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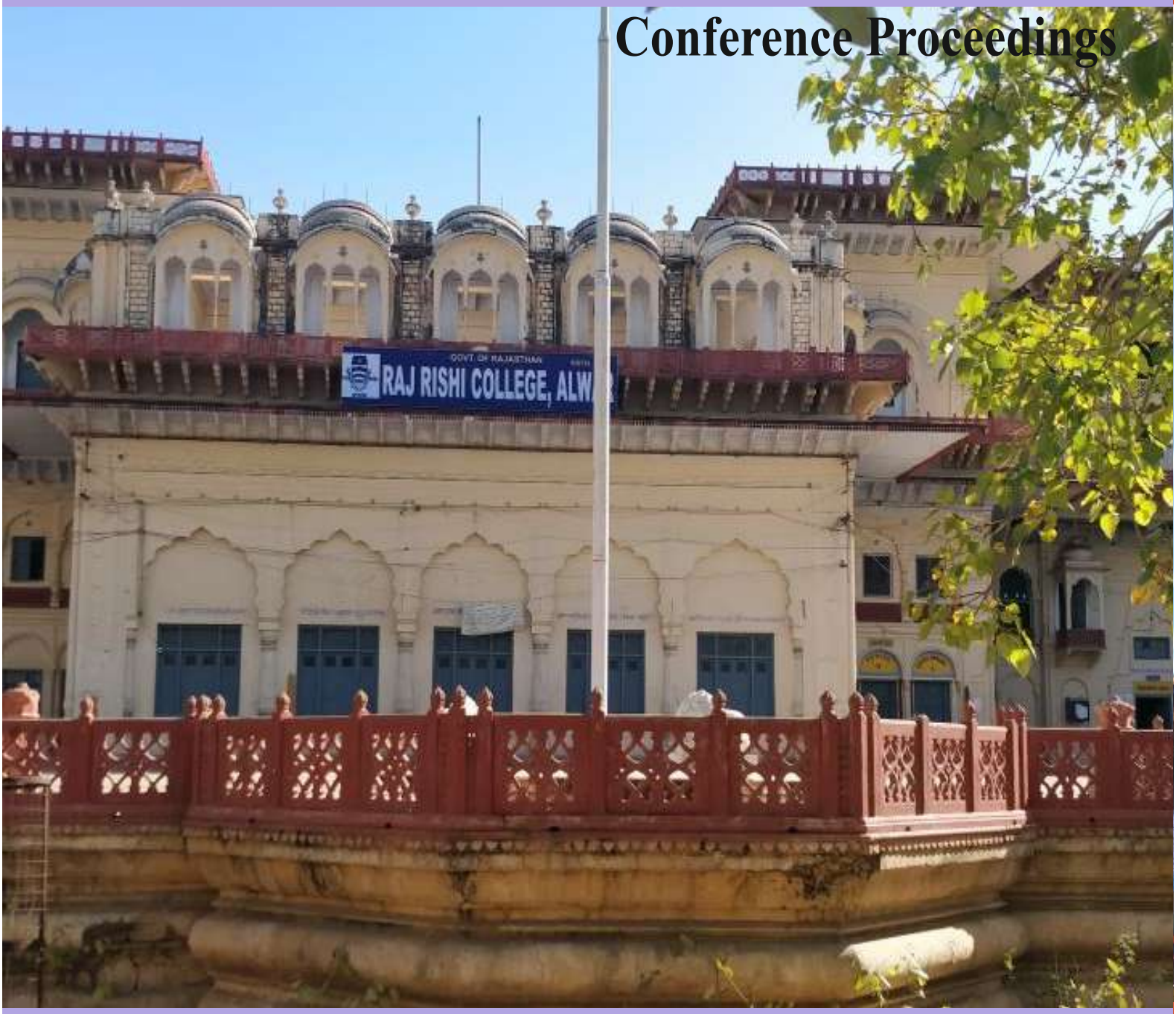

ICISTIDEC 09-10 March, 2018 Alwar, Rajasthan, India

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Proceedings of

R.R. Govt. Autonomous College, Alwar & The Society for Academic Research's Joint

International Conference on Innovation and Strategies in Transdicipline to Face the Integrated Development and Environmental Challenges - ICISTIDEC-2018

Venue: R.R. Government College, Alwar. Rajasthan, India

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Organized by:

Date of Event:

09-10 March, 2018

Online Event Promotion Partner:

Raj Rishi Government Autonomous College
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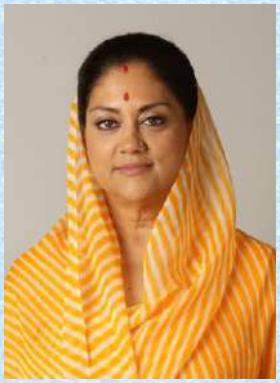
सत्यमेव जयते

VASUNDHARA RAJE

CHIEF MINISTER RAJASTHAN



Message

It gives me immense pleasure to know that R.R. Govt. Autonomous College, Alwar in collaboration with IAARHIES (Governed by the Society for Academic Research) organising an international conference on 'Innovation and Strategies in Transdiscipline to face the Integrated Development and Environmental Challenges' ICISTIDEC-2018 on March 9, 2018.

I am sure that this conference shall provide a forum for discussion on challenges being faced by our Environment and am sure that the outcomes shall be of immense use for the stakeholders concerned.

I wish the conference the very best.

Vasundhara Raje.

(Vasundhara Raje)

किरण माहेश्वरी

मंत्री
उच्च, तकनीकी एवं संस्कृत शिक्षा,
विज्ञान एवं प्रौद्योगिकी विभाग
राजस्थान सरकार

Kiran Maheshwari

Minister
Higher, Technical and Sanskrit education,
Science and Technology Department
Government of Rajasthan

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MESSAGE

I am happy to learn that Govt. R.R. Autonomous College, Alwar is going to organize an International conference on "Innovation and Strategies in Transdiscipline to Face the Integrated Development and Environmental Challenges" (ICISTIDEC-2018) on 09-10 March, 2018.

Organizing such an event is a matter of pride for all of us. I firmly believe that every institution of higher learning should strive to develop itself as a centre of excellence.

I hope the gathering of intellectuals, researchers and practitioners of the conference will provide a useful opportunity to the participants to deliberate upon the issues of on the occasion, I extend my best wishes to organizers and participants and wish the conference success in its endeavors.

Kiran Maheshwari

(Kiran Maheshwari)

KHEMRAJ
I.A.S.

Additional Chief Secretary
Higher, Technical & Sanskrit Education
and ACS, Coordination - School & Sanskrit
Education Department
Rajasthan, Jaipur-302005

MESSAGE

At the outset I congratulate you for hosting the '**International Conference on Innovation and Strategies in Transdiscipline to Face the Integrated Development and Environmental Challenges'.** The only thing constant in today's world is 'change'! With dynamism being an accepted fact of today's changing world transdiscipline strategies are the need of the hour. I hope that the deliberations taking place in this conference would open new vistas of learning. RR College, Alwar has been a centre of excellence for the past almost over seventy five years and has set a rich academic tradition in the field of applied and pure sciences. The hosting of this conference in collaboration with The International Academic Association of Researchers in Humanities, IT, Engineering & Science would prove to be an alliance which would be enriching for the teacher and student community both.

I wish the same a grand success!

(KHEMRAJ)

Room No. 2207, Second Floor, Main Building, Secretariat, Jaipur - 302 005 (Rajasthan)
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F 8 (सेमीनार) अलाइ/आकादमी/15/558 दि॰ 22-2-18

Ashutosh A.T. Pednekar
IAS
Commissioner, College Education &
Special Secretary, Higher Education

सत्यमेव जयते

Block No. 4, Dr. R.K. Shiksha Sankul,
J.L.N. Marg, Jaipur-302017 (Raj.)
Telefax : 0141-2706847
Email : cce_raj@yahoo.com

MESSAGE

It gives me immense pleasure to know that the Raj Rishi College, Alwar in collaboration with The International Academic Association of Researchers in Humanities, IT, Engineering & Science is hosting an ' International Conference on Innovation and Strategies in Transdiscipline to Face the Integrated Development and Environmental Challenges' on 9th & 10th March, 2018. I am all the more delighted as my association with Alwar and Raj Rishi College goes back to the time when I was posted there as Collector. The areas which would be covered and dealt with in this Conference are very relevant in the present scenario. This would definitely prove to be an academically enriching experience for the participants.

Wish the event a grand success!

(Ashutosh A.T. Pednekar)

MESSAGE

I am really happy to know that RR Autonomous College ,Alwar is organising an international meet on integrated development and environmental challenges on 9th and 10th of March 2018.

It's an important theme and demand of the hour .

Entire world is disintegrated on several lines maybe religion, language, cast, development, politics , consumption propensity, technological levels, etc. which have direct bearing on environmental degradation.

In my opinion global resources on the planet should be equally distributed on population and area being possessed by different nations .then only the problem of environment maybe solved to a great extent.

I wish the program a great success .

Professor ADN Bajpai
Jabalpur Dated March 7 2018

MESSAGE

Professor K. S. Gupta *Ph. 08769863213(R), 9829239129(mob)*
Emeritus Professor(SERB Project) *guptaks200@gmail.com*
Coordinator: Env. Chem. UGC/MHRD Env. Sci. ePGPATHSHALA *Atmospheric Chemistry Lab*
Department of Chemistry
University of Rajasthan
***Jaipur-302004*, INDIA**
Correspond to: 1-K-14, Sector – 1
Jawaharnagar, Jaipur-302004

Message

I am delighted to learn that R. R. College, Alwar and The International Academic Association of Researchers in Humanities, IT, Engineering and Science are jointly organizing the *International Conference on Innovation and Strategies in Transdiscipline to Face the Integrated Development and Environmental Challenges. Now it is well established that the wheel cannot turn back and development is necessary to feed teeming millions. But, necessity of an integrated development that takes care of human needs as well the preservation of the environment as far as possible is equally important.*

Environmental issues needs to be dealt with not only in their scientific and engineering aspects, but also in their impact on society at large keeping in view the long term effects.

I congratulate the Organizers for selecting a pertinent issue and I wish the Conference a grand success.

K. S. Gupta

RAJ RISHI COLLEGE, ALWAR

Established since 1930

Prof. Anup Shrivastava,
M.Phil, Ph.D.
Principal

MESSAGE

Raj Rishi College, Alwar is endowed with rich cultural and academic traditions. Though my association with this college is of almost two years, this great institution which is now over seventy five years old has been known for the contribution in pure and applied areas of academics and has been a centre of excellence ever since its inception. It is indeed a matter of pride for R. R. College, Alwar to be the host to the 'International Conference on Innovation and Strategies in Transdiscipline to Face the Integrated Development and Environmental Challenges'. The subject itself speaks of the multidimensional and multidisciplinary aspects which would open from the deliberations taking place in the Conference. I hope that it would be an academically enriching experience for those who are associated in any form with this conference and good memories of the same would linger in the times to come.

Wishing the event a great success!

email: rrcalwar@gmail.com Contact: +91-144-2700772 : Near Alkapuri, Alwar-301001

PREFACE

Rajrishi Govt College, Alwar and the International Academic Association of Researchers in Humanities, IT, Engineering and Science (IAARHIES) are going to organise a joint International Conference on Innovation and Strategies to Face the Integrated Development and Environmental Challenges (ISISTIDEC) on 9-10 March, 2018.

At the very outset, we extend a warm welcome to all our distinguished guests, speakers, sponsors and the participants, who have directly or indirectly joined us during this joint International conference in R.R. Government College, Alwar, Rajasthan, India on 09-10 March, 2018.

The main motive behind this conference is to provide a strong platform to the researchers, academicians and professionals to present their innovative thoughts and discoveries and to explore future trends and applications in the various fields of development and the integrated approaches to advance the development agenda of the Governments. We would also expect a sharing of the challenges being faced in advancing and achieving the following 17 Sustainable Development Goals (SDGs) stipulated by the United Nations in September, 2015:

GOAL 1: No Poverty
GOAL 2: Zero Hunger
GOAL 3: Good Health and Well-being
GOAL 4: Quality Education
GOAL 5: Gender Equality
GOAL 6: Clean Water and Sanitation
GOAL 7: Affordable and Clean Energy
GOAL 8: Decent Work and Economic Growth
GOAL 9: Industry, Innovation and Infrastructure
GOAL 10: Reduced Inequality
GOAL 11: Sustainable Cities and Communities
GOAL 12: Responsible Consumption and Production
GOAL 13: Climate Action
GOAL 14: Life Below Water
GOAL 15: Life on Land
GOAL 16: Peace and Justice Strong Institutions
GOAL 17:Partnerships to achieve the Goal

We are happy to receive more than 200 research papers from all parts of the world in a short span of time. This shows peoples' growing interest in the development agenda. Due to lack of space, only some selected papers from the diverse areas of Business, Education, Management, Engineering, Technology, Science and Humanities are being published in these proceedings.

However, I am sure that the deliberations during this conference will be useful to the society in general and to the researchers in particular by disseminating knowledge on both theoretical and applied research on the aforesaid areas with an ultimate aim to bridge the gap between these coherent disciplines of knowledge and the community. Our final goal is to make the conference proceedings useful and guiding factor to audiences involved in research in these areas, as well as to those involved in design, implementation and operation, to achieve their respective goals. Deliberations in this conference will be shared through our journals.

First and foremost we are thankful to the RR College Principal and his staff for their collaboration and cooperation. We owe thanks to the organizing committees, whose incessant efforts made this conference happen in such a short time.

We are also thankful to all the delegates participating in this event in Alwar, Rajasthan. We should not forget the contribution of our advisory members and reviewers for making this event a successful one.

We have tried to make all possible arrangements for a smooth organization of this conference. However, your suggestions/feedback would provide us valuable inputs in improvising the upcoming events. We wish you all a comfortable stay in Alwar.

Dr. Upendra Singh
Conference Secretary

Dr. Neeraj Saini
Conference Secretary

DR. Hardev Sharma
Conference Secretary

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Prof. (Dr.) Anup Srivastava
Principal, Raj Rishi Government Autonomous College, Alwar

Dr. Neelam Raisinghani
Retd. Joint Director, College Education, Rajasthan

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Director - Research, Sunrise university, Alwar

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Programme Schedule

Innovation and Strategies to Face the Integrated Development and Environmental Challenges (ISISTIDEC-2018)

Date: 9-10 March, 2018

Venue: Pratap Auditorium, Alwar – 09 March, 2018

R.R. Govt Autonomous College, Alwar – 10 March, 2018

DATES	TIME	EVENTS
9 March	8:30 -9:45	Registration
	10:00-11:30	Inaugural Session
	11:45- 12.00	Tea Break
	12.30-1.30 PM	Three Parallel Technical Sessions on Humanities, Science & Management
	1.30 PM-2.30 PM	Lunch Break
	2.30 PM -5.30 PM	Three Parallel Technical Sessions on Humanities, Science & Management
10 March	9.00 AM-11.00 AM	Three Parallel Technical Sessions on Humanities, Science & Management
	11.00 -11.30 AM	Tea Break
	11.30-1.30 PM	Three Parallel Technical Sessions on Humanities, Science & Management
	1.30-2.30 PM	Lunch Break
	2.30 PM-3.00 PM	Valedictory Session

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Petroleum University of Technology, Iran
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Innovation and Strategies in Transdiscipline for integrated development and environmental challenges

Ladies and Gentlemen,

The thing I liked the most about this conference is we from many disciplines are gathered at this forum to share our experiences on how to resolve our environmental, social and economic development challenges we are facing.

Actually, transdisciplinarity integrates the natural, social and health sciences in a humanities context, and goes beyond their traditional boundaries. I totally agree to the point that the necessity of implementing more appropriate approaches instead of the traditional single disciplinary approaches, in order to be able to cope with the ill-defined, highly complex problem of sustainable development and environmental challenges in systems such as organizations or regions.

In the past decade, development actors and academia have come to recognize that the quest for integrated development requires innovations that can address the complexity of social, economic and environmental challenges and better connect academic studies to decision-making. In other words, it requires the coordination between governments, non-governmental sectors and academic intuitions.

Our generation is facing multiple unprecedented challenges including, but not limited to, the degradation of ecosystems, over exploitation of natural resources, climate change, wealth inequalities, political instabilities and the ethnic conflicts. These interconnected challenges are threatening the integrated development of society. Attempts to meet the demands of the current generation without compromising the ability of future generations to meet their needs, is the essence of sustainable development, as defined by UN, still remains at best a distant goal in reality.

Since the nature of problems are interconnected across the disciplines, naturally we have to adopt the transdisciplinary approach to address them. Transdisciplinary approach involves activities including effective governance, coordination mechanism and joint research between governments and the stakeholders including academic organizations. Active input from government bodies and stakeholders from within and outside the academia is necessary to materialize it. Transdisciplinary research is one of the major innovations to address such complex, real-world problems our time. It requires a common articulation of the research problem and the joint development of a research framework across multiple disciplines. I am sure many of you here have carried out some collaborative activities with the people from other disciplines, haven't you?

Yes, many of you have taken some initiatives and others will start soon. I think to achieve the success in this mission, we have to address some pertaining issues:

1) Create common communication platform
2) Transdisciplinary discipline has to be further developed as a core discipline
3) It should use simple language that all involved disciplines and civil society can understand its products
4) It should develop better methodological tools for research
5. Boundaries should be defined
6. Linkage to governments should be established
7. Incentives should be provided

Although rewarding, working across disciplines and integrating knowledge to be far more challenging than anticipated. The realm of integrated development is inherently complex, demanding navigation of many kinds of boundaries. There can be jurisdictional, cultural, disciplinary and so on to keep our eyes on.

While we have acknowledged that the transdisciplinary working process is time and labor intensive, we propose that incorporating these boundary ideas into process design in advance of the projects could improve its opportunities for success.

Transdisciplinary works are usually problem-focused and involved mutual learning across disciplinary boundaries through a collaborative, reflexive, and integrative process resulting in a jointly produced analytical framework that transcends disciplinary paradigms in the social and natural sciences.

Disciplines and professions often possess unique concepts and jargon not easily translated, making it difficult for

transdisciplinary team members to understand one another. Such teams must develop strategies for clarifying and sharing vocabulary, meaning, and context. Overcoming the communication barrier in transdisciplinary research takes considerable time, effort, patience, and interpersonal skills.

While the problem orientation of transdisciplinary research provides a common point for discussions and facilitates cross-boundary dialog, it can also create challenges as scholars find themselves pulled between competing desires of addressing societal problems. We can say that disciplinary expectations often win out because the social reference and control systems of participating actors and stakeholders is anchored within their home institution and not within the transdisciplinary team.

A lack of institutional or peer support can make it difficult for individual to commit to transdisciplinary activities, which may affect the legitimacy of the project. Other challenges include a lack of funding and/or training to work across disciplinary boundaries, individuals' fear of failure, insufficient problem framing, long-term participation, and even competing disciplinary policy cultures.

Past research have showed that transdisciplinary research is not for everyone; participants should be amenable to intellectual risk-taking and to the ambiguities that emerge from the interactions of different academic cultures and languages. More training is needed to build capacity for transdisciplinary projects, but in the absence of explicit training, to communicate complex ideas across disciplines and to a broader audience needs to be facilitated. The mutual respect built during this process creates a sense of community, which in part keeps contributors coming back. While physical get together and interaction can be a part of such activities, organizations involved in transdisciplinary activities can make use of information and communication technologies for the same.

As a member of academia, I would like to re-emphasize the importance of the transdisciplinary approach. While I think the universities recognize the value of transdisciplinary research, its own structure and momentum can make it difficult to do this sort of work for reasons ranging from time to incentives. Another point to highlight is the perspective one gains participating in such a process can strengthen the capacity for future transdisciplinary work involving stakeholders and non-academics. With changing environmental governance and integrated development trends, we anticipate that the ability to work across boundaries will be ever more valuable and more demanding. Let us all encourage ourselves and colleagues to consider transdisciplinary approach as a way forward. When you change the route, the final destination will be also altered.

Finally, I would say our common goal should be to contribute to a small but growing body of transdisciplinary literature on how to organize and carry out such activities to address the challenges and to provide helpful insights for others interested in using this approach. One among many efforts towards this direction is this conference itself. As we go back from this conference, lets plan to start off some transdisciplinary activities and we will meet again to hear the stories in the next conference.

Thank you everyone for your attention.

Dr. Manoch Aree,
Srinakharinwirot University, Bangkok, Thailand

The Regional Impact of ASIA's Globalization Waves: A Narrative Review

Karniza Khalid
Clinical Research Centre
Hospital Tuanku Fauziah, Perlis
Ministry of Health Malaysia

ABSTRACT: The current age of advancement in robotics and artificial intelligence (AI) has catalysed the paradigm shift to the Asian continent. Sharing of knowledge and technology expansion between the Western and Eastern hemisphere has become a daily norm in integrating widespread growth in major aspects of human life. This status quo review article represents a synthesis of a broad collection of literatures with regards to the ever-growing development and accompanying environmental challenges, particularly in the field of behavioural and life sciences. In the sociology domain, the urban elderly were found to appreciate outdoor activities and social mingle comparing to the oldest-old population who prefer social isolation. Robotics technology has gradually begun replacing human capital often resulting in patchy unemployment in urban cities with consequential socioeconomic glitches. Furthermore, environmental shift has witnessed the rising global warming and pollution issues all around Asia with the growing number of factories emanating biomass smokes. Hence, technological advancement must be dealt in a methodically structured manner with collaborative efforts from multi-agencies to establish a well-rounded society acclimatized to change and a milieu that is both healthy and conducive to modern transformation.

Keywords: artificial intelligence; global warming; environmental pollution; Asia.

1 INTRODUCTION

Urbanization in broader term refers to the physical development of infrastructures and technological advancement aimed to facilitate and simplify daily laborious task. Modernization often relates to the increasing use of robotics and machinery to aid manual labour and is often considered as a luxury, especially in limited-resource settings.

Technological development is casually stamped with a Western origin. The present age of globalization has witnessed the sharing of knowledge between the two hemispheres. Integration of the shared technology comes with the consequential rising living standards. Old techniques are strategically improvised leading to a change in ideology and delivery of services. The use of man-made machinery and artificial intelligence are deemed superior to the conventional techniques, offering a higher degree of precision with the exclusion of flawed human variables.

The acceptance of new technology and advancement appear to be geographically-concentrated. In the 1950s, there were 17.5% (245.1 million population) of Asian population living in urban areas and by 2010, the figure exponentially increased to 44.4% (1.85 billion population).[1] As urbanization crouches throughout the continent, people are forced to either embrace changes or sink deep in the process. People living in areas away from the resources are more resistant to change and prefer to do things the traditional way.[2] They see change as alien and do not readily adapt to adjustment whereas those living geocentrically in areas of abundant resources welcome change more readily. Geocentric urbanization also attracts the younger generation due to job opportunities, hence further divide the age ladder between cities and rural areas.

Urbanization unceasingly brought in enigmatic changes that encourage dichotomous settlements among the population. Sociology impact from modernization has witnessed emerging diseases that are closely related to the advent of technology such as poor sensory development and learning difficulties among children with high exposure to gadgets and prolonged screen-time[3]; and poor coping behaviour among adults who are complacent to the use of machinery-aid labour. Diseases resulting from environmental effect of urbanization include the unsettling issues of pollution and global warming with its resultant erratic climate changes.

This narrative review aimed to study the impact of urbanization in Asia on the environment, sociology and life

sciences and strategies employed by the region to overcome the challenge.

2 PACING UP TOWARDS DEVELOPMENT

Urbanization in Asia and the Demographic Ageing

Asia has experienced an exponential expansion of physical development and robotic technology in the past decade. Such transformation promises an outburst in the country's economy and a shift in the socio-demographic grounds. The life expectancy increases with the improvement of diagnostic modalities and healthcare services. Based on the Health Facts 2017 data released from Department of Survey and Mapping, Malaysia, the percentage of the nation elderly population aged 65 years and above increased from 5.8% in 2015 to 6.1% in 2016.[4]

Modern states often resort to cramped living spaces and subsidized public estates to maximize the growth of industrial and business corners. A study by Sun et al. (2017) acknowledged the notion of environmental gerontology to be further incorporated into nation's developmental plan.[5] Housing typology was found to significantly influence the elderly's attitude towards outdoor spaces in urban areas. Elderly aged 65 years and older living in public housing estates were found to enjoy outdoor events and social mingling compared to those living in private housing.[5] Elderly population from the yesteryears classically continue to perform daily functional activities and still enjoy contributing to their society whereas the elderly living within the city boundaries maintains an active lifestyle for personal gain of good health and vitality.

Urbanization has become a global phenomenon with a direct bearing on the population. The elderly populace is the most sensitive to changes brought about by the modernization wave and they unfortunately received the least attention from the policy-makers. Whilst the younger generations are always out scouring and chasing the deadlines to make ends meet, the elderly are commonly left to scavenge for themselves. There will be a number who are maladaptive, senile and are just incompetent to adjust. The poor populace is often hindered from the rest of the community and is perceived as a burden to the society, particularly those who lacks social and familial support. As our ageing population grows, the policy-makers shall outline a comprehensive plan to cater for the elderly social needs and address their health concern, allowing them to live longer, healthier lives.

The High Cost of Modernization and the Environmental Decay

Urbanization era is witnessing the growth of industrial plants and business estates with the entailed unmet environmental needs. Asia is a well-known harbor for a wide range of natural resources, making it a powerful continent to fuel global development. The increasing demand for bio-factories in processing organic fuels to power machineries has inadvertently led to increasing emission of biomass smokes. Biomass smokes are common air pollutants in our region and is a known hazard to health, emitted from the combustion of organic matter such as wood, crop residues and animal dung.[6]

Organic combustion causes accumulation of the carbon dioxide, nitrous oxide and methane, notoriously known as the 'greenhouse gases', which are known to be directly linked to the global warming and its consequent climate changes. The accumulation of the greenhouse gases further cause the thinning of the ozone layer, trapping the sun's radiation in the lower atmosphere resulting in perceptible radiation.[7]

The issue of climate change and the pathological effect of environmental degradation, including the management and distribution of clean water, the management of sewage and solid waste have been the focus subject in international conferences.[8-10] Recent reports showed that the United States and China collectively contributed to 40% of the global emissions. The 2015 Paris Climate Accord is an agreement within the United Nations Framework Convention on Climate Change (UNFCCC) attempted to mitigate greenhouse gas emissions beginning the year 2020. The agreement was presented before the representatives of 196 parties and a consensus was adopted in December 2015.[11] A number of innovations and plan to further reduce environmental pollution to control climate change and mitigate global warming have been put forth and structurally laid out to ensure the effectiveness of the strategy.

The Influence of Artificial Intelligence Everywhere

The infusion of Artificial Intelligence (AI) in major key areas such as in the healthcare services has showcased the

novel application of computer system in healthcare delivery to perform clinical diagnoses and therapeutic recommendation. AI is presumed to be superior as it removes human error from the calculation which traditionally results in litigations. Example include the use of remotely-operated robotics in major surgeries, a form of physical AI; whereas the use of an integrated system to track patients' medical records and data is considered as the virtual AI.[12] The integral use of AI optimizes the labor-intensive work process that normally required painstaking human labor.

AI does not stop at the healthcare industry but revolves around all the consumer-related products, including its use as the modern day social companion, development of a utopia driver-less cars and its use in a real-time translator device to assist in multilingual communication between different continents. Agriculture industry has made use of the AI algorithm to guide the farmers on the best plantation time to maximize the crops' productivity. This is made possible by the implementation of AI to analyze and forecast the weather, and compute the soil component to ascertain the viability status.

Some skeptics are alarmed that the AI technology might relentlessly rule over human, given its due time. Science fiction has a long tradition of being brand as dystopias, immoral and inhumane. The superiority of machines in duplicating the human tasks with more integrity, precision and productivity has raised its standard to be above that of humans'. The human role ultimately becomes expendable, resulting in escalating unemployment rate and entailing socio-economic hurdles, particularly in bigger cities where the industries are continuously thriving.

3 STRATEGIES FOR A HOLISTIC TRANSFORMATION

The community role and organization in ecosystem

Change does not necessarily imply bad transformation. Some people resist change and promote riots to collectively refuse change. Tradition to them is the absolute way of life and any form of determent is deemed disputable. A structurally sound development process will cultivate a steep learning curve which is beneficial to increase productivity and simplify everyday task with the ethical use of legitimate resources. It is crucial to adapt to change while holding steadfast to the core values of ethics and morality.

Nowadays, the expansive use of the Internet has buoyed up the idea of health literacy, globally. Health literacy is a marker of community development to encourage the communities' active involvement in the health policy and practice.[13]

The growing number of population living in urban cities throughout the decade is expected to rise even more in the coming years.[1] Unfortunately, there are also a small group of people who do not readily adapt to change but do not otherwise resist. This constitutes a significant bulk of the population and is mostly among the elderly populace. The aftermath of forced gentrification is detrimental, which includes increasing rate of homeless folks, the unsatisfied need of living expenditures, widespread crime rates and growing social decay.[14]

It is crucial for the global leaders to pay heed and address their needs and concern so as to not lose the human capital that is an essential factor to a nation's holistic development. Skill trainings, such as free-access IT lessons, are important early steps to be introduced to the community to allow a comprehensive assimilation of technology.

Urban green economy to fuel growth

There have been various accords and ongoing debates to control environmental pollution attributed by the different levels of industrialization. The increasing land use has resulted in population shifts and geocentric development, resulting in patchy developed areas in major Asian cities. This concentrated development causes accumulated environmental hazards including the agglomeration of greenhouse gases, biomass smokes and episodes of flash floods in poorly-planned development.

Industrial developers should collaborate with the environmental specialists to plan a structured planetary urbanization with thorough consideration of the environmental effects.

Policy-makers

A functional institution promises a proper industrial planning and sustainable development, beneficial to the people. The policy-makers are responsible in making the world a better and safer place to live in for the generations

to come. In order to realise the not-beyond-reach utopia, strict regulations on environmental-friendly urbanization must be firmly endorsed and enforced.

Uncontrolled industrialization invariable leads to environmental catastrophes and unsystematic development. A joint effort between multi-agencies is necessary to establish a controlled, conducive and solicitous development. As urban cities demonstrate strong leadership in policy enforcements and good environmental practices, considerable avenues for positive outcomes are possible.[15]

4 CONCLUSION

Urban areas have the potential to generate significant environmental achievements by being the primary sites to instigate innovation strategies as they hold the concentration of the resources on site.

It is imperative for the major Asian cities to demonstrate exemplary leadership in holistic urban governance to generate visible changes, such as the breakthrough discovery of feasible renewable energy development, to sustain green economy.

5 ACKNOWLEDGEMENT

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6 REFERENCES

[1] Dodman, D. (2017). Environment and Urbanization. The International Encyclopedia of Geography. Retrieved from doi: 10.1002/9781118786352.wbieg0623

[2] Chambers, R. (2014). Rural development: Putting the last first. Routledge.

[3] Hinkley, T., Carson, V., Kalomakaefu, K., & Brown, H. (2017). What mums think matters: a mediating model of maternal perceptions of the impact of screen time on preschoolers' actual screen time. Preventive medicine reports, 6, 339-345.

[4] Ministry of Health Malaysia. (2017) Health Facts 2017. Kuala Lumpur: Ministry of Health Malaysia.

[5] Sun Y, Phillips DR & Wong M. (2017) A study of housing typology and perceived age-friendliness in an established Hong Kong new town: A person-environment perspective. Geoforum. Retrieved from https://doi.org/10.1016/j.geoforum.2017.11.001

[6] Capistrano SJ, van Reyk D, Chen H & Oliver BG. Evidence of Biomass Smoke Exposure as a Causative Factor for the Development of COPD. Toxics 2017;5(36):1-16. Retrieved from doi:10.3390/toxics5040036

[7] Li, F., Newman, P., Pawson, S., & Perlwitz, J. (2018). Effects of Greenhouse Gas Increase and Stratospheric Ozone Depletion on Stratospheric Mean Age of Air in 1960-2010. Journal of Geophysical Research: Atmospheres.

[8] Czernichowski-Lauriol, I., Berenblyum, R., Bigi, S., Car, M., Liebscher, A., Persoglia, S. & Wildenborg, T. (2017). CO2GeoNet Perspective on CO2 Capture and Storage: A Vital Technology for Completing the Climate Change Mitigation Portfolio: 13th International Conference on Greenhouse Gas Control Technologies, GHGT 2016. 14 November 2016 through 18 November 2016.

[9] Mal, S., Singh, R. B., Huggel, C., & Grover, A. (2018). Introducing Linkages Between Climate Change, Extreme Events, and Disaster Risk Reduction. In Climate Change, Extreme Events and Disaster Risk Reduction (pp. 1-14). Springer, Cham.

[10] Alam, M., Toriman, M. E. B., Siwar, C., Molla, R. I., & Talib, B. (2017). The impacts of agricultural supports for climate change adaptation: farm level assessment study on paddy farmers.

[11] United Nations. (2016, January 29). Report of the Conference of the Parties on its twenty-first session, held in Paris from 30 November to 13 December 2015. Paper presented at Framework Convention on Climate Change, France. Retrieved from https://unfccc.int/resource/docs/2015/cop21/eng/10.pdf

[12] Hamet, P. and Tremblay, J. (2017). Artificial intelligence in medicine. Metab Clin Exp. 69(Suppl.):S36-S40. Retrieved from http://dx.doi.org/10.1016/j.metabol.2017.01.011

[13]Wills, JD and Sykes, SM and Popple, K (2017) The Role of Community Development in Building Critical Health Literacy. Community Development Journal. In-press. Retrieved from http://researchopen.lsbu.ac.uk/887/

[14] Vidhate, S., & Sharma, A. (2017). Gentrification and Its Impact on Urbanization in India. World Academy of Science, Engineering and Technology, International Journal of Architectural and Environmental Engineering, 4(2).

[15] PAGE (2016), Integrated Planning & Sustainable Development: Challenges and Opportunities.

Abstracts
(English)

Influence of Heavy Metals on Antioxidative Potential of Dianthus caryophyllusL

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Heavy metals form main group of inorganic contaminants. Heavy metals are released into the environment by mining, smelting. Chromium (Cr) is the 21st most abundant element in the Earth's crust. Mainly due to tanning and chrome-plating industrial activities, large quantities of Cr compounds are discharged as liquid, solid and gas waste into the environment, and ultimately have significant adverse biological and ecologic effects. Cr occurs in the environment especially in two valence states: trivalent Cr [Cr (III)] and hexavalent Cr [Cr (VI)]. Of these two forms, Cr (VI) shows more phytotoxicity when absorbed by plants. Chromium interferes with several metabolic processes and its toxicity to plants is exhibited by reducing seed germination, stunted seedling and inadequate accumulation of phytomass.

Catalase, guaiacol peroxidase and polyphenol oxidase are antioxidant enzymes which are important in the metabolism of reactive oxygen species, and can be induced by environmental stresses including chromium (Cr), heavy metal toxic to living organisms. In vitro regenerated shoots of carnation (Dianthus caryophyllusL.) were exposed to K2Cr2O7 and the activities of these antioxidant enzymes was analysed. Significant reduction in the POD activity was observed at 2nd week of culture followed by slight increase in the activity at the 4th week of culture. Maximum PPO activity was detected during the 3rd week of culture which was comparable to the control cultures. Significant reduction in the CAT activity was found at the 4th week. The chlorophyll content did not change significantly in the shoot buds developed up to 4th week of culture.

Keywords: Dianthus, K2Cr2O7, abiotic stress,

Abbreviations: BAP: 6-benzyl amino urine, CAT: catalase, K2Cr2O7: potassium dichromate, NAA:α-naphthalene acetic acid, POD: peroxidase, PPO: polyphenol peroxidase

Powder X-ray Study of Magnesium Oxychloride Cement (MOC)

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In present study dry mixes composition were prepared by mixing magnesia and dolomite (inert filler) in the ratio of 1:1 by their weights respectively. Compositions were gauged with 20°Be, 24°Be, 28°Be, 32°Be and 35°Be gauging solution $MgCl_2$. PXRD was carried out by Panalytical X'Pert Powder X-ray diffractometer. Two main bonding crystalline phases; phase three and phase five are detected in XRD patterns of MOC. The MOC phase five ($5Mg(OH)_2{\cdot}MgCl_2{\cdot}8H_2O$) indicated as 5P, phase three ($3Mg(OH)_2{\cdot}MgCl_2{\cdot}8H_2O$) indicated as 3P and $Mg(OH)_2$ as MH in all XRD patterns. The symbols on figures indicate the position and the peak intensities of the powdered diffractions are according with standard from ICDD (International Center for Diffraction Data) database. In each figure XRD analysis indicate a sharp peak at $2\theta \sim 31^\circ$ which is identified for phase three of MOC.

Keywords: Magnesium Oxychloride Cement, X-ray diffraction

Android based Remote Monitoring System

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Today for real time applications it is important to monitor system in efficient way which puts limit in terms of accuracy and repeatability if a human is employed on plant to do this task. The traditional automated monitoring (surveillance) systems are wired and larger in size. It mostly uses only PC as a surveillance terminal, which works efficiently but does not give portability. The proposed system describes an intelligent Monitoring System which is based on android platform gives facility to access monitored parameters quickly on mobile handsets anywhere from the world.

As the mobility provided by the mobile phones and the application supportability given by the android system over 2G and 3G network there are infinite possibilities to expand monitoring system.

Keywords: Remote Monitoring System with Android, Data Acquisition with Android, Surveillance system using

Photochemical Studies of Mixed Surfactant in Solar Cell

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Solar cells have been extensively studied for solar power and storage at low intensity artificial sunlight. Therefore, the present study of photochemical of Rhodamine 6G-EDTA (Ethylenediamine Tetra acetic Acid) with efficiency enhancer chemical such as NaLS (Sodium dodecyl sulphate/ Sodium lauryl sulfate) + CTAB (Cetrimonium bromide) surfactant in alkaline medium has been used to observe their workable feasibility in artificial sunlight. This chemical system with changed concentrations, a combination electrode and a very small Pt (Platinum) electrode was used to fabricate a modified solar cell. The effect of various cell fabrication parameters was studied for optimization of the value of fabrication variables for the optimal cell performance based on the proposed mechanism. The observed optimum cell performance in terms of maximum power, short-circuit current, open-circuit potential, conversion efficiency and storage capacity respectively.
Keywords: sunlight, power, conversion efficiency, storage capacity

Photo-degradation of Orange G (Acid Orange 10) in aqueous solution by heterogeneous photo catalyst

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The present study involves the photo catalytic degradation of Orange G (Acid Orange 10), employing heterogeneous photo catalytic process. Photo catalytic activity of immobilized Dowex-11 photocatalyst has been investigated. An attempt has been made to study the effect of process parameters viz., amount of catalyst, concentration of dye, light intensity and pH on photo catalytic degradation of Orange G. The experiments were carried out by irradiating the aqueous solutions of dyes containing photocatalyst with UV light. The rate of degradation was estimated from residual concentration spectrophotometrically. Similar experiments were carried out by varying pH (3.5-11.5), amount of catalyst (1-3gm) , initial concentration of dye (10 mg L-1 to 70 mg L-1) and light intensity (5.2-15.6 mWcm-2). The dye is decolorized in 80 min and completely degraded in 180 min under optimum conditions. Removal efficiency results (98%) after 3 hour Kinetic analysis of photo-degradation reveals that the degradation follows approximately pseudo first order kinetics according to the Langmuir-Hinshelwood model. Carbon dioxide, nitrate and sulphate ions have been identified as mineralization products.
Keywords: Photo catalysis, Orange G, Kinetic Analysis, UV Light, Photocatalytic degradation, Azo dye

Synthesis of Titanium Complexes of Schiff Base Ligands and Their Biological Activities

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Schiff bases are versatile ligands synthesized from the condensation of an amino compound with carbonyl compounds and these coordinate to metal ions via azomethine nitrogen. Schiff base ligands can coordinate with many transition metals and stabilize them in various oxidation states. The titanium complexes have interesting properties because of its low toxicity and oxophilicity nature. The titanium complexes possess remarkable properties like catalysts in various biological systems, antimicrobial activities, antifungal activities, antiviral activities, insecticides, antitumor and cyto-toxic activities, plant growth regulator, enzymatic activity, and pharmaceutical fields. A variety of Schiff bases and their metal complexes have been studied extensively. Several model systems, including those with bidentate, tridentate, tetradentate, multidentate Schiff base ligands and their coordination chemistry of titanium attract significant attention because of their biological relevance and their own interesting coordination chemistry such as geometry, flexible redox property, and oxidation state.
Keywords: Schiff bases, Titanium, Antibacterial activity, Antifungal activity, Application

Synthesis of Silver nanoparticles using Gallic acid for the detection of Cr(III)ion in water

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The detection and quantification of so-called heavy metal ions are significant due to their adverse toxic risks to human health at very low concentrations. Among various heavy metal ions, Cr(III) is one of the most dangerous ions due to its high toxicity and carcinogenicity. Bearing in mind the elevated risks related to human health due to Cr(III) there is an urgent need to develop a simple and sensitive method for Cr(III) detection. Herein, we synthesized silver nanoparticles (AgNPs) for the detection of heavy metal ions in water using chemical reduction method. AgNPs exhibit strong Surface Plasmon Resonance (SPR) peak at 420 nm. One of the most exciting accomplishments is the minimum detection limit for Cr(III) which is found to be 0.1nM in water with good sensitivity. The detection of heavy metal ion such as Cr(III) using AgNPs of size 50 nm was developed. The sizes and shapes of nanoparticles were tuned by selecting the reducing and capping agents. The nanoparticles have been characterized by UV-Vis spectroscopy and transmission electron microscopy.

Keywords: Gallic acid, Silver nanoparticles (AgNPs), Surface Plasmon Resonance

Green synthesized spherical silver nanoparticles for the colorimetric detection of Cd(II) ions in aqueous medium

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Precisely probing heavy metal pollutants in water warrants novel methods and materials. To this end, functionalization of nanoparticles using biologically important substances through a green route is a novel aspect in the design of a sensor. In this article we report a green preparative strategy for the synthesis of Jamun (Syzygium cumini) stabilized silver nanoparticles (J-AgNPs) in aqueous medium. The particles were characterized by UV-visible spectroscopy, transmission electron microscopy (TEM) techniques, zeta potential and DLS techniques. The prepared AgNPs are found to be highly sensitive and selective for rapid colorimetric detection of Cd(II) ions with a detection limit of 0.01 ppm. The prepared J-AgNPs holds practical applicability for the real water samples also.

Keywords: Jamun, Silver nanoparticles, Colorimetric

Defluoridation from aqueous system by using trimetallic Fe–La–Ce composite adsorbent

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Fluoride is considered as an important ingredient of drinking water when present within the permissible limits. It has beneficial effects in bones and teeth formation when present in low concentration, However, as per WHO guidelines when the concentration of fluoride exceeds the threshold limit of 1.5 mg/L, adverse effects such as dental and skeletal fluorosis has been observed. Therefore, a wide variety of adsorbents have been developed for the removal of excess of fluoride from drinking water. In this study, Fe–La–Ce nanocomposite adsorbent was prepared through the precipitation of metal nitrates, and further applied to remove excessive fluoride ions from water. The effects of various limiting factors including pH, contact time, initial fluoride concentration, temperature, and co-existing substances were investigated. Fourier transform infrared (FTIR) spectrometer measurements evidenced the mechanism of fluoride uptake onto the synthesised adsorbent. Maximum fluoride adsorption occurred at pH 7. The kinetic study revealed an optimum equilibrium time as 30 min with an adsorbent dose of 100 mg/L at room temperature. The ion sorption data were fitted well with Langmuir isotherm. An optimized composite had a Langmuir adsorption capacity of 303.03 mg/g. Thermodynamic analysis indicated that the nature of fluoride sorption is spontaneous and endothermic.

Keywords: Defluoridation, Fe–La–Ce adsorbent, Adsorbent, Adsorption.

Removal of health-hazardous fluoride ions from aqueous systems using Fe-Al-Ce adsorbent

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A new crystalline and hybrid Fe-Al-Ce adsorbent was developed, and tested to establish its efficiency, using kinetic and thermodynamic studies, for fluoride removal. The adsorption properties of the developed adsorbent were studied using batch and column methods and the noticeable fluoride adsorption capacity was 28.7 mg/g. The pH range for the maximum removal of fluoride on the metal oxide adsorbent surface was 5.0–7.0. The adsorption kinetics fitted well with a pseudo second- order as compared to a pseudo-first-order rate expression. Herein, four models were used to fit the experimental data to explain the adsorption isotherm. The adsorption isotherm data fitted rationally well into both Freundlich and Dubinin–Radushkevich (D–R) isotherm models. Thermodynamic examination demonstrated that fluoride adsorption on the Fe–Al-Ce nanoadsorbent was reasonably spontaneous and endothermic. Most commonly existing anions, such as Cl^-, NO_3^-, SO_4^{2-}, CO_3^{2-}, and HCO_3^-, but not PO_4^{3-}, showed no significant counter ion effect on fluoride adsorption efficiency. The adsorbent was easily regenerated up to 95% with an alkali solution. The capability to revive and reuse the nanoadsorbent makes it a smart sustainable material.

Keywords: Fluoride, Fe-Al-Ce adsorbent**,** Langmuir, Pseudo order kinetics.

Sustainability of Fabrics through Garneting

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The use of pesticides and fertilizers, in addition to water, makes the global textile industry one of the most polluting and waste-generating sectors in the world. Plenty of companies boast about apparel made from PET bottles, but when that item of apparel is no longer wanted, its disposal once again becomes a nagging issue. Tonnes of old clothes end up in landfill. Manufacturers and fashion houses need to think harder about recycling. Few municipalities accept textiles into their recycling programmes. Add the heaps of clothing rejected by retailers because of flaws or they've missed the season, and the result is a resource that is not as easily recyclable as aluminum cans, glass, or even plastic. Annual disposal of one million tonnes of discarded apparel and either recycles or finds an alternate use for everything from towels to sari fabric. As the textile, apparel, fashion, and retail industries move to become more sustainable, an area of interest is the use of recycled fibre, yarn, fabric, and product content in the development and production of new products. The decision to use recycled materials in products must occur during design and product development and continue throughout the manufacturing processes. One hurdle for increased textile recycling is that the various fibres that comprise clothing make reprocessing and recycling a challenge. Some materials such as cotton and linen can be composted, but petroleum-based fibres such as polyester have little chance for reuse. There are several recognized stages in recycling collection, processing, and then use in a new product. Recycled materials used in textile and apparel products can be obtained throughout the textile and apparel supply chain and post-consumer collection methods**.** Process of recycling called Garneting.

Keywords: Recycling, Garneting, Discarded apparel, Post consumer collection

Influence of Natural Resources on Environment

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Natural resources and environmental concerns have been prevalent not only in India, but in other countries of the world as well, but in most cases, India has been the major country that has experienced the depletion of natural resources and environmental degradation. In this research manuscript, main focus has been laid upon India; India is the most populous country in the world and with the impact of population explosion, there is exhaustion of natural resources and environmental degradation. The main areas that have been highlighted are rural poverty and environmental degradation, effects of disasters and natural hazards, assessing risks, impacts and opportunities from natural resources and the environment, precise insinuations for environment, sustainability and green development, greening rural development and economic growth and environmental sustainability. The issues have been taken into account and the measures also have been underscored that are essential in order to lead to preservation and sustenance of natural resources and the environment.

Keywords: - Environment, Degradation, Sustainability, Development, Growth

High Temperature Superconductors: A Review

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There are numerous applications of superconductivity and these applications will change our civilization far into the future in the same way that electricity did in the 20th century. The important present and future applications of superconductivity are in the field of nuclear fusion (ITER), Quantum Train (High Temperature Superconducting Maglev), Magnetic Resonance Imaging MRI and Nuclear magnetic resonance (NMR) machines, Elevators (Superconducting elevators will allow Megacities to flourish and will allow for theoretical Mega Structures to reach well over a mile high into the atmosphere), The Large Hadron Collider (LHC), Transmission through the use of HTS power cables (which provides 0% loss of electrical current during transmission), Evacuated Tube Transport Technology ET3.

Superconductivity is a follow-up discovery to electricity in the early 20th century, which is the complete loss of electrical resistance and displacement of magnetic fields when certain materials are cooled to a critical temperature or transition temperatures (T_c). At the moment, superconductors only work at very low temperatures. They have to be kept very cold with liquid nitrogen or liquid helium. The metallic superconductors usually have transition temperatures below 30 K (−243.2 °C).

A lot of work is going into developing superconductors to raise the critical temperature (T_c). A significant breakthrough was achieved in 1986 with the discovery of high temperature superconductors or copper oxide superconductors such as: LBCO and LSCO. Further, more additional copper oxide compounds were synthesized such as BSCCO, YBCO and TBCCO with T_c as high as 138 K, well above the boiling point of liquid nitrogen (77K) and hence can be cooled to superconductivity using liquid nitrogen. The discovery of superconductivity in MgB_2 in 2001 and FeSe in 2008 has reawakened the search for high T_c in compounds with light elements. In 2015, hydrogen sulfide (H_2S) under extremely high pressure (around 150 GPa) was found to undergo superconducting transition near 203 K, the highest temperature superconductor known to date. High temperature superconductors are highly anisotropic, ceramic superconductors and are potential materials for different applications using liquid nitrogen cooling.

Several theories have been proposed to explain the pairing mechanism responsible the phenomenon of superconductivity in high T_c superconductors. Still there exists lots of discrepancies and the research continues for the quest of actual mechanism responsible for superconductivity in these materials. The stripe phase mechanism and pseodogap formation studies may be ascribed to the formation of pairing mechanism.

Main challenge is to prepare flexible superconductors with high critical current densities in higher magnetic fields on long length. The efforts are being made by materials scientists to improve performances of these complex materials for useful applications. In present investigation the Brief overview of high T_c superconductors, with emphasis on Crystal structures of high T_c ceramic superconductors, Iron-based superconductors, and Hydrogen sulfide are discussed. Magnetic properties of high T_c superconductors and theories related to explain the phenomenon of high T_c superconductivity are studied. Further, other materials sometimes referred to as high-temperature superconductors are also discussed.

Phytochemistry of various Ferns & fern allies of Sitamata Wildlife Sanctuary of Rajasthan

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Rajasthan lies in the north western part of India. The Sitamata wildlife sanctuary has an area of 423 sq. km falling in Pratapgarh and Chittorgarh districts of Rajasthan. Ferns and fern allies grow luxuriantly in this sanctuary. Phytochemical investigations such as total soluble sugars, soluble proteins and phenols from the entire plant have been taken up in various species of fern i.e *Ampelopteris prolifera*, *Christella dentate* and *Selaginella ciliaris*. Among the investigated species the maximum sugar content was recorded in *Christella dentata.* The maximum protein content was recorded in *Selaginella ciliaris* and the maximum total phenol content was recorded in the entire plant of *Ampelopteris prolifera.*

Key Words: Phytochemistry, Sitamata Sanctuary, Ferns & fern allies, Rajasthan.

Impact of Smog on Environment

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Smog is a type of air pollutant. The word "smog" was coined in the early 20th century as a portmanteau of the words smoke and fog to refer to smoky fog, its opacity, and odor. The word was then intended to refer to what was sometimes known aspea soup fog, a familiar and serious problem in London from the 19th century to the mid-20th century. This kind of visible air pollution is composed of nitrogen oxides, sulphur oxides, ozone, smoke or dirt particles and also less visible particles such as CFC's. Human-made smog is derived from coal emissions, vehicular emissions, industrial emissions, forest and agricultural fires and photochemical reactions of these emissions.

Modern smog, as found for example in Los Angeles, is a type ofair pollution derived from vehicular emission from internal combustion engines and industrial fumes that react in the atmosphere with sunlight to form secondary pollutants that also combine with the primary emissions to form photochemical smog. In certain other cities, such as Delhi, smog severity is often aggravated by stubble burning in neighboring agricultural areas. The atmospheric pollution levels of Los Angeles, Beijing, and Delhi, Lahore, Mexico City, Tehran and other cities are increased by inversion that traps pollution close to the ground. It is usually highly toxic to humans and can cause severe sickness, shortened life or death.

Keywords: - Environment, Pollution, Smog, Engines.

Use of Metal Sulphides as Photocatalyst for Solar Desalination

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There is a large escalation of demand for fresh water because of the rapid industrial growth and explosion of population all over the world. This leads to acute fresh water shortage since the natural sources of water can meet the demands to a very limited extent. An effective, convenient and inexpensive method for the purification of water has been investigated, as water is one of the principal elements, which influences economic, industrial and agricultural growth of mankind. The over utilization of groundwater, uncertainty of monsoon, poor recharge, poor aquifer conditions, absence of proper monitoring and management have gradually influenced the quality of water. A solar desalination plant was fabricated to utilize solar energy to obtain distilled water. The effect of metal sulphides as photocatalyst, on the rate of production of distilled water and its quality was made and it was found that the rate of production of desalinated water increased to a remarkable extent. A comparative study of different parameters like pH, conductivity, concentration anions and cations, etc. was made between raw water and desalinated water under these condition.

Keywords: Solar desalination, Photocatalyst, Desalinated water, Solar energy, Solar still

Use of different Amines, surfactants and polymer as corrosion inhibitors for metals in acidic medium

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N,N-Dimethylaniline, Hexamine, isopropylamine, Polyvinyl pyrrolidone, and Cetyltrimethylammonium bromide are used as corrosion inhibitor for Carbon steel in different concentrations of Hydrochloric Acid medium at three different temperatures 25, 30, 35^{0}C. Corrosion rate and Percentage Corrosion Inhibition Efficiency (PCIE) in presence and absence of inhibitor was calculated by weight loss method, Electro chemical polarization experiments and Impedance spectroscopy techniques. Surface study of corroded and blank specimens was carried out by SEM and Metallurgical research Microscopy techniques. Different concentrations of (100, 200, 400, 600, 800 and 1000 ppm) was tested in different concentration of HCl solution i.e. 2.0, 1.0 and 0.1 N. Observed results show that percentage corrosion inhibition efficiency increases with increase in concentration of corrosion inhibitor. Effect of temperature on percentage corrosion inhibition efficiency was also studied. As the temperature increases percentage corrosion inhibition efficiency decreases. It is also observed that percentage corrosion inhibition efficiency decreases with dilution of HCl. Here combinations of these organic inhibitors are also used. These organic inhibitors act as a very good inhibitor for Carbon Steel in different hydrochloric acid medium.

Keywords: Carbon steel, Weight loss, Polarization, Impedance, Hexamine, Corrosion.

Forest livelihood challenges for women in tribal communities- study in biodiversity management in Udaipur, Rajasthan, India

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Sustainable developmental goals 2030 envision a society that is just and equitable and the role of women in biodiversity conservation efforts have to be encouraged so that conservation global targets are met. Despite history of laws (National Forest Policy of 1988, the Biological Diversity Act of 2002, Scheduled Tribes and Other Traditional Forest Dwellers Act of 2006) which have recognized tribal communities right to property ownership, traditional knowledge, and use/management of resources, the consistency of actual rights granted varies greatly across the country. Present study is an attempt to evaluate the use of forest produce in a historically tribal block of Rajasthan, India that exhibits varying degrees of controls over the forest land by the Forest Department, and Community Forest Rights (CFR) Committees. The absence of biodiversity management committee (BMC) as mandated by the Convention on biological diversity 1992 (CBD) has resulted in no documentation of the biodiversity prevalent in the area, its loss due to various reasons and no mechanism for access and benefit sharing (ABS) is in place. The level of Bhil and Garasia women in managing forest produce was studied and it was found that their livelihoods depended on some important trees, their fruits and leaves and which were sold in the local markets. Sporadic programs by forest department on social forestry also have women participating. There is need to encourage their traditional conservation practices so that deforestation can be halted.

Benefits of biodiversity resources in community conserved areas are not always equally distributed between rich and poor and between men and women; women do not participate in benefit sharing, and have limited access to forests for collecting fuel wood and non-timber forest products (NTFPs). Women need their rights and security ensured while accessing forests and there is need for institutional mechanisms to be put in place to guarantee the same.

Keywords: Women, Tribal communities, Biodiversity, Udaipur.

Mizoram Inner Insight of education system: Status of Current Knowledge, Challenges and Research opportunities in a Sandwiched state Mizoram

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Education provides the surest instrument for attaining sustainable development of a high order in a country. In this regard, primary education acts as the basic enabling factor for participation, freedom and overcoming of basic deprivation, whereas, secondary education facilitates economic development and establishment of social justice. Over the years, liberalization and globalization have led to rapid changes in the scientific and technological world and have prompted the general needs of improved quality of life and reduced poverty. This undoubtedly necessitates the school leavers, to acquire higher levels of knowledge and skills than what they are essentially imparted with, throughout the eight years of elementary education. Also, a crucial stage in the educational hierarchy, secondary education empowers children to aggrandize nations, by preparing them for higher education and also the world of work. Secondary education, in specific, as a part of this virtuous circle of growth and development, not only serves as an important transition from primary to higher education, but provides key generic competencies to individuals which prove important across all domains of knowledge. It provides skills for early employment and the foundation for further education. Secondary education is a vital part of a virtuous circle of economic growth within the context of a globalized knowledge economy. According to UNESCO, expanding secondary schooling is "a minimum entitlement for equipping youth with the knowledge and skills they need to secure decent livelihoods in today's globalized world." Secondary education also helps build social capital, by raising the likelihood that citizens will participate in democratic institutions, will join community organizations and engage in politics.

Photocatalytic Bleaching of Textile Wastewater of Bhilwara (Rajasthan) by Photo Fenton reagent

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Textile industries produce large volume of coloured dye effluent which are toxic and non-biodegradable during the last decade. Bhilwara textile industry is one of the most water and chemical intensive industries. About 200-400 litres of water is needed to produce 1 kg of textile fabric in textile factories and discharge polluted wastewater. Photocatalytic degradation of Textile wastewater by fenton reagent has been investigated by using U.V. light in Photochemical reactor at 254nm. The progress of reaction was observed spectrophotometrically. The effects of various parameters like concentration of catalyst, pH on the rate of degradation and decolourisation were also studied.

Key Words: Textile, Fenton reagent, Bhilwara.

Land Use / Land Cover Changes of IGNP Command area using High Resolution Satellite Data and Geographic Information System

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The main objective of the present study was to mapping and monitoring of the Land use/ Land cover (LU/LC) of Indira Gandhi Nahar Pariyojna (IGNP) Command area using high resolution satellite data. LU / LC map of IGNP Command area was prepared using IRS P6 LISS III & IRS 1C/1D LISS III satellite data, in ERDAS 9.1 and ARC/GIS 9.2 version software. In the interpretation of Land use/ Land cover of the IGNP Command area, it was found that the total geographical area is 25487.93 sq km. In this classification, 6 and 14 classes were identified in level-1 and level-2 respectively.

In the level-I classification of LU/LC based on satellite data, out of the total Command area 35.53 % under agriculture land, 1.06 % under built up, 0.13 % under forest, 61.58 % area under west land, 1.35 % under water bodies and 0.34 % under wetland. In the level-I classification of LU/LC based on satellite data (Year 1998-99), out of the total Command Area 33.49 % Under agriculture land, 0.93 % under built up, 0.11 % under forest, 62.83 % area under west land, 1.43 % under water bodies and 1.20 % under wetland.

In the level-II classification, LU / LC categories Crop Land-Rabi Crop, Fallow, Plantation, Built Up (Rural), Built Up (Urban), Scrub Forest, Barren Rocky/ Stony Waste, Salt Affected Land, Sandy Area, Scrub Land, Canal/Drain, Lakes/Ponds, Reservoir/Tanks, and Waterlogged were identified.

This result shows that agricultural land, settlement and forest is increasing in ten years which is good indication for that land transforming in wasteland to agriculture land. While Wasteland, Water bodies and Wetland decreased.

Keywords:- Land use/ Land cover, Indira Gandhi Nahar Pariyojna, Wetland, Satellite data.

Forest livelihood challenges for women in tribal communities- study in biodiversity management in Udaipur, Rajasthan, India

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Sustainable developmental goals 2030 envision a society that is just and equitable and the role of women in biodiversity conservation efforts have to be encouraged so that conservation global targets are met. Despite history of laws (National Forest Policy of 1988, the Biological Diversity Act of 2002, Scheduled Tribes and Other Traditional Forest Dwellers Act of 2006) which have recognized tribal communities right to property ownership, traditional knowledge, and use/management of resources, the consistency of actual rights granted varies greatly across the country. Present study is an attempt to evaluate the use of forest produce in a historically tribal block of Rajasthan, India that exhibits varying degrees of controls over the forest land by the Forest Department, and Community Forest Rights (CFR) Committees. The absence of biodiversity management committee (BMC) as mandated by the Convention on biological diversity 1992 (CBD) has resulted in no documentation of the biodiversity prevalent in the area, its loss due to various reasons and no mechanism for access and benefit sharing (ABS) is in place. The level of Bhil and Garasia women in managing forest produce was studied and it was found that their livelihoods depended on some important trees, their fruits and leaves and which were sold in the local markets. Sporadic programs by forest department on social forestry also have women participating. There is need to encourage their traditional conservation practices so that deforestation can be halted.

Benefits of biodiversity resources in community conserved areas are not always equally distributed between rich and poor and between men and women; women do not participate in benefit sharing, and have limited access to forests for collecting fuel wood and non-timber forest products (NTFPs). Women need their rights and security ensured while accessing forests and there is need for institutional mechanisms to be put in place to guarantee the same.

Keywords: Women, Tribal communities, Biodiversity, Udaipur.

Gas Permeation study of different foils used for packaging applications

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Commercially available aluminum foil, aluminum coated polymeric foils and polymeric substrate alone have been analyzed for their gas permeation characteristics. For this purpose their gas permeability coefficients have been measured by using carbon dioxide and hydrogen. We used hydrogen gas for reference purpose because of its smallest molecular size and hence higher permeation. From the analysis of the experimental results, it has been concluded that gas molecules can permeate through aluminum foil and Al coated polymeric foil. However, it has been found that aluminum coating reduces the permeation flux of CO_2 through the foil more than twenty times. Surface morphology of the Al coating on the PET polymeric substrate has been studied by optical microscopy and UV-Vis spectroscopy. Pin-hole sized defects in the Al metal coating are clearly visible. Fourier Transform Infrared (FTIR) analysis shows that Polyethylene terephthalate (PET) polymer has been used as a substrate.

Key words: Aluminum foil, Permeability coefficients, Optical microscopy, UV-Vis spectroscopy, FTIR, PET.

Impact of Indira Gandhi Nahar Pariyojana on Avian Fauna of Thar Desert Using High Resolution Satellite Data and GIS

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Thar Desert is a small desert but exhibits a wide variety of habitats and biodiversity. It is considered to be a unique desert because of its location at the crossing where Palaearctic, Oriental and Saharan elements of Biodiversity are found. This desert has sustained great civilization particularly in Ghaggar and Indus River basins. Both Flora and Fauna species in the Thar region constitute an invaluable stock of rare and resistant germ plasm which is too valuable from biological point of view.

The Indira Gandhi Nahar Pariyojana (IGNP) was introduced in the Thar with aim to improve social, economic and ecological conditions. While the canal has produced positive socio-economic impacts, the ecological impacts have mainly been negative. The Thar is under process of transformation. Though the IGNP has transformed more than 11% un-inhabitated desert grassland into a fertile land, the biodiversity is under threat because the canal has changed the soil moisture, soil texture and vegetation composition. Not only the flora, but also the fauna is changing at an alarming rate. Water-loving birds are replacing many desert-loving birds. Many species of Aravallis and Gangetic plain are extending their range into Thar Desert.

In this study, Impact of IGNP on avian fauna was evaluated using High Resolution Satellite Data and GIS. Land use / Land Cover map of IGNP command area was prepared using IRS P6 LISS III & IRS 1C/1D LISS III satellite data, in ERDAS 9.1 and ARC/GIS 9.2 version software. In the interpretation of Land use/ Land cover of the IGNP Command area, it was found that the total geographical area is 25487.93 sq km. In this classification, 6 and 14 classes were identified in level-1 and level-2 respectively.

Change in Land use / Land Cover, increases avian diversity. There are 43 bird's species are introduced in Thar desert, some species were seen first time in Thar desert, forest birds also reported in Thar desert. Endangered and critically endangered are also present in this region. Overall 276 bird species were reported on this study. The avian diversity is increasing, but this rise is at the lost of desert-dwelling species. Habitat alteration mainly under the impact of massive IGNP is also giving pathway to various life forms from magic areas replacing the indigenous desert's biodiversity.

Keywords: - Avian-Fauna, LU/LC, IGNP, Wetland, Satellite data.

Importance of ICT in Education

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Abstract This paper is a mere attempt to present a glimpse of meaning of ICT, its importance & its mandatory need for education, which is indispensable.ICT stands for INFORMATION & COMMUNICATION TECHNOLOGY . These technologies include: computers, the Internet, Broadcasting technologies (radio and television), Telephony.

One of the many challenges facing developing countries today is that of preparing their societies and governments for globalization and the information and communication revolution. Policy-makers, educationists, non-governmental organizations, academics, and ordinary citizens are increasingly concerned with the need to make their societies competitive in the emergent information economy. Globalization and innovations in technology have led to an increased use of ICTs in all sectors - and education is no exception. Uses of ICTs in education are widespread and are continually growing worldwide. It is generally believed that ICTs can empower teachers and learners, making significant contributions to learning and achievement. Of the teachers interviewed on the effectiveness of ICT in education majority of them felt that introduction and use of ICT adequately will be extremely effective in children‟s learning and achievement. However, current research on the impacts of ICTs on student achievement yields few conclusive statements, pros or con, about the use of ICTs in education. Studies have shown that even in the most advanced schools in industrialized countries, ICTs are generally not considered central to the teaching and learning process. However, there appears to be a mismatch between methods used to measure effects and the type of learning promoted. Standardized testing, for example, tends to measure the results of traditional teaching practices, rather than new knowledge and skills related to the use of ICTs. It is clear that more research needs to be conducted to understand the complex links between ICTs, learning, and achievement. Again, on the question of impact of audio visuals, research shows that surprisingly little documentation is available on the use and impact of video in education, barring one or two video projects like UNICEF‟s animation series, „Meena‟, which has become a key weapon in the battle against *gender and social inequity in South Asia.*

Many teachers are reluctant to use ICTs, especially computers and the internet. Some of the reasons for this reluctance include poor software design, skepticism about the effectiveness of computers in improving learning outcomes, lack of administrative support, increased time and effort needed to learn the technology and how to use it for teaching, and the fear of losing their authority in the classroom as it becomes more learner-centered.

In terms of using internet and other ICT as a resource for lesson preparation, most of the teachers interviewed, admitted to never or rarely using it, while very few used the internet to gather information sporadically or regularly.

Keywords: ICT, Computer, Internet, World Wide Web, Teleconferencing, Radio, Television.

Effect of Chromium on *in vitro* Growth and Antioxidant Potential of *Dianthus caryophyllus*L.

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Catalase, guaiacol peroxidase and polyphenol oxidase are antioxidant enzymes which are important in the metabolism of reactive oxygen species, and can be induced by environmental stresses including chromium (Cr), heavy metal toxic to living organisms. *In vitro* regenerated shoots of carnation (*Dianthus caryophyllus*L.) were exposed to $K_2Cr_2O_7$ and the activities of these antioxidant enzymes were analysed. Significant reduction in the POD activity was observed at 2nd week of culture followed by slight increase in the activity at the 4th week of culture. Maximum PPO activity was detected during the 3rd week of culture which was comparable to the control cultures. Significant reduction in the CAT activity was found at the 4th week. The chlorophyll content did not change significantly in the shoot buds developed up to 4th week of culture.

Keywords: *Dianthus,* $K_2Cr_2O_7$, Abiotic stress

Abbreviations: CAT: Catalase, $K_2Cr_2O_7$: Potassium dichromate, POD: peroxidise, PPO: polyphenol peroxidase

Mammalian Diversity at Nidani Reserve Forest, Alwar (Rajasthan)

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Nidani Reserve Forest (NRF) is situated at 5 Km. South West of Alwar city, Rajasthan. It is situated at 27°34′28″ N latitude, 76°35′16″ E longitude. It covers about 16 Km^2. It is included in the Buffer Area of Critical Tiger Habitat (CTH) of Sariska Tiger Reserve (Rajasthan Gazette, Forest Department -2012).

India is one of the 12 'mega diverse' nations of the World. The Indian subcontinent, a part of the vast Oriental biogeographical region, is very rich in biodiversity. According to National Biodiversity action plan NBAP (2008), Aravali Range and Alwar District of Rajasthan have been declared as ecologically fragile or eco-sensitive area. The vegetation cover is only around 19% in Alwar district much below the expected level of 33%. The vegetation of Nidani Reserve forest is tropical dry deciduous forests type according to the classification of forests given by Champion and Seth (1968). NRF is very rich in mammalian fauna. Some of the mammalian fauna found in the NRF include the leopard, jungle cat, striped hyena, golden jackal, chital, sambhar, nilgai, chinkara, wild boar, hare, hanuman langur and Rhesus monkeys. Present study deals with the status of mammalian fauna of NRF.

It is being suggested that the wild life fauna are important for the ecosystem, as they play various roles as scavengers, pollinators and predators of insect pest. Major threats to mammalian fauna are habitat loss and climate Change. Anthropogenic activities like fire wood collection, livestock grazing and improper management are also the major threats to the habitat loss. So, proper conservation of habitat of study area is essential.

Key Words: Biodiversity, Ecologically fragile, Conservation

Chemical Analysis of Ground Water of Vishwakarma Industrial Area, Jaipur

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The chemical analysis of ground water quality of Vishwakarma industrial area, Jaipur in Rajasthan is presented in this paper. It is important from this point of view to observe the suitability of water for safe drinking and irrigation.

Natural ground water bodies like tub-wells, hand pumps, tape water etc. are subjected to pollution comprising of organic and inorganic constituents. Among the inorganic constituents, metals have been recognized as the most harmful pollutants because they are not biodegradable and often have long term toxic effects.

The different parameters measured PH, conductivity, TDS, Calcium, Magnesium, Cl^-, F^-, $No3^-$, Na^+, K^+, SO_4^{2-}, Cd^{2+}, Pb^{2+} and Fe^{2+} have been in this investigation. From the observed data, it was found that parameters like conductivity, TDS, alkanity, NO_3^- have high values in this area whereas other parameters are approximately within the limits.

Keywords: Ground Water, Vishwakarma Industrial Area, Tub-wells, Hand pumps

Integrated Watershed Management for Sustainable Development of Land and Water Resources, Using Geo-Spatial Technology- Case Study of Pisangan Watershed, Ajmer District, Rajasthan, India

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Water is the most crucial for maintaining an environment and ecosystem conducive to sustaining all forms of life. An Integrated Watershed Management is an emerging concept for efficient use of rain run-off in the rural areas of India. The approach to Watershed Management is participatory in nature, people friendly, location specific and to provide services to the problems and need to the rural communities. The principle of Watershed Management is the proper management of all the precipitation by the way of collection, storage and efficient utilization of runoff water and to recharge the ground water. Rajasthan is a region with very limited water resources. The purpose of the research work is to show the application of procedures for sustainable management and development of the Land and Water Resources of the Pisangan watershed of Ajmer district, Rajasthan using Remote Sensing and Geographic Information System (GIS). Watershed boundary was delineated in which flow directions streams orderings and streams lengths have been analyzed and computed. Data was further analyzed and used for preparing digital elevation model. Digital Elevation Model has been utilized for generating slope of the area. In the recent era, Geo-spatial technology proved its efficiency in the preservation, conservation and development of natural resources. It is used to monitor the natural resources and a vast geographical data set can be well managed in a systematic way and the goal of sustainable development can be achieved. Sustainable management of Land and Water Resources was examined through various thematic layers. Land use/Land cover, Soil type, geomorphology, Lithology, Lineament structures, drainage network has been prepared. The study has led to the delineation of area where water occurrence is most promising for sustainable development of low cost structures that are percolation tanks, Storage Tank and Check dams. The findings provide the basic concept to use a natural resource in a multiple way and can be a reference to the decision makers in the region in utilizing the land and water in a scientific and systematic manner.

Key Words: GIS, Watershed management, Geo-spatial technology, Remote sensing

The Dielectric studies of Hydrocarbon Contaminated Soil at Microwave Frequencies

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Anthropogenic activities regarding development (urbanization, industrialization, vehicular traffic) have increased the presence of the hydrocarbons in the soil, which has significant social and environmental impacts. Human exposition of these compounds can have serious health consequences like neurological diseases or cancer. Characterization of soil contaminated with hydrocarbon and the determination of the level of contamination and reclamation of contaminated soil is important emerging field of study. Dielectric studies show high potential for characterization of contaminated soil . Detection of locations of contamination sites, determination of the level of contamination and reclamation of contaminated soils are possible by dielectric studies at microwave frequencies. In present investigation the real and imaginary parts of dielectric constant (ε' and ε'') are determined for dry and moist soil of Alwar, artificially contaminated with crude oil varying 0.0% to 10.0% gravimetrically. ε' and ε'' of soil are determined at 34.5^0C temperature and at a X-band microwave frequency. It was observed that ε' and ε'' increases as percentage concentration of crude oil in the soil increase but the effect of crude oil mixing on dielectric properties is more significant for moist soils. ε'' of moist soil is strongly correlated with contamination level of soil. This can attribute to the increasing of ε' with increasing the conductance channel (free water content) formed by water. The loss factor ε" increases with contamination because, crude oil has the complex compositions consisting various compound as resins having the polar molecules, often containing hetero-atoms such as nitrogen, oxygen or sulpher. The parameter "tangent loss" related to the microwave heating of soil is also determined regarding reclamation of soil. The microwave emissivity (e) is a basic observable parameter at the sensor in passive microwave remote sensing. Microwave emissivity primarily depends on the dielectric constant of soil. Surface. Thus, in case of contamination of soil due to presence of hydrocarbons, the emissivity of soil at microwave frequencies depends upon the percentage of contaminants in the soil. A ground base radiometer can detect changes in the dielectric properties of soil due to hydrocarbons contamination. Thus, impact of dielectric variation of soil due to crude oil contamination can be used to detect the location and degree of contamination by a radiometer on the principle of passive microwave remote sensing.

Keywords: Hydrocarbon Contaminated Soil, Microwave Frequencies, Anthropogenic activities

Transdisciplinary Research for Sustainable Agriculture: A Perspective for Genetically Modified Bt Brinjal

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Transdisciplinary Research and Development is a tool for addressing complex problems such as sustainable intensification, a vision for agriculture, in which varied ecosystems jointly increase to meet the future needs of humanity and the biosphere. Agricultural Research and Development systems and associated social groups are strongly polarized across biotechnological, diversified, conventional, and organic approaches, and there are strong systemic and ideological barriers to integration. An illustration is the embracing of the Genetically Modified (GM) technology with an attempt in trying to commercialize the first genetically modified vegetable, Bt Brinjal on which a public moratorium was issued for its approval and commercialization. Since the growing impact of science on society has encouraged society to have an increasing role in science, the voice of the public in debates about science and the way it impacts on citizens is growing. This requires an outcome-driven approach that draws on all available practices and technologies to design agro ecosystems for the pursuit of "sustainability". Transdisciplinary research approach offers the most promising way forward, bridges the traditional boundaries between disciplines and between academia and practice. The integration of biotechnologies, diversified farming systems, organic and conventional production systems emphasize integrative assessment and analysis of complex problems. A transdisciplinary methodology is therefore suggestive on processes of dialogue, collaboration and negotiation for the future consumption of GM food crops as it engages with a wide group of stakeholders; listening to the public voice as well as engaging with policy makers.

Keywords: Transdisciplinary Research, Agriculture, Bt Brinjal

Screening of antimicrobial activity of *Cassia tora (L.)* extracts

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Infectious diseases are one of the leading causes of death in the world. Due to the undesired effects of synthetic antimicrobial agents and the development of drug resistance in human pathogens, pharmaceutical industries are searching for natural compounds to treat these problems. *Cassia tora* is a well known plant in Ayurveda and is used in traditional system of medicines for the treatment of skin diseases caused by Dermatophytes. The literature indicates that *Cassia tora* extract shows presence of biologically active compounds viz; anthraquinones, sennosides flavonoids and other natural phenolic compounds, correlated to known substances that possess antimicrobial activity. To evaluate the scientific basis for the use of the plant as antimicrobial agent, the comparative antimicrobial activity of methanolic extract of different plant parts of *C. tora* was screened against bacteria *viz*. *Escherichia coli, Staphylococcus aureus* and fungi *viz. Aspergillus flavus, A. niger*. Antimicrobial activity of different extracts was determined by agar diffusion method. For bacterial culture, nutrient broth medium and for fungal culture, PDA medium was used. In agar diffusion assays all the plant extracts (leaves, stem, root, seeds and the callus developed from leaf explants) showed an interesting antimicrobial activity. So the study suggests that *C. tora* can be used in the treatment of skin diseases.

Keywords : Antimicrobial activity, *Cassia tora,* Methanolic extract, Callus culture.

Physicochemical and microbial analysis of Pushkar Sarovar in association with monthly pilgrim load, a revered pond in Rajasthan (India)

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One of revered water bodies of India, *Pushkar Sarovar* ($26^0$30'N, $74^0$33'E at 486m above msl) is now facing challenges due to negligence. The present study was intended to analyses the effect of pilgrim load in deterioration of water quality during January 2017 to December 2017. *Pushkar Sarovar* is perennial pond, with an area of 5 km^2, encircled by 52 Ghats for public use particularly for holy bath. This pond is fed by vast catchment area of more than 50 km^2. The analysis revealed association among water quality parameters and pilgrim toll. After massive influx of Pilgrims during Pushkar Fair, the quality parameter showed significant drift. Turbidity (53.61 NTU) and electric conductivity (499.8 microS/cm) became much higher with acidic pH (6.12). TDS (336.8 mg/l), Alkalinity (204.63 mg/l) and chloride (34.26 mg/l) were also become higher after mass bathing during Pushkar fair. Phosphate was remarkably high (ranged from 4.52 mg/l to 8.52 mg/l) due to dumping of cremation wastes throughout the year but nitrates were found around 1 mg/l. Total coliform (85 MPN/dl) and fecal coliform (13 MPN/dl) became higher after fair. Their presence may indicate presence of other harmful bacteria in water. Overall mass bathing causes a significant change in water quality, which may represent a health hazard to the users.

Keywords: Pushkar Sarovar, Mass bathing, Pilgrim, Water quality, Phosphate, Coliform

Teaching Effectiveness of Hindi Language Teachers in Secondary Schools

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It is the Aptitude that indicates as to how effectively and successfully an individual can perform a task. Teachers are very responsible resource persons for development of society. If a teacher has positive aptitude, he will enjoy his work and this will surely develop students and bring about achievement. It is essential to create an academic environment and psychological mindset in which teachers inculcate positive and healthy aptitude for their profession. In the present study, researchers have undertaken survey of Hindi and English medium teachers of higher secondary schools. Teacher Aptitude Inventory of Ahluwalia is used and modified according to specific condition and given to selected teachers teaching Hindi language subject. Findings indicate that teachers of both medium have almost similar and positive Aptitude for their profession. Both Hindi & English medium teachers have positive attitude towards teaching Hindi language as their profession. But Hindi medium teachers have higher and better aptitude towards teaching profession than English medium teachers.

Hindi language teachers in both medium of instruction accept that student's personal, moral and cultural development can be done by educating them properly. Psychologically they accept that teaching is the best profession for them and they feel proud to be a teacher. After joining teaching profession, both Hindi & English medium teachers felt that their level of self-confidence has highly increased.

Both Hindi and English medium teachers appreciated and promoted innovative and interactive Hindi language teaching. They also promoted child-centered education in teaching Hindi language. All activities (curricular, co-curricular or extracurricular) done by students are evaluated for proper assessment of any student. It is teaching through which good and progressive social environment can be created and improved.

Keywords: Teaching, Hindi Language Teachers, Effectiveness

Identification and bio-control of *Pseudomonas syringae* pv. *pisi* causing bacterial blight of pea

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Pseudomonas syringae pv. *pisi* is a Gram negative facultative phyto-pathogen cause bacterial blight disease of pea. The pathogen was identified on the basis of cultural, morphological, biochemical and molecular characterization. Bio-efficacy of six different medicinal plant extracts namely *Withania somnifera* (leaves), *Azadirachta indica* (leaves), *Emblica officinalis* (fruits), *Treminelia chebula* (fruits), *Allium sativum* (bulbs) and *Zinziber officinalis* (rhizomes) was tested *in vitro* using filter paper disc assay and seed treatment method against *Pseudomonas syringae* pv. *pisi*. The fresh aqueous plant extracts at two concentrations (50% and 100% w/v) were tested. All six plant extracts were found significantly effective to control the pathogen. The maximum antibacterial activity was shown by aqueous extract of *A. sativum* (IA=455.98mm^2) followed by *T. chebula* (IA=415.25mm^2). Seed treatment with aqueous extract of *A. sativum* improved seed germination (94.6%) as compared to check (56.3%) and control the incidence of the pathogen in seeds (85.5%).

Keywords: Antibacterial, *Pseudomonas syringae* pv. *pisi*, Seed treatment, Pea, Plant extracts.

The role of selected herbs and shrubs in the Sodium, Potassium, Calcium & Phosphorus cycling in a tropical dry deciduous forest in Rajasthan in North-West India

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The dominant herbs *Adhatoda vasica* & *Achyranthes aspera* and shrubs *Grewia flavescens* & *Capparis sepiaria* play important role in cycling of Na, K, Ca and P in a tropical dry deciduous forest in Rajasthan. Among the four plant species, the herb, *Adhatoda vasica* return higher amount of Sodium to the soil, through litter. Except *Adhatoda vasica* the other three species do not lose Sodium more than the proportion of Sodium present in the soil. The shrubs exhibit a tendency to retain Sodium in their plant body. However, among the shrubs, *Grewia flavescens* return higher amount of Sodium to soil through litter fall than *Capparis sepiaria*. The percentage of Potassium is four times higher in the above ground biomass of *Achyranthes aspera* than in the rest of the three species. Thus it may be suggested that this herb conserve large amount of Potassium, in its growing period during rainy season, thus reducing loss due to soil erosion with runoff water in the forest. Calcium was highest in the above ground parts of *Grewia flavescens* as compared to other three plant species and is lowest in *Achyranthes aspera*. Both the herbs allocate higher amounts of Calcium to leaves while shrubs allocate more to stem and branches. It may be suggested that former allocates more Calcium to leaves to increase photosynthetic area whereas the latter to stem to increase their canopy size. The perennial herb *Adhatoda vasica* allocates more Phosphorus to roots and stem to increase its competitive ability whereas the annual herb *Achyranthes aspera* allocates more to above ground parts to increase its reproductive capacity. The percentage of Phosphorus was higher in the litter in all the perennial species as compared to living biomass. Finally, it may be concluded that the herbs and shrubs play more important role in the cycling of Calcium whereas the herb *Adhatoda vasica* in the cycling of Sodium, Potassium and Calcium and *Achyranthes aspera* in the cycling of Potassium in the forest.

Keywords: Biomass, Litter fall, Nutrient conservation, Percentage of elements, Re-translocation

Environmental Challenges in the 21st Century

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Climate change is one of the complex problems facing now a days. Climate change is not an isolated issue. It has several aspects & inter-linkages namely, science & technology, trade, that makes it not just another issue in this complicated world of proliferating issues. Air pollution, water pollution, garbage & pollution of the natural environment are all challenges for India. According to World Bank expert, between 2000 through 2017, India has made one of the fastest progressing countries in the world, in addressing its environmental issues. India has a long way to go to reach environmental quality similar to those enjoyed in developed economies. Pollution remains a major challenge for India. The pursuit of economic growth is compounding the growth in demand. Global warming is exacerbating the sustainability challenge as it may reduce agricultural production & will result in physical damage resulting from extreme weather events, sea-level rise, etc. Actuaries can examine the different scenarios for climate change and use of resources to quantify the risks and provide guidance through cost analyses. Given the multidisciplinary nature of these issues, actuaries can benefit from inputs by non-actuarial entities and work in cooperation with other professionals to serve the public interest through optimizing policy options.

Keywords: Environment, 21st Century, India.

Preliminary Survey of Nidani Reserve Forest, Alwar (Rajasthan)

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Nidani Reserve Forest (NRF) is situated at 5 Km. South West of Alwar city, Rajasthan. It is situated at 27°34′28″ N latitude, 76°35′16″ E longitude. It covers about 16 Km^2. It is included in the Buffer Area of Critical Tiger Habitat (CTH) of Sariska Tiger Reserve (Rajasthan Gazette, Forest Department -2012).

India is one of the 12 'mega diverse' nations of the World. The Indian subcontinent, a part of the vast Oriental bio-geographical region, is very rich in biodiversity. According to NBAP (2008), Aravali Range and Alwar District of Rajasthan have been declared as ecologically fragile or eco-sensitive area. The vegetation cover is only around 19% in Alwar district much below the expected level of 33%. The vegetation of NRF is tropical dry deciduous forests type according to the classification of forests given by Champion and Seth (1968). NRF is very rich in wild life fauna. Some of the wildlife found in the NRF include the leopard, jungle cat, striped hyena, golden jackal, chital, sambhar, nilgai, chinkara, wild boar, hare, hanuman langur, Rhesus monkeys, and plenty of bird species and reptiles. Birds include peafowl, grey partridge, bush quail, sand grouse, tree pie, golden-backed woodpecker, crested serpent eagle and the Great Indian Horned Owl. Present study deals with the status of vertebrate fauna of NRF. It is being suggested that the wild life fauna are important for the ecosystem, as they play various roles as scavengers, pollinators and predators of insect pest. Major threats to wild life fauna are habitat loss and climate Change. Anthropogenic activities like fire wood collection, livestock grazing and improper management are also the major threats to the habitat loss. So, proper conservation of habitat of study area is essential.

Keywords: Biodiversity, Ecologically fragile, Conservation

Integrated Watershed Management for Sustainable Development of Land and Water Resources, Using Geo-Spatial Technology- Case Study of Pisangan Watershed, Ajmer District, Rajasthan, India

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Water is the most crucial for maintaining an environment and ecosystem conducive to sustaining all forms of life. An Integrated Watershed Management is an emerging concept for efficient use of rain run-off in the rural areas of India. The approach to Watershed Management is participatory in nature, people friendly, location specific and to provide services to the problems and need to the rural communities. The principle of Watershed Management is the proper management of all the precipitation by the way of collection, storage and efficient utilization of runoff water and to recharge the ground water. Rajasthan is a region with very limited water resources. The purpose of the research work is to show the application of procedures for sustainable management and development of the Land and Water Resources of the Pisangan watershed of Ajmer district, Rajasthan using Remote Sensing and Geographic Information System (GIS). Watershed boundary was delineated in which flow directions streams orderings and streams lengths have been analyzed and computed. Data was further analyzed and used for preparing digital elevation model. Digital Elevation Model has been utilized for generating slope of the area. In the recent era, Geo-spatial technology proved its efficiency in the preservation, conservation and development of natural resources. It is used to monitor the natural resources and a vast geographical data set can be well managed in a systematic way and the goal of sustainable development can be achieved. Sustainable management of Land and Water Resources was examined through various thematic layers. Land use/Land cover, Soil type, geomorphology, Lithology, Lineament structures, drainage network has been prepared. The study has led to the delineation of area where water occurrence is most promising for sustainable development of low cost structures that are percolation tanks, Storage Tank and Check dams. The findings provide the basic concept to use a natural resource in a multiple way and can be a reference to the decision makers in the region in utilizing the land and water in a scientific and systematic manner.

Key Words: Geographic Information System, Watershed management, Geo-spatial technology, Remote sensing

Role of Teacher in Environment Challenges

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Prevention is better than cure, is an old saying which is very apt in the context of environment and education, environment and disasters and sustainable development. Awareness and education is an important tool in creating this culture of prevention and preparedness. We use the environment and its resources to serve our many purposes, the fact of the matter is that because of ignorance, arrogance and defiance of the natural laws of the environment, the net result of the human occupancy of the Earth has been an environment crisis of grave dimension. 'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. In this context, Environment Education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops, and fosters attitudes, motivations and commitments to make informed decisions and take responsible action.

The role of teacher is very important to build the nation making; they play a crucial role in forming, changing and establishing attitudes and values. A teacher is a friend, philosopher and guide of the students. Importance of sustained development and environmental education must teach knowledge of the environment based on a balanced presentation of current scientific information. Professionals in higher education can play one of the most decisive roles through innovative progamme by finding ways to integrate interdisciplinary and system approach in their higher level courses. Through Eco-club, project work, environmental labs, quiz, debates etc., we can provide proper information and knowledge to the students. In this way the new generation can imbibe and spread to families and community and prepare, leading to reduced vulnerability and possible reduction in impact of the disaster on lives, livelihood and property and can contribute in nation building.

Keywords: Teacher, Environment, Sustainable development

Rare sighting of a large flock of Demoiselle Cranes (*Grus virgo*) near Ramnagar wetland, Bundi, Rajasthan

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Wetlands play important role in maintaining avifaunal diversity as these cradles of biodiversity harbour many plant and animal species which work as life support system for numerous resident and migratory bird species. Many avian species rely on wetlands for food, shelter and breeding grounds. Demoiselle Crane (*Grus virgo*) which are winter visitors to Indian subcontinent also use wetlands as shelter as these large birds often roost in shallow wetlands and marshes after feeding largely on shoots of wheat, gram and paddy in nearby cultivation, considerably damaging winter crop. Ramnagar wetland which is about 10 kilometres away from Bundi city, situated on Bundi-Bhilwara Road, is surrounded by many agricultural farms. In winter, farmers cultivate paddy and wheat in surrounding farms which extends favourable environment for migratory birds including Demoiselle Cranes. Present study deals with sighting of a large flock of Demoiselle Cranes around Ramnagar wetland near Bundi, Rajasthan.

Keywords: Demoiselle Crane, Bundi, Rajasthan.

Effulgence of Behavioural quagmire: An assessment of Teacher Student Interaction through SALSA System

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Effective interactions between teachers and students are essential for promoting long-term school success across all the grades. **The School Assessment lexical Scoring Analysis (SALSA)** offers an evidence-based approach to defining and measuring effective interactions in school classrooms. The SLASA also provides aligned professional development supports to give targeted feedback to districts, schools, and teachers, with the overarching goal of improving outcomes for students. Attempts at defining and measuring quality in education have yielded limited results. We now know that many of the more commonly debated regulations intended to improve the impacts of classrooms (i.e., class size, teacher education, and credentialing) are not sufficient to ensure that students make academic and social progress. Likewise, the implementation of different curricula has done little to improve student achievement because it is teachers' facilitation of learning objectives, not simply having the curriculum box on the shelf that determines whether students benefit from instruction. Consistent evidence suggests that to improve students' academic achievement and social skill development, we need to focus on the nature and quality of teacher-student interactions.

Keywords: SALSA System, Behavioural quagmire, Teacher Student Interaction

Modern Concerns of Educational Researches

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There is a growing research base about the use of data for educational improvement. Unfortunately, still many problems persist as they were in past. Undoubtedly, since descent modification, the numbers of researches have been increased, and many of these are found fruitful for sundry further studies. The field of educational policy research has undergone a dramatic transformation. Just a few decades ago, policy analyses were almost exclusively conducted by government agencies themselves. Academic researchers slowly entered the field, but the relationship between academically-inspired policy research and policymakers was tenuous and haphazard. Over the past twenty years, though, the rapid growth of nongovernmental and nonacademic organizations dedicated to educational policy reform has shifted the policymaking landscape. Advocacy groups, nonprofits, think tanks, consultants, and interests groups produce copious amounts of research with varying degrees of rigor and varying degrees of bias. The influx of research from these sources has been coupled with a simultaneous increase in the amount of policy research produced by academics and governmental bodies, and the sheer quantity of research is all the more overwhelming as the complexity and sophistication of policy analysis as a field continues to grow. Ironically, then, policymakers concerned with education find themselves in a notable predicament: they work in an environment where they have access to more research than ever before, but it may be more difficult than ever to find high quality and trustworthy research.

Keywords: Educational Research, Academics and governmental bodies, High quality, Trustworthy

Causes Of Environmental Pollution And Implementation Of Green Chemistry Methods

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There are many causes of environmental pollution like; Industries; Transportation; Agriculture activities; Residences etc. The over consumption of resources and creation of plastics are creating a global crisis of waste disposal. Plastic, fast food, packaging and cheap electronic wastes threaten the well-being of humans. Waste disposal is one of urgent current environmental problem. If we not alert toward air pollution, big cities would be the "Gas Chamber" after some years.

Air quality of Delhi and Delhi NCR has been became a big problem. Particulate matter PM10 (particles smaller than 10 microns, limits 25 μg/m3 24-hour mean) and PM2.5 (particles smaller than 2.5 microns, about 25 to 100 times thinner than a human hair ; limit 50 μg/m3 24 hour mean) in air was found higher than permissible limits December 2017.

Environmental challenges- Greenhouse effect, Ozone depletion, Photochemical smog and Acid rain etc, have been come out in front of academicians and scientists to save the earth planet. Therefore, it is necessary to the implementation of Green Chemistry methods for reducing - waste, material, hazard, risk energy and cost.

Kinetics and Mechanism of Pd(II) Catalysed Oxidation of Alanine by Cerium(IV) in Aqueous Acidic Medium

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The Pd(II) catalysed oxidation of alanine by Ce(IV) in aqueous sulphuric acid medium has been studied spectrophotometrically at 45°C and I = 1.50 mol dm^{-3}. Stoichiometry analysis shows that one mole of alanine reacts with two moles of cerium (IV) to give Ce(III) and aldehyde. The reaction is first order in both Ce(IV) and Pd(II) and the order with respect to alanine concentration varies from first to zero order as the alanine concentration increases. The rate decreases with the increase of $[HSO_4^-]$ and increases of $[H^+]$. The active species of oxidant is $Ce(SO_4)_2$. A mechanism is proposed, and the reaction constants and activation parameters have been determined.

Keywords: Kinetics, Mechanism, Cerium(IV), Alanine, Palladium(II) catalysis, Sulphuric acid medium.

Seasonal Variation in Water Quality of Kakund River at Bandh Baretha Wild life Sanctuary: A Case Study of Bandh Baretha Dam, Bharatpur, Rajasthan

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An alarming rate of deterioration of water quality of fresh water resources like pond, lake and rivers etc is now a global problem. The present study was conducted to evaluate the seasonal variations in the physicochemical properties of Kakund river water at Bandh baretha dam which is an important bird area (IBA) and support the wildlife of Bandh Baretha Wild life Sanctuary. Water quality status was observed by different parameter viz. Temperature, pH, total hardness, total dissolved solids, Electrical Conductivity, dissolved oxygen, biological oxygen demand (BOD), alkalinity, chloride, nitrate, phosphate and heavy metals. All parameter were found under the prescribed limit but rising trend in amount of nitrate, phosphate and biological oxygen demandindicate contamination in water due to agricultural runoff and other anthropogenic activities.

Keywords: Important Bird Area (IBA), Wild life Sanctuary, Anthropogenic, Habitat suitability.

E-Waste: Handling and Human health

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Electronic waste or e-waste describes discarded electrical or electronic devices. Used electronics which are destined for reuse, resale, salvage, recycling, or disposal are also considered e-waste. Thus, old electronic equipment that has outlived useful life is categorized as e-waste. Because technology advances at such a high rate, many electronic devices become "trash" after a few short years of use. In fact, whole categories of old electronic items contribute to e-waste such as VCRs being replaced by DVD players, and DVD players are being replaced by Blu-ray players. E-waste is created from anything electronic: computers, TVs monitors, cell phones, PDAs, VCRs, CD players, fax machines, printers etc.Informal processing of e-waste in developing countries can lead to adverse human health effects and environmental pollution.These pollutants are responsible for groundwater contamination, air pollution and soil acidification.

Electronic scrap components, such as CPUs, contain potentially harmful components such as lead, cadmium, beryllium, or brominated flame retardants. Recycling and disposal of e-waste may involve significant risk to health of workers and communities in developed countries and great care must be taken to avoid unsafe exposure in recycling operations and leaking of materials such as heavy metals from landfills and incinerator ashes.

On an average, in India, in case of mobile phones the useful life goes up to 2 years, in case of PCs, it may go up to 5 years. The life of these equipments is extended due to reasons such as upgrade, repair and reuse, donation to charity etc. It is therefore important that viable solution found to address the problem of e waste involving skilled manpower from the different sectors of the economy and use of appropriate technology to recycle the e-waste products.

Keywords: E-waste, salvage, Pollution, Incinerator ashe

Bio toxicity of heavy metals and their contamination in Yamuna River

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Heavy metal is an imprecise term which includes metallic elements that have relatively high density compared to water. Metals are introduced in water by various natural processes like weathering of soil and rocks, from volcanic eruptions and also from variety of human activity like agriculture, pharmaceutical, domestic effluents, mining, foundries, smelters and other metal based industries. The most common heavy metal pollutants are Lead, Arsenic, Cadmium, Chromium, Nickel, Copper and Mercury, which are able to induce toxicity even at low level of exposure. These metal elements are considered as system toxicants that can induce damage of multiple organs like liver, kidney etc. even at lower level. There are different types of sources of pollutants, which are highly responsible to contaminate and pollute the holy and mythological river Yamuna i.e. point sources and non-point sources. From different drainage systems like industrial waste and household drainage released acid makes heavy metals soluble in water. When the pH of water falls, metal solubility increases and metal particle become more mobile which can affect a long range in area and even not easily separable by normal separation methods using in day-to-day life.

Keywords: Bio toxicity, Heavy metal, Yamuna River, High density

Eco-Friendly Approach for De-Fluoridation of Potable Water

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Fluorosis is a disease, caused by excess intake of fluoride (>1.5ppm) through diverse sources. Men and nature both are responsible for this disease. Water is generally being the principal source of fluoride. The presence of fluoride in the drinking water above (and sometimes even below) permissible limits can (1.5 ppm accordingly to WHO) leads to fluorosis. Elemental fluorine exists as a diatomic molecule with remarkably low dissociation energy (38kcal/mole); as a result, it is reactive and has a strong affinity for combining with other elements forming compounds called as fluorides. Fluorosis occurs not only in India but also in other countries, all of them facing the problem of excess fluoride in drinking water. It is a worldwide health problem and is affecting both the developing and developed countries. Today, it is not only a clinical problem but a social problem too. In the whole world, about 25 countries have high fluoride concentration in ground water. Rajasthan is the worst affected state in India. As per a report of WHO, 20% of fluoride-affected village in the whole world are in India. Fluoride entering the body through water is almost completely absorbed where as fluoride ingested through food is absorbed to a much lesser extent. Aluminum salts are commonly used as coagulants in water treatments. Aluminum fluoride is less toxic than other fluorides. In this study Aluminum compounds was used as de-fluoridating agent in drinking water earthenware. Aluminum compounds were incorporated in different amounts in soil. Some soil pots were prepared by the mixture. It was noted that these soil pots had a remarkably decreased concentration of fluoride in drinking water in case of some compound. The concentration of fluoride was determined by the fluoride ion selective electrode method. The fluoride ions present in sample are adsorbed by aluminum ion by inter- ionic interaction and surface adsorption phenomenon. Langmuir and Freundlich isotherms curves were also plotted. pH, TDS, hardness, fluoride and aluminum parameters were also examined in residual water samples. It was also noted that TDS, pH of water samples are slightly changed.

Keywords: Adsorption, Aluminum compounds, De-fluoridating, Fluoride, Fluorosis.

Structural and Positron life time study of compound semiconductors

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The positron annihilation studies have been presented on II-VI group polycrystalline CdSe and CdTe compound semiconductors. Samples were prepared in form of 1 mm thick pellets having 12 mm diameter using hydraulic pressure at 3 ton. These pellets annealed at different temperature under vacuum (10^{-5}torr) then characterized using positron annihilation spectroscopy and X-ray diffraction (XRD) techniques after and before annealing. Structural properties have been observed for both the pristine as well as annealed samples. It has been found that concentration of defects is decreased and crystallinity of samples is increased after annealing.

Keywords: Compound semiconductors, Positron annihilation spectroscopy, Structural property
PACS: 71.15.Dx, 71.20.Nr, 78.70.-g

Water Scarcity: A Global Issue

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Abstract: - This chapter explores about the problems that we are facing because of water scarcity. Water is very important in our life and its scarcity can lead us to many problems. Basically, water scarcity is the lack of sufficient available fresh water resources to meet water demand. It affects every continent and is the largest global risk. 0.014% of all water on Earth is both fresh and easily accessible. The unequal distribution results in some wet and some dry geographical locations. Today, humanity is facing water crisis and we are continuously wasting the water available with us. At the current consumption rate, the situation will only get worse. By 2025, two-thirds of the world's population may face water shortage. There will be many affects of water scarcity such as lack of availability of drinking water, hunger, diseases, sanitation issues, etc. In Cape Town, forecasters have forecasted that the water available with them will last till 16 April. To use the available water for longer, South African Government has reduced the consumption of water from 87 liters to 50 liters a day. If we want to overcome this problem, then we must take certain steps. We must educate people not to waste the water, store water, etc so that this problem of water scarcity can be easily solved.

Keywords: scarcity, consumption, sanitation, location

Study of water pollution, scarcity and its management in India by Potential Roof Rain Water harvesting system

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Water pollution has become one of the greatest toxic loads in the history of our planet. Drinking pure water and removing toxins is important in maintaining health and avoid cancer. Treating cancer alternatively looks at cancer and other diseases to see the effects of water pollution and how each of us can rid our bodies of some of the toxins that are in our water.

One hundred years ago, people died from contaminated water. Cholera, diarrhea, hookworm, trichuriasis, were all traced to water. With an increase in the population and the demand for water, came an increase in water's contaminants. Our municipalities have the enormous job of purifying the tremendous volume of water that flows into our homes. They have kept the population as healthy as possible. However there is more that each of us can do individually to ensure that we are drinking pure water. Water is scarce natural resource, even though 71% of land is covered by water. Out of total water on the earth near about 2.5% are fresh which is being utilized for various purposes viz. domestic, irrigation and industrial are common. Water scarcity has become a serious global threat due to hap hazardous population growth, frequent droughts and changing climate pattern (Carolina B. Mendez et.al). Now a day, the need of domestic water is magnifying tremendously in a developing country like India which has long tradition of rural culture. Here, an attempt has made to estimate the potential of roof rain water harvesting in India.

Keywords: Water pollution, Roof Rain Water harvesting, Rural culture

Causes of Environmental Pollution and Implementation of Green Chemistry Methods

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There are many causes of environmental pollution like; Industries; Transportation; Agriculture activities; Residences etc. The over consumption of resources and creation of plastics are creating a global crisis of waste disposal. Plastic, fast food, packaging and cheap electronic wastes threaten the well-being of humans. Waste disposal is one of urgent current environmental problem. If we not alert toward air pollution, big cities would be the "Gas Chamber" after some years. Air quality of Delhi and Delhi NCR has been became a big problem. Particulate matter PM10 (particles smaller than 10 microns, limits 25 μg/m3 24-hour mean) and PM2.5 (particles smaller than 2.5 microns, about 25 to 100 times thinner than a human hair ; limit 50 μg/m3 24 hour mean) in air was found higher than permissible limits December 2017. Environmental challenges- Greenhouse effect, Ozone depletion, Photochemical smog and Acid rain etc, have been come out in front of academicians and scientists to save the earth planet. Therefore, it is necessary to the implementation of Green Chemistry methods for reducing - waste, material, hazard, risk energy and cost.

Keywords: Environmental Pollution, Green Chemistry Methods, Gas Chamber

Ban on Crop Residual Burning and the Plight of Small Farmers

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National Green Tribunal (NGT) imposed ban on burning of crop residue in the states of Punjab, Haryana, Uttar Pradesh, Delhi and Rajasthan after NASA observed 'red patches of fire amidst brown fields and there states and cloud of black smoke' over National Capital Region (NCR) in 2015. At the end of kharif season, which also heralds the advent of winter, the problem of smog becomes critical in Delhi due to burning of paddy straw in these states. Government of these states were, therefore, directed by NGT on the one hand to take punitive action against farmers were not obeying the order and on the other give financial assistance to small and marginal farmers for using modern machines for cutting and removing the crop straw in an eco-friendly way. As a result government started gathering fines from farmers, but asking the central government for funds, did nothing to give them financial assistance. Small and marginal farmers are hardest but by this dichotomy. Already reeling under huge amount of debts and facing scarcity of labor as well as rising labor wages, they are in a vulnerable condition. Though coming in direct contact of harmful smoke and wearing loss of soil nutrients due to burning, farmers find themselves helpless. Compensating the cost of pollution-free straw management by selling it for industrial use, is also not a practical solution with very scanty buyers in the form of bio-fuel units, cardboard units, paper plants, etc..Apart from straw burning, pollution by industries, construction activities, brick kilns, stone-cutting units etc., have been banned by NGT. However, their owners being powerful and influential, are not much bothered by it. A complaint has been filed in NGT about large number of brick kilns violating the ban. Thus, implementing the order of NGT regarding dispersal of financial aid to small and marginal farmers and earmarking sufficient funds for ensuring easy availability of machines like happy seeders and straw reapers to them, expanding network of biomass based power plants and other industrial units for reuse of crop residue, providing collection and transportation assistance must be at top most priority of the government for the upliftment of poor farmers along with sustainable development and food security.

Keywords: Crop, Residual Burning, Small Farmers

Floristic diversity in the Government Post Graduate College Campus, Bundi, (Rajasthan)

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Trees found in forests are priceless gifts of nature to humans. The existence of all mankind is dependent on the existence of plants and organisms. Plants are integral part of various social traditions. From them, we get high quality food items, raw materials for goods, beauty products and many common commodities. The plant diversity is responsible for ecological balance. Due to the continuous exploitation of wild floristic species by urbanization, the existence of many plant species has been threatened. Preservation of the local plant communities in the premises of government offices, universities, colleges and schools as well as establishment and care of new plant species is an important step in protecting the endangered plants and environment. Present study deals with biodiversity of plant species found in the campus of Government Post Graduate College campus, Bundi.

Keywords: Floristic diversity, Bundi, Rajasthan

Effects of electromagnetic radiations on students and environment

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Environmental pollution from electromagnetic radiations emitted by cell phone, laptop, TV and towers is a new kind of health hazard, which has increase the public concern regarding the health implications of electromagnetic radiations on humans and animals. Long term consequences of these radiations are still unknown. So it become important to measure and maps the electromagnetic radiation level to analyze potential risk .The present study has been taken to estimate the RF pollution in environment and effects on students health at Baba Khetanath Mahila Vidhyapeeth Bhiteda, Behror .The radiation exposures was measured using a handle held portable electro smog meter for environmental pollution and other physical diseases or damages or side effects measured by students. Results are compared with the safety guidelines issued by ICNIRP (International commission on non ionizing radiation protection) and Bio initiative report ,2012. It has been found that the radiation exposure level in term of power densities and corresponding specific absorption rate (SAR) are much below than ICNIRP guidelines for all school, colleges and hospitals. But in the case of BKNM Bhiteda are quite alarming where the power density and SAR was found to be 79.1 % and 4 % respectively higher in comparisons with safe biological limit .The students whose use androids phones and laptops were founded with the initial stage of depression, eye side weak and have not concentrate .Some other major disease and complications are found in this study.

Keyword: Environmental pollution, Hazards, Electromagnetic radiations, Radiation vs health

A Review Potentiality of *Moringa Oliefera* as Nutraceuticals for the Treatment of Cancer

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Cancer is one of the leading causes of death and the number of casesare increasing day by day. Cancer treatments like surgery, chemotherapy, and radiation therapy are expensive and have side-effect. Therefore an attempt is being made through this review to aware our society for the importance of *Moringa oliefera* for cancer prevention. *M. oliefera* can be used as an anti-neo proliferative agent thereby inhibiting the growth of cancer cells. It has alkaloids and flavonoids like quercitin, isoquercitin, kaemfercitin etc. which are known for anti proliferative and anti-cancer agent.

Keywords: Cancer, Prevalent Therapies*, Moringa oliefera,* alkaloids*,* Flavonoids.

Applications of Data Mining in Healthcare Domain

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Data mining is the process of extracting useful information from large data stets through the use of algorithms, statistics, machine learning & Database management system. The huge amounts of data produced by healthcare organizations are too complicated and voluminous to be processed and analyzed by traditional methods. Data mining provides the methodology and technology to transform these mounds of data into useful information for decision making. In the present research paper decision tree data mining technique has been applied in healthcare domain to identify the risk factors associated with the onset of diabetes. It has been found that out of the five attributes (Age ,Gender, Body Mass Index, Exercise per week, Waist Hip Ratio) Age is the most effective and gender is the learnt effective attribute on the onset of diabetics. It is also concluded that as the age of the person increases the probability of getting affected by diabetics also increases. The paper also highlights the limitations of data mining and discusses some future directions.
Keywords: Data Mining, Healthcare organizations, Body Mass Index, Waist Hip Ratio

Megachilid Bee Pollinators around the Sariska Forest (Hymenoptera: Apoidea: Megachilidae)

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This study, for the first time explored and identified the Megachilid bee species (Apoidea) which are associated with six major cultivated crops and more than twenty wild plant species. The investigations conducted since 1992 revealed that 28 species of bees around the Sariska forest. These have been identified belongs to 10 genera. These genera and number of their species are: ***Parevaspis*** Ritsema (01 species), ***Trachusa*** Panzer (01 species), ***Coelioxys*** Latreille (06 species), ***Creightonella*** Cockerell (01 species), ***Eumegachile*** Friese (02 species), ***Chalicodoma*** Lepeltier (06 species), ***Cressoniella*** Mitchell (06 species), ***Megachile*** Latreille (06 species), ***Spinasternella*** Gupta & Sharma (04 species), ***Osmia*** Panzer (01 species). Major cultivated crops and number of foraging megachilid bee species are: ***Crotolariajuncea*** L. (26 species), ***Cajanuscajan*** L. (25 species), Phaseolus***aureus*** Roxb. (16 species), ***Helianthus annus*** L. (16 species), ***Medicago sativa*** L. (10 species) and ***Brassica compestris*** L. (01 species). Association of megachilid bees with different plant species are useful in pollination except cleptoparasites.

Photo-catalytic Degradation of Janus Green B Using Cobalt Hexacyanoferrate (Ii) as Semiconductor

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The Photo catalytic degradation of Janus green-B has been investigated using Cobalt hexacyanoferrate (II) as semiconductor. Cobalt hexacyanoferrate (II) was used as effective photo catalysts for carrying out number of chemical reactions. The photo catalytic bleaching of Janus green-B was carried out in the presence of semi conducting Cobalt hexacyanoferrate and the progress of the reaction was observed spectrophotometrically. The effects of various operating variables like pH, concentration of dyes, amount of semiconductor and light intensity on the rate of bleaching was observed. A tentative mechanism has been proposed for the photo catalytic bleaching of dyes.
Keywords: Photo catalytic degradation, Cobalt hexacyanoferrate (II), Janus green B

Assessment of Present Status of Biodiversity in Raj Rishi College Campus, Alwar (Rajasthan)

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The study of biodiversity has become significant because of unprecedented perturbations, habitat loss and extinction rates. Environmental trends such as illegal cutting of vegetative cover; increasing waste production and pollution with consequent deterioration of habitat, overexploitation and depletion of bio resources are all symptoms of environmental deterioration. Documentation on the campus of RR College area is lacking which has prompted this study. The outcome of the study can be used constructively in planning sustainability of both man and natural environment. The Study of biodiversity of RR college campus was conducted for a period of six months from September 2017 till February 2018. The study involved seasonal documentation of the flora and fauna for its abundance and distribution. The study involved 140 days of field visits to the campus covering an area of 450 acres. The Campus was divided into two main sectors (semi-half) viz. Left half sector and right half sector.

Among the flora the trees and shrubs were dominant. The comparison between the left half sector and right half sector revealed that the vegetated sector was more balanced than the right half sector. All these observations indicated that the campus has a rich biodiversity that is vulnerable to the human intrusion. In the six month duration of the study it was observed that most vegetation has been cut down clean and had become sparse.

The RR college campus is important not only from education point of view but also as a green lung for the city. The campus can still support a lot of biodiversity but implementing conservation measures is the immediate need. Development is a necessary evil and will take place with time but one needs to recognize the potential of the campus as a green lung and carbon sink.

Keywords: Biodiversity, Raj Rishi College, Pollution

Household Solid Waste Management in India: Practices and Challenges

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Solid waste management is one of the most critical environmental challenge faced by urban authorities, especially in developing countries like India. In metro cities in India an average of 0.8 kgwaste/person daily.With rapid urbanization, the country is facing massive household waste management challenge. Over 377 millionurban people live in 7935 towns and cities. The total municipal solid waste generated at 79 million tons per annum. Household solid waste contains 51% organic waste, 17% recyclables, 11% hazardous and 21% inert waste include used aerosol cans, batteries, kitchen and drain cleaning agents, cosmetic items, light bulbs, tubelights, compact fluorescent lamps and empty containers. Lack of suitable facilities, equipment and infrastructure, improper management, inadequate technical skills are the major challenges for the household solid waste management in India. Improper solid waste management deteriorates public health, causes environmental pollution, accelerates natural resources degradation, causes climatic changes and greatly affects the quality of life of citizens. The present paper highlights some issues related to household solid waste management and provides some suggestions and recommendations to improve the waste management practices in India.

Keywords: Household Solid Waste, India, urban

Activated Flyash Used as an Adsorbent for Dye Removal from Dying Waste Water

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Dyes which can be recognized by the human eye even at low concentration in water are a valid class of toxin or pollutant. Disposal of dyes in precious water resources must be avoided, however for that various treatment technologies are in use. Adsorption of dye from aqueous solution onto activated fly-ash adsorbent (AFA) a low cost waste material in a batch process was investigated. Various experiments were studied using batch adsorption techniques under different conditions of pH, adsorbent dosage, temperature, contact time and initial dye concentration. Activated Fly Ash had the highest potential to remove dye from wastewater stream due to electrostatic forces. it was found that percentage adsorption varied exponentially increase with the amount of adsorbent & concentration with time but varies non linearly with pH. About 81% of dye was removed in a short contact time of 60 minutes. The adsorbents had a large adsorption capacity (mg/g). The adsorption isotherm obeys Langmuir isotherm model and pseudo second order kinetic model.

Keywords: Adsorption, Low Cost Adsorbent, Isotherm, Waste-Water

Recent Innovation in Green HR Practices for Organizational Technological Development

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As a result of more widespread economic development in recent decades, global capacity for research and development is evolving broadly across the developed world and emerging economies. However, building on this progress will require action to encourage new ideas across the diversity of development contexts, and to ensure that these ideas can reach and transform new markets. The challenge of transitioning onto cleaner development pathways is particularly difficult for developing countries because their need for rapid economic growth often seems to outweigh the importance of "leapfrogging" onto cleaner development trajectories. Achieving sustainable economic development will require regional and international cooperation for implementation, supportive domestic policies, institutional capacity building, strong public–private partnerships, long-term financing and human capital development. In parallel, new mechanisms are needed to support the development and diffusion of intellectual property that can be shared with, and created in, developing countries along with enforcement mechanisms for its protection. **Green human resources** refer to using every employee touch point / interface to promote sustainable practices and increase employee awareness and commitments on the issues of sustainability. It involves undertaking environment-friendly HR initiatives resulting in greater efficiencies, lower costs and better employee engagement and retention which in turn, help organizations to reduce employee carbon footprints by the likes of electronic filing, car sharing, job-sharing, tele-conferencing and virtual interviews, recycling, telecommuting, online training, energy-efficient office spaces etc.

Vedic Culture: A Short Introduction

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Present study is a short explanation of the basics of Vedic culture and its philosophy. Many people do not know fairly what it is, and it is often described incorrectly by many who are not a part of it. However, it is not as mysterious or complex as it is often portrayed to be.

The Vedic Custom or Hinduism is more than a religion, but a way of life, a broad philosophy. The Vedic tradition recognizes that the individual soul is eternal, beyond the limitations of the body, and that one soul is no different than another.

Role of higher education in environmental awareness

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Today we are facing severe environmental problems and higher education can be the key solution for this situation because higher educational institutions have the potential to deal with different environmental issues. They can provide trained manpower and knowledgeable expertise to solve these critical environmental problems. The main aim of this paper is to find the ways to protect the natural environment through higher education.

Keywords: Higher education, Environmental awareness, Trained manpower

Effect of Temperature on Corrosion Combating Efficiency of *Catharanthusroseus* Extract on Al in HCl solution

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Extract of leaves of *Catharanthusroseus* was taken for studying its corrosion combating efficiency on Al in HCl solution. Weight Loss Method was employed for the studies. 0.5 M and 1.5 M HCl solutions were taken for weight loss studies. Inhibition concentrations were taken 0.1 % , 0.3 % , 0.5 % and 0.7 % in this method . Studies were carried out at 298 K and 308 K. Results show that the corrosion combating efficiency of *Catharanthusroseus* decreases with rise in temperature. Maximum efficiency was found in 0.7 % concentration of inhibitor in 1.5 M HCl at 298 K and minimum was found in 0.1 % of inhibitor in 0.5 M HCl at 308 K. Further result shows that corrosion combating efficiency of inhibitor increases with its increase in concentration.

Keywords: *Catharanthusroseus,* Weight Loss, Corrosion Rate, Surface Coverage

Incidence and Histopathology of Rhizoctonia Bataticola on Black Gram Grown In Rajasthan

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Vigna is one of the important genuses among the pulses which form a major part of Indian dietary. Three field surveys covering the entire major crop growing in districts of Rajasthan state were carried out. 123 seed samples were collected. Seven diseases were recorded in different fields.Various abnormalities were found on dry seed examination. A total of 39 fungal species were recorded in standard Blotter Method. During histopathological studies of infected seeds components plating, cleared whole mount preparations and microtome sections were used to determine the location of seed-borne pathogen. Symptomatology and histopathology of pod parts was also carried out.

Keywords: Rhizoctonia Bataticola, Black Gram,Rajasthan

Preserving or Poisoning: A Case of Dried-Beans from Nigeria

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Beans (Vigna unguiculata) are commonly known as the cowpea, black-eyed pea, catjang, china-pea, cow-gram or southern-peas that were mainly grown in the tropics and subtropics regions. Globally, beans are great source of protein for human, and are found in curry dishes, cooked with rice, in desserts or as paste. This is a popular legume grown in Nigeria which were mainly dried and stored for either local consumption or traded and exported to various countries around the world, especially the European Union. Nigeria was among the leading beans exporting nation of the world. Since 2013, the EU has placed temporary import suspension on dried-beans originating from Nigeria's due to the discovery of higher pesticides residue found in them (between 0.03mg/kg and 4.6mg/kg). This study assesses the key techniques used in preserving dried-beans in Nigeria. Based on the qualitative nature of the data involved, the study employed survey research design that depend on in-depth interview with open ended questions and personal observations. This study discovered that high illiteracy among the dried-beans merchants and storekeepers lead to direct application of various toxic pesticide in high doses onto the dried-beans with a sole intension of protection from pest. The study finally recommends the provision modern grain storing facilities.

Keywords: Dried-beans, Storage, Pesticides, Nigeria

Environmental Concerns Related to Developmental Sectors in Rajasthan: An Analytical Study

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In this research paper, DPSIR (Driving Force-Pressure State Impact Response) method has been used for discussion on environmental issues of Rajasthan state. Human activities are driving force for environmental changes. From 1951 to 2011 growth in Rajasthan has been 429% exceeding national average 335%. There is more specific economic, social and institutional pressure on the environment in the state. More industrial activities are required for employment generation to get Rajasthan out of BIMARU state category. In the low per capita income and trapped in the various cycle of poverty, rural people relay on income activities derived from tree cutting. So these include all action taken to address environmental issues by government, NGOs, business, research institution and other initiatives. In present paper, an attempt has been made to analyze the environmental issues and activities related to various environmental sectors in Rajasthan and aims to bring out environmental concerns that create while carrying out various developmental activities.

Keywords: Environment, Developmental Sectors, Rajasthan

Studies of solute- solvent interactions of Cu (II) surfactant derived from Karanj *(Pongamia pinnata)* oil in methanol-benzene mixture at 298.15 K.

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Density of complexes have been measured in various concentrations and by using density data, the molar volume and apparent molar volume have been evaluated in order to determine the critical micelle concentration (CMC). Viscosity and other parameters of Cu(II) surfactant derived from karanj oil in non-aqueous solvents of varying composition has been determined at constant temperature 298.15K. The synthesize surfactants were characterized by IR NMR and Elemental analysis. In the present work, benzene and methanol have been chosen as the co-solvent as mixed solvents have tendency to interact with complex molecules and result affecting the aggregation of complex molecules. The results were used to determine the critical micelle concentration (CMC), soap-solvent interactions and the effect of chain length of the surface active molecule on various parameters. The CMC values of copper karanj soap solutions decreases with the increase in methanol the polar solvent. The conclusions with regard to solute-solute and solute- solvent interaction have been discussed in terms of well-known Masson's and Jones-Dole equations. This vital information plays an important role in various industrial and biological applications.

Key words: Cu (II) Soap, Non-edible oils, Soap- Solvent interaction, CMC, Density and Viscosity.

Silicomolybdic Acid modified Montmorillonite Clay: A Remarkable Reusable Solid Catalyst in Organic Synthesis

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Heteropoly acids (HPAs) modified clays have attracted much interest as solid acid green catalysts for organic synthesis. Heteropoly acids (HPAs) have several advantages over liquid acid catalysts such as noncorrosive, environmentally benign. In the present study silicomolybdic acid (SMA) modified montmorillonite clay has been synthesized. This modified clay has been characterized by various analytical techniques such as FT-IR, XRD, TGA, DSC etc. Modified clays possess qualities such as good thermal stability, high acidity and high oxidising ability. It has been found to be an efficient and reusable catalyst for organic synthesis with excellent yields.The efficiency of these catalysts can be compared with the Montmorillonite by using them in reactions such as Deoximation of oximes of aldehydes and ketones, synthesis of acetal derivatives, esterification reactions, synthesis of coumarin derivatives etc.

Keywords: Montmorillonite Clay, Heteropoly acid, Silicomolybdic acid, Green catalyst.

An Environmental Pollutant- antibacterial drug catalytic oxidative degradation by Hexacyanoferrate(III) in Aqueous Alkaline Medium

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Pharmaceuticals, especially fluoroquinolone antibiotics, have received increasing global concern, since they have been recognize as emerging environmental pollutants. Degradation of antibiotics, such as oxidative degradation by metal ions, often plays an important role in the elimination of antibiotics from the environment. The Cu(II) catalyzed oxidation of an antibacterial drug nalidixic acid by hexacyanoferrate(III) has been investigated spectrophotometrically in an aqueous alkaline medium at 40˚C. The stoichiometry for the reaction indicates that, the oxidation of one mole of nalidixic acid requires two moles of hexacyanoferrate(III). The reaction exhibited first order kinetics with respect to [hexacyanoferrate(III)] and less than unit order with respect to [nalidixic acid] and [OH^-]. All the possible reactive species of the reactants have been discussed and a most probable kinetic model has been envisaged. The activation parameters with respect to the slow step of the mechanism were computed and were also determined.

Keywords: Antibacterial drug, Cu(II) catalysis, Hexacyanoferrate(III), Kinetics, Mechanism, Oxidation.

Unraveling the role of salivary gland during Plasmodium vivax infection in mosquito Anopheles stephensi: A comparatively RNA-Seq transcriptomic study

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Malaria is a vector born infectious disease transmitted by *Anophelin* mosquito species. Efforts to control vector born diseases have been impeded in part by the development of drug resistant parasites, insecticide resistance in mosquitoes and environmental concerns over usage of the insecticides. Therefore, there is an urgent demand to develop novel strategies that can complement or replace existing control methods. To, overcome the challenges, designing of new molecular tools through modern technology such as: genomics, proteomics, genome editing CRISPR etc., are expected to facilitate this area of research rapidly. One of the potential tool may rely on the development of the parasite resistance mosquitoes by manipulating the mosquito immune system. *Plasmodium*, the causing agent of malaria undergoes a complex developmental process with in the mosquito host that interact three main tissues: salivary gland, midgut, and hemolymph. Salivary glands are key facilitator for successful meal acquisition. Though, salivary glands also potentiate entry and exit of the parasite, but how it manages molecular and functional relationship during blood feeding and *Plasmodium* infection is not well understood.

Thus to decode the molecular complexity, we performed a comparative RNA-Seq transcriptomic data analysis of blood fed and *Plasmodium vivax* infected mosquito salivary glands in the mosquito *Anopheles stephensi*, an urban malarial vector in India. A comprehensive analysis unraveled that P. vivax infection strongly modulate the genetic makeup of the salivary glands. An ongoing transcriptional profiling of selected immuno- transcripts such as Gambicin, Cecropin, Defensin, HPX 12 and SP24 showed significant alteration in response to plasmodium infection .Functional characterization of specific transcripts is expected to unravel a key role of the target gene(s) during parasite transmission, a valuable knowledge to design novel molecular tool to fight against vector born diseases.

Analysis of Lead Adsorption in Continuous Column

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Zeolite adsorbent was used for the removal of Pb ions from wastewater in column mode. Effect of flow rate (2, 3,5 lit/hr), bed depth (3,5,7 inch) and initial concentration (10, 20, 30 mg/lit) was used for the experimental observations. The BDST model was used for the analysis of column. The adsorption capacity of adsorbent Zeolite was 10.895 mg/g and percentage removal 93%. Data indicate that the breakthrough curves were dependent on flow rate, initial concentration and bed depth. The data was in good agreement with the BDST model. The study shows that Zeolite acts as an effective adsorbent for wastewater treatment.

Keywords: Zeolite, BDST model, Adsorption capacity, Wastewater

Structural and Thermal properties of ion beam irradiated polystyrene/ZnO nanocomposite films

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Polystyrene/ZnO nanocomposite (PS/ZnO) thin films were prepared by the solution mixing method and irradiated with 55MeV carbon ion beam at various ions fluences ranging from 3×10^{11} to 3×10^{13} ions/cm^2. The structural and thermal properties of swift heavy ions (SHI) beam on irradiated films were studied by several characterization techniques such as Scanning Electron Microscopy (SEM), X-ray diffraction (XRD), Differential Scanning Calorimetry (DSC) and the dielectric setup with LCR meter. The SEM measurement showed the uniform dispersion of ZnO nanoparticles in Polystyrene solution. The XRD pattern indicated the presence of ZnO nanoparticles in nanocomposite thin films. The increasing ions fluences significant loss of average crystallite size, percentage of crystallinity, glass transition temperature (T_g) and thermal stability were observed for many applications such as unique optical, mechanical and electrical properties. The dielectric loss, a. c. conductivity and dielectric constant were also increased with increasing values ions fluences.

KEYWORDS: Polystyrene, Nanocomposite, X-Ray Diffraction, Differential Scanning Calorimetry, Glass Transition Temperature

Noise Pollution, Right to Health and Environment

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Noise may not seem as harmful as the contamination of air or water, but it is a pollution problem that affects human health and can contribute to a general deterioration of environmental quality. Noise is undesirable and unwanted sound. All sound is not noise. It may be considered as music to one person and may be noise to another.Noise Pollution is one type of the volume which makes diseases into the environment and it very harmful for the people who are breathing and living on this earth. Noise Pollution involves the Vehicle horns, Industrial volume, and loudspeaker music. Noise Pollution is very discomfort and injurious for the physical and mental health and irritating and annoying to the living beings.

"Keep the noise down otherwise noise will keep your hearing down."

Keywords: Noise Pollution, Health, Environment.

Estimation of Sulphite Anions by A Newer Photochemical Method Using Sodium Nitroprusside

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A newer fast, inexpensive and convenient quantitative method for the estimation of sulphite anions using photochemical exchange reaction of sodium nitroprusside (SNP) has been investigated. SNP is a photo labile complex and it undergoes photochemical ligand exchange reactions rapidly. Some recent efforts have been made to utilize such reactions for the estimation of some sulphur and nitrogen containing anions. The progress of the reaction is observed spectrophotometrically. The effects of different parameters like pH, change of concentration of SNP, concentration of ligands, light intensity etc. on percentage error was investigated. The efforts were made to minimize the percentage error and few optimum conditions were obtained. Such reactions can be used for the estimation of sulphite anions or molecules in the range of millimoles to micromoles, hence it is important to know whether such estimations can be performed successfully and that to with the desired accuracy.

Keywords: Photochemical exchange reaction, Sodium nitroprusside, Photo labile, Spectrophotometrically

Digital India: Move Towards Cashless Economy

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Digitalization of India, A welcome move! The Digital India programme launched by Indian Government is a much needed initiative that will help bridge the digital divide between Urban and Rural India and empower citizens. Digital India is a large umbrella national program that focuses on providing universal digital literacy and universal accessibility of all digital resources for citizens. Cashless economy is when the flow of cash within the economy is negligible and all the financial transactions are through electronic medium. After demonetization center government is pushing for achieving maximum share of cashless transaction in our economy. It aims to connect Grampanchayat by Broadband internet, promote E-Governance and transform India into a connected knowledge economy. This paper will discuss the extent to which Rural people has been uplifted from this programme. It describes the challenges faced by Rural India while implementation of Digital India Programme.

Keywords: Digital India, Cashless, Uplifted, e-Governance.

Contamination Sources of Heavy Metals in Environment

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Heavy metals are found naturally in the earth and become concentrated as a result of human caused activities. Common sources are from mining and industrial wastes, vehicle emissions, lead-acid batteries, fertilizers, paints, treated woods, aging water supply infrastructure and microplastics floating in the world's oceans. Arsenic, cadmium and lead may be present in children's toys at levels that exceed regulatory standards. Lead can be used in toys as a stabilizer, enhancer, or anti-corrosive agent. Cadmium is sometimes employed as a stabilizer, or to increase the mass and lustre of toy jewellery. Arsenic is thought to be used in connection with colouring dyes. Regular imbibers of illegally distilled alcohol may be exposed to arsenic or lead poisoning the source of which is arsenic- contaminated lead used to solder the distilling apparatus. Rat poison used in grain and mash stores may be another source of the arsenic.

Keywords: Contamination Sources, Heavy Metals, Environment

Environmental Governance for Integrated Development in India

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India's biggest challenge today is to identify and implement a development process that will lead to greater equity, growth and sustainability. Degradation of environment resulting from unprincipled and excessive exploitation of resources of our planet earth has threatened to negate and has already adversely affected the development registered by various societies. It is the duty of the government to ensure that development in no way should lead to environmental degradation and the development should be in tune with the health of land, air, forest and other natural resources. This aim could only be achieved through effective environmental governance. The character of environmental policy is the product of political process. The relationship between politics and environment also explains the responsiveness of the political institutions towards the matters of public concern. Therefore, the laws for environmental protection should be designed, amended and enforced in such a way that it has enough provisions to punish the polluters.

The landmark report of the world commission on environment and development, entitled 'Our Common Future', warned that unless we change many of our lifestyle patterns, the world will face unacceptable levels of environmental damage and human suffering. The integrated development of a country has to understand the challenges of environment. The latest survey of National Geographic Magazine mentions that Indians are the most environment friendly people. So, today is our responsibility to protect, preserve and promote Indian cultural heritage and traditional knowledge but also to lead the world in environmental conservation through sustainable development.

Keywords: Governance, Integrated Development, India.

Collaboration of Mongiya Tribe in Biodiversity Conservation

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Biodiversity is a contraction of biological diversity. It reflects the number, variety, and variability of living organism and how these change from one location to another and overtime. Biodiversity conservation is a matter of great concern in India. India is being a mega biodiversity nation to under great threat of loss of many animal and plant species.

Many solution to the conservation issue have been reported but which the involvement of the tribes who are the true nature lovers is the most useful and practical process which can be a boon in solving the root cause of the problem. The present study was conducted in Sawaimadhopur region to identify the role of mongiya tribe in the conservation. The mongiya tribe has their own religious and socio-culture taboos which has the involvement of certain of certain plant and animals. They also use many plant for medicinal use. Ethical values are also great concern for mongiya people which bind then to participate in biodiversity conservation.

KEYWORDS: - Biodiversity, Conservation, Mongiya tribe

Start-up India Initiative

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Start-up India campaign is based on an action plan aimed at promoting bank financing for start-up ventures to boost entrepreneurship and encourage start-ups with job creation. The campaign was announced by Prime Minister Modi in his 15 August 2015 address from the Red Fort.

Start-up India is a revolution scheme that has been started to help those people who have many business ideas and potential but are unable to finance their dream projects .This programme aims to fill gaps in the economy for growth and development of start-ups,promotes digital entrepreneurship at the grassroots. The start-up India campaign is entrusted with obligation to turn the youth of India from "job seekers to job makers".

This paper talks about start-ups and the initiatives taken by government. The paper also discuss about investment frameworks, eligibility criteria, steps, changing trends of start-ups, roadblocks of the startups.

Key Words: Start-ups, Bank financing, Initiatives

Fungal diseases of onion and their biological control

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Onion (*Allium cepa*) is an important crop grown throughout the world for food and forage. The crop is attacked by many different pathogens. Among them fungal pathogens are important limiting factor in the yield and quality of the crop. The present review is mainly focused on important fungal diseases associated with the crop and their eco-friendly and economical means of biological management. The antagonistic effect of various bio-agents and antifungal activity of different plant extracts has been studied to control fungal diseases of onion. The present paper deals with various biological approaches to control onion fungal diseases such as damping off, purple blotch, neck rot, anthracnose, leaf blight, basal rot and onion smut.

Key words: Bio-agents, Control, Fungal diseases, Onion, Plant extracts

Sustainable Development in India

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This chapter explore how energy access is critical for sustainable development and, therfore, financing energy is a necessarily. Environment is a broad concept encompassing the whole range of diverse surroundings in which one perceives experience and react to events and changes. Now a day's people are become selfish for their benefits. They degrade the quality of natural resources just for money. To save the environment now a day's sustainable environment is very necessary to reduce the degradation of natural resources. It is not the current issue it is becomes the topic of issue since last 4 decades. In 1988 the World Commission on Environment and Development are held which is headed by the Prime Minister of Norway Mr. GRO HARLSM BRUNDTLAND release the report "OUR COMMON FUTURE". This report was the starting point of all things related to sustainable development. In India this issue still required more emphasis because in India degradation of natural resources are increased day by day. Sustainable development also requires the financial support. So this paper will concentrate on financial gradients as a potential approach to analyses financial flows in sustainable development programme. Once it is started in India our country will go on hike and became the well developed country from developing country very soon. It is the duty of the government and as well as citizens of the country to arrange the funds for that. From that the funds are used in the right direction and scams are reduced and India will become CORRUPTION FREE COUNTRY.

Keywords: Sustainable Development, Financial Gradients, Scam, Emphasis, Potential.

Role of Green Chemistry in Achieving a Sustainable Society

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Green and sustainable chemistry is innovation at molecular level oriented towards the development of products and processes that eliminate or minimize the use and generation of substances hazardous for human health and for the environment and lead to the conservation of energy and natural resources. The need of the hour is a development path that is economically viable, socially equitable and ecologically bearable. This essentially encapsulates the sustainable development concept, which involves social, ecological and economic objectives. Development has taken the world to a higher level but with this the resources are being used more and more day by day to support development. Many international pacts are made which help to unite on a global scale and solve various problems in a line, but when we look at the concept of sustainable development this is rooted back to many generations.
Green chemistry provides solutions to such global challenges as climate change, sustainable agriculture, energy, toxics in the environment, and the depletion of natural resources. A collaborative effort by industry, academia, and government is needed to promote the adoption of the green chemistry technologies necessary to achieve a sustainable society. The origins and basis of green chemistry chart a course for achieving environmental and economic prosperity inherent in a sustainable world.

Keywords: Environment, sustainable Development ,Green chemistry

Feeding Behaviour of Swimmers / Water birds (Natatores) and Waders / Shore Birds (Grallatores) of The Ajmer District in Rajasthan

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The present examination demonstrate the natural surroundings utilize, assets, foodstuff usage, bolstering conduct and assortment of different types of herons (dairy cattle egret, little egret, huge egret and lake heron); Coot and Cormorant in chose wetland living spaces in Ajmer (Rajasthan). The utilization of an assortment miniaturized scale natural surroundings of wetlands by the species, the dangers to the wetlands in the investigation range and require for their preservation for survival of these winged creature species.

Keywords: Wetland, Micro-Habitat, Cattle Egret, Little Egret, Pond Heron, Coot and Cormorant

Passive Solar Concept: A Means to Minimize Environmental Pollution

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Energy is the primary and most universal measure of all kinds of work by human beings and nature. Everything that happens in the world is the expression of the flow of energy in one of its forms. The rising price of petroleum fuels, depletion of oil reserves and stiff regulations on exhaust emissions have necessitated the substitution of fossil fuels with less polluting and easily available renewable energy. The quantity of energy intercepted by the earth as it moves round the sun is enormous. In one year its equivalent to one hundred times the energy stored in the worlds' proven reserves of fossil fuels. If just one ten thousandth of this energy is extracted, it would replace all of the energy currently obtained from fossil fuels.

The use of solar energy for heating and cooling of buildings by natural means is a very ancient concept, and has been used since man has started building habitations. Although solar energy has been used in many ways, yet most widespread and profitable use of it has been in the heating and cooling of buildings. Passive solar heating and cooling is the new name for the ancient craft. This paper explores how passive design concepts can be used in collecting, storing, distributing and controlling solar energy flow by means of natural principles of heat transfer.

Water Conservation and Rain Water Harvesting in India

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World oceans cover about three fourth of earth's surface. Although it is surprising but true that 70% part of the world is covered with water but still we are thirsty. Out of 97% of earth's water is found in ocean, 2% is frozen as ice in poles etc and remaining 1% is available to us in the form of fresh water in rivers, lakes and ground water and which is used for human beings for their daily needs, irrigation and Industries. Mankind can't do anything without water. Unfortunately, with a galloping population growth, urbanization and ever increasing demand on it, water resource of world over are fast depleting. Excessive tapping of ground water through numerous bore wells and tube wells has led to a decline of water level, whose means of replenishing itself has been greatly hampered. The crisis about water resources development and management thus arises because most of the water is not available for use and secondly it is characterized by its highly uneven spatial distribution. Accordingly, the importance of water has been recognized and greater emphasis is being laid on its economic use and better management. Global water consumption has been raised ten told since 1900 and many parts of the world are now reaching the limits of their supply. UNIESO has predicted that by 2020 water shortage will be a serious worldwide problem. Third world war will be battled for water. One third of the world's population is already facing water problem due to water shortage and poor drinking water quality.

In order to augment the depleting ground water resources, it is essential that the surplus monsoon runoff that flows into the sea is conserved and recharged to augment ground water resources. The need for conserving water has therefore become imperative. Since water is the most important resources for all developmental activities on which future depends, it must be carefully conserved and put to optimum use. In future, a day is bound to come when the demand will outgrow availability. Today there is an urgent need for efficient and effective management of water supply system and storage of rain water on surface for future use and recharge to ground water in India.

Keywords: water conservation, water harvesting, water resources

Renewable Energy: Energy from Bio Mass

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Energy is the most important component of every country. Development index is also depends on energy. For sustain economic growth, it is main input. Two Main Sources of Energy: Conventional Sources of Energy and Non-Conventional Sources of Energy. First type sources are in limited quantity. Besides conventional sources of energy there are non-conventional sources of energy. These are also called renewable sources of energy. Like Bio energy, solar energy, wind energy and tidal energy etc. In my paper, I am focussing only Bio Energy in form of bio gas and bio mass. This is obtained from organic matter.Bio Gas is called simply Gobar Gas produced from cattle's dung. Bio Massis simply plants, trees, animals and crops and it is a renewable source of energy.
Keywords: Renewable Energy, Bio Mass, Gobar Gas

Physico-Chemical and Microbiological Study of Siliserh Lake, Alwar (Rajasthan)

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Present study is undertaken to access the water quality of Siliserh Lake by observing different physico-chemical and microbiological parameters during the year of 2016-17. High water temperature, BOD, pH, total hardness, TDS, Phosphate, Nitrate, and dissolved organic matter and low depth of visibility. The microbiological studies include total colliform colonies and fecal colonies in the lake water. Higher values of microbial parameters and dissolved oxygen showed heavy load of organic matter in the lake and water quality is deteriorating rapidly due to intense human activities and influx of agricultural pollutants.
Keywords: Physico-chemical, Microbial parameters, Siliserh Lake

Make in India: The Integral Role of Manufacturing Units

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The ambitious scheme Make in India launched by the Prime Minister Narendar Modi has the aim to encourage Multinational as well as National companies to manufacture their products in India. This Initiative has the primary objective of transforming the Indian economy into a global manufacturing hub. This major new flagship programme is aimed to increase the contribution of manufacturing units in GDP (Gross Domestic Product) at 25% level. The major new National programme has been designed to facilitate investment, foster innovations, skill development, protect intellectual property and build best in class manufacturing infrastructure.
Thus, this paper will give the brief overview about the Campaign and analyze the initiatives taken by the Indian government with regard to companies and find out the challenges faced by the manufacturing units. It attempts to suggest some measures about how the manufacturing units can convert its threats into opportunities to face challenges at Global level.
The Study has found that this initiative change seeks to transform India into a manufacturing hub for Automobiles, Electronic Systems and Pharmaceuticals as well as a hub for Hydrocarbon and Nuclear energy. This task has the greatest economic reform in modern Indian history. It seeks to unleash the Country's potential.
Keywords: Make In India, Campaign, Challenges, Opportunities and Threats.

Land Use / Land Cover Mapping of Keoladeo National Park, Bharatpur, Using High Resolution Satellite Data and Geographic Information System

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Land use / Land cover (LU / LC) assessment is one of the most important parameters to meaningfully plan for land resource management. Changes in Land use / Land cover affect ecosystems, biodiversity and agricultural productivity. The timely, accurate and up-to-date information on LU / LC can be obtained from various satellite based high resolution remotely sensed data on a cost effective basis at the shortest possible time. In the present study LU / LC map of Keoladeo National Park (KNP), was prepared using high resolution merged (IRS P6 LISS-IV & Cartosat-I PAN data) satellite data, in ERDAS 8.7 and ARC / GIS 9.1 version software. In the interpretation of Lu / Lc map of KNP, it was found that the total geographical area is 28.96 sq km. There are 7 and 15 classes were identified in level-1 and level-2 respectively. Woodland and wetland area increased to 1.69% and 2.31% respectively but grassland area decreased to 3.27%.

Keywords- Land use / Land cover, Keoladeo National Park, High Resolution Satellite Data, Wetland and Geographic information system.

A Study on Consumer Preferences & Their Satisfaction on Direct-to-Home (DTH) Services in Jaipur City of Rajasthan

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Indian service sector had witnessed many revolutionary changes and rapid growth that resulted to competition among players. All the major players from DTH sector are highly concentrating on their strategies towards improving service quality and increasing customer satisfaction. At present, it has become necessary for all service providers to construct and modify their marketing policies of on-going or upcoming services keeping focus on existing or potential customer's requirements, and paying proper attention to service quality perception, customer satisfaction and their behavioral responses. This study is focused on to identify the core factors influenced the buying behavior of the customers, their preferences and extent of satisfaction. Initially this study was conducted among few respondents through the questionnaire. Analysis and Interpretation is done using Chi-square method and ANOVA. It was observed that people prefer a DTH service due to various factors such as Picture & Sound quality, Quality of Service, Recharge facilitation etc. By which a DTH service provider can make their business more successful and satisfy the customers.

Keywords: DTH sector, Service quality, Customer Satisfaction etc.

Environmental changes effects Amphibians Biodiversity

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Biodiversity means different kind of organisms. In biodiversity we include various types of fauna and flora. Over 6300 species of amphibians are found in world. Approximately 1856 species are threatened and nearly 168 species have gone extinct. This study deals with the biodiversity of amphibians. This study is done by general survey, easily visible characters, and habitats. These characters were helpful in the identification of amphibian species. Amphibians are like other species of animals have a prominent role in the ecological balance and conservation of nature. But due to recent changes such as climate change, habitat destruction, over exploitation, mechanization in agriculture and increase the use of fertilizers and pesticides in agriculture the biodiversity of amphibian is decreasing gradually. Therefore, the reproduction and foraging sites of amphibians have been reduced. So in these areas the conservation and protection of amphibians is needed on a large scale. For this we should insure captive breeding and reintroduction of amphibian species and restricted use of fertilizers, pesticides and less use of mechanization in agriculture. So save biodiversity then ecosystem will remain in homeostasis.

Keywords: Environmental changes, Amphibians Biodiversity, Ecosystem

Land Use / Land Cover Mapping of Keoladeo National Park, Bharatpur, Using High Resolution Satellite Data and Geographic Information System

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Land use / Land cover (LU / LC) assessment is one of the most important parameters to meaningfully plan for land resource management. Changes in Land use / Land cover affect ecosystems, biodiversity and agricultural productivity. The timely, accurate and up-to-date information on LU / LC can be obtained from various satellite based high resolution remotely sensed data on a cost effective basis at the shortest possible time.

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Keywords- Land use / Land cover, Keoladeo National Park, High Resolution Satellite Data, Wetland and Geographic information system.

3 Tier CSR Model: A comparative study of Rajasthan and Gujarat Model

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The idea of Corporate Social Responsibility has evolved over the years. It is today considered as a crucial piece of the strategic business of large corporations. CSR is a method for leading business, which makes corporate entities socially responsible residents, visibly contributing to the social good. Socially responsible companies do not limit themselves to using economic, environmental and social objectives with the company's operations and growth. An alternative synonymous of CSR is people, planet, and profit also known as triple bottom line. The government of India has also enhanced its focus on persuading companies to participate in addressing social and developmental issues, not only as a part of their social responsibility but also their business practices. As part of the Companies Act 2013, companies are required to spend 2% of their three-year average annual net profit on CSR activities each financial year. Government attaches due importance to the welfare activities for the well-being of its people. In this regard, a need has been felt for optimal utilization of the CSR funds and initiatives, through facilitating both the Public and Private Sector Companies in relation to carrying out their CSR activities As per estimates, Rajasthan receives about Rs 1,200crore annually as part of CSR activities. Secondary Research on comparative study has been done between Rajasthan and Gujarat on the basis of number CSR projects in Education, Women Empowerment, Rural Development, Health care, National Heritage, Environment Sustainability, and Sports.

The finding was that CSR fund flow in Gujarat and Rajasthan are Almost Same still CSR projects in Rajasthan are less than in Gujarat which directly or indirectly affects the state's growth and development. Literacy rate was one of reason which result into less CSR projects in Rajasthan than Gujarat.

Keywords: CSR, 3 Tier Model, PPP Model, CSR Rajasthan.

Discovery of X-rays

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The present study aims at exploring the discovery of X-rays. Rontgen in 1895 discovered the x-rays, when was studying the phenomenon of discharge of electricity through rarefied gases. He found that when the pressure in the discharge tube is reduced to 0.001 mm of mercury and electric discharge is possed between cathode and anode, the glass wall behind cathode begins to glow with greenish yellow color.

During his experiment he also observed that fluorescent screen placed close to discharge tube continued to fluorescent close to the discharge tube continued to fluorescent even if the discharge tube was completely covered with a black paper. Although the intensity of fluorescence was reduced by interposing various thickness of different substance between screen and tube but it could not be cut off entirely.

When plate of iron was placed it costs a shadow on the screen showing that certain radiation are coming out from the discharge tube. After performing a series of experiment Rontgen concluded that when a beam of fast moving electrons striken a solid target, invisible high penetrating radiation is produced. Because of their unknown nature Rontgen called these Radition as X-Ray.

Keywords: Discovery, X-rays, radiation, Rontgen, discharge tube etc.

Environment And Human relationship in the area of Beawar

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The environment is our life support system. It includes everything that we rely on during our lifetime such as air, water, metals, soil, rock and other living organisms. It is important to remember that the state of our environment is influenced by our behaviour and that we have the opportunity to either nurture or mistreat it. Environmental health is the science and practice of preventing human injury and illness and promoting well-being by identifying and evaluating environmental sources and hazardous agents and limiting exposures to hazardous physical, chemical, and biological agents in air, water, soil, food, and other environmental media or settings that may adversely affect human health.

Our environment is constantly changing. There is no denying that. However, as our environment changes, so does the need to become increasingly aware of the problems that surround it. With a massive influx of natural disasters, warming and cooling periods, different types of weather patterns and much more, people need to be aware of what types of environmental problems our planet is facing.Global warming has become an undisputed fact about our current livelihoods; our planet is warming up and we are definitely part of the problem. However, this isn't the only environmental problem that we should be concerned about. All across the world, people are facing a wealth of new and challenging environmental problems every day. Our planet is poised at the brink of a severe environmental crisis. Current environmental problems make us vulnerable to disasters and tragedies, now and in the future. We are in a state of planetary emergency, with environmental problems piling up high around us. Unless we address the various issues prudently and seriously we are surely doomed for disaster. Current environmental problems require urgent attention.

In this study I have mainly focus on the Major Current Environmental Problems noted in the Beawar. Out of total 10 main problems the noted in Beawar is 7 problems were dominantly present in this region.

Environmental Pollution & Its Impact on Human Health

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Exposure to environmental pollution remain a major source of health risk throughout the world though risks are generally higher in developing countries,levels of exposure for example are often uncertain or unknown as a result of the lack of detailed monitoring and inevitable variations within any population group long latency time. The effects of cumulative exposures and multiple exposures to different pollutants which might act synergistically all create. Difficulties in unraveling association between environmental pollution & health's. In recent years several attempts have been made to assess the global burden of disease as a result of environmental pollution, either in terms of mortality or disability. About 8-9 % of the total disease burden may be attributed to pollution, but considerably more in developing countries. Unsafe water, poor sanitation and poor hygiene are seen to be the major sources of exposure, along with indoor air pollution.

The latest example of environmental pollution is Delhi. Delhi has earned the unenviable distinction of becoming the most polluted city on earth at this time, as air quality has reached epically bad proportions. The airborne particles and toxic chemicals that make up the smog have chocked the 12 million residents of the metropolitan area. Where merely breathing the air was at its worst like smoking 50 cigarettes in a day. Hospital reported a 20 % surge in patients with pollutions related illness and doctor have declared public health emergency.

Keywords: Environmental Pollution, Human Health, Smog

Population dynamics of *Desmodium triflorum* (L.) DC*, D. gangeticum* (L.) DC. and *D. repandum* (vahl.) DC. in Alwar district of Rajasthan northwest India

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The population dynamics of *Desmodium triflorum* (L.) DC*., D. gangeticum* (L.) DC. and *D. repandum* (vahl.) DC. was evaluated in different habitats in the Alwar district of Rajasthan NW India (27˚4' to 28˚ 4' N and 76˚ 7' to 76˚ 13' E). The population density of *Desmodium repandum* was highest (13.8 plants m^{-2}) while that of *Desmodium gangeticum* was lowest(3.8 plants m^{-2}). Among the three species, *Desmodium gangeticum* showed higher population growth rate (1.16 plants $m^{-2}yr^{-1}$) than the other two species. The perennial herbs (*D. gangeticum and D. triflorum*) showed age dependent mortality with decrease in mortality with increase in age of individuals. The seedling cohorts of *Desmodium repandum* and *Desmodium triflourm* showed Deevey Type II survivorship curve with higher mortality in older age groups whereas *Desmodium gangeticum* showed Deevey Type I survivorship curve with continuous mortality in increase in age of individuals. The seedlings of the three species suffered mortality mainly due to drought conditions as well as competition for resources with associated vegetation. The age structure of the perennial species indicates that their population is stable and growing in this region. The absence of the population of Desmodium gangeticum and D. repandum in disturbed areas indicated that these species are highly sensitive to human disturbances. These species can be conserved if their natural habitat is not subjected to any anthropogenic disturbances.

Keywords: Desmodium, Population density, Anthropogenic disturbances

Dendritic Spine Density Fluctuations in Neurons of Hyperpallium Apicale of a seasonally Breeding Male Baya Weaver bird (*Ploceus philippinus*)

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The hyperpallial part of avian telencephalon, known as the visual wulst (VW), consists of four histologically distinct laminae. It is proposed to be the avian equivalent of the mammalian striate cortex. The importance of the VW, which receives visual and/or auditory cues, is well indicated by various behavioural studies including lesion experiments. In this study conducted on Golgi-impregnated brain tissues, we analyzed the seasonal changes in density of dendritic spines in various fields of VW, with special reference to the most superficial lamina, i.e., Hyperpallial Apicale (HA). Dendritic spines form the basis of neuronal plasticity thus establishing synapses (connecting axons with dendrites). The results showed significant increase ($P<0.05$) during breeding season in dendritic spine density in HA as compared to that during non-breeding state. This suggests that seasonal hormonal variations and increased activeness during breeding season do mediate plasticity in spinal morphology contributing to functional and behavioural changes reported during breeding state in an experimentally unmanipulated animal. These changes suggest possible role of VW not only in various learning and memorizing system, but also its social and sexual system in preparation for the breeding season.

Keywords: Dendritic Spine Density, Hyperpallium Apicale, Baya Weaver bird

Study and loosed Delay Queuing Model for N-Capacity

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In the present paper, we are going through a model, which is applicable in mobile phone, e-mailing etc. where deporting in the based of first come first serve. The expressions of waiting time etc. are derived for numerical purpose and explore the model in the actual situations. This model may be helpful for the communication industries.

Keywords: Loosed delay, N-Capacity, model, communication industries etc.

Biodiversity in Ghana (Bharatpur)

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The term biodiversity refers to wealth of the earth, namely the millions of plants animal and microorganism that live on our mother earth. Living thing are interdependent .The term biodiversity mean biological diversity at different levels from genetic diversity, species diversity to ecosystem diversity. The distribution of plant diversity on earth is not uniform and it is influenced by various factors. In my thesis I emphasize physical geographic factor which include climate, Soil and topography. Next I assess the influence of environmental heterogeneity .Ecological phenomenon biotic factor and disturbance. I also assess biodiversity gradient which include attitude and latitude and latitude gradient and size and remoteness of habitat .Another part is focused on the plant habitat diversity relationship because the relation will be researched in the second part of my thesis. Bharatpur (Ghana) was chosen as a model area for its specificity interest and high species and habitat diversity. The aim of my thesis is to determine the species habitat diversity relationship in the selected area.

Keyword: Plant diversity, Habitat diversity, GHANA

Title: Drug Research: Challenges and Opportunities

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Barring the accidental discoveries, Drug Research and Development is always an interdisciplinary game of Chemists, Biologists and Clinicians. The advancements in science and technology opened up new disciplines and specialties from the basic sciences. In the changed scenario many disciplines and specialties have joined this game. Today's Drug Research team consists of many players and each one attempts to make significant contribution to the progress of the collective objective.

The diagnostic objective of a QSAR study deals with the mechanistic aspect supporting or suggesting theories as to the site of action. The predictive aspect of it is concerned with the extrapolative and interpolative predictions based on the correlative approach. The interpolative prediction within spanned substituent species (SSS) is thought to be much more reliable as compared to extrapolative prediction outside SSS. In this way, the QSAR study has become an indispensable tool to rationalize the design of new bioactive compounds and to investigate their interaction with the living matter.

Keywords: Drug Research, QSAR study, Spanned substituent species

Challenges of Teaching English in Rural Areas

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Twenty first century is witnessing tremendous impact of technology on educational activities. The whole process of teaching and learning has been digitalized. But it is very painful that a rural learner is still in those dark ages and completely marginalized as far as technological exposure is concerned. It is well known that 70% of Indian lives in villages and majority of workforce come from rural areas. Rural student is equally competent to learn English. An English teacher has to adopt and adapt innovative strategies in the classroom. A few measures like appointment of skilled and committed teachers of English at Primary level, effective implementation of technological schemes, provision of minimum technological aids like TV, LCD projectors, computers, weekly film show will certainly help in better teaching and learning of English language in rural areas. More training communicative language teaching approach should be arranged for its teachers. Speaking and listening activities should be emphasized more. As English is a global language, we cannot expect development by keeping the problems alive. It can be affirmed that the addressed issues will ensure a congenial teaching environment at the rural level. English language teaching in rural region is somehow a challenging work. Over the last few decades English has become increasingly important in the educational system, personality development and employment. In India, some reforms have been carried out taking into account the new international context of globalization in teaching of English. But those reforms are limited to urban areas of India. In rural areas many students are struggling to learn the English language .This inability has become a stumbling block in the progress of rural students. Learners of rural areas are found helpless in adjusting with the language and face these problems. Practical approach in teaching can pave the way for effective learning and nurture the confidence in rural students and make their dream of communication in English a reality.

Keywords: English, Globalization, Rural student, Teachers, Technology

Threats to Plant Disease Management

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Various challenges in the field of plant pathology and its management arise due to depletion of natural resources, competition in fertile lands which largely affects the agriculture potential. Deteriorating the quality of ecosystems by intensified agriculture, increased risk of epidemics and ever increasing population that demands for food and resources are other reasons. To achieve a favourable environment for host while harmful for pathogen reproduction, sustainable plant disease management should be emphasized. Check on correct nutrition, temperature and moisture affects disease development through their influence on growth and susceptibility of host,on multiplication and activity of pathogen, or on interaction of host and pathogen being relevant to the severity of symptom development. Plant disease management must highlight the need to safeguard the quality of ecosystems with the reduced dependencies on resources, while encouraging the food security principle for all on the same time.

Keywords: Plant Disease, Ecosystems, Environment

A Review on Antimicrobial Peptides (AMPs) and their Therapeutic Applications

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The rapid increase in drug-resistant infections has presented a serious challenge to antimicrobial therapies. The failure of the most potent antibiotics to kill "superbugs" emphasizes the urgent need to develop other control agents. Antimicrobial peptides and proteins (AMPs) are a diverse class of naturally occurring molecules that are produced as a first line of defense by all multicellular organisms. These proteins can have broad activity to directly kill bacteria, yeasts, fungi, viruses and even cancer cells. The ability of these active AMPs to act as multifunctional effector molecules such as signaling molecule, immune modulators, mitogen, antitumor, and contraceptive agent makes it an interesting candidate to study every aspect of their structural and biological properties for prophylactic and therapeutic applications. Thus, understanding the versatile biological properties of AMPs can be of extreme importance for clinical development of peptide-based therapeutics.

Key Words: Antimicrobial peptides, drug-resistant, peptide-based therapeutics.

Modification in Properties of Magnesium Oxysulphate Cement by Incorporating Starch as an Additive: An Ecofriendly Approach

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In this modern world construction industry is the fastest growing industry. Eco- friendly non calcareous Magnesium oxysulphate cement is first produced by French Engineer Stanislas Sorel in 1867. It is formed by the reaction between MgO and $MgSO_4$. This reaction is exothermic hence Dolomite is used as an inert filler to absorb the excess heat evolved during the reaction. It is used for plasters and decorative purposes (Toys and Statues), partition walls, preparation of artificial abrasive stones, grind stones, tiles, light weight insulating panels etc. It has also got high attenuation power for radioactive emanations. It has no corrosion to steel and effective inhibition of the frost. Additives may alter the properties of Magnesium oxysulphate cement by forming additional bonds in the matrix. Starch is a dispersible carbohydrate having free hydroxyl groups. In the present study Starch is used as an additive for Magnesium oxysulphate cement and findings are very encouraging. It decreases setting times and improves mechanical strength & water tightness of the product.

Keywords: Magnesium oxysulphate cement, Setting times, Moisture ingress, Weathering effects, Linear changes, Starch

Watershed Development Programmes in Rajasthan: Present Scenario and Issues for Convergence

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Watershed development is among the flagship programmes of rural development that assist in rural poverty alleviation, particularly in the more marginal semi-arid, rain fed areas. Watershed as 'a geo-hydrological unit comprised of land and water within the confines of a drainage divide. Thus, the watershed is a natural ecosystem and a logical unit that integrates the social and economic forces as well as the biophysical factors that have led to environmental degradation and food insecurity. Rajasthan is the largest state (3, 42,239sq.km/ 132,140 square miles) of India constituting 10.4 per cent of total geographical area and 5.67 per cent of total population of India (GoI, 2011). The state is divided to 7 divisions, 33 districts, which are further subdivided into 244 tehsils, 249 Panchayat sammitees and 9,168 gram Panchayats. Rajasthan is situated in the North - West part of India Between 23° N to 30° N Latitudes and 69° E to 78° E Longitudes and is characterized with tropical climatic conditions.

The state has termed as drought prone and semi-arid area where monsoon failure and drought perpetual feature since last decades. The various projects of watershed development have been under taken in the Rajasthan state for more than one decade by the Union and State government, multilateral and bilateral agencies and NGOs too. Thus, Rajasthan state has been selected as universe for this study. Coverage of the five selected districts belongs to different geo agro-climatic region, which are distinguished geographical identity due to their physical homogeneity and cultural, historical, social and economic coherence. The Government of Rajasthan started the various watersheds Development Programme with the aims of reducing the vulnerability of the people to droughts, improving their incomes and livelihood and providing short-term employment opportunities in rural areas through implementation of integrated watershed management programme in participatory mode with people's participation.

The study is designed at two stages first, to study the geographical area and evaluation of watershed development and second, to investigate the subsequent impacts of these adopted approaches in terms of socio-political, economic and ecological at the grassroots levels. The methodological approach adopted in the field involves a survey-based data collection exercise comprising close-ended questionnaires. Three independent sets of questionnaires were used to collect the data. As per the specifications, 25 watersheds were selected from 5 districts comprising watersheds implemented under three different schemes, i.e. 15 watersheds implemented under IWDP scheme, 5 under DPAP and 10 under DDP schemes. The sampling design to select the districts, number of watersheds and year of sanction of the Watershed projects to be covered was determined by the Principle Investigator, prior to the commencement of the fieldwork. Accordingly, the study was undertaken in 5 districts of Rajasthan spread over 8-panchayat sammitees of 5 selected districts to cover the 25 micro watersheds.

Keywords: Watershed Development, Rajasthan, Geo-hydrological unit

Comparative Study of Social Maturity of Rural Area and Urban Area Working Women of Himachal Pradesh

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One finds that more and more women are educated, gaining economic independence and holding official positions and ranks at all levels. The traditional image of Indian woman is no doubt changing. One cannot expect this change to enter into practical life overnight traditional attitudes and prejudices still persist. This is but natural, for social opinion takes its own time to change. The investigator has undertaken the study entitled comparative study of social maturity of rural area and urban area working women of Himachal Pradesh. The objective of the study was to find out the difference between rural and urban area working women of Himachal Pradesh in variables of social maturity. Null hypothesis was formulated. Six hundred randomly selected subjects were taken for the present study i.e. three hundred from rural area and three hundred from urban area .Manual for social competence scale by Dr. Y.P Sharma and Shukla was used, 't' was employed to establish the difference.

Historicity of nature conservation in India: through tree worship

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In today's world where deforestation has become a major challenge to environment ancient indian history shows us the path to protect and conserve the nature This path is the a custom of tree worship which is still observed in the most part of India .In 1922 s.M.Edwards wrote "the worship of is an example of the reverence paid to them by Hindus of all classes occur in every village, town and city from the Himalayas to cape Comorian "Indeed way back to Indus valley civilization {5000years before} to modern times tree worship is a form of reverence and respect of the Indian culture towards mother nature. Primarily this belief arise from the widespread primitive belief that trees have souls of their own like men, that they feel injuries done to them and that the trees is the home of a tree spirit which gives rain and Sunshine, causes crops to grow, makes herds multiply and blesses women with off springs. And this belief allowed no one to cut down or injure trees. Gradually in the course of time this primitive belief was supported by religion. There are ample evidences of tree worship in Indus valley civilization which dates back to 5000 years before. Ahead of Harrapan civilization our ancient scriptures including Vedas, upnishads, Bhagvatgita and purans all give utmost importance to trees and plants. Even these scriptures mention Kalpavriksh and chaityavriksh as a deity, which indicates that worshipping tree is indeed an ancient indian practice. The Aryans worshiped nature, plants, trees and the other elements were always revered and several rituals were connected to them. The purpose of this research paper is to prove that our ancestors not only knew the immeasurable benefits of trees to mankind but also respect and admire trees because of the immense benefits that they received from trees in the form of fruits, flowers, fresh, oxygen and shade.To protect the trees from cutting down they considered them sacred and venerable. Thus under the umbrella of religion our ancestors made a successful attempt to conserve the nature.

Keywords: Tree worship, India, Environment

Environmental Pollution

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India has major water pollution issues. Discharge of untreated sewage is the single most important cause for pollution of surface and ground water in India. There is a large gap between generation and treatment of domestic waste water in India. The problem is not only that India lacks sufficient treatment capacity but also that the sewage treatment plants that exist do not operate and are not maintained. The majority of the government-owned sewage treatment plants remain closed most of the time due to improper design or poor maintenance or lack of reliable electricity supply to operate the plants, together with absentee employees and poor management. The waste water generated in these areas normally percolates in the soil or evaporates. The uncollected wastes accumulate in the urban areas cause unhygienic conditions and release pollutants that leach to surface and groundwater.

According to a World Health Organization study, out of India's 3,119 towns and cities, just 209 have partial sewage treatment facilities, and only 8 have full wastewater treatment facilities. Over 100 Indian cities dump untreated sewage directly into the Ganges River. Investment is needed to bridge the gap between 29000 million litre per day of sewage India generates, and a treatment capacity of mere 6000 million litre per day.

Other sources of water pollution include agriculture run off and small scale factories along the rivers and lakes of India. Fertilizers and pesticides used in agriculture in northwest have been found in rivers, lakes and ground water. Flooding during monsoons worsens India's water pollution problem, as it washes and moves all sorts of solid garbage and contaminated soils into its rivers and wetlands.

Keywords: Environmental Pollution, World Health Organization, Ganges River

Inter-laminar Variations in the Dendritic Spine Density of Multipolar Neurons in the Visual Wulst of Breeding-state Male Baya Weaver bird (*Ploceus philippinus*)

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This study using Golgi-impregnated brain tissue demonstrates pronounced activity both of apical and basal dendrites of multi polar neurons in hyperpallium intercalatum (HI) during breeding period in an experimentally un-manipulated animal (Baya Weaver bird). Dendritic spines connect axons with dendrites and so are suggested to be key elements in neuronal physiology. Significant inter-laminar differences ($P<0.05$), reported in dendritic spine density may be believed to contribute to the functional differences among the various wulst regions and resulting to be elemental in refinement of the neuronal connectivity patterns suggesting its possible role in various learning, sexual, social and nesting behaviors. In contrast, insignificant variations may attribute to some basic level of neuronal processing in each lamina in every situation. Such changes could conceivably be assumed to be due to variations in the gonadal-steroid levels, androgens in case of male bird, Baya weaver, *P. philippinus* which fluctuate between the two seasons being increased during breeding-state.

Keywords: Inter-laminar Variations, Dendritic Spine Density, Baya Weaver bird

Organochlorine Pesticides in Human Milk: How safe are the Neonates?

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Organochlorine Compounds (OCPs) are man-made environmental pollutants. They have been used for several decades in the development of agriculture and protection of public health. Their low degradation in nature, accumulation in living beings, biomagnification (increase of residue levels in the food chain) and biological effects in natural exposure and animal experimentation led to the legislation of the allowable concentrations. This legislation was intended to prevent the exposure of the general population to harmful levels of these xenobiotics. Taking the above point into consideration, a continued surveillance on the levels of pesticide levels in the human milk is an important task to ensure the wellbeing of neonates-our future generation. It was, therefore, planned to conduct a study in Jaipur, the capital of Rajasthan and the pink city of India in which the milk of women subjects were analyzed for OCPs and were divided into groups of having different food habits, age, parity, weight, use of pesticides and gestation period to find out that whether these factors effects the accumulation and excretion of pesticides in the human milk. The above study will be of special significance for the Indian population, since, Indians have been reported to possess the highest body burden of pesticides.The breast milk collected 48-72 hours after child birth of Indian (Jaipur) nursing mothers were examined for the presence of OCPsby using gas liquid chromatography. Significant residue levels of aldrin, isomers of HCH, metabolites of DDT and heptachlor were found in all the milk samples analyzed. Results revealed the susceptibility of subjects towards the food habits, age, parity, weight, use of pesticides and gestation period to accumulate and excrete OCPs residues in milk. No statistical difference could be observed between the two different categories of age, parity and food habits. Statistically higher accumulation was observed in the milk of pesticide users (non-persistent type) high weight category women and in the milk of subjects with preterm labour. The presence of organochlorine pesticides in human milk reveals its excretion and contamination resulting in sufficient neonatal intake which further poses the problem of management of neonatal health and nutrition.It further reflects that there is an urgent need to develop less/non persistent and more/total biodegradable pesticides and other means by which we can to reduce the environmental contamination by the OCPs which is not only posing a great risk to human health but also jeopardising our future generations.

Key Words: Human milk, Organochlorine Pesticides, Gas Liquid Chromatography, Contamination, Residues

International Environmental Law: Evolving of State Responsibility

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The present paper is a modest attempt to discuss the necessary evolving of state responsibility for implementation of International Environmental Law. State responsibility is one of the most complicated issues in the International Environmental Law. The main problemof dealing with this issue is the difficulty to necessary evolving of State responsibility in practice. There are so many environmental problems (such as nuclear damage, maritime damage, hazardous wastes and their disposal, e-waste) and it becomes very hard to tackle the every form of it.

State responsibility was developed through customary law and few cases of international tribunals and arbitration. Two main conditions are needed for state responsibility. One is the contravention of international obligation and another is the act that constitutes acontravention must be attributable to the state. Unfortunately, invoking the state responsibility in field of environment still remains a problem.

Due to the globalisation, development and industrialisation, the number of hazardous activities increased and many of these activities are allowed by international law. However, state responsibility may arise only out of illegal acts. Today, there are many activities that are allowed by international law, but may cause disastrous damage to the environment. The concept of state responsibility started to be insufficient.Sovereign State mustensure their responsibility and liability to implementing environmental law and make sure their global accountability for our prepossessing and precious planet.

Keywords: International Environmental Law, State Responsibility

Environmental issues in India

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There are many environmental issues in India. Air pollution, water pollution, garbage and pollution of the natural environment are all challenges for India. Nature is also causing some drastic effects on India. The situation was worse between 1947 through 1995. According to data collection and environment assessment studies of World Bank experts, between 1995 through 2010, India has made one of the fastest progress in the world, in addressing its environmental issues and improving its environmental quality. Still, India has a long way to go to reach environmental quality similar to those enjoyed in developed economies. Pollution remains a major challenge and opportunity for India. Environmental issues are one of the primary causes of disease, health issues and long term livelihood impact for India.

British rule of India saw several laws related to environment. Amongst the earliest ones were Shore Nuisance (Bombay and Kolaba) Act of 1853 and the Oriental Gas Company Act of 1857. The Indian Penal Code of 1860, imposed a fine on anyone who voluntarily fouls the water of any public spring or reservoir. In addition, the Code penalized negligent acts. British India also enacted laws aimed at controlling air pollution. Prominent amongst these were the Bengal Smoke Nuisance Act of 1905 and the Bombay Smoke Nuisance Act of 1912. Whilst these laws failed in having the intended effect, British-enacted legislations pioneered the growth of environmental regulations in India.

Upon independence from Britain, India adopted a constitution and numerous British-enacted laws, without any specific constitutional provision on protecting the environment. India amended its constitution in 1976. Article 48(A) of Part IV of the amended constitution, read: The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country. Article 51 A(g) imposed additional environmental mandates on the Indian state.

Other Indian laws from recent history include the Water (Prevention and Control of Pollution) Act of 1974, the Forest (Conservation) Act of 1980, and the Air (Prevention and Control of Pollution) Act of 1981. The Air Act was inspired by the decisions made at Stockholm Conference. The Bhopal gas tragedy triggered the Government of India to enact the Environment (Protection) Act of 1986. India has also enacted a set of Noise Pollution (Regulation & Control) Rules in 2000.

In 1985, Indian government created the Ministry of Environment and Forests. This ministry is the central administrative organisation in India for regulating and ensuring environmental protection.

Despite active passage of laws by the central government of India, the reality of environmental quality mostly worsened between 1947 and 1990. Rural poor had no choice, but to sustain life in whatever way possible. Air emissions increased, water pollution worsened, forest cover decreased.

Starting in the 1990s, reforms were introduced. Since then, for the first time in Indian history, major air pollutant concentrations have dropped in every 5-year period. Between 1992 and 2010, satellite data confirms India's forest coverage has increased for the first time by over 4 million hectares, a 7% increase.

Rapid Seasonal Changes in Dendritic Spine Dimensions of Multi polar Neurons of Para hippocampal Area in Male Baya Weaver bird (*Ploceus philippinus*)

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The key elements in neuronal physiology connecting axons with dendrites and serving as the main postsynaptic targets are the spines which are assumed to form the basis of neuronal plasticity. Limited information is available regarding avian hippocampal neuronal fluctuations in response to seasonal breeding in birds. Golgi-impregnated brain tissues demonstrated seasonal changes in dendritic spine dimensions (spine head size and spine neck length) in multi polar neurons in para hippocampal area (APH) in male Baya weaver bird. The results showed significant increase during breeding season in dendritic parameters in APH thus implying more neuronal networking of APH in experimentally un-manipulated breeding-state animal suggesting its possible role in various learning, sexual, social and nesting behavior. This variation may be believed to contribute to functional and behavioural changes reported during breeding state in birds.

Keywords: Dendritic Spine Dimensions, Neurons, Parahippocampal, Baya Weaver bird

Cell Phone radiation hazards

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Drastic changes have occurred in the society due to cell phones in present century. Now a day it becomes an essential part of routine life, without which life becomes stand still. Before the invention of cell phone very few people would have imagined that in future they would have gadget like this. But this great invention has brought with itself many hazards. The problem is that cell phones are still too new to know the long-term effects on humans. Cell phones are working on electromagnetic radiation in the microwave range (450–3800 MHz). Use of hands-free devices raises the levels of radiation to the head from cell phones up to three and a half times.

Cell phones cause memory loss, radiation sickness. It can also alter our sleep pattern. Some studies propose links between radio frequency radiation and lymphoma, microwaves and memory loss, excessive use of cell phone and a rare type of brain cancer, cell phone radiation and DNA destruction, cell phone use and damaged scalp nerves, radiation from mobile tower and disturbance to the flora-fauna of surroundings.

Keywords: Cell Phone, Radiation hazard, Radiation sickness

Resent Trends in Changing Eco System

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The global bio system basically the living conditions depends upon theprevailing ecological situations.Recent threat to Indian Agriculture is unpredictable, irregular and insufficient. The underground water level is on decreasing trends which Seldom gets enough water harvest for recharging the system. The directly result increasing Soil Sodality and poor crops. Contrarily excessive rains and water logging result acidic soil condition. unpredictable weather conditions pose difficult and undermining sowing time.Human health to has adirect co relation with the surrounding eco system. Congenial condition for development of microbes causes endemic disease syndrome a locality. Polluted water, air, available sunlight, pesticidal hazards etc. and atmospheres facilitate disease development and poor healthy. Recently, Global warming has become a Universal and serious concern to the scientific world. This problem is not only related with the global increase atmospherictemperatures but also created a rise in mean sea level and provided adverse green level effects There is an utmost need to increase a social awareness and re-evaluated the changing ecological conditions in relations to biological aspects with the aim to improve human welfare status.

Keywords: Bio system, Eco System, Indian Agriculture

Effect of temperatures of $MgCl_2$ solution on compressive strength of Magnesium Oxychloride Cement (MOC) – Green Cement

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Magnesium oxychloride cement (MOC) was discovered by S.T. Sorel in 1867. It is superior to the ordinary Portland cement (quick setting , higher fire resistance, lower thermal conductivity, better resistance to abrasion and chemicals. It is much research interest cement due to energy saving and environmental protection consideration. The effect of temperatures of MgCl2 solution on the compressive strength of magnesium oxychloride cement (MOC) has been investigated by authors. The results show that compressive strength is decreased on increasing temperature of MgCl2 solution within experimental limits.
Keywords: Abrasion, Density, Compressive strength.

Shannon's Entropy in Regional and Urban Planning

Anju Rani ,**Shalu Garg

The purpose of present paper is to analyse the effect of cost factor on the distribution of population in different areas. For this analysis, two cases are considered by using the measure of Shannon's entropy. The first case is studied with cost constraint. The second case is studied when cost of living is reduced in increasing proportion and comparison is made between two cases.
Keywords: Shannon's Entropy, Regional and Urban Planning, Population distribution

Rapid one Pot Synthesis of Polyacrylamide (Paam) Pendant Green Seaweed Polysaccharide Hydrogel of *Chamaedoris Auriculata*

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Poly-acrylamide (PAAm) pendant polysaccharide hydrogel was synthesized by grafting PAAm with a hot water soluble sulphated polysaccharide (CD_{sps}) of the green seaweed of *Chamaedoris auriculata* in aqueous neutral medium. The reaction was carried out by irradiating under microwave using the water-soluble redox initiator potassium persulphate (KPS). The reaction parameters were optimized in order to give product with the ability of forming hydrogel. The proposed mechanism by which this crosslinking process occurred was also shown. The grafting parameters (Pourjavadi, & Zohuriaan-Mehr, 2002) under optimized conditions were calculated and found as Grafting ratio (Gr) = 2.35, Grafting efficiency (Ge) = 0.94, Add-on (Ad) = 0.56, Total conversion (Ct) = 1.20, Homo-polymer content Hp = 0.039. Presence of nitrogen in hybrid product (4.01 %) and parent polysaccharide (0.82%) was also determined, higher percentage of nitrogen in hybrid product indicated the presence of PAAm. The copolymer was characterized by ^{13}C CP-MAS FT-IR, SEM, TGA, XRD, optical rotation, surface area analysis and elemental analysis. Optical micrograph and optical rotation $[]^{25}_{589}$ of the copolymer [+77.39°] were also studied and compared with parent polysaccharide (+114.14°). The product was found to have higher water holding capacity which envisages its possible application in agriculture as water retainer and in pharmaceutical as wound dressing material.
Keywords: Grafting, Poly-acrylamide (PAAm), Hydrogel, Copolymer, SEM.

Light Pollution

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Light pollution, also known as photo pollution, is the presence of anthropogenic light in the night environment. Light pollution is a problem of cities and other settlements with large amounts of outdoor lighting. Light escaping to the sky is scattered back causing a rise in the brightness level of the background sky. This in turn masks away stars and other objects such as nebulae and galaxies. This is a severe problem for astronomers and astronomy hobbyists who need to relocate to areas with darker skies to pursue their activities. Severe forms of light pollution can also influence animal behavior.

Light pollution is a by- product of lighting at night especially when we use inefficient luminaries and lamps and when we light to excessive levels. We can minimize our impact on light pollution by lighting more efficiently when we choose efficient luminaries and lamps. Fewer lamps may be required to meet the lighting objectives, resulting in less wasted light emitted into areas where the light is not needed.

Keywords: Light pollution, Inefficient luminaries, Cities

Analysis of Structural Traffic In Network Security Monitoring Systems

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Abstract: With the rapid development of Internet and the growing, today's network structure complexity is increasing day by day, network scale, network security has gradually become the focus of attention. To build a stable and secure network management system naturally become the focus of attention, one of network traffic monitoring system is one of the important means. The network traffic load monitoring system from the perspective of packet traffic analysis, through real-time information collection and monitor network packets, to check the network performance. It is help to monitor and analysis the network running status, improve the efficiency of network management and network security status, having a basic and decisive significance. Computer networks are playing a very important role in our daily life. Our dependency on computer networks is growing tremendously. Understanding what information flows in a computer network is important not just for network administrators but also for accounting, network planning, network security, forensics and counter-terrorism.

Keywords :Network Security, Wireless Network Structure, WSN

Electro Magnetic Pollution

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Electromagnetic radiation is a form of energy that is all around us and takes many forms such as radio waves, microwaves, X-rays and gamma rays. Sunlight is also a form of EM energy. A large proportion is of the cosmic radiation coming from space is absorbed by the atmosphere and only a very small portion reaches the ground. All living organisms use EM- radiation for a variety of their living activities for Communication, control and regulation of their various physiological and psychological functions.

In the present urban, domestic and working place environments, sources of EM- radiations are increasing rapidly. Increasing radiations from sources like- Power lines, Microwave, Telecommunication, Electrical appliances, Radar, Transmission of radio and television etc. are causing the problem of increasing EM- pollution. Usually symptoms of such Electromagnetic pollutions manifest as constant headache, lack of energy, mental blocks, sleep disturbance, trembling and rashes, anxiety attacks, cancer etc.

The effects of radiations are classified into two categories namely ionization and non-ionization radiations. Ionization radiations have high energy and can change the structure of atoms in the cells and leads to cancer. On the other hand, non ionization radiations cannot change structure of atoms. They just impact on their manner that it can lead to irreparable hurts.

Natural ways to reduce the dangers of EM-radiation are:-

1- Keep the cell phones and computers at a distance.
2- Avoid the use of Bluetooth headsets.
3- Try earthling.
4- Eat a Healing Diet.

Keywords: Electro Magnetic Pollution, Electromagnetic radiation, Cancer

Construction Activity – A Big Threat to Clean Environment

Leena Bhambhani, Deepa Bhambhani, Dr. Amita Saraswat

Development is sure to be followed by construction. But this is a major source of environmental pollution. The dominant construction materials like brick, steel and concrete contributes largely towards Global Warming. Each of them has a high LCA factor. These noxious materials cannot be fully banned as they are need of the hour. So their alternatives are designed and it is to our discretion that they are particularly used by the human society.

One of the most unanimous scientific consensus of the past two & half decades is that climate change is occurring as a result of human activity. Our mother earth is at a "tipping point" that is we are at a point where we could accelerate the onset of either a new hotter & wetter age (the environment which was present on earth before appearance of human race) or a new ice age. The window of opportunity for reversing the trend from hotter & wetter to ice age lies in our hands and according to scientist the time limit is as short as briefly 10 years. Rapid economic growth has accounted for improvement in living standards of people all around the globe,which in turn has led to a vicious cycle of consumption of raw materials by the constructing industries resulting in depletion of natural resources and increase Carbon dioxide emissions. Since buildings are large entities so impact on environment is also large. A building impact can be assessed by LCA { Life Cycle Assessment} which can measure green house gas (CO2) in the form of embodied energy ie the energy or green house gas emissions caused throughout an objects life cycle. A 2012 LCA study reveals that the construction materials have a high embodied energy, steel 32 MJ\Kg, cement 7. 8 MJ\Kg where cement produces highest CO2. A quick stats state that building account for 40% energy used worldwide. Furthermore, over next 35 years the production of cement in the world would reach 5 billion metric tons with approximately 4 billion tons of CO2emissions.

The major environmental impacts of construction occur during the use and operation phase of the building which are so dominant that the impacts of demolition, construction, disposal and transportation seem to beirrelevant. This problem can be solved by either reducing the consumption of construction material or by reducing the impacts caused by each construction material. For this two methods can be approached. Abate the consumption of construction material ie recycle and reuse them.

Selection of local materials

The dominant construction material in India being brick, steel and concrete ; each having its own noxious effect on environment. 25 to 26% of country's wood production are used for burning bricks every year causing deforestation ; Annual brick production in India is estimated at 140 billion bricks which uses 400 million tons of good quality soil every year by brick manufacturers resulting in depletion of good agricultural soil ; Brick industry is the largest consumer of coal (24 million tons\year) which contributes to 28. 8% of major air pollutant in air ie Sulphur dioxide.

Next are the concrete and steel, Concrete is a material that quite literally holds are cities together but it also has a dirty secret, the production of commercial concrete materials releases tons of green house gasCO2;Concrete tradionally is made of aggregates of water and Portland cement ; Large scale manufacturingleads to production of rammed Earth (dirt) which contributes to air pollution ; Concrete production leads to damageof top soil and also Long term use of concrete in environment contributes to release of radio active substances like K, U, Th and Rn which are harmful for human health

Apart from all the above mentioned negative effects of construction materials the truth is that they are unavoidable in today's scenario ; So an alternatives to these have been searched.

Use of bricks can be exchanged for sandstone and soap stone. Also in the crusade to cut global CO2 emissions our scientists have focused their search on power plants and for manufacturing innovative technologies have been hired. To mention a type of concrete made from biofuel waste that has lower carbon footprint than conventional concrete is developed from Kansas State University. This newly developed concrete where 20% of Portland cement is replaced with by products from cellulosic ethanol production not only has increased durability but also finds an avenue for bio fuel waste. Other alternatives to concrete are Timbercrete, Ashcrete, Ferrock (recycled material from steel industry it is actually steel dust).

Hence, If construction is a drastic need for development then other avenues such as reuse, recycling and local availability of materials incorporated with scientific designs and innovative modern technologies are a must.

Keywords: Construction Activity, Clean Environment, Bio fuel

Emerging Trends in Teacher's Education in the 21st Century

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Teachers' education is in the transition phase because of the rapid change in technology and students' changing values. Teachers' education course must therefore incorporate the learning and teaching psychology of students and teachers respectively. However, teachers' education system is facing problem of inaptness and irrelevance. There is a visible gap between how student live and how they learn. Hence, the concept of technological interface is missing in teachers' education in most part of the world. The drive to bring synergy between technology and teachers' education and enhance human capacity building is the main motive for this paper. It therefore made a rigorous review of the various trends in teachers' education in order to ensure that all prospective pre-service teachers have equal access to this new technology regardless of their economic background, This is tailored towards bridging the gap between modern teaching methodologies and existing traditional teaching methodology. The traditions of American teacher's training framework was adopted and critiqued. It was concluded that a proper model of teachers' education programme known as 'A proactive teacher's training framework was adopted and critiqued. It was concluded that a proper model needs to be sought out and conceptualized. It must have the right amalgamation of technology and tradition based on regional requirements. This is because most part of the developing country is not uniformly developed in terms of educational infrastructure and modern teaching aids. So adopting a complete developed country teacher's education model in developing countries may not be successful. It is recommended that developing countries should embrace the new technological model in order to meet up with the global standards.

Keywords: Teachers, Education, Psychology

Innovation and Entrepreneurship in Today's Scenario

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With rising population of the world, the world's need and necessities pattern had also evolved through the years. To sustain the ever increasing demand and supply of products, right entrepreneurship skills and innovation are much more needed. Without new business ideas and technology to support it, no consumer demand will be fulfilled completely. Entrepreneurship can be viewed as a creative and innovative response to the environment and an ability to recognize, initiate and exploit an economic opportunity. An entrepreneur is an innovator who introduces something new in an economy. Entrepreneurship is doing things that are generally not done in the ordinary course of business. Innovation may be in; introducing a new manufacturing process that has not yet been tested and commercially exploited, introduction of a new product with which the customers are not familiar or introducing a new quality in an existing product, locating a new source of raw material or semi-finished product that was not exploited earlier, opening a new market, hitherto unexploited, where the company products were not sold earlier, developing a new combination of means of production. Innovation involves problem solving and an entrepreneur is a problem solver. An entrepreneur does things in a new and a better way. A traditional businessman working in a routine manner is not entrepreneurial. Innovation leads to the dynamics that governs the interaction between science, industry, and society. Innovative organization wants must have to prepare for renewing the offerings and its delivery process to its stakeholders to survive in today's globalised world. In the present paper, concept of innovation and entrepreneurship has been studied. The paper will also include examples of innovative entrepreneurs and how the innovation in products/services helps the business in survival and growth in present globalised market place.

Keywords: Innovation, entrepreneurship, scenario etc.

Importance of Tribal People in Conservation of Environment

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80% of most biodiversity areas on the earth are home to indigenous and tribal people. Long before the word conservation was coined, tribal people knew the highly effective measures for maintaining the richness of their environment. They have sophisticated codes of conservation to stop over hunting and preserve biodiversity. Tribal people are being illegally evicted from their lands in the name of "conservation." Now they are accused of "poaching" because they hunt their food. They face arrests and beatings, torture and deaths, while fee-paying big game-hunters are encouraged. Their lives and lands are being destroyed by the conservation industry, tourism and big businesses.

Survival is fighting these abuses. We know that the tribal people are far better at looking after their environment than any of these conservationists. Therefore, tribal people should be allowed to play main role to conserve the environment, it will give them a dignified life also. These tribal people have developed a unique and sustainable relationship with nature. Through an elaborate attempt to balance individual needs with the needs of the larger community, they have nurtured an ecosystem which acknowledges the interdependent and interconnected nature of all life.

Keywords: Tribal People, Biodiversity, Poaching

Autonomous Encoding of Selective Jamming Attack by Packet Hiding Method in Wireless Sensor Network

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In the field of wireless sensor network, it is a very emerging technology based area of and very popular for research because it is very useful in many areas such as health sector, military application and other commercial application i.e. it addresses the many problems which is not handled by human being easily. Wireless sensor nodes have limited storage capacity and processing signal power to complete their task. Because it is small and cheap, it can be deployed easily in a hostile and unattended environment. There are so many attacks on wireless sensor network, In wireless networks due to its open nature it leaves vulnerable to the intentional interference attacks, called them as jamming. This can be used for mounting Denial-of-Service attacks in wireless network. Typically jamming has been addressed under external threat model In this addressing problem of jamming attacks in wireless network and considering adversaries is active for only short period of time, selectively targeting messages of high importance . For prevention of these attacks we are implementing three schemes that prevent real time packet classification by combining cryptographic primitives with physical layer and also strong hiding commitment schemes and cryptographic puzzle hiding schemes.

Keywords: selective jamming, Denial-of-service, packet classification, cipher text, plain text

Drinking water treatment with laser pulses

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The project focuses on design of a new technique for cleaning of tap water using the laser pulses. Laser breakdown in liquids (in particular in water) is of considerable interest due to its potential application to on-line analysis of suspended solid contaminants. Most studies of the phenomena of optical breakdown in water refer to the dynamics of the radiation emitted from the breakdown region and only a few addresses the integral hydrodynamic picture of the process. Taking into account that water (in general) and tap water (in particular) contains numerous suspended particulates, the laser breakdown events must be of discrete character. Therefore, studying only the integral parameters of water cannot adequately describe the process. The basic theme of this project is to purifying the drinking water using laser pulse interactions. The incoming water is stored in a chamber (along with the flow of the water) and the laser pulses may be injected through a pin hole in the water chamber. Due to the photonic energy of the laser pulse, the contaminated water can be heated. A cooling method must be used to cool down the heated water so that the contamination can be settling down in the bottom. In this way, a stream of pure water may be flown out from the water chamber. The most important thing is to optimize the laser intensity so that the water temperature cannot reach beyond the multi-boiling point. Otherwise, a heat exchanger would be needed to reduce the water temperature.

Keywords: Drinking water, Laser pulses, Laser breakdown

Application of Thermal Plasma Pyrolysis for Solid Waste Management

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The disposal of solid waste is a serious problem for Industries and also for Society. One can decompose the solid waste by burning using incinerator. However incinerators produces toxic aromatic compounds because of insufficient temperature conditions. In addition one cannot recover energy from the gases comes out from incinerator.

Thermal Plasma pyrolysis is emerging as a technology which can solve the solid and hazardous waste disposal problem in eco friendly manner with energy recovery. The thermal plasma pyrolysis process attracted great interest due to its moderate cost, high processing speed and simple system of operation. This technology can be used for treatment and disposal of Municipal Solid Waste (MSW), Bio Medical Waste (BMW), E-waste, Petroleum refinery solid waste and other industrial waste. One can dispose all these types of solid waste with Energy recovery without producing toxic compounds.

The process can be made more efficient by using suitable catalysts at different temperatures in the pyrolysis chamber and also to recover energy. After rigorous experimentation, the process can be optimized in an environment friendly manner.

Key words: Solid waste management, Thermal Plasma pyrolysis, Municipal Solid Waste (MSW), Bio Medical Waste (BMW), E-waste, Petroleum refinery, Energy recovery

Teacher Educator's Perspective and Teacher's Role

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The roles of teacher educators and teachers in any aspect of education can never be over-emphasized. In this connection, we want to analyse here the teaching of physics related concepts at school level from the point of view of science-for-all approach vis-à-vis disciplinary approach to science.

Any discussion on teaching physics at a level lower than senior secondary is likely to be considered a little out of context and even a retrograde step in the present scenario of elementary and secondary education. It is well known that on the basis of various considerations, the National Policy on Education 1986 and the revised National Curriculum Framework 1987 recommended that teaching of science should form an integral part of the curriculum for general education up to the secondary level. Not only science has to be compulsorily taught, but it has been envisaged that the approach to teaching science should be concerned more with the utilitarian value of science and scientific methods, and less with the aesthetic and disciplinarian way by which the scientific knowledge gets discovered in the first place. There is now a worldwide concern for ' Education for all (EFA)' and, accordingly, the school curriculum maker- The National Council for Educational Research and Training (NCERT) is preoccupied with District Primary Education Programme (DPEP) presently operating in various states.

Keywords: Teacher Educator, District Primary Education Programme (DPEP), National Council for Educational Research and Training

Groundwater Quality Investigation of Dholpur District Using Multivariate Analysis

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Groundwater is a valuable natural resource for various human activities. It is also an important source of drinking water in Dholpur, a district town of Rajasthan. Therefore it is essential to assess the quality of drinking water. The present study focused on multivariate statistical analysis of groundwater quality of Dholpur district. In order to investigate the factors controlling the groundwater quality, Nineteen physico-chemical parameters viz. Temperature, pH, EC, TDS, Turbidity, Total hardness, Total alkalinity, Ca^{2+}, Mg^{2+}, NO_3^-, SO_4^{2-}, N_2, DO, COD, F^-, Fe, Pb, Zn and Cu were analyzed. From the correlation matrix analysis of groundwater quality parameters, strong correlations were observed between EC and TDS, Ca, Mg and Total hardness. The weak and negative correlation was observed between F^- and SO_4^{2-}. The factor analysis was applied on all nineteen physico-chemical parameters to investigate the origin of the water pollution sources. Multivariate analysis showed the existence of upto four significant factor which account for 79.0% of the total variance of hydrochemical data. The two factors i.e EC and TDS can be initially assigned to mineralization, mining and salinity due to salt water intrusion whereas the other originates as a result of industrial wastes, domestic wastes and wastes from agricultural activities.

Keywords: Groundwater, Water quality parameters, Multivariate analysis, Factor analysis

Impact of food insecurity & its mitigation strategies

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It's fore-fronted that Climate change is affecting all the 4 dimensions of food security viz. food availability, food accessibility, food utilization and food systems stability. Consequently, it will have an impact on human health, livelihood assets, food production and distribution channels, as well as changing purchasing power and market flows. Its impacts will be both short term, resulting from more frequent and more intense extreme weather events, and long term, caused by changing temperatures and precipitation patterns. People who are already vulnerable and food insecure are likely to be the first affected. Agriculture-based livelihood systems that are already vulnerable to food insecurity face immediate risk of increased crop failure, new patterns of pests and diseases, lack of appropriate seeds and planting material, and loss of livestock. People living on the coasts and floodplains and in mountains, drylands and the Arctic are most at risk. As an indirect effect, low-income people everywhere, but particularly in urban areas, will be at risk of food insecurity owing to loss of assets and lack of adequate insurance coverage. This may also lead to shifting vulnerabilities in both developing and developed countries. Food systems will also be affected through possible internal and international migration, resource- based conflicts and civil unrest triggered by climate change and its impacts. Agriculture, forestry and fisheries will not only be affected by climate change, but also contribute to it through emitting greenhouse gases. They also hold part of the remedy, however; they can contribute to climate change mitigation through reducing GHG emissions by changing agricultural practices. At the same time, it is necessary to strengthen the resilience of rural people and to help them cope with this additional threat to food security. Particularly in the agriculture sector, climate change adaptation can go hand-in-hand with mitigation. Climate change adaptation and mitigation measures need to be integrated into the overall development approaches and agenda. In this paper, background information on the interrelationship between climate change and food security, and ways to deal with the new threat, and the opportunities for the agriculture sector to adapt, as well as describing how it can contribute to mitigating the climate challenge, is delineated precisely.

Keywords: Food insecurity, Mitigation strategies, Climate change

Role of "Religious Mythology" to Protect Environment in India

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Environment Protection has major issue now a days since global warming, Industrial, Residential waste and sewerage pollutant mixing with pure environment. Area of green belt is no longer green. Mountains, Hills and Forest area are trespassing by many ways. Green House Effect (Ozone Layer) and Climate changing are main focus areas included in Earth Summit "Agenda 21".Greedy motive of human causes depletion of natural resources. Many international forum and representations also inspired other countries to take effective steps on these challenges. To fight back these issues law maker made many legal texts to serve and protect it. According to our Indian Mythology "Panchtatva" are five elements of universe or the "Panchamababhutas". These are- Prithvi (Earth), Agni (Fire), Jal (Water), Vayu (Air) and Aakash (Space). It gives a spiritually believe that our body and whole universe is composed of these Panchtatva. So, our ancient "Sanatana Dharma" of Hinduism teaches us to protect and wellness of these five elements. If any of these being harmed or unbalanced, God will be aggressive and curse since these five elements worships as god in this culture.

Key words: Environment Protection, Religious Mythology

Current Status, Distribution and Eco behavior study of Golden Jackal (*Canis aureus*)in and around Jodhpur Rajasthan (India)

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The study cover districts Jodhpur Rajasthan, which is suitable site for study the species in details of ecology and behaviour. In Jodhpur District nine study location Machiya Safari Park (First biological park of Rajasthan), Kailana Forest Area, Chokha, Osian, Dangiawash, Palashni, Bishalpur, Ramdavas (Pipar), Devalinadi, Luni, Sathin and Ratkuriya (Bhola ram ji ki devil) were selected for study of golden Jackal. The city of Jodhpur lies at the eastern fringe of the Great Indian Desert in Western Rajasthan (altitude about 241 m MSL, latitude 26^0 18' N and longitude 73^0 08' E).Golden jackals are omnivorous and opportunistic foragers, and their diet varies according to season and habitat. Jackal prey on sheep, goats and calves. It also eats vegetables and fruits. There has been an intense human pressure on the Jackal in recent years. During the study period three cases of Jackal road accident observed. The number of particular species individuals and their sightings at a distance from the point were recorded. Golden Jackal is regarded rare and kept under schedule III of the Wildlife (Protection) Act-1972.

Key words: *Canis aureus*, Status, Eco behavior, Jodhpur

Confront and Opportunities of Indian Rural Market – A Critical View

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Rural advertising is a creating idea, and the advertisers have understood the chance of development in the market as of late. As everybody realize that Indian Rural Marketing is an exceptionally perplexing and one of a kind thing to be conjecture. Indian Rural markets are potential and up and coming business sector for the majority of the items and administrations on account of its tremendous size and request base. Country populace constitutes 128 million families, 41% of Indian Middle class and 58% of aggregate discretionary cash flow. Local markets have gained importance, as the general development of the economy has come about into substance unrest; the country territories are expending a huge amount of mechanical and urban fabricated items. There are different monetary layer found in the rustic market like small farmers, big landlords, marginal farmers. Demographic Variation at state level is likewise unmistakable. It has been watched that in country advertise numerous organizations have entered and substantiated themselves with legitimate comprehension of the market an inventive showcasing thought. It is extremely troublesome for the organizations to disregard the open doors they could from rural markets. In recent years, rural markets have acquired importance, as the overall growth of the economy has resulted into considerable increase in the purchasing power of the rural people and preferences of rural people are also getting changed. So, every marketing player is keen to invest in rural markets. Despite the fact that there is enormous potential and considerable development openings in the rural markets, yet there are a few difficulties as well, which caused jumps in tapping country markets. The present paper consists of the challenges that the companies have to face and opportunities that companies get in rural marketing.

Keywords: Rural marketing, Strategy, Challenges and Opportunities

Smog in Delhi and NCR

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Since the past two decades, air pollution has become a global public health issue and identified as a major environmental health hazard. Due to rapid development, society is facing serious challenges such as: climate change, global warming, ozone hole, acid rain and smog. Increasing energy demand and growing per capita energy consumption has led to such serious challenges. Their notoriety is evidence for the growing concern about the human impacts on climate. Recently, the onset of winter in every year Delhi and National capital Region (NCR) of India witnessed hazy and dusty condition or smog, which prolonged for many days (October to November). In present investigation, on the basis of air quality monitored by various Government organizations for the years 2009 – 2015, the occurrence of smog in Delhi is studied and fog is categorized as mixture of Classical and Photochemical Smog. In present investigation the overall scientific aspects driving the research are as: important processes controlling levels of smog and surface exchange, impacts of smog on human health and the environment and important processes controlling the interaction between climate and air pollution.

Successful Product or Successful System-A Human Centric Approach Towards User Satisfaction of Enterprise Resource Planning System

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Most of the software projects are largely undertaken with a mythology of developing successful products rather than successful systems. Enterprise resource planning products are generally developed in isolation from other system components such as people, information or existing business processes. This paper tries to apply the human centred approach in studying the user friendly effectiveness of ERP systems. The objective of the paper is to explore the relationship between the human centric approaches like (processes, semantic, social and pragmatic) and satisfaction of the user of ERP Systems. The contribution of this paper is to address the need for the human centric approach as a basis of designing of an ERP system, to define user human centric model for measurement towards user satisfaction.
Keywords: Enterprise resource planning, human centric approach, User Satisfaction etc.

Inventory models for deteriorating items with ramp type demand rate, Weibull distributed deterioration rate, partial backlogging and time-varying holding cost

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Abstract: In this paper, an inventory model with general ramp type demand rate, two parameter Weibull distributed deterioration rate, time-dependent holding cost and partial backlogging of unsatisfied demand, is considered. The model is studied under two different replenishment policies: (a) starting with no shortages and (b) starting with shortages. The backlogging rate is any non-increasing function of the waiting time up to the next replenishment and holding cost is taken to be any positive, continuous, increasing function of time. The optimal replenishment policy for the above model is derived for both the above mentioned policies.
Keywords: Inventory, Ramp type demand, Time-varying holding cost, Partial backlogging.

Spectral studies synthesis and antimicrobial evaluation of 10-substituted 6a,7-dihydro-6H-7-(4-bromophenyl)- 6-(4-methoxyphenyl) [1] benzopyrano [3,4-c] [1,5] benzothiazepine

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The majority of heterocyclic compounds mostly present in pharmaceuticals Currently marketed, alongside with their intrinsic versatility and unique physicochemical properties have poised them as true cornerstones of medicinal chemistry. Most of the drugs belong to the class of heterogeneous compounds. Heterocyclic compounds played a vital role in the metabolism of living cells, most of them are five and six membered heterocyclic compounds having one or more heteroatoms in their nucleus. These biological profile motivated us to synthesize new series of 1,5-benzothizepine derivatives. For the synthesis of 10-substituted 6a, 7-dihydro-6*H*-7-(4-bromophenyl)-6-(4-methoxyphenyl)-[1] benzopyrano [3,4-c][1,5]- benzothiazepines. Equimolar proportion of 5-substituted-2-amino benzenethiols, the substituents being fluoro,chloro, bromo, methyl, methoxy, and ethoxy were reacted with newly synthesize 2-(4-anisyl)-3-(4-bromobenzylidine) chromanone in dry toluene containing trifluoroacetic acid or piperidine in catalytic amount. The products were conveniently obtained by refluxing for 3-3.5 hours in good yield. The structural investigations are based on the result of microanalytical data of elements and spectroscopic studies based on IR, H^1 NMR, and mass spectra and anti-bacterial activity was carried out on Gram negative bacteria *Escherichia coli* and Gram positive bacteria *Staphylococcus aureus* and anti-fungal activity screening on fungus *Candida albicans.*

Keywords: 5-substituted-2-amino benzenethiols, 2-(4-anisyl)-3-(4-bromobenzylidine) chromanone, dry toluene, trifluoroacetic acid, Gram negative and Gram positive bacteria's

Analysis of Lead Adsorptionin Continuous Column

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Zeolite adsorbent was used for the removal of Pb ions from wastewater in column mode. Effect of flow rate (2, 3,5 lit/hr), bed depth (3,5,7 inch) and initial concentration (10, 20, 30 mg/lit) was used for the experimental observations. The BDST model was used for the analysis of column. The adsorption capacity of adsorbent Zeolite was 10.895 mg/g and percentage removal 93%. Data indicate that the breakthrough curves were dependent on flow rate, initial concentration and bed depth. The data was in good agreement with the BDST model. The study shows that Zeolite acts as an effective adsorbent for wastewater treatment.

Keywords: Zeolite, BDST model, Adsorption capacity, Wastewater

Streamlining Green Economy in India: Sustainable Development and Poverty Alleviation Perspective

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To attain sustainable development and poverty alleviation across the globe, the UN Conference on Environment and Development (UNCED) in 1992 made significant efforts. The United Nations Conference on Sustainable Development (or Rio+20) was conceived at a time of great concern for the health of the world economy. In this atmosphere 'green economy' was chosen as one of two central themes for the conference, building on a burgeoning body of literature on the green economy and growth. A green economy can be defined as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities (UNEP 2011). In a green economy, growth in income and employment is driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services. It is closely related with ecological economics, but has a more politically applied focus.

India has huge population consisting of poverty, unemployment, malnutrition, inequality and so on. Therefore, development path should maintain, enhance and, where necessary, rebuild natural capital as a critical economic asset and source of public benefits, especially for poor people whose livelihoods and security depend strongly on nature.

The main question remains that how can a green economy contribute sustainable development in India ? This study aims at the pathway to green economy in India which is very essential in recent times to alleviate poverty in order to achieve Millennium Developmental Goal(MDGs) for sustainable development.

Keywords: Green Economy, Environmental Challenges, Sustainable Development, Ecological, Natural Capital.

Synthesis, Spectral Studies, Antimicrobial Approach and Coordination Behavior of Aluminium(III) and Gallium(III)Compounds with Benzothiazoline

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Biological important complexes of aluminium (III) and gallium(III) derived from biologically active sulfur donor ligands 2-hydroxy-N-phenyl benzothiazoline have been prepared and investigated using a combination of micro analytical analysis, melting point, electronic, IR, ^{1}H NMR and ^{13}C NMR spectral studies,. Aluminium and gallium isopropoxide interacts with the ligand in 1:1 and 2:3 molar ratios (metal: ligands) resulting in the formation of coloured products. On the basis of conductance and spectral evidences, a penta coordinated structure for aluminium (III) and gallium(III) complexes have been assigned. The ligand are coordinated to the aluminium(III) and gallium (III) via the azomethine nitrogen atom and the enolic oxygen atom.

Keywords: Schiff bases, X-ray powder diffraction studies, Benzothiazoline, 2-hydroxy-N-phenylbenzamide.

Description of the nest and the immatures of *Megachile studiosa* Bingham (Hymenoptera, APOIDEA, Megachilidae)

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Three nests of *Megachile studiosa* Bingham (Hymenoptera, Apoidea, Megachilidae) were collected from anatural crevice made amidst stones in a wall in the Department of Zoology, JNV University, Jodhpur, during rainy seasons of year 2017. They had leaf cutting coating outside their nest chambers. Each nest consisted of 3 chambers, making a count of total 09 chambers. They contain larvae, pupae and, two chambers were occupied by pupae of cleptoparasites. Later these also emerged to adults and were identified as those of *Brachymeria*spp (Hymenoptera, Chalcididae). The paper describes the nest, immature stages and developmental consequences of the broods collected out of the nests of *M. studiosa*. A pair of adult bees which were reared from the nest shall be deposited at the national museum of Zoological Survey of India, Kolkata as Lactotypes.

Keywords: Immature, *Megachile studiosa,* Bingham

Ion-acoustic nonlinear periodic waves in plasmaswith nonthermal electron

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Ion-acoustic nonlinear periodic (cnoidal) waves and solitons are studied in plasma with nonthermal electron. Using reductive perturbation method, Korteweg de Vries (KdV) equation is derived for the system. It is found that nonthermal electron has a significant effect on the amplitude and width of the cnoidal waves, while it also affects the width and amplitude of the soliton in plasmas. The numerical results are plotted within the plasma parameters for laboratory and space plasmas for illustration. It is found that nonlinear periodic wave and soliton structure are formed in plasmas with nonthermal electrons.

Key words: Ion-acoustic cnoidal wave, KdV equation, Nonthermal electron

Estimation of *Prosopis juliflora* Removal in Keoladeo National Park, Bharatpur (Rajasthan)

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Land use and land cover change has become a central component in current strategies for managing natural resources and monitoring environmental changes. The advancement in the concept of vegetation mapping has greatly increased research on land use land cover change thus providing an accurate evaluation of the spread and health of the world's forest, grassland, and agricultural resources has become an important priority. Remote Sensing (RS) and Geographic Information System (GIS) are now providing new tools for advanced ecosystem management. The collection of remotely sensed data facilitates the synoptic analyses of Earth - system function, patterning, and change at local, regional and global scales over time; such data also provide an important link between intensive, localized ecological research and regional, national and international conservation and management of biological diversity.

Keoladeo National Park (KNP) popularly known as Bharatpur Ghana Bird Sanctuary situated between 27°7'06" to 27°12'02" N latitude and 77°29'05" to 77°33'09" E longitude. This important wetland was set aside as a bird's sanctuary in 1956 and a national park in 1981. It is included under both the Ramsar Site and the World Heritage Convention. It is famous for migratory avifauna especially for Siberian crane.

Today, wetlands – their flora and fauna are under increasing anthropogenic and natural pressures. The anthropogenic activities like unchecked vegetation removal, construction of barrages, and encroachment of the peripheral areas of the water bodies for residential, commercial and industrial activities are affecting the biotic components of wetland. In KNP wetland, *Prosopis juliflora* vigorously spreads and reduces the wetland area. This invasive species are adversely affecting the health of the National Park. Removal of this invasive species is urgent need for growth of ecosystems. As a master plan of management, removal of *Prosopis juliflora* has been successfully completed by the help of eco-development committee. Satellite data shows degraded forest area by nudation of *Prosopis juliflora.*

In this study Land use / land cover map of KNP was prepared using merged high resolution satellite data and estimate the land area change. In the interpretation of Land use / land cover of the KNP, it was found that the total geographical area is 28.96 sq km. and removed juliflora area (degraded forest land) is 8.77sq.km, which is covered 30.29 % of the KNP area.
Keywords: *Prosopis juliflor,* Keoladeo National Park, Bharatpur ,Rajasthan

Land Use / Land Cover Mapping of Siliserh Lake, Alwar

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Wetlands are amongst the Earth's most productive environment. The main peculiarity of wetlands is their extra-ordinary diversity, which makes them not only ecologically very rich and varied but also very productive from biological and economic point of views Siliserh Lake is situated about 13 kms (8 miles) south-west of Alwar city in Rajasthan (India), at 27° 31' 29" North latitude and 76° 31' 53" East longitude with an elevation of 939 ft. above msl. It is connected by a road which branches off from the National Highway 8, about 10 km (6 mile) from Alwar towards Jaipur.
LU/LC assessment is one of the most important parameters to meaningfully plan for land resource management. Changes in LU/LC affect ecosystems and agricultural productivity. The timely, accurate and up-to-date information on LU/LC can be obtained from various satellite data on a cost effective basis at the shortest possible time. In the present study LU/LC map of Siliserh Lake was prepared..
Keywords- Land use / Land cover, Siliserh Lake, Satellite data

Impact of Tourism and Integrated Development on Environmental Conditions of Jammu and Kashmir: A Geographical Analysis

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As the major tourism industry in India and the national development vision inspires and raises hope, the argument for trade as the engine of growth and development of Jammu and Kashmir in the face of globalization needs no emphasis. Unfolding developments in the political, economic and social spheres are bringing about tremendous changes and challenges in the business environment. These changes entail radical shifts in international economic relations, evident in the trade liberalization and globalization phenomenon. Mountain regions and communities often have fragile environments and socio-economic relations, the latter frequently important factors in environmental management. Problems associated with tourism in mountain regions include: sewage pollution of rivers, sedimentation and emissions from construction activities, landslides erosion linked to trails and snowmobiling, water extraction from streams to supply resorts, damage to habitats during construction and use, interruption by roads and construction of animal migration between life zones, litter accumulation on trails. In This background the proposed paper highlights the impact of tourism on environmental conditions of Jammu and Kashmir.

The main potential adverse impacts of tourism on the environment include: Pressure on natural resources, Harm to wildlife and habitats, with associated loss of biodiversity, Pollution and wastes, Social and cultural pressures related to conservation and sustainable use of biodiversity etc. The paper title devote to analysis impact of tourism and integrated development on environmental conditions of Jammu and Kashmir with geographical aspects.

Smog

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Smog is a type of pollutant. The word "smog" was coined in the early 20th century as a portmanteau of the words smoke and fog to refer to smoky fog, its opacity, and odour. The word was intended to refer to what was sometimes known as pea soup fog, a familiar and serious problem in London from the 19th century to the mid 20th century. The kind of visible air pollution is composed of nitrogen oxides, sulpher oxides, ozone, smoke or dirt particles and also less visible particles such as CFC's. Human made smog is derived from coal emission, vehicular emission, industries emission, forest and agriculture fires and photochemical reactions of these emissions. Modern smog, as found for example in los angles, is a type of air pollution derived from vehicular emission from internal combustion engines and industrial fumes that react in the atmosphere with sunlight to from secondary pollutants that also combine with the primary emission to from photochemical smog. In certain other cities, such as Delhi, smog severity is often aggravated by stubble burning in neighboring agricultural areas. The atmospheric pollution levels of Los Angeles, Beijing, Delhi, Lahore, Mexico city, Tehran and other cities are increased by inversion that traps pollution close to the ground. It is usually high toxic to humans and can cause severe sickness, shortened life.

Keywords: SMOG, Air pollution, Fog, Smoke

Integrated Development and Environmental Impacts in Jajjar District, Haryana

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"The climate of Jajjar district is semiarid. It is characterized by Precipitation during monsoon season which extends from June to September, overlapping And Extension beyond the Specific Period. Average Temperature ranges from 7^0C in January to 40.5^0C in May to June. Rainfall plays a significant part in regulating the seasonal biological rhythms of different parameters in the Reservoir of Jajjar District in Haryana.

The Initial Environmental Examination (IEE) assesses the Environmental Impacts due to proposed Improvement to all Different Roads Stretches for a total length of 78.7 KM in Jajjar and Bahadurgarh District in Haryana.

Constructions of roads increase the paved surface and permanent loss of top soil under these civil construction works. Spoilage of Fuel, Lubricants, Chemicals and other Oils will contaminated the soil in this Area. Due to these constructions activities generate dust in surroundings areas causing Increase in Particulate Matter which polluted the Air. Storage of Bitumen and other Hazardous material if stored near drainage channels would induce hazardous situations to the environment from possibility of leaching into ground and flow as runoff. Spillage of debris and constructions works materials causing water contamination which is harmful for both aquatic plants and animals.

Keywords: Climate, Soil, Environmental Impacts, Air Pollution, Biological rhythms

Air Pollution in Delhi and NCR

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Delhi is one of the most polluted city in the world. Due to rapid development, vehicular pollution, road dust, construction sites, industries etc. there is serious problem of Air Pollution in Delhi NCR region. Delhi is the most heavily populated state in India. Many steps are taken by the Government to tackle the problem of Air Pollution but still the quality of air is far below the recommended level. More concerted efforts are needed and required to reduce the air pollution in Delhi & NCR region. Some recommendations to improve the air quality of Delhi & NCR region are discussed in the Paper.

Keywords: Air Pollution, Delhi and NCR, Heavily populated

Fin-Tech: Digital Transformation of Financial Services

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Innovation and Technology have brought about a radical change in Traditional Financial Services. The financial service industry will be unrecognizable in five years. The innovators of today will not be necessarily be the innovators of tomorrow. To remain in the centre of the financial services industry in the future, innovation journey should be the part of overall agenda and align with all company's objective. Evolution of startups is imperative for a successful Fin-Tech ecosystem. Start-ups are redesigning the financial services processes with their high-end technological expertise; incumbent players are also following suit and investing heavily in creating new products of their own. Fin-Tech has evolved from startups that want to take on and compete with incumbents. Financial Technology (Fin-Tech) is the new technology and innovation that aims to compete with traditional financial methods in the delivery of financial services. Customers are increasingly getting attracted to Non Traditional Financial Service providers starting with smart phones for mobile banking, investing services, payments, funds transfer and crypto currencies. Despite being ease of working and business, Fin-Tech companies often face doubts from Core Financial Regulators. Data security is major issue because of the threat of hacking as well as the need to protect sensitive consumer and corporate financial data. Startup disruption is also one of the situation emerged by established ventures.

At this moment there is no universal understanding and definition of Fin-Tech, however this concept is used vividly developing. This research paper will shed new light on objective understanding of Fin-Tech with challenges and opportunities.

Keywords: Fin-Tech, Startups, Innovation, Disruptions, Financial Services

Calcium Hydroxyl Apatite Nano particles (CaHANPs) based Fluoride Removal from Potable Water

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Fluorine combine chemically with other elements in nature to form'fluoride'compounds and very high positive value of standard electrode potential for fluoride ions makes it physiologically more active and play significantrole in human physiology. It can disturb normal metabolic process and physiological functions of human body.Fluoride minerals are water sparingly soluble, therefore its presencein potable water is highly dependent on local and regional geological conditions. WHO and other agencies have fixed standard value of 1 to 1.5 ppm fluoride in water for clean potable water which is safe for the human health. High concentration of fluoride in potable water is known to cause dental and skeletal fluorosis, osteosclerosis, thyroid disease, kidney disease, cardiovascular disease, gastrointestinal disease, endocrine disease, neurological disorder, reproductive problems etc. Areport of the union drinking water and sanitation ministry of India reported 13,334 habitations which are affected by high fluoride in the country. Calcium based phosphate compound found to be a good candidate for static defluoridation of potable water. Therefore, we have synthesized Calcium hydroxyapatite nanoparticles (CaHANPs) for the defluoridation of potable water. CaHANPs were synthesized by dropping phosphoric acid solution in saturated basic solution of $Ca(OH)_2$ with constant stirring at 50 ^{0}C temperature.After around 3 hours of constant stirring a white flocculent solution of CaHANPs was obtained and CaHANPs were purified by repeated washing with distilled water and precipitation and dried in hot air oven. Synthesized CaHANPswere characterized with the help of PXRD, SEM, TEM and spectroscopic techniques. For static defluoridation study different amounts of CaHANPs were suspended in 1L of fluoride containing sample water with continuous stirringat room temperature for 1 hr, the supernatantwas taken out for determination fluoride. The defluoridation efficiency of CaHANPs was found to be comparable with potable water national and international standard.

Keywords: Calcium hydroxyl apatite, Nano particles, Fluoride, Potable water

Studies on the Effects Of Potassium Ion on *Nostoc Muscorum*

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In the present study the effect of potassium on *Nostoc muscorum* has been analyzed in terms of total growth, total carbohydrate, proteins and amino acids using 1 mg/l to 10 mg/l concentrations of potassium. All the growth and physiological parameters increases regularly upto 1 mg/l and after this level, these rapidly decreases up to 10 mg/l. High levels of K+ have not affect the total dissolved solids and electrical conductivity. Heterocyst frequency calculated after growth period of 18 days. Heterocyst frequency and enzyme activities of *N. muscorum* regularly increase under all the concentrations of K+.

Key Words: Potassium, Growth Parameters, Heterocyst Frequency, Nostoc muscorum

Efficient red luminescent Ag-Au alloy cluster @ Titania core shell

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Noble metal quantum cluster1 belongs to new category of nano material. Nano clusters are expected to be smaller (1–10 nm) with near-monodisperse size distributions (≤15%), while colloids are often >10 nm with much broader size distributions. In this paper we have synthesized metal core shell nanocomposites2 which have wide applications in solar energy conversion, microelectronic, optical and photo-catalyst. To make the coating of TiO2 Sol-Gel method is opted where precursors like metal alkoxides or metal chlorides undergoes hydrolysis and poly condensation reaction to form colloids. As Ti alkoxides undergoes very fast hydrolyzed with water so we need to control the rate of hydrolysis. This can be modified by adding complexing agent or by use of acid medium where the proton limits the condensation and allow gelation.

First Ag@MSA nanoparticles protected with mercaptosuccinic acid is synthesized then AgAu@MSA cluster is synthesized. Further AgAu@MSA core at TiO2 shell synthesis is facilitated by slow and steady growth of oxide layer on metal core and stability of metal colloid.As Ti alkoxides undergoes very fast hydrolysed with water so we need to control the rate of hydrolysis. Here we used titanium isopropoxide as Ti precursor and acetylacetone as complexingagent. Beside this Ag@MBA cluster is synthesized by solution phase reduction method and its application part is studied. This cluster can be used for mercury sensing.Characterization is done by UV-visible, Fluorescence spectroscopy, SEM, TEM with EDAX, XRD, FTIR and XPS etc.

Mobile Telephony (An Invisible Environmental Pollution?) & Human Male Reproductive Health : An Original Piece of Work

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Present study was designed to assess the possible effects of mobile phone (Electro-magnetic-radiation) on human seminal profile. 80-human male volunteers attending our infertility Clinic were assessed for semen profile according to the WHO Method Manual (Parameters included: abstinence period, liquefaction time, colour, volume, viscosity, density, motility, debris and sperm abnormalities). Personal details of these human volunteers like – profession, cell phone placing (shirt pocket and belt pocket), and talk time/day (approximately) and number of total years of mobile phone use were also recorded.

Results of our study reveal that 55-human volunteers (out of 80) were in the state of oligospermia with increased sperm abnormalities. These volunteers used mobile phone 3- 11 hours/day for a period ranged 3-10 years. While 25 volunteers showed normospermic state and these volunteers used the mobile phone for 15 -45 min /day approximately and number of total years ranged 1 -3 years.

Our study reflects the possible impact of mobile phone (electro-magnetic- radiation) on sperm characteristics which may be associated with use of mobile phone for longer duration alongwith other environmental factors, future studies are needed to confirm the effect of mobile phone on male reproductive system in order to ascertain its safety and formulate guidelines for mobile users.

Keywords: Mobile Phone, Human Semen Profile

Green and Sustainable Apparel Fashion: Socio-Economic and Environmental Aspects

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In recent years, the textile production, consumption and its waste have risen drastically across the World. Fashion industry is becoming one of the most ecologically perilous industries leading to a crisis situation for our planet. The world is facing challenges through transforming climate, ecology, economics, and society. The fashion industry requires trimming down its negative impacts from the triple bottom line - economical, social and environmental.

The entire supply chain, from sourcing, production, manufacturing, packaging, marketing, and consumption, call for addressing various sustainability issues. The need of the hour is to adopt green and sustainable production, consumption and waste disposal procedures. Reducing the exploitation of fertile soil, water, energy, mineral oils, petroleum products, toxic chemicals, and application of substitute organic fibres, reduction of carbon footprint and minimized use of non-renewable resources during production, eco-friendly packaging and increase in use of locally produced apparels gives a way to minimize chemical pollution, preservation of biodiversity and natural resources. Fair trade, ethical labour practices, elimination of child labour, safety of workers and consumers and promotion of traditional textiles, hand-spun and hand-woven products are some social and economical issues related with sustainable and green fashion production.

The actual consumption phase of a garment's lifecycle, during which it is worn and re-washed, has a significant environmental impact through washing, dry-cleaning, drying and ironing. Reduced energy use throughout the product life cycle, use of chemical-free laundering agent can support sustainability. Recycling and reuse of post-consumption textile waste may further prop up green campaign. The paper discusses the challenges and way outs to redress apparel fashion in detail.

Keywords: Green and Sustainable Apparel Fashion, Socio-Economic, Environmental Aspects

Main Source of Unsaturated Fatty Acids in Seed Oil of Momordica Charantia in Arid Zone of Rajasthan

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Momordica charantia is a member of Cucurbitaceae family. Momordica charantia is very nutritious vegetable having high therapeutic value. It is cultivated throughout India. Momordica charantia is commonly known as Bitter melon or Bitter gourd. Momordica charantia belongs to a climbing vine, which is commonly seen growing on walls and shrubs in the tropics. The plant grows up to 6 feet tall and develops small flowers, yellow in colour both male and female, on the same plant. The female flowers are followed by warty, egg-shaped to oblong, green ripening to yellow and then orange fruit with a tapering tip.

Momordica charantia seed oil washed thoroughly with distilled water to remove impurities, dehulled and subsequently dried at 600C to tray drier till consistency in seed weight is attained which were later cooled and ground by manual grinding machine. Bitter gourd seed of 12.0024 gm weight taken on Whatman No.1 filter paper was placed in Soxhlet extractor was originally designed for the extraction of a lipid from a solid material. Normally a solid material containing some of the desired compound is placed inside a “thimble" made from thick filter paper, which is loaded into the main chamber of the Soxhlet extractor. Grounded Momordica charantia seed oil was extracted taking a known weight of each sample with petroleum ether, using a soxhlet apparatus for 6 hours on water bath. Seed oil was extracted by repeated washing (percolation) with petroleum ether (boiling range between 40-60OC) using the solvent extraction procedure. After extraction, complete solvent was removed by distillation.

The oil obtained was stored in closed bottles and kept in refrigerator for analysis. Fatty acid compositions of seed oils were Determined. The results of this study show that the Bitter gourd oil has good nutritional value and is good for industrial application also, as the acid value was low and it may be used as good lubricant.The results show that the fatty acid contents (except oleic acid) in different varieties were significantly different ($P < 0.05$). Data reveals that seed oil contained a higher amount of α-eleostearic acid (54.12 %) while linoleic and oleic acid contents were found to be 5.35 % and 15.88 %, respectively. The saturated fatty acids estimated were stearic (20.55 %) and palmitic (3.21 %).

Keyword:- Momordica charantia, fatty acid, α-eleostearic acid and palmitic acid

Effect of Cinnamon Powder Supplementation on Blood Glucose Profile and BMI of Type 2 Diabetic Men

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Purpose of Study: The term diabetes mellitus describes a metabolic disorder of multiple aetiology, is characterized by chronic hyperglycaemia with disturbances of carbohydrate, fat & protein metabolism, resulting from defects in insulin secretion or insulin action or both (National Diabetes Statistics, 2011 and WHO, 1999). Diabetes is rapidly emerging as a global health care problem that threatens store ach pandemic levels by 2030. The WHO estimates a prevalence of 422 million peoples with diabetes worldwide in 2016. According to Indian Heart Association, India is projected to be 109 million individuals with diabetes by 2035. Cinnamon, granted Generally Recognized As Safe (GRAS) status by the USFDA, is generally safe when ingested (Lopezetal, 2005), and has a regulatory role in blood glucose levels as it contains a water soluble polyphenol, Methyl Hydroxyl Chalcone Polymer (MHCP), which has an insulin mimetic effect (Jarvil-Taylor,2001).

Objective:To find out the effect of cinnamon supplementation on blood glucose levels and BMI of middle aged adult men with type 2 Diabetes mellitus.

Methods and Materials: Seventy five adult men (50 comprising the 2gm cinnamon experimental group & 25 control group) suffering from type 2 diabetes mellitus (40-55years) were selected purposively for the study. Blood samples and height and weight measurements were taken at baseline and after 3 months of supplementation of 2gm of cinnamon powder per day. The parameters studied were Fasting and Post prandial blood glucose, glycated Haemoglobin, BMI, which were estimated at pre and post intervention in the experimental and control group.

Results and Discussion

The results of the study indicate a significant reduction in the mean fasting blood glucose levels, postprandial blood glucose levels, HbA1C levels and BMI after intervention, thus indicating that supplementing the diet with two grams of cinnamon powder per day for a period of three months brings a boutan improvement in the blood glucose profile and BMI of men with type 2 diabetes mellitus.

Conclusion: The study concluded that cinnamon powder supplementation is effective in reducing the blood sugar level and BMI of men with type 2 diabetes mellitus.

Keywords: Cinnamon Powder, Blood Glucose, BMI, Type 2 Diabetic Men

Prevalence of Endemic Fluorosis in Domesticated Cattle of Kishangarh Tehsil of Ajmer District Rajasthan

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Drinking water is the largest contributor of fluoride in daily intake. Fluorosis is a chronic disease caused by the continued ingestion of fluoride. The present work is undertaken to study the prevalence and health manifestation of fluorosis in cattle in ten different villages of Kishangarh tehsil of Ajmer district, Rajasthan. The water samples from borewells and handpumps were collected during pre monsoon, monsoon and post monsoon season in plastic collection bottles for the analysis of TDS, hardness, calcium, magnesium and fluoride. 40% of villages were found to have fluoride concentration >3.0 ppm and 60% of the villages have fluoride concentration < 1.5 ppm. House-to-house surveys were made in the early morning and late evening to estimate the prevalence and severity of F toxicity in milk and osteo-dental fluorosis. Chronic fluoride toxicity in the form of osteo-dental fluorosis was observed in cattle. There was a prevalence of dental fluorosis 5.76% in calves but skeletal fluorosis was not observed in calves. With the increasing fluoride concentration and age the prevalence and severity of osteo-dental fluorosis increased. Dental fluorosis in adult cattle was found to be 6.71%. The prevalence of skeletal fluorosis in cattle was 13.4%. Sporadic lameness was observed in the animals of more than 6 years of age. Reduced milk yield is also observed due to fluoride toxicity. The significantly higher free fluorine concentration in relation to bound fluorine is found. Approximately 6% of total fluorine in milk is bound fluorine. Milk obtained from cattle showed a significantly higher free fluorine concentration in relation to bound fluorine.

Keywords: Osteo-dental fluorosis, fluoride toxicity, fluoride in milk, skeletal fluorosis.

Computational modeling of MHD Stagnation point flow towards a Stretching or Shrinking sheet in a porous medium

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Numerical analysis is carried out to investigate two-dimensional laminar flow of a viscous incompressible electrically conducting fluid near a stagnation point of a stretching or shrinking sheet in the presence of a uniform magnetic field in a porous medium. The governing nonlinear partial differential equations are reduced to ordinary differential equations by using suitable similarity transformation. Mathematical computation of the problem was performed by shooting iteration technique. Effects of various parameters such as Prandtl number, permeability parameter, magnetic parameter and stretching or shrinking parameter on velocity and temperature profiles are computed and represented graphically, whereas numerical values of skin-friction coefficient and Nusselt number are presented in tabular form.

Key Words: magneto hydro dynamic flow, stagnation point, stretching sheet, shrinking sheet, porous medium

Utilization of Chemically Transformed Kota Stone Waste to Improve The Growth of Bhindi Plant

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There is continuous increment in the demand of various types of stones which leads to enormous increase in the business of stone sector industry. Kota stone is a fine grained variety of lime stone, quarried at Kota district, Rajasthan, India. Kota stone industry is one of the stone industries generating waste heaps on a large scale. Only insignificant quantity has been utilized and rest has been dumped unscrupulously resulting in environmental problems and health hazards. This study focuses on chemical transformation of Kota stone waste and its application on Bhindi plant to study the effects on its growth. The application of chemically transformed Kota stone waste after mixing with vermicompost in 7.5% of the total weight of the soil showed maximum effect on the growth of Bhindi plant

Keywords: Stone industry, Kota stone, Waste, Growth, Bhindi plant

A Study on Benefits of Environmental Audit

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Environmental performance and position of an organization can be quantified by environmental audits. Uses of these tools include compliance audits, management audits and functionality audits among other.

Environmental auditing benefits vary depending upon the objectives and scope of the audit. Some benefits for an organization includes-

(i) Demonstrating their environmental responsibilities
(ii) Meeting statutory reporting process
(iii) Compliance of legal requirements
(iv) Conforming the implementation environment policy which is necessary for sustainable level of development of organization
(v) knowing about proper management of their environmental risks
(vi) Improving environmental performance and saving money
(vii) Understanding environmental implications of their products, process and activities.

It also helps in pollution control, improves production safety and conservation of resources by ensuring waste prevention and reduction. It, thus, places environmental information and compliance in to the public domain.

Keywords: Environmental audit, pollution control, waste prevention

Assessment of Physical Properties of Conventional and Ahimsa Silk with Cotton Union Fabrics

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Sustainable fashion is not merely a short term trend but on which could last many seasons. It is for generations to survive on the earth. Silk fiber is the most beautiful natural fiber known as the "Queen of Textiles". Ahimsa silk is a non-violent, eco-friendly and sustainable process of the production. Cotton is a versatile fabric full of comfort properties. Hand spun and hand woven cotton fabric is another model of sustainable fabrics. Therefore, union fabrics in different ratios were prepared from cotton and ahimsa and conventional silk yarns. Assessment of physical properties of cotton and Ahimsa and Conventional silk union fabrics has been reviewed in this paper.

Objective of the study was to prepare union fabrics in three different ratios Eri*Cotton 33:67, Eri*Cotton 50:50 and Eri*Cotton 67:33 and assess physical properties. These fabrics were tested in the wool Research Association for its crease recovery, abrasion, drapability and dimensional stability etc. The results indicate that cotton-ahimsa silk union fabrics are compatible to other cotton- conventional silk union fabrics in their properties, so can be used for various garment construction.

Keywords: Cotton and Ahimsa silk, Conventional union fabrics, Natural fiber

Analysis of Lead Adsorption in Continuous Column

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Zeolite adsorbent was used for the removal of Pb ions from wastewater in column mode. Effect of flow rate (2, 3,5 lit/hr), bed depth (3,5,7 inch) and initial concentration (10, 20, 30 mg/lit) was used for the experimental observations. The BDST model was used for the analysis of column. The adsorption capacity of adsorbent Zeolite was 10.895 mg/g and percentage removal 93%. Data indicate that the breakthrough curves were dependent on flow rate, initial concentration and bed depth. The data was in good agreement with the BDST model. The study shows that Zeolite acts as an effective adsorbent for wastewater treatment.

Keywords: Zeolite, BDST model, Adsorption capacity, Wastewater

Communication at Workplace: Spine for Success

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The purpose of this paper is to recognize and discuss the significance of effective communication during the process of managing changes in organizations. The paper discusses the relationship between communication and organizational success. The advantages of successful communication related to efforts of employees to improve communication, plan and execute various policies are also discussed. This paper also identifies the objectives and communication needs for each stage of the communication process. Also, the various motives and benefits of organizational communication are discussed. It defines the organizational communication and presents its various objectives. The means to achieve these objectives and their advantages are also described. The paper offers a change communication model which identifies different variables facilitating effective communication and finally ensuring successful organizational change. Also, it highlights the aspects of communication which has proven to be useful for successful changes in business organizations. It would be of value to practitioners and researchers seeking to develop their communication skills and encourage members of staff to demonstrate improved results.

Keywords: Communication, Workplace, Spine for Success

Environmental awareness (Education) for a Sustainable Future

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"Earth provides enough to satisfy every man's needs, but not every man's greed." - Mahatma Gandhi

Environmental problems are multidisciplinary in nature. Some problems are global and regional while some are local. Although India has a rich and long history of environmental laws dating back to the1970s, it still ranks very low on air and water pollution levels compared to the rest of the world resulting in higher rates of infant mortality and lower life expectancy rates. The reasons for this disconnect between enlightened environmental laws and high levels of pollution could be traced to lack enforcement of existing environmental laws and environment education. The main objective behind this research is to identify the role of Education. In short, environmental education is provided so that people can have a better understanding of the world around them and know how to take care of it properly so that the world can be a better place and integrated development can be achieved.

Key words: Environment, Environmental education, India

Body Language: A Language of Expression

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Communication is a two way process of reaching mutual understanding and connecting people , where participants not only use it as an essential tool for exchanging ideas, feelings , information and news but also create and share meaning. The basic elements of communication include sensible sender, intended messages and attentive recipient. Medium also plays an important role in transmitting the messages. Words are the best medium for Written and Spoken communication which constitutes the world of verbal communication. The world of Non-Verbal communication includes body languages, symbols, and signs to pass across any message.

Body Language is the silent way of communicating messages through the sender's body movements, facial expressions, voice tone and loudness etc. This unspoken and non-verbal mode of communication occurs in every single aspect of our interaction with another person. Sometimes it can send signals stronger than words. It is controlled by our subconscious mind because the thought process is always reflected irrespective of what a person is saying. It is just like a mirror which reflects thinking and feeling of sender as well as receiver. The non verbal behavior interprets certain personality traits of a person rather than what a person actually speaks or writes. Body Language involves: Facial Expressions, Eye Contact, Body Movements or Gestures, Appearance

This paper will explore the importance of Body Language in business and how to use this type of communication properly. We can feel its presence in our day -to- day life and is necessary to communicate it in a very expressive manner. More than half of all human communication takes place nonverbally. A person is judged on what he speaks and how he expresses his feelings. So the effective body language enhances the potentiality of the message. Hence proving 'Actions Speak Louder than Words.'

Keywords: Body Language, Language of Expression

Integrating Innovations, Technology and strategies with a vision of creating a better future

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In a world where we are leading towards destruction, exhausting natural resources like fossil fuels, petroleum, water, land and emission of harmful greenhouse gases into the environment which will eventually lead towards a future with no resources and merely survival conditions. Though our present technologies are useful and accessible, they are slowly adding up to the pollution and degrading the environment we live in. Innovations are needed in technological field to lessen the pollution, waste and to regenerate the energy to optimise its use. In this research, we will be concluding the strategically innovative approaches in technology to overcome this problem. The action which is commonly known as a national sustainable development strategy- a process that represents a transition from the traditional fixed plan, towards operating an adaptive system that can continuously improve. We will try to build such a plan which will innovate to satisfy the needs of masses and simultaneously protect the environment. This research mainly focuses on picking up the present technologies and innovating, modifying and upgrading them.

Keywords: Integrating Innovations, Technology and strategies

Sound Attenuation in Ferroelectrics

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By ultrasonic studies, static and dynamic properties of the crystals can be measured simultaneously. Ultrasonic attenuation data provides information about the dynamic behaviour. The mechanism involved in phase transition can be understood by temperature and frequency variation of attenuation.

Soft mode (or coupled soft mode) frequency is held responsible for the anomalous behaviour of ferroelectric crystals near phase transition. Near this point, soft mode frequency [$\Omega^2 = K(T-T_C)$] becomes small resulting in an increase of its amplitude. This anomalously large amplitude of soft modes should influence the acoustic mode via phonon-phonon interactions and is expected to give rise to an anomalous behaviour of sound waves near phase transition. These sound modes are longitudinal acoustic modes as in the vicinity of T_C, only the interactions of longitudinal sound remains. Interaction between transverse acoustic and transverse optic modes is very small.

The aim of the present study is to investigate sound attenuation in displacive as well as order –disorder type ferroelectric crystals using double-time thermal Green's –function .We concluded that attenuation varies as $T/(T-T_C)^{3/2}$ near phase transition which is found in agreement with the results of others. Considering the quartic anharmonic term in the frequency dependent attenuation, it can be approximated as $\alpha_s(\omega) \approx a_2\omega^2$ which shows the ω^2 dependence of the attenuation. This theory can also be extended to deuteration effects on hydrogen bonded order –disorder hydrogen bonded ferroelectric crystals.

Keywords: Sound Attenuation, Ferroelectrics

Water Management and Improving Water Security in Rajasthan

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Every year Rajasthan faces severe drought like conditions. To solve the water scarcity problem it is best to restore, repair & renovate the traditional water bodies like baoris, tanks, kunds, ponds, johads, khadin etc. Sometimes-traditional time tested ways can help fulfill the requirements of people in a very effective way. This paper discusses and recommends the Traditional ways used for so many years to improve water security.

Keywords: Water Management, Rajasthan, Drought

Synthesis and Characterization of cobalt ferrite with metal (X) (X= Co, Fe) oxides by Chemical co-precipitation method

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In the present research work, Cobalt ferrite with metal oxide nanoparticles were synthesized by metal chloride precursors through chemical co-precipitation technique by pipette drop method using aqueous NaOH solution as precipitating agent. Cobalt ferrite with metal oxide nanoparticles were characterized by using X-Ray diffraction and FTIR (Fourier Transformation Infrared microscopy). The size of the particles was calculated by using Scherrer formula. The average size of particles synthesized at room temperature was controlled near about 26nm. Cobalt ferrite with metal oxide is a magnetic material having a significant number of applications such as making gas sensing device, recording media and making devices that operate at microwave or radio frequency ranges.

Keywords: Cobalt ferrite, Metal oxide nanoparticles, Co-precipitation method, XRD

An Inventory Model for Items having Weibull Demand Variable Deterioration Rate and Backlogging with Money Inflation

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In this paper, we consider an inventory model with two parameter Weibull demand and shortages with deterioration. Considering deterioration rate is as time dependent. Three different cases with complete, partial and no backlogging are considered. The optimal analytical solution of the model is derived.

KEYWORDS: Inventory, Weibull demand, Partial backlogging

Green and Sustainable Apparel Fashion: Socio-Economic and Environmental Aspects

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In recent years, the textile production, consumption and its waste have risen drastically across the World. Fashion industry is becoming one of the most ecologically perilous industries leading to a crisis situation for our planet. The world is facing challenges through transforming climate, ecology, economics, and society. The fashion industry requires trimming down its negative impacts from the triple bottom line - economical, social and environmental.

The entire supply chain, from sourcing, production, manufacturing, packaging, marketing, and consumption, call for addressing various sustainability issues. The need of the hour is to adopt green and sustainable production, consumption and waste disposal procedures. Reducing the exploitation of fertile soil, water, energy, mineral oils, petroleum products, toxic chemicals, and application of substitute organic fibres, reduction of carbon footprint and minimized use of non-renewable resources during production, eco-friendly packaging and increase in use of locally produced apparels gives a way to minimize chemical pollution, preservation of biodiversity and natural resources. Fair trade, ethical labour practices, elimination of child labour, safety of workers and consumers and promotion of traditional textiles, hand-spun and hand-woven products are some social and economical issues related with sustainable and green fashion production.

The actual consumption phase of a garment's lifecycle, during which it is worn and re-washed, has a significant environmental impact through washing, dry-cleaning, drying and ironing. Reduced energy use throughout the product life cycle, use of chemical-free laundering agent can support sustainability. Recycling and reuse of post-consumption textile waste may further prop up green campaign. The paper discusses the challenges and way outs to redress apparel fashion in detail.

Keywords: Green and Sustainable Apparel Fashion, Socio-Economic, Environment

Current Environmental Issues and Challenges

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The Earth has enough for everyman's need but not for one man's greed— Gandhi.

Humans are very innovative, but we've also created many ecological problems. We've changed the face of the planet, fished the oceans, and we're causing climate change through emissions.

We have a dream – a world without poverty – a world that is equitable – a world that respects human rights – a world with increased and improved ethical behaviour regarding poverty and natural resources - a world that is environmentally, socially and economically sustainable, and where economic growth is accomplished within the constraints of realising social objectives of poverty eradication and social equity and within the constraints of nature's life support carrying capacity, and a world where the challenges such as climate change, loss of biodiversity and social inequity have been successfully addressed. This is an achievable dream, but the system is broken and our current pathway will not realise it. Unfortunately, humanity's behaviour remains utterly inappropriate for dealing with the potentially lethal fallout from a combination of increasingly rapid technological evolution matched with very slow ethical-social evolution. The human ability to do has vastly outstripped the ability to understand. As a result civilization is faced with a perfect storm of problems of many environmental challenges.

Keywords: Environmental Issues, Challenges, Technological evolution

Environmental Ennui: A Stumbling Block To Literature

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Literature has through the ages dilated upon the issues relating to aesthetics and ethics. These two fields roughly summarize the field of literature. The works of literature are judged to be good, either in aesthetic terms or in terms of ethical values. The writers have been measured with respect to these two parameters. Those who celebrated the dictum of 'art for art's sake' upheld the artistic factors and measured things in aesthetic terms and those from Shakespeare to Tolstoy, who took upon themselves great social and humanistic responsibilities, tackled things in moral terms. If the social, economic, political and cultural fabric sustains and all these superstructures rupture, and man degenerates into mere animals, taking recourse to crass predaciousness and rapaciousness, as is very much probable if an environmental ennui ensues, then our ethical and aesthetic values will go to the dogs or to the hell. The aesthetic values will be gone when all the beauty will vanish. The very nature will be replaced with patches of disaster and muck of industrialization. The very word beautiful will be an obsolete item and all those things that go by the name of beautiful will turn fossilized. The only existent entities will be disfigured things with their skins blistered and bruised and burnt and unsightly. In such a world, the writer talking of beautiful things will be as childish as one talking of faeries and other imaginative chimeras is today. No Eliot-or Yeats-like serious writer will be able to talk anything aesthetic.

Keywords: Environmental Ennui, Stumbling Block

Consumers' Perception towards Online Shopping of Apparel through Various Websites

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Online shopping made life easy for everyone making a wide range of products available to the consumer at once. One can search any product easily by using any online shopping site. As buyer has choice from products available world-wide markets which is never been possible in traditional shopping from sort. There are numbers of websites on the internet that the consumers can access to find information and compare different types of apparel. The present study aims to identify the consumer buying behavior towards the online shopping as well as satisfaction level and various problems met by them during online shopping. This research also aims to study and compare different online shopping sites with growing competition. It is important to study consumers' behavior towards online shopping as it clearly affects what they buy and where they buy it from. It helps in developing better marketing strategies to convert off-line buyers into online shoppers and make use of the great market that lies ahead. It gives an idea about the kind of products that a consumer is interested in buying and the circumstances under which they prefer buying online. This paper concluded that the advancement in technology facilitate consumers into many ways which develop trust towards e-business. The role of innovation in the field of online shopping resolves number of issues related to customer satisfaction and technical obstacles by improving on the challenges faced by them currently. The study also elaborates how increased competition among different websites is benefiting consumers by providing them with competitive prices, high discounts and convenience of delivery within 24 hours along with vast range of payment options with higher security of personal information.

Key words: Consumer buying behavior, Apparel shopping Websites, Service quality.

The Impact of Modern Technology in Healthcare System

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Modern technology has changed the structure and organization of the entire medical field. Modern technology is the need of every sector especially healthcare , using latest technology we can access good treatment at short time. The impact of technology on healthcare includes three main areas : 1st quality of human life 2nd healthcare job 3rd the world economy. Treatment and recovery time have been reduced significantly. Modern Technology affects the lines of thousands of medical professionals and students training to become medical experts. There is the traditional line between engineering and medical science grows ever thinner. As medical machines and the computers that power them become smaller, faster and smarter the medical device industry is making medical practice easier for doctors , more effective for patients and cheaper for the entire healthcare system. The challenges in the integration and management in medical field includes: Data Privacy, Flexibility and evolution of application, managing device interoperability and diversity , Scale, Data Vol., and Performance. Modern technology innovations help in : Health Monitoring and Diagnosis , Medical Treatment and Patient care , Pharmaceutical Research and development , Clinic Performance and optimization.

Keywords: Data Privacy, Flexibility, World economy

DNA double strand breaks repair pathways: A new approach for cancer treatments

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Genomic instability plays a crucial role in the cancer development. DNA repair pathways play a crucial role in the repair of DNA double strand breaks and maintenance of genomic stability. In the events of cancer treatments by radiotherapy and chemotherapy, DNA damage plays an important role. So, the cells DNA damage repair and response pathways may hold the key to the development of new therapeutic drugs for cancer treatments. In mammalian cells DSB is repaired mainly through non-homologous endjoining(NHEJ) and homologous recombination pathways. In NHEJ, DNA-PKcs acts as the DSBsensor. There are lines of evidence strikingly indicating that the catalytic activity of DNA-PKcsto phosphorylate various proteins is essential for the repair function of DNA-PK. Another important key player, XRCC4 (X-ray repair cross-complementation protein 4) was named to complement its ability to complement Chinese Hamaster Ovary cells (CHO) cell line, XR-1 that is deficient in DNA double strand break repair process. XRCC4 protein binds and make a complex with Ligase IV protein and ligates broken DNA ends in the Non-homologous End-Joining repair process of DNA double strand breaks.The research work in the present research paper is carried out to increase our understanding of the complex mechanisms of NHEJ repair pathways of DNA double strand breaks that govern the cellular response. We have successfully analysed the functional relationship between DNA protein kinase and XRCC4 in NHEJ repair pathway. This research work is veryimportant to find a missing link in our understanding of DSB repair mechanism and may provide us with a new therapeutic approach for the treatment of cancer.

Keywords: DNA double strand, cancer, Ligase IV protein

Media propaganda abrupt human development in terms of their various stages related to psychological growth

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As country is growing into developing nation, society is also growing in various directions whether it is education, politics, media, fashion, science, technologies etc each phase has its own belief system which further help in the rotation of its field. If we talk about today's scenario we are known to several other features which act as a science of success, showing the graph of development of the life and society in terms of evolution. In the ancient time life is very simple and easy to understand in terms of association, people learnt settlement with the environment and also focus on their ontogeny. Time passed by to showcase its importance of being serene and pure in terms of emotions and perception but todays cultural is totally opposite to its origin of human behaviour and gradually decreasing to monotonic functions. What worked at the back of it, if asked always come up with the definition of nurturing, creating a reply of denial to the submission of handmade suspensions, but truly, media whether it is visual or sound, everything worked as a creative consensus with an array of influential vulnerability of its effect on emotional arousal. No one has made boundaries to this collective consciousness which is blowing in different aspects of culture, habits and personalities in all types of age group, reflecting the propaganda thrown over their mind. This help in assessing dispositions of socio cultural theory of human science and its growing mind and brain. Tools to locate these tendencies and inclinations are related to the objectivity of research.

Key words: Media, Growth, Collective Consciousness, Development, Science of Success, Socio Cultural Theory

Environment- Development over Challenges

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Environment has always been a Hot topic. It is a word which refers to "anything that surrounds us". We, the Human Beings are living in a biophysical environment. An Environment which includes biotic as well as abiotic. Besides all of this, we should not forget the fact that Human Beings, from the Stone Age era to the present 21st century is responsible for using environment for selfish motives. In 2017 CCPI report, G20 was responsible for 75% of GHG (greenhouse gas) emission. But not only GHG emission, there are different environment issues which threatens the existence of the mankind namely, climatic change, environment degradation, overpopulation, resource depletion, etc. India is on a red alert situation for GHG emission. Talking about environment degradation, World Bank stated that it costs India about $80 billion a year. In a survey of 178 countries by International Labor Organization, India ranked 155th, almost last in the Air pollution, and WHO survey said that 13 of the 20 polluted cities were in India. Now the main question arises that "How can we come out of the Environmental trauma?". The answer is seemingly possible. The environment development committees have been formed which are responsible for the study of the environmental conditions and preparing the strategic goals for the betterment of the environment. In a country survey report of CCPI, it was seen that India is now on 14th position in the emission and the energy use category, with Sweden being on top and Saudi Arabia on the last. What is required for the present day is-going back to the basic perspective which suggests a collaborative venture of man and nature?

Keyword: Environment, Greenhouse gas, Overpopulation

Nature cures, not the physician

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Food is a powerful medicine. Natural food remedy for common diseases is an age-old practice that has been passed down from one generation to the other. Most natural foods like fruits, vegetables, cereal grains, seeds and nuts, possess many medicinal virtues. Research has proved many of these cures to be astonishingly effective. The living proof is that of our ancestors—with the help of these cures—they lived a happier, healthier, and longer life than the present generation. Today's generation is under greater attack from the pollutants in our air, food and water than any other previous generation. Moreover, coronary heart disease, diabetes, Alzheimer's, dementia and metabolic syndromes---every chronic degenerative disease is a direct result of the dark-side of oxygen i.e. the oxidative stress. Many fruits and vegetables possess antioxidant properties. This helps to combat oxidative stress. Hence eating right food in the right quantity at the right time is the key to good health. Various modern drugs treat only the symptoms of the disease and are unable to cure the root cause of disease. Many a times modern medical system fails to give relief, despite prescribing huge quantities of drugs, especially painkillers, antacids, tablets and tranquilisers and sometimes due to heavy dependence on drugs the body's metabolism slows down and electrolyte imbalance starts. This is pointed out in ayurvedic shloka ---"pathye-sati gadatarsaye kim-oshadhe-nishevanne, pathye-asati gadatarsaye kim-oshadhe-nishevanne" Which means when diet is right, medicine is of no need and when diet is wrong, medicine is of no use. Thus, a co-ordinated research by drug companies, medical practitioners of all pathies, nutritionists has to be done to prevent or to cure chronic life style diseases.

Keywords: Food, Antioxidant, Ayurvedic

Characterization of Green Synthesized Zero Valent Iron Nanoparticles By Sem and Tem

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The iron nano particle technology has received considerable attention for its potential applications in groundwater treatment and site remediation. Nanoparticles exhibit a high surface/volume ratio leading to different properties far different from those of bulk material. Biomolecules present in plant extracts can be used to reduce metal ions to nanoparticles in a single step green synthesis process. The biogenic reduction of metal ion to base metal is quite rapid, readily conducted at room temperature and easily scaled up. In this work, a novel green and cost-efficient method is used for the synthesis of zero-valent iron nanoparticles with an average diameter of 50-100 nm. Characterization of nZVI was performed systematically by using pH analysis, SEM, TEM studies.

Keywords: zero valent iron nanoparticles, green synthesis, pH, SEM, TEM

Role of Zinc Oxide as a Photocatalyst in Photo-Bleaching of Basic Fuchsine

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The photo catalytic bleaching of basic fuchsine over zinc oxide has been carried out. The effects of various parameters such as pH, concentration of basic fuchsine, amount of semiconductor and light intensity have been observed and a tentative mechanism has been proposed.

Keywords: Photo catalytic bleaching, Dye, Zinc oxide, Basic fuchsin, Semiconductor.

Food Habits of *Axis axis* With Special Reference to Keoladeo National Park, Rajasthan

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Keoladeo National Park is a man made and man managed Wetland Park. It plays host to thousands of birds and provide grazing ground for different mammals. It is a mosaic of grass land, woodland, woodland swaps & wetland. It declared as Ramsar site in October 1981, National Park on 10 March 1982 and world heritage site in 1985.

Axis axis is commonly known as Axis deer or Chital (Pitra *et al*.,2004). Chital is most primitive deer of true Cervidae (Flerov,1960). Food habits of chital in Keoladeo National Park were studied from Nov 2012 to Oct 2013. For this purpose 8 transects were laid in different blocks of KNP. Selection of blocks is based on random observations of the area. Data were collected by feeding site method (Lovaas,1958) *i.e.* noting the locations where animals grazed and later inspecting the site. Chital prefers grazing but switched to browsing as needed. It utilized grasses and fallen leaves, fruits, seeds of different trees and shrubs in the park.

Keywords : KNP, *Axis axis* , Food Habits, Vegetation, Grazer, Browser.

Technological solution as a special need for visually challenged persons: Design and Implementation of Smart Cane

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Visually challenged persons face sundry restraints in daily life activities such as mobility and navigation. Therefore, the present scenario of technological innovations need for an effulgent solution, which can be generalized for visually challenges persons as panacea. The aim of this project is to propose a cost effective and innovative prototype that would use the technological advancements to upgrade the white cane by increasing the usability of the cane while ensuring an efficient navigation. This is done by including an ultrasonic sensor to detect potential obstacles at an extended distance from the user, a vibrating motor and a buzzer to alert the user of these obstacles. Overall connections of hardware and implementation of software is done with the help of Arduino .The project also proposes a solution for indoor navigation within colleges and institutions for visually impaired in GPS denied areas using the same cane through RFID technology. The RFID tags have to be placed at various locations within the college campus which will help in identifying the current location of user by the system and the user will be informed through the voice output about the desired path.The development work involves coding and physical installation.

Keywords: Arduino microcontroller, Ultrasonic sensor, Vibrating motor, Buzzer, RFID

The Rock Paintings of Alwar and its Ecological and Environmental Significance

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The Pre-historic Rock paintings in the rock shelters in the Aravali ranges of Panchayat Hajipur, Panchayat Samiti Umrain, Alwar, Rajasthan are full of animal motifs and floral designs. The animal motifs include a huge whale and a dinosaur which describes the environment they lived in. The floral designs and patterns are ceremonial and depict their closeness to nature. The rock shelters are east facing and depiction of the Sun is equally relevant. The elephant, rhinoceros, tiger, monkey, goats, bull and antelope are common features of the rock paintings.

The rock paintings are spread over 10 Kms and are divided into small groups and are at a similar altitude. The elevation shows that there was a perennial source of water. The power-point presentations will show in detail the ecological significance and environment in which the pre-historic man lived in relation to present day challenges.

Keywords: Rock Paintings, Ecological, Environment, Panchayat Hajipur

Tetraphenyl Phosphonium and Arsonium Salts of Alkylene Dithiophosphato Moieties

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Complexes of the type $[Ph_4M]^+$ $[S_2POGO]^-$ where **M**= **P** and **As ; G= -**$CMe_2CH_2CH(Me)$-, -CH_2CMe_2-CH_2- , -$CH_2CEt_2CH_2$-. –CMe_2CMe_2- and –$CH_2CH_2CH(Me)$- have been synthesized by reacting tetraphenyl phosphonium and arsonium chloride with ammonium salts of alkyl enedithio phosphoric acids in 1:1 molar ratio in isopropanol. These complexes have been characterized by elemental analysis, molecular weight measurement, IR and multinuclear NMR (^1H and ^{31}P) studies. A downfield shift in ^{31}P NMR (δ= 20-30 ppm) have been observed in these complexes.

It was thought of interest to extend these studies to the corresponding tetraphenyl phosphonium and arsonium derivatives and get a comparative study with the open chain derivatives. Also to concentrate on alkyl enedithio phosphates derivatives of P and As so that a effect of change of metal as well as organophosphorus ligands on the chemical properties and pesticidal behavior of the new derivatives could be studied.

Keywords: Tetraphenyl Phosphonium, Arsonium Salts of Alkylene Dithiophosphato

Network Controlled Monitoring System Using Arm 7

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Network controlled device has its own demand and application with fast development in technology. The system of remote data monitoring is designed based on the core processors of LPC2378 in the paper. The proposed paper is design to add security issue to any general premises. In this paper, telemetry monitoring based on embedded platform with Ethernet port support is designed. Method of embedded system interface based on Ethernet and ARM7LPC2378 processor. The platform has Ethernet interface on it DP83848H can directly connect with the Ethernet MAC, to develop system. A data can be transmitted transparently through Ethernet interface unit to the remote end desktop computer. This design has the advantage of cost-effective, easily realized, stable and reliable transmission and so on. The simulation of the system is carried on network analyzer and it is seen that the no of bytes on wire matched to captured one.

Index Terms: Remote data monitor, Embedded Ethernet, ARM 7.

Plant Community at Bhimlat of Bundi, South: East Rajasthan

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The present paper communicates study of plant community at Bhimlat of Bundi district, south-east Rajasthan. Different types of plant species occurred in this forest area. The floristic composition of forest stand of Bhimlat area has been observed in this work.

Key words: Angiosperms, Community, Floristic, Taxa

Integrating Innovations, Technology and strategies with a vision of creating a better future

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In a world where we are leading towards destruction, exhausting natural resources like fossil fuels, petroleum, water, land and emission of harmful greenhouse gases into the environment which will eventually lead towards a future with no resources and merely survival conditions. Though our present technologies are useful and accessible, they are slowly adding up to the pollution and degrading the environment we live in. Innovations are needed in technological field to lessen the pollution, waste and to regenerate the energy to optimise its use. In this research, we will be concluding the strategically innovative approaches in technology to overcome this problem. The action which is commonly known as a national sustainable development strategy- a process that represents a transition from the traditional fixed plan, towards operating an adaptive system that can continuously improve. We will try to build such a plan which will innovate to satisfy the needs of masses and simultaneously protect the environment. This research mainly focuses on picking up the present technologies and innovating, modifying and upgrading them.

Keywords: Technology and strategies, Innovations, National sustainable development strategy

Dietary Habits: A Sociological Study in Spreading Breast Cancer

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The relation of breast cancer to social and dietary variables is evaluated in a case-control study of women with breast cancer. Occupations are related to the risk of breast cancer, housewives and non-manual workers (teachers and other professionals, clerical workers, etc.) showing more relative risks of breast cancer when compared to women occupied in agriculture. The role of education is apparently less important, and not statistically significant. The risk is higher in women who are obese, the trend of increasing risk with increasing body mass index being confined to post-menopausal women. When indicators of dietary fat intake are analyzed, a significantly increased risk is found with more frequent consumption of milk and dairy products but the risk estimates are only slightly above unity with reference to meat consumption. Women who drink alcoholic beverages show relative more risk compared to women who had never drunk. The association between alcohol and breast cancer is not explained by the other dietary variables considered, and the risk estimates are higher for women who drink more wine, or more than one type of alcoholic beverage. Thus, the findings of the present study give evidence in favor of the hypothesis that alcohol consumption is related to the risk of breast cancer.

Keyword: Breast-Cancer, Body-mass, Dietary-habits, Alcohol.

Sustainable Technologies in Water Management and Wastewater Treatment

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When we examine the sustainability profile of a particular community, we always have to look at the water system that sustains that community. Historically, people dwellings were associated with the sources of water: rivers, springs, or lakes. In modern times, the issue of water remains primary. We have more advanced technologies to extract and distribute water resources, and we have other technologies to utilize and treat water. Those technologies become key links in the universal water cycle, which involves both ecological and anthropogenic spheres. This paper specifically focuses on the technological methods to provide efficiency for water supply and further to provide sustainability of water resources. Such technologies target the two growing problems - water resource depletion and water pollution. After touching on the background of water management systems, this paper will direct to the examples of lifecycle analysis, which helps identify the technologies with the higher promise for sustainability.

Key words: Sustainability, Community, Technology, Water cycle

Environmental Science & Mathematics

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It is well known that there is difference on a number of standardized Mathematics tests. The recent activities in Science, Mathematics and Environmental Education. Mathematics models are enabling advances in increasingly complex areas of engineering. Technology and Life Science, environment issues can provide an excellent way to connect Mathematics with the Science at Colleges and Universities curriculum for lower division Mathematics, Biology, Chemistry and Environmental Science. Many of these materials are small project designed for student to explore collaboratively with the assistance of graphing calculated Computer Algebra system; they bring their studies back to the classroom use.

Keywords: Environmental Education, Mathematics models

Environment and Human Behaviour

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Pollution, a component of the physical environment, absolutely can affect our well-being and health. Ozone pollution can have unfavourable effects on humans including shortness of breath, coughing, damaging the lungs and making lungs more susceptible to infection. Human have made remarkable advancements in technology by creating more automobiles, machines, factories etc. But this revolution is not all positive. We have seen a rapid increase in greenhouse gas emissions over the last century. When there are large quantities of greenhouse gasses in the atmosphere, the planet is going to get gradually warmer. We are already experiencing some very damaging effects of climate change. Heat waves, floods, droughts, wildfires and loss of sea ice. The current effects we are seeing are also expected to intensely. An even greater problem is the fact that plants and animals are unable to adapt to the quickly changing environment and are dying off. As a result of climate change, animals habitats are becoming completely inhabitable. We are seeing a rapid loss of species which will inevitably effect the natural flow of the biosphere and the individual ecosystems it is composed of.

Human behaviour has the potential to make dramatic changes to the environmental activism, recycling, conserving energy, decreasing water use and decreasing the frequency of auto mobile use, are all useful measures to take regarding this issue. If we collectively work to battle this giant threat to our environment, we may be able to slow and even reverse the effects of climate change.

Keywords: Ozone pollution, Human behaviour

Social and Cultural Analysis of Environmental Challenges

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We face many challenges that will affect us domestically as well as globally, out of which environmental degradation is the burning issue in present capitalized societies. When society changes from simple to complex, traditional to modern, homogeneous to heterogeneous drastic changes took place in the environment that will effect on human rights, economics, democracy, equality and social and civil justice aspects.

All Humans activities affect the environment, but people with different cultural and social background create different kinds of changes that may be hazardous to the environment. Culture itself evolved with humans and thus plays a role even at that level, including insights into how human environments evolved from the hominid. Different groups are affected differently by the same characteristics of environments. At the same time that different aspects of environments become salient to different groups, their preferences vary on the basis of their different evaluations of environmental quality based on differing values, ideas, norms, knowledge, laws, morality customs, and traditions. Their choices also vary-and choice or habitat selection is the major effect of environments on people. Present research paper deals how social and cultural factors affect the climate environment.

Key words: Environment, social and cultural factors, Capitalist, society

Integrated Approach of Revised Soil Equation (RUSLE) and Geographical Information System (GIS) for Soil Erosion Risk Assessment

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Water is the vital natural resource for the survival. Rainfall constitutes a major role in the sources of water for recharge of ground in the watershed. Watershed is the area that drains run-off to the common point .The present study aims to calculate the soil erosion using RUSLE Method. Bisalpur catchment is our study area. Soil erosion is a growing problem especially in areas of agricultural activity where soil erosion not only leads to decreased agricultural productivity but also reduces water availability. In the present study an attempt has been made to assess the annual soil loss in Bisalpur Catchment area .The present study demonstrates the prognostic modelling capabilities of geo-spatial technology based on soil erosion potential model to assess the effects of implementing land use changes within the area. The Revised Universal Soil Loss Equation (RUSLE) integrated with geo-spatial technology was used to produce predictive soil erosion map. The soil erosion rate was determined as a function of land topography, soil texture, land use/land cover, rainfall erosivity, and crop management and practice in the watershed. Rainfall erosivity (R), slope length-steepness (LS), soil erodibility (K), cover management (C), and conversation practice (P) were used to generate soil erosion map. The results show that RUSLE method performed well in estimating the soil erosion .This paper clearly tells that the integration of GIS and Remote Sensing with the RUSLE method provides a powerful tool for estimating soil erosion.

Keywords : Universal Soil Loss Equation(USLE); GIS; Remote Sensing

Population Explosion Impact on Environment

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The rapid increase of human population is putting an incredible strain on our environment. While developed countries continue to pollute the environment and deplete its resources, developing countries are under increasing pressure to compete economically and their industrial advancements are damaging as well. The demands that this growth places on our global environment are threatening the future of sustainable life on earth. One of the largest environmental effects of human population growth is the problem of global warming. Some scientists fear that global warming will lead to rising sea levels and extreme weather conditions in the future. In order to support the growing population, forests are being destroyed at an alarming rate. Humans also continue to put a great demand on the natural resources of our planet. Many non-renewable resources are being depleted due to the unrestrained use of fuel and energy. Many parts of the world also suffer from a shortage of food and water. The growth of population puts larger demands on our already limited resources. The environment on earth is suffering from the growth of global population. The depletion of resources and biodiversity, the production of waste, and the destroying of natural habitat are serious problems that must be addressed in order to ensure that life on earth will be sustainable throughout the next century. More population means more space to construct houses and availability of more consumer goods. It also requires more means of transport, more consumption of fossil fuels and more pollution of air, land and water. Thus growth of population leads to pollution of air, land and water. Different types of pollutions are causing a number of problems in the physical environment that are further affecting the biological environment seriously.

Keywords: Resources, Pressure, Industrial advancements, Land and soil degradation, Sustainable development, Global warming, Climate change, Air and water pollution, Deforestation, Physical environment,

Environment And Human relationship in the area of Beawar

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The environment is our life support system. It includes everything that we rely on during our lifetime such as air, water, metals, soil, rock and other living organisms. It is important to remember that the state of our environment is influenced by our behaviour and that we have the opportunity to either nurture or mistreat it. In this study I have mainly focus on the Major Current Environmental Problems noted in the Beawar. Out of total 10 main problems the noted in Beawar is 7 problems were dominantly present in this region.

Teacher Competence in Higher Education

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The Concept of teacher competence is highly situational one and involves where on one absolute set of competencies is effective in relation to all kind of learner groups. The teacher competence refers to 'the right way of conveying unites of knowledge, application and skills to students'. The right way here includes knowledge of content, processes, methods and means of conveying content. Any definition of teacher competence depends on teaching in a particular setting, the culture and valued held in the community. It also depends on innumerable teacher and student characteristics and the classroom context. We held the view that the teaching competence is a crucial component which has significant implications while the instructional process is organised. This cuts across both roles of a teacher i.e., as an input and as a systemist. It has various dimensions such as content knowledge, instructional planning, student motivation, presentation and communication skills, evaluation competencies and classroom management skills. While the teacher would require all these dimensions to a reasonable extent, it is in the manifestation of these in an integrated manner that makes him effective in the classroom context.

Continuity of the Spectrum Function in convex cones in Ordered Banach Algebras

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Let A be an ordered Banach algebra and C be a closed and convex cone in A. In this paper we define the C-continuity at a point $x_o \in C$ of the spectrum function $f: C \to \mathbb{C}$. We define some subalgebra of the OBA A on which the spectrum function $f(x) = \sigma(x)$ becomes continuous. We prove some results on subalgebra of A on which the spectrum function $f(x) = \sigma(x)$ becomes continuous when it is restricted to the subalgebra C. We also prove the continuity of the spectrum function in ordered Banach algebras with polynomial identities. Some examples will also be given.

KEYWORDS: Banach Algebras; Spectrum function; Algebra Cones, Convex Cone

Nuclear Energy

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The discovery of nuclear fission started from the attempts of Fermi and his co-workers in 1934, to produce transuranic elements by bombarding uranium with neutrons. According to Fermi expectation, when uranium $_{92}U^{238}$ is bombarded by a neutron, the isotope of uranium $_{92}U^{238}$ should be formed and this should be a β emitter. The reaction can be represented as

$$_{92}U^{238} + _{0}n^{1} \rightarrow _{92}U^{239}$$

and

$$_{92}U^{239} \rightarrow _{93}X^{239} + _{-1}e^{0}$$

Thus the element X formed in this process having atomic number 93 should be transur anic elements. In the actual experiment Fermi and his co-workers found four β particles with different half life periods of 10 sec., 40 sec., 10 min. and 40 min. From these β ray activities, they concluded that some new process is taking place because uranium is a natural radioactive substance which disintegrates by the emission of α particles. As β activity increases the atomic number by one, hence they felt that four transuranic elements with atomic numbers 93,94, 95 and 96 are formed. At that time they do not have any doubt that the new substances so formed may have atomic numbers far less than uranium.

In 1939 two German scientists Otto Hahn and Strassman discovered that when uranium (Z=92(was bombarded with neutrons, it splits up in two separate fragments which were identified as barium (Z=56) and krypton (Z=36). They also observed that these two fragments travel in opposite directions with tremendous speed. It was further observed that in the splitting of uranium, enormous energy is released because the original nucleus has a greater mass than the sum of masses of two fragments and this decrease of mass appears as the energy in accordance with Einstein equation $E = mc^2$. The reaction is represented as

$$_{92}U^{238} + _{0}n^{1} \rightarrow _{56}Ba^{148} + _{36}Kr^{88} + 3_{0}n^{1} + \text{energy}$$

The integration process in which heavy nucleus after capturing a neutron, splits up into two higher nuclei of nearly equal masses is called fission of the nucleus or nuclear fission.

Abstracts
(Hindi)

पर्यावरण में जल की समस्या एवं इसकी चुनोतियाँ

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भारत का भौगोलिक विस्तार इस प्रकार है–अक्षांशीय विस्तार 8.4से 37.6 उत्तरी अक्षांश तक तथा देशंतारीय विस्तार 68.7 से 97.25 पूर्वी देशांतर तक है। भारत की सीमान्त लम्बाई उत्तर से दक्षिण 3214 कि. मी. तथा पूर्व से पश्चिम 2933 कि. मी. है। भारत का कुल क्षेत्रफल 3.287 मिलियन वर्ग किलोमीटर है।भारत में विश्व की कुल जनसंख्या का लगभग 17.9प्रतिशत भाग निवास करता है। जनसंख्या की दृष्टि विश्व में भारत का चीन के बाद दूसरा स्थान है। भारत की जनसंख्या लगातार बढ़ रही है जिसके कारण भारत में आधारभूत ढाँचे के विकास के लिए प्रति दिन नए–नए उद्योग स्थापित करना, नवीन रोड व रेलवे लाइनों मैं विस्तार करना तथा कृषि विकास करने के लिए वनों की कटाई करना, भूमि को समतल करना, रक्षा मंत्रालय के द्वारा विदेशी आक्रमणों से बचने के लिए नए–नए परमाणु व मिसाइल आदी का परीक्षण करना। इन सभी कारणों के द्वारा पर्यावरण पर विपरीत प्रभाव पड़ रहा है।

हमारे चारों ओर दिखाई देने वाला भौतिक एवं अभौतिक आवरण ही पर्यावरण है। पृथ्वी पर उत्पादित होने वाली हर एक भौतिक एवं अभौतिक वस्तु हमारे पर्यावरण में ही आती है। समान्यतः पर्यावरण का अभिप्राय उन सभी घटकों से है जो हमारे चारों ओर विध्यमान रहेते हैं तथा पृथ्वी पर जीवन व्यापन करने वाले प्रत्येक जीव–जन्तु तथा मनुष्य के जीवन को प्रभावित करते हैं अर्थात पर्यावरण से तात्पर्य उन सभी भौगोलिक, सामाजिक, आर्थिक, राजनैतिक, सांस्कृतिक, धार्मिक आदि परिस्थितियों से है जिसमें प्रत्येक प्राणी पैदा होता है, जीवित रहता है तथा समाप्त हो जाता है। प्रकृति ने सभी परिस्थितियां इस प्रकृति में जीवित रहने वाले प्रत्येक प्राणी को समान रूप से उपभोग करने के लिए प्रदान की हैं। लेकिन सभी जीवों मैं सबसे अधिक बुद्धिमान जीव मनुष्य अपने स्वार्थ के लिए प्रकृति को दो भागों में विभाजित कर दिया है जैसे प्राकृतिक प्रकृति या परिस्थितियां तथा मानव निर्मित /कृत्रिम प्रकृति या परिस्थितियां आदि।

भूमिगत जल संसाधन और फ्लोराइड : पर्यावरणीय अध्ययन (अलवर के विशेष संदर्भ में)

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एसोसिएट प्रोफेसर, इतिहास विभाग, बाबू शोभाराम राजकीय कला महाविद्यालय, अलवर
डॉ. रवि कुमार विजय
एसोसिऐट प्रोफेसर, फिजिक्स, राजर्षि महाविद्यालय, अलवर

जल प्रकृति का अमूल्य उपहार है। जल के बिना किसी भी तरह का जीवन कहीं भी संभव नहीं है। अभी तक ज्ञात स्त्रोतों के अनुसार सौरमंडल में पृथ्वी ही एकमात्र ग्रह है, जहाँ जल कल उपस्थिति के कारण जीवन विकसित हुआ है। पृथ्वी पर उपलब्ध जल में से 1.0 प्रतिशत से भी कम जल पेयजल के रूप में विद्यमान है जो वर्षा जल, सतही जल एवं भूमिगत जल के रूप में पाया जाता है। न्यूनतम मात्रा में पेयजल की उपलब्धता एवं मानवीय क्रियाओं द्वारा जल की गुणवत्ता में गिरावट पर्यावरणविदों के लिए हमेशा से ही चिंता का विषय रहा है। परन्तु प्राकृतिक रूप से ही जल का प्रदूषण गंभीर चिंताजनक पहलू है। प्रस्तुत शोध पत्र अध्ययन क्षेत्र अलवर में फ्लोराइड युक्त जल की स्थिति एवं उसके मानव व पर्यावरण पर प्रभावों का विश्लेषणात्मक अध्ययन है। फ्लोराइड से सम्बन्धित स्वास्थ्य समस्या आज विश्व के कई देशों में मुख्य पर्यावरणीय समस्या है। सामान्यतः फ्लोराइड युक्त पेयजल मानव स्वास्थ्य पर विपरीत प्रभाव डालता है।

भारत में आतंकवाद और समाप्ति के उपाय

लालचन्द कुम्हार
राजनीति विज्ञान विभाग, कोटा विश्व विद्यालय, कोटा

आतंकवाद एक ऐसी विचारधारा है जो कि विश्व के प्रत्येक राश्ट्र एवं समाज की उन्नति के लिये हानि कारक है। यह अपने उद्धेश्यो की पूर्ति के लिये सभी प्रकार के उचित और अनुचित साधनो के प्रयोग में विश्वास करती है । मानव जाति के उदभव काल से ही आतंक का स्वरूप विद्यमान रहा है। क्योंकि सभी धर्मो के धार्मिक ग्रन्थो में आतंक का स्वरूप देखने को मिलता है । परन्तु भारत मे आतंकवाद का संघठित स्वरूप स्वत्रंता प्राप्ति के बाद ही उद्य होकर सामने आया है। क्योंकि स्वतत्रंता प्राप्ति से पूर्व एक्ता की भावना प्रबल विद्यमान थी हम और हमारा देश दोनो ही महान थे । उन दिनो भारत का विश्व पर शिक्षा शक्ति, और शान्ति की दृश्टी से आधिपत्य विद्यमान था । परन्तु जब से हामारे ऊपर आतंकी हमले होने लगे है । हम अपने ही देश मे भययुक्त और असुरक्षित महसूस करने लग गये है। वर्तमान समय मे भारत के लगभग आधे से अधिक राज्य आतंकवाद से प्रभावित है। इसकी समाप्ति के लिये सरकार के द्वारा कानूनी रूप से अनेक प्रयास किये जा चुके है। परन्तु इस बुराई को जड़ से समाप्त करने के लिये सरकार द्वारा प्रत्येक स्तर का प्रयास किया जाना चाहिए। सरकार के द्वारा सैन्य व्यवस्था और उपकरणो का आधुनिकीकरण करने के साथ–साथ देश की भ्रमित युवा पीढी को विश्वास मे लेने के लिये उचित शिक्षा रोजगार की व्यवस्था तथा जनता और सरकार के मध्य सामजस्य के दृश्टीकोण विकसित किया जाना आवश्यक है। पड़ौसी देशो के द्वारा प्रयोजित आतंकवाद को रोकने के लिये पंचनिर्णय की प्रक्रिया को अपनाया जाये । क्योंकि हमारे सभी पड़ोसी देशो के साथ सीमा विवाद रहे है। इन्हे समय पर समझौतो एवं वार्ताओ के माध्यम से हल किया जाना आवश्यक है। अगर भारत से आतंकवाद समाप्त हो गया तो 21 वी शताब्दी में यह भारत की सबसे बड़ी उपलब्धि मानी जायेगी।

मुख्य शब्द : भारत, आतंकवाद, 21 वी शताब्दी

शैक्षणिक सुविधाएँ और मानव संसाधन विकास : राजस्थान के सवाईमाधोपुर जिले का भौगोलिक अध्ययन

सरेन्द्र सिंह, डा. श्रीमती राजबाला साइवाल

किसी भी देश के विकास में मानव संसाधन की महत्वपूर्ण भूमिका होती है। विकासशील देश के रूप में भारत में सीमित संसाधनों के कारण अधिक असमानता परिलक्षित होती है। वर्तमान मे स्थानिक विश्लेषण सामाजिक विज्ञान से सम्बन्धित आँकड़ों का भौगोलिक लक्षणों के साथ अध्ययन का महत्वपूर्ण साधन बन गया है। शिक्षा के क्षेत्र में विद्यमान असमानताओं के स्थानिक प्रतिरूप का विश्लेषण आवश्यक हो जाता है। मनुष्य अन्य संसाधनों का जन्मदाता होने के साथ–साथ स्वयं भी एक संसाधन है, जिसे शिक्षा परिमार्जित और विकसित करती है। मनुष्य का समस्त आर्थिक, राजनीतिक, सामाजिक व सांस्कृतिक विकास औपचारिक व अनौपचारिक शिक्षा द्वारा ही संभव है। वर्तमान समय में औपचारिक शिक्षा की मांग व महत्व में अत्यधिक वृद्धि हुई हैं । शिक्षा मानव के व्यक्तित्व, चारित्रिक एवं व्यावसायिक जीवनयापन के लिए उपयुक्त साधन है। अतः मानव संसाधन विशेष रूप से शिक्षा किसी भी राज्य के विकास में प्रयुक्त होने वाला महत्वपूर्ण कारक है। यह सुनने में अच्छा लगता है कि भारत जनसंख्या के मामले में दूसरा स्थान रखता है। देश की जनसंख्या या तो उसकी ताकत होती है या बोझ। ऐसे में भारत अपनी जनसंख्या को ताकत बनाने पर जोर दे रहा है। भारत में साक्षरता की दर बढ़ती जा रही है। राजस्थान के पूर्वी मैदानी प्रदेश में स्थित शैक्षणिक सुविधाओं और उनके गुणात्मक स्तर के विश्लेषण के लिए सर्वामाधोपुर जिले को इस शीर्षक के लिए चुना है।

मुख्य शब्द :शैक्षणिक सुविधाएँ, मानव संसाधन, राजस्थान, सवाईमाधोपुर

पर्यावरण प्रदूषण बनाम मुद्दे एव ंचुनौतियां

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हमारा पर्यावरण दिन–प्रतिदिन प्रदूषित होता जा रहा है और पर्यावरण को प्रदूषित में अभी सबसे बडा हाथ मानव का ही है। आधुनिक समय में मानव जीवन में हो रहे बदलाव के कारण मनुष्य अब पर्यावरण को काफी प्रदूषित करने लगा है। अब लोग ज्यादा से ज्यादा बिजली की खपत कर रहे हैं जिसकी वजह से पर्यावरण में कार्बन डाइ ऑक्साइड की मात्रा बढ़ती जा रही है। लोग धड़ल्ले से पॉलिथीन और पेट्रोलियम प्रोडक्ट का इस्तेमाल करते जा रहे हैं जिससे पर्यावरण को काफी नुकसान पहुंच रहा है। कई सारे पशु–पक्षी पॉलिथीन की चपेट में आकर अपनी जान गंवा रहे हैं। मनुष्य ऐसे कई सारे सामानों का इस्तेमाल कर रहा है जिसको बनाने में कई हानिकारक केमिकल्स का प्रयोग किया जाता है और जब वह सामान फेंका जाता है तो वह खतरनाक केमिकल वातावरण में आ जाता है जिससे वातावरण प्रदूषित हो जाताहै। आज अगर आप किसी ट्रेन या यात्रा पर जाए तो आप को पानी की बोतलें बिखरी हुई मिलेगी, लोग पर्यावरण की चिंता नहीं करते हैं और प्लास्टिक के सामान और बहुत सारे खाने–पीने के सामान इधर–उधर फेंक देते है जिसका खामियाजा हम सभी लोगों को उठाना पड़ता है।

पर्यावरण में कार्बन डाई ऑक्साइड की अधिक मात्रा से पृथ्वी का तापमान बढ़ता जा रहा है। इसके वजह से कई सारे देश समुद्र में डूब सकते हैं। मनुष्य पर्यावरण को प्रदूषित सिर्फ अपने आसपास की जगह ही नहीं कर रहे है बल्कि अन्तरिक्ष में भी प्रदूषण फैलने लगा है और ऊंचे–ऊंचे पहाड़ों की चोटियों पर भी प्रदूषण होने लगा है वहां भी लोग जाते हैं तो प्रदूषण फैला कर आते हैं। संसाधनों का दोहन आखिर किस लिए, क्या हम सिर्फ आज में जी रहे हैं या तिजोरी भर रहे हैं। क्या भविष्य में बहती झील, साफ–नदियाँ डाल पे बैठा पंछी तस्वीरों में ही दिखाई देंगे उन्हें सिर्फ ऊंची दीवारें, तंग रास्ते, जहां से तारों भरा आसमान भी न दिखें, क्योंकि वायु प्रदूषण के कारण उन्हें देखना मुश्किल होगा। कहां ले जा रहा है ये विकास और कौन सा मॉडल है ये, विचार करने की विशेष आवश्यकता है।

मनुष्य प्रजाति ज्यादा से ज्यादा दिन पृथ्वी पर टिके रहे इसके लिए यह जरूरी है कि हमारा पर्यावरण प्रदूषित नहीं हों। हम लोगों को अपने पर्यावरण को स्वच्छ रखने का भरपूर प्रयास करना चाहिए और किसी को भी प्रदूषण फैलाने का अधिकार नहीं होना चाहिए। लोगों को प्रदूषण नहीं फैलाना चाहिए और अगर वह किसी और को प्रदूषण फैलाते हुए देखें तो उन्हें रोकना और समझाना चाहिए। पर्यावरण को अच्छा बनाने के लिए लोगों को स्वच्छता अभियान में बढ़–चढ़कर हिस्सा लेना चाहिए और ज्यादा से ज्यादा पेड़ लगाने चाहिए।

उक्त शोध पत्र में पर्यावरण से सम्बन्धित समस्याओं और मुद्दों का अध्ययन किया गया है और पर्यावरण के समक्ष चुनौतियों के समाधान का प्रयास किया गया है।

मुख्य शब्द :संसाधन, वायुप्रदूषण, विकास, मॉडल।

पर्यावरण असन्तुलन : उभरती चुनौती

डॉ. आँचल मीणा
असिस्टेन्ट प्रोफेसर, राजनीति विज्ञान, बाबू शोभाराम राजकीय कला महाविद्यालय, अलवर

मनुष्य की प्रकृति पर निर्भरता आदि काल से ही चली आ रही है। इसीलिए विश्व की प्रत्येक सभ्यता में प्रकृति की पूजा का प्रावधान है। प्राचीन भारतीय समाज भी प्रकृति के प्रति बहुत ही जागरूक था। वैदिक काल में प्रकृति के विभिन्न अंगों भूमि, पर्वत, वृक्ष, नदी जीव जन्तु आदि की पूजा की जाती थी। प्रकृति के प्रति मनुष्य इस असीम श्रृद्धा के कारण पर्यावरण स्वतः सुरक्षित था। विकास की अंधी दौड़ में मनुष्य ने प्रकृति को अत्यधिक नुकसान पहुंचाना शुरू कर दिया है। एक सीमा तक प्रकृति उस नुकसान की भरपाई स्वयं कर सकती थी, लेकिन जब उसकी स्वतः पूर्ति की सीमा समाप्त हो गई तो पर्यावरण असंतुलित होगा। आज का मनुष्य लालच के वशीभूत हो कर प्रकृति का क्रूर दोहन कर रहा हैं इसी अति–उपभोग वादी प्रवृति के कारण प्रकृति कोइ तना नुकसान पहुँच चुका है कि प्रकृति की मूल संरचना ही विकृत हो गई है।

पर्यावरण के असंतुलन के लिए अनेक कारण उत्तरदायी है। लेकि न वे सभी कहीं न कहीं हमारी अनियोजित व अदूरदर्शी अर्थ नीति से जुड़े हुए हैं। आज का मनुष्य अपनी आर्थिक उन्नति के लिए ''कोई भी कीमत'' देने को तैयार है। उस ''कोई भी कीमत'' की सबसे बड़ी कीमत प्रकृति को ही देनी पड़ती है। पिछले कुछ दशकों से पर्यावरण असंतुलन की स्थिति बहुत ही भयावह हो गई है। प्रकृति के साथ सदियों से चली आ रही क्रूरता के दुष्परिणाम अब सामने आने लगे हैं। ग्लेशियरों का पिघलना, अरब के रेगिस्तानों में भारी वर्षा, ओजोन परत से छिद्र, बाढ़, भूकम्प, अम्ल वर्षा, सदानीरा नदियों का सूखना, फसल चक्र का प्रभावित होना जैव विविधता मे ंतीव्र गति से ह्रास होना आदि असंतुलित पर्यावरण की ही अभिव्यक्ति है। पर्यावरण असंतुलन से निपटने की जिम्मेदारी केवल देशों या सरकारों की ही नहीं है। इसके प्रभावी हल के लिए प्रत्येक व्यक्ति को प्रयास करना होगा। आखिर इसकी वर्तमान खराब स्थिति के लिए हम सभी ही जिम्मेदार है। यदि प्रकृति हमारे उपभोग के लिए साधन प्रदान करती है तो हमें भी इसके संवर्द्धन के लिए कार्य करना होगा। इसी से हमारा पर्यावरण सुन्दर व संतुलित बना रहेगा।

मुख्य शब्द : पर्यावरण, उपभोक्ता वादी प्रवृति, असन्तुलन, सन्तुलित विकास, संवर्द्धन।

पर्यावरण की समस्या और वैदिक साहित्य

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मनुष्य और प्रकृति का घनिष्ट सम्बन्ध है। मनुष्य का जीवन प्रकृति के आंगन में ही पुष्पित और पल्लवित होता है। प्रकृति को पूजने वाला भारतीय समाज पश्चिम की तर्ज पर बेरहमी से प्रकृति का दोहन और शोषण कर रहा है। तभी तो प्राकृतिक विपदायें हादसों का कारण बनकर हमारे लिए समस्याऐं बनी हुई हैं। वायुमण्डल में विसर्जित होने वाले इन अपशिष्टों से हमारी 'इकोलॉजी' प्रदूषित हो रही है। महानगरों में प्रतिदिन ये वाहन कई टन प्रदूषण छोड़ रहे हैं। ज्यों–ज्यों औधोगिक विकास हुआ त्यों–त्यों जंगलों का कटाव भी हुआ – 'कहीं नहीं बचे हुए वृक्ष/न ठीक सागर बचे हैं न ठीक नदियाँ/पहाड़ उदास हैं और झरने लगभग चुप/आँखों में घिरता है अन्धेरा घुप/तपोपन संस्कृति वाले भारत।

हमारे ऋषि मुनियों ने प्राकृतिक सन्तुलन को बनाने के लिए प्रकृति के प्रत्येक अंग में शान्ति की महत्ता पर बल दिया है। भारतीय सांस्कृतिक परम्परा में प्रकृति की उपासना और सौन्दर्य–साधना के स्वर मुखरित हुए हैं। वैदिक प्रार्थनाओं का क्षेत्र कितना विस्तृत और विशाल है, यजुर्वेद में प्रार्थना की गई है– ''ओम् द्यौः शान्तिरन्तरिक्षं शान्तिः पृथिवी शान्तिरापशान्तिरोषधयः शान्तिर्वनस्वतयः शान्तिर्विश्वे देवाः शान्ति ब्रह्य शान्तिः सर्व शान्तिः शान्तिरेव शान्तिः साया शान्तिरेधि।

वेदों में पर्यावरण को वायु, जल, ध्वनि, स्वाध्य तथा मिट्टी, वनस्पति, वन सम्पदा व पशु–पक्षी संरक्षण में बांटकर इनके संरक्षण पर जोर दिया है। इनमें सामंजस्य बनाये रखने की प्रार्थना की गई है।

प्रस्तुत शोध पत्र के माध्यम से यह विवेचित करने का प्रयास किया गया है कि वर्तमान समय में पर्यावरण प्रदूषण की समस्या से निजात पाने के लिए वैदिक साहित्य की प्रासंगिता सदैव बनी रहेगी।

मुख्य शब्द : पर्यावरण, वैदिक साहित्य, प्रकृति

भूमि उपयोग का बदलता प्रतिरूप (बहरोड़ तहसील के विशेष संदर्भ में)

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भूमि उपयोग की अवधारणा पुरातन काल से निरन्तर गतिशील है। किसी भी क्षेत्र में भूमि उपयोग ऐसा होना चाहिए जिससे कि उस भौगोलिक क्षेत्र का प्राकृतिक संतुलन बना रहे। इस हेतु भूमि उपयोग की वैज्ञानिक अवधारणा को उपयोग में लिया जाना चाहिए। वैश्विक स्तर पर देखा जाये तो भूमि उपयोग मानव की सामाजिक–आर्थिक गतिविधियों का प्रतिफल है। आज वैश्विक स्तर पर नगरीकरण एवं औद्योगीकरण की बढ़ती प्रवृति ने भूमि उपयोग के स्वरूप को अत्यधिक प्रभावित किया है। किसी भी क्षेत्र में भूमि उपयोग मनुष्य की संसाधनों तक अधिक पहुँच बना रहा है। तो दूसरी ओर पारिस्थितिकी का संतुलन बनाये रखने की क्षमता कम हो रही है। प्रस्तुत शोध पत्र का अध्ययन क्षेत्र 'भूमि उपयोग का बदला प्रतिरूप (बहरोड़ तहसील के विशेष संदर्भ में)' है। जनसंख्या वृद्धि, नगरीकरण की प्रवृति राजमार्गों का विकास, कृषि का बदलता प्रतिरूप के कारण तहसील का भूमि उपयोग तीव्र गति से बदल रहा है।
वातावरण कम हो रहा है और इस भूमि को कृषि, यातायात तथा आवासीय भवनों के निर्माण में उपयोग में लिया जा रहा है। प्राकृतिक अपवाह क्षेत्रों में मानव बसावट की गतिविधियों में वृद्धि हुई है। अतः शोध पत्र में तहसील में भूमि उपयोग के वर्तमान प्रतिरूप के साथ ही इसकी बदलती प्रवृति का विश्लेषण किया गया है ताकि विकास एवं विस्तार जैसे मुद्दों के साथ–साथ पर्यावरण अवक्रमण को भी ध्यान में रखा जा सके ताकि भूमि उपयोग के नकारात्मक प्रभावों से बचा जा सके। शोध पत्र में भूमि उपयोग के नियोजन हेतु सुझाव भी दिए गए हैं ताकि तहसील के भूमि उपयोग प्रबंधन की योजनाओं के निर्माण में सहायता मिल सके।
मुख्य शब्द : बहरोड़, पर्यावरण अवक्रमण

पर्यावरण एवं चुनौतियाँ

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वैश्वीकरण एवं भूमण्डलीकरण के दौर मे आज हम 21 वीं सदी में अनेक चुनौतियों एवं संकटों का सामना कर रहे है। भारतीय संस्कृति की दृष्टि चिरकाल से संपूर्ण प्राणियों एवं वनस्पतियों के कल्याण की आकांक्षा रखती आई है, आज विश्व का पर्यावरण लगातार बिगडता जा रहा है, कहीं भूकंप के तीव्र झटके, कहीं ज्वालामुखी का फटना, कहीं प्रलयकारी सुनामी के लहरें, कहीं बाढ औला वृष्टि तथा अनावृष्टि तो कहीं परमाणु हथियारों द्वारा संपूर्ण जगत को विनाश के करीब लाने की धमकी। अतः आज विश्व के सामने सबसे बडी चुनौती यह है कि कहीं धरा से मानव व प्राणी जाति विलुप्त न हो जाए।

प्रस्तुत लेख में पर्यावरण चुनौतियों के संदर्भ में अध्ययन किया गया है। बागंलादेश, मालद्वीप समुद्र से घिरे हुए तथा समुद्र तल से दो – तीन मीटर की ऊँचाई पर है। ग्लेशियरों के पिघलने से समुद्री जल स्तर बढने से इन देशों के कुछ भू भाग जलमगन हो सकते है। भारत का पूर्वी तट केरल, गोवा, कच्छ, सौराष्ट्र का कुछ भाग भी जलमगन हो सकता है। इन क्षेत्रों के जलमगन होने से पेयजल समस्या बढने के कारण देश के अन्य भागों की ओर जनसंख्या पलायन होगा, वायुमंडल में कार्बनडाई की मात्रा लगातार बढने से पृथ्वी का तापमान भी लगातार बढता जा रहा है। जिससे ग्लेशियर की बर्फ पिघलेगी। इस ताप वृद्धि से, मौसम की अनियमितता से कृषि उत्पादन की स्थिति बिगड सकती है। कार्बनडाई आक्साइड की अधिकांश मात्रा को समद्र का पानी सौंख लेता है। परन्तु इसकी भी एक सीमा है। मानव की असिमित ऊर्जा आवश्यकताएँ एवं पेडो की अंधा धुंध कटाई भी इसके कारणों में है। वायुमण्डल के ऊपरी भाग (स्ट्राटोस्फीयर) में अवस्थित ओजोन परत जो अंतरिक्ष से आने वाली पराबैंगनी एवं हानिकारक किरणों को धरती तक आने से रोकती है, कि सबसे बडी दुश्मन क्लोरो फ्लोरो कार्बन तथा अंतरिक्ष कार्यक्रम है। इन हानिकारक किरणों से प्राणियों में कई प्रकार की बीमारियाँ हो जाती है, पृथ्वी के तापमान नियंत्रण में "एयरो – सोल" एवं "एल्विडो" विधियाँ खोजी गई है। संक्षिप्त में कहेंगें – ""Technology Produce the crisis, technology can end it.""

पर्यावरण सम्बंधी समस्याएं एवं मानवधिकार

डॉ. अशोक आर्य
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हम जिस परिक्षेत्र में जीवन यापन कर रहे हैं उस क्षेत्र के बाह्य वातावरण में सम्मिलित समस्त घटकों का मिला हुआ रुप पर्यावरण है। पर्यावरण बहुत व्यापक शब्दहै जिसमें वेसभी कारक शामिल हैं जिनका प्रत्यक्ष या अप्रत्क्ष प्रभाव मानव जाति के विकास पर पड़ता हैं। जब तक प्राकृतिक संतुलन बना रहता है तब तक सब ठीक है लेकिन जब किसी प्राकृतिक या अप्राकृतिक कारण से इसमें असंतुलन आताहै ता प्रदूषण की समस्या पैदा हा जातीहै।

प्रदूषित पर्यावरण मानव के मानसिक तथा शारीरिक स्वास्थ्य को प्रभावित करता है। पर्यावरण की भौतिक, रासायनिक तथा जैविक स्थितियों में परिवर्तन के कारण मानव का जीवन कठिन हो गया है। विश्व स्वास्थ्य संगठन के अनुसार जलवायु परिवर्तन के कुप्रभावों से प्रतिवर्ष एक से डेढ़ लाख लोग मृत्यु के शिकार हो जाते हैं। वातावरण में बहिस्त्रावो का विसर्जन, तेल का रिसाव, कूड़े के ढ़ेर, रद्दी पदार्थ, अम्ल वर्षा तथा ध्वनि प्रदूषण कुछ ऐसे उदाहरण हैं जिन्होंन मानव जीवन की गुणवत्ता को व्यापक रुप से प्रभावित किया है। इनका सीधा प्रभाव मानव के आर्थिक, सामाजिक, सास्कृतिक, राजनीतिक एवं नागरिक अधिकारों पर पड़ता है।

प्रस्तुत शोध पत्र में पर्यावरण प्रदूषण के विभिन्न रुपों का मानव जीवन पर पड़ने वाले दुष्प्रभावो का विश्लेषण किया गया है। पर्यावरण प्रदूषण विशेषकर जल प्रदूषण, ध्वनि प्रदूषण, वायु प्रदूषण तथा मृदाप्रदूषण ने किस प्रकार मानव का जीवन दुष्करकर दिया है तथा मानवीय अधिकारो का हनन हो रहा है, इन्हीं पक्षों की विश्लेषण इस शोध पत्र में किया गया है।

ग्रामीण पर्यटन तथा सतत् विकास– **SWOT** आधरित विश्लेशण

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ग्रामीण–पर्यटन, पर्यटन का नवीन रूप है जिसमें पर्यटक ग्रामीण जन–जीवन को महसूस करते है। सतत्–ग्रामीण–पर्यटन–विकास का दृश्टिकोण बहु–आयामी है। यह समाज में सकारात्मक आर्थिक तथा सामाजिक परिवर्तन ला सकता है। गांवो में मौजूद क्षमता और संसाधनो के आधार पर आय–रोजगार के अवसर, ग्रामीणो के जीवन–स्तर तथा कल्याण में वृद्धि का सकता है। प्राकृतिक संसाधनो को रख–रखाव तथा पर्यावरण–संरक्षण और अर्थव्यवस्था की जीवन–क्षमता में सन्तुलन ला सकता है। ग्रामीण–पर्यटन से गांवो का चहुँमुखी विकास किया जा सकता है। राजस्थान एक ऐसा मरू–प्रदेश है, जो अपने में गजब का आकर्शण रखता है। अतः **SWOT**–मॉडल के अनुसार विश्लेशण करते हुए सतत्–ग्रामीण–पर्यटन–विकास के लिए उचित रणनीतियाँ का सुझाता है। यह अध्ययन ग्रामीण–पर्यटन तथा सतत्–विकास की सार्थकता की जाँच करने का प्रयास है।
मुख्य शब्दः ग्रामीण–पर्यटन, सतत्–विकास, सतत्–ग्रामीण–पर्यटन–विकास ,राजस्थान, मॉडल,

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ग्लोबल वार्मिंग वर्तमान वैज्ञानिक युग की सबसे बड़ी चुनौती व समस्या है। ग्लोबल वार्मिंग किसी एक देश या राश्ट्र की समस्या नहीं है वरन् यह एक विश्वव्यापी समस्या है जो निरन्तर गंभीरता और विकरालता की ओर अग्रसर है। प्रदूशण, औद्योगिकीकरण, वनों की अंधाधुंध कटाई, बढ़ती जनसंख्या, विद्युत–उत्पादन, नगरीकरण, वाहनों का बढ़ता प्रयोग, ग्रीन हाउस गैसों में वृद्धि, प्रशीतनीकरण (Refrigeration) आदि अनेक घटक इस विश्वव्यापीतापन में वृद्धि के कारण हैं।

विश्व तापमान में वृद्धि के कारण समुद्र जल–स्तर में वृद्धि, कृशि उपजों में परिवर्तन, सूखा पड़ने की सम्भावना, तूफान व बाढ़ आना, जलवायु–परिवर्तन, हिम नदों का पिघलना, मरुस्थलीकरण, वनों में आग लगना, अनेक प्रजातियों का विलोपन, नई–नई बीमारियाँ फैलना आदि समस्याओं का खतरा बहुत अधिक बढ़ गया है। आज विश्व–ऊश्मीकरण (ग्लोबल वार्मिंग) सम्पूर्ण विश्व की मुख्य समस्या बन गया है। यह हमारी जीवन–शैली को सबसे अधिक प्रभावित कर रहा है। ग्लोबलवार्मिंग के कारण प्राकृतिक संतुलन बिगड़ रहा है, जिसका जीव–जगत पर बहुत बुरा प्रभाव पड़ रहा है। ग्लोबल वार्मिंग के कारण भविश्य में स्थितियाँ और अधिक विकट हो सकती हैं, समूचा विश्व इसकी चपेट में है। प्रस्तुत शोध पत्र इसी समस्या पर केन्द्रित है।

हिंदी सिनेमा का सामाजिक पर्यावरण सुधार में योगदानः 1931 से 2017 तक

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प्रस्तुत शोध आलेख का उद्देश्य सन् 1931 से 2017 तक हिंदी सिनेमा का सामाजिक पर्यावरण सुधार में योगदान दिखाना है। सामाजिक पर्यावरण से सम्बन्धित विभिन्न समस्याओं और उनका समाधान अभिव्यक्त करने से सामाजिक सुधार की ओर कदम बढ़ा है। हिंदी सिनेमा में सन् 1931 से लेकर 2017 तक निर्मित फिल्मों में सामाजिक पर्यावरण सुधार के मुद्दे को जोरदार तरीके से प्रस्तुत किया है, जैसे–अमृतमंथन (1934) में बलिप्रथा का विरोध, धर्मात्मा (1935) में जाति प्रथा का विरोध, अनाथ आश्रम (1937) में विधवा विवाह की हिमायत, पड़ोसी (1941) में धार्मिक सद्भाव, सिंदूर (1947) में विधवा विवाह की हिमायत, दहेज (1950) में दहेज समस्या, दो आँखें बारह हाथ (1957) में अपराधी सुधार, दाग (1952) में मद्यपान समस्या, मयूरपंख (1954) में नस्ल भेद का विरोध, कालाबाजार (1946) में कालाबाजारी का विरोध, अंगुलीमाल (1968) में अपराधी सुधार, संघर्ष (1968) में ठगी प्रथा का विरोध, दस्तक (1970) में वेश्या समस्या, बेईमान (1972) में भ्रष्टाचार समस्या का विरोध, मंथन (1976) में सामाजिक कुरीतियों और अंधविश्वासों का विरोध, शोध (1979) में अंधविश्वासों का विरोध, अंधेरनगरी (1980) में अछूतोद्धार, मंडी (1983) में वेश्या समस्या, जाने भी दो यारों (1983) में भ्रष्टाचार का विरोध, प्रहार (1991) में भ्रष्टाचार पर प्रहार, दीक्षा (1991) में सामाजिक असमानता और सामाजिक कुरीतियों का विरोध, दामिनी (1993) में महिला की अनन्त सामर्थ्य गाथा, स्वदेश (2004) में भूमंडलीकरण का विरोध, युवा (2004) में समाजविरोधी राजनीति का विरोध, तारे जमीं पर (2007) में मंद बुद्धि बालकों के विकास पर बल और टॉयलेट– एक प्रेम कथा (2017) में स्वच्छता पर बल दिया गया है। हिंदी सिनेमा के योगदान से सामाजिक पर्यावरण सुधार में उन्नति हुई है। प्रस्तुत अध्ययन मानवोपयोगी एवं राष्ट्रोपयोगी है।

पर्यावरण सम्बंधी समस्याएं एवं मानवधिकार

डॉ. अशोक आर्य
ऐसोसियेट प्रोफेसर राजनीति विज्ञान विभाग बाबू शोभाराम राजकीय कला महाविद्यालय, अलवर (राज.)

हम जिस परिक्षेत्र में जीवन यापन कर रहे हैं उस क्षेत्र के बाह्य वातावरण में सम्मिलित समस्त घटकों का मिला हुआ रुप पर्यावरण है। पर्यावरण बहुत व्यापक शब्द है जिसमें वे सभी कारक शामिल हैं जिनका प्रत्यक्ष या अप्रत्क्ष प्रभाव मानव जाति के विकास पर पड़ता हैं। जब तक प्राकृतिक संतुलन बना रहता है तब तक सब ठीक है लेकिन जब किसी प्राकृतिक या अप्राकृतिक कारण से इसमें अंसतुलन आता है तो प्रदूषण की समस्या पैदा हो जाती है।

प्रदूषित पर्यावरण मानव के मानसिक तथा शारीरिक स्वास्थ्य को प्रभावित करता है।पर्यावरण की भौतिक, रासायनिक तथा जैविक स्थितियों में परिवर्तन के कारण मानव का जीवन कठिनहोगयाहै।विश्व स्वास्थ्य संगठन के अनुसार जलवायुपरिवर्तन के कुप्रभावों से प्रतिवर्ष एक से डेढ़ लाख लोग मृत्यु के शिकार हो जाते हैं। वातावरण में बहिस्त्रावों का विसर्जन, तेल का रिसाव, कूड़े के ढ़ेर, रद्दी पदार्थ, अम्ल वर्षा तथा ध्वनि प्रदूषण कुछ ऐसे उदाहरण हैं जिन्होंने मानव जीवन की गुणवत्ता को व्यापक रुप से प्रभावित किया है। इनका सीधा प्रभाव मानव के आर्थिक, सामाजिक, सास्कृतिक, राजनीतिक एवं नागरिक अधिकारों पर पड़ता है।

प्रस्तुत शोध पत्र में पर्यावरण प्रदूषण के विभिन्न रुपों का मानव जीवन पर पड़ने वाले दुष्प्रभावों का विश्लेषण किया गया है। पर्यावरण प्रदूषण विशेषकर जल प्रदूषण, ध्वनि प्रदूषण, वायु प्रदूषण तथा मृदा प्रदूषण ने किस प्रकार मानव का जीवन दुष्कर कर दिया है तथा मानवीय अधिकारों का हनन हो रहा है, इन्हीं पक्षों की विश्लेषण इस शोध पत्र में किया गया है।

खेल एवं पर्यावर्णीय चुनौतियॉ

डॉ गंगा श्याम गुर्जर

मानव व खेलों का संबंध उतना ही पुराना है जितनी पुरानी मानव सभ्यता है । खेलों का सामाजिक चुनौतियों का सामना करने वाले कारक के रूप में विशिष्ट स्थान है । इन पर परम्परागत समाजों में जहॉ लोग धर्म, जाति, विचारधारा, सम्पति, वर्ग व सांस्कृतिक विविधताओं के मध्य निवास करते है । वहॉ खेल लोगों को एकता के सूत्र में बॉधने का कार्य करता है । आधुनिक युग में शारीरिक गतिविधियॉ कम होती जा रही है वहॉ खेल अच्छा मानसिक व शारिरीक स्वास्थ्य बढाने का अवसर ही नहीं देते बल्कि सामाजिक सम्बन्धों को निर्मित करने का अवसर भी देते है । इसलिए खेल हमारे समाज का अविभाज्य अंग है ।

एक ऐसे विश्व में खेल विभिन्न राष्ट्रो, क्षेत्रों के सामाजिक, सांस्कृतिक ताने बाने का हिस्सा है । वहॉ खेलों में प्राकृतिक संसाधनों का प्रयोग अनिवार्यतः होता है । खेलों के आयोजनो एवं खेल गतिविधियों के कारण पर्यावरण का नुकसान पहुॅचता है । इस हेतु ग्रीन गेम्स का विचार तेजी से फैल रहा है । जिसका अर्थ है खेलों में एक पर्यावर्णीय दृष्टिकोण का विकास । इसके दो लक्ष्य है –– एक तो खेलों के द्वारा पर्यावरण प्रदुषण को घटाना व दूसरा खेलों के द्वारा पर्यावरण प्रदुषण के प्रति दुनियाभर में जागरूकता बढाना । आज खेल पर्यावरण संम्वर्धन में महत्वपूर्ण योगदान दे रहे है।

मुख्य शब्द : खेल, पर्यावर्णीय चुनौतियॉ

यज्ञ की पर्यावरण प्रदूषण निराकरण में भूमिका

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'अयं यज्ञोभुवनस्य नाभिः' यज्ञ सृष्टि का आधार बिन्दु है। यज्ञ से पर्यावरण को संतुलित व सुरक्षित, वायुमण्डल का संरक्षण, भू जल, वायु तथा ध्वनि समस्त प्रकार के प्रदूषण को रोका जा सकता है। यज्ञ से मानसिक, शारीरिक तथा सामाजिक व्याधियों को अपहृत कर समाजिक प्रदूषण को भी रोका जा सकता है। यज्ञ से वायु हल्की होकर ऊपर उठती है, वायु की गति में तीव्रता आ जाती है। अशुद्ध वायु बाहर निकल जाती है और फिर उसके स्थान पर शुद्ध वायु प्रविष्ट होती है। यास्क ने निरूक्त में कहा है ''अर्थं वाचं पुष्पफलमाह–याज्ञदैवते पुष्पफलेदैवताध्यात्मेवा'' यज्ञ ज्ञान वेद का रूप है। यज्ञ में प्रदीप्त छवि से इन्द्र को तृप्त कर वृष्टि की याचना की गयी है। शतपथ ब्राह्मण में ''अग्नेर्वे धूमो जायते, धूमाद भ्रमभ्रादद्धष्टिरेताजायको तस्मादाहतपोजाः।''

यज्ञाग्नि से जो धुँआ उत्पन्न होता है, वह वनस्पतियों के रस में मिश्रितः होकर उनका शोषण करता हुआ ऊपर जाता है और सूर्य के द्वारा आकर्षित जल में मिश्रित होकर ऋतु के अनुकूल वृष्टि होने में निमित्त बनता है

भगवद्पुराण में भी कहा है –''यज्ञाभ्दवति पर्जन्यो यज्ञः कर्मसमुद्दयः''

ऋग्वेद में लिखा है यत् पुरूषेण हविषा देवा यज्ञमतन्वत।
वसन्तोऽस्यासीदाज्यं ग्रीष्म इध्मः शरद्हविः।।

वर्षचक्ररूपी यज्ञ में वसन्त ऋतु घी है, ग्रीष्म ऋतु समिधा और शरद् ऋतु हव्य है। वसन्त के बाद ग्रीष्म, ग्रीष्म के बाद वर्षा, वर्षा के बाद शरद् और शरद् के बाद वसन्त। वर्षचक्र इस प्रकार पूरा होगा। यज्ञ से ही मेघ बनते है और यज्ञ कर्म से ही प्रादुर्भुत होते है।

'इष्टप्राप्त्यनिष्ट परिहारयोरलौकिकम् उपायं यो ग्रन्थो वेदयति स वेदः' जो ग्रन्थ इष्ट प्राप्ति और अनिष्ट निवारण के अलौकिक उपायों को बताता है वह वेद है वेद भारतीय तत्वज्ञान का उद्गम स्त्रोत है। विद् ज्ञानार्थक धातु से निष्पन्न वेद शब्द का अर्थ है ज्ञान की भण्डार राशि। वेदों में यज्ञ माध्यम से ही ज्ञान का प्रतिपादन हुआ है। यज्ञ के प्रयोजन से ही वैदिक ज्ञान आविर्भूत हुआ है। ऋग्वेद में वैदिक ऋषियों का मानना है कि यज्ञ में अग्नि प्रज्ज्वलित करके देवताओं तक हव्य साम्रगी पहुँचाते है हव्य साम्रगी जब अग्नि में जलती है तो वह ऑक्सीजनमय होकर पर्यावरण को शुद्ध करती है। वैज्ञानिक भी इसका समर्थन करते है कि कोई भी पदार्थ जब अग्नि में जलता है तो वह जलकर असंख्य गुना व्यापक हो जाता है। 1966 में आयोजित कैलीफोर्निया विश्वविद्यालय की एक अन्तर्राष्ट्रीय वैज्ञानिक संगोष्ठी में स्वीकार किया कि अग्नि में किसी भी हव्य को ऑक्सीकृत कर आकाश में पहुँचाने की शक्ति व क्षमता है। छान्दोग्य उपनिषद में कहा है :–एषह हवै यज्ञो योऽयं पवते,इदं सर्वं पुनाति, तस्मादेव एवं यज्ञः।

यज्ञ सब अशुद्धियों, दोषो या प्रदूषण को दूर करके पवित्र करता है। भैषष्ययज्ञा वा एते यत् चातुर्मास्यानि तस्माद् ऋतुसन्धिषु वै व्याधिर्जायते।यज्ञ एक पवित्र धर्म, कृत्य तथा उत्कृष्ट जीवन दर्शन है यज्ञ पवित्रता और परमार्थ का प्रतीक है। यज्ञ में प्रज्जवलित अग्नि स्वयं पवित्र होती है और उसके सम्पर्क में आने से जगत की अपवित्र वस्तुऐं भी पवित्र हो जाती है। यज्ञकर्ता आहुतियों के रूप में यज्ञीय अग्नि को वायुभूत बनाता है और समस्त वायुमण्डल में विकीर्ण कर देता है प्राणी जब श्वास लेता है तो उन्हें ये यज्ञीय स्वास्थ्यवर्धक पदार्थ ग्रहण होता है।

हिंसा–अहिंसा : मानवीय दृष्टिकोण

डॉ0 गजेन्द्र कुमार जैन

सह आचार्यः हिन्दी विभाग, महारानी श्री जया स्नातकोत्तर महाविद्यालय, भरतपुर (राज0), ई–मेल : gajendrajain00@gmail.com.

प्रथमतः जब भी हिंसा–अहिंसा की चर्चा चलती है, तो हमारा ध्यान प्रायः दूसरे जीवों को मारना, सताना या उनकी रक्षा करना आदि की ओर ही जाता है। हिंसा–अहिंसा का सम्बन्ध प्रायः दूसरों से ही जोड़ा जाता है। दूसरों की हिंसा मत करो, बस यही अहिंसा है, ऐसा ही सर्वाधिक विश्वास है, किन्तु यह एकांगी दृष्टिकोण है।

अपनी भी हिंसा होती है, इस ओर बहुत कम लोगों का ध्यान जाता है। जिनका जाता भी है तो भी आत्महिंसा का अर्थ केवल विष–भक्षणादि द्वारा आत्मघात (आत्महत्या) ही मानते हैं, उसकी गहराई तक पहुँचने का प्रयत्न नहीं किया जाता है। अन्तर में राग–द्वेष–मोह की उत्पत्ति होना भी हिंसा है, यह बहुत कम लोग जानते हैं। अमृतचन्द ने अन्तरंग पक्ष को लक्ष्य में रखते हुए लिखा है– ''आत्मा में राग–द्वेष–मोहादि भावों की उत्पत्ति होना ही हिंसा है और इन भावों का आत्मा में उत्पन्न नहीं होना ही अहिंसा है। वही जिनागम का सार है।

यहाँ स्वाभाविक प्रश्न यह उठता है कि क्या फिर जीवों का मरना, मारना हिंसा नहीं है? और उनकी रक्षा करना अहिंसा नहीं? वास्तव में हिंसा का कारण क्या है? इन प्रश्नों पर विचार इसलिए आवश्यक है कि अनेकशः एक सी क्रिया होने पर भी उसके परिणाम भिन्न–2 प्रकार से देखे जाते हैं। उदाहरणतः तीन व्यक्ति हैं जिनमें एक डॉक्टर, एक मोटर ड्राईवर, एक डाकू है। डॉक्टर एक रोगी का ऑपरेशन करता है। रोगी को स्वस्थ बनाने के लाख प्रयत्नों के बावजूद रोगी मर जाता है। एक मोटर ड्राईवर के वाहन के नीचे गलती से एक बालक आ जाता है, ड्राईवर के लाख बचाने के प्रयत्नों बावजूद वह बालक मर जाता है। तीसरा व्यक्ति डाकू है जो लूट की खातिर मुसाफिर की हत्या कर देता है। ये तीनों ही केसों में एक सी क्रिया 'मृत्यु' होने पर भी तीनों को एक सा दण्ड नहीं देता। बल्कि कानूनी दृष्टिकोण से उन तीनों की मंशा या अभिप्राय पर विचार करता है, उसी के अनुसार निर्णय देता है।

पर्यावरणीय असंतुलन : चुनौतियो एवं सामाधान

डॉ राकेश कुमार शर्मा
एसोसिएट प्रोफेसर, इतिहास विभाग, बाबू शोभाराम राजकीय कला महाविद्यालय,अलवर

सम्पूर्ण विकास एवं पर्यावरण विषयक चुनौतियों की समस्या भारत की ही नहीं पूरे विश्व की समस्या है। औद्योगिक एवं वैज्ञानिक क्रिया कलापो से विकास के नाम पर मानव, प्रकृति के मनोरम एवं जीवनदायिनी स्वरूप पर कुठाराघात कर रहा है और प्राकृतिक शक्तियों पर अपना प्रभुत्व स्थापित करने की विनाशकारी चेष्ठा में प्रयासरत है। भौतिक विज्ञान की प्रगति ने ऐसी चकाचौंध पैदा की है, कि जिससे ऐसा भान लगने लगा कि मानव की प्रकृति को जीत लेने की विजय यात्रा अबाध गति से बढ़ती रहेगी और सर्वत्र सुख शान्ति फैल जायेगी परन्तु इसी प्रयास मे पर्यावरण संकट का दैत्य विशाल रूप में भारत के ही नहीं समस्त विश्व के समक्ष उपस्थित हो गया। विकास के नाम पर प्रकृति के दोहन ने जटिल समस्या और अपराजेय लगने वाली चुनौतियाँ खडी कर दी। यदि इस संकट पर और इन चुनौतियों पर नियन्त्रण नही किया गया तो भावी पीढ़ियों को मिलने वाली विरासत भयावह एवं विनाशकारी होगी। पर्यावरणीय समस्याओं का समाधान भारतीय जीवन–विधान, दर्शन, दृष्टि चिंतन, धर्म तथा संस्कृति में भरपुर मिलता है। पेड़–पौधे, जीव जन्तुओं के प्रति, 'आत्मवत् सर्वभूतेषु' के भाव का विस्तार आवश्यक है और यही समाधान का संधान भी है।

समकालीन हिन्दी कविता में पर्यावरण चेतना

डॉ. बुद्धमति यादव
जी.डी. कॉलेज, अलवर

मानव और प्रकृति का अटूट सम्बंध है। प्रकृति के बिना मानव अस्तित्व की कल्पना करना ही असम्भव है, क्योंकि मानव शरीर का निर्माण प्रकृति के पंच तत्वों 'क्षिति, जल, पावक, गगन, समीरा' से हुआ है। मानव अपनी मूल आवश्यकताओं की पूर्ति प्रकृति से ही करता है। कैसी विडम्बना है कि मानव वर्तमान में अपनी मूल आवश्यकताओं के स्रोतों के साथ ही खिलवाड़ करने पर आमादा है।

भौतिक सुखों की चाह में मानव विकास के सोपान दर सोपान तो चढ़ता जा रहा है लेकिन साथ ही अपने अस्तित्व को भी संकट में डाल रहा है। विकास के नाम पर प्राकृतिक संसाधनों के निरंतर दोहन से आज 'पर्यावरण प्रदूषण' जैसी गम्भीर चुनौती मानव के समक्ष आ खड़ी हुई है। इस गम्भीर समस्या को देखते हुए अपने परिवेश के प्रति जागरूक समकालीन कवि इसे अनदेखा कैसे कर सकता है? इसलिए समकालीन कवियों ने अपनी कविताओं में पर्यावरण के बिगड़ते संतुलन तथा प्रकृति के विविध रूपों–पेड़, नदी, पहाड़, समुद्र, हवा, पानी, गर्मी आदि को लेकर उन्हें नये सन्दर्भों के बीच रखकर अभिव्यक्ति देने का प्रयास किया है। समकालीन कवियों की कविताओं में पर्यावरण सम्बंधी चिन्ताएं निहित हैं। पहाड़, जंगल, मिट्टी जैसे घटते नैसर्गिक संसाधनों के कारण प्रकृति केवल किताबों या स्मृति मात्र बनकर रह जाएगी, अतः कवि कहता है–

वे पहाड़, जंगल, मिट्टी के मैदान हरे
छोटे हो गये हैं जो इतिहास में बड़े देश के प्रमाण थे
इनकी विशालता का कोई गुणगान
अब सुनाई नहीं देता।

सम्पूर्ण विश्व की भलाई के लिए पर्यावरण संरक्षण अति आवश्यक है। 'सर्वे भवन्तु सुखिनः सर्वे सन्तु निरामया' की कामना करने वाले समकालीन कवि की कविताएं पर्यावरण असंतुलन के दूरगामी प्रभावों के प्रति सोचने को बाध्य कर, असुरक्षित भविष्य से बचाव के लिए पर्यावरण संरक्षण की अलख जगाने का संदेश दे रही है ताकि पृथ्वी पर जीवन का आधार बचा रहे।

''संस्कृत वाड्.मय में पर्यावरण चिंतन''

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ऊँ द्यौ शान्तिः अंतरिक्ष शान्तिः पृथ्वी शान्तिः आपः शान्तिः।

शुक्ल यजुर्वेद 36/17 के उपरोक्त शान्तिपाठ में सभी तत्वों को शांत और संतुलित बनाये रखने का भाव विद्यमान है। परस्पर अवलम्बी सम्बन्ध का ही नाम पर्यावरण है, जो हमारे चारों ओर व्याप्त है जो हमें सुरक्षा कवच प्रदान करता है पर्यावरण कहलाता है। पर्यावरण संरक्षित तो जीवन सुरक्षित। पर्यावरण के विविध घटकों पच्चमहाभूतों (पृथ्वी, जल, तेज, वायु और आकाश) में संतुलन ही सम्पूर्ण सृष्टि की समृद्धि का सूचक है जबकि इसमें असंतुलन हम सबके लिए खतरे का सूचक है। वेद को मानव जाति का आदि वाड्.मय कहा जाता है जिसमें समग्र सृष्टि के विविध विषय समाहित हैं। इसी प्रकार ऋषियों की चिंतन की धुरी पर्यावरण सदैव रहा है। वेदों को सृष्टि विज्ञान का मुख्य ग्रन्थ स्वीकार किया जाता है क्योंकि वेदों में जीवनदायी तत्वों की विशेषताओं का सूक्ष्म व विस्तृत वर्णन मिलता है। पर्यावरण संतुलन में महत्वपूर्ण देवता निम्न थे यथा – सूर्य, वायु, क्षेत्रपति, अग्नि, इन्द्र इत्यादि। प्राकृतिक शक्तियों को देवतुल्य स्वीकार कर उनके प्रति अटूट श्रद्धा प्रकट करते थे वहीं लौकिक संस्कृत साहित्य मे वाल्मीकि रामायण से हमे पर्यावरण संरक्षण की प्रेरणा मिलती है। पर्यावरण चिंतन आज ही नहीं सदैव ही मनुष्य के चिंतन का क्षेत्र रहा है। पर्यावरण संरक्षण की दिशा में वेदकालीन समाज में यज्ञ व हवन को करने की जो परम्परा विद्यमान थी उसके मूल में भी पर्यावरण संरक्षण में योगदान देना था क्योंकि याज्ञिक धुँए से कीट–मच्छरों का नाश होता है, सुगन्धित द्रव्यों से वातावरण सुगन्धित व स्वच्छ होता है। इसी प्रकार इन्द्र देवता से प्रार्थना की जाती थी कि वे समयानुसार जल को बरसाये जिससे कुओं, तालाबों, बावडियों, नदियों में जल की कमी न हो, इसी प्रकार क्षेत्रपति देवता से याचना की हे खेतों के स्वामी देवता, खेतों में उच्च कोटि का अत्यधिक मात्रा में अन्न उपजे, जिससे अन्न की कमी न हो, कोई भूखा न रहे। आज जहाँ वर्तमान में मनुष्य की अत्यधिक लोभी प्रवृति ने मनुष्य की सोच को संकीर्ण कर दिया है वहीं दूसरी ओर वेद ''सर्वे भवंतु सुखीनः'', संगच्छ ध्वं, संवदध्वं, संमवो मनांसि जानताम् ..... इत्यादि संज्ञान सूक्त के मंत्रों में सभी को साथ लेकर चलने व कल्याण की भावना है। आज पर्यावरण प्रदूषण का कैंसर के समान बढ़ता जाना हम सबके लिए घातक है। अतः सभी को वेदानुसार मिलजुलकर चिंतन, मनन और कार्य करने से ही इस गंभीर समस्या से निजात मिल सकती है।

पर्यावरणीय शिक्षा के प्रसार में शिक्षक की भूमिका

डॉ. एस.के. महतो

प्राचार्य, ठाकुर दुर्गपाल सिंह मैमोरियल बी.एड. कॉलेज, तिजारा रोड़, अलवर (राज.)

आधुनिकता एवं विकास की अन्धाधुन्ध दौड़ में आज विश्व के सभी देश किसी न किसी पर्यावरणीय संकट से ग्रस्त है। वजह चाहे जनसंख्या विस्फोट हो या ओधोगिक क्रान्तिः पर इनता तो तय है कि सौरमण्डल में अवस्थित पृथ्वी पर उपस्थित जीवधारियॉ का अस्तित्व खतरे में है और इन्हें खतरों से बचाने के लिए पर्यावरण शिक्षा आवश्यक ही नहीं बल्कि अनिवार्य सी प्रतीत होती है। पर्यावरण शब्द बहुत व्यापक है। अधिकांश विषयों में पर्यावरण का अध्ययन तथा अध्यापन किया जाता है। विशेषकर भूगोल, मनोविज्ञान, वनस्पति विज्ञान, जीव विज्ञान, रसायनशास्त्र, ज्योतिष विज्ञान आदि विषयों की पाठ्य वस्तु में पर्यावरण को सम्मिलित किया जाता है। वायुमण्डल, जलमण्डल, भूमण्डल आदि को पर्यावरण कहा जाता है। सौर मण्डल को भी पर्यावरण कहते है जो पर्यावरण का वृहद् रूप है। शब्दकोष में पर्यावरण के चारों और की उन सभी परिस्थितियों को सम्मिलित करते हैं जो पशुओं, जीवों, पौधों तथा व्यक्तियों के विकास, रहन–सहन तथा कार्य करने की परिस्थतियों को प्रभावित करती है।

पर्यावरण शिक्षा वस्तुतः इस पृथ्वी पर रहने वाले प्राणि–जगत में सबसे समझदार एवं बुद्विमान मानव को उस पर आने वाली सम्भावित विपदाओं से बचाने तथा उन्हें सुखमय जीवन देने का प्रयास की प्रक्रिया है। साथ ही उन्हें इस योग्य थी बनाना है कि वे आगे और का सकने वाली समस्याओं को पूर्व में ही जान सके और उनका हल खोजे, जिससे समस्या थी दूर हो जाये और नियमित जीवन प्रक्रिया में कोई बाधा थी नहीं पड़े। वातावरण के प्रति जागरूकता लाने के लिए आज आवश्यकता है– पर्यावरण शिखा के इसी उदेद्य के तहत 5 जून को पूरे विश्व पर्यावरण दिवस मनाया जाता है। विश्व के सभी देश आज किसी न किसी प्रकार के पर्यावरणीय समस्या जैसे–बाढ़, सूखा, अतिवृष्टि, अनावृष्टि भूकम्प इत्यादि से ग्रस्त है। जनसंख्या वृद्वि के दुष्प्रभाव, औधोगिक क्रान्ति, प्राकृतिक संसाधनों का दुरूपयोग मानव के अदूरदर्शितापूर्ण कार्य व्यवहार से जल, वायु एवं भूमि का दोहन ही पर्यावरण को प्रदूषित एवं असन्तुलित करते है। यदि समय रहते जनसाधारण को पर्यावरण के संरक्षण हेतु सजग नहीं किया गया तो समूची मानव जाति का भविष्य चौपट हो जायेगा। अतः वर्तमान समय में पर्यावरण शिक्षा प्रदान करने की महती आवश्यकता है।

पर्यावरण शिक्षा के प्रसार में शिक्षक की भूमिका–शिक्षक समाज का एक महत्वपूर्ण उत्तरदायित्वयुक्त सम्मानीय सदस्य है, अतः पर्यावरण शिक्षा के प्रसार में उनकी महत्वपूर्ण भूमिका है। शिक्षक का सम्बन्ध विभिन्न आयु वर्ग के विद्यार्थियों के साथ होता हैा दूसरे शब्दों में कहा जा सकता है कि चॅकि समाज के भावी कर्णधारों को सही दिशानिर्देश देने वाला, उसका पथ–प्रदर्शक शिक्षक ही होता है। इस वजह से भी शिक्षक की भूमिका अहम् हो जाती है जो अपने विद्यार्थियों को, नई पीढ़ियों को अपने विभिन्न प्रकार के पर्यावरण, जैसे– सामाजिक, प्राकृतिक तथा मनोवैज्ञानिक के प्रति चेतना विकसित करने के लिए विविध गतिविधियों का आयोजन कर सकते हैं जो निम्न प्रकार से है–

पाठ्य–सहगामी क्रियाओं का आयोजन– इसके अन्तर्गत विद्यार्थियों द्वारा विभिन्न प्रकार की गतिविधियॉ करवायी जा सकती है, जिससे पर्यावरण में सुधार हो सके। चूॅकि शिक्षक विद्यालय में विभिन्न विषयों का ज्ञान विद्यार्थियों को देते है, इसलिए उस विषय के साथ विभिन्न तरह के पर्यावरण की जानकारी सहज ढ़ग से दी जा सकती है। कुछ गतिविधियॉ जो पर्यावरण शिक्षा के लिए प्रभावी है, निम्नलिखित है–

(1) वृक्षारोपण तथा हरी–भरी वाटिकाओं का संरक्षण करना तथा कराना।
(2) जहॉ कहीं भी गन्दगी दिखाई पड़े वहीं की सफाई करने एवं करवाने के लिए विद्यार्थियों को प्रेरित करना, जैसे–पार्को, जलाशयों, शहरों की गन्दी एवं भरी हुई नालियों की सफाई।
(3) विद्यार्थियों को पर्यावरण को स्वच्छ रखने के प्रति जागरूक बनाने की शिक्षा देना।
(1) नाटक, लघु नाटक, नुक्कड़ नाटक, कठपुतली नाटक के द्वारा गन्दगी से हानि, ध्वनि, वायु, जल, भूमि प्रदूषण से हानि, परिवहन के साधनेां से नुकसान, ओजोन परत में निरन्तर हास, ग्रीन हाउस प्रभाव वृक्षारोपण की आवश्यकता एवं महत्व इत्यादि पर प्रकाश डलवाना।
(2) पर्यावरण सम्बन्धी फिल्मों, निबन्धों, लेखो, रिर्पोटो, चित्रकला, पोस्टर, स्लोगन, कवि सम्मेलन, फोटोग्राफी प्रतियोगिता का आयोजन करवाना।

पर्यटन द्वारा शिक्षा – विद्यार्थियों को भ्रमण एवं पर्यटन के माध्यम से विशिष्ट स्थलों एवं आत्म–विकृतियों तथा प्रदूषणों को दृष्टान्त बताकर, पर्यावरण प्रदूषण से सम्बन्धित स्थलों पर ले जाकर प्रदूषण द्वारा पड़ रहे प्रभावों का निरीक्षण करवाना चाहिए ताकि विद्यार्थी उसका अवलोकन कर अनुभव प्राप्त कर सकें।

अन्य गतिविधियॉ–पर्यावरणीय शिक्षा को प्रभावी बनाने के लिए शिक्षक अपने विद्यार्थियों के साथ गॉवों एवं शहरों मे जाकर उसके दुष्परिणामों की जानकारी दे सकते है। इसके लिए विभिन्न प्रकार के आयामों एवं विधियों का प्रयोग किया जा सकता है, जैसे– व्यक्तिगत सर्म्पक, सामूहिक विचार–विमर्श एवं पर्यावरण तथा पर्यावरण समस्याओं से जुड़े विभिन्न प्रकार के सिनेमा, मुद्रित सामग्री, पदर्शन वस्तु चार्ट, रेडियो, समाचार–पत्र एवं दूरदर्शन। आयाम का उद्वेश्य जन–जन में हलचल पैदा करना है। पर्यावरण सम्बन्धी समस्याओं के बारे में जनसामान्य लाने में शिक्षकों की महत्वपूर्ण भूमिका होती है।

जनसंख्या नियन्त्रण के प्रयास हेतु शिक्षक अपने योग्य विद्यार्थियों के साथ गॉवों, कस्बों एवं झुग्गी–झोंपड़ियों में जाकर श्रव्य–दृश्य सामगियों एवं लघु नाटकों द्वारा जनसंख्या नियंत्रण सम्बन्धी तथ्यों को जनसामान्य तक प्रभावी तरीके से पहुॅचा सकते है। तथा उसके लाभों एवं हानियों से लोगो को अवगत कराकर न केवल सैद्वान्तिक वरन् व्यावहारिक रूप में जनसंख्या नियन्त्रण करवाकर पर्यावरण में उत्पन्न होने वाले भौतिक एवं अभौतिक प्रदूषण को कम करवाया जा सकता है।

उपरोक्त गतिविधियों के अलावा शिक्षक कक्षा में भी विभिन्न प्रकार की जानकारी देकर विद्यार्थियों को पर्यावरण के प्रति जागरूक बना सकते है, जिसका अध्ययन हम निम्न बिन्दुओं के अन्तर्गत करेंगे। इस प्रकार हम देखते है कि शिक्षक एक कुम्हार की भॉति है, जिसके द्वारा समाज एवं राष्ट्र के भावी कर्णधारों का निर्माण होता है। अतः वे पर्यावरण शिक्षा के प्रसार में प्रभावी भूमिक निभा सकते है।

हिन्दी बाल काव्यों में पर्यावरण चेतना

सीमा कुमारी मीणा , हिन्दी विभाग ,गौरी देवी राजकीय महाविद्यालय, अलवर

कविता मनुष्य के मन, मस्तिष्क पर अमिट छाप छोड़ने वाली, सबको आनन्दित करने वाली होती है। साहित्य और समाज दोनों एक–दूसरे के पूरक, अभिन्न अंग है। हम वास्तविक जीवन में जिन कठिनाइयों से जूझते है। उनका हल साहित्य के माध्यम से बताया जाता है। इसी प्रकार वर्तमान में हम पर्यावरण प्रदूषण के घातक दौर से गुजर रहे हैं ये पर्यावरण सदैव ही कवियों की लेखनी का विषय रहा है। किसी भी भाषा का साहित्य में उसमें पर्यावरण को मनुष्य का सहचर घोषित किया है क्योंकि पर्यावरण के अभाव में हमारा अस्तित्व नगण्य है इसीलिये हिन्दी बालकाव्यों में भी पर्यावरण को केन्द्र में रखकर बहुत सी कविताएँ रचित की गई।

बाल काव्य के विकास की शुरूआत में कवियों ने प्रकृति के विविध रूपों का वर्णन कर अपना प्रकृति के साथ जुड़ाव को परिदर्शित किया। बाल काव्यों में आकाश, धरती, वायु, पर्वत, सूर्य, चाँद, सितारे, वृक्ष, पादप, जीव–जन्तु इत्यादि के महत्व को चित्रित किया है। कवियों ने प्रकृति के सुन्दर रूप का चित्रण कर प्रकृति और मानव के साथ सामंजस्य को बताया है। राष्ट्रकवि पं. सोहनलाल द्विवेदी ने प्रकृति परक बाल कविताओं की न केवल रचना की अपितु उनके माध्यम से महत्वपूर्ण संदेश दिये हैं। तारे, नदी, नहर, गगन आदि का वर्णन अपनी लेखनी के माध्यम से किया है :– प्यारे–प्यारे तारे चमको, नभ पर चमको, भू पर चमको, आदि। द्वारिका प्रसाद माहेश्वरी ने उस नियंता के प्रति कृतज्ञता ज्ञापित की है – जिसने सूरज, चॉद बनाया, जिसने धरती गगन बनाया .....। इसी प्रकार हिन्दी के प्रसिद्ध गीतकार गोपाल सिंह नेपाली ने सरिता के निर्मल जल के विषय में भी बहुत सुन्दर कहा है – यह लघु सरिता का बहता जल , यह विमल दूध सा हिम का जल .....

हिन्दी बाल काव्य के क्षेत्र में प्रकृति के सौन्दर्य और महत्व को निम्न प्रमुख कवियों द्वारा प्रतिपादित किया है जिनमें है – निरंकार देव सेवक, चन्द्रपाल सिंह यादव, आनंद प्रेम नारायण गौड़, डॉ. रामस्वरूप दुबे, डॉ0 प्रतीक मिश्र, राधेश्याम सक्सेना, श्रीमती शकुन्तला सिरोठिया, सुमित्रा कुमारी सिन्हा इत्यादि द्वारा पर्यावरण चेतना सम्बन्धित अनेकों बाल कविताएँ लिखी गई है। वर्तमान समय के बालकाव्य प्रणेता अपनी कविताओं के माध्यम से प्रदूषण के दुष्परिणाम और पर्यावरण संरक्षण के उपायों पर भी प्रचुर मात्रा में बाल काव्यों का सृजन कर रहे हैं जैसे – सीताराम गुप्त, विनोद चन्द्र पाण्डेय, जगदीश चन्द्र शर्मा और डॉ. राष्ट्र बन्धु हिन्दी के श्रेष्ठ बाल काव्य सर्जक है। डॉ. राष्ट्र बन्धु ने पर्यावरण संरक्षण की दिशा में एक अभियान के लिए प्रेरित किया है यथा – जन–जन का कल्याण,

जन–जन का उत्थान, एक नया अभियान, पर्यावरण शुद्ध रखेंगे, वृक्ष लगाऐंगे। दुखद प्रदूषण दूर करेंगे।कष्ट भगाऐंगे। हमारा है संकल्प महान ,हमारा एक नया अभियान।

शैक्षणिक सुविधाए और मानव संसाधन विकासः राजस्थान के सवाईमाधोपुर जिले का भौगोलिक अध्ययन

डॉ. श्रीमती राजबाला साइवाल, सुरेन्द्र सिंह

मनुश्य अन्य संसाधनों का जन्मदाता होने के साथ–साथ स्वयं भी एक संसाधन है, जिसे शिक्षा परिमार्जित और विकसित करती है। मनुश्य का समस्त आर्थिक, राजनीतिक, सामाजिक व सांस्कृतिक विकास औपचारिक व अनौपचारिक शिक्षा द्वारा ही संभव है। वर्तमान समय में औपचारिक शिक्षा की मांग व महत्व में अत्यधिक वृद्धि हुई है।

प्रस्तुत शोध अध्ययन इसी विचार को ध्यान में रखकर तैयार किया गया है।

अध्ययन क्षेत्र का संक्षिप्त परिचय– भारत देश के पश्चिमी प्रांत राजस्थान के दक्षिणी–पूर्वी भाग में स्थित सवाई माधोपुर जिला अध्ययन क्षेत्र है, जो रणथम्भौर राश्ट्रीय उद्यान व श्री त्रिनेत्र गणेश मंदिर के लिए विश्व प्रसिद्ध है। इसके उत्तर में दौसा व करौली, दक्षिण में कोटा, पश्चिम व दक्षिण –पश्चिम में टोंक, उत्तर–पूर्व में करौली जिला व दक्षिण–पूर्व में चम्बल नदी एक प्राकृतिक सीमा के रूप अवस्थित है, जो मध्यप्रदेश के श्योपुर जिले को सवाई माधोपुर से अलग करती है। (स्लाइड–2)

वेदों में पर्यावरण चिंतन

डॉ .धनंजय कुमार सिंह ,
एसोसिएट प्रोफेसर ,संस्कृत विभाग, बाबू शोभाराम राजकीय कला महविद्यालय अलवर ,राजस्थान

मानव सभ्यता के अस्तित्व के लिए पर्यावरण का स्वच्छ एवं संतुलित होना अत्यावश्यक है।सम्पूर्ण मानव जगत के परितः समस्त जैविक एवं अजैविक तत्वों के मध्य पूर्ण सामंजस्य को हम पर्यावरण संतुलन की संज्ञा देते है। वेदों में हमें पर्यावरण के रक्षण एवं संवर्धन के विषय में गहन विवेचन एवं सूक्ष्म चिंतन प्राप्त होता है। हमारे तत्ववेत्ता ऋषियों को पता था की हमारा शरीर पञ्च तत्त्वों –पृथ्वी ,जल ,वायु ,आकाश एवं अग्नि के मेल से बना है। अतः प्रकृति में उपलब्ध इन भूत –भौतिक पदार्थों के सतत रक्षा हेतु प्रयत्नशील रहते थे। यही कारण है कि वेदों में अनेक स्थलों पर पृथ्वी ,जल ,वायु,आकाश ,अग्नि ,वनस्पति ,अंतरिक्ष आदि के प्रति असीम श्रद्धा प्रकट करने पर अत्यधिक बल दिया गया है .

जल जीवन का प्रमुख तत्त्व है। वेदों में अनेक स्थानों पर इसके महत्व का प्रतिपादन किया गया है। ऋग्वेद में जल के महत्व पर प्रकाश डालते हुए कहा गया है कि जल में अमृत है, जल में औषधि है –"अप्सु अन्तः अमृतं ,अप्सु भेषजं" –[ऋग्वेद -१.२३.२४८] इसी तरह अथर्ववेद के पृथ्वी-सूक्त में जल की शुद्धता की रक्षा के लिए कहा गया है –'शुद्धा न आपस्तन्वे क्षरन्तु' [-अथर्ववेद १२ .१.३०] वेदों में वायु की स्तुति की गयी है जिससे जीवों का सम्यक व संतुलित विकास होता रहे –'मित्रस्याहम् भक्षुसा सर्वाणि भूतानि समीक्षे '[यजुर्वेद -३६ .१८].

ऋग्वेद में अग्नि को पिता के सामान कल्याणकारक बताया गया है –'अग्ने ! सूनवे पिता इव नः स्वस्तये आ सचस्व'.ऋग्वेद का प्रथम मन्त्र अग्नि देव को ही समर्पित है –'ऊं .अग्निमीले पुरोहितं यज्ञस्य देवं ऋत्विजम् '[ऋग्वेद -१ .१.१]

इसी तरह ऋग्वेद में ही आकाश को पिता एवं पृथ्वी को माता के रूप में स्तुति की गयी है –'दयौर्मे पिता जनिता नाभिरत्र बन्धुर्मे माता पृथिवी महीयम'[ऋग्वेद -१ .१६४ .३३].अथर्ववेद के भूमि-सूक्त में भी पृथिवी को माता के रूप में पूजनीय मन गया है –'माता भूमिः पुत्रो अहं पृथिव्याः' [12.1 .12]

इस तरह हम देखते है कि सम्पूर्ण वैदिक साहित्य में पर्यावरण के आवश्यक तत्वों जल, वायु, आकाश, अग्नि, पृथ्वी आदि की श्रद्धापूर्वक स्तुति द्वारा उनके संरक्षण व संवर्द्धन की कामना की अभिव्यक्ति हुई है। हमारे प्राचीन ऋषि –महर्षि पर्यावरण एवं प्राकृतिक असंतुलन से होने वाले दुष्प्रभावों से भली –भांति अवगत थे इसीलिए उन्होंने इन तत्वों के प्रति आदर एवं श्रद्धापूर्वक संरक्षण की परिकल्पना आज से लगभग ३५०० वर्ष पूर्व ही कर ली थी। अतः पूरे विश्व को आज पर्यावरण के विषय में वैदिक साहित्य से प्रेरणा व मार्गदर्शन लेने की आवश्यकता है।

भारतीय संस्कृति और पर्यावरण संरक्षणता

डां. कविता शर्मा (संस्कृत विभाग) एवं डां. प्रभाकर दीक्षित
एशोसिएट प्रोफेसर,एस.बी.डी. राजकीय महाविद्यालय, सरदारशहर (राज.)

वैदिक धर्म और पर्यावरण का समन्वय आदिकाल से रहा है। भारतीय संस्कृति में आर्यों के प्रवेश से एक नूतन आर्य संस्कृति का उद्भव हुआ और इसी के साथ–साथ एक नवीन व्यवस्था ने भारतीय विचारधारा को लागू करने का कार्य किया। पर्यावरण के प्रति इस नवीन विचारधारा को अपनाने का श्रेय वैदिक कालीन मनीषियों एवं ऋषियों जाता है।

वैदिक संस्कृति की ही भांति पुराणों में भी पर्यावरण के घटकों कों पूजनीय माना है, प्रकृति के इन घटकों में देवताओं का वास बताया गया है। यहॉ मिट्टी प्रस्तर के पहाड़ को देवात्मा हिमालय बताया है तो नदियों को देवी का रूप माना गया है। गंगा नदी को तो इसमें प्रथम स्थान प्राप्त है। पुराणों के अनुसार ईश्वर संसार के कल्याणार्थ कभी मत्स्य का आकार ग्रहण करते हैं तो कभी कछुआ, हंस बनकर इनकी महता प्रतिपादित करते है। सिंह और वाराह के रूप में आकर सभी जीवों की श्रेष्ठता घोषित करते हैं। इसलिए भारतीय संस्कृति में सभी जड़–चेतन का दिव्य माना है। पुराणों की रचना का आधार भी सृष्टि के तत्वों को लेकर बना है। अनेक पुराणों का नामकरण भी इन तत्वों के नामों को लेकर हुआ है। अग्निपुराण, वायुपुराण आदि में यही भाव दिखाई देता है। इन सभी पुराणों में दिव्य प्रकृति का सहज वास है।

ब्रह्मनंदपुराण ने अपने एक श्लोक में जलतव का महत्व प्रतिपादित किया है। गंगाजल की विशेषता इसमें खासतौर पर परिलक्षित होती है। वृक्ष मानवमात्र के लिए हमेशा प्राण वायु का संचार करते है। यही कारण है कि भारतीय ऋषियों महर्षियों ने वृक्षों के प्रति अपना प्रेम दर्शाया है। भारत में वैदिक काल से ही वृक्ष पूजा का प्रचलन वर्तमान समय तक विद्यमान है। देवदार को देवताओं का प्रिय वृक्ष कहा जाता है। तुलसी को वायुशोधन एवं पवित्रता के लिए हर आंगन में लगाने की परम्परा वर्तमान समय में भी मौजूद है। पौराणिक मान्यता के अनुसार भारतीय संस्कृति यहॉ पीपल,पलाश, नीम,अशोक,बरगद आदि अनेक वृक्षों कों देवताओं का प्रतीक माना गया है।

निष्कर्ष– इस प्रकार वैदिक संस्कृति में पर्यावरण को संरक्षित करने का जो कार्य ऋषियों ने प्रारम्भ किया इसके बाद आगे आने वाली अन्य महत्वपूर्ण संस्कृति यथा–मौर्यवंश,गुप्तवंश,राजपूत वंश तथा उतरोतर काल में पर्यावरण को संरक्षित करने का कार्य समय–समय पर अनेक महान व्यक्तियों एवं जनमानस ने अपने हाथों में लिया।

संदर्भ ग्रंथ–1. पर्यावरण अध्ययन(मनु कौशिक) 2. कल्याण(पर्यावरण विशेषांक) 3. भगवत गीता(गीता प्रेस,गोरखपुर)

राजस्थान की औद्योगिक नगरी भिवाड़ी में औद्योगिक विकास एवं उसका प्रभाव

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प्रस्तुत पत्र मेंउद्योगों से सम्बन्धित विभिन्न पहलुओं पर विचार करते हुये औद्योगीकरण का आधारभूत ढांचे पर पड़ने वाले प्रभाव से सम्बन्धित आँकड़ों का विवेचन प्रस्तुत किया गया है। औद्योगिकीकरण से सम्बन्धित आंकडों को सरल व व्यवस्थित तथा तुलनात्मक रूप में समझाया गया है। साथ ही नगरीय विकास से सम्बन्धित समस्याओं को ध्यान में रखते हुए उनका अध्ययन कर उचित समाधान भी बताया गया है। औद्योगिकीकरण एवं नगरीयकरण का देश के आर्थिक विकास में योगदान पर भी प्रकाश डाला गया है। निश्कर्शतः कहा जा सकता है कि औद्योगिक नगरी भिवाडी में लगातार औद्योगिक विकास हो रहा है एवं उसके कारण आधारभूत सुविधाओं में वृद्धि के साथ–साथ लोगों के जीवन स्तर पर सुधार हो रहा है।

मुख्य शब्द–औद्योगिकविकास, औद्योगिकवृद्धि, शहरीकरण, जिलाउद्योगकेन्द्र, रीको

नीमराणा में औद्योगिक विकास तथा भारत के औद्योगिक विकास में प्रत्यक्ष विदेशी निवेश की भूमिका

सत्येंद्र सिंह शोधार्थी,
भूगोल विभाग, राजस्थान विश्वविदयालय, जयपुर

औद्योगिक विकास किसी क्षेत्र के आर्थिक विकास का मापदंड होता है जो प्राथमिक क्षेत्र के साथ(साथ निर्माण क्षेत्र के विकास पर निर्भर करता है और इसमें प्रत्यक्ष विदेशी निवेश एक सुपर इंजन की तरह कार्य करता है प्रत्यक्ष विदेशी निवेश मूलत है देसी अर्थव्यवस्था में किसी उद्यम को चलाने के लिए विदेशी निवेशक को चाहे वह व्यक्ति हो या सामूहिक संस्था इसमें एक निश्चित प्रतिशत तक निवेश कीअनुमति मिलती है और कई क्षेत्रों में यह शत प्रतिशत पूंजी निवेश भी होता है

भारत में इसकी शुरुआत आर्थिक उदारीकरण की पहल के साथ 1990 के दशक में हुई थी जो भारत के आर्थिक विकास में एक महत्वपूर्ण भूमिका अदा करता है क्योंकि इस के माध्यम से भारत के बुनियादी ढांचा परिवहन प्रौद्योगिकी सेवाएं और सकल घरेलू उत्पाद तथा मानव विकास सूचकांक में वृद्धि संभव हो पाई है यह पत्र नीमराणा में औद्योगिक विकास तथा भारत के आर्थिक विकास में प्रत्यक्ष विदेशी निवेश की भूमिका के बारे में विशेष रुप सेअध्ययन करता है यहां शोधकर्ता ने अनुमान लगाया है औद्योगिक विकास में अधिकतम विदेशी प्रत्यक्ष निवेश सेऔरअधिक विकसित करेगा तथा मेकइन इंडिया कार्यक्रम को बढ़ावा मिलेगा और रोजगार सृजन भी अधिक होगा

MATASHREE GOMATI DEVI JAN SEVA NIDHI

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Sita Ram Gupta
Executive Director

Ved Prakash Sharma
Chief Project Coordinator

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माताश्री गोमती देवी जन सेवा निधि, अलवर

कार्यक्षेत्र – राजगढ़, रैणी, लक्ष्मणगढ़ व कठूमर पंचायत समिति के 105 गांव

संस्था के मुख्य कार्य

कृषि विकास कार्यक्रम

- (पपीता उत्पादन)
- (भिण्ड़ी उत्पादन)
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- (कुम्हारी कार्य)
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- (जूती कषीदाकारी)
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- (कारीगर क्रेड़िट कार्ड)

(महिला सषक्तीकरण)

- (महिला समूह निर्माण)
- (समूह प्रबंधन, खाता प्रबंधन व नेतृत्व प्रबंधन प्रषिक्षण)
- (समूह बैंक समन्वयक)
- (समूह खण्ड़ निर्माण)
- (समूह फेडरेषन निर्माण)
-

(सामुदायिक स्वास्थ्य कार्यक्रम)

- (गर्भवती महिलाओ हेतु चेतना कार्यक्रम)
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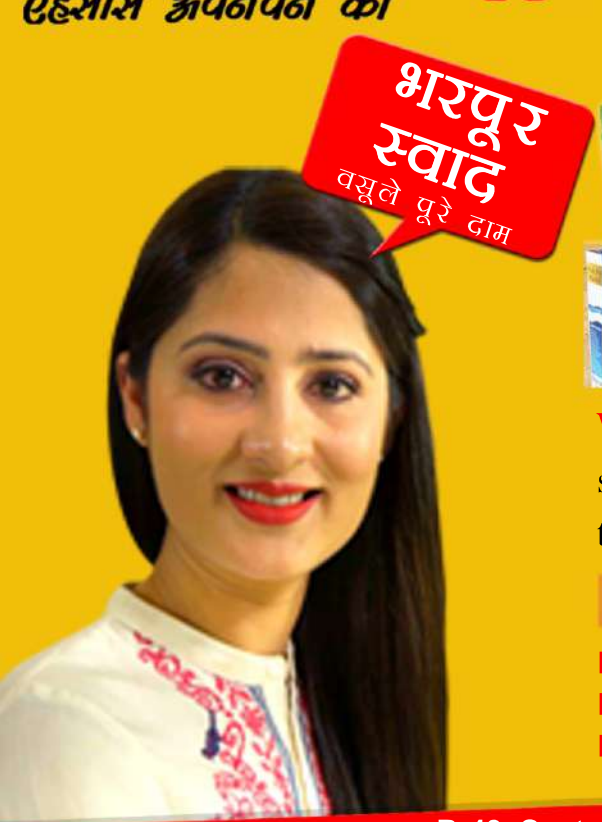

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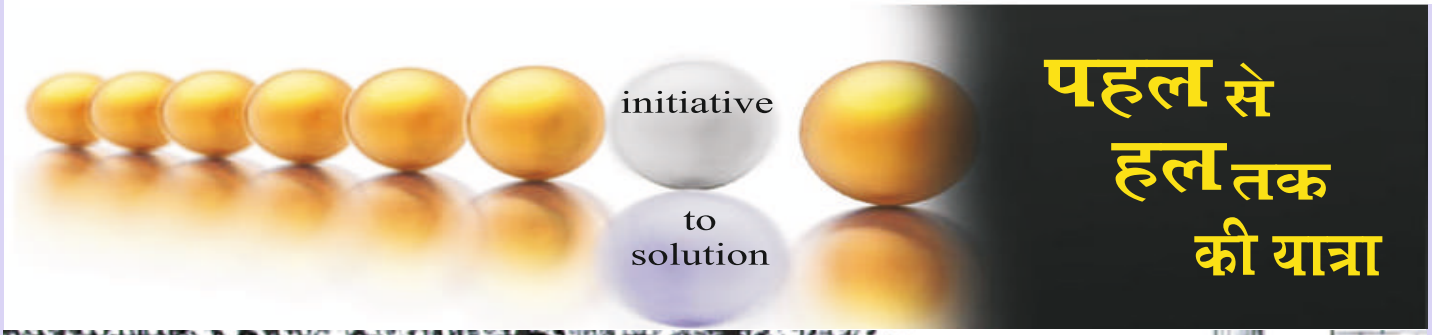

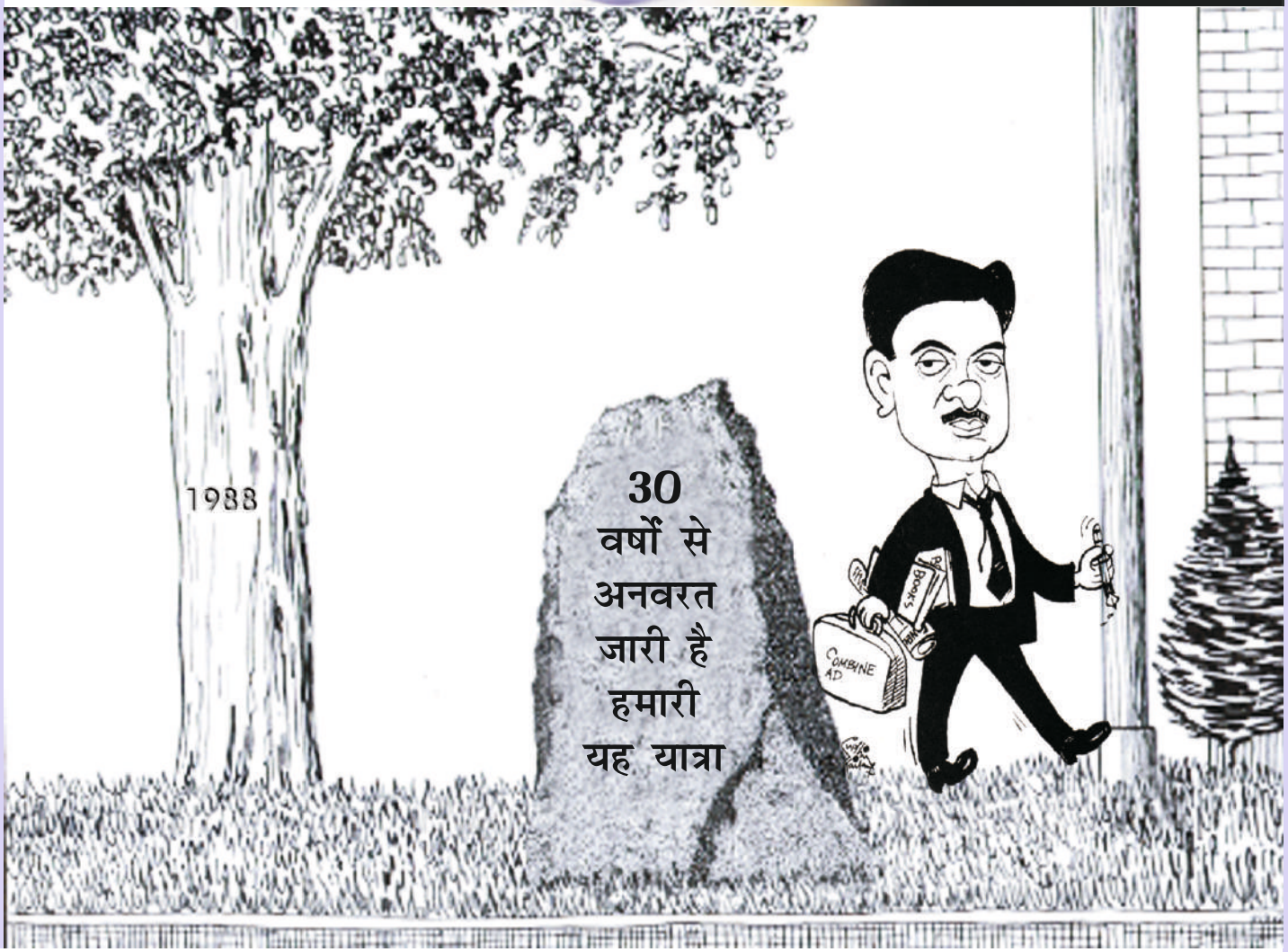

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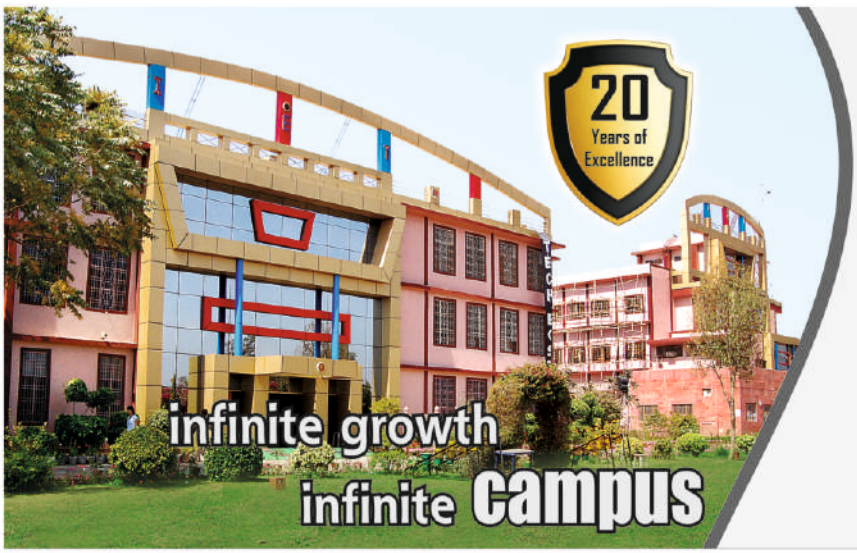

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