhibitory concentration was found to be 0.2, 0.4, and 0.4 μg/ml for Staphylococcus aureus, Escherichia coli, and Klebsiella pneumonia respectively. The zone of inhibition increases under white light than in dark.

Keywords: *Nanoparticles, XRD, FT-IR, morphology, petals.*

Socio-economic Dimensions of Sustainable Development

Sustainable Development is a widely used term which has become an integral part of Indian Economic System in recent years. Sustainability is no longer considered solely as an environmental concern but also incorporates social and economic dimensions. The present paper attempts to delve socio economic indicators responsible for sustainable development. The article presents selected issues of the problems connected with the sustainable development within the global and local perspective. It summarizes the economic aspects of the broadly understood growth process and the socio-economic development. It discusses the possibility of reaching the harmony between the economic activity of the man, the consumption and the ability of the natural environment to exist and restore itself.

The present paper is based on an empirical study. It attempts to devise socio economic indicators for sustainable development in India. The period of research is 2010-11 to 2020-21
.

Keywords: sustainable development, socio-economic indicators, natural environment, harmony

Acrylamide: An environmental hazard and neurotoxin

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Chemicals can be released into the environment as a result of their manufacture, processing, and use. Acrylamide (AA) is an important industrial chemical agent that is mainly used in the production of polymers and copolymers. Human beings get exposed to acrylamide through diet, occupation, lifestyle, and many environmental factors. The high mobility of acrylamide in soil, the ability to travel long distances in ground waters, its biodegradability, and its

sedimentation resistance are all factors that make it a potential environmental pollutant. Direct contact with dissolved acrylamide irritates the skin and its dust can lead to respiratory irritation. It is associated with ascending central peripheral or central axonopathy in humans and animals. This potential neurotoxin is formed by the Maillard reaction between reducing sugars and free amino acids during food processing. Over the past decade, various studies have been conducted to investigate its neurotoxicity. As a result of short-term exposure to acrylamide, the human nervous system can experience drowsiness, in co ordination, and confusion. Repeated exposure to acrylamide in workers causes neurologic symptoms such as muscle weakness, abnormal sensations, and in co ordination. Laboratory studies show that repeat exposure to acrylamide causes similar adverse nervous system effects in animals. One of the most prominent histological findings is swelling of axons or a decreased number of axons of large diameter. The major contributor to acrylamide toxicities is oxidative stress. Modifying food processing methods can be a good way to reduce acrylamide production in foods.

Key words: Acrylamide, Pollutant, Neurotoxicity, Human, Animal

Sustainable Development and Environmental Economics

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The environmental economics concept started in the 1950s when, in the United States, Resources for the Future (RFF) was formed in Washington, DC. RFF is an independent research organization that developed and also applied economics to environmental issues. Initially it was focused on the issue of natural resource scarcity. The effects of agrochemicals in the environment are not new, but they are already gained public attention earlier. The economics have to do a lot with environmental problems. First, agrochemicals are big business in the world. Second, the use of chemicals raised agricultural productivity. Third, economists are familiar with the idea that there are likely to be costs and benefits from any form of economic activity. The costs have affected us in the form of "external effects.

Sustainable development has become a central point in modern era. Sustainable development is development that fulfills the requirements of the present without reducing the ability of future generations to meet their own needs. In economic terms, the definition involves the concept of an economic system in which prosperity capita enhances over time on a uninterrupted basis. But economic growth models traditionally adopted the same temporal perspective by looking at growth paths of utility and consumption. Hence it seems appropriate to reinterpret traditional growth theory in terms of sustainable development.

Keywords: Sustainable development, Consumption, Growth theory, Environmental economics, Modern Era

ROLE OF LAW TO COMBAT ECOLOGICAL IMBALANCE IN NEPAL IN THE CURRENT TIMES

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The authors delve to study the constitutional frameworks envisaged in Nepal to combat ecological imbalance. The government of Nepal adopted and enacted Environment Protection Act, 2019 to enforce Article 30 of the Constitution of Nepal which guarantees a breath of fresh air to every citizen (not every person). As India and Nepal share open-border relations and cultural proximities, the authors found it imperative to study the Nepal's green laws in the light of India's constitutional provisions and judicial approach toward right to clean and green environment. Unequivocally, there is an inseparable nexus between climate change and human rights. The Act, 2019 embodies environmental principles like sustainable development, Environment Impact Assessment (EIA), or Polluter Pays Principle (PPP) to foster purposive and progressive environmentalism. These green laws mandate that there should be developments but that development should be in closest possible harmony with environment. In this light, the authors discuss the compliance mechanisms, rights of the Centre and Provinces and among other legal mandates provisioned to control and abate the acts and omissions that tend to degrade the quality of environment.

Keywords: Constitution, environment, Nepal, India, environmental law, law, green democracy

Sunlight- Driven Photocatalytic degradation of emerging pollutants by metal oxide doped Prussian blue analogue nanocomposite

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The global use, toxicity, and bioaccumulation of paracetamol (PCM) and atenolol (ATL) have drawn increased attention from researchers. These medications are only partially absorbed by the human body and their majority portion is expelled into the environment through human waste, which may have harmful impacts on the soil and water bodies. Using a green approach, a nanocomposite of chromium oxide and zinc hexacyanocobaltates (Cr_2O_3@ZnHCC) via seed extract of *Sapindus mukorossi* for the elimination of targeted pharmaceuticals. The Cr_2O_3@ZnHCC nanoparticles underwent microscopic and spectroscopic investigation, revealing uniformly integrated prisms with a 75 nm particle size into the cubic framework. Under sunlight and dark, well-characterized Cr_2O_3@ZnHCC and individuals (Cr_2O_3 & ZnHCC) were used to degrade PCM (94%) and ATL (91%).

Additionally, Cr_2O_3@ZnHCC significantly reduced the half-life of the targeted drugs (PCM: 0.6 h; ATL: 2.9 h) and changed them into safer-small metabolites, which was supported by analysis using LC-MS. Total organic carbon analysis also supported the decrease the carbon content. Data from photoluminescence and UV reflectance revealed the generation of reactive charge species. Therefore, it considered as a strong candidate for industrial applications, the synthesized green-nano photocatalyst demonstrated remarkable repeatability (up to the 10th cycle) and sustainability during the degradation process.

Keywords: Pharmaceutical drugs, Photocatalyst, Sunlight, Paracetamol, Atenolol, Chromium oxide, zinc hexacyanocobaltate

Roots of nature in 20th century acting training in western theatre

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20th Century acting training played a significant role in Europe and North America. Many innovators of the regions created unique acting practices in this era. Though much has been written about these acting practices, this paper considers relation between environment and acting training. In addition, this paper reflects some, but inevitably not all, of the key experts and their acting exercises that establishes roots from the nature. The study is purely based on literature review. The findings will establish significant relation between environment and various acting techniques.

Key words: actor, body, mind, voice, nature and acting exercises.

Intended Sub-theme: Environment and Human relationships.

Role of Energy for Sustainable Development in Rajasthan with Special Reference to Public Power Sector

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Government of Rajasthan is taking many initiatives to undertake policies related to power and energy sector. The state has introduced many energy and power policies which had the vision to decrease the dependency on non-renewable method and promotion and the progress of nontraditional power sources like solar power in the industries. It was stated that the state government has referred the region as a global centre of solar power generation to meet energy needs of Rajasthan in Indian economy. Nontraditional power sources contribute to the security of the state as well as the security of the nation by reduction of carbon emissions. It was suggested that reforms are needed in the power sector of Rajasthan for reduction of dependency on fossil fuels. The generation of power is related to direct indirect employment

opportunities in the state. Rajasthan Solar Energy Policy, 2011 had laid importance of solar energy in Indian and Rajasthan economy. It was felt that generation of power from solar energy is very option as it is a pollution free source of power generation. Thus, it becomes all the most important as it reduces environment hazards and reduces emission of green house gases. So, without doubt solar energy is a free and non-polluting resource for an economy. Rajasthan's economy is gifted with a lot of potential in this field as it has abundance of solar energy which is very useful. The present research is focused with study of renewable and traditional source of power and energy. Paper also reveals the impact of power sector contribution in socioeconomic growth of Rajasthan state.

Keywords: Power, Energy, Sustainable Development, Traditional Sources of Energy.

Environment Protection: Constitutional Framework and Role of Judiciary

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Man became more materialistic as civilization progressed. His primary purpose in life was to amass increasing amounts of material wealth. This sparked scientific innovation and new technology, paving the door for natural resource exploitation. The deterioration of the environment became a possible threat because of rapid and unregulated industrialization. Large-scale pollution and damage to the earth's ecology occurred as a result of the Second World War and the industrial disaster. People began to realize that if this persisted, man's very life would be risked.

The constitution of India is not an inert but a living document which evolves and grows with time. The specific provisions on environment protection in the constitution are also result of this evolving nature and growth potential of the fundamental law of the land. The preamble to our constitution ensures socialist pattern of the society and dignity of the individual. Decent standard of living and pollution free environment is inherent in this. The Environment (Protection) Act, 1986 defines environment as "environment includes water, air and land and the interrelationship which exists among and between Air, water and land and human beings, other living creatures, plants, micro-organism and property".

Environmental Sociology and Anthropology

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Increasing population leads to the increased consumption and natural resources, pollution and loss of biodiversity.

Starting from the stone age to the nuclear era the humans are giving invitation to the world crisis. Crisis in all probabilities is to increase due to our ignorance of not thinking ecologically. Our excessive dependents on chemical has a result of industrialisation and other

technology advancements make us blind to the fact that there are ecological limits which if crossed may lead to disaster . Today all the developing countries are in the race of becoming most industrialised Nation competition of nuclear power has made this world sitting on a dormant bomb tragedies like use valley episode in 1930 donora in peninsula of USA London episode in 1952 Bhopal episode in India occurred in 1984 nuclear disaster of 2011 and recent episode of war between Ukraine and Russia has disturbed the balance of the environmental ecosystem

Keywords: environment, Ecosystem, World crisis ,Technological advancement and Disaster

GOOD PRACTISES IN ORGANIC AGRICULTURE BY SUSTAINABLE USE OF ORGANIC FERTILIZER CUM-BIONEMATICIDE FOR PLANTS GROWTH AND IMPROVE SOIL QUALITY

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The agriculture system adopted from the west has started showing increasing unsustainability and once again the need for an appropriate method suitable to our requirements is being felt. The practice of organic farming, said to be the best known alternative to the conventional method, also originated in the west, which suffered from the ill effects of chemical agriculture. However, organic farming is based on the similar principles underlying our traditional agriculture. Organic agriculture aims at the human welfare without any harm to the environment which is the foundation of human life itself .

Neem cake and marigold powder mixture is a potential source of organic fertilizer cum-bionematicide. Neem has demonstrated considerable potential as a fertilizer. Our Neem cake also reduce alkalinity in soil, as it produces organic acid on decomposition, being totally natural, the Neem cake we offer hence ensure fertility of the soil, it also improve the organic matter contain of the soil, helping improvement in soil texture, water holding capacity, soil aeration for batter root development. Neem based formulations and azadirachtin significantly suppress root-knot nematode (Meloidogyne incognita), on cucumber, and cyst nematode (Globodera Rostochiensis), on potatoes.

Marigold plants produce a number of potentially bioactive compounds, among which α-terthienyl is recognized as one of the most toxic. This sulfur-containing compound is abundant in marigold tissues, including roots. It has nematicidal, insecticidal, fungicidal, antiviral, and cytotoxic activities, and it is believed to be the main compound responsible for the nematicidal activity of Marigold.

Keywords: *Bionematicide , sustainable, organic fertilizer, bioactive*

सतत विकास लक्ष्यों की ओर भारत के कदम

लोकेश कुमार मीणा[1], उमा कुमारी डेचरवाल[2]
[1]सेठ आर एल सहरिया राजकीय पीजी महाविद्यालय कालाडेरा जयपुर
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सतत् विकास में अपेक्षा रहती है कि प्रत्येक राष्ट्र अपने लक्ष्यों की प्राथमिकता का निर्धारण करें और स्थानीय चुनौतियों, क्षमताओं व उपलब्ध संसाधनों के अनुसार सावधानीपूर्वक विभिन्न योजनाओं/ कार्यक्रमों को कार्यान्वित करें। अपने लक्ष्य को प्राप्त करने की दिशा में भारत ने अपने एसडीजी लक्ष्यों की प्राप्ति के लिए "समग्र-दृष्टिकोण" का अनुपालन किया है जिसके लिए विभिन्न योजनाओं को प्रारंभ किया जा चुका है। भारत सरकार के मुख्य कार्यक्रमों जैसे कि स्वच्छ भारत मिशन, बेटी बचाओ-बेटी पढ़ाओ, प्रधानमंत्री आवास योजना, प्रधानमंत्री जनधन योजना, दीनयाल उपाध्याय ग्राम ज्योति योजना और प्रधानमंत्री उज्ज्वला योजना ने सतत् विकास को प्राप्त करने की दिशा में भारत की प्रगति में प्रमुख रूप से योगदान दिया है। नीति आयोग ने प्रत्येक राज्य/संघ राज्य क्षेत्र के लिए समेकित सूचकांक (कंपोजिट इंडेक्स) का भी विकास किया है जिसमें प्रत्येक संधारणीय विकास के लक्ष्य की ओर होने वाली प्रगति को संकलित करके दिखाया गया है। भारत सतत् विकास लक्ष्य (एसडीजी) प्राप्त करने की ओर तेजी से प्रगति कर रहा है। भारत के राष्ट्रीय विकास परिषद (एनडीसी) ने अपने जलवायु संबंधी उद्देश्यों को प्राप्त करने के लिए स्पष्ट लक्ष्य निर्धारित किए हैं।

KEY WORDS - नीति आयोग, समेकित सूचकांक, राष्ट्रीय विकास परिषद,जलवायु परिवर्तन वायु प्रदूषक

Empowered Women Carrying the Culture in diversified lands in Ramabai Espinet's the *Swinging Bridge*

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This paper is focused on the Indo- Caribbean- Canadian writer Ramabai Espinet's novel The Swinging Bridge (2003) with respect to culture and how it is carried from one land to another. The Swinging Bridge has been taken as a literary perspective to examine the individual and collective construction of resilience and creativity in the context of this 'double diaspora' (Wack 2011). Born in Trinidad and with Indian ancestors and now living in Canada, Espinet has explored the multiple itineraries chosen by women on the path of self-empowerment. This double consciousness of Espinet provides a suitable frame to represent Giander, Lily, Muddie, Babs and Mona Singh as strong women characters of the novel. Giander is the first to come on a foreign land and preserved her culture there. She not only preserved but passes it on to the next generation orally through her songs that are related to

Ramayana.Later on Mona translated those into English from her grandmother's diary. Thus women are not only represented as empowered but also the preserver and carrier of culture in geographically diversified land.

Keywords: Diaspora, Culture, Double -consciousness ,Diversified, Geography

Environmental Issues:- Impact on Environment

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Today's biggest problem which is faced by all human beings worldwide is climate change and from the current situation it will be faced over the next decade. The data which is received from the World Health Orginzation (WHO) estimates that about more than 90%of the people in our country breathes Polluted Air and this in turn causes respiratory illness. Second major health problem is the contamination of water and approximately five million deaths a year is recorded according to data which is conducted by one of the agencies. Another noticable thing is the dumping of plastic in rivers and oceans, which in turn causes damage to eco system. There should be improved management of protected areas and fishing should be reduced , the increase in the earth's temperature due to pollution should also be reduced.The solution which is the need of an hour is that use of paper should be avoided and we should work towards conservation of water and electricity. Emphasis should also be done on supporting environmental friendly practices otherwise one day environmental issues will be a warning of the upcoming disaster.
Landmark case of M.C.Mehta V/S Union Of India,1987 SCR(1),AIR,1987 is related to environmental issues.
Keywords: Climate Change,WHO, Pollution ,Fundamental Rights,Health Problem,Disaster, Judiciary

The Common but Differentiated Responsibility Guiding Principle under Climate Change Regime

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Anthropogenic climate change is a formidable trans-boundary global challenge. Yet, countries facing climate change impacts and their contribution to GHGs emissions are substantially different. The United Nations Framework Convention on Climate Change (UNFCCC) has recognized the different contribution of different countries to the global stock of carbon. Similarly, the UNFCCC has also acknowledged the different development and

capacity level of different countries. These differences are clearly enshrined in the principle of CBDR-RC. The issues of fairness, justice and equity in burden sharing of mitigation efforts are always critical in global negotiations under auspices of the UNFCCC. Mitigation efforts are coupled with sustainable development and remain a cause of concerns for developing countries. These contentious issues were brought to the negotiation table by the conceptualizing the principle of "Common but Differentiated Responsibilities". The present paper attempts to trace the history of the CBDR. Further it attempts to analyze its applicability in climate change regime under the auspices of the UNFCCC.

Keywords: Anthropogenic, climate change, GHG, UNFCCC, CBDR

An overview of environmental pollution and its impact on society

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Pollution is a universal problem that has high potential to influence the human physiology in current time. Pollution not only has detrimental effect on human health, but also affects plants and animals. There is a need to aware the different types of pollution, their cause, effect and corrective action to prevent from all health-related issues.

The main kinds of environmental pollutants that currently cause harmful effects are water pollution, soil pollution, noise pollution and air pollution. The worldwide environment is considered as international public health problems, which should be investigated from multiple perspectives, including social, economics, legislation and environment engineering ecosystems.

In this study, the researcher wants to prove that numbers of peoples in societies are suffering from many diseases due to different kind of pollution. It appears that polluted environment is a global issue So, it is the accountability of every human being for making our environment harmless, otherwise it gives contrary effect on human health. Inadequate waste disposal and management leads to environmental degradation, ecosystem destruction and poses serious public health risks.

Keyword: Environment Pollution; Accountability, Causes, Human Health, Kinds of pollution.

Microwave-assisted Synthesis and Characterization of Novel Schiff base and Complex of Cu(II)with Acetophenone and Pyridine derivative

Dr. Mamta Ranka

The aim of synthesis in the field of chemistry is to synthesize an environment-friendly compound, with less hazardous effects, high atom economy, and low expenditure of money and time. The microwave-assisted method is a great move towards sustainable chemistry. A Schiff base was prepared from 4-methylacetophenone and 2-aminopyridine with the help of the microwave technique. The Schiff base is used as the primary ligand to synthesize the complex with Cu(II) salt. Here, L-alanin, the amino acid was used as the secondary ligand. Both the Schiff base and complex were characterized by elemental contribution, magnetic moment, conductance, and spectral analysis(UV-Vis, FTIR, ^{1}H-NMR, etc.). The synthesized compounds can be further used for antimicrobial activities and can be beneficiary for medicinal, agrochemical, pharmaceutical, and industrial fields. Schiff bases have azomethine linkage which has great importance in various areas like antibacterial, antifungal, antimalarial, antitumoral, anticonvulsant, etc.

Keywords: Microwave-assisted, 4-methylacetophenone, 2-aminopyridine, L-alanin, sustainable chemistry

वेदों में पर्यावरण चिंतन

डॉ मनीषा शर्मा
सेठ आरएल सहरिया राजकीय स्नातकोत्तर महाविद्यालय कालाडेरा ,जयपुर

पर्यावरण शब्द संस्कृत का शब्द है जो परि+आवरण से बना है।इसका अर्थ है चारों और का आवरण ।अर्थात वह आवरण जिसने सम्पूर्ण धरती को ढका हुआ है या जो सारी सृष्टि पर व्याप्त है।पर्यावरण की बात करते ही आज के समय का अनिवार्य विषय है पर्यावरण संतुलन ।पर्यावरण-सन्तुलन से तात्पर्य है जीवों के आसपास की समस्त जैविक एवं अजैविक परिस्थितियों के बीच पूर्ण सामंजस्य।

हम जानते हैं कि यह आज के युग का अनिवार्य विषय बन गया है लेकिन इस सामंजस्य का महत्त्व वेदों में भी विस्तारपूर्वक वर्णित दिखाई देता है।

हमारे चारों वेद- ऋग्वेद, यजुर्वेद, सामवेद और अथर्ववेद की मूल विशेषताएँ क्रमशः कल्याणकारी संकल्पना, शुद्ध आचरण, निर्मल वाणी एवं सुनिश्चित गति मानी जाती है और पर्यावरण-सन्तुलन भी मुख्यतः इन्हीं गुणों पर समाश्रित है।

भारतीय संस्कृति में और इस संस्कृति के परिवाहक वेदों में उन सभी को देवता का स्थान देकर उन्हें सम्मान प्रदान किया जाता है जो प्राणियों के जीवन हेतु अनिवार्य और लाभदायक हैं।इसीलिए वेदों में जल, पृथ्वी, वायु, अग्नि, वनस्पति, अन्तरिक्ष, आकाश आदि के प्रति असीम श्रद्धा प्रकट करने पर अत्यधिक बल दिया गया है। तत्त्वदर्शी ऋषियों के निर्देशों के अनुसार जीवन व्यतीत करने पर पर्यावरण-असन्तुलन की समस्या ही उत्पन्न नहीं हो सकती। इनमें हुए अवांछनीय परिवर्तनों के कारण आज जल-प्रदूषण, वायु-प्रदूषण, मृदा-प्रदूषण की समस्याएँ चारों ओर व्याप्त हैं।

कुंजी शब्द-वेद,पर्यावरण,संस्कृति, जल,आकाश

EFFECT OF STARCH AS AN ADDITIVE ON MOISTURE RESISTANCE AND BONDING STRENGTH OF SODIUM SILICATE

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Compared to organic adhesives, inorganic adhesives are non-toxic, easy to manufacture, inexpensive and resistant to fire and chemicals. Excess application of organic adhesives is the cause of environment pollution due to large amount of volatile organic compounds (VOC), which they produce. It is important to eliminate the use of organic adhesives that are harmful to humans and responsible for environmental pollution. Alkali silicates are commonly used as the base materials for inorganic adhesives. They exhibit good bonding strength and are easy to handle prior to curing and cheap in price.

Silicate coatings are green chemical inorganic-based binders. The development and acceptance of these coatings in the wood sector require some adjustments in formulations or special preparation of the surface to be coated to obtain durable finishes. The global wood coatings market is currently dominated by organic-based materials, which adversely affect our environment.

Sodium silicate is an excellent inorganic binder having high initial strength and easy to handle. It is VOC free, cost-effective environment friendly compound. Due to good fire and chemical resistance properties of Sodium silicate, it is very useful for wood coatings and works best as wood adhesives. Although, Sodium silicate is very good inorganic binder but the basic problem in application of sodium silicate as a binder is its moisture sensitivity which decreases its bonding strength.

Incorporation of suitable additive can overcome these problems. In the present research work starch is used as an additive to moderate the moisture resistance and bonding properties of Sodium silicate to some extent.

Keywords: Sodium Silicate, Starch, water resistance, bonding strength etc.

CHANGE IN BONDING PROPERTIES OF MAGNESIUM OXYSULPHATE BY INCORPORATING CARBOXY ETHYL CELLULOSE AS AN ADDITIVE IN THE REACTION MIXTURE

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Sorel cement is a non-hydraulic cement made from a mixture of Magnesium oxide and Magnesium chloride/sulphate. It was discovered by the French engineer Stanislas Sorel in 1867. Magnesium oxysulfate (MOS) cement is a green and environment-friendly civil engineering material prepared using caustic calcined magnesia and an aqueous solution of

magnesium sulfate. The MOS cement has the advantages of being light weight as well as having rapid strength development and low thermal conductivity, and it is widely used in the light insulation board of the partition wall and fire coating.

Insignificant volume changes were observed in Magnesium oxysulfate cement and its thermal coefficient in low. It is used for plastering of air-conditioned rooms due to its non-expensive properties. The poor water resistance is the main drawback which decreases its large-scale commercial application. The strength & other properties can be increased by admixing suitable additives in the reaction mixture. Incorporation of the additive in the reaction mixture overcome this problem by forming additional bond in the matrix or by diminish the adverse effect of the harmful impurities present in the matrix.

Carboxymethyl cellulose, a hydrophobic derivative from cellulose that can be prepared from different biomass, has been widely applied in food, medicine, chemical, and other industries. In the present research work Carboxy ethyl cellulose is tried as an additive to enhance moisture resistance and bonding properties of MOS cement.

Keyword: *magnesium oxysulfate, Carboxy ethyl cellulose, sorel cement etc.*

Economic assistance by Waste Management in India (Waste: An issue or A Solution) Under the track Environmental Issue: Waste and Its Impact on Environment

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People are producing too much waste and cannot dispose it in a sustainable manner. Disposing of trash has major environmental effects and also causes some serious issues. The government of India needs to focus on waste management and make strategies to separate waste wisely in order to protect the environment and human efficiently. Government of India introduce golden principle of 3R which should be strictly followed, here's the R's symbolize as Reduce, Reuse and Recycle. Inappropriate waste management decline human health, negatively effects infrastructure, causes environmental pollution, speed up natural resources decline and most importantly affects the quality of life of public. However, efficient waste management often contains 20 % to 50 % of municipal budgets. This paper includes strategies or missions of Government of India toward waste management. This paper also examines how reuse and recycling provide financial assistance to people if done in well manner. This research paper is explanatory in nature. This paper is based on secondary data which is collected from various sources such as journals, newspapers, research articles,

government websites, on line sources, books, etc. Effective waste management may positively affect the cost of waste disposal; it also accelerates the growth of economy. Waste management is an essential segment of the country because it increases employment rate. Although, appropriate waste management is one of the major challenges and very crucial faced by lots of countries around the world.

Key Words: Waste Management, Economic assistance, Problem or Solution, Employment.

Sustainable Upcycling of Textile Waste in Indian Tradition

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The increasing awareness of consumers towards sustainability has gaining momentum by reuse of fashion products. Indian textile legacy is opulent in enormous artistries to minimize textile waste by ways of upcycling and environment protection. The concept of sustainability is deeply rooted in Indian cultural tradition, therefore all kind of textiles waste - comprised of used/ rejected garments and fabrics, torn furnishings and other household textile material are being converted into artefacts for centuries.

Upcycling is a method of creating new fashion items or artefacts by adding some value to discarded and waste textile objects thereby prolong the life cycle of textile material. It's an ethical approach to consumerism with environmental and social responsibility. Each Indian state has its unique style and technique for upcycling of used textile products. These include embroidered textiles, like Kantha, Kasuti, Sujani; woven textiles (shawls, bedsheets, Punja durries, rugs, carpets); felted, such as Gabba, Namada, carpets, doormats; stitched textiles, viz. Puppets, Patchwork and Applique and other combined techniques produce attractive apparel, bedsheets, quilts and other furnishings, bags, wall decors and even jewellery utilizing versatile range of textile waste.

Traditional upcycling crafts not only provide employment to the people but also minimise the exhaustion of precious natural resources of our planet by reducing textile waste. Revival of these traditional crafts can initiate a dynamic path towards sustainable fashion world. Major fashion brands require modification in their business models by adopting ethical, environment-friendly and innovative designed products responding to the emergent demand of sustainable fashion products.

Keywords: Indian tradition, Sustainability, Textile Waste, Upcycling, Value Addition.

Plastic pollution: Impact and Action

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Plastic waste is a major cause in polluting earth, ecosystem and health worldwide. Plastic waste leads to land pollution as it accumulates in the form of litter. It comes from industries and also generates during transport and off-loading. Plastic waste pollutes aquatic environments through littering or by transport in water systems. After mixing in oceans, surface currents, tides and waves results in dispersion and re-suspension of plastic waste. Atmospheric fallout is also a reason of widespread micro-plastics. Plastic pollution (macro, micro, and nano-plastic waste) alters natural cycles, exerts biological impacts various important species, leads to ecological toxicity. The future, recycling and socioeconomics of plastic are very complex issues. Other than plastic production, misbehaviour of consumers in terms of improper disposal after using plastic is a major contributor in production of plastic waste. Various economic and political factors, ignorant behaviour of governments and stakeholders, different opinions of scientists, and under-reported or overlooked polluters are the major culprits. To overcome plastic pollution problem, change in pre and post consumption behaviour is important. Education, awareness and reduction in the plastic demand altogether with better industrial solutions and improved government policies can do better in solving plastic pollution problem. A modern plastics economy should replace the existing plastic economy for sustainable development. Green or eco-friendly polymers like 'green plastic' is also an option. The policymakers, stakeholders, entrepreneurs, NGOs, citizens and researchers must effort to ensure some sustainable solutions to solve the problem of plastic pollution that will fight to plastic waste related existing issues and future threats as well.

Keywords: Plastic waste, Plastic pollution, land pollution, green plastic, sustainable solution.

Effect Of Magnesium Chloride Concentration And Dry-Mix Composition On Strength And Water Resistance Property Of Magnesium Oxychloride

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The construction industry accounts for the majority of development in the world. Cement is the main component of any type of construction material. Magnesium oxychloride (MOC) cement is a green chemical binding substance that was invented by S.T. Sorel in 1867. It does not require any type of energy, whether heat or light, making it an eco-friendly compound. It has high strength, high bonding, and quick-setting properties. It does not require humid curing. It is a tough, stone-like fireproof compound, and it is ideally suited to specialist applications in precast construction, road repair, and other fields, including nuclear waste immobilization. It has many superior properties to ordinary Portland cement (OPC). For MOC production, emitted CO_2 is 40%–50% lower than that associated with OPC manufacturing. After production, it absorbs CO_2 from the environment and releases no heat; therefore, it is a very good alternate for OPC. It is formed from lightly calcined Magnesium oxide and a concentrated solution of Magnesium chloride. The reactions between these two are exothermic, hence dolomite is used as an inert filler in the reaction mixture to absorb the excess heat. Present research is based on the effect of Magnesium chloride concentration and dry-mix composition on bonding properties of MOC. It was found that an optimum composition it works best.

Keywords: Magnesium oxychloride, Magnesia, Magnesium chloride, inert filler, water resistance, strength, etc.

Novel Z- scheme based green synthetic Bi_2O_3@CdS nanocomposite: Efficient photo degradation of pharmaceuticals

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In this work, bismuth oxide coupled cadmium sulfide (Bi_2O_3@CdS**)** nanocomposite was employed as effective photocatalyst for the degradation of PCM (98%) and DCF (96%) from simulated water under direct Sunlight. Crystalline structure (<50 nm) of nanocomposite comprising Bi_2O_3 hexagonal nanolayer enfolded CdS nanosphere engaged together was synthesized via *Azadirachta indica* leaf extract as reducing agent. The optimum condition, sharp declination of targeted drugs concentration (20 mg L^{-1}) by Bi_2O_3@CdS **(**30 mg**)** was analyzed visually (milky to colorless) and through UV-spectrophotometer. The degradation of PCM and DCF on Bi_2O_3@CdS followed the first-order kinetics with about 3.2 and 2.5

times apparent rate constants than individuals, respectively. The improved photocatalytic activity exhibited by Bi_2O_3@CdS is attributed to a synergistic effect including high surface activity (63.17 m^2 g^{-1}), porosity (1.53 nm), and low bandgap (2.0 eV), and the improved separation of photogenerated charge carriers between the individual's nanoparticles. The photogenerated reactive species as electrons (e_{CB}^-), holes (h_{VB}^+), and hydroxyl (•OH) radicals via Z-scheme mechanism refer to the directed migration of photoinduced electron-hole pair. Further, Bi_2O_3@CdS is highly efficient and reusable upto ten cycles, led to a promising and sustainable photocatalyst for environment safety and industrial applications with bright future.

Keywords: Photocatalysis, Environment protection, Green synthesis, Pharmaceuticals, Nanocomposite

Growing Waste An Emerging Threat Or Opportunity To The Environment

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The rapid population growth leads towards huge production and consumptions which cause of waste production. Presently, India accounts for roughly 18% the world's population and 12% of global municipal solid waste generation, with increasing population it is expected to see significant growth in waste. Waste can be broadly classified as industrial, commercial, domestic and agricultural.

This article focuses on growing waste can be threat or problem and opportunity to the environment. waste generates harmful gases, creates negative impact like water, air pollution, loss of biodiversity and infections diseases. Another side this threat can be oppournity by reuse , recycle and by biological treatment of waste.

Keywords: Waste, Domestic, Biodiversity, Biological, Treatment

Environment Issues: Waste and its impact on Environment. EVS Pollution and Public Health

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We all know Environment means everything surrounding us which is the necessary system for our body by exchanging mass, energy, or other properties. Global conditions are changing and natural climate and Environment is getting affect. Except this Environment is causing

harm from several types of Waste like municipal waste, solid waste, industrial waste, hazardous waste, non- hazardous waste, radioactive waste , oiling and gas production waste, fossil and fuel waste, agricultural and animal waste. We all know we are directly or indirectly tolerating effects of this waste and environment.

We are having smart watches today but no fit heart. We are having expensive cosmetics and screen protection lotions but simultaneously suffering with so many skin diseases. We drink non fatty milk and take filtered oils and pure salt but at the same time even young generation is the patient of Blood pressure, stress, mental and physical illness.

Now this is the ultimate conclusion in people that We are getting money, earning more but losing our health. How can we forget *"Pehla sukh nirogi kaya" and that sickness free life is totally depended on* Environment. Unfortunately this Environment is taking a beat of population and waste materials. It increases the risk of respiratory infections, heart diseases and cancer.

Long term survival in this condition will be a big challenge in front of us. Even still it is. We have to come out with our busy schedules and think to sort out this big problem Environment Issues: Waste and its impact on Environment, EVS Pollution and Public Health.

Energy And Environment

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The study on energy and environment emphasises on the aspect of storage, generation and efficient utilisation of natural resources and energy. Assessment of interaction between energy technologies and the environment is made for establishing renewable and clean energy. The environmental problems are associated with consumption and production and it includes water pollution, climate change, solid waste disposal and also air pollution. The major cause of urban air pollution includes emission of air pollutants from fossil fuel combustion. In this regard, renewable energy is helpful for saving the environment from increasing pollution. Renewable energy is considered to be derived from various sources that are natural. Wind and sunlight are the major sources of renewable energy and these sources are constantly being replenished. This energy is plentiful and available all around in the environment. On the contrary, fossil fuels such as gas, oil, and cola are energy resources that are non-renewable and it takes hundreds of millions of years for formation. Moreover, fossil fuel leads to production of harmful greenhouse gas emissions. Generation of renewable energy contributes to far lower emissions of greenhouse gas in comparison to fossil fuel. Furthermore, renewable energies are cheaper in most of the countries and help in generating three times more jobs than fossil fuels. Solar energy is believed to be the most plentiful renewable energy source. Moreover, there is wind energy, hydropower, bio-energy that are highly useful as renewable energy sources.

Keywords: Energy, environment, Renewable energy, Fossil fuel, Pollution, Solar energy

ENVIRONMENTAL ACCOUNTING AND REPORTING PRACTICE IN INDIA

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Nowadays the world is facing the twin problems of promoting economic development and protecting the environment. The rapid growing population and economic development is leading to a number of environmental issues at international level as well as national level because of the uncontrolled growth of urbanization and industrialization, expansion and massive intensification of agriculture and the destruction of forests. In this juncture the proper accounting and reporting of environmental issues are very necessary. Environmental accounting refers to accounting practices incorporating the environmental costs, impacts and consequences. It involves the identification, measurement and allocation of environmental costs, integration of these costs into business, identifying environmental liabilities and communication the results to the stakeholders of the company as part of financial statements. Environmental reporting refers to disclosure of environmental related data regarding environmental risks, environmental impacts policies costs and liabilities. This study attempts to address the development of corporate level environmental accounting and reporting and the problems associated with that. Aim of this study is to gain an insight into the corporate environmental accounting and reporting practices of selected Indian manufacturing and non-manufacturing companies.

***KEY WORDS**: Environmental Accounting, Environmental Reporting, Social Responsibility, CSR.*

An Empirical Study of EnviStats-2021 in Context of Rajasthan

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Natural capital refers to all manners of environmental means that live in the terrain. It also includes ecosystem services that are frequently " unnoticeable " to utmost people, similar as air and water filtration and sanctification, flood tide security, carbon copy storehouse, pollination of crops and territories for wildlife. Natural capital is essential for profitable excrescency, employment, and, eventually, substance. rotund Domestic Product(GDP), the expressway it's constructed, looks at profitable interpretation and has a restricted representation of the natural capital that uphold this profit.

The 'System of Environmental- Economic Accounting(SEEA1) ' provides a common or garden frame for disposing and carrying statistics on the terrain and its relationship with the frugality. The SEEA helps position statistics on environmental means, goods and services

into an account frame, thereby adding their utility for procedure, allowing transnational community, iteration over time and consonance with being public accounts India's first sanctioned environmental profitable accounts(released in 2018) containing intelligencer accounts in physical tours of four natural coffers – timber, land, minerals and water. The accounts revealed a refined picture of the country of India's natural capital, with several regions showing off a net- positive raises in means like timber cover and carbon copy stock.
This study tries to analyse the data related to Rajasthan in the field of Crop Provisioning Services' refer to the contribution of the cropland ecosystem to crop production and provide an assessment of the total and combined result of processes taking place in cropland that support crop production. Further 'Soil Nutrient Indices' have been used to provide an analysis of the soil fertility. Water Quality Accounts analyses Groundwater Quality across the state . Also Biodiversity and Air Quality have been analyzed as per Envistat in respect of Rajasthan. Governance an d Policy measures also play an important role which have been analyzed in respect of Rajasthan .

Key Words : Envistats , NCAVES, Ecosystem Accounting , Crop provisioning, Air quality , Ecosystem

Impact of Sustainable Development Goal 13 "CLIMATE ACTION" reporting on the firm's value: an evidence from Indian corporates

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The importance of business in achieving Sustainable Development Goals (SDGs) is becoming more widely acknowledged. Some well-known companies have started to refer to the SDGs in their communications in order to highlight their participation in sustainable development goals. Another main cause for this practice was the launch of a joint initiative by the Global Reporting Initiative (GRI) and the United Nations Global Compact (UNGC) to help businesses to involve the SDGs in their planning and reporting processes. The purpose of the study is to investigate the Impact of reporting on Sustainable Development Goal 13 "CLIMATE ACTION" on the firm's value and extent of reporting of Sustainable Development Goal 13 of 60 National Stock Exchange (NSE) listed companies (top 5 companies of each macroeconomic sector) in India. Further, this research attempts to comparative analysis among the 12 macroeconomic sectors. Data will be collected from the sustainability report (SR), business responsibility report (BRR), business responsibility and sustainability reporting (BRSR), Corporate social responsibility (CSR) report, and annual report of the companies for the year ended 2021-2022. The basis of the SDG disclosure index is Global Reporting Initiative (GRI) by the united nations environment program (UNEP) this is examined through Content analysis of the reports, chi-square test, student t-test, and ordinary least squares regression (OLS) research techniques were used for data analysis.
KEYWORDS

Sustainable Development Goals, Global Reporting Initiative (GRI), Sustainability Report (SR), Business Responsibility Report (BRR), Business Responsibility and Sustainability Reporting (BRSR), Corporate Social Responsibility (CSR) Report

Origin, growth and development of wildlife protection and spreading extinction in Indian Environmental and Ecological dimensions, Implications and Issues in world species scenario

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We live in the Environment and use of Environmental regencies like air water land to meet our needs Development also means meeting of needs of the people. It is responsibility of every citizen to use our Environmental regencies with care and protect them from degradation pollutants. Over the past years the study of Environmental influences on human physical growth and development has focused on the social and economic factors. Family and house held characteristics moderation property, pollution, population and features physical environment such as temperature and climate change greenhouse effects soil contamination. Radioactive pollution radiation, noise dumping of Industrial and municipal wastes light visual. Thermal pollution, Global warning vehicular production ozone rayed depletion, margine land ecosystem imbalance material and climate change are main causes of Environmental degradation and factor of spreading pollution. The biggest problem in the world is environmental pollution. The problem and challenges of environmental degradation are as old as the evolution of Homo sapiens on this plant. The environmental problems of technological substance chemical material metallic burning issues in India are growing rapidly.

Wild life

Wild life and humane health protection which is a part and parcel of Environment constituted wealth of the nation. It including wild animals, birds and plants etc. wild life and forest are nature gift. The wild life animals occupy an important place in our culture and religious traditions. Almost every God and Goddess in our pantheon is associated with some animals plants and trees and that animal includes their young and eggs. Animals live in their habitats. Habitat includes lend water and vegetation which is the natural home of any wild animal for their safety protection in protected area reserve forest. Natural diseases occur on wild life. Accidental position ecological imbalance and hunting preaching are main alarming problem of wild animals. The deep study on this research article paper for further goes on to describe the various legal provisions and legislation enforced and Ads enacted in India in consonance with the international standards towards protecting and conserving the wild life and

biodiversity of our country. The Article also highlights various problems challenges implication and burring issues in implementing these Acts and their reasons and also provides possible solutions for effective implementation of legal regulation rules and policies so as to maintain a balance the environment flora faunal and life forms on this earth and universe. The rest burring causes factors provisions judicial data's and policies placed before the technical session by the chair of the national conference in detail form.

Key words
Degradation, Endangered species, Biodiversity, Conservation, Eco system,

The effect of environment on behaviour

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In real life, our behaviour occurs in the context of an environment, one that is constantly changing and rich in information. Our environment provides us with basic needs hr life, including food, water and air to breathe. It is also modified by our actions, and is altered whenever one of us changes it. Our environment includes all of our natural and built surroundings, and is a delicately balanced system that can easily be damaged.

Although it is recognised that the individual and the external world are linked in complex and mutual ways. We take as our starting point the theoretical preposition that individuals are the sum of their social relations, i.e., they are the cause and consequence of their relations to others and the environment. Therefore, environmental psychology should give priority to examining the reciprocity between people and environment and the ways in which they mutually reproduce the material conditions for their existence. In environmental psychology knowledge is sought about how the molar environment is related to behaviour. The relationship between human behaviour and the environment plays a specific role in our lives. In fact we will see how the environment and humans interact with each other and how each influences the other in a big way. These days, there is a growing awareness that environmental problems such as noise, pollution, crowding, natural disasters and unsatisfactory ways of garbage disposal have damaging effects on physical and mental health. The environment affects our perception, emotional reactions, occupation, living style and attitudes.

Keywords: Environment, behaviour, perception, emotional reaction

A Research On The Contribution Of Mhd Pulses, Waves And Instability In Triggering Numerous Solar Transients At Diverse Spatio-Temporal Scales

Neetika Meena

We provide a three-dimensional compressible magneto hydrodynamic (MHD) simulation in spherical coordinates for MHD wave propagation in a structured solar environment. A magnetic field profile with an open pole and closed equator is used. Initial solar atmosphere consists of the chromosphere and corona, approximating the photosphere transition area. This study examines MHD wave propagation in a two-layer solar atmosphere. Thus, r = 1 R_s is added to the chromosphere. We compare this instance to one where the pulse is introduced at the corona's base (r = 1.018 R_s). Where the disturbance begins in the chromosphere, a pair of fast mode waves and a slow mode MHD wave is formed. (2) If the disturbance is launched at the bottom of the corona (r = 1.018 R_s), we observed a pair of fast and slow mode MHD waves travelling upward to the corona and another pair propagating downhill toward the photosphere. We argue that the model can reveal the relationship between flare initiations more ton waves of the chromosphere and Extreme Ultraviolet Imaging Telescope waves in the low corona.

Keywords: Solar Atmosphere, MHD Pulses, Chromosphere, Coronal Disturbance, Extreme Ultraviolet Imaging Telescope waves

INVESTIGATION AND STRUCTURE ELUCIDATION OF Mn (lll) COMPLEXES

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Mixed ligand complexes have taken a wide place in coordination chemistry and have important role in development of inorganic chemistry, biochemistry and environment chemistry. Here, mixed ligand complexes of Mn(III) of the type $[Mn(L)_2(L')]$, (where L=2-hydroxy-propiophenone and L'=5-nitrosalicylaldehyde or pentane-2,4-dione) have been synthesized in 1:2:1 molar ratios by maintaining the pH of the reaction mixture. The mode of bonding and geometry were determined through physicochemical and spectroscopic methods (IR, FAB mass spectra). Electronic spectra of the complexes show intra-ligand, charge transfer and d-d transition respectively. The electrical conductance studies of the complexes in DMF at 10^{-3} M concentration indicate their non-electrolytic nature. Antibacterial activity of ligands and metal complexes was performed against gram positive bacterial strain

Staphylococcus aureus and gram negative bacteria *Escherichia coli*. Octahedral geometry has been proposed for the prepared mixed ligand complexes.
Keywords: mixed ligand complexes, 2-hydroxypropiophenone, FAB mass spectra, antibacterial activity.

Worrisome Brunt of Changing Climate: Its Adaptation and Mitigation Strategies for Sustainable Era

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The rapid changes in global average surface temperature have unfathomed influences on human society, environment, ecosystem, availability of food and fresh water. Multiple lines of evidence indicate that warming of the climate system is unequivocal, and human-induced effects are playing an enhanced role in climate change. It is of utmost importance to ascertain the hydroclimatological changes in order to ascertain the characteristics of D & A of human-induced anthropogenic influences on recent warming. Global climate change is a change in the long-term weather patterns that characterize the regions of the world. It is stated unequivocally that the earth is warming. Natural climate variability alone cannot explain this trend. Human activities, especially the burning of coal and oil, have warmed the earth by dramatically increasing the concentrations of heat-trapping gases in the atmosphere. The more of these gases humans put into the atmosphere, the more the earth will warm in the decades and centuries ahead. The impacts of warming can already be observed in many places, from rising sea levels to melting snow and ice to changing weather patterns. Climate change is already affecting ecosystems, freshwater supplies, and human health. Although climate change cannot be avoided entirely, the most severe impacts of climate change can be avoided by substantially reducing the amount of heat-trapping gases released into the atmosphere. However, the time available for beginning serious action to avoid severe global consequences is growing short. Given the worsening of global warming, climate change has attracted increasing attention from academia, industry, and branches of government, which sufficiently reflects the growing demands of all circles of the community on substantial scientific research and decision-making on climate change. In effect, scientific studies on climate change are the cornerstones of policy making and involve several key aspects: scientific basis, facts and evidences of climate change, climate impacts and adaptation, and climate change mitigation. Generally, mitigation and adaptation are the two core channels to cope with climate change risks; these two topics, therefore, have become the main focuses of current climate change research. For mitigation, the general interests include analysis of emission trajectories, assessment of mitigation costs, design of specific policies, and options of available low-carbon technologies. It is clear that the issue of climate change raises difficult questions of science and economics, which have been debated widely over the years. What has been ignored for long is the legal side of the problem of climate change, which is

equally significant. In this background, an attempt is made in this paper to analyze climate change and its impact on India from a legal perspective.

Keywords: Global Warming, Droughts, Glaciers, GHGs, Industrialization, Droughts, Floods, Wildfires, Super storms

FUTURISTIC VIEW OF ESG FROM AN INDIAN PERSPECTIVE

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Demand for sustainability is increasing, the financial aspects of an organization that supports sustainability are strongly impacted by investment in environmental, social, and governance (ESG). Investors are growing more aware that variables like climate change have a substantial and significant impact on the value of their investments, which is among the major motivations why Environmental (E) social (S) Governance (G) investing is getting more popular. In the upcoming years, we continue to expect that equities investors paying attention to sustainability and Environmental, social, and governance (ESG) issues will grow more forward-looking. As more investors adopt these practices, organizations would have to become Environmental, social, and governance (ESG) compliant in order to attract investment. Once again, the issue of sustainable and comprehensive development has become a hot topic of discussion around the world. Here the main aim is to know about the current and upcoming research directions for ESG. This paper is mainly based on secondary data. Since 2006, once the acronym "ESG" was officially introduced, there have been multiple articles on this subject. This article describes the key findings from the last ten years, pointing out the importance and development of ESG investing. We also address difficulties in implementing ESG reporting. Furthermore, evaluating a company's environmental, social, and governance (ESG) activities can help determine its sustainability and beneficial societal impact. Valuable information about the growth of ESG reports is provided by these findings. There is a perpetual interest in ESG issues in investing among investors. This is due to the growth of large corporations in the global economy, the significant number of corporate securities held by fiduciary investors, the challenge of trust in finance, as well as other aspects.

Keywords: ESG, Environmental Social and governance, Futuristic view, sustainability reporting, financial performance.

Role and scope of environmental economics in human life

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Environmental economics is a comprehensive interdisciplinary field of study that focuses on the efficient allocation of environmental and natural resources, and evaluation of policy interventions in disciplines related to the environment such as energy consumption and efficiency, environmental management, industrial ecology, resource economics, natural resources management and environmental impact assessment. Environmental Economics undertakes theoretical or empirical studies of the economic effects of national or local environmental policies around the world. It bridges the gap between two diverse fields of ecology and economics.

The origins of environmental economics date back to the 1960s, when environmental activism began to increase as the negative consequences of environmental degradation due to booming industrialization were recognized. Since then, the research has generated powerful environmental debates and proposals that have led to contemporary environmental policies and regulations around the world, leading to the creation of new environmental organizations– chief among them, the United Nations Environment Programme (UNEP).

The current state of knowledge in this area allows us to anticipate future problems and possible solutions, and to design policies that can provide incentives for businesses to reduce their carbon emissions and adopt higher standards of operation that help protect natural habitats and human health. Environmental economics is related to ecological economics but there are differences. This field involves questions of excessive production of pollution by the market. In nutshell, Environmental economics is an application of scientific theories and general application of welfare economics.

Keywords: environmental economics, industrial ecology, natural resource management, environmental impact assessment.

Impact of Global Warming on Environment

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Global warming is a gradual, long-term increase in the average temperature of Earth's atmosphere due to the greenhouse effect where gases from various human activities, including the burning of fossil fuels, trap heat from solar radiation . It is caused by the release of greenhouse gases like carbon dioxide, methane, CFCs etc. into the atmosphere.

Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, but since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil, and gas), which produces heat-trapping gases.

Climate change has caused increased heat, drought, and insect outbreaks. In turn, these changes have made wildfires more numerous and severe. The health risks of a changing climate include direct, indirect (mediated), and diffuse and delayed effects, such as adverse health impacts from exposure to extreme weather and climate events; vector-, water- and food-borne diseases; poor air quality; and insufficient quality and quantity of food.

Causes of Global Warming

- Burning Fossil Fuels: Machinery that relies on coal, natural gas, or oil to run releases carbon dioxide (a major greenhouse gas) into the atmosphere.
- Deforestation: Deforestation removes the trees that act as a natural GHG filter, absorbing carbon dioxide and releasing oxygen into our atmosphere.
- Agricultural Practices: Modern farming accounts for more than 10% of all human-produced greenhouse gas emissions, largely due to livestock and rice cultivation.
- Consumer Goods: The energy used in the manufacturing and transportation of consumer goods leads to increased greenhouse gas emissions.
- Mining: Operations that rely on fossil fuels emit significant levels of GHGs.
- Waste Disposal: When plastics and other non-biodegradable waste decompose, it releases toxic gasses into the environment.

Keywords: Average Temperature, Green House Effect, Fossil

Nanotechnological Approach To Defluoridate Groundwater

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One in eight persons in the world lack access to safe water. The need to provide safe potable water to poor people in developing countries cannot be overemphasized. Nanotechnology has the potential to deliver affordable and effective solutions for water purification, providing access to safe potable water to millions of people. This will contribute to poverty alleviation and achievement of the Millennium Development Goals (MDGs). Nanotechnology has introduced a new generation of water filters and purification systems. Research nano catalysts like silver, iron, titanium dioxide and carbon nano-filtration membranes for water treatment applications is a fast growing field. Nanotechnologies can provide solutions to alleviate water problems, both in terms of detection and removal of contaminants. Also since small amounts of nanomaterial are used for purification, costs and waste generation are low, providing an effective and affordable water treatment solution to the poor. Many water sources are

contaminated with both biological and chemical pollutantssuch as arsenic, fluoride, etc. Fluorine is one of the elements of halogens and exists abundantly in crust, especially in some organics and stones. Fluoride deficiency may cause dental caries and excessive use of its standard may cause dental disease, liver and skeletal fluorosis. Fluorosis can cause weakness of dental and skeletal structure and stagnate the growth. Optimal fluoride content is within the range of 0.5–1.0 mg/L. Nanotechnology, the engineering and art of manipulating matter at the nanoscale (1–100 nm), offers the potential of novel nanomaterials for treatment of surface water, groundwater, and wastewater contaminated by toxic metal ions, organic and inorganic solutes and microorganisms. Due to their unique activity toward recalcitrant contaminants and application flexibility, many nanomaterials are under active research and development. Accordingly, literature about current research on different nanomaterials (nanostructured catalytic membranes, nanosorbents, nanocatalysts, and bioactive nanoparticles) and their application in water treatment, purification and disinfection is reviewed in this article. Moreover, knowledge regarding toxicological effects of engineered nanomaterials on humans and the environment is presented. The aim of this review is to investigate fluoride removal efficiency of nanotechnology with a concentration exceeding the permitted value.

Keywords: *Fluorosis; Nanocatalyst; Desorption; $CaCO_3$; CaO; $Ca_3(PO_4)_2$; Defluoridation; Membrane separation*

Assessment of Heavy Metals toxicity in living organisms

Nivedita Kumari

Heavy metals are popular environmental pollutants because of their longevity in the environment, toxicity and ability to accumulate in the living organism’s body. Heavy metals are characteristic representative of toxic substances, which are not biodegradable, enter into the food chain, and accumulate in living system and they also have high atomic mass.Heavy metals introduce in the environment by variety of sources, including fertilizers, paints’, sewage sludge, and industrial effluent’s, coal burning, leaded gasoline, petrochemicals, .Heavy metals can be categorized into two types that is essential and non -essential, essential heavy metals are important for biological function for instance necessary for proper enzymatic action, genetic material unification, while non-essential heavy metals are not needed by body for functioning, are very much toxic, and considered as toxic even at very low concentration. It is found that heavy metals cause two kinds of damages one is direct and other is indirect damage. In the indirect damage heavy metals responsible for production of reactive oxygen species and nitrogen species, hydrogen peroxide, super oxide radicals and other endogenous oxidants. On the other hand, direct damage can produce conformational changes to the biomolecules. Heavy metals can bind and they interact with nuclear proteins and then damaging to the DNA and finally leading to the apoptosis, while direct damage can produce conformational changes to the biomolecules. Heavy metals generally reduce the energy levels and can severely damage and behave as carcinogens and disturb the function of

many organs like brain, liver and lungs and responsible for many diseases such as Parkinson disease, Alzheimer disease.

Key words- Heavy metals, toxicity, Reactive oxygen species, Apoptosis, Carcinogens

Right to a Healthy Environment: A Universal Human Right?

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Environmental pollution is a serious threat to all humankind. Due to this, the fundamental right of man i.e. the right to life is violated. Unbalanced and indiscriminate exploitation of nature has caused serious damage to the environment, which is a direct result of air pollution, water pollution, soil pollution and noise pollution. It is the root of many diseases and the cause of physical and mental disorders. Living a healthy life in this world is the highest human right of a person. The world is currently grappling with climate, biodiversity and pollution crises and the risk of emergence of other pandemics like Kovid-19 is also increasing. Environmental damage is one of the main reasons for this. It is very necessary to stop this violation of rights due to environmental pollution. Many efforts have also been made in this direction at the national-international level. Recently the United Nations Human Rights Council (UNHRC) unanimously voted to recognize a clean, healthy and sustainable environment as a universal human right. The United Nations General Assembly has passed a historic resolution declaring access to a clean, healthy and sustainable environment as a universal human right. If ratified by all members, it would be the first such right in more than 70 years since the adoption of the Universal Declaration of Human Rights (UDHR) by the United Nations General Assembly in 1948. The United Nations General Assembly declared that everyone on the planet has a right to a healthy environment; a move backers say is an important step in countering the alarming decline of the natural world. The General Assembly said climate change and environmental degradation were some of the most pressing threats to humanity's future. It called upon states to step up efforts to ensure their people have access to a "clean, healthy and sustainable environment."

In the presented research paper, those measures have been outlined by which strong efforts should be made to control and deal with this deadly pollution so that a clean, healthy and sustainable environment can be made available to the future generation as a universal human right.

USAGE OF VARIOUS BIOADSORBENTS FOR DEFLUORIDATION GROUNDWATER OF NAGAUR CITY (RAJASTHAN), EMPLOYING

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Water samples of 12 locations of Nagaur District were chemically analyzed for determining fluoride ion concentrations. High fluoride containing localities were identified on the basis of fluoride levels of water samples and also on prevalence rate of dental, skeletal and non-skeletal fluorosis of the study area. Water samples containing high fluoride levels were defluoridated with economically cheaper materials prepared from plant byproducts. These materials were found successful in decreasing fluoride ion concentration to a permissible limit (0.5 to 1.5ppm) without disturbing potable water quality standards.
Keywords: *Defluoridation; Fluorosis; ;Physiochemical parameters; ESC; AAC; PJC; CLC; GAC*

Correlation analysis of reactivity in the oxidation of some p-substituedbezhydrols by cetyltrimethylammonim bromochromate

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Oxidation of some para-substituted benzhydrols(BH) by cetyltrimethylammonium bromochromate(CTMABC) in dimethylsulfoxide(DMSO) leads to the formation of corresponding benzophenones. The reaction was run under pseudo-first order conditions. The reaction observed to be first order with respect to CTMABC and benzhydrols. The reaction is catalyzed by hydrogen ion in the form of $k_{obs}= a+b[H^+]$. Oxidation of benzhydrol was investigated in 18 different organic solvents. The solvent effect analyzed by the Kamlet's and Swain's multi-parametric equation. Kamlet-Taft solvatochromic parameters correlation with rate data suggests that the solute-solvent interactions play a major role in reactivity of the process. A suitable mechanism of oxidation has been proposed.
Keywords: *Kinetics, mechanism, benzhydrol, cetyltrimethylammoniumbromochromate, solvent effect.*

RATION AND CHARACTERIZATION OF NANOADSORBENT FROM PLANT WASTE AND THEIR APPLICATION IN REMOVAL OF ORGANIC CONTAMINANTS FROM WASTEWATER

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Some plant based nanoadsorbents were prepared by the chemical activation process. Activated carbon obtained from different sources of agricultural and locally available plant waste or trees in the environment. The prepared activated carbon was characterized by Fourier transform infrared spectroscopy (FTIR), X-ray diffraction, scanning electron microscopy (SEM), transmission electron microscopy (TEM) and Brunauer-Emmet-Teller surface (BET) area for the removal of organic contaminants by activated carbon nanoadsorbent. The effect of different pH and adsorbent doses of activated carbon nanoadsorbent on the removal of organic dye methylene blue and from wastewater treatment were studied. Result showed that the adsorption maximum for methylene blue occurs at around pH 10; adsorption equilibrium was achieved in 90 min. at 30 mgL^{-1} MB concentration and adsorbent dose of 20 mg/50 ml for each sample. Removal of MB dye increases with increasing solution pH and pH maximum value was at pH 10 for all samples.

Key words: Pollutant, Adsorption, Nanoadsorbent, Plant waste, organic dye.

Drug Repurposing of FDA approved drugs with the aim of developing control agents of urinary tract infections caused by *Pseudomonas sp.*

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One of the most concerning health issues in the world today is antibiotic failure due to lack of new antibiotic discoveries, prevalence of resistant bacterial isolates and recurrent infections. Repurposing already authorized medications with well-characterized toxicity and pharmacology is an innovative approach to overcome with treatment options. In the current study, a library of drug compounds from various categories, such as anticancer, anti-inflammatory, antipyretic, antidiabetic, antimalarial, and anti-oxidant that are approved by the FDA, was taken for assessment of effective antibacterial and antibiofilm activity. Drugs with antibacterial action were screened out during a preliminary screening by growth inhibition assay with incorporation of resazurine dye that exhibited potent antibacterial activity against multi drug resistant *Pseudomonas sp*. Strains. FDA approved non-antibiotic drug that includes anti-inflammatory, antipsychotic, antimalarial, anti-oxidant categories were screened out. Among those screened drugs amlodipine, 5- flurouracil and diclofenac were investigated for excellently reducing the production of biofilm and other drugs were found positive for biofilm dissolution activity against *Pseudomonas sp*. strains, thus it indicates that all these identified drugs have considerable efficiency to be successfully repurposed for use as antimicrobial agents for treatment of urinary tract infections caused by multi drug resistant bacteria *Pseudomonas sp*.

Keywords: Drug resistance, Drug repurposing, *Pseudomonas sp*.

Estimation of Bioaccumulation of Heavy Metals in Water and Tissues of Fish

Poonam Yadav

Freshwater food safety is a evaluative prerequisite for sustained global quantitative and qualitative development. In recent years, human health and food quality has been unintendedly damaged by pollutants. Safe ecosystems have notable impact in the possible composition of safe aquaculture products, which serve as the beginning of every food web. As fishes are top consumer in aquatic system they are badly affected by deposition of heavy metals in fresh water and elevation through food chain. Currently the major bothering is the constant oozing of genotoxic compounds in our surroundings. Genotoxic compounds, by attaching with DNA, bring about several alterations in DNA (for example point mutations, DNA adducts formation, chromosomal aberrations, single and dsDNA nicks and amplified formation of micronuclei). Many advanced methods recently put in to assess genotoxic damage in diverse watery and terrestrial species created by chemical pollutants.

Therefore, this study speculates and explain the bioaccumulation of heavy metals and diversity of toxic effects on a variety of body tissues and organs of fish and the accumulation of various metals and for induction of enzymatic (SOD, CAT, and GST) and non- enzymatic glutathione (GSH) antioxidant protection will be estimated in gill, liver tissue of fish. Heavy metals bio accumulation effect the level of antioxidants in Gills, Liver and Muscles of fish. For our study we are estimating the deposition of heavy metals in water and the fish tissues by using Atomic Absorption Spectrophotometer (AAS).

Contemporary Issues for Various Pathway on Computerizing Systems of Accounting in India

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Electronic systems play important role in Development of Accounting in India. But some problems arises on time of recording transactions so risk always maintain for sustains ability of accounting Data. The introduction of advanced information technology (IT) has changed the way of businesses. The capabilities of IT have led to the introduction of various information systems, such as, accounting information system (AIS), manufacturing resource-planning system (MRP) and human resource system (HRM), inventory information system to manage the various aspects of a business. The proper use of this technology may create competitive advantage for most businesses and organizations in all fields, including accounting in India.

Key Words- E-accounting, Computer, Technology, Accounting packages, Software, financial data, security of data.

बीज शब्द -पर्यावरण संरक्षण, अवधारणा, साहचर्य, अनुकूलन, देशकाल और वातावरण, हरित मानसिकता

डॉ प्रणु शुक्ला
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भारतीय संस्कृति में पर्यावरण के संरक्षण को बहुत महत्त्व दिया गया है। यहाँ मानव जीवन को हमेशा मूर्त या अमूर्त रूप में पृथ्वी, जल, वायु, आकाश, सूर्य, चन्द्र, नदी, वृक्ष एवं पशु-पक्षी आदि के साहचर्य में ही देखा गया है। पर्यावरण शब्द का अर्थ है हमारे चारों ओर का वातावरण।" पर्यावरण संरक्षण का तात्पर्य है कि हम अपने चारों ओर के वातावरण को संरक्षित करें तथा उसे जीवन के अनुकूल बनाए रखें। पर्यावरण और प्राणी एक-दूसरे पर आश्रित हैं। यही कारण है कि भारतीय चिन्तन में पर्यावरण संरक्षण की अवधारणा उतनी ही प्राचीन है जितना यहाँ मानव जाति का ज्ञात इतिहास है।"1
उल्लेखनीय है कि सिनेमा ने शुरू से ही पर्यावरण के संरक्षण को महत्त्वपूर्ण स्थान दिया। फिल्मों के कथानक व उसकी शूटिंग का अधिकांश जुड़ाव प्रकृति से रहा है जो सिनेमा के प्रकृति जुड़ाव को दर्शाता है। पाथेर पांचाली, मदर इंडिया, हीरा मोती, गोदान, नया दौर, दो बीघा जमीन, उपकार, शोले, मजदूर, पैगाम, धरती कहे पुकार के, राम तेरी गंगा मैली, मोतीबाग, आरोहण, पीपली लाइव, पार, दिशा, काला पत्थर, मंवन, चिरुथा, टार्जन, मोगली, जंगल सफारी, जंगली, प्रोजेक्ट मराठवाड़ा, कदम्बन, चक्रव्यूह, कोयलांचल, देवभूमि, केदारनाथ, देहली सफारी, आदि ऐसी फिल्में हैं जिनका मुख्य कथानक भले ही एक अलग कटेंट चित्रित करता हो, परंतु फिल्मों का देशकाल और वातावरण कहीं ना कहीं प्रकृति के उन तमाम हिस्सों को प्रदर्शित करते हैं, जिनमें पर्यावरण की चिंता व संरक्षण दिखलाई पड़ता है।पर्यावरण संरक्षण हमारी संस्कृति का अंग है, परंतु मानव में अपने स्वार्थ के लिए प्राकृतिक संसाधनों के दोहन की प्रवृत्ति ने पर्यावरण संकट की नई चुनौती को जन्म दिया है। कोविड-19 महामारी ने हमें साफ हवा की कीमत समझा दी है। पर्यावरण संरक्षण के निमित्त आमजन का सहयोग अनिवार्य हो गया है। आज मानव को हरित मानसिकता विकसित करने की आवश्यकता है।

Green Management "- A Practice to sustain customers and its impact on implementation of Business Function in India"

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Green management and going green is not about the repackaging or the reinventing new approaches to diverse business, nor business management or new business management style. In the world of business management, companies are turning green at an increasing rate due to varied reasons which is not directly based on profitability, long tenure or sustainability. The urgent need arises from factors such as environment, sustainability, branding, and stewardship, which leads to drastic changes in how companies function. Nowadays,

organizations of unique shapes and sizes are in a constant process to turn green which includes their processes, products, facilities, and direct sustainable business practices. To get an edge towards competitive advantage. Going green is largely not a legal requirement, but a voluntary process. The Paper focuses on different green management strategies striving towards sustaining customers for a longer duration. It also throws a light on its implementation of major business functions in India.

Key words
Green Management, Sustainable Development, Competitive advantage, Business Function, Marketing Strategies.

Environment Related Provisions in the Indian Constitution

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Environment is made up of two words (Pari + Cover). Pari means around and cover means covered or surrounded. The conditions that surround humans and other living beings are the most essential in the world. Environment and environment is the basis of the world, clean environment is necessary for the development of all, whether it is human beings, animals, trees, plants, etc. We have seen the example of this that the school is closed in Delhi every winter, as well as every person Due to this, our constitution maker is seen in visionary thinking, in the Indian constitution, how important the environment is for humans along with humans, it also takes into account this and hence the constitution of India Article 21 protection of life and personal liberty in Part 3 and Article 48 protection and improvement of environment and protection of wild life in Part 4 and Article 51A in Part 4(a) of (g) natural environment including lakes, rivers and Protect and support wild animals and have compassion for living beings. Place Shubhash Kumar v. State of Bihar AIR sc 420 Rural Litigation and Settlement Center Dehradun v. State of Uttar Pradesh 1985 Supreme Court 431 MC Mehta v. Union of India 1986 Supreme Court 176 Indian Counseling for Environmental Legal Action v. Union of India 1996 Supreme Court 281 Counseling for Legal Action v. Union of India 1996 Supreme Court 281.

Environment and Sustainable Technology

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Rapid industrialization, urbanization, population growth, and land use for modern agricultural practices have resulted in an increase in the production of waste and the introduction of various toxic chemicals into the natural environment across the globe. This is one of the greatest challenges faced by humans, as many of them are persistent in nature and pose

significant threats to public health, as well as global environmental security. Therefore, there is an ongoing demand for the development of safe, sustainable and cost-effective technologies to better manage environmental pollutants, waste reduction and resource recovery in order to work towards a more environmentally friendly future, which is essential both for our quality of life and that of future generations. However, this issue has been a challenging task for the scientific community as well as for environmental policymakers and regulators. Sustainable technology is an umbrella term that describes innovation that considers natural resources and fosters economic and social development. The goal of these technologies is to drastically reduce environmental and ecological risks and to create a sustainable product. Environmental protection can be done by using sustainable technology as follows.

i. Biodegradable, affordable and sustainable technologies for clean-up of toxic chemicals and emerging contaminants from aqueous bodies;
ii. Green technology to mitigate environmental problems;
iii. Application of eco-friendly and sustainable materials in industry, agriculture, and construction;
iv. Sustainable utilization of natural resources and solutions for natural resource depletion;
v. Development of clean and energy-efficient technologies that use alternative sources of energy (renewable energy);
vi. Restoration and remediation technology to improve ecosystem restoration;
vii. Biochars and clay-based remediation technologies for soil remediation and water purification;
viii. Green technologies to minimize climate change including drought, heat stress, etc.;
ix. Vermicomposting, green manure, and biofertilizer for sustainable agriculture;
x. Convert waste into bio-CNG, bioethanol and biomass plants;
xi. Recovery of metals and other beneficial products from fly ash, wastewater, and other wastes;
xii. Sustainable waste management technologies in the post-COVID-19 world;
xiii. Environmental policy and framework development for natural resource management.

Keywords: Sustainable Technology, Biodegradable, Environmental policy, wastewater treatment, biofertilizer.

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Environmental Accounting Practices in Selected Indian Companies: A Comparative Study

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Environmental sustainability is a major concern with increasing Global Warming. One of the best ways to portray the companies' responsibility is by following green accounting practices and disclosure. There are companies doing their voluntary practices and disclosure for the same but till today there is no specific set of rules and regulations at the national or state level for them to comply with. This study focuses on the prominent five companies of India who made their name into the CDP (Carbon Disclosure Project) list. The main aim of the study is to analyze the practices incorporated by the companies namely **Nayara Energy (formerly known as Essar oil)**, **Larsen & Toubro Limited**, **Wipro Limited,** T***ata Consultancy Services*** **& Tech Mahindra** followed by the comparative analysis of the same. The paper encompasses the achievement attained by the companies after following green accounting.

Keywords: Green accounting, environmental accounting, environmental sustainability, carbon footprint

Environmental And Human Behaviour

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Environmental psychology examines the interrelationship between environments and human behaviour. The field defines the term environment very broadly including all that is natural on the planet as well as social settings, built environments, learning environments and informational environments.

The reason environmental psychology is important is because emotional connection to the natural world is an important predictor of well-being and ecological behaviour. By helping people develop bonds with nature, environmental psychologists promote sustainable behaviour and overall well-being.

A short-term study of Coleoptera diversity in selected agro-ecosystem in Shekhawati region

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Insects are the most diversifying fauna on the earth. Coleopteran insects out of all other insects are the most dominant species. They play a significant role in pollinating various crops, as well as predators of many pest species. Their importance to the diversity of a particular field is thus quite significant.

The goal of this study was to examine the diversity of Coleoptera in selected fields of Chelasi Village, Jhunjhunu at the Shekhawati region. The present study was conducted from

January through June 2022, on rabi crops and seasonal vegetable crops. Net sweeping and light trap methods were used to collect insects.
Six families of beetles, all belonging to the order Coleoptera, were explored: Scarabaeidae, Curculionidae, Coccinellidae, Cicindelidae, Cerambycidae and Melodie.
Anomala bengalensis, *Coccinela septumpunctata*, *Hypolixus truncatulas*, *Menochilus sexmaculatus* were observed on wheat, Barley, Mustard and Grams. Coccinella septempunctata, a ladybird beetle that is widely distributed and particularly important as a predator of aphids in the larval and adult stages, has been observed. Dung beetle species, such as Scarabaeus andrewesi and Cylindrothorax pictus, were collected from field areas. Apogonia ferruginea were observed on Mustard and Rapeseed while rarely on Wheat, Barley and Gram.

Key words - Insects, Coleoptera, Diversity, Fauna, Predators

A Study of Environmental Impacts of Thermal Power Plants in India

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Thermal power plants are the main source of power generation in a developing country. About 60% of the electricity in our country is generated by thermal power plants. Water, coal and fuel oil are the major input ingredients in the thermal power plants. Air pollution is one of the biggest problems facing people around the world, and many sources contribute to the global threat. Among these, thermal power plants are one of the main point sources of air pollution worldwide. Unfortunately, as the capacity of these power plants continues to grow, our country is also witnessing extreme levels of air pollution around them. The release of these hazardous emissions into the atmosphere caused by power generation in thermal power plants is a serious problem, posing threats to human life, biodiversity and much of the environment. The anthropogenic emissions from these thermal power plants of various types also shed light on their negative impacts on the environment and human health. Several solutions are presented to prevent, control, and mitigate these effects, and possible alternatives are also suggested. In addition, the study highlights common issues in national air pollution-related policy making and legislation, and also addresses pollution control deficiencies at the factory level. Stringent measures to meet emission standards, greater transparency of air quality data between stakeholders and the public, regular air quality monitoring, enforcement of new and more stringent regulations and various mitigation measures for control Pollution from thermal power plants and some new technology are discussed in the study.
Keywords: Thermal power plants, pollution, hazardous emissions, biodiversity, environment.

Gender Inquality and Sustainable Development in India

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The present paper is an attempt to discuss gender inequality and sustainable development in India. In recent years, women play prominent role in reducing poverty and bringing power to the society through participating in economic activities. Moreover, women now have a more prominent part to play in sustainable livelihood than men; therefore, women getting involved in income generating activities form an essential part. It increases the sustainability of family income and livelihood security. Women participation in different economic activities provides faster and more sustainable development. But in Indian scenario general position of females is not very good, may be due to many socio-economic factors. Women in India faces discrimination at every stage like in education, health, employment, income, political position etc. The findings suggest that the Gender equity is much lower in India so there is more need to focus on gender equity to reduce poverty and achieve sustainable development.

Key Words: gender inequality, Employment, sustainable development, poverty, education

Mitigation of Recalcitrant Organic Compounds Employing AOPs

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Advanced oxidation processes (AOPs) are the technologies that generally use the hydroxyl radicals, the ultimate oxidant for the remediation of organic contaminants in wastewater. These are highly effective novel methods speeding up the oxidation process. AOP can combine with ozone (O_3), catalyst, or ultraviolet (UV) irradiation to offer a powerful treatment of wastewater. Future research should be focused on enhancing the properties of heterogeneous catalysts in AOPs. This chapter reports general review of different AOPs utilized for the removal of various phenolic compounds and textile dyes in wastewater. The chapter also aimed at an investigation of efficiency for different photochemical AOPs. The authors have carried out the experimental runs at a laboratory scale for the removal of malachite green oxalate (MGO) dye with photochemical AOPs. The influence of Fe^{++} [ferrous ions] and oxidant dosage on percentage decolorization of MGO in wastewater has been reported. The discussion extends to the utilization of different modified photocatalysts for the photocatalysis process. The future challenges, such as the adoption of strategies for the integration of processes and the decrement in operational cost of AOPs, are discussed. The discussion covers the utilization of different heterogeneous catalysts, the reduction of input demands of chemicals and energy for the processes. In this review paper general review of different AOPs employed for the oxidation of organic pollutants in wastewater is delineated. The report also aimed at an investigation of the efficiency of different

photochemical AOPs. Experimental runs using a UV photochemical reactor were performed at a laboratory scale for the decoloration of malachite green oxalate (MGO) dye using photochemical AOPs. The influence of ferrous ions and oxidant dosage on percentage decolorization of MGO in wastewater has been reported. The discussion was also extending to the utilization of different modified photocatalysts for the photocatalysis process. Some of the future challenges, such as the adoption of strategies for the integration of processes and the decrement in operational cost of AOPs, are discussed.
Keywords: AOPs; Phenolic Compounds; MGO; Photocatalysts; Waste water

Major Pillars of Sustainable Development in Organizational Context

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In the contemporary business world, sustainability has become the major goal in the organizations. In the beginning, sustainability is not considered a key component of the business strategy but due to rise in importance of corporate social responsibilities, the sustainability issues become the focal point. Sustainability is a holistic approach that show concerns for ecology, social and economic dimensions in order to unearth lasting prosperity. The concept of the sustainable development was underscored by the United Nation's conference on environment and development. Sustainable development seeks to meet the needs and aspirations of the present without compromising the ability of the future generations to meet their own needs. University of Alberta defined sustainable development as the process of living within the limits of available physical, natural, and social resources in ways that allow the living system in which humans are embedded to thrive in perpetuity. The three major pillars of sustainable development are the economic, social and environmental sustainability. Economic sustainability deals with establishment of economic value to the organization. It consists of the decision which stimulates the organization financially while taking into consideration the other two pillars. For achieving economic sustainability, it is required for business to maintain proper balance among economic, social and ecological aspects. Social development is the significant component of the sustainability. Business firms must ensure the respect of personal and cultural rights of their work force. Social sustainability can be achieved by designing appropriate plans in support of their employees in particular along with the community. Environmental sustainability is concern with protection and renewal of natural resources and environmental heritage. Economic growth should not adversely affect the ecological balance. Business decision must be designed keeping in view the equilibrium between the natural sources without depletion. Sustainability development is rapidly making its way into business operations. By balancing all these pillars, the organizations can develop themselves as sustainable systems. Thus, sustainable practices also provide a competitive edge to the business firms in the market.

Key Words: Sustainable Development, Business Organizations, Economy, Society, Environment.

Types of Biodiversity and Conservation

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The biological diversity or biodiversity is combination of two words. Bio (Life) and diversity (Variety). In simple terms, biodiversity is the number and variety of organism found within a specified geographical region.

Biodiversity is our living wealth. It is result of hundreds of million of constant evolution. Biodiversity can be discussed at three levels:

1. Genetic diversity
2. Species diversity
3. Ecosystem diversity

1. **Genetic diversity:-** Genes are the basis of characteristics in organism. Genetic biodiversity refers to the variation of genes within species as human beings. Human beings genetically belong to the group of homosapiens and also differ in their characteristic such as height, colour, physical appearance etc. This is due to genetic diversity.
2. **Species diversity:-** This refers to variety of species i.e. number of species found in a defined or particular area. This kind of diversity can be measured in term of its richness, abundance, and types Eg. tigers, lion, wolf, dear etc. Some area are more rich in species than the others. Area rich in species diversity are called hot spots of diversity.
3. **Ecosystem diversity:-** One ecosystem is different from the other on the fan's of physical characteristics. As physical characteristics are different so is the ecosystem and their adaptation. So, we found different varieties of species in different ecosystem. Though, it in the fact, we cannot define boundaries of ecosystems strictly. But, gradually we find that as we move from our ecosystem to another some characteristics diminish and others get increased.

Importance of Biodiversity:- Man, most advanced form of life, before being civilised one is also a animal first, This thing implies that he is also dependent on nature for its needs. So, biodiversity has great role in the life of human beings.

First of all, we can say that this whole Universe is interdependent. This can be understood by the example of food chain, nutrient chain and flow of energy within various ecosystem.

Another important thing is that every economic need is being satifisfied through nature. Humen get food, medicine, Livestock, both etc. from nature.

Other very important thing is that through the study of biodiversity we can know the process of evolution, how various species developed.

A generalised distribution pattern:-

The highest biodiversity is found is equatorial region. We may say in tropical areas, specially rain forests of the world. Here, optimum condition are found because of uninterrupted supply of abundant moisture and water and heat throughout the years eq. 6000 to 7000 species of flowering plants are found in W. Africa (congo basin), 20000 species of flowering plants in Malaysia, 40000 species of flowering plants in Brazil etc.

As we move from tropical area to the poles biodiversity decreases. At the poles severness of environment increases and that does not support high degree of biodiversity.

Loss of Biodiversity:-

Since 1600 AD. Many species have become extinct greatest in last one and half century. This has become because of growth of human population and advancement of science and technology and in turn greater use of natural resources.

Some of the basic reason of biodiversity loss can be identified under following headings.

1. Habitat loss
2. Habitat Fragmentation
3. Habitat degradation
4. Introduction and invasion of exotics species
5. Increased spread of disease

विश्नोई पंथ का पर्यावरण संरक्षण में योगदान

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ज्ञमलूवतक - विश्नोई पंथ, गुरु जाम्भोजी, खेजड़ली, बलिदान, पर्यावरण प्रेमियों

विश्नोई पंथ के संस्थापक गुरु जाम्भोजी का अवतरण सं. 1508 को भादो बदी अष्टमी को नागौर के पींपासर नामक स्थान पर हुआ। 'विष्णु' के रूप में उनका परिचय सबदवाणी में मिलता है तथा उन्हें पंथ में विष्णु ही माना जाता है। गुरु जाम्भोजी ने उनतीस नियमों की आचार संहिता स्थापित की, जिसमें जाम्भोजी ने "जीव दया एवं पर्यावरण का पाठ" पढ़ाया। प्रकृति एवं पर्यावरण के संतुलन हेतु मानव, वनस्पति एवं जीवों तीनों का होना आवश्यक है।

गुरु जाम्भोजी ने मनुष्य को जीव एवं पर्यावरण के संरक्षण का संदेश दिया। "सन्त लोकहितार्थ के कार्य करता है, जिसके कारण सर्वतोभद्र सर्वतोमुखी वाणी जन-जन के लिए प्रिय बन जाती है। जाम्भोजी ने पर्यावरण संरक्षण पर अत्यधिक बल दिया है। जाम्भोजी ने वृक्षों को प्राणवान मानते हुए हरे वृक्षों को काटने का तीव्र प्रतिरोध किया है। विश्व इतिहास में वृक्षों के रक्षार्थ प्राण न्योछावर करने का श्रेय विश्नोई समाज को ही है। गुरु जाम्भोजी के संदेश "जीव दया पालणी, रूंख लीला नहिं घावै।" इन दोनों ही नियमों का विश्नोई समाज ने अक्षरशः पालन करते हुए विश्व में मिसाल कायम की है। विश्नोई पंथ में वृक्षों की रक्षा हेतु बलिदान की एक दीर्घ एवं अविस्मरणीय परम्परा है, जिसका प्रारम्भ वि. सं. 1661

जेठ वदि. दूज शनिवार को जोधपुर के गाँव रामासड़ी (रामासनी) में वृक्षों की रक्षा हेतु घटना से होता है। जिसमें अपने धर्म का निर्वाह करते हुए श्रीमती करमां व गोरा विश्नोई ने वृक्षों के काटने का तीव्र प्रतिरोध किया तथा अपने प्राणों की आहुति दी। विश्व में वृक्षों की रक्षा हेतु प्राण न्योछावर करने की यह पहली घटना थी। इसके पश्चात भी विश्नोई पंथ में बलिदान की परम्परा निरन्तर गतिमान रही। इसकी दूसरी कड़ी के रूप में तिलवासनी में वृक्षों की रक्षा करते हुए श्रीमती खीवंणी, श्रीमती नेतू नैण तथा मोटाजी खोखर ने प्राणोत्सर्ग कर दिये। मेड़ता के निकट पोलावास गांव में वि. सं. 1700 को चैत्र वदि तीज को श्री बूचोजी ने वृक्षों की रक्षा हेतु आत्म बलिदान दिया।
जोधपुर के तत्कालीन राजा अभयसिंह के महल निर्माण हेतु चूने बनाने के लिए ईंधन की आवश्यकता होने पर हाकिम गिरधरदास भण्डारी अपने कारिन्दों के साथ खेजड़ली नामक स्थान पर पहुँचा तथा उन्हें खेजड़ी वृक्षों को काटने के आदेश दिया। विश्नोई समाज के लोगों के द्वारा तीव्र विरोध करने पर भी वे लोग नहीं माने तब इस महाबलिदान का प्रारम्भ अमृता देवी के बलिदान से हुआ। श्रीमती अमृता देवी ने "सिर साटे रुंख रहे तो भी सस्तो जाण।" का उद्घोष करते हुए प्राणोत्सर्ग कर दिये तथा बलिदान का सिलसिला कई दिनों तक चला। इस भीषण जन संहार में 363 विश्नोई स्त्री-पुरुषों अपने प्राणों की आहुति देकर वृक्षों की रक्षा की। 'सिर साटें रुंख रहे तो भी सस्तो जाण।' अगर हमारे शीश कटने पर भी वृक्ष की रक्षा हो जाय तो भी इस सौदे को सस्ता समझना चाहिए तथा यह वाक्य आज भी पर्यावरण संरक्षण की प्रेरणा देता है।

भारतीय स्वतंत्रता सग्रांम में ऐसे कई वीर शहीद हुए, जो इतिहास में तो कभी दर्ज नहीं हुए पर आज लोक में जीवित हैं। वैसे ही खेजड़ली बलिदान लोकमानस में सदैव अमिट रहेगा। वर्तमान में इतिहासकारों एवं जागरूक लोगों ने खेजड़ली बलिदान की सत्यता उजागर करते हुए विश्वभर में प्रचारित व प्रसारित कर दिया है, क्योंकि सत्य कभी छुप नहीं सकता। आज इस बलिदान की गूंज सम्पूर्ण संसार तक पहुँच चुकी है, जो वर्तमान एवं भविष्य में भी पर्यावरण प्रेमियों में प्रेरणा एवं उत्साह का संचार करती रहेगी।

Alternative Energy Resources: Renewable Energies

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Fossil fuels (oil, coal and natural gas) are our most traditional source for power generation. Therefore, the energy that's produced from any source other than fossil fuels is alternative energy. In other words, alternative energy is any amount of energy derived from non-fossil fuel sources. Generally speaking, using alternative energy has a low environmental impact. Alternative energy is a set of promising methods to generate energy from renewable sources, which are not as widespread as traditional, but are of interest because of the advantage of using them at low risk of harming the environment. Alternative energy includes

all renewable sources and nuclear. Nuclear is not classified as a renewable energy source. A renewable energy source is produced from sources that do not deplete or can be replenished within a human's lifetime. Nuclear is produced from mined elements like uranium and thorium which cannot be replenished. A renewable energy source means energy that is sustainable - something that can't run out, or is endless, like the sun. When you hear the term 'alternative energy' it's usually referring to renewable energy sources too. The most popular renewable energy sources currently are: Solar energy, Wind energy, Hydro energy, Tidal energy, Geothermal energy and Biomass energy.

Keywords: Fossil fuels, Nuclear, Solar energy, Tidal energy, Geothermal energy, Biomass energy.

"Environmental impacts of e-waste management"

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E-waste management presents difficulties due to a lack of technical expertise, inadequate infrastructure, insufficient funding, and passive community involvement. Waste electrical and electronic equipment (WEEE) is becoming a global issue. Its poisonous emissions mix with uncontaminated soil and air and have a negative direct or indirect impact on the entire biota. Acids, toxic substances, including heavy metals, and chemicals that cause cancer are examples of direct effects. Indirect consequences include biomagnification of heavy metals. Several private companies are engaged in gathering, disassembling, sorting, and exporting e-waste for recyclers. Nevertheless, tight rules are currently being observed as on approval of such firms, for example, e-steward certification by Basel action network in the US, which also involved in public awareness projects. For the correct management of E-waste, an inventory of end-of-life electronic items must be created, which can be done by developing an environmentally acceptable legal framework for recycling. The implementation of efficient management of e-waste in developed and developing nations has a strategy. It is anticipated that the application of systematic management strategies for E-waste in emerging nations, together with best practises, will assist preserve a sustainable and resilient ecosystem while minimising negative effects.

Keywords: E- waste, electronic waste, recycling, waste management, Environment impact

Environment Education Law and Human Rights

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The environment is defined as that outer physical and biological system in which man and other organisms live as a whole. Human environment consists of both physical environment and biological environment. Physical environment covers land, water and air. Biological environment includes plants, animals and other organisms.

Environmental issues are a growing concern in today's world. All the countries, including India, are facing excessive environmental degradation.We know that development of a nation depends on industrialization and on the other hand, rapid industrial and agricultural development entails much adverse effects on the environment of the countries concerned. So we have to apply our wisdom in striking a balance between these two contradictory factors. In recent years, the recognition of the links between human rights and the environment has greatly increased. The number and scope of international and domestic laws, judicial decisions, and academic studies on the relationship between human rights and the environment are growing rapidly.

On 28 July 2022, the United Nations General Assembly declared that everyone on the planet has a right to a healthy environment. This landmark decision is the result of decades of mobilization of various stakeholders. States must now implement their commitments and scale up their efforts.

NANOMATERIALS: ENVIRONMENTAL IMPLICATIONS AND ECOTOXICOLOGY

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The diameter of a human hair strand when reduced to approximately one lakh times, is the size of a nanoparticle. Varied definitions have been proposed for nanomaterials, with one thing in common i.e. at least one dimension of a nanoparticle is one millionth of a millimetre. Nanomaterials (viz. metal oxides, carbon fullerenes, quantum dots, carbon nanotubes, etc.) can be either natural or engineered. Owing to the unique morphological as well as functional features of nanomaterials, a diversified spectrum of their applications has manoeuvred a global nano-revolution. But the wide-scale employment of nanomaterials is like playing with a 'two-edged sword'. Because the presence of certain nanomaterials may have negative effects on the environment (flora and fauna) and human health caused by uncertainties or irregularities in their structural features and chemical composition. As a result, questions have

been raised about the fate, haulage, and progression of nanomaterials entering the environment.

There can be many factors responsible for driving the ecotoxicology of nanomaterials, like-their capacity to damage biota by producing reactive oxygen species (which could harm biological structures); nanomaterials might serve as a transporter for other pollutants; they can induce oxidative stress in living systems, and so on, but no mechanism for ecotoxicology can be considered generic for various nanomaterials.

Engineered nanomaterials are frequently alluded to harness their energy to improve environmental conditions, public health, etc. But it is also an ethical responsibility of the scientist community to critically assess the potential benefits, ecotoxicology and unintended consequences of nanomaterials on environment and human health.

KEYWORDS: Nanomaterials, Environment, Ecotoxicology, Human health, Nano-revolution.

Research on Photogalvanic Cells Using Mixed Biodegradable Surfactants in Tartrazine-Fructose Systems for Power Production and Storage

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Objective: The rapid consumption of fossil fuels including wood, coal, kerosene, and others threatens to deplete them totally. Renewable energy will soon be able to compete with coal-based electricity, thanks to increasing storage capacity. Over the next several decades, the world will need to drastically reduce its coal and oil usage to accelerate climate action. Coal and oil, two fossil fuels, presently provide more than half of world energy demand. Thermal power, the majority of which is coal-based, generates a significant amount of global energy. Nonrenewable energy sources come with their own set of limitations, as well as the possibility for dangerous operations and pollutants. The scientific community is under pressure to develop a long-term energy source that will feed the whole globe while simultaneously being ecologically friendly and economically viable. As a result, solar energy is the most viable option for supplying electricity. A complete study approach for doing systematic research on photogalvanic cells for solar energy conversion was offered. It was needed and recommended that experimental work be done in both natural and artificial light. A complete literature evaluation of several photogalvanic cells was undertaken for the best outcomes.

Methods: The reaction mechanism for producing photocurrent and photocurrent in the proposed solar cell has been carefully researched. The use of PG Cells in a solar energy conversion system was investigated.

Findings: Investigations into PG cells' photopotential, photocurrent, conversion effectiveness, fill factor, and cell performance were studied. 712 mV, 939 A, 6.4278%, 0.4806, and 864 mV, 1050 A, 8.723%, 0.5543, respectively, are the values. The main components of this photogalvanic cell are a dye, reductant, and mixed surfactant cell system.

Novelty: The photogalvanic cell is a relatively new area of study, and the publication includes significant information about the electrical output, conversion efficiency, and

storage capacity of a produced photogalvanic cell with an emphasis on enhanced functionality and lower costs for commercial viability.

Keywords: *Renewable energy, Photocurrent, Photopotential, Fill factor, Conversion Efficiency.*

Physical Characterization of Solid waste generated from the Chaksu Tehshil of District, Jaipur, Rajasthan (India)

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Disposal of solid waste is one of the major environmental problems of most of the Indian cities, therefore municipal solid waste management is an emerging concern in major cities of India. Municipal solid waste (MSW) is one of the major environmental problems of the urbans and sub-urbans. Rapid industrialization and population explosion in India has led to the migration of people from villages to cities, which generate thousands of tons of Municipal Solid waste daily. Characterization of solid waste is often limited to material composition, which can be used to describe waste recycling and diversion efforts and estimate expected landfill behavior.The principal objective of this research is to quantify the current Chaksu Tehshil Scenario of solid waste physical charecterization. Based on the generation of humungous amount of waste due to rise in economic conditions and standard of living the trend of waste generation of the Chaksu Tehshil has changed drastically in couple of decades. The study carried out in the Chaksu Tehshil on Physical charecterization of solid waste generetaed from different sites.It was observed that the secondary data on physical characterization of solid waste collected from Chakasu dumping site during 2021 indicates higher percentage of organic content physical characterization of solid waste conducted reveals that in stone and earth are available in higher percentage. Inert matter high in the physical characterization due to the practice of inclusion of construction and demolition debris in Municipal solid waste. Moreover, the biodegradable fraction of the waste are almost degraded.

Key words: Disposal, Inert matter, Processing, Recycling, Solid Waste.

TECHNOLOGIES UTILIZED IN ERRADICATION OF HEAVY METAL IONS FROM INDUSTRIAL WASTEWATERS: A REVIEW

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Heavy toxic metals discharging industries are more worried than ever before about hazardous heavy metals in treating wastewater from industrial effluents and sludge, as well as the effect of these pollutants on both the environment and on the public health. Researchers have discovered several technologies in the last two decades that address toxic metals in wastewater and sludge management while fulfilling these toxic effluent limits, preserving sustainability performance, and enhanced organizational efficiency cost-effectively. This review paper emphasized on several methodologies adopted by scientist in the removal of toxic metals from wastewater such as ion-exchange resins, cross-linked biopolymers, use of adsorbents and biosorbents, precipitation etc. This also discussed in detail about the advantages and disadvantages of using these methodologies, their prospects, and strategies in the implementation of these technology to protect the water bodies being polluted by toxic metals.

Keywords- Industrial pollution, Heavy metals and removal technologies

AGRICULTURE AND ENVIRONMENT LINKED TO EACH OTHER

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Environment and agriculture are connected to each other. Agriculture negative impacts as like pollution, degradation of soil, air, and water are very serious to us. A significant cause of hunger and environmental degradation is local people's loss of access rights to natural resources such as land, water and trees. The enhancement of agriculture through new technology such as pump irrigation and chemical pesticides can generate new environmental issues and even increase the food insecurity. Most conventional economic assessments undervalue or ignore environmental "goods and services" such as water and soil fertility partly because it is hard to assign them a value those leads to overuse or misuse and degradation. Climate change has been predicted to impact agricultural production to multiple directly and indirectly. Changes in temperature and water availability combined with increased variation in weather conditions and will have a direct impact on crop yields. Increasing of CO_2 concentration in atmosphere also improves crop growth throughout boosting photosynthesis.

We create financial incentives to encourage biodiversity conservation, improve agricultural policies, and identify new income opportunities for producers. When agricultural operations are sustainably managed, they can preserve and restore critical habitats, help protect watersheds, and improve soil health and water quality. Many countries have been some encouraging signs that the agriculture sector that in particular, farmers have improved pesticides, nutrient management, energy and water using less of these inputs per unit of land. Farmers have also made good progress in adopting more environmentally beneficial practices, such as conservation tillage, improved manure storage, or soil nutrient testing.

Key word: resources, fertility, atmosphere, biodiversity, pesticides, conservation.

POSITIVE EFFECTS OF COVID-19 LOCKDOWN ON ENVIRONMENT

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Coronavirus Disease 2019 (COVID-19) pandemic poses an extreme threat to human beings, The disease was first spotted in Wuhan, China; later, it spreads throughout the world.

The spread of coronavirus infection has experienced several negative impacts all over the world. But as the movement of people seized due to the Lockdown, the coronavirus crisis brought a positive impact on the climatic conditions and a noticeable decline in environmental pollution.

The present research will find a relationship between the positive effects of the COVID-19 lockdown and the environment.

This is a review-based paper in which many articles, newspapers, and previous studies, and published data from various organizations such as the National Aeronautics and Space Administration, European Space Agency are reviewed to attain research goals.

The findings of the study suggest that lockdown is the short-term solution to deal with environmental pollution, but it will hinder the nation's economy effectively in the future. Lockdown resulted in a decrease in air pollution levels which is beneficial to the species globally.

Keywords: COVID-19, Lockdown, Positive Effects, Air Pollution, Environment

Environmental Management and Accounting

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Environmental Management Accounting (EMA) can be defined as the identification, collection, estimation, analysis, internal reporting, and use of materials and energy flow information, environmental cost information, and other cost information for both conventional and environmental decision-making within an organization. EMA addresses the management information needs of managers for corporate activities that affect the environment, as well as environment-related impacts on the corporation. Depending on the

type of organization, environmental impacts could include production effluent, recycling, water and power consumption, and carbon footprint. Continuous improvement is a fundamental premise of EMA and relies heavily on across-the-board engagement of EMA initiatives and processes. EMA doesn't need to cost a lot or be a burden on your time. The complexity of your needs is based on your operating permits, sustainability goals, and in-house experience. It is recommended that your accounting system adapts to your size and requirements - start small and simple and scale up your efforts as you grow. EMA increases the range of instruments and organizations involved in the environmental and economic policy mix, and helps government to achieve its policy goals.

Keywords: Environmental, Decision-making, organizations, complexity, Accounting.

Nanotechnology for Conservation of Sandstone and Marble Building Materials

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Stone surfaces and façades of historic buildings, due to their predominately outdoor location, suffer from many deterioration factors, including air pollution, soluble salts, relative humidity (RH)/temperature, and biodeterioration, which are the main causes of decay. This study aims to provide an updated survey of the main nanomaterials used for the conservation and restoration of cultural heritage. In the last few years, besides the classic nanomaterials used in this field, such as metal nanoparticles (copper and silver) and metal oxides (zinc and aluminum), hydroxyapatite and carbonated derivatives, tubular nanomaterials (such as carbon nanotubes) have been used as a potential consolidate material of cultural heritage. In the conservation of monuments, research on innovative nanocomposites with strengthening, hydrophobic and self-cleaning properties have attracted the interest of the scientific community and promising results have been obtained as a result. In this study, stemming from the need for the compatibility of treatments in terms of nanocomposite/substrate, a three-layered compatible treatment providing strengthening, hydrophobic, and self-cleaning properties is proposed. Nanomaterials suitable for the consolidation and protection of stones will be developed aiming at providing the best technological answer for the preservation of different types of stones, according to porosity and mineralogical and chemical features. The exploitation of the project will bring about the adoption of best practices for the preservation of the cathedrals and high-quality buildings by selecting the most advanced nanotechnologies. Usually, the use of nanomaterials in the field of antimicrobial protection of stone artifacts harvests the known potential of some metallic or metal oxide nanoparticles (such as silver, a wide known antimicrobial, ZnO, TiO_2, CuO, Cu, etc.).

Keywords : Nanotechnology, Nanomaterials, Marble, Buildings, Cultural Heritage

BRYOPHYTES: NATURAL ENVIRONMENTAL POLLUTION INDICATORS

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Bryophytes, the pioneer land colonizers, are extremely sensitive for the changes in their micro-climate and show distinct and visible symptoms of injury even in the presence of minute quantities of pollutants and hence are potential natural bioindicators of air pollution. They have unique qualities to accumulate the elements due to their wide distribution, ability to grow on variety of habitats, large surface area, lack of cuticle and stomata, evergreen and ectohydric nature of plants. The accumulated pollutants are easily measured by the analysis of organism that provides the information about the level of pollution deposition. They respond to various toxic substances by visible changes in their vigour, density and reproduction system. Bryophytes obtain nutrients directly from substances dissolved in ambient moisture. They have capacity to absorb and retain pollutants in quantities much higher than those of other plants growing in the same habitats. These plants trap or accumulate such pollutants and prevent the recycling of such pollutants. The analysis of these plants can provide information about the degree of metal pollution. The pollutants may be SO, NO, O , NH , HC, CO, aldehydes, Lead, automobile 2 3 3fumes, heavy metals and radioactive materials. Similarly aquatic bryophyte accumulates heavy metals from contaminated water to a much greater extent than vascular plants as the metal uptake or absorption is over their entire surface. Presence of crystals of HgS in the cell wall of Jungermannia sp. and Scapania sp. shows the uptake of Mercury. Several bryophytes like Frullania dilatata, Porella platyphylla, Radula complanata, Sphagnum sp., Bryum sp., Thuidium sp. etc. have been used in various environmental monitoring studies. Specific locality based repeated seasonal surveys and analysis of bryophyte elements can therefore; provide knowledge about the trace element pollution even within small niches.
Keywords: Bryophytes, Pollution, bioindicator, Heavy metal

Income inequality and Environment: A Theoretical Analysis[3]

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Income inequality between rich and poor people is a serious issue for all the nations across the world. The income inequality refers unequal distribution of wealth/ income among people

or society in a country. The income inequality leads to various types of disparities for example, disparity for accessing education, health care facilities and resources. Higher income inequality in a society result in the form of lower level of health status, lower level of happiness, lower level of education and less financial resources. It is revealed from literature that environmental damages affect the lives of people and the cost of environmental damages affects disproportionately. The poorer people of a country or society are more exposed to natural calamities and disasters like droughts, floods and heat waves etc., while, rich people are least affected by the environmental damages. Rich people have enough resources to protect themselves from these types of disasters by creating better infrastructures and adequate planning. On the other side, due lack of resources and education, the poorest people cannot create basic infrastructure and adequate planning to protect themselves from the bad effect of environmental damages. In this background, the main objective of this paper is to establish the relationship between income inequality and environment and to examine effect of environmental damages on poor and rich people of the society in the context of income inequality. This paper reveals that the poorest people suffer most adversely and rich people affect least from environmental damages.

Keywords: Society, Wealth, Disparity, Income Inequality, Environment.

Renewable Energy Sources In Rajasthan: Future and Challenges

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Globally, energy consumption is increasing drastically due to the economic growth, rapid industrialization and increasing domestic comforts. In recent years, the increasing prices of fossil fuels and concerns about the environmental consequences of greenhouse gas emissions have renewed the interest in the development of alternative energy resources. Hence renewable sources such as solar energy, wind energy, biomass, etc. are being considered to meet the growing demands of energy. As India looks to expand its renewable energy capacity, a new report from IEEFA found that Rajasthan can play a key leadership role in the country's transition to a low-cost, low-emission, profitable electricity system. Rajasthan has a bright future as a renewable energy leader in India. But its power distribution companies (discoms) are among the worst-performing in India. Rajasthan has high solar radiation and wind speeds and an abundance of barren land that make it suitable for utility-scale solar parks. These factors make Rajasthan an attractive destination for domestic and foreign investors looking for opportunities in renewable energy, electricity grid infrastructure, and associated manufacturing. Currently, Rajasthan depends on electricity imported from other states given a power deficit during peak daytime hours. With an increase in renewable energy investment, the state could become a net exporter of electricity in the coming decade. In this paper, future and challenges related to renewable energy sources in Rajasthan is discussed.

Keywords: Energy, Renewable, opportunities, electricity, infrastructure

Preparation of activated carbon from plant waste with chemical activation for the removal of dye from wastewater

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The traditional water and wastewater treatment methods are unable to provide up-to-data organized standards for drinking water and discharging effluents into natural ecosystems.Therefore, developing advanced and low cost methods to achieve published standards for water and wastewater and population needs are these days necessity. In this research paper application of nanoadsorbent derived from dead bark of *Azadirachta indica* (Neem) for the removal of cationic dye, methylene blue, from aqueous solutions has been investigated. The synthesized nanoadsorbent was characterized using FTIR, ultraviolet-visible, BET, FESEM, HRTEM, and zeta potential analysis. The experiments were carried out in batch mode. Effect of the parameters such as contact time, pH, temperature, initial dye concentration and adsorption dose on the removal of the dye was studied.

Keywords- Azadirachta indica, Methylene blue, Adsorption, Zeta potential, Isotherm, Kinetics

WATER RESOURCE MANAGEMENT IN ANCIENT INDIA

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Water is the most important substance on the earth for a dignified life. The ancient Indian civilization has flourished on the banks of Saraswati and Indus rivers and since the emergence of the civilization, people were aware about the importance of the nature and natural resources. The excavations of Indus Valley Civilization show the remains of an extensive water management system in ancient India. Environment protection, water resource management and conservation were often highlighted with great devotion in the ancient Indian texts. Today not only the country but the world is facing many challenges of climate change and water scarcity. Climate change and increasing pollution levels affected the water cycle all over the world. With the growth of the economy and population growth of the country and increasing demand for the natural resources, India is also facing critical water scarcity challenge. In this context, the traditional methods and approaches followed in the ancient times according to the physiographic conditions of a place can play a significant role to overcome these challenges. The present research article focuses on the significance of environment protection and water management in the ancient times and also discusses about the techniques and methods used for water management by the ancient people. The research paper also highlights the significance of these techniques in the present time. Ancient water management techniques can still be useful as the preventive measures and can also be proved effective if combined with modern advanced technologies to rejuvenate the water resources of the country.

Keywords: Ancient India, vedic period, water management, water scarcity, rivers, water harvesting.

Environment Edification: Essence of Business Operations

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In today's scenario, it has become pertinent to have environment friendly business. No business can survive for a longer duration if it is not facilitating environment to emerge or grow better. The community and customers are becoming more environmentally aware and educated. An environmentally friendly business operates in a sustainable manner, causing minimal damage to the environment and using renewable resources where possible. Considers where its supplies come from and how they are made—it will work with environmentally responsible suppliers and source materials locally to reduce its carbon footprint. Seeks to remove or minimise any negative effect it has on the environment. Considers the effect its products and services have on the environment. Limits unnecessary packaging and manages stock production to reduce waste. Your business reputation, ability to sell products and services and attract staff may all be affected by the environmental policies and procedures that you have in place. However, on one hand business is supporting natural environment while on the other hand it is also ensuring several negative impacts on the natural. According to Environmental Sustainability, we're on pace to produce 27 billion tons of solid waste by 2050 due to a business environment that prioritizes rapid production and turnover of products for maximum profits. Unchecked CO2 emissions are projected to contribute to a temperature increase of two degrees Celsius by 2050, which will cause sea levels to rise and catastrophic weather events to increase. A study found that just 100 companies are responsible for 71% of global emissions. Now is the time for businesses to become part of the solution, cut down on emissions and waste, and contribute to cultivating a livable planet. The good news is that businesses can make a major impact and account for 60% of emissions cuts by 2030, as per the Paris Climate Accord.

Sustainable development through ecofriendly biodegradable plastics

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Growing concern towards ecological menace due to plastic pollution, several countries are focusing on various waste management projects together with plastic waste depletion by producing biodegradable plastic materials. By adopting biodegradable plastics, we can decouple the society from the utilization of fossil fuels and reduce the problems caused by plastic wastes. Innovation of biodegradable plastics can be an ecofriendly and sustainable

solution for plastic pollution. As use of renewable feedstocks for the manufacture of these types of plastics can reduce the magnitude of greenhouse gases (such as CO_2 and CH_4) discharged into the environment in comparison of traditional plastics produced from fossil fuels. The intensification of research through commercialization of the biodegradable plastics materials and solicitation of the large-scale manufacture can also solve the problems related to plastic pollution in the atmosphere. Production of biodegradable materials and their establishment in the market is important for the environment. Incorporation of renewable feedstock and biodegradability are major benefits of biodegradable plastics. The execution of sustainable practices will reduce the impact of conventional plastics on the atmosphere and save assets for future generations.

Keywords: Sustainable development, Fossil fuels, Biodegradable plastics, Greenhouse gases, Plastic pollution

ENVIRONMENTAL ETHICS: JUSTICE, SUFFICIENCY AND SOLIDARITY

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The moral relationship of human beings and the healthy environment are depending on the environmental ethics. Ethics or moral philosophy is the branch of Philosophy that involves. systematizing, defending and recommending concepts of right and wrong conduct. Environmental ethics is the discipline in philosophy that studies the moral relationship of human beings to and also the value and moral status of the environment its nonhuman contents.

In each country they have some environmental ethics and principles. In our country we should have profound respect for nature. We must maintain a harmonious relation with other species. The Ethical values for pollution control is that we should recognize our moral duty to protect the welfare not only human beings but also of this system. Human have no rights to reduce the environmental richness and diversity expect to satisfy vital needs. The ideological changes is mainly that of appreciating life quality rather than to increase higher standards of living. It is our duty that we should adopt voluntary measures to conserve the resources.

Key words – Moral relationship, Philosophy, Principle , Quality , Pollution

A Comparative Study on Environmental Accounting Practices in India of Selected Textile Companies: Vardhman Textiles Ltd. and Raymond Ltd.

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The term environment comprises of all living and non-living elements and their effect that tend to influence human lives. The increase in public awareness and the rising, have forced the organisations to produce sustainable products. Corporate enterprises are facing the

challenges to disclose their true profitability index which are environmentally sustainable ones. Hence, it becomes important to maintain proper accounting records disclosing the consequences of a business organization on environment and vice versa. This function is faithfully performed by environmental accounting or green accounting. For this reason, textile companies are focusing on promoting a sustainable business environment which could be linked to use of eco-friendly material, use of renewable resources of energy, reusing/ recycling, lesser usage of chemical, water, and ethical issues in production process. Environmental accounting helps in keeping records of environmental costs in an effective manner and disclosing required information on profits and other items in a suitable form. The research paper in conceptual in nature and focuses on exploring the theme of environmental accounting practices and reporting in textile industry. The primary objective of the study is to analyse and compare the practices incorporated by two famous textile companies; Vardhman Textiles Ltd and Raymond Ltd. The paper is based on secondary research and encompasses the achievements attained and problems faced by the companies after following environmental accounting.
Keywords: environmental accounting, sustainability, textile industry, green accounting, corporate social responsibility

पर्यावरण और नैतिक कर्तव्य

डॉ. संदीपन कुमार आर्य
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पर्यावरण के संबंध में मानव एक ऐसा घटक है जो अपने अनुरूप पर्यावरण में परिवर्तन करने की क्षम ता रखता है|पर्यावरण का शाब्दिक अर्थ है हमारे आसपास जो कुछ भी उपस्थित है जैसे जल थल वायु त था समस्त प्राकृतिक दशाए ,पर्वत ,मैदान व अन्य जीव जंतु आदि जो हमें प्रत्यक्ष या अप्रत्यक्ष रूप से प्रभा वित करते हैं मानव ने प्राकृतिक संसाधनों का अत्यधिक दोहन करने के साथसाथ उसका दुरुपयोग भी किया है। जिसके कारण अनेक पर्यावरणीय विकराल समस्याएं उत्पन्न हुई है इसलिए मनुष्य का संसाध नों की निरंतर उपयोगिता और पर्यावरण संरक्षण के प्रति नैतिक दायित्व के लिए पर्यावरणीय नैतिक मू ल्यों की सख्त आवश्यकता अनुभव होती है । जिससे मानवीय संवेदनाओं के साथसाथ प्रकृति के प्रति नै तिकता का पाठ पढ़ाया जाता है । पर्यावरण मूल्यों की आधारभूत अवधारणाओं के साथ जैव विविधता ए वं पारिस्थितिकी तंत्र के संरक्षण के प्रति आत्मबोध तथा उस पारिस्थितिकी तंत्र को बनाए रखने के लिए व्यक्ति परिवार और समाज अपने आसपास के सामाजिक दृष्टिकोण को मानव अपने मूल्य आधारित नै तिक तत्वों से उसका पालन व संरक्षण कर सके। ऐसा प्रयास किया जाना चाहिए ।पर्यावरण और नैतिक मूल्य या कर्तव्य मनुष्य के साथ-साथ पृथ्वी के वायुमंडल में निवास करने वाले विभिन्न जीव जंतु पेड़-पौधों, पशुपक्षियों , नदियों पहाड़ों आदि सभी मनुष्य और उसके समस्त समष्टि रूप समाज का हिस्सा है । इसलिए मानव को इन सब के प्रति कर्तव्य बोध के साथसाथ अपना अधिकार मानते हुए उनके प्रति मा नवीय दृष्टिकोण रखते हुए उन्हें सम्मान व आदर भाव देना हमारे नैतिक कर्तव्यों में सम्मिलित है । भार तीय चिंतन धारा में प्रकृति को मित्रवत माना गया है और सभी पर्यावरणीय तत्वों के प्रति शांति का भाव उन्हें दायित्व के प्रति मानव को सजग रखता है ।

ओम द्यौ: शान्तिरन्तरिक्षँ शान्ति:,
पृथ्वी शान्तिराप: शान्तिरोषधय: शान्ति:।
वनस्पतय: शान्तिर्विश्वे देवा: शान्तिर्ब्रह्म शान्ति:,
सर्वँ शान्ति:, शान्तिरेव शान्ति:, सा मा शान्तिरेधि॥
ॐ शान्ति: शान्ति: शान्ति:॥यजुर्वेद।।

इसलिए पर्यावरण नैतिकता से संबंधित प्राकृतिक संसाधनों का दुरुपयोग का एवं अत्यधिक दोहन से पर्यावरण असंतुलन की स्थिति उत्पन्न हो रही है क्योंकि मानव प्रकृति का हिस्सा है अतः प्रकृति के साथ सहयोग एवं समन्वय स्थापित करते हुए उनका सदुपयोग करना चाहिए ना कि दुरुपयोग ।

वनों का विनाश तथा अंधाधुंध कटाई की जा रही है। इसके अलावा कृषि के लिए भी वनों का सफाया किया जा रहा हैं । उन सब पर नकारात्मक प्रभाव पड़ रहा है और जैव विविधता में भी कमी आ रही है। पशु पक्षियों के लिए स्थान समाप्त होते जा रहे हैं ।

अतः वनों का संरक्षण करना पर्यावरण के नैतिक दायित्वों से ही संबंधित है । इसी प्रकार विभिन्न मानवीय गतिविधियों के कारण पर्यावरण प्रदूषण को बढ़ावा दिया जा रहा है इसका सबसे अधिक नकारात्मक प्रभाव निर्धन एवं वंचित वर्गों पर पड़ रहा है ।

अतः मानव का नैतिक कर्तव्य है कि वह पर्यावरण को प्रदूषित ना होने दें । पशुओ जीव जंतुओं एवं पौधों का भी प्राकृतिक संसाधनों पर उतना ही अधिकार जितना कि मानवो का है।

नैतिकता के आधार पर मानव को प्राकृतिक संसाधनों का दुरुपयोग रोकना चाहिए पशु कल्याण की नैतिकता से संबंधित है क्योंकि पशु भी प्राकृतिक पर्यावरण में रहते हैं । पशुओं के अधिकारों का भी संरक्षण होना चाहिए । अतः मानव को यह समझना होगा कि इन सब के दोहन का अधिकार उसे नहीं है ।इस प्रकार देखा जाए तो व्यक्ति व समाज प्राकृतिक संसाधनों के सदुपयोग करने का नैतिक दायित्व निभाए तो किसी भी प्रकार की पारिस्थितिकी असंतुलन नहीं हो सकता जैवविविधता में किसी भी प्रकार का असंतुलन उत्पन्न नहीं हो सकेगा इसलिए मनुष्य को अपने कर्तव्यों का बोध होना चाहिए और मानवीय दृष्टिकोण और संवेदनाओं के साथ इन सब प्राकृतिक संसाधनों के प्रति भी मानवीय दृष्टिकोण अपनाया जाना चाहिए ।यही मनुष्य का नैतिक मूल्य एवं नैतिक कर्तव्य समझा जाना चाहिए।

PHOTOGALVANIC CELL : EFFECT OF CONCENTRATION OF PHOTOSENSITIZER AND SURFACTANT ON CONVERSION EFFICIENCY & STORAGE CAPACITY

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Nowadays, in the developing phase of world most of the part of development is dependent on energy. Currently, about more than half of world energy demand is met by two fossil fuels - coal and oil. Solar energy is the most abundant energy resource on earth. With the rapid commercialization of solar as supplements and potential substitutes of fossil fuels, the need for power storage techniques to render renewable energy sources. The photogalvanic cells are dilute solution-based dye sensitized and storage device, based on 'photogalvanic effect', which was discovered by Rideal and William. The photogalvanic system acts as a (cyclic) light-driven electricity generator. The reducing agents and their oxidised products behave as the electron carriers in the cell diffusing through the path. The energy stored in the charge separated semi or leuco forms is converted into the electrical energy by the so-called Photogalvanic effect. The PG cell is a prominent example of photo-electrochemical systems consisting of anodic and cathodic electrodes dipped in a solution mixture of compulsory chemicals such as photo-sensitizer(s), reductant(s) and an alkali. A surfactant may also be added to this solution mixture to enhance the performance of the PG cell by increasing the solubility and stability of the dye sensitizer. The results of electrical parameters (open circuit potential, short circuit current, power at power point, fill factor, conversion efficiency and storage capacity) of the photogalvanic cells.

Keyword: Solar energy, photogalvanic cell & effect, renewable energy, photosensitizer, surfactant, reductant etc.

Environmental Issues of India and Impacts of Climate Change on the Indian Economy

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One of the most pressing environmental issues in India is air pollution. Vehicular emissions, industrial waste, smoke from cooking, the construction sector, crop burning, and power generation are among the biggest sources of air pollution in India. The country's

dependence on coal, oil, and gas due to rampant electrification makes it the world's third-largest polluter.Besides its air, the country's waterways have become extremely polluted.Illegal dumping of raw sewage, silt, and garbage into rivers and lakes severely contaminated India's waters. The near-total absence of pipe planning and an inadequate waste management system are only exacerbating the situation. India is the country expected to pay the highest price for the impacts of the climate crisis. Aside from extreme weather events such as flash floods and widespread wildfires, the country often experiences long heatwaves and droughts that dry up its water sources and compromise crops. Unprecedented heatwave is a direct manifestation of climate change. The heatwave has also contributed to an economic slowdown due to a loss of productivity, as thousands of Indians are unable to work in the extreme heat. The heatwave is causing further water shortages across the nations.Heat waves frequency and intensity are increasing in India because of climate change. Severe landslides and floods are projected to become increasingly common in India.

Key Words- Environmental Issues, Air Pollution, Industrial Waste, Power Generation, Illegal Dumping, Climate Crisis, Heatwaves, Droughts, Economic slow

Some Genes involved in Spermatogenesis

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Male germ cell development (spermatogenesis) is a tightly regulated developmental process that occurs through successive mitotic, meiotic and post-meiotic phases (in spermatogonia, spermatocytes and spermatids, respectively). During spermatogenesis, gene expression is regulated in three ways: intrinsically, interactively and extrinsically. Spermatogenesis is a complex process regulated by a multitude of genes. The identification and characterization of male-germ-cell-specific genes is crucial to understanding the mechanisms through which the cells develop. Various studies have highlighted a role for many of these genes in spermatogenesis

The regulation of spermatogenesis involves the expression of a large number of genes in a precise cell- and stage-specific program. A comprehensive understanding of spermatogenesis requires the identification and functional characterization of the 2300 or so genes that are predominantly expressed in the testes. On the premeiotic and meiotic levels the genes from DAZ family and TSPY1 are highly expressed, however, during the postmeiotic stage the following genes increased their expression: PRM2, TNP1, SYNJ2, and ZPBP, mainly responsible for sperm head formation and the normal sperm function and postmeiotic genes such as ODF1, TNP1, and PRM2, which are essential for the correct formation of sperm cells.

Researchers from China who carried out observations on gene expression of normal and motility-impaired spermatozoa originating from healthy volunteers identified an additional series of postmeiotically expressed genes. These included AKAP4, CLGN, ODF2, and LDHc which were involved in capacitation, sperm motility, and interaction with an egg. The NYD-SP 16 (SPATA9), is involved in capacitation and the acrosomal reaction, and undergoes expression in all stages of spermatogenesis. Expression levels of the PRM2 and JMJD1A

genes that are involved in chromatin reorganization and the AKAP14 gene involved in sperm motility.

Keywords- Gene, Spermatogenesis, Expression, PRM2, Regulation.

Prediction of Environmental Impact Assessment(EIA) in contrast with the Sovereignty and structure of the Nation

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The EIA is a multifaced phenomenon, which ensure that consideration of environment must fall in to the decisions of project which may impact the environment. The identification of environmental effects of any activity can be mitigated by EIA. The official document of EIA itself is technical tool which predict analyse and identify the cultural and health concerns and impact. EIA promote public involvement and transparency while serving the procedural role in the overall decision – making process. Importantly, the project cannot be altered and rejected which any contingencies arises regarding environmental impact. Since, its evolution in USA under the environmental policy act 1969, many new and offshoot techniques have emerged which primarily focus on the biodiversity, environmental health etc. The purpose the establishment to replace the old version of environmental process for providing the better understanding of environmental concerns. EIA can develop the projects benefit and reduce environmental harm. Under the EIA principle, the examination impact on the natural world, on local communities and created the decision-making process for the affected members of the public at large. In international instruments the EIA commitments are contained to address transboundary impacts and impacts to global commons.

Key Words : EIA, Environmental Harm, Transparency, Environmental Policy.

NATIONAL GREEN TRIBUNAL AN ACCESS TO ENVIRONMENTAL JUSTICE IN INDIA: A STEP IN THE RIGHT DIRECTION

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Access to environmental justice is a crucial element in ensuring just and equitable outcomes for sustainable development. In 2010, the government of India established the National Green Tribunal (NGT). The NGT is a "quasi-judicial" body that only handles civil litigations involving the environment. This paper discuses in brief about the evolution of National Green Tribunal. It emphasizes on the brief history of laws that were developed in India for the preservation of the environment and the pursuit of environmental justice. Further this paper highlights the landmark judgements of Supreme Court that interpreted the right to the

environment within the ambit of Article 21 of the Constitution which led to the establishment of National Green Tribunal The article also provides a brief explanation of notable National Green Tribunal interventions that had a significant positive impact on the environment and society at large. Although the NGT statute and its procedures have many limitations, they can still be seen as a step in the right direction towards environmental justice in India. The NGT, which has a broad jurisdiction and is "multi-faceted and multi-skilled," is quickly gaining a reputation as a "fast-track court." The types of matters that have been brought before the NGT include concerns connected to pollution and the enforcement of environmental fines, as well as environmental clearances for developmental projects such as dams, steel factories, hydroelectric projects, thermal power plants, coastal zone rules and encroachments on floodplains. It seeks to achieve the right balance between development and the environment. In deciding the issues before the NGT, the core concepts of inter-generational equality, the public trust doctrine, the precautionary and polluter-pays principle have all been applied.

Keywords: National green tribunal, Environmental justice, Sustainable Development, Article 21, Public Interest Litigation

How does the production techniques affects the environment?

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India is witnessing the growth in all sectors of economy, the contribution of major three sectors; primary, secondary and tertiary sectors has changed drastically over the period of time. The primary sector belongs to agriculture related activities while secondary and tertiary sectors are related to industry and service sectors respectively. The required inputs are different for production in different sectors. How much the process of production harm the environment, it depends upon the inputs used for production. If the labour intensive technique is used for production, the environment less affected, on the other hand the capital-intensive technique involving huge machines is used for production the environment affected badly.

Natural resources are essential inputs for production in various sectors and production process leads to pollution and other pressures on the environment. Poor environmental quality affects overall growth and wellbeing by lowering the quantity and quality of resources. The trend of change in the share of three sectors of an economy indicates, where the resources of economy are deployed. The engagement of resources depicts the level of environmental degradation during the process of production.

The paper attempts to identify the changes in the share of all three sectors of economy in the study period and also examine the role of resources used for production. It estimates the environmental degradation during the production by different sectors of economy. finally, the paper analysis the current production status and effects on environment and also concludes that there is a relationship between production techniques and environmental degradation.

KEY WORDS: Environment, Production, Production Process, Environmental degradation

CLIMATE CHANGE: BETTER LATE THAN NEVER

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The Earth is round but soon no corner of the world will be able to escape the current climate crisis which is progressing way faster than our inadequate steps to mitigate it. The Earth's atmosphere is heating up faster than previously projected, jeopardizing the survival of every being on this globe. The climate is changing way quicker than most species are being able to adapt to it, leading to their untimely extinction. This alarming rise in the average global temperature is a serious cause for concern and needs immediate action. The recent calamities ranging from widespread recurring wildfires leading to the loss of life and extreme rainfall resulting in fatal floods to prolonged and severe droughts in varied geographical regions all over the planet are all the effects of the recent hike in global warming. Only implementing government policies to curb this advancing increase in the global temperature isn't enough anymore and needs to go hand in hand with steps taken on individual levels. Small steps such as by switching from non-renewable sources of energy to renewable ones wherever possible, by opting for the more environmentally feasible approaches rather than economic ones, and by propagating the idea of being more environmentally conscious by keeping our individual carbon footprint to the bare minimum are all ways that can be practiced on an individual level. By practicing methods similar to these in our daily lives will be very essential to achieve the common goal of winning over this race against climate change.

Keywords: Climate change, global warming, mitigate, calamities, individual.

ELECTROCHEMICAL BEHAVIOUR STUDIES ON DETERMINATION OF Pb(II) AND ITS REMOVAL WITH RESIDUAL OIL CAKES FROM INDUSTRIAL WASTE WATER

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Heavy metals are extensively utilized in a variety of industries such as textiles, chemical production, metal plating etc. Pb (II) is a highly toxic and carcinogenic compound when present higher to a prescribed limit. Owing to this it is compulsorily to remove it from industrial wastewater before it can reach to the water bodies and causes serious aliments to the human health. In the present research, the determination of trace Pb (II) by Differential pulse polarography (DPP) and its removal from industrial waste water by using Annona muricata residual oil cakes as biosorbent has been analyzed. The biosorbent capacity of Annona muricata oil cakes left as a residue after extraction of seeds oil were analyzed by using different parameters like pH, concentration, contact time, biosorbent dosage, and temperature. The present study revealed that the residual oil cakes obtained from Annona muricata is effectively removed the toxic lead content from industrial effluents. Further the biosorbent so prepared from Annona muricata residual oil cakes is likely to be a cheap,

economically friendly, and easy availability material for removing Pb (II)from industrial wastes to maintain our health and environment free from toxic heavy metals.

Keywords- Heavy metals, Lead, Annona muricata, and Industrial effluents.

ENVIRONMENTAL ECONOMICS AND HUMAN RIGHTS

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Environmental economics is the study of the cost-effective allocation, use, and protection of the world's natural resources. Economics, broadly speaking, is the study of how humans produce and consume goods and services. Environmental economics focuses on how they use and manage finite resources in a manner that serves the population while meeting concerns about environmental impact. This helps governments weigh the pros and cons of alternative measures and design appropriate environmental policies. The basic theory underpinning environmental economics is that environmental amenities (or environmental goods) have economic value and there are costs to economic growth that are not accounted for in more traditional models. Environmental goods include things like access to clean water, clean air, the survival of wildlife, and the general climate. Although it is hard to put a price tag on environmental goods, there may be a high cost when they are lost. Environmental goods are usually difficult to fully privatize and subject to the tragedy of the commons.

Environmental economics lays ample emphasis on the study of human related rights and duties as the present world is heading towards a lethal and drastic direction in the form of melting ice, rising sea levels, and changing weather patterns attributable to climate change which increasingly is affecting daily life for millions, and perhaps billions, of people. When the environment suffers, people suffer. Climate change increasingly interferes with the realization of fundamental, internationally recognized human rights- including the right to life, to health, to culture, to food, to self-determination, to property, and to development. The poorest and most vulnerable will suffer first, and perhaps most, but ultimately the crisis will reach all of us.

The importance of the environment to the fulfilment of human rights is widely accepted at international law. What is less well-accepted is the proposition that we, as humans, possess rights to the environment beyond what is necessary to support our basic human needs. The suggestion that a human right to a healthy environment may be emerging at international law raises a number of theoretical and practical challenges for human rights law, with such challenges coming from both within and outside the human rights discourse. It is argued that human rights law can make a positive contribution to environmental protection, but the precise nature of the connection between the environment and human rights warrants more critical analysis.

Climate Governance: causes, solutions, implementers, and approaches for climate change

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There has been intense discussion over climate change, which has been termed the biggest environmental threat of the twenty-first century. Climate governance is a process of dialogues, negotiations, and agreements involving a diverse group of national and local governments, international organizations, the private sector, non-governmental organizations, etc. Its goal is to fight climate change as quickly as possible. The three pillars of climate governance are mitigation, adaptation, and methods of implementation. The Paris Agreement, which sets the international community's objective of reducing global warming to far below 2°C in this century, was ratified by countries from all over the world in 2015. My research finding includes that although most nations have developed their strategies/plans to tackle climate change, there is still a lack of political will to put such plans into action. The desire to combat climate change is verbal but not fundamental. India has a long history of practicing sustainable living. India is one of the most proactive countries in the world to address climate change. India's nationally determined contributions include the generation of 450 GW of renewable energy by 2030, using electric vehicles, and achieving net zero carbon emissions by 2070, among other things. In a nutshell, we require a diverse approach to address climate change. Major international powers must take swift actions to safeguard our planet.

(Keywords: Climate Governance, Paris Agreement, Climate Change, Nationally Determined Contributions, Sustainable Living)

Environmental Accounting Practices in India

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Environmental accounting has grown to be a significant area of accounting in recent years in India due to the severity of environmental pollution and the seriousness of the issue among stakeholders. Concern over the necessity of safeguarding and conserving the environment is developing among all societal segments as well as among various corporate social stakeholders. Thus, the idea that each corporate citizen must account for the degree to which it has contributed to environmental degradation as well as the efforts made by the corporate body towards the conservation and welfare of the environment is gaining ground. Accounting for the environment and natural resources is known as "green accounting" in modern parlance. By exploiting it as a resource, more eco-friendly technologies and wiser decisions may increase other environmental costs. Understanding the significance and benefit of environmental accounting in India is the key objective of this paper. Corporate social

responsibility today focuses on a number of key issues, including social and environmental responsibility. Environmental accounting is crucial to a company's CSR efforts. While proving how green accounting promotes environmental sustainability is a challenging task for every business, efforts are made in this direction. Action must be taken by the organisations to include renewable accounts at all corporate levels. In order to prevent violations of environmental regulations and to enforce penalties, the government must take effective action. One of the most crucial aspects of the company's social responsibility is responsibility for the world.

Key words: Environmental accounting, Corporate social responsibility, Green accounting, Environmental sustainability.

THREAT OF AIR POLLUTION WORLDWIDE: PRECAUTIONARY AND EXTENUATION MEASURES

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Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms , or cause damage to the natural environment or built environment, into the atmosphere. The atmosphere is a complex dynamic natural gaseous system that is essential to support life on planet Earth. Stratospheric ozone depletion due to air pollution has long been recognized as a threat to human health as well as to the Earth's ecosystems. These are greater cause for concern because they are inadequately monitored. Air pollution from growing vehicular traffic, cutting down of trees to build express highways and flyovers and the hazards from industrial effluent have sharply increased the incidence of a range of diseases , from asthma to cancer to mental retardation, caused by increasing levels of lead (Pb) in the blood stream. Air pollution has become a devastating child killer throughout Asia. Children living in cities are unintended victims of the rapid industrialization and urbanization of most of Asian countries, poisoned by breathing air polluted by motor vehicle exhausts and industrial smokestacks. But kids in rural areas don’t escape harm either. Children die every year from breathing smoke from fires that turn their own homes into death traps. Because diseases tied to environmental factors can have more than one cause, it’s impossible to state flatly how many children are victims of air pollution. The large proportion of time that most people spend inside air-conditioned spaces increases the likelihood that poor indoor quality may cause adverse reactions such as allergies, eye irritation, headaches, feeling of confusion, and drowsiness as well as more serious long term effects. Carbon dioxide levels can be used as an indicator to evaluate whether adequate ventilation is taking place in the building. A high concentration of CO_2 may indicate that other contaminants in the building may be concentrating. Problems associated with high CO_2 are drowsiness, fatigue, and sick building syndrome. Environmental tobacco smoke (ETS) is the major sources of indoor air contamination. Inhalation of ETS is commonly termed as "second hand smoking" or "passive smoking". The ubiquitous nature of

ETS in indoor environment indicates that some unintentional inhalation of ETS by non-smokers is inevitable. ETS is a dynamic and complex mixture of more than 4000 chemicals found in both vapour and particle phase. Air pollution is usually concentrated in densely populated metropolitan areas, especially in developing countries where environmental regulations are relatively lax or nonexistent. However, even populated areas in developed countries attain unhealthy levels of pollution. This manuscript delineates about various air pollutants, related health hazards and control measures.

Keywords: Carbon Monoxide; Polycyclic organic matter; Environmental Performance Index; COPD: VOCs; SPM; Health hazards; POPs' PAN; PA

CLIMATE GOVERNANCE : AN OVERVIEW

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Climate change is unprecedented with respect to scale, severity and complexity. Like no other environmental problem it unsettles contemporary society and calls into question the ways in which we collectively have come to organize and conduct social and political life in the twenty- first century.The severity or magnitude of the climate problem, they disagree on how to make political sense of this problem and how to devise effective and just solutions by mirroring the heterogeneous and evolving practice of climate governance that mobilizes a wide range of disciplinary and theoretical resources to discuss.In simple terms, the word "governance" denotes the institutions or processes we collectively put in place to solve shared problems or other issues which need to be effectively managed. In terms of the global climate, keeping humanity—and a whole range of existing ecosystems, diverse species, and natural resources—within a "safe operating space" is of course of crucial concern. We have already seen an intensification of devastating forest fires, melting ice caps and extreme weather events in various regions across the globe; signals of our already-changing climate.The governance requirements of our time may require a conceptual shift, to acknowledge an essential global commons and the need for new approaches to earth system governance, based on ever-expanding planetary science (e.g., see the work of the Earth Commission and Global Commons Alliance). Climate governance – that is, effective management of the global climate system – is thus of vital importance. However, building effective collective mechanisms to govern our impacts on the climate system at the planetary level presents particular challenges. One is the complexity of the relevant science and the progressive refinement of scientific knowledge about our global climate and planetary systems, and the challenge of communicating this knowledge to the general public and to policy makers. There is also the urgency of addressing this issue; the Intergovernmental Panel on Climate Change (IPCC) has underlined that the international community has a narrow window of opportunity to act to keep global temperature rise at safe levels. Also, multilateral treaty-making processes – the current form of global environmental governance – are slow

and cumbersome, with uneven implementation of agreed goals and lack of enforcement, allowing shared objectives to be undermined. For example, despite the great success of concluding the 2015 Paris Agreement, it has been noted that there is a 97% chance of exceeding a 2°C temperature rise target based on countries' climate policy pathways thus far.The 2009 United Nations climate conference in Copenhagen is often represented as a watershed in global climate politics, when the diplomatic efforts to negotiate a successor agreement to the Kyoto Protocol failed and was replaced by a fragmented and decentralized climate governance order. In the post-Copenhagen landscape the top-down universal approach to climate governance has gradually given way to a more complex, hybrid and dispersed political landscape involving multiple actors, arenas and sites. While the Covid-19 global pandemic reduced fossil fuel emissions temporarily, climate-induced fires have at the same time increased carbon emissions from natural sinks, and atmospheric concentrations continue to rise. Our shared question now is really, how can we all learn from the best available scientific knowledge and technical solutions – providing all the tools we need to solve the collective climate challenge (see e.g., the Exponential Climate Action Roadmap) – as a basis for more effective or enhanced global governance of the climate? Can we build upon and endow our current global governance architecture with sufficient capacity to ensure that we can meet the climate emergency, which has been called "the fight of our lives"?

Keywords: climate policy, pollution , governance paradigm, global climate governance system,exposure.

पर्यावरण प्रदूषण, मानव स्वास्थ्य एवं कचरा प्रबंधन

शिम्भू दयाल मीना
राजस्थान विष्वविधालय जयपुर

सार:-
वर्तमान में विश्व स्तर पर पर्यावरण प्रदूषण एक प्रमुख समस्या है जो मिट्टी और पानी को दूषित करते हुये जैव विविधता, पारिस्थितिकी तंत्र और मानव स्वास्थ्य को प्रभावित करती है। मानव की विकास संबंधी गतिविधियां जेसे भवन निर्माण ,यातायात, खाद्य पदार्थो आदि से इतना कूडा, कर्कट (अपशिष्ट) एकत्र होता है। जिससे वायु, जल, मृदा, नदियां समुद्र आदि सब प्रदूषित होते जा रहे है जिसके फलस्वरूप मानव स्वास्थ्य पर विपरीत प्रभाव पड रहा है। जिनसे अनेक बीमारियां पैदा हो रही है जो इसी प्रदूषित वातावरण का ही प्रभाव है। खराब वस्तुओं /कचरा को मानव द्वारा फैंक दिया जाता हे। जिसके लिए कचरा प्रबंधन किया जाना आवश्यक है। कचरा प्रबंधन करने के कुछ सिद्धांत है जिनका सही तरीके से पालन करके कचरा को अच्छी तरह से नियंत्रित किया जा सकता है। कचरा प्रबंधन करने के लिए कई तरह की क्रियाएं चरणबद्ध करनी पडती है। कचरा प्रबंधन करने से हम कुछ सीमा तक पर्यावरण को प्रदूषित होने से रोक सकते है।
मुख्य शब्दः- पर्यावरण प्रदूषण, मानव स्वास्थ्य, अपशिष्ट पदार्थ, कचरा प्रबंधन, पारिस्थितिकी एवं जैव विविधता ।

Soil Carbon Sequestration in Forest Ecosystem

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Soil is a major carbon reservoir in comparison to vegetation and atmosphere. It has a great potential to store organic carbon which represents a key function of soils that is not only crucial for climate regulation but also somewhere affects soil functions. Climate change is likely to accelerate the degradation of soil organic carbon which may result in increasing carbon release from soil, therefore provide positive feedback to climate change. The present study aims to review and integrate soil carbon stocks and dynamics in forest soils worldwide. The SOC is significantly correlated with precipitation, soil moisture and tree density. It has been reviewed that forests are the carbon pools as they store a huge quantity of organic carbon hence, the forest soil carbon is a key component of the global carbon cycle and also plays an important role for sustaining forest productivity. But this is highly influenced by forestry and land use patterns. SOC storage is significantly increases with latitude. Few studies also showed that carbon storage is directly related to plant diversity. The areas with the higher species richness and diversity attains higher carbon content especially in top 50 centimetre of soil. The cropping systems where diverse practices are combined results in higher SOC than individual practices. But in comparison forest accumulates more amount of total carbon then plantation and agricultural land. Thus, results indicate that a large proportion of carbon loss is due to conversion of forest into agricultural lands. In a study it is indicated that if pre-existing soil carbon is protected and rebuilding depleted stocks can contribute to total 25% of potential for natural climate solutions.

Keywords- Soil Organic Carbon, Carbon Sequestration, Climate change, Forest carbon storage, Carbon dynamics

Therapeutic uses of green synthesized nanoparticles for cancer

SHWETA RATANPAL

Nanotechnology has emerged as a considerable tool for the development of nanomedicine to treat different type of life-threatening cancers with higher efficacy. The conventional treatments of cancer have many disadvantages and side effects. As an alternative to these conventional methods nanomaterials can be used. Nanoparticles have demonstrated great potential in diagnosis and therapy of cancer as these nanoparticles are eco-friendly, less toxic, biocompatible, cost-effective and useful in targeted drug delivery, detection of cancer biomarkers and bioimaging, even in early stages tumor can be visualized. However, to avoid the drawbacks related to their chemical and physical

methods of synthesis, researchers have initiated the utilization of green or bio-synthesized nanoparticles.

Environmental Problems And Justice

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The global climate change is serious problem in present time and this change entail consequences for global and social system .Environmental problems do not directly impact on human beings life. Every person has faced polluted environmental conditions from many years. We know that the environment provides goods and services for persons but no body respect and realise the real value of healthy environment. Healthy environment is very important for both present and future generations. The Indian law went to the recognizing the Right to a healthy and clean environment as a Fundamental Rights . The Judiciary was followed this fundamental rights in several cases.

M.C.Mehta V/S Union Of India,1987 SCR(1),AIR,1987

In this case the belief in the very existence of humanity in this dangerous world in this time. All the M.C.Mehta cases are related to the environment issues.

The Indian Courts marked a major change in its approach. Our Judiciary has played an important role in supporting sustainable development and Healthy environment. The Indian Judiciary has done good interpretation of laws. Supreme court has laid down the Polluter Pays Principle as being part of the environmental lawand declared is an important part of the environmental law.

Key words - Global, Climate, Fundamental Rights, Healthy environment, Judiciary

A STUDY ON INDIRECT IMPACT OF COVID-19 ON OUR ENVIRONMENT: WITH REGARDS TO INDIAN CONTEXT

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As a result of the rapid global spread of the COVID-19 virus, tourism, transportation traffic, and industrial output have all declined significantly. During this period of crisis, there has been less interaction between people and nature, which has greatly benefited ecology and nature. Following the first COVID-19 outbreak, reports from all over the world indicate that the environment, including air and river water quality, is improving and that wildlife populations are thriving. Due to its large population, heavy traffic, and numerous polluting industries, India has a reputation for having high levels of pollution. As a result, all of the

nation's major cities now have high air quality index (AQI) values. However, following the declaration of the lockdown because of COVID-19, the air quality began to improve along with all other environmental parameters, including the water quality in rivers. This article provides an evidence-based analysis of the environmental and air quality changes that occurred before and after the pandemic-related lockdown. An effort has been made to visualize the improvement in air quality using satellite images of the Indian atmosphere, the results of on-site real-time monitoring at specific locations (such as Ghaziabad, the most polluted city in India), and the air quality index (AQI) calculated by the central pollution control board of India.

Keywords: ***Covid 19, Pandemic situation, Lockdown, Air quality index, Central pollution control board.***

Greener Approach To Synthesize The Schiff Bases From Aminoanthracene Derivative: Characterization And Biological Significance

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Schiff bases, the condensing products of carbonyl and amine have great significance in the arena of medicine, pharmaceuticals, industries, and agriculture. Schiff bases contain a specific linkage, C=N(azomethine), which can participate in binding with the microbes to stop the growth or kill them. A Schiff base was synthesized by 2-aminoanthracene and 1,3-cyclopentanedione and another Schiff base was prepared from 2- aminoanthracene and 2,6-diacetylpyridine by microwave-assisted techniques to reduce the hazardous and toxicity of compound and expenditure of time and money so that compounds and the process of synthesis become environmentally friendly. Aminoanthracene has attracted the attention of chemists and researchers due to its wide spectrum of significant pharmacological activities like anti-cancer, anti-inflammatory, antioxidant, antimicrobial, antiviral, etc. All synthesized Schiff bases were characterized to identify the compound and their significance, by elemental contribution analysis, magnetic behaviour of compounds, their conductance, and spectral behaviour (UV-Vis, FTIR, NMR, Mass, etc.). To understand the significance of these compounds, their biological activity was also addressed.
Keywords: Azomethine, 2-aminoanthracene, 1,3-cyclopentanedione, 2,6-diacetylpyridine, Antimicrobial, Microwave-assisted

Role of Common Service Centers (CSCs) in Enhancing Social Sustainability in India

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Sustainable development call for concerted efforts towards building an inclusive, sustainable and resilient future for people and the planet. Social sustainability can foster gender equality, and the development of people, communities and cultures to help achieve a reasonable and fairly-distributed quality of life, healthcare and education across the globe. CSCs are enhancing social sustainability by delivery of essential public utility services, social welfare schemes, healthcare, financial, education and agriculture services to citizens in rural and remote areas of the country. CSCs is a pan-India network catering to the regional, geographic, linguistic and cultural diversity of the country. CSCs are playing a significant role in achieving sustainable development goals related to good health and well-being, quality education and gender equality. In the presented paper, various efforts made in relation to the fulfilment of the sustainable development goals of the CSCs will be studied. **Keywords –** Social sustainability, CSC(Common Service Centres), SDG (Sustainable Development Goals), Delivery, Pan-India.

Nitrogen doped Green Biosynthesized Nanocomposite for the Removal of Pesticides

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The low-cost and highly efficient pesticides are largely used in residential, agricultural, and commercial applications.Their prevalent occurrence, bioaccumulation, and chronic toxicity to living beings have raised environmental concern. Therefore, advance and fast processes based on low-cost and highly proficient nanomaterials are required for their elimination. Herein, Nitrogen doped nanocomposite was prepared using green synthesis method via *Azadirachta indica leaves. N doping effect, the band gap energy of nanomaterials by increasing their electronic and electrical parameters due to the enhancement of active sites* . Synthesized nanocomposite was characterized through spectroscopic and microscopic techniques. The purity and crystallinity of the deformed spherical nanoparticle (10– 80 nm) were ensured by the sharp peaks acquired by PXRD and FE-SEM analysis. Subsequently, N-doped nanocomposite was investigated for the elimination of pesticides at discrete reaction

parameters. The presence of holes, O_2, and OH radicals were responsible for the breakdown of the complex structure of ethion, confirmed by scavenger analysis. Safer metabolites formed after degradation confirmed by GC-MS analysis. Conclusively, by virtues greater efficiency of reusability (n = 8), stability, and greater charge separation, hybrid N doped nanocomposite may prove as an alternative catalyst for industrial application with intense scope.

Keywords: Photocatalysis, Pesticides, nanomaterials, Ethion, Degradation

Impact of organometallic complexes on human health

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Innovation in chemistry have a direct impact on human health through their pharmacological application. Organometallic complexes play an important role in novel active medicinal agents. Organometallic compounds are defined as having one or more covalent metal-carbon bonds and a wide variety of structural diversity.These complexes have been widely used for the treatment of various diseases. The unique and exceptional properties of organometallic compounds, intermediate between classical inorganic and organic materials provide new insight in the progress of inorganic medicinal chemistry. The use of organometallic fragments in the combination of organic moiety show increased potency. Because of their outstanding physicochemical properties, which include chemical stability, structural diversity and unique photo- and electrochemical properties, organometallic compounds have the ability to play a leading role in the field of chemical biology. In addition, they are characterized by kinetically stable, usually uncharged, and relatively lipophilic composition and therefore offer great opportunities for the design of new therapeutics.

Keywords: Organometallic complexes, pharmacological applications, medicinal agents.

Green Management "- A Practice to sustain customers and its impact on implementation of Business Function in India"

Dr Sumita Sharda, Dr.Priti Baheti

Green management and going green is not about the repackaging or the reinventing new approaches to diverse business, nor business management or new business management style. In the world of business management, companies are turning green at an increasing rate due to varied reasons which is not directly based on profitability, long tenure or sustainability. The urgent need arises from factors such as environment, sustainability, branding, and stewardship, which leads to drastic changes in how companies function. Nowadays, organizations of unique shapes and sizes are in a constant process to turn green which includes their processes, products, facilities, and direct sustainable business practices. To get an edge towards competitive advantage. Going green is largely not a legal requirement, but a voluntary process. The Paper focuses on different green management strategies striving

towards sustaining customers for a longer duration. It also throws a light on its implementation of major business functions in India.

Key words
Green Management, Sustainable Development, Competitive advantage, Business Function, Marketing Strategies.

Impact of Climate Change on Environment, it's Reasons, and Forthcoming Results

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The word **"**Climate" explains the statistics of various meteorological elemental parameters, such as temperature, atmospheric pressure, moisture, wind, rainfall pattern, atmospheric particle count etc in a given area over a long period of time. Long term shifting of weather is termed as climate change that causes disturbance in natural environmental equilibrium. Both natural and human caused activities like changes in volcanic activity, Earth's orbit around the sun, emission of green house gases, deforestation, use of plenty of fertilizers in agricultural field causing soil pollution, burning of fossil fuel, conversion of land for forestry and agriculture, hazardous chemicals disposals, livestock farming and many more can cause the change in climate. It adversely affects ecosystem and biodiversity. This causes global warming, rising in sea level, economic losses, poverty etc and creates difficulties for survival of all kind species including human beings too. This article endows climate change types, both natural and anthropogenic factors responsible for it, it's impact on environment, future aspects and some solutions to control it.
Keywords: Climate, natural and anthropogenic activities, global warming, economic loss

सतत विकास लक्ष्यों की ओर भारत के कदम

लोकेश कुमार मीणा, उमा कुमारी डेचरवाल

सेठ आर एल सहरिया राजकीय पीजी महाविद्यालय कालाडेरा जयपुर

राजकीय कन्या महाविद्यालय करौली

सतत् विकास में अपेक्षा रहती है कि प्रत्येक राष्ट्र अपने लक्ष्यों की प्राथमिकता का निर्धारण करें और स्थानीय चुनौतियों, क्षमताओं व उपलब्ध संसाधनों के अनुसार सावधानीपूर्वक विभिन्न योजनाओं/ कार्यक्रमों को कार्यान्वित करें। अपने लक्ष्य को प्राप्त करने की दिशा में भारत ने अपने एसडीजी लक्ष्यों की प्राप्ति के लिए ''समग्र-दृष्टिकोण'' का अनुपालन किया है जिसके लिए विभिन्न योजनाओं को प्रारंभ किया जा चुका है। भारत सरकार के मुख्य कार्यक्रमों जैसे कि स्वच्छ भारत मिशन, बेटी बचाओ-बेटी

पढ़ाओ, प्रधानमंत्री आवास योजना, प्रधानमंत्री जनधन योजना, दीनयाल उपाध्याय ग्राम ज्योति योजना और प्रधानमंत्री उज्ज्वला योजना ने सतत् विकास को प्राप्त करने की दिशा में भारत की प्रगति में प्रमुख रूप से योगदान दिया है। नीति आयोग ने प्रत्येक राज्य/संघ राज्य क्षेत्र के लिए समेकित सूचकांक (कंपोजिट इंडेक्स) का भी विकास किया है जिसमें प्रत्येक संधारणीय विकास के लक्ष्य की ओर होने वाली प्रगति को संकलित करके दिखाया गया है। भारत सतत् विकास लक्ष्य (एसडीजी) प्राप्त करने की ओर तेजी से प्रगति कर रहा है। भारत के राष्ट्रीय विकास परिषद (एनडीसी) ने अपने जलवायु संबंधी उद्देश्यों को प्राप्त करने के लिए स्पष्ट लक्ष्य निर्धारित किए हैं।

KEY WORDS - नीति आयोग, समेकित सूचकांक, राष्ट्रीय विकास परिषद,जलवायु परिवर्तन वायु प्रदूषक

ENVIRONMENT AFFECTS AND DEVELOPMENT

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Our environment refers to the surroundings in which we live. They affect our life and development. The environment includes the air we breathe and the water we drink. These are gifts given to us by God. The mountains with the tall trees, the rivers with their fish and the forest with their animals - all form part of the environment of the world of nature. The good God has created all these for our benefit. They are to be used for the well-being of humans as well as the other creatures. The environment can be destroyed in many ways. When we cut down trees, we destroy the environments. When we pollute our surroundings. We destroy the environment. When we waste water or electricity, we are misusing the benefits of our environment. When we pollute the atmosphere by unnecessary noise or needless fires we destroy the environment. When we destroy the environment we do not realise the harm we do. It not only affects us but all other creatures as well as future generations.

We should protect and safeguard the environment. We must fight against cutting down of trees or deforestation. This takes away the homes of animals. This also creates changes in climatic conditions. Such changes create problems for all of us. Protecting the environment is the duty of us all. It is a service we do for our fellow creatures and their successors.Let us start by keeping our surroundings neat and clean. Let us avoid the use of plastics. Let us protect trees. Let us also plant more trees. We must avoid wasting paper, water and electricity.

Keywords:- Environment, Live, Life, Development, Trees**.**

Desertification and its impact on environment

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Desertification is the greatest environmental challenge in present time. Approximately 70 % percent of the world's dry-lands or almost 3,600 million hectares are degraded at present. This is principally a man-made phenomenon which is aggravated by climate change. Desertification can define as land degradation in arid, semi-arid and dry sub humid areas due to combined impact of mismanagement of land, unmanageable use of fresh water and climate change. These factors degrade the soil immensely, particularly in water deficient areas. Desertification reduces the productivity of land due to depletion of fertile topsoil and vegetation cover which is done due to increase in weather extremes such as droughts and heavy rains. Land degradation can also trigger a spiteful cycle of environmental degradation, impoverishment and migration. Land degradation reduces the surface moisture due to which less water is available for the sun's energy to evaporate and the significant amount of energy is left over which is responsible for warming the earth surface. Desertification is responsible for environmental degradation that reduces the land's pliability to climate changes; compromised potential for food production; an increase in the frequency of famine; indirect pressures on outside areas occur immediately after affected areas and socio-economic instability. Over one million species are threatened by extinction due to land alteration. These negative transformational changes are creating circumstances of biological evolution swiftly.
Key words: Land degradation, climate change, arid, extinction

A Study on Software Procedures to Enhance IoT and Android Software Security for Smart Homes

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The Internet of Things is the idea of associating any gadget (with an on/off change) to the Internet and other associated gadgets. A protected house system incorporates a doorway lock structure, which has become perhaps the most favored customer gadgets, supplanting numerous conventional locks because of customer comfort and minimal expense. IoT security includes both actual gadget and organization security, and affects the cycles, headways, and techniques needed to guarantee IoT gadgets and organizations are secure. We recommended that the application gain from customer conduct and change security appropriately. The data about the customer who opened the lock will be saved in the server, along with the date and time, which might be utilized to foresee when the client will enter the property and change security in like manner. We involved the House Module just as the Control Module. Home computerization, as one of the main parts of the thriving housing

market, requires the making of a fundamental yet successful framework that, through preparing, predicts and executes the customer's activities.

Democratic Government and Environmental Policy

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The present paper is a modest attempt to discuss the role of democracy and democratic institutions in advancing environmental policy including climate policy. In this paper also focused to study the important role of policymakers in democratic governments and their efforts to implement environmental policy. From a theoretical perspective, democratic procedures can effect meaningful reform if public support for these reforms exists, especially when compared with autocratic regimes, as the set of incentives for policymakers to legislate toward these ends in a system deriving legitimacy from the consent of the governed is substantive; for instance, given political responsiveness as a result of electoral accountability, policymakers in democratic governments have reason to consider a wide view of the public interest that incorporates the varied positions of their constituents and work to efficiently create change.
Key words – Democracy, Environmental Policy, Climate change, Policymakers, Accountability

Importance of green economy in sustainable development

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Abstract: Green growth, the promotion of energy efficiency and clean energy technologies and sustainable development are frequently viewed as complementary goals by international policymakers. This paper argues that green growth will not ensure sustainable economic development as long as global ecosystem degradation and loss means that the world continues to face worsening problems of ecological scarcity — the loss of myriad benefits, or “services”, as these systems are exploited for human use and activity. Overcoming this problem requires addressing further sustainability and funding challenges. The sustainability challenge is to overcome a vast array of market, policy and institutional failures that prevents recognition of the economic significance of this scarcity. The funding challenge is to bridge the shortfall between the global benefits that humankind receives from ecosystems and what we are willing to pay to maintain and conserve them. Improving economic and scientific analysis of ecological scarcity, valuing the loss in benefits, and translating the implications into policy are the key steps for addressing the sustainability challenge. Exploring and implementing a range of innovative financing mechanisms, from international payments for

ecosystem services to financial and currency transactions taxes to international financing facilities are possibilities for alleviating the funding challenge.

भारत में आपदा जोखिम प्रबंधन : सतत विकास लक्ष्यों के परिप्रेक्ष्य में एक अध्ययन

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आपदा एक अचानक व अनिश्चित घटने वाली घटना है जो मानवजनित या प्राकृतिक हो सकती है। इसके कारण देश या समाज की क्षति होती है। आपदाओं से उत्पन्न ख़तरों के कारण देश की अर्थव्यवस्था पर नकारात्मक प्रभाव पड़ता है। इसलिए इन आपदाओं को रोकने के लिए कुशल प्रबंधन की आवश्यकता है। आपदा प्रबंधन के द्वारा योजनाओं का निर्माण होता है। यह आपदाओं के ख़तरों को खत्म नहीं करता बल्कि कम करता है। विगत वर्षों में आपदा प्रबंधन के तौर-तरीकों में काफी बदलाव हुए हैं। यह घटनाओं के प्रबंधन से आगे बढ़कर जोखिम के प्रबंधन में बदल चुका है । जोखिम प्रबंधन का अर्थ है- अंतर्निहित खतरों और कमजोरियों चाहे वे प्राकृतिक हों अथवा मानवजनित, का वैज्ञानिक दृष्टि से मूल्यांकन किया जाए और उन्हें शुरुआत में ही विकसित होने से रोका जाए। इसका यह मतलब भी है कि मौजूदा जोखिमों को विभिन्न संरचनात्मक और गैर संरचनात्मक उपायों की मदद से कम किया जाए।

भारत आपदा जोखिम न्यूनीकरण के लिए सेंदई फ्रेमवर्क का एक हस्ताक्षरकर्ता है, जिसे मार्च 2015 में आपदा जोखिम न्यूनीकरण पर तीसरे संयुक्त राष्ट्र विश्व सम्मेलन के दौरान अपनाया गया था ताकि सभी हितधारकों को आपदा के लिए लचीला बनाने और जीवन और संपत्ति के नुकसान को कम करने की दिशा में काम किया जा सके । सत्रह सतत विकास लक्ष्यों (एसडीजी) में से दस में आपदा जोखिम से संबंधित लक्ष्य हैं, जो सतत विकास के लिए 2030 एजेंडा को साकार करने में आपदा जोखिम में कमी की भूमिका को मजबूती से स्थापित करते हैं। सतत विकास लक्ष्यों और पेरिस जलवायु समझौते के साथ सेंदई फ्रेमवर्क का कार्यान्वयन भारत में आपदा जोखिम प्रबंधन के अब तक उपेक्षित, लेकिन चुनौतीपूर्ण कार्य को संभव बनाने का अवसर प्रदान करता है। भारत व्यवस्थित और सतत प्रयासों के माध्यम से लक्ष्यों को प्राप्त करने के लिए प्रतिबद्ध है।

प्रस्तुत शोध पत्र में भारत सरकार द्वारा आपदा जोखिम न्यूनीकरण के लिए किये गए प्रयासों और विद्यमान चुनौतियों की विवेचना की गई है |

मुख्य शब्द : सेंदई फ्रेमवर्क, सतत विकास लक्ष्य, कोप 21, डीआरआर, एनडीएमपी |

ADVERSE EFFECTS OF NOISE POLLUTION ON HUMAN HEALTH

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Noise pollution is repeated exposure to loud noise levels that may be harmful to living things. The World Health Organization states that living creatures are not harmed by sound levels lower than 70 dB but consistent and Long-term exposure to noise levels above 85 dB may be dangerous for living beings. Humans are extremely likely exposed to 85 dB of loud noise pollution if they spend eight hours each and every day working close to a busy road, highway or industry. People's physical health may be negatively impacted by noise pollution either directly or indirectly as a result of prolonged exposure to noise levels exceeding 85 dB. Hearing loss can be directly caused by loud noises. Unusual loudness perception, tinnitus, impaired hearing, reduced cognitive function, trouble in communication and cardiovascular issues are a few symptoms of noise-induced hearing loss. According to certain research, expecting mothers who are exposed to noise pollution during their pregnancy tend to have new-borns who are lesser in weight and stress levels that the expectant mother feels during her pregnancy also disturb the unborn infant. Mental health is also severely affected by noise pollution. Anxiety or stress can be brought on by persistent or loud noise. A person becomes much more sensitive to stress as they are exposed to noise pollution on a continuous basis. People experience irritation, tenseness, frustration or anger due to noise pollution.
Keywords- Noise Pollution, dB, Tinnitus, Cardiovascular, Anxiety.

Environment Issues: Waste and its impact on Environment, An overview

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Today, the conservation, protection, and improvement of human environment (degraded by human itself) are major issues all over the world. Land, water, air, plants, animals and other forms of life (microorganisms) are to be conserved / managed. The biosphere and ecosystem are self-sustaining. Nature maintains a balance in land, water, air and the living organisms in the world. Any kind of imbalance in the biosphere is called environment pollution.

The Green house effect is a natural phenomenon responsible for trapping the heat in earth’s atmosphere. Had it not been for the greenhouse effect, the average temperature of the earth’s surface would have been -18*c rather then 15*c.

The water prevention and control of pollution act (1974) was passed. Industrial effluents and domestic sewage are polluting our rivers. Not all the wastewater is being treated by sewage

treatment. Where sewage is discharged, there is a sharp decline in the oxygen content due to its usage by microorganisms for biodegradation of organic matter.
There are many environmental issues that are currently affecting the world. One of the most pressing issues is plastics. Plastics are not biodegradable and have to be recycled in order to be reused. Plastic pollution in the ocean is also a major concern, with an estimated 100 million tons of plastic being present in our oceans. The united nations reported that by 2050, there will be more plastic in the ocean than fish (by weight).

डॉ सुमन ढाका
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पर्यावरण की समस्या और समाधान

वर्तमान समय में औद्योगीकरण के कारण प्रदूषण की समस्या उत्पन्न हो गयी है। आज हमारे सामने सबसे बडी चुनौती पर्यावरण को बचाने की है क्योंकि पानी, हवा, जंगल, मिट्टी आदि सब कुछ प्रदूषित हो चुका है। संतुलित वातावरण में ही जीवन का विकास सम्भव है। प्रकृति के द्वारा प्रदान किया गया पर्यावरण जीव धारियों के अनुकूल होता है जब वातावरण में कुछ हानिकारक घटक आ जाते है तो वे वातावरण का संतुलन बिगाड़कर उसको दूषित कर देते हैं। यह गन्दा वातावरण जीव धारियों के लिये अनेक प्रकार से हानिकारक होता है। जनसंख्या की असाधारण वृद्धि और औद्योगित प्रगति ने प्रदूषण की समस्या को जन्म दिया है और आज इसने इतना विकराल रूप धारण कर लिया है कि उससे मानवता के विनाश का संकट उत्पन्न हो गया है। वातावरण को प्रदूषित होने से बचाने के लिये वृक्षारोपण सर्वश्रेष्ठ साधन है। हमें जन–सामान्य को वृक्षारोपण के लिये प्रोत्साहित करना चाहिये।

मिथिलांचलीय चित्रण का पर्यावरणीय पक्ष

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मनुष्य की उत्पत्ति के साथ ही मानव का पर्यावरण के साथ अन्तर्सम्बन्ध रहा है, जो एक दूसरे के पूरक है। सभ्यता के विकास क्रम में मानव ने प्राकृतिक साधनों का सहारा लिया, वहीं प्रकृति को अपने जीवन में भी अपनाया है। मानव ने प्रकृति के अपने विवेक कौशल के अनुसार कला में ढ़ाला है। पर्यावरण का अंकन विश्व की समस्त सभ्यताओं, जन जातिएं कलाओं, आदिम कलाओं में चित्राकंन किया गया है। अन्तर केवल इतना है कि भिन्न–भिन्न सभ्यताओं व कलाओं में प्रकृति चित्रण का उद्देश्य तथा महत्व अलग है। इस प्रकार के चित्रण हमें मिथिलांचल की लोक कलाओं में भी देखने को मिलते हैं। मिथिला की सांस्कृतिक लोक चित्रकला इसी वैदिक रेखाकृति के आधार पर कालान्तर के शक्ति परक तंत्र–शास्त्र का अनुगत सम्मत और संस्कृत संबंधित रूप है। प्राचीन भारतीय संस्कृति और सभ्यता को अब तक अक्षुण रखने में भारतीय कलाओं की विशेषता है, उसमें लोक कला का स्थान सबसे उत्तम है। लोक कला ने पूर्णयतः पर्यावरण को संजोए रखा है। चित्रों के माध्यम से ही भूली सभ्यता व बिसरी संस्कृति भारतीयों के मानस पटल पर विद्यमान है। मिथिला चित्रकला का मुख्य केन्द्र मधुबनी रहा है, इसलिए यह मधुबनी कला शैली कहलाती है। इसमें लोककला से संबंधित पर्यावरण का चित्रण बहुत अधिक गहराई लिए हुए एवं सुन्दर तरीके से किया गया है। इस स्थान के आस–पास के गांवो में सर्वाधिक महिलाएं इस कला को क्रम प्रदत्त होकर अपने पूर्ण आस्था और विश्वास से समस्त कार्य करती है। मधुबनी लोक कलाओं को विषय के आधार पर प्रमुख चार भागों में यथा–कछनी, भरनी, गोदना और तांत्रिक कला के रूप में विभाजित किया गया है। इन सभी विधाओं में पर्यावरणीय पक्ष अत्यन्त प्रिय व सार्थक रहा है। मधुबनी लोक कला में सूर्य, चांद, पेड़–पौधे, फूल, जलीय जीव, बाँस, पशु–पक्षी आदि का अंकन बहुत मार्मिक रूप में दर्शाया गया है। इन सभी वस्तुओं का मिथिला चित्रकला में एक अलग पक्ष रहा है और उसे बहुत ही जीवन्त रूप में प्रस्तुत किया गया है। इन सभी का अपना अलग महत्व है।

मुख्य शब्द – मिथिलांचल, प्राकृतिक, पशु–पक्षी, पेड़–पौधे, सभ्यता, लोककला आदि।

Biodiversity and its conservation in arid region of Rajasthan

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It is certain that the human species has to accept sharing the Earth and its ecosystem not only with other humans but also with other living beings. Conservation of biodiversity is vital for maintaining the Earth's environment and sustaining life on the planet. There are a number of ways in which the richness of biodiversity helps in maintaining the ecological system. Conservation of biodiversity is important for the survival of living beings on Earth. Hence, a lot of emphases is being given on the conservation of biodiversity these days. This paper describes the biodiversity and its conservation in the arid region of Rajasthan, its relationship with the environment and the existing human and livestock populations.

Ethical Principles and Moral Reasoning about the Environment

Dr. Sarita Bang

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The use of different principles on which to draw in moral reasoning about the environmental problems can lead us to the solutions of these through a very scientific approach. Three basic principles –justice and sustainability, sufficiency and compassion, solidarity and participation can take us a long way in the wellbeing of the natural world and our duties to it. Ethical principles are standards or benchmarks against which we can evaluate our actions. They are also signposts to orient us towards the difference between right and wrong,especially in conditions where there are multiple problems and the interests of the whole of humanity. This paper aims to demonstrate the use of ethical principles in the face of any decision involving environmental ethics.

Environmental Effects on Public Health: An Economic Perspective

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In this paper we critically review the economic literature on the effects of environmental changes on public health, in both the developed and the developing world. We first focus on the economic methodologies that are available for the evaluation of the effects (social costs and benefits) of environmental changes (degradation/preservation) on public health. Then, we

explain how the monetary valuations of these effects can feed back in the construction of economic policy for creating agent-specific incentives for more efficient public health management, which is also equitable and environmentally sustainable. Our exposition is accompanied by a synthesis of the available quantitative empirical results.

- Environmental Edification

Rakhi Paliwal.

According to Indian Vedas and shastras human body is made with panch tatvas - Prithvi , Vayu ,
Aakash, Jal , Agni which are Essential elements of nature. Environment is a great blessing and present of God not only for human being but also for all creatures. It is duty of everyone not to become selfish just to grow in life and to get materialistic happiness. Only poverty, terrorism, violence , health issues are not only problems but also the environmental issues are burning now a days. Radiations from mobile phones affecting our body soil water and air pollution is increasing day by day. If we the human beings will not become serious to protect nature and environment the nature will show its nature and the result will be a disaster. Just launching new missile and placing 5G towers , constructing Sky touching buildings and inventing new technologies mere will not make our future happy and secure until we give our best and our whole attention, efforts to save environment. Some efforts should be made by us to check the environment pollution there should be more strict laws and more courts should be established for speedy disposal of environmental pollution cases and more plants should be grown .We should use lead free petrol. We will have to realise that environment and nature is a part of Supreme Power 'God 'and all our endeavours should be made to save this not only for us but also for future generation.

A critical study of Judicial Interpretation of Wildlife Jurisprudence in India

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Earlier, the wild life offences though came to the notice of the authorities, but were not taken to the court and wild life offenders remain scot free. But, the situation has gradually improved. Considerable numbers of offenders are brought to the ambit of Judiciary and proceedings drawn against them. In this context, role of Gauhati High Court and its subordinate courts in deciding the wild life crime cases is also noteworthy. However, the rate of conviction in wild life cases is not up to the mark. Above all the heavy judicial workload, absence of trained lawyers and prosecutors also complicate the problem. As a result, there is

lack of adequate justice in wild life cases in India. Therefore, judicial responsibility must be exercised stringently so that wild life offenders get adequate punishments that can set an example for the rest.

Environmental pollution and waste management

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This paper will discuss the problems of environment pollution and waste. Everything that's around us is the environment which is connected directly or indirectly to environment. Environment pollution is the major problem for human being, it causes a negative and serious impact on living organism and survival of mankind. Environment has given so many things to us, but question arises that what we have given to environment? Only pollution which are present in many kinds like Air, Water, Soil, Noise, Radioactive, Thermal, light and Plastic Pollution. Which causing a negative and serious impact on living organism. Every person who is leaving on the earth faced many problems and worried about consequences because it creates health issues like asthma, allergy, lungs cancer, heart disease and respiratory infection. According to the United Nation climate summit (Egypt) reported in the year 2022 that 4060 million tons of carbon oxide has been produced in the atmosphere and in the same context India's carbon emission higher than even before by 6% which is dangerous for future. To reduce these issues, we should set up NGOs and create awareness among the people about waste management and environment.

CNTs Subordinated Membrane Technology to get Potable Water

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New technologies are required to improve desalination efficiency and increase water treatment capacities. Large amount of specific energy requirement, leading to high operational costs, bio-fouling and less resistance of membrane to chlorine ion presents a big challenge in adopting desalination technologies. These challenges can be addressed by considering the newly emerging nanomaterials especially those made from carbon. CNTs have recently attracted considerable attention for the synthesis of novel membranes with

attractive features for water purification. This paper critically reviews the recent progress on the synthesis and applications of carbon CNT based
membranes in water treatment. Various synthesis techniques for the preparation of CNT based membranes are discussed. Furthermore, the effect of incorporating CNTs in the matrix on the membrane properties has deliberated in detail. The key issues associated with the synthesis of CNT based membranes for actual applications are highlighted. Finally, research directions are given to ensure the fabrication and application of CNT membranes in a more effective manner. This paper presents a comprehensive literature
survey and review that brings those CNMs into focus which directly participate in desalination processes. The structural and functional properties of CNMs, their fabrication into membranes, their hybridization with polymer membranes are some of their usages in desalination processes which are exploited. The survey and analysis of the available literature shows that CNMs can enhance capacity and efficiency of next generation desalination systems particularly RO and membrane distillation.
Keywords: Desalination; Carbon nano-materials; Bio-fouling, CNMs, MWNTs, RO membrane, Graphene
1.

Physiochemical Characteristics of Reverse Osmosis Rejected Water and Management

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Water purification system is now based on purifying polluted water using membrane such as reverse osmosis (RO) process. This technology is widely applied to meet potable water quality standard. In this process ground or surface water is used as feed water and pure water and Reverse Osmosis Concentrate (ROC) are formed as product and by product respectively. ROC is discharged in this reverse osmosis process and it contains dissolved inorganic and organic pollutants. As a result of pressure gradient RO system permits the separation of water molecules and salts through a semi permeable membrane, due to low back pressure system in household reverse osmosis units uses a lot of water as a feed water, so as a result recovery is less and a lot of water goes waste, which has no further use. RO process discharge water is almost 50% of feed water and it is one of the major drawbacks of this process. The concentration of contaminants in RO reject (ROC) is influenced by the nature of feed water as well as the kind of membrane being used in RO system along with applied pressure and recovery rate of the system. RO brine is a significant component of desalination plant because there are management issues related to its proper treatment and disposal of the ROC is an important part of sustainable water treatment practice, dealing with the pollution level and amount of reject waste water in water stressed region is the biggest challenge and this RO waste water may have catastrophic consequences for mega cities, so the amount of RO waste

water requiring must be as minimal as possible. This paper highlights the RO process and reverse osmosis concentrate or rejected water together with their physicochemical parameters, potential risk by using RO concentrate disposal methods and environmental benefits of reusing brine water which can resolve the problem of water scarcity. The study reveals that RO waste water disposal problem can be minimized by reclaiming the RO brine and using it for fish farming, irrigation, producing salt and in brick formation. Hence this article proposes an environmentally friendly approach for sustainable management of RO brine water.

Withania somnifera: A Miraculous Plant for Radioprotection

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Among the numerous ayurvedic plants, *Withania somnifera* (family Solanaceae) commonly known as Ashwagandha, Winter Cherry or Indian Ginsing, has always been stand out in its impeccable properties to promote physical and mental health since thousands of years. *W. somnifera*, one of the medically significant xerophytic plants, is scattered throughout the Mediterranean region, the Canaries, Cape of Good Hope as well as found in the drier sections of Afghanistan, Baluchistan, Afghanistan, India (Mumbai, Punjab, Manasa, Western India and the Himalayas), Sri Lanka, and Sind at high altitudes that reach a height of 5,500 feet. In India, it spreads widely, especially in drier regions, along roadsides, and in waste areas. *W. somnifera* is a 30-150 cm tall, tomentose, upright, evergreen shrub with simple, oval, glabrous, and up to 10 cm long leaves.

W. somnifera has been evaluated for its immunomodulatory, antioxidant, anti-asthmatic, anti-allergic, anti-rheumatic, anti-cancer, anti-tumor, anti-stress/adaptogenic, hepatoprotective, anti-diabetic, anti-inflammatory, anticonvulsant, neuropharmacological, musculotropic, anti-ageing, morphine tolerance, macrophage-activating activity, haematopoietic activity, anti-microbial, and anti-plasmodium activities. Alkaloids (cuscohygrine, anahygrine, tropine, pseudotropine, anaferine, isopelletierine, withananine, withananinine, pseudo-withanine, somnine, somniferine, and somniferinine), neutral amino acids (aspartic acid, glycine, tyrosine, alanine, proline, tryptophan, glutamic acid, and cystine), steroids, volatile oils, starch, reducing sugars, glycosides, hentriacontane, dulcitol, and withaniol are medicinally beneficial components found in the leaves, flowers, fruits, roots and seeds of *W. somnifera.* Researchers proved that *W. somnifera* root extract improved antioxidant levels and semen quality in males while increasing fertility in females. Therefore, it is hypothesized that *W. somnifera* root extract may be promising for study of radioprotection of the male reproductive system against ionising radiation-induced damage because of the presence of such modulating activities.

Radioprotective Potential of *Tylophora indica* Leaf Extract against Radiation-Induced Gastrointestinal Injury

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ABSTRACT

Ayurvedic medicine uses the threatened *Tylophora indica* (family Asclepiadaceae) as a folk remedy for the treatment of bronchial asthma, cough, inflammation, bronchitis, allergies, and dermatitis. Alkaloids (tylophorine, tylophorinine, tylophorinidine, isotylocrebrine), flavonoids, phenols, saponins, and terpenoids are some of the bioactive substances found in the *T. indica* herb. Strong antioxidant, antiasthmatic, anti-inflammatory, antitumor, antibacterial, immunomodulatory, anti-plasmodium, antivenom, antidysenteric, myocardial protective, and diuretic properties were displayed by *T. indica*. For a radioprotection study of the gastrointestine system of Swiss albino male mice against WBI (10Gy), various doses of the hydroalcoholic leaf extract (50, 100, 200, and 400 mg/kg b.wt. doses were administered orally once daily for seven consecutive days prior to 2 hours of whole body gamma irradiation) of *T. Indica* prepared by the cold extract method was evaluated. By using ABTS, DPPH, and hydroxyl free radical scavenging assays, the antioxidant properties of leaf extract including phenolic as well as flavonoid contents were assessed. The estimated total flavonoid content was 0.105 mg/mg extract, which is equivalent to rutin, and the estimated total phenolic content was 0.037 mg/mg extract, which is equivalent to gallic acid.In comparison to the ascorbic acid standard, the antioxidant activity measured as the percentage inhibition of DPPH radicals, ABTS radicals, and hydroxyl radicals was 92.07%, 93.12%, and 82.7%, respectively. By thirty days of survival study, it was observed that the dose of 100 mg/kg b.wt was radioprotective, and it was non-toxic up to 400 mg/kg b.wt. The administration of the chosen extract dose reduced the effects of radiation while enhancing intestinal integrity and villi morphology. This study demonstrates the radioprotective and therapeutic effects of *T. indica* leaf extract on radiation-induced gastrointestinal damage.

Keywords: Antioxidant, Alkaloid, Gastrointestine, Radioprotection, Tylophora.

Extremophile: A Treasure Trove of Extremolytes for Humanity

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The habitat that organisms have developed to adapt to varies greatly in nature. Some archeabacteria and eubacteria in the area are known to exhibit incredibly great tolerance to the harsh climate. Since a very long time, microbial inhabitants have been regularly surveyed. Despite our current understanding of microorganisms and microbial processes, the diversity of extremophile still needs to be examined, researched, and utilised. Microorganisms have established themselves as a diverse assemblage of extremely compatible species. For the study of microbial metabolites, outstanding severe resistance mechanisms of extremophiles are of great interest. But how wisely and profitably humanity uses this natural resource rests on them.

Numerous microorganisms have been monitored for their scientific and productive value, but there is still a wide horizon of these organisms waiting to be explored. Due to the variable climatic activity today, we face challenges. The microbes that are latent in these harsh habitats provide an indication as to whether they would be beneficial or harmful in nature if given the right conditions for reproduction. The biotechnology sector has been able to develop corresponding bioproducts, or extremolytes, such as thermostable enzymes, mannosylglycerate, kahalalide F, curacin A, PHB, PHA etc. On the basis of their metabolite profiling and interactive metabolite networking, they can be studied for their climatic evolutionary importance as well as the potential discovery of new species and their comparative distribution in extreme environments. In addition, Extremophile produce a variety of secondary metabolites that are advantageous for their survival in such harsh conditions. It is therefore anticipated that bacterial metabolites from extremophiles may be used for therapeutic purposes, bioremediation, the reduction of environmental waste, and protection against harmful environmental disasters.

Key words: Extremophile, Extremolytes, Thermophile, Free Radicals

Microwave Radiation's Effects on Biological Systems

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Abstract

The widespread use of microwave generators in industry and commerce for heating and cooking, as well as the development of radar technology and the broadcasting sector, have all contributed to the likely health effects of these electromagnetic radiations. At the molecular level, non-ionizing electromagnetic radiation is absorbed, changing the vibrational energy or temperature of the molecules. Actual things such as cell lines, tissue preparations, and living species can all exhibit the effects of heat. The effects of non-thermal low intensity frequency are unique to a living body, and the waves disrupt the organism's natural endogenous cycles. Biological consequences of microwave radiation on microbes and mammals include genetic, behavioural, and physiological changes in tissues including the brain. Significant biological consequences of microwave radiation on microbes and animals include genetic, behavioural, and physiological changes in organs like the brain, skin, liver, kidneys, and reproductive systems. Information in brief on the athermal effects of microwave radiation on biological systems. The conclusion summaries an overview of the biological effects of microwaves on tissue, including the radiation from mobile and personal communication devices.

Key words: Microwave, Genetic effects, Behavioral effects, Neurological effects, Cellular effects.

Phytochemical Screening of *Calligonum polygonides* Stem Extract

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Calligonum polygonoides commonly known phog, have been used in traditional herbal medicines. Stem of this plant having nodes and internodes which joints stem and branches conspicuously. *Calligonum polygonoides* has emerged as one of the most economically useful plant in western Rajasthan. Roots and thick branches are used as fuel. The aqueous paste of plant acts as an antidote against the heavy dose of opium and poisonous effects of *Calotropis procera*. Qualitative phytochemical screening of the hydro alcoholic extract of *Calligonum polygonoides* were done in the present study. The extract was prepared by soxhlet extraction procedure. The qualitative phytochemical examination reveals the presence of tannin, saponin, flavonoid, steroid, phenols, quinines, alkaloid, and glycosides in hydro alcoholic extract of *Calligonum polygonoides*.

Keywords: Phog, phytochemical, *Calligonum polygonoides*, herbal medicine, flavonoid.

Phytochemical investigation of *Martynia annua* Fruit Extract

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Martynia annua (Baghnakh) belongs to the family Martyniaceae is an important herbaceous annual medicinal herb found as a wild plant throughout India. . The plant is commonly known as the Devil's claw and Kakanasika in Ayurveda. Decoction of the entire plant is used in traditional medicine to treat cold fever and pneumonia. The juice from the leaves is gargled to treat sore throats. The seeds are also appliedlocally for itching and. The fruits are used to treat asthma. Since ancient time, extract of *M. annua* fruit, leaves and stem have been used to cure disease like, Epilepsy, Inflammation, and Tuberculosis, sore throat, burns, itching and Skin Infections. The qualitative phytocemical analysis of *M. annua* fruit extract was done. In the analysis phytochemicals such as phenols, amino acids, alkaloids, flavonoids, saponins, glycosides, tannins and anthocynins were found to be present in the methanolic fruit extract of *Martynia annua*.

Process for an Environmental Audit

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An environmental Audit provides an assessment of the environmental performance of a business or organization. The audit reveals details about the activities of a company and its compliance with environmental regulations. Audit information is presented to the management team and employees. An environmental audit evaluates and quantifies the environmenta performance. It identifies compliance problems or management system implementation issues.

Phytochemical and Secondary Metabolites Investigation of Plectranthus amboinicus (Lour.) Spreng: The Fascinate Medicinal Plant

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Plectranthus amboinicus (Lour.) Spreng (common name- Indian Borage) belongs to Lamiaceae family and is diversified well known medicinal plant in India and abroad. It is perennial, aromatic, fleshly herb distributed universely. The plant Plectranthus genera retains manifoldprimary and secondary metabolites in leaves, stem, roots, petioles etc which contribute smedicinal attributes to cure fatal diseases. This herb possesses the therapeutic and nutritional properties attributed to its inherent natural phytochemical ingredients which are highly valued in the pharmaceutical industries. The plant has thus been unique targets for intensive pharmacological as well as biochemical analysis upto now. Aromatic bioactive compounds are responsible to determine the medicinal attributes. The customize medicines include the application of various plant extracts or phytochemical bioactive compounds which facilitates the human health benefits at low cost. Fundamentally, secondary metabolites are responsible for medicinal properties of plants. Qualitative phytochemical analysis of the plant Plectranthus confirms the presence of different phytochemicals like saponins, terpenoids, steroids, anthocyanins, coumarins, fatty acids, tannins, leucoanthocyanins and emodins etc. The plant secondary metabolites of Plectranthus amboinicus includes essential oils, flavonoids, terpenoids, poly-phenols, phytols, thymol, apigenin, rosmarinic acid, quercetin, carvacrol, abietane diterpene, ursolic, cinnamine, ladalein, carophyllene oxide, and circimaritin etc. These secondary metabolites aid the benefits in different forms such as an anti-cancerous, anti-viral, anti-oxidant, anti-malarial, anti-fungal, anti-bacterial, anti-diabetic, anti-inflammation activity, antibiotic- modulations, wound healing, anti-rheumatic arthritis, anti-epileptic nephro-protective, bio-herbicidal, bio-accumulation, nutrients mobilization, anti-haemorrhagic, anti-ischemic, bacterial anti-bio-

film, anti-nephron crystal formation, and analgesic properties. Bio-active components identified from the plant may play a key role in effective drug formulations without side effects.

Key words: Phytochemical, Secondary metabolites, anti cancer, antibiotic, medicine,

Environmental Accounting and Reporting of Indian Corporate Sector - An Overview

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Environmental accounting states to modification of the system of national accounts t oinclude the use or depletion of natural resources. Environmental reporting is the present of description and numerical information on an organization's environmental effect for the accounting period. Environmental Management Accounting (EMA) helps to regulate the true environmental costs, assisting management to make costing calculations, investment decisions, and other decisions. This paper aims to study about the environmental accounting and reporting of corporate sector in India. This study is based on secondary data which arecollected from annual reports of the selected companies, different websites, journals and newspapers etc. An effort has been made to analyze the annual reports of the selected companies to scrutinize their disclosure practices concerning the environmental issues. This research paper describes the theoretical considerations relating to environmental accounting and reporting practices. This study reveals that companies in India do not have a appropriate environmental accounting system to govern the environment related costs, benefits, assets and liabilities. Indian companies fail to deliver adequate disclosure on the environment issue. Companies provide only statutorily required, qualitative, and positive information on environment due to absence of strict accounting pronouncements from the ICAI and disclosure norms by the regulatory authorities. Annual reports of selected listed companies were studied for three year's i.e. 2018-19, 2019-20, 2020-21 have been examined to evaluate their environmental disclosure practices. Only some companies publish their environmental objectives separately in the annual reports. some of the companies voluntarily disclose information on environmental policies, legal compliance and objectives. From our analysis we found that maximum of the companies disclosed their environment information in the Directors report only. However, few companies report their information in separate environmental sections in the annual report.

Keywords– Corporate sector, Disclosure requirements, Director's report, Environment accounting, Environmental management accounting (EMA).

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महाकाव्यों में पर्यावरण चेतना

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भारतीय इतिहास में रामायाण एवं महाभारत महाकाव्य प्राकृतिक चिन्तन की दृष्टि से भी महत्त्वपूर्ण माने जाते है। यद्यपि प्राचीन भारतीय ऐतिहासिक वाड़मय सें वेद, उपनिषद व अन्य साहित्य स्त्रोत भी पर्यावरण चेतना को महत्तवपूर्ण मानते हुये प्रकृति से जुडी अनेक विधाओं को वर्णित करते है। महर्षि वाल्मीकी रचित रामायण में गंगा, सरदू आदि नदियों के प्रति पूजनीय भाव दर्शाया गया है। वन, उपवन, कूप, तालाब एवं बावडियों आदि का महत्तव बताते हुए जीव–जन्तु एवं मानव के बीच सांमजस्य पूर्ण माहौल की बात रामायण में वर्णित है अरण्यक काण्ड एवं किस्किंधा काण्ड में प्राकृतिक चिन्तन विशेष रूप से उल्लेखनीय है। वाल्मीकि ने बालकाण्ड में अयोध्या नगरी की शोभा का वर्णन इस प्रकार किया हैः–

उधानाभ्रवनोपेता महती सालमेखलाम्

महाभारत का महत्वपूर्ण अंश श्रीमद्भगवत गीता माना जाता है जिसके कहा गया है कि यज्ञ द्वारा देवताओं की कामना करें। साथ ही पीपल के वृक्ष को भी विष्णु का वासस्थान अर्थात् ईश्वर का एक प्रतिशत बताया गया है।

इस प्रकार रामायण एवं महाभारत भारतीय सनातन परम्परा एवं संस्कृति अमूल्य विरासत है। ये महाकाव्य प्रकृति चिन्तन व पर्यावरणीय चेतना पर बल देते हुये सांस्कृतिक उत्थान में महत्वपूर्ण भूमिका निभाते है।

अथर्ववेद में पर्यावरण चेतना

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प्राचीन भारतीय ऐतिहासिक वाड़मय विशिष्ट भाव अभिव्यक्त करता है। वेदो के अनुसार जीव जन्तुओ व औषधि–वनस्पतियो का मानव के साथ एक अभिन्न सम्बन्ध होता है।

अथर्ववेद में अधिकाधिक पर्यावरण और प्रकृति के प्रति एक सम्मान जनक भाव प्रकट किया गया है। सम्पूर्ण प्रकृति में कोर्ठ भी द्रव्य ऐसा नही है जो रोग–निवारक क्षमता न रखता है। अथर्ववेद के अनुसार मानव की मेधा शक्ति विकसित करने में प्रकृति का विशिष्ट महत्व है। पर्वति का विशिष्ट विशिष्ट महत्व है। पर्वत की अपत्यकाओं तथा नदियो के संगम का पर्यावरण शान्त और शुद्ध होता है। अथर्ववेद में उल्लेख किया गया है कि पर्यावरण के घटक अपने रक्षा कवच से और विदूषण शक्ति से मावन का कयाण करते है अतः अथर्ववेद कालीन मानव रहात था। उसका घर हरियानी से युक्त अन्नम वर्ण वाला होना था,

होतृ षदनं हरितं हरिण्ययम्

सम्पूर्ण प्रकृति में कोई भी ऐसा द्रव्य नही है जो रोग निवारक क्षमता नही रखता हो। प्रकृति में एक एक द्रव्य अनमोल औषधि है। अतः मानव को प्रकृति प्रत्येक संसाधन को संरक्षित व प्रदूषण मुक्त रखने का पाठ अथर्ववेद हमें पढ़ाता है। पर्यावरण के प्रति सामन्जाय व चेतना के द्वारा ही सृष्टि पर सकारात्मकात संभव है।

संकेताक्षर :–

पर्यावरण, अथर्ववेद, प्रकृति, कल्याण, प्रदूषण, चेतना, हरयाली