GO BACK TO NATURE TREAT EARTH AS MOTHER

INTERNATIONAL CONFERENCE

SUSTAIN MOTHER EARTH

April 22-24, 2023

A road map by combining science and spirituality

A new beginning with the practical approach at global level

ABSTRACT BOOK

Jointly organized by

- Shri Shankheshwar Puram Vigyan Tirth, Palitana, Gujarat
- Dr. D.S. Kothari Institute For Research and Education, Udaipur
- Vigyan Samiti, Udaipur
- Mohan Lal Sukhadia University, Udaipur
- Jain Academy of Scholars, Ahmedabad
- Science and Spirituality Research Institute, Ahmedabad
- Global Peace Organization, Dubai
- Jaina India Foundation
- Shrutra Ratnakar, Ahmedabad
- Rajsthani Bhasha Ar Sanskriti Prachar Mandal, Ahmedabad

Venue

Vigyan Samiti Campus, Road No. 17, Ashok Nagar, Udaipur (Raj-)

ABOUT THE CONFERENCE

Is The Earth moving towards sixth extinction?

Every year 25,000 biological species are disappearing and 150 billions of animals are killed for food only. Since 1970, sixty percent of living beings species have disappeared from the Earth. As per some scientists, Earth is moving towards sixth life extinction. In last 550 million years, only five extinctions have taken place and they were all natural ones. The next sixth one would be man-made. The main causes are excessive human activities induced by science, technology, industrial mode of production, urban life style, and consumerism has caused disturbance, imbalance and pollution of water, air, soil, eco system and Life System at every level. Global warming resulting into melting of ice in Antarctica and glaciers; Extensive and Intensive population is putting huge pressure on natural resources; Waste disposal, Ocean acidification, Loss of biodiversity, Deforestation, Ozone layer depletion resulting into more and more ultraviolet radiation falling on the Earth; Public health issues etc.

To minimize damages described above and to achieve a co-existential, harmonious, Peaceful sustainable development human Life style, United Nations Organization (UNO) has already defined following areas for sustainable living and Government Planning including, to Ensure Clean Water and Sanitation, Affordable and Clean Energy, Sustainable Cities and Communities; Responsible Consumption and Production; Action for good climate and sustainability.

Dr D.S. Kothari Institute is a non-profit, registered Trust. Institute envisions to be a centre of learning excellence and innovative research at the interfaces of science, society and spirituality. It will strive to develop scientific temper for logical and evidence based thinking towards peace and harmony for global good. Following the life, value system and scientific thinking of Dr. D.S.Kothari , the institute strives to create an enabling platform for research through interdisciplinary interaction among experts in education, research and technology, with sociologists and like minded stake holders

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उदयपुर अंतरराष्ट्रीय संगोष्ठी में आशीर्वचन

पूज्य आचार्यदेव श्री लब्धि चंद सागर सुरी महाराज
विज्ञान तीर्थ शंखेश्वर पुरम, पालीताणा

परमात्मा आदिनाथ दादा ने अपने जीवन के 8400000 पूर्व आयुष्य में से 8300000 पूर्व का आयुष्य राज्य व्यवस्था (संस्कृति) स्थापना करने में लगाया और उसके बाद उन्होंने संयम जीवन का स्वीकार कर राज्य व्यवस्था और संस्कृति की धरोहर के ऊपर तीर्थ की (जैन शासनकी) स्थापना की। उनके बाद होने वाले 23 तीर्थंकर परमात्मा ने परमात्मा आदिनाथ दादा द्वारा स्थापित जो सांस्कृतिक व्यवस्था प्रचलमान थी उसको यथास्थित रखकर ही तीर्थ की (जैन शासन की) स्थापना की।

जैन आगमों के अनुसार असंख्य वर्षों तक यह व्यवस्था बरकरार चलती रही किसी ने भी उसमें दखल अंदाजी नहीं की। वर्तमान में हमारे जीवन उत्थान का जो भी ज्ञान विज्ञान था वो धर्म और समाज के निर्देश और नियंत्रण में चल रहा था। मगर पिछले 200 वर्षों में जब से ज्ञान विज्ञान पदार्थवाद, भोगवाद, बाजारवाद के प्रभाव नियंत्रण में आ गया, उद्यम युग का उद्योग युग में परिवर्तन हुआ और विज्ञान का तथाकथित विकास शुरू हुआ बस मानो की मानव सर्जित पतन का शुभारंभ हुआ।

पंडित वर्य प्रभुदास बेचरदास पारेख एवं पूज्य महोपाध्याय धर्म सागर जी महाराज साहब आदि अनेक आप्त पुरुषो ने बार बार हमे ये निर्देश दिए कि यह प्राकृतिक संसाधनों के नाश पर उठती आत्यंतिक उपभोक्तावाद की मायाजाल हम सभी को एक न एक दिन ले डूबेगी मगर उनकी उस दुरदर्भिता को हमने नहीं समझा।

हमारे देश के अंदर धर्म अर्थ और काम मात्र और मात्र मोक्ष की साधना के लिए पर्याप्त रूप से उपस्थित थे लेकिन हमने साधना के बजाय साधनों को बढ़ाने के मार्ग पर विज्ञान का उपयोग किया और परिणामतः हमने जल, जमीन, जंगल और जानवर का बेतहाशा नाश किया। शायद यही एक वजह है की वर्तमान वैज्ञानिकों के मत के अनुसार ये छठी बार पृथ्वी का विनाश मानव सर्जित होने जा रहा है

विज्ञान तीर्थ शंखेश्वर पुरम के माध्यम से आज सर्वप्रथम, मूलभूत और दृढ़ रूप से यही कार्य करने का भाव है कि अगर हमें मोक्ष मार्ग, साधना मार्ग बचाना है तो हमें जीवन बचाना होगा, जीवनशैली(संस्कृति) बचानी होगी और यह सब बचाने के लिए हमें धरती माता की सुरक्षा करनी होगी और यह सेवा करने के लिए हमें जल, जमीन, जंगल और जानवर सब जीव मात्र को सुरक्षित रखना और उनको जीने का अधिकार देना होगा।

आज हमें मात्र गर्व ही नहीं फक्र भी है की डॉ सुरेंद्र भाई पोखरना साहेब, डॉ नरेंद्र भाई भंडारी, डॉ सुधीर भाई, पंकज भाई जोशी आदि ऐसे तटस्थ, कर्मठ और सेवाभावी वैज्ञानिक मिले हैं जो हमारी इन भावनाओं को यथार्थ करने में जुटे हुए हैं शायद परमात्मा की परम कृपा से इन लोगों से हमारी मुलाकात ना होती तो शायद हम यह कार्य इस तरह नहीं कर सकते।

आज उदयपुर में यह संगोष्ठी आयोजित होने जा रही है वह मेरे मत के अनुसार सर्वश्रेष्ठ कार्य हो रहा है। इस कार्य में हमारा आशीर्वाद ही नहीं अपितु पूर्ण रूप से हमारा सहकार भी शामिल है।

11 दिसम्बर 2022 को विज्ञान तीर्थ शंखेश्वर पुरम में क्मबसंतंजपवद व ्चिंसपजंदं के नाम से अनेक वैज्ञानिक और अनेक आचार्य भगवंतो की उपस्थिति में जो घोषणा पत्र जाहिर हुआ था की ँअम म्ंतजीँअम स्पमि और उसमें 75 गतिविधियों को शामिल किया गया था उसमें हमारा यह पूर्ण रूप से विश्वास है की जैन जीवन शैली और हिंदू जीवन शैली एवं धर्म और अध्यात्म के नियम ही हमारी रक्षा का एक मात्र उपाय हैं।

आप सभी सुज्ञ है, बुद्धिमान, विचारशील है अतः हम सभी स्वस्थ मन से किसी भी प्रकार के पूर्वाग्रह से मुक्त रहकर सकल जीव हितकारी विश्व कल्याणकारी जीवन शैली के बारे में साथ बैठकर सोचे और सकल विश्व को मार्गदर्शन प्रदान करें।

यही शुभकामनाओं के साथ

लब्धि चंद सागर सुरी महाराज

PREFACE

We are very happy to write this preface for collection of abstracts of papers to be presented during the three days of "International Conference to Sustain Mother Earth": A Roadmap by combining Science and Spiritually and a new beginning with a practical approach at global level. This is being organized from April 22-24, 2023 on the occasion of Earth Day which is being celebrated throughout the world on April 22. This is a collective effort of ten organizations and institutions.

This idea originated from a set of seventy five activities which were defined to save the Earth on "Earth day"held on April 22, 2022 in Dr. Daulat Singh Kothari Institute and Vigyan Samiti Udaipur. This idea got a further support of blessings from Pujyaniya Aacharya Shri Labdhi Chand Sagar ji Maharasahab of Shri Shankheshwar Puram from where a declaration was made on December 11, 2022 on the occasion of inauguration of Vigyan Tirth in the presence of many Jain Aacharyas, Sadhu-Sadhvies, Scientists, Doctors, Engineers and Jain scholars. This declaration entitled as Palitana Ghoshna Patra emphasized upon a need to use both Science and Spirituality to save the Mother Earth from sixth extinction.

It is highly satisfying that we have received an extremely good response from scholars across the country and the world over with issues like overview of processes on the Earth, carbon di oxide emission, glacier melting, land degradation, ozone layer depletion problem, studies of wetland and others. They all provide a macroscopic view of the problem. We have papers coming from Religious, Social and Philosophical disciplines received from scholars of repute. Several case studies have been also sent by experts.

Attempts are being made now to study the relation between science and spirituality in a systematic way. The work of Prof. Vernon Neppe and Edward Close is most remarkable in the sense that it involves use of higher dimensions beyond 3 space and 1 time dimensions. Their TDVP (Tri Dimensional Distinctions Vortical Paradigm) model is a very original piece of work. A new mathematical formalism has been developed by them known as Calculus of distinctions. Incidentally at least ten parameters of their model matches well with concepts developed in Jain philosophy.

A main objective of this conference is that that we develop a global strategy and a simple action plan which any body can execute in daily life at any place in the world. Regular training programs will start after the conference. We welcome you all to join this auspicious programme to sustain mother earth for a good happy future for us and our future generations.

Kundan Lal Kothari	Indra Vardhan Trivedi	Narendra Bhandari
Sanjeev Sharma	Bipin Doshi	Jitendra Shah
Kamal Prakash Talesara	Kanak Madrecha	Chandra Shekhar Mathur
Surendra Singh Pokharna	Manohar Lal Kalra	Maheep Bhatnagar


Scientific

PSEUDOMONAS MONTEILII CS3: A POTENTIAL STRAIN FOR REMEDIATION OF MARBLE SLURRY CONTAMINATED SOIL

Harshada Joshi
Department of Biotechnology, Vigyan Bhawan, Block B,
Mohanlal Sukhadia University, Udaipur, Rajasthan, India
E-mail:- hjbiotech@gmail.com, Mo:09828778510

Udaipur is famous for its white marbles, which are the major driving resources behind the industries based in the city. Marble slurry is the waste generated during marble cutting, processing and polishing. After processing of marble stones large amount of marble slurry is discharged as a waste either to a vacant land or to a surface water source in the nearby areas. The excessive production of marble slurry waste is causing environmental hazards to the nearby area and posing threat for plants, animals and mankind. Besides utilization of slurry in making concrete blocks, the bacteria that can degrade marble slurry can provide an efficient solution to this problem. Considering the above fact, the present study was carried out to isolate and identify potential calcite solubilizing bacterial strain from slurry contaminated soil collected from dumping yard in Sukher, Udaipur, India. The study confirmed the remarkable calcite solubilization activity in Pseudomonas monteilii CS3. FTIR and HPLC data reveled the calcite dissolution by production of various organic acids by the isolate. Our study confirmed that Pseudomonas monteilii CS3 has immense potential to alleviate the effect of marble slurry toxicity on Zea mays L. which was resulted in enhanced plant growth parameters. The isolate can prove to be a strong candidature in terms of playing an important role in bioremediation of marble slurry contaminated soil.

Key words: -Marble slurry, calcite solubilizing activity, Pseudomonas monteilii CS3, bioremediation, organic acids, calcite dissolution

CLIMATE CHANGE IN EARTH'S HISTORY: CAUSES AND CONSEQUENCES

Dr. Vinod Agrawal
Retd. Professor of Geology and Former Dean, Mohanlal Sukhadia University, Udaipur
Email: vinodudz@yahoo.com Mobile: 9829040780

Climate change is a long-term change in the average weather patterns of Earth's local, regional and global climates. These changes have a broad range of observed effects on various components (lithosphere, hydrosphere, atmosphere and biosphere) of the Earth's environment. There are two factors for causing and controlling the climate change (1) Natural factors that include the changing configuration of continents and oceans, changes in the Sun's intensity, variations in the orbit of Earth, meteoritic impact and volcanic eruptions and (2) Anthropogenic factors that include increasing use of fossil fuel, industrial processes, solvent and other product use, agriculture, land use change, deforestation and waste disposal practices. Climate change impacts our health, environment, and economy. There are number of consequences of climate change that include intense droughts, water scarcity, severe fires, rising sea levels, flooding, melting polar ice, catastrophic storms, declining biodiversity, extreme weather conditions, change in pattern of rains etc.

Earth's climate has changed dramatically many times since the planet was formed 4.6 billion years ago. Evidence of climate change is preserved in a wide range of geological settings, including marine and lake sediments, ice sheets and fossil records.

Our Earth's observed many times the serious consequences in form of "Mass Extinction" that were directly and indirectly related with the climate change. Mass extinction is an episode in which a large number of plant and animal species become extinct within a relatively short period of geologic time. So far, there were five major episodes of mass extinctions in Earth's history. However, evidences show that the process of sixth mass extinction has been initiated. This extinction has been referred as "Anthropocene Extinction". As per the report of World Wild Life Fund, we have lost about 52% of wild life species in just last 40 years and many are to be extinct shortly. According to the International Union for the Conservation of Nature (IUCN), 99.9% of critically endangered species and 67% of endangered species will be lost within the next 100 years. Unlike previous mass extinctions, the sixth extinction is due to human actions primarily due the unsustainable use of land, water and energy use, and climate change.

ROLE OF EMERGING TECHNOLOGIES IN SAVING THE ENVIRONMENT

Vimal Wakhlu
Former Chairman & MD, Telecomunications Cunsltants India Ltd.
Email:vimalwakhlu@gmail.com | Tele: +919968304050

One of the biggest challenges facing humanity today is the degradation of the environment of our Mother Earth. As humans, it is our responsibility to mitigate this challenge to the best of our capacity, otherwise our extinction in the no so distant future, is imminent.

Various aspects of environment facing challenges and needing to be taken care of include- air, water, flora and fauna.

The objective of this paper is to highlight how the emerging technologies can help mitigate the challenges facing our environment. These emerging technologies include- Artificial Intelligence, Extended Reality, Blockchain, Internet of Things, Quantum Computing, Digital Twins, Drones, Big Data Analytics, 3D Printing, e-Networking Platforms and Smart and Renewable Energy.

Besides this, there would also be a references to the role that Ancient Indian ethos and concepts could help us in mitigating these challenges.

CLIMATE CHANGE AND AGRICULTURE SCENARIO WITH EMPHASIS ON INDIAN PERSPECTIVE

Dr Shanti Kumar Sharma
Assistant Director General (HRM)
Agricultural Education Division, ICAR, New Delhi-110 012
Email: shanti_organic@rediffmail.com

Global heating over the past 200 years leading to a current temperature rise of 1.1°C above pre-industrial levels has led to more frequent and hazardous weather events that have caused increasing destruction to people and the planet. According to NASA, atmospheric carbon dioxide has never been more

than 300 parts per million in the last 800,000 years. Today. it is creeping up to 420 ppm. 1.5°C limit is still achievable if critical actions required across sectors and by everyone at all levels are implemented. There is a critical need for action that considers climate justice and focuses on climate resilient development

In both its greenhouse gas emissions and its vulnerability to climate change, India is one of the most significant countries in the world. With a large and growing population, India's emissions of greenhouse gases are increasing. In India, climate change has triggered increase in temperatures by 0.6 °C to 25.1 °C between 1901 and 2018, caused shifts in monsoon patterns Productivity of most crops is likely to decrease 10-40% by 2100 due to increases in temperature, rainfall variability, and decreases in irrigation water.

While Indian agriculture is adversely impacted by the vicissitudes of climate change, the sector also is a significant contributor to greenhouse gas (GHG) emissions. As per the Third Biennial Update Report submitted by the Government of India in early 2021 to the United Nations Framework Convention on Climate Change (UNFCCC), the agriculture sector contributes 14 per cent of the total GHG emissions (energy 75.01 per cent; industrial process and product use 8 per cent; and waste 2.7 per cent, as per 2016 data).

Within the sector, 54.6 per cent of GHG emissions were due to enteric fermentation, followed by 17.5 per cent from rice cultivation, 19.1 per cent from fertiliser applied to agricultural soils, 6.7 per cent from manure management, and 2.2 per cent due to field burning of agricultural residues. Therefore, effective mitigation measures and appropriate adaptation technologies must be taken to reduce ghg emissions from the agriculture sector

Climate change is a global issue, requiring global coordination India's per capita CO2 emissions are 1.8 tonnes, significantly lower than the global average of 4.5 tonnes.

By sharing best practices, technology, effective policy measures, and mobilising sufficient finance, any community can decrease or prevent the usage of carbon-intensive consumption methods. The biggest gains in well-being can be achieved by prioritizing climate risk reduction for low-income and marginalized communities in India.

This has heightened the need to embrace the notion of Climate Smart Agriculture (CSA) in the face of climatic vagaries to reduce the negative impacts of climate change on agricultural systems. A transformation of the agricultural sector, including crop and livestock production, fisheries and forestry, is urgently needed to respond to climate change and sustainably increase agricultural productivity and incomes. Climate-smart agriculture is rooted in sustainable agriculture and rural development objectives which, if reached, would contribute to achieving the Millennium Development Goals (MDGs) of reducing hunger and improved environmental management.

India's approach has been a balancing act between growth and sustainability in its climate change policies and it is leading the developing nations to place agriculture in the ongoing negotiations. The National Mission on Sustainable Agriculture, as part of National Action Plan on Climate Change for more than a decade now, has focused to make Indian agriculture sustainable, considering likely risks arising from climate variability.

Circulatory economy of re-use, cycling and recycling of 683 million tons of ligno-cellulosic, non-grain, -food, -feed and -fodder biomass of 11 major crops of India has been argued in the context of intensive agriculture. Lots of innovations and technologies have been applied in waste recycling processes.

Under NICRA, climate resilient technologies have been developed for various crops under State of the art climate change research facilities established at several institutes across the country. District level risk assessment of Indian agriculture to climate change (572 rural districts) have been prepared. ICAR along with NARS has developed District Agriculture Contingency Plans for 650 districts in India and is being updated regularly.Climate-resilient villages have been developed, one in each of 151 climatically vulnerable districts under the NICRA Project and location-specific technologies have been demonstrated in these districts. "More crop per Drop" is a strong message in overall water utilization strategy in Indian agriculture.

India has been ranked amongst top 5 countries in the world, and the best among the G20 countries, based on its Climate Change performance. India jumps 2 spots higher, and is now ranked 8th as per Climate Change Performance Index (CCPI, 2023) published by German Watch, New Climate Institute and Climate Action Network International based in Germany.

The climate protection performance of these 59 countries, which together account for 92% of global greenhouse gas (GHG) emissions, is assessed in four categories: **GHG Emissions** (40% of overall score), **Renewable Energy** (20% of overall score), Energy Use (20% of overall score) and Climate Policy (20% of overall score). **As per the CCPI report, India is on track to meet its 2030 emissions targets (compatible with a well-below-2°C scenario).**

IMPORTANCE OF EARTH SCIENCE AND THE WAY AHEAD

Shailesh Nayak
National Institute of Advanced Studies (NIAS), Bengaluru

1. Introduction

Earth system science is a science of national importance. The scientific understanding of the earth system helps to improve prediction of climate, weather, and natural hazards as well as leads to affordable and sustainable living and use of natural resources. During the last fifteen years, there has been major improvements in weather, climate and monsoon forecasting, prediction of hazards such as tsunami and cyclones, sustainable use of fishery resources and exploring mineral and energy resources for future.

At present, the world and India are facing challenges related to sustainability of humanity and ecosystem of our planet. We need to implement a system approach to understand causes and consequences of interaction of earth processes and anthropogenic activities as well as use and management of natural and energy resources.

There are five major areas which earth system scientific community should address in coming years.

2. Climate Variability and Change

The understanding of the past climate changes and interactions of climate with landscapes, ecosystems and human activities of past is a critical aspect of understanding and predicting future climate changes. The changes occurred during Holocene (last 11000 years), when civilization grew and lost, are most vital. The understanding of responses of fauna and flora, hydrological and ecological conditions of past climate and

use of this insight in predicting future response is of great necessity. The observing networks of atmosphere, hydrosphere, geosphere, cryosphere and biosphere will have to be strengthened to increase our capability to generate outputs from predictive and empirical models. Such outputs will help to develop strategies for reduction of risk and improve potential of hydrological and ecological systems to be self-sustaining, resilient, and adaptable to climate change and their impacts. The future projections developed by the Earth System Science Organisation – Indian Institute of Tropical Meteorology related to changes in monsoon patterns, droughts, sea level rise, ocean warming, cyclones and Himalayan systems, are needed to be translated into policy directions. Such efforts will help in strengthening the response to climate change.

3. Water Census

Water availability is likely to a major concern in India. With increasing population, availability of water is reducing per capita. In view of climate change, we have been witnessing an increase in extreme rainfall and decrease in low and moderate rainfall events leading to changes in water cycle. There is a need to understand how these changes are going to affect shallow groundwater table. Shallow groundwater supports terrestrial ecosystem and base flow in rivers. We need to understand how changing climate, terrain and sea level can affect shallow groundwater and we should model the same. Second, in North-west India, the Indus basin, provide water for food crops and sustaining human life. The Indus basin depends mainly on snow and ice melt for water which is likely to change. The variability of snowfall consequent to climate change needs to be modeled and an efficient forecast system to be developed. Lastly, in view of the changing water cycle, a comprehensive accounting of spatial and temporal availability of freshwater, both quantity and quality, for local and regional needs to be developed. Such a system should assess the needs of human as well as for terrestrial ecosystem and biota.

4. Hazards and Risk Assessment:

The potential risk from natural hazards such as earthquakes, floods, landslides, tsunamis, coastal erosion, forest fires, cyclones, etc. must be continuously evaluated and communicated to governments and communities. The impact of climate change and variability on frequency and intensity of natural hazards must be addressed. The understanding of hazard generating processes, their distribution, timing, severity and their impact on terrain, settlements and human security are critical for assessment of societal vulnerabilities. In this regard, earthquakes, landslides, and avalanches are most critical as predictive capabilities are yet to be developed. Improvements in forecasting probabilities and assessment of long-term strain rates in Himalayas and other earthquake-prone areas may facilitate probabilistic forecasting of large earthquakes in Uttarakhand, Himachal Pradesh, and NE India. Intense efforts are required to achieve this goal. Second, Himalaya is losing almost 4 billion tons of ice every year. In view of this, the understanding of solid earth processes to deformation associated with glaciology-isostatic adjustment need to be developed. At present, limited efforts have been made in this direction. Lastly, it is essential to have in depth assessment of the structure and composition of Indian Lithosphere. Development of seismic tomographic models, starting with Himalayan terrain, for understanding structure of lithosphere along with measurement of strain through GPS and SAR Interferometry supported by gravity and magnetic should be taken up.

5. Energy and Minerals:

India is one of the largest consumers of fossil fuel, however, indigenous production is less than 30 per cent of requirement. Gas hydrates, ice-like crystalline form of methane (99.9%) and water, are

considered as a major future hydrocarbon energy resource and occurs in shallow sediments along continental margins of India where water depth is more than 500 m. The volume of methane gas in the deep ocean located gas hydrates reservoirs of India is prognosticated to be 1900 TCM. Efforts are to be enhanced for understanding of formation of gas hydrate as well as development of technology to harness same.

The assessment of energy resources such as gas hydrates, shale gas, geothermal and other renewable energy resources vis-s-vis consequences of using fossil fuels and their impact on atmospheric carbon dioxide levels, land use changes and atmospheric pollution has been carried out. Research efforts are to be enhanced to study carbon cycle and carbon sequestration in earth system.

The rare metals (metals having concentration of few milligrams per ton in the Earth's crust), such as cobalt (Co) which have applications in high-tech industries, resources of which are scarce. Cobalt is mostly associated with copper, nickel, and arsenic. Efforts are required for intense exploration, both on land and in sea. Such exploration need not limit to Indian landmass and waters but also in High Seas, Arctic, and in other friendly countries.

The understanding of complete "life cycle" of materials including plastics, i.e. occurrence, extraction, use, and waste disposal and their impact on environment and economy will help to understand influence of landscape, hydrology, climate, ecosystems and human health.

6. Understanding Ecosystems and Predicting Ecosystem Change

The distribution and health of various ecosystems, their components, functions, and dynamics should be understood for conservation, preservation, and management of vital and critical ecosystems. There will be a need to expand observing systems including satellite and aerial systems for collecting biological, biophysical, and biochemical measurements to monitor and observe changes vis-à-vis environmental changes. The Census of Marine Life and the Ocean biogeographical Information System carried out by ESSO-Centre for Marine Living Resources, Kochi re good examples. Predictive modelling efforts are required to be enhanced in view of impact of climate change.

7. Conclusions

There are already investments made in these regions but not sufficient. The full implementation of five strategic areas will need additional funding and human resources. The benefits to nation will be substantial compared to the investments made in these activities. The sustainable development of a country or a region requires not only understanding of the earth system processes and resources but also communicating their impact to society so that natural resources are effectively managed, and thresholds are not crossed to avoid irreversible changes leading to disasters.

Bibliography

Myres, M. D. et al. 2007. USGS Goals for Coming Decade. Science, 318: 200-201.

ANALYSING THE PHYSIOLOGICAL STRATEGIES TO SURVIVE DESICCATION IN PLAGIOCHASMA APPENDICULATUM

Upma Bhatt and Vineet Soni
Laboratory of Plant Bioenergetics and Biotechnology,
Department of Botany, Mohanlal Sukhadia University, Udaipur-313001, Rajasthan, India
bhattupma154@gmail.com, 9782074377
vineetsonijnu@gmail.com, 7665559662

Desiccation tolerance (DT) is a widespread phenomenon among land plants mainly in embryophytes. We hypothesized that DT is associated with physiological changes; therefore a dry land bryophyte plagiochasma appendiculatum was used to evaluate the physiological mechanism of DT. Fresh thalii were collected, dried, and then again reactivated by being watered. Resurrection plants are those that can be rejuvenated. The reactivation occurred within 27 minutes, although the entire drying took 5 days. Up to the fifth day, a consistent drop in RC/CS, Fo, and Fm was seen. Specific and phenomenological fluxes similarly declined throughout drying. Although ABS/RC improved on the fifth day of desiccation, indicating that the antenna size had been increased, leading to stronger photon trapping. In the membrane model of the fully dried thallus, an enlarged antenna was noticeable. The quantum yield of photosynthesis and ET/RC increased after only two minutes of watering, whereas ABS/RC declined to the control level at that time. The primary and secondary photochemistry, performance indices, phenomenological fluxes (PIcs and PIabs), quantum yields (ϕP0, ϕE0, ϕD0), and photochemistry correlated to the control level within 27 minutes. The present study concluded that the resurrection ability of P. appendiculatum is strongly correlated with the density of active reaction, the redox potential of plastoquinone pool, antenna size and rate of electron transport.

Keywords–Bryophytes, Chlorophyll fluorescence, Desiccation tolerance, plagiochasma appendiculatum, Plastoquinone pool, Photosynthesis, Resurrection plants

IMPACT OF TECHNOLOGY TO SAVE THE ENVIRONMENT

Mrs. Rathore Shilpa[1] and Dr. Rathore Sangeeta[2]
rathoreshilpa191@gmail.com
[1.]Research Scholar, Department of Zoology, B. N. University, Udaipur (Raj.)
[2.]Associate professor & Head, Department of Zoology, B. N. University, Udaipur (Raj.)

Environmental Technology is also known as 'green' or 'clean' technology and refers to the development of new technologies which aim to conserve, monitor or reduce the negative impact of technology on the environment. Environmental technology such as renewable energy, electric vehicles and carbon dioxide removal. Renewable energy, also known as 'clean energy', is energy that is collected from renewable resources which are naturally replenished such as sunlight, wind, rain, tides, waves, and geothermal heat. Modern environmental technology has enabled us to capture this naturally occurring energy and convert it into electricity or useful heat through devices such as solar panels, wind and water turbines, which reflects a highly positive impact of technology on the environment. The environmental technology of the electric vehicle is propelled by one or more electric motors, using energy stored in rechargeable batteries. Electric

vehicles demonstrate a positive impact of technology on the environment because they do not produce carbon emissions, which contribute towards the 'greenhouse effect' and leads to global warming. Furthermore, they do not contribute to air pollution, meaning they are cleaner and less harmful to human health, animals. Direct Air Capture (DAC) is the process of capturing carbon dioxide directly from the ambient air and generating a concentrated stream of CO2 for sequestration or utilisation. Technology now is being widely used in saving wildlife. Smart collars embedded with GPS, meters, and sensors to keep track of endangered species like rhinos and elephants. SIM-based collars for animals near human habitats to reduce animal-human conflicts. Conservation drones to track and monitor wild forest regions for any natural disasters like forest fires that can cause animals to be killed. Saving environment with technology is helping us build better ecosystems.

Keywords:- Environmental technology, Renewable energy, Environment, Endangered specie

OUTCOME OF LARGE-SCALE DISTURBANCE ON ANIMAL SPACE USE: UTILITY RESPONSES BY GREATER SAGE-GROUSE AFTER MEGA FIRE

Sarangdevot Manjhal[1], Rathore Renu[2]

[1.]Department Of Zoology, Janardan Rai Nagar Rajasthan Vidhyapeeth (Deemed To Be University), Udaipur, Rajasthan, India.

[2.]Department Of Chemistry, Bhupal Nobels' University, Udaipur, Rajasthan, India

Megafires result in immediate changes to habitat available to terrestrial wildlife over broad landscapes, yet we know surprisingly little about how such changes shape space use of sensitive species in habitat that remains. Functional responses provide a framework for understanding and predicting changes in space use following habitat alteration, but no previous studies have assessed functional responses as a consequence of megafire. We studied space use and tested for functional responses in habitat use by breeding greater sage-grouse (Centrocercus urophasianus) before and after landscape-level changes. Megafire had strong effects on the distribution of available resources and resulted in context-dependent habitat use that was heterogeneous across different components of habitat. Functional responses in the use of nesting habitat were influenced by the overarching effect of megafire on vegetation, whereas responses during brood rearing appeared to be driven by individual variation in available resources that were conditional on nest locations. We provide a conceptual framework to better understand space use and aid habitat conservation for wildlife in this rapidly changing world.

Keywords : Mega Fire, Centrocercus urophasianus, habitat model, habitat selection, habitat use, predicting habitat quality, resource selection function

MICROWAVE SYNTHESIS AND ANTIBACTERIAL ACTIVITIES OF SOME CHALCONES AND THEIR 1-ACYL-3,5-DIARYL-2-PYRAZOLINES

Dr. Mangal Shree Dulawat[1], Dr. Ritu Tomar2, Dr. Renu Rathore[2]
[1]Department Of Chemistry, Janardan Rai Nagar Rajasthan Vidhyapeeth
(Deemed To Be University), Udaipur, Rajasthan, India.
[2]Department Of Chemistry, Bhupal Nobels' University, Udaipur, Rajasthan, India.

This review explained the microwave assisted synthesis of biologically active Chalcone. Recently the microwave has become the useful nonconventional source for the organic synthesis. Chalcone are widely distributed in nature like fruits, vegetables, tea and spices. Microwave synthesis of some chalcones by the condensation of variously substituted aromatic ketones and aromatic aldehydes in ethanol as energy transfer medium with catalytic amount of base and their subsequent rapid transformation to 1-acyl-3,5-diaryl-2-pyrazolines with hydrazine hydrate and aliphatic acids as energy transfer medium has been described. Remarkable rate enhancement and dramatic reduction in reaction time with better yields have been observed as compared with samples prepared from conventional methods. The structures of the compounds have been confirmed by elemental analysis, IR, 1 H NMR and Mass spectral data. The synthesised compounds have been screened for their antibacterial activities.

Keywords: Microwave, Chalcones, Pyrazolines, Antibacterial Activities

ECOFRIENDLY SYNTHESIS OF NANOPARTICLES USING SONOCHEMISTRY

Choubisa Riya[1], Dulawat Mangal Shree[1], Tomar Ritu[2], Rathore Renu[2]
[1]Department Of Chemistry, Janardan Rai Nagar Rajasthan Vidhyapeeth
(Deemed To Be University), Udaipur, Rajasthan, India.
[2]Department Of Chemistry, Bhupal Nobels' University, Udaipur, Rajasthan, India.
1E-Mail: riyachoubisa02@gmail.com

It is possible to create new materials using high-energy ultrasound and it offers a fresh approach for generating well-known materials without the need of bulk high temperatures, high pressures or long response periods of time. Sonochemistry, specifically the creation or alteration of nanomaterials during ultrasonic irradiation, is caused by a number of events. The most notable effects are caused by acoustic cavitation (the formation, growth and implosive collapse of bubbles) and they can be divided into three categories: primary sonochemistry (chemistry that takes place inside collapsing bubbles in the gas phase), secondary sonochemistry (chemistry that takes place outside the bubbles) and physical modifications (caused by high-speed jets or shock waves derived from bubble collapse). The following overview gives ideas of how to manufacture or modify a variety of nanostructured materials by taking use of the chemical and physical effects of high intensity ultrasound.

Keyword: Ultrasound, ecofriendly, nanomaterials, sonochemistry, acoustic cavitation.

MITIGATION OF CLIMATE CHANGE THROUGH HARNESSING GREEN POWER

Dr Narendra Singh Rathore
Campus Director, Geetanjali Educational Society, Dabok, Udaipur
Former DDG (Education) and DDG (Engineering), ICAR, New Delhi
Former Vice Chancellor, SKNAU Jobner, MLSU Udaipur and MPUAT Udaipur
Email: nsrdsr@gmail.com

Factors responsible for mitigation of climate change involves number of steps for reducing the flow of heat-trapping greenhouse gases into the atmosphere, either by reducing sources of these gases (for example, the burning of fossil fuels for electricity, heat, or transport) or enhancing the sinks that accumulate and store these gases (such as the oceans, forests, and soil). In this context, new and renewable energy sources known as Green energy sources offers promising options.

Green energy sources are from nature, which are Renewable energy and recyclable sources. There are a few common sources of renewable energy i.e. Solar Energy (which is the most abundant of all energy resources and can even be harnessed in cloudy weather), Wind Energy, Geothermal Energy, Hydropower, Ocean Energy and Bioenergy.

In this paper, attempts has been made to highlight options for using renewable/green energy for different application, which include generating renewable energy on-site using a system or device at the location where the power is used (e.g. Solar PV panels on a state building, Wind energy, Biomass-fueled combined heat and power and other sources).

Introduction

India is the world's third largest producer and third largest consumers of electricity. The national electricity grid in India has an installed capacity of 403.76 GW as of 30 June 2022. On an average 57% Fossil, 15% hydro, 21% RES, 6% NG, 1% Nuclear, and 1% Diesel is used for electricity generation in our country. Renewable Energy Sources / Green Energy which also include large hydroelectric plants, constitute 35.86% of India's total installed capacity.

The goal of mitigation of climate change is to avoid significant human interferencewith Earth's climate, Statement wise it is "stabilize greenhouse gas levels in a timeframe sufficient to allow ecosystems to adapt naturally to climate change, ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner". In this context, new and renewable energy sources offers quite promising options. Apart from energy point of view, renewable energy so called Green energy offer following advantages.

Environmental and economic benefits of using renewable energy include: Generating energy that produces no greenhouse gas emissions from fossil fuels and reduces some types of air pollution, Diversifying energy supply and reducing dependence on imported fuels and Creating economic development and jobs in manufacturing, installation, and more.

Why Green (Growing Resources and Enhancing Energy Efficiency in Natural Ways) Energy is need of hours in present context:

1. There is need to promote change from Energy dependence to Energy autonomy.
2. The need to enlarge the slope from Electrification to Energization.
3. The need to shift from External control to Self-reliance.
4. The need to preserve & enhance Ecology & maintain Nature's cycle.
5. To move from Conventional non-renewable to Non-conventional (New & Renewable Energy Sources).

The most common Green Power Technologies include: Solar (photovoltaic, solar thermal), Wind, Biogas (landfill gas/wastewater treatment digester gas), Geothermal energy, Biomass, Low-impact hydroelectricity and Emerging technologies: wave and tidal power.

1. Solar Energy

In fact, solar energy is father of all sources of energy, which is divided into Direct and Indirect application. Direct solar energy application includes solar thermal applications based on temperature difference, and solar photovoltaic for electricity generation based on PV system. Whereas indirect solar application includes Biomass Energy, wind Energy, ocean energy, Geothermal, Hydro energy, and wave energy etc.

It is estimated that solar energy reaches the earth every year is equivalent to over 15,000 times the world's annual commercial energy consumption. India receives solar energy in the region of 5 to 7 kWh/m2 for 300 to 330 days in a year. This energy is sufficient to set up 20 MW solar power plants per square kilo metre land area. Solar energy falling on an area equal to the size of the tennis court per day is equal to energy obtained from 35 lit of petrol or 80 kg of coal. In India, total solar energy of 5, 00,000 crore kWh per year striking on its surface, which is many times more than its annual consumption.

Electrifying an average size village in the plains costs Rs.4 lakh. In the hills, it costs Rs.11 lakh. Whereas a photovoltaic (PV) power plant costs Rs.7 Lakh in plains & Rs.8 Lakh in hills. In the future, solar energy could produce hydrogen to provide transportation fuels, chemicals, and electricity. Solar panel use silicon sheets with energy absorbing cells to convert sunlight into electricity. It is relatively accessible resource and any one can harness it individually or industrially by installing solar panels on building and homes.

Promising Solar Thermal Technology:

1. Solar Water Heating and Drying System
2. Solar Refrigeration / Air Conditioning cum Solar Architecture
3. Solar Pond for Power Generation
4. Solar Furnace for Process Heat and Furnace
5. Solar Thermal Power Generation: Distributed Farm Concept and Centralized Tower System

Promising Solar Photovoltaic Technology:

1. Lighting (Domestic: Solar lantern, Community centre application: For lighting, Street lighting & TV).
2. Refrigeration

3. Power generation: - Small standalone (Few to 1000 watts), large standalone (1000 W to 3000 W) and central generation system (multi MW production)

2. Wind Power

Wind turbines generate kinetic energy that can be used to create electricity. The harnessing of wind power doesn't require much human labor and it is known as one of the most environmentally friendly resources. Wind mills are being used for pumping water and grinding purposes, whereas aero generators are used for electricity generation.

3. Hydropower

Hydropower plants capture kinetic energy from the currents flowing in streams and rivers. This is done through the use of a turbine built into a dam. There is also a good potential of Small and micro hydel electricity plant in our country especially in hilly area.

4. Biomass

This energy can be generated from agricultural, urban and industrial waste. Biomass can be harnessed by burning wood and energy crops grown specifically for this purpose. Wheat, sugar beet, sugar cane and maize are often fermented to produce bioethanol.

5. Biogas:

Biogas can be generated from organic waste available from animal, human and industries. It is anaerobically treated to produce combustible gas and simultaneously produces enriched manures for maintaining soil fertility.

6. Geothermal

The heat held within the fluids and rocks beneath the Earth's crust or molten magma can create energy. To harness geothermal energy from the steam and hot water, workers dig mile-deep wells into underground reservoirs. Then this steam and hot water can be used to power turbines connected to electricity generators.

Conclusion

Green energy looks set to be part of the future of the world, offering a cleaner alternative to many of today's energy sources thus ready source for mitigating climate change. Readily replenished, these energy sources are not just good for the environment, but are also leading to job creation and look set to become economically viable as developments continue. The fact is that fossil fuels need to become a thing of the past as they do not provide a sustainable solution to our energy needs and responsible for climate change. By developing a variety of green energy solutions we can create a totally sustainable future for our energy provision, without damaging the world we all live on, and this will be step forward for mitigating climate change as well.

IMPACT OF MERCURY STRESS ON PHOTOSYNTHETIC PERFORMANCE OF LEMNA MINOR : A CHLOROPHYLL FLUORESCENCE ANALYSIS

Hanwant Singh and Vineet Soni
Email: hanwant.mlsu@gmail.com, vineetsonijnu@gmail.com

Plant Bioenergetics and Biotechnology Laboratory, Department of Botany, Mohanlal Sukhadia University, Udaipur- 313001, Rajasthan, India

The purpose of this study was to evaluate the effectiveness of chlorophyll fluorescence analysis in detecting mercury (Hg) induced stress in plants and to determine the key photosynthetic parameters involved. To achieve this, the aquatic angiosperm Lemna minor was subjected to different Hg concentrations (ranging from 0 to 0.4 μM). The study of Hg tolerance in L. minor showed that mercury stress significantly impacted the photosynthetic ability of the plant. The presence of Hg reduced chlorophyll fluorescence kinetics, energy fluxes, density of reaction centers, and performance indexes. The results showed that Hg stress had a pronounced impact on all photosynthetic parameters, with complete inhibition of electron transport observed in plants treated with high Hg concentrations. The quantum yield of primary photochemistry and the ratio of dissipated energy to absorption both showed a decline with increasing severity of Hg stress. The performance indexes were significantly affected by the Hg concentrations, reaching zero in plants treated with the highest Hg concentration.

Keywords: Chlorophyll fluorescence, Mercury stress, Photosynthetic parameters, Lemna minor, Electron transport

THE EFFECT OF MALACHITE GREEN ON CHLOROPHYLL FLUORESCENCE OF EICHHORNIA CRASSIPES

Jyotshana Sharma and Vineet Soni
Plant Bioenergetics and Biotechnology Laboratory, Department of botany
Mohanlal Sukhadiya University, Udaipur
Email: jyoti6264@gmail.com, vineetpbbl154@gmail.com

The problem of aquatic environment contamination is getting more and more serious. Pesticides, antibiotics, and synthetic dyes are just a few of the chemical substances that have entered the aquatic environment as a result of the chemical industries' rapid rise. There are several applications for synthetic dyes, including the textile, tanning, printing, paper, pharmaceutical, and cosmetic sectors. The primary hydro-soluble basic dye known as malachite green (MG) and frequently used for coloring. Due to the danger to human health, it is listed as a Class II health hazard. MG is prohibited in Canada, the United States, and Europe due to potential health risks. Additionally, as soon as these pollutants enter the aquatic environment, they are directly exposed to sunlight in the water and go through photochemical and biological changes, producing a large number of transformation products that could be even more dangerous and persistent than the original pollutants. It builds up in soil and water habitats, disrupting the aquatic food chain and

endangering aquatic plants. Little is known about the harmful effects of MG on the photosystem II and chlorophyll content in spite of all the potentially hazardous facts. This study aims to examine the effects of MG on chlorophyll concentration and polyphasic chlorophyll fluorescence utilizing Eichhornia crassipes as plant material. With increasing MG concentration, a dramatic drop in chlorophyll content was seen. Experiments using in vivo chlorophyll fluorescence showed that E. crassipes photosynthetic efficiency is generally reduced when exposed to MG due to a slowdown in electron transport.

Keywords – Chlorophyll fluorescence, Environment, Malachite green, photosynthesis,

CENTURY SCALE DYNAMICS OF FOREST AREA, BIOMASS AND CARBON POOL IN INDIAN FORESTS – INTEGRATION OF REMOTE SENSING AND MULTISOURCE DATA

V. K. Dadhwal
Chair Professor, National Institute of Advanced Studies (NIAS), Bengaluru
Email: vkdadhwal@nias.res.in

Remote Sensing (RS) data is the current approach to map and monitor forests. However, creating consistent long-series of data on area under forests and forest biomass remains a challenge. Progress in the last decade through our studies, increase in scope of State of Indian Forest released by Forest Survey of India and published work, have brought in new results on size and increase in carbon pools, enhancement of tree cover of India and crown-cover based dynamics. While RS based techniques to monitor natural forests, plantations and tree associations with spatial dynamics have been developed, the above ground biomass (AGB) density and carbon density at high resolution is still a challenge. RS results are available for around 5 decades and earlier state of India's forests can be reconstructed from forest department statistics, forest and topographical maps, climate-based vegetation classes and published ecological data. These approaches have large uncertainties. Taken together, the reconstruction approach, current forest dynamics and models of future dynamics is essential component of the scientific basis of managing Indian forest in a sustainable manner. Current understanding of forest dynamics and the challenges in addressing methodology and results gaps will be presented.

Keywords: Remote Sensing, Forest Area, Deforestation, Forest Biomass, Forest Carbon Pool

USE OF PROSOPIS CINERARIA PLANT EXTRACTS AS NATURAL COAGULANT FOR SEWAGE WATER TREATMENT

Rinku Kumari, Vipul Dev Beniwal and Dr. Sushma jain*
Department of Zoology, VBRI, Udaipur (Raj.)
*E-mail: sushma1830@yahoo.com

Water sample is essential to overcome drinking water problem. This study was carried out to find out suitable low cost biosorbents for the purification of physiochemical parameters of water. Prosopis cineraria leaves, bark, seeds were used and their efficiency was compared with normal tap water and WHO standard procedures as a reference. Water sample were collected from randomly. 2gm/500ml dosage of dried extracts powder was taken and they were mixed with the collected water sample and after 10 minutes showed a clear

water layer at the top and a sediment layer at the bottom. The clear water was then passed through a natural bio-sand filtration and charcoal filtration the resulting water was found useable. The treated water samples with plants extracts and charcoal were examined for different physicochemical parameters such as temperature, turbidity, conductivity, pH, hardness, chloride, magnesium, alkalinity, DO, COD, BOD, colour and odour. Prosopis cineraria bark showed the highest ability to reduce pH (8.92 to 7.35), conductivity (3100 to 2100), hardness (700 to 490), TDS (950 to 530), turbidity (14 to 5), COD (120.7 to 33.8), DO (9 to 7.0), magnesium (250 to 140), Prosopis cineraria leaves reduce BOD (214.6 to 22.4), chloride (680 to 321), Prosopis cineraria seeds reduce alkalinity (820 to 540) in treated sample 1 and Prosopis cineraria bark showed the highest ability to reduce conductivity (3250 to 2150), hardness (694 to 480), TDS (961 to 535), turbidity (14.8 to 3), COD (120.9 to 33.9), DO (9.6 to 7.2), magnesium (260 to 142), Prosopis cineraria leaves reduce BOD (215.2 to 22.6), DO (9.6 to 7.2), chloride (669 to 320), Prosopis cineraria seeds reduce pH (8.7 to 7.0), alkalinity (812 to 520) in treated sample 2.All plant extracts have shown the ability to remove the colour of water sample with charcoal. Prosopis cineraria bark was found to be the best purify contaminated water in this study. The use of natural absorbent could be proposed for environmentally friendly, simplified water purification for rural communities in cost effective manner.

Keywords: water purification, natural absorbent, plants extracts, environmentally friendly, Prosopis cineraria, Ocimum sanctum

SPACE TECHNOLOGY FOR ACHIEVING LAND DEGRADATION NEUTRALITY:

Ajai

Former Group Director, Space Applications Centre, ISRO, Ahmedabad 380015

Land is the fundamental basis for all kinds of life on earth, as it offers suitable substrate for agricultural production, and habitats for the flora and fauna, and provides a suitable environment for human beings to live and flourish. It provides all other desired natural capitals and ecosystem goods and services which are essential for human sustenance and their well-being. Humans depend on land for their basic requirements such as food, clean water, fodder, and fibre etc. Land is both a source and a sink of greenhouse gases, and also plays a key role in the exchange of energy and water with the atmosphere, and thus contributes significantly to the climate system.

Land affects the environment and, in consequence, is affected by the quality of the environment. Since the past few decades, the human dependence on land-based ecosystem goods and services, has led to the unsustainable exploitation of land in order to meet the constantly growing requirements, particularly due to rising human population as well as the growing quest of man to lead a better quality of life. Over-exploitations can be in the form of agriculture expansion and intensification, land conversion (from natural ecosystem to managed ecosystems), inappropriate land use practices, cultivation on marginal land, overgrazing of rangelands and grasslands. In this pursuit, man has disturbed even the less productive and fragile lands. When such unsustainable intensified exploitation of land is continued unabated, it leads to loss of ecological equilibrium, and ultimately may result into land degradation (LD). As the population continues to rise, it becomes essential not only to sustain productive land that is still available to us, but also to reclaim and restore the land degraded by us and also by our predecessors in the past.

In ancient times, several, once once-thriving civilizations, such as those of Mesopotamia, Nile, Yangtze and Indus Valley civilizations, have disappeared due to land degradation, desertification and drought, which

had led to the depletion of resources on which they arose and flourished. World's first empire, the Akkadian, based in southern Mesopotamia, collapsed around 4,200 years ago, after only a century of prosperity, as a result of severe and prolonged drought, land degradation and desertification.

The seriousness of the implications of land degradation on the human society, environment and the natural capitals and resources, have been realized by the global organizations such as United Nations. United Nation's "Agenda 2030 for Sustainable Development" comprises of 17 SDGs (Sustainable Development Goals) and 169 associated targets that seek to achieve sustainable development in its three dimensions, e.g. economic, social and environmental, in a balanced and integrated manner. SDG 15 aims at sustaining life on land and includes a target related to combating desertification and makes explicit reference to a land degradation neutral world under its target 15.3. It states 'By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, droughts and floods, and strive to achieve a land degradation neutral world'. In this context, United Nations Convention to Combat Desertification (UNCCD) has formulated a program called Land Degradation Neutrality (LDN). All the UN member countries of the world are committed to implement LDN in their respective countries Neutrality means neither loss nor gain. The principle of Land Degradation Neutrality (LDN) states 'it is required to counter balance the ongoing land degradation (loss) with restoration of already degraded land (gain)'. Land degradation neutral world envisions a world where the total amount of degraded land remains constant over a period of time. The main objective of LDN is to stop the ongoing loss of healthy or productive land as a result of unsustainable land management, inappropriate land use and land conversion. Most of the countries of the world have set a target under LDN, so as to restore the targeted degraded land by 2030. India has made a commitment to restore 26 million ha of degraded land by 2030.

In order to make appropriate strategies to restore the degraded land / combat land degradation and to arrest the process of degradation in those land which are undergoing the process of degradation , the important tasks which are required to be carried out are: i) to identify and map the land which are already degraded or in the process of degradation, ii) to identify the and map the types of land degradation processes and the severity of degradation, iii) to identify the land areas which are vulnerable to degradation, iv) to find out the appropriate combating strategies for each type of the land degradation process, v) to work out the appropriate implementation mechanism and execute the combating strategies in the field vi) to monitor the impact of the implementation on the social system and the environment.

In the past for decades, the availability of high-resolution images/data from Earth Observation (EO) Satellites have made it possible to identify and map the land which have been degraded or undergoing the process of degradation. The various types of the land degradation process can also be distinguished and mapped along with their severity using satellite images. In additions, different thematic layers which are required for preparation of appropriate action plan towards combating/restoring the degraded land (such as, Land Use/Land Cover, Surface water bodies. Ground water prospects, DEM or slope information etc) are also being prepared using EO satellite data. Monitoring the impact of the actions taken for combating LD or restoration of degraded lands can also be done using multi-temporal satellite data.

The present talk addresses all the important issues related to land degradation, as mentioned above, and also the use of space technology in combating land degradation so as to achieve the Land Degradation Neutrality. Techniques based on the use of EO satellite data for mapping and monitoring of the land degradation processes and severity, as well as preparation of locale specific action plans for restoration and combating of land degradation will also be presented in details. A few case studies and success stories will be discussed.

CLIMATE CHANGE IMPACT ON EARTH AND HUMANKIND

Harish Seth
Scientist, ISRO, Ahmedabad
Email: harishseth2013@gmail.com, Mobile: 9408780448

The current circumstances of our mother earth clearly indicates that in future whole human civilization, biosphere is on the verge of extinction until and unless immediate hard preventive steps are not taken. The main reason behind it is to fulfill our greed (Not Need) which is infinite and it results in causing huge disturbance, imbalance, and pollution in nature. To overcome it sincerely, we have to follow the statement from Acharya Labdisagar ji Maharaj "To Save our mother earth, Science and Spirituality both are required ". In my view science and spirituality both are required for sustainable development and without spirituality, science causes havoc which is visible now a day. In this letter I will try to underline some disastrous effect of climate change on earth based true facts and available data published by intergovernmental panel on climate change (IPCC- 2021) and other reports. Further beyond earth the menace of space debris caused due to commercialization of space is also discussed.

According to geological study, earth climate is relatively stable over last 10000 years and expected to remain for another 50000 years. Geologist call this period as Holocene but it is now at risk (Ganopolski, et al 2016). The most warning result appeared in sixth Assessment Report (AR6) of Intergovernmental panel on climate Change (IPCC-2021) that global temperature of land is already increased by 1.59˚C in the merely 10 years from (2011-2020) and earlier same increase in temperature is observed in 50 years (1850- 1900). Last 20 (out of 22 years) are observed to be warmest. Further no evidence is observed that these changes are natural so only human anthropogenic activities are responsible. The current increase in temperature is mainly due to burning fossil fuels and deforestation. Further the rise in CO2 since year 2000 is about 20 ppm/ decade which is 10 times faster than any sustained rise in CO2 in last 80000 years. The effect of this temperature rise cause wide spread effect and adverse changes in earth atmosphere, biosphere, ocean and cryosphere. Due to current increase in temperature Greenland lost 3900 billion ton of ice in period of 1992 to 2017, Antarctica lost 2600 billion tons of frozen ice and Arctic sea ice is melting at the rate of 13% per decade and sea level has already rose 20 mm. Further due to temperature increase frequency of occurrence of warm days and warm night is projected to increase by 50% causing very much adverse effect on human health and whole biosphere. If we look for Indian perspective, India is home of 18% of global human population over only 2% of land and 4% of global fresh water. Further Indian population is also increasing at very fast rate (already increased more than 3 times since independence). This population increase and Greed of materialistic development cause huge pressure on out natural resources and it is plummeting at faster rate. Let us take an example of water availability, India has 20 million wells and tube well and use 250 Km3 of ground water annually which is approx. 20 % of total of total ground water extracted globally. It will reduce per capita water availability from 1588 m3/year to 1140 m3/year by 2050. Jaipur may face second highest global water deficit and cause wide spread urban draught in Indian cities like Chennai, Bangalore, Delhi,

Kanpur, Bhubneshwar, Jodhpur Indore etc. and cause tangible adverse effects in next 2-3 decades. Currently the effect of climate change is visible in the form of severe cyclone, floods, draught, pollution (air, water, land and plastic), land degradation, vector borne diseases etc. but still world politicians are not ready to compromise it on the cost of this materialistic development and currently they focusing on mitigating the effects of climate change by setting the limit of global warming to < 1.5˚C and CO2 under 400 ppm.

Further If I talk about space exploration, approx. 1400 satellites were revolving in earth orbit by 2015, but due to business greed (Global internet, space tourism,) it is expected to reach up to 58000 at the end of decade. At present nearly 3000 retired spacecraft and 36000 objects (larger than 10 cm) and more than one million small objects are revolving in earth orbit with very high velocity (> 5 Km/second). This menace is causing huge space debris and probability of collision with useful satellites. It may be noted that any object having size 3 mm or more can cause huge damage to operational satellites so the situation has reached to alarming stage and almost all space agencies are working to minimize space debris and collision avoidance mechanism. ISRO itself performed 21 maneuvers and International Space Station (ISS) is doing maneuvering many times to avoid collision. The current situation demands that space must be used for human and natural welfare and it must not be commercialized.

So it is now our main responsibility to minimize materialistic usage and move toward spiritualism and holistic development to save our mother earth, otherwise our next generations will not forgive us although we left huge house, big bank balance for them.

References:

- Ganopolski, A., et al. (2016). Critical insolation– CO2 relation for diagnosing past and future glacial inception. Nature, 529. 200–203. https://doi.org/10.1038/nature16494.
- Intergovernmental Panel on Climate Change(IPCC-2021) reports.
- ISRO and other websites.

CLIMATE CHANGE IMPACT ON EARTH AND HUMANKIND

Manish Naja
Chairman, Atmospheric Sciences Division,
Aryabhatta Research Institute of Observational Sciences (ARIES),
Dept. of Science and Technology (DST), Nainital
Email: manish@aries.res.in

Earth is the only planet where living beings exist, which is mainly due to favourable atmospheric composition on the Earth. The Earth's atmosphere is composed of a mixture of gases and apart from major gases like nitrogen, oxygen and argon, several other trace gases (less than 0.1%) are of natural and anthropogenic origin and those play a very important role for the survival of living beings. Ozone is one of such gases and found only in small amounts (about 0.001%) in the atmosphere. Nevertheless, it is vital to human well-being as well as agricultural and ecosystem sustainability. Most (85-90%) of Earth's ozone resides in the stratosphere (above 10-18 km and up to about 50 km) and shields Earth's surface from harmful ultraviolet radiation emitted by the Sun. This stratospheric ozone is produced naturally by the photo-dissociation of oxygen molecules. This production of stratospheric ozone is balanced by its destruction in chemical reactions and the chemical loss reaction used to be driven by the oxygen and ozone itself until industrialization. Following industrialization, some of the reactive gases like hydrogen, nitrogen oxides and those containing chlorine and bromine enhanced the stratospheric ozone loss. Global emissions of several of these reactive gases have increased despite controls imposed on their production under the Montreal Protocol on substances that deplete the ozone. This talk will cover the formation mechanism of ozone and why significant ozone loss is seen in the Antarctic when compared with Arctic or low-mid latitude regions (major source region of CFCs). Is it happening through the year or specific to a particular season, why? What is the status of recovery of ozone loss?

Ozone is also found in the lower most part of the Earth's atmosphere, i.e. the troposphere and it is about 10-15% of the total atmospheric ozone. Unlike the stratospheric ozone, high levels of surface ozone have detrimental impact on living beings and reduce the vegetation growth/yield. It is also an efficient greenhouse gas. There are two sources of the tropospheric ozone; (i) in situ photochemical production involving various pollutants like CO, NO-NO2, VOC, etc and (ii) downward transport of ozone rich air from the stratosphere. Similarly, ozone destruction takes place mainly by two processes; (i) chemical loss (ii) surface deposition. The majority of tropospheric ozone formation occurs when nitrogen oxides (NO-NO2), carbon monoxide (CO) and volatile organic compounds (VOCs) react in the atmosphere in the presence of sunlight. These gases, which are leading to ozone production, are called ozone precursor gases. Motor vehicle exhaust, industrial emissions, and chemical solvents are the major anthropogenic sources of these gases. Although these precursors often originate in urban areas, winds can carry these precursor gases hundreds of kilometers, causing ozone formation to occur in less populated regions as well. It has been found that exposure to the exceedingly high levels of polluted air accounts for around 30% of mortality in South Asia. Moreover, the average life expectancy for the region has been estimated to have been reduced by approximately five years. The economic toll associated with additional impacts to health, agricultural productivity, mobility, etc. can account for reductions of Gross-Domestic Product (GDP) of several percent for the regional economies. Model based studies have also shown that air pollution in South Asia may not improve during the next few decades. More will be discussed during the talk.

MICROBES AND CLIMATE CHANGE: CORRELATION AND IMPACT

Namita Ashish Singh
Department of Microbiology, Mohanlal Sukhadia University, Udaipur-313001, Rajasthan,
Mail ID: namita.singh@mlsu.ac.in

One of the greatest risks to humanity in the twenty-first century is climate change. Global economics, food security, and water quality all are negatively impacted by climate change. Microbes are supervising the metabolism of the greenhouse gases carbon dioxide, methane, nitric oxide, and nitrous oxide as well as the biogeochemical cycling of the essential components for life. Microbes especially methanotrophic bacteria consume about 60% of the methane produced across the world. Cyanobacteria viz. Prochlorococcus and Synechococcus eliminate approx. 10 billion tons of carbon from the air each year. However, Climate change is responsible for the warming of permafrost (frozen soil) consequently increasing the methane concentration in the environment as well as leading to the emergence of new pathogens such as Candida auris which ultimately causes disease outbreaks. Identifying the impact of climate change on various microbial populations is a current challenge. There should be a thorough assessment of the functional variety of microorganisms on a global scale, and consideration of microbial processes and functions in ecosystem modeling. Academic institutions and public policymakers should work together to address this global problem of climate change that threatens the entire biosphere.

Keywords: Climate change, microbes, impact, methanotroph


Spiritual

आचार्य भिक्षु आलोक संस्थान, केलवा आध्यात्मिक ज्ञान प्रसारण का एक अनुपम केन्द्र

डॉ के एल कोठारी
कुलप्रमुख, विज्ञान समिति, उदयपुर
Email: kundanlalkothari@gmail.com

आचार्य भिक्षु ने अषाढ़ शुक्ल पूर्णिमा वि.स. 1817 में श्वेताम्बर जैन तेरापंथ की स्थापना की थी। ऐसा विधान निर्माण किया जिसके आधार पर आज 263 वर्ष में लगातार प्रगति होती रही और देश का अनुपम संगठन बना। दुनिया के विभिन्न देशों में जैन धर्म का पूर्ण कौभाल के साथ प्रचार किया जा रहा है।

तेरापंथ की स्थापना की उस भूमि में एक संस्था स्थापित हो ऐसी अपेक्षा थी। स्व. साध्वी प्रमुखा कनक प्रभा जी की प्रेरणा से सन् 2012 में एक संस्था उपरोक्त नाम से स्थापित हुई जिसका उद्देभय आध्यात्मिक ज्ञान प्रसारण, मानव सेवा तथा विद्वानों का सम्मान है। विभिन्न गतिविधियों के माध्यम से उद्देभयों की पूर्ति की जा रही है। उसका मासिक मुखपत्र श्रद्धा नियमित प्रकाशित होता है। पुस्तकालय का विकास हो रहा है। विभिन्न गांवों में आचार्य भिक्षु वार्ताएं विद्वानों द्वारा दी हा रही है। अब तक 12 जैन विद्वानों को आचार्य भिक्षु प्रज्ञा सम्मान दिया जा चुका है। प्रतिवर्ष नेत्र चिकित्सा भाविर केलवा में आयोजित हो रहे हैं। अब तक आयोजित 5 भाविरों में 750 रोगियों की सेवा हुई हैं 230की निःशुल्क शल्य चिकित्सा हुई है। विद्यार्थियों को छात्रवृत्ति एवं ज्ञानवर्द्धन हेतु प्रतियोगिताएं आयोजित की जाती रही है। शिक्षा विभाग ने इस संबंण में संस्थान का सम्मान भी किया है।

पर्यावरण का सार्वभौमिक, सार्वकालिक और सार्वजनिक महत्त्व : जैन आचार मीमांसा के परिप्रेक्ष्य में

डॉ. समणी संगीतप्रज्ञा

आधुनिक युग का बहुचर्चित शब्द है पर्यावरण, जिसका मानव जीवन से सार्वकालिक, सार्वभौमिक और सार्वजनिक सम्बन्ध है। बिना पर्यावरण के जीवन की कल्पना भी नहीं की जा सकती। वस्तुतः, पर्यावरण मानव जीवन हेतु प्रकृति द्वारा प्रदत्त सर्वोत्तम उपहार है। इस पर न केवल मानव जीवन का अस्तित्व टिका है, अपितु जीवन का विकास भी इसी के सहयोग से सम्भव है। अतएव जीवन में पर्यावरण का विशिष्ट योगदान है।

जैन आचारशास्त्र जितने प्राचीन हैं, उतने ही प्रामाणिक भी। ये प्राचीन भारतीय संस्कृति के प्रतिनिधि भी हैं। इनमें पर्यावरण के अनेक सूत्र हैं, जिनके प्रयोग से पर्यावरण की समस्याओं का सहज और सरल समाधान प्राप्त हो सकता है।

पर्यावरण का सार्वभौमिक, सार्वकालिक एवं सार्वजनिक महत्त्व

आज से लगभग अठारह सौ वर्ष पूर्व आचार्य उमास्वाति ने पर्यावरण की जिन विशेषताओं को दर्शाया, उनसे पर्यावरण की महत्ता स्वतः ही प्रकट हो जाती है। ये विशेषताएँ हैं गत्यात्मकता और परस्पर आश्रितता।

(1) **क्रियात्मकता**—पर्यावरण के प्रत्येक घटक का कोई न कोई प्रयोजन अवश्य है अर्थात् कोई भी घटक ऐसा नहीं है, जो निष्क्रिय और अर्थहीन हो। चाहे वन हो या भूमि, जल हो या अग्नि, वायु हो या अन्य प्राणी. इन सभी का प्रयोजन अवश्य है। हमें चाहिए कि पर्यावरण के घटकों का समुचित मूल्यांकन कर सकें।

(2) **गत्यात्मकता**—पर्यावरण का प्रत्येक घटक प्रतिक्षण परिवर्तनशील है। उत्पादव्ययध्रौव्ययुक्तं सत् अर्थात् कोई भी घटक ऐसा नहीं है, जिसमें अवस्थान्तरण नहीं हो रहा है। चाहे समुद्र हो या सरिता, पर्वत हो या समतल भूभाग (मैदान, पठार आदि), मरुस्थल हो या वनभूमि, पर्यावरण के प्रत्येक घटक में गत्यात्मकता या परिवर्तनशीलता है। यह विशेषता पर्यावरणीय गुणवत्ता

में सुधार की सम्भावनाओं को प्रकट करती है। कैसी सुन्दर एवं सकारात्मक व्यवस्था पर आधारित है हमारा पर्यावरण! हमें चाहिए कि पर्यावरण–संरक्षण की प्रक्रिया के द्वारा पर्यावरणीय ह्रास की अपेक्षा विकास का प्रयास करें।

(3) **परस्पर–आश्रितता**–पर्यावरण एवं मानव के बीच तथा पर्यावरण के विविध घटकों के बीच परस्पर निर्भरता है–परस्परोपग्रहो जीवानाम्। ये तत्त्व एक–दूसरे से प्रभावित होते रहते हैं, जैसे जीवन पर पुद्गल का उपकार है। इस विशेषता के कारण से ही मानव अपनी समस्त आवश्यकताओं की पूर्ति पर्यावरण के माध्यम से कर पाता है। चाहे आवास हो या आहार, प्राणवायु हो या पेयजल, औषधियाँ हो या सजावटी सामान, वाहन हो या संचार के उपकरण इन सभी की आपूर्ति प्रत्यक्ष अथवा परोक्ष रूप से प्रकृति प्रदत्त उपहारों से ही होती है। हमारा यह नैतिक कर्त्तव्य है कि यदि पर्यावरण हमारे जीवन को सुरक्षा प्रदान करता है, तो हम भी उसका संरक्षण करने का अधिकाधिक प्रयास करें।

बृहद्कल्पभाष्य की निम्नलिखित पंक्तियां पर्यावरण–संरक्षण के लिए पर्याप्त है–

जं इच्छसि अप्पणतो, जं च न इच्छसि अप्पणतो।
तं इच्छ परस्स वि, एत्तियगं जिणसासणयं।।

अर्थात् जो अपने लिए चाहते हो, वही दूसरों के लिए भी चाहना चाहिए, जो अपने लिए नहीं चाहते हो, वह दूसरों के लिए भी नहीं चाहना चाहिए। बस! इतना मात्र जिनशासन है और यही तीर्थंकरों का उपदेश भी ।

इस प्रकार, पर्यावरण का सम्यक् प्रबन्धन कर पर्यावरणीय संसाधनों की सुरक्षा का प्रयत्न करना चाहिए।

शिवमस्तु सर्वजगतः, परहितनिरता भवन्तु भूतगणाः।
दोषाः प्रयान्तु नाशं, सर्वत्र सुखी भवन्तु लोकाः ।।

ज्ञान पंचमी का महत्त्व

शकुन्तला पगारिया

दिन की रोषनी ख्वाबों को बनाने में गुजर गई,
रात की नींद बच्चों को सुलाने में गुजर गई।
जिस घर में मेरे नाम की तख्ती भी नहीं,
सारी उम्र उस घर को सजाने में गुजर गई।

जन्म– 6 जून 1945 श्रीमान सरदार मल जी सेठ एवं श्रीमति रतन सेठ के यहां छः भाई–बहन में दूसरे नम्बर पर है।

शिक्षा– कक्षा 10 तक पढ़ाई विज्ञान एवं गणित में उर्त्तीण करी। आगे की शिक्षा परिवारिक परिस्थितियों के कारण हो नहीं पायी।

विवाह– 29 नवम्बर 1962 में श्रीमान रतन लाल पगारिया ध्द जीतमल जी एवं श्रीमती दाख बाई पगारिया के चौथी सन्तान से सम्पन्न हुई।

जिन्दगी का सफर यहाँ नहीं रूका और 1963 में राजस्थान सरकार में अध्यापन कार्य हेतु एवं शिक्षिका के रूप में कार्य प्रारंभ किया।

उन्हीं दिनों की बात है नौकरी में आगे बढ़ने के लिए केवल मेट्रिक पास से पर्याप्त नहीं था तो आगे की पढ़ाई निजी परीक्षा के माध्यम से कक्षा ग्यारहवीं की परीक्षा हेतु प्रक्रिया आरंभ करना चाही, परंतु नियति को कुछ और ही मंजूर था।

बाधाओं का कारवां आगे बढ़ता गया 1966, 1968, 1969, 1980 में चार संतानों को जन्म दिया। उसके बाद 1974 में फिर से पढ़ाई करने का मन किया और गृहस्थ जीवन की बाधाओं से झूझते हुए पुनः कक्षा ग्यारहवीं अध्ययन आरंभ किया। लगातार

तीन–चार बार परीक्षा देने पर भी असफलता ही हाथ लगी परंतु हार नहीं मानी।

कहते है ना कि

सफलता जिस ताले के अंदर बंद रहती है,

उसको दो चाबियों से खोला जाता है,

एक कठिन परिश्रम और दूसरा दृढ़ संकल्प।

अगली बार पुनः परीक्षा का फार्म भरा उस मुश्किल समय में जिन्दगी के सफर में मसीहा बन कर आयी एक अजीज एवं प्रेमी मित्र श्रीमती विजया जैन (एक अध्यापिका) से मुलाकात हुई उन्होंने सलाह दी कि ज्ञान पंचमी का उपवास 65 बार (प्रत्येक माह की भुक्ल पक्ष की पंचमी) दीपावली के बाद आने वाली पंचमी से संकल्प लेकर शुरू किया। उसके पश्चात् सफलता का पहिया रूका नहीं एवं हायर सैकण्डरी, स्नातक, B.Ed. तक परीक्षा उर्त्तीण करी वो भी बिना रूकावट के ईश्वर व जैन धर्म में श्रद्धा बढ़ती गई, साथ में भक्ति भी बढ़ गई।

तत्पश्चात् अपनी ज्येष्ठ पुत्री सुधा एवं और संतानों को भी सुझाव दिया एवं स्वयं ने 1974 से निरंतर 2005 तक ज्ञान पंचमी का उपवास कराना एक नियमित प्रक्रिया बन गई। ज्येष्ठ पुत्री सुधा जो आज एक सफलतम गेस्ट्रो एन्ट्रोलोजी यूएसए में वरिष्ठतम डॉक्टर में से एक है। दूसरी पुत्री लीला भी एक सफल डॉक्टर है तत्पश्चात् पुत्र कमल एवं चित्रा भी एक सफल इंजीनियर है। 2005 के पश्चात् डायबीटिज होने के कारण चिकित्सकीय सलाह के कारण उपवास करना बंद किया। लेकिन आज भी प्रत्येक सोमवार जिनदत्त राजेन्द्र जी सूरी दादा गुरुदेव का ग्रत करती है। इन्हीं विचारों के साथ –

तेरे आज की मेहनत, तुझे कल कामयाब बनायेगी।
तेरा दृढ़ संकल्प ही तुझे, मंजिल तक पहुंचाएगी।।

शायद मेरी शक्ति की अटूट श्रद्धा कहो या जूजून आज भी मेरा यह सिलसिला निरंतर जारी है।

विभिन्न भारतीय दर्शनों के परिप्रेक्ष्य में महात्मा गांधी का पर्यावरण संरक्षण सिद्धान्त

डॉ. वंदना मेहता,
सहायक आचार्य, जैन दर्शन विभाग, जैन विश्वविद्यालय, बैंगलोर
Email: vandanamehta.123@gmail.com, M. 9460110185

पर्यावरण और मनुष्य का संबंध जब से सृष्टि है तभी से हैं। पर्यावरण का संबंध न केवल मनुष्य के साथ वरन् प्राणी मात्र, वनस्पति जगत एवं अजीव जगत् के साथ अन्योन्याश्रित रूप से जुड़ा है। विश्व की प्राचीनतम सभ्यता एवं संस्कृति के देश भारत में दिव्य द्रष्टा महर्षियों ने पर्यावरण के महत्त्व को अपनी दिव्य चक्षुओं से जान लिया था एवं उनकी दिव्य दृष्टी ने स्वतः स्फूर्त अग्नि सूक्त, मरूत सूक्त, वात सूक्त, पर्जन्य आदि सैकड़ों सूक्तों का सृजन किया।

पर्यावरण एवं जीव जगत के सम्बन्ध में भारतीय दर्शनों एवं परम्पराओं में महत्त्वपूर्ण उपयोगी सिद्धान्त और चिन्तन हमें प्राप्त है। इनके विस्मरण से मानव समाज भटकाव की स्थिति में पहुंच गया है। महर्षि द्वय चरक एवं सुश्रुत की आयुर्वेदिक संहिताओं, जैन आगमों, बौद्ध त्रिपिटकों, सभी भारतीय दर्शनों, गीता उपनिशद्, तथा परवर्ती साहित्य में पर्यावरण संरक्षण के सन्दर्भ में परामर्श एवं अत्यन्त उपयोगी युगीन समस्याओं की समाधायक सामग्री प्राप्त है।

प्रस्तुत शोध लेख की दृष्टि से देखें तो पर्यावरण संरक्षण एवं आचार की दिशा गाँधी जी के वैचारिक एवं जीवन दर्शन से स्पष्टतः प्राप्त की जा सकती है। प्रकृति के सन्दर्भ गाँधी जी ने ब्रह्माण्ड को अखण्ड रूप में तथा मानव को उसकी आवश्यक लघुतम इकाई मानकर मानव–प्रकृति तथा ब्रह्माण्ड में सामंजस्य बिठाकर अंतर्निर्भरता के दर्शन को मान्य किया है। संयमित जीवन दर्शन को व्यक्त कर इच्छाओं के अल्पीकरण के द्वारा मानव प्रवृत्ति को सुविधावाद तथा उपभोक्तावाद से मुक्त रखने का प्रयास निश्चित रूप से पर्यावरण के प्रति स्वस्थ संबंधों को ही उजागर करता है। 'मेरा जीवन ही मेरा संदेश है' के द्वारा वास्तव में वे संयम व प्रकृति के प्रति प्रेमभाव को ही प्रतिष्ठित करने का प्रयास करते थे। गांधीजी ने प्राणी मात्र के प्रति समभाव का निरूपण करते हुए सरलता, सादगी तथा इन्द्रिय–संयम को महत्त्वपूर्ण माना था। इस चिन्तन व मत का समर्थन करते हुए प्रसिद्ध इतिहासकार आर्नाल्ड टायनबी ने कहा है कि विभिन्न उन्नत सभ्यताओं के पतन का कारण बाहरी आक्रमण नहीं बल्कि आंतरिक, सांस्कृतिक व नैतिक विघटन है। उन सभ्यताओं को विशेष रूप से कभी गंभीर समस्याओं का सामना नहीं करना पड़ा है जिनका आधार संयम एवं प्रकृति के प्रति प्रेम–भाव है।

गांधीजी के दर्शन का स्वरूप मुख्यतः सर्वजन हिताय एवं सर्वजन सुखाय का प्रतिपादन करता प्रतीत होता है। गांधीजी के ग्राम–स्वराज्य का चिन्तन भारतीय परिस्थितियों के सर्वथा अनुकूल रहा है। चूंकि भारत की आर्थिक व्यवस्था मुख्य रूप से कृषि पर अवलंबित है, अतः ग्राम से ही आर्थिक एवं बौद्धिक उन्नति का चिन्तन पर्यावरण संतुलन के मार्ग को प्रशस्त रखने की क्षमता रखता हैं। उनका मानना था कि भारतीय प्ररिप्रेक्ष्य में कृषि एवं इससे संबंधित क्रियाकलाप ही श्रेय है। परम्परागत कृषि को 'सतत् कृषि' कहा गया है क्योंकि वह स्थायित्व सम्पन्न, अविनाशी और सदा गतिमान रही है। उसमें ऐसे शाश्वत तत्त्व, घटक या उपादान रहे हैं जिन्हें विकल्प सोचते समय नजर अन्दाज नहीं किया जा सकता। यह व्यवस्था पशु व मनुष्य के अटूट रिश्ते पर टिकी थी। गांधी जी ने भारतीय अर्थव्यवस्था को 'गौ अर्थव्यवस्था' कहा था। जो मूलतः वैदिक दर्शन आधारित है।

पर्यावरण सरंक्षण की दिशा में गांधीजी का प्राकृतिक चिकित्सा का संदेश एवं व्यवहार अपनी विशिष्ट भूमिका का निर्वहन करता है। आधुनिक जगत में भावी विज्ञान के क्षेत्र में तथा सौन्दर्य प्रसाधनों के अनुसंधान व निर्माण हेतु जिस क्रूरतम अमानवीय व्यवहार का परिचय दिया जा रहा है, वह पारिस्थितिकी तंत्र के विनाश का अवश्यंभावी कारण बन सकता है। इस संदर्भ में ज्म्त्प् (ज्ंजं म्दमतहल त्मेमंतबी प्देजपजनजमद्ध द्वारा किये गये शोध के निष्कर्ष बताते हैं कि चिकित्सा एवं प्रसाधन सामग्री के अनुसंधान व निर्माण के नाम पर जिस अनुपात में जीव–जन्तुओं पर प्रयोग हो रहे हैं, यदि इसी अनुपात में मानव–जाति पर प्रयोग किये जाएं तो चार साल में मानव–जाति विलुप्त हो जाएगी। अर्थात् प्रतिवर्ष लगभग डेढ़ अरब संख्या में पशु–पक्षियों को हमें निरोगी तथा सुन्दर बनाने हेतु क्रूरतम तरीके से मार दिया जाता है। इस आधुनिक चिकित्सा पद्धति का सवर्था निषेध करते हुए गाँधी ने प्राकृतिक तत्त्वों यथा– जल, मिट्टी, वायु द्वारा मनुष्यों को निरोगी रहने की पद्धति अपनाने की सलाह दी उनकी इस चिकित्सा पद्धति को प्राकृतिक चिकित्सा की संज्ञा दी जाती है, जो आजकल विदेशों व अन्य स्थानों पर प्रचलित हो रही है। यह पद्धति वर्तमान काल में गांधी जी के दर्शन की प्रासंगिकता भी सिद्ध करती है।

यद्यपि पर्यावरण वर्तमान की ज्वलंत समस्या है किन्तु गांधीजी ने कई दशक पूर्व इस आने वाली समस्या के प्रति विभिन्न प्रकार से सचेत किया था, जिसका दर्शन उनके चिन्तन एवं प्रयोगों में बहुधा दिखता रहा। खादी, स्वदेशी, शरीर श्रम, लघु एवं कुटीर उद्योग, ग्रामीण अर्थ–व्यवस्था, कृषि प्रधान जीवन, गौ संरक्षण, बुनियादी तालीम आदि मौलिक चिन्तन ने विभिन्न प्रकार से न केवल तत्कालीन मानव समाज एवं पर्यावरण को विशुद्ध रखने का प्रयास किया है, अपितु वर्तमान समस्याओं के सन्दर्भों में भी मार्गदर्शन करने की क्षमता बनाए रखता है।

विज्ञान : अंतिम जिम्मेदारी या अंतिम परिणाम

संजीव शर्मा
संयोजक : विज्ञान तीर्थ पालिताना, गुजरात
Email: sanjshiv@gmail.com

टेक्नोलॉजी का उदेश्य है हमारे कार्य को टास्क में बदलना, परंतु आर्टिफिशियल इंटेलिजेंस(कृत्रिम होशियारी) और चौथी औद्योगिक क्रांति पहली बार इंसान को, इंसान की जरूरत को, इंसान के अस्तित्व को, इंसान से जुड़ी हर बात को, इंसान की इस धरती पर उपयोगिता को ही पूर्ण रूप से और सदा के लिए बदल देगी। टेक्नोलॉजी अपने साथ में केवल नई संभावना ही नहीं लाती है, बल्कि यह अपने साथ नये विचार, व्यवस्था, आर्थिक मॉडल और हथियार भी लाती है। जब ये नई तकनीक, संभावनाये और हथियार जब एक–दूसरे के साथ पूर्णतया एक इकोनॉमिक मॉडल के रूप में स्थाई हो जाते हैं, तब इन इकोनामिक मॉडल के अंदर छुपे हुए चंद लोगों के स्वार्थ रूपी हथियार ही जीतते हैं और इनको इस्तेमाल करने वाला और जिनके ऊपर ये इस्तेमाल किए जाते हैं वह दोनों हार जाते हैं।

जैसा कि आधुनिक ज्ञान–विज्ञान, समाज विज्ञान, मनोविज्ञान मानता है। जब हम कभी जंगल में आदिवासियों की तरह रहते थे। हम प्रकृति के द्वारा पैदा किए गए शारीरिक रूप में सबसे कमजोर जीव में से एक है। जिनके पास चींटी, कुत्ते, पक्षी, चीते, उल्लू, हाथी जैसी एक भी कर्मेंद्रिय ओर ज्ञान इंद्रिय नहीं है। जब हमें जंगल की विपरीत परिस्थितियों का सामना करना पड़ा, तो हमने अपनी पांचों कर्म इंद्रियों को सशक्त करने के लिए अपनी ज्ञानेंद्रियों का विकास किया। जब ज्ञानेंद्रियां, कर्म इंद्रियों के साथ जुड़ी तो नई क्रिएटिविटी, तकनीक, यंत्र, तंत्र–मंत्र, सयंत्र, षडयंत्र, हथियार, संभावनाएं, औजार पैदा हुए।

यंत्र के रूप जैसे ही हमने एक पत्थर को उठाया। यह पत्थर नये यंत्र, संभावना, उपयोगिता के साथ–साथ एक नए हथियार के रूप में भी इस्तेमाल किया गया। इस पत्थर से हमने पेड़ों से फल भी तोड़ें , हमने जानवर भी भगाएं और मारे, परंतु इसके साथ–साथ हमने इससे इंसानों को भी मारा। दूसरी खोज के रूप में, हमने आग को विकसित किया, आग से पेड़ भी जले, जानवर भी जले और इंसान भी जले। जब हमने भाला, तलवार इत्यादि लोहे ओर धातु को विकसित किए, जिससें पेड़ भी कटे, जानवर भी कटे और इंसान भी कटे। फिर हमने बंदूक, तोप, टैंक, मिसाइल का विकास किया, जिससे पेड़ भी कटे, जंगल साफ हुए, जानवर भी कटे, परंतु साथ–साथ इंसानों का भी सफाया हुआ। यहाँ तक की गांव, प्रदेश, देश, महाद्वीपों से लेकर संस्कृतियों तक का सफाया हुआ। इसके बाद जब हमने मशीन, गाड़ी, ट्रैक्टर, ट्रेन और एरोप्लेन की खोज की। जिसने जंगल ही नहीं, लगभग समस्त पालतू जानवरों गाय, भैंस, घोड़ा, याक, हाथी, ऊंट इत्यादि का सफाया कर दिया। आधुनिक खेती, बीज, कीटनाशक और संयंत्रों के जोड़ ने हमारी 75: वनस्पति और जैविक प्रजातियों का समूल नाश कर दिया। मिसाइल, रॉकेट, बम, परमाणु बम के द्वारा हम पूरी धरती को 800 बार सफाया करने की क्षमता तक हम पहुँच चुके है।

आज हमारे पास कंप्यूटर, नैनो टेक्नोलॉजी, एल्गोरिथम, आर्टिफिशियल इंटेलिजेंस, आर्टिफिशियल जीन थेरेपी, वैक्सिनेशन, डिजिटल करेंसी, सूचना प्रौद्योगिकी में 5जी, 6जी, 8जी, हार्प–मौसम संशोधन प्रौद्योगिकी, लोकतंत्र, मुक्त बाजार, पूंजीवादी वित्तीय निगम, केंद्रीयकरण, नियंत्रित मीडिया और जनमानस जैसी सारी तकनीकी संभावनाएं उपयोगिताएं, इकोनॉमिक मॉडल और हथियार सब एक साथ उपलब्ध है। इन सभी के सह अस्तित्व के साथ चौथी औद्योगिक क्रांति, ट्रांस हयूमन ओर न्यू वर्ल्ड ऑर्डर का केंद्र बिंदु प्रकृति, जीव–जंतु, जानवर नहीं है। अब इन हथियारों, संभावनाओं, तकनीकों, आर्थिक मॉडलों का केंद्र बिंदु इंसान का इंसान के साथ व्यवहार, संबंध, जनसंख्या, उपयोगिता, युद्ध और इंसान की इस धरती पर अंतिम जरूरत या प्रासंगिकता के प्रश्न और परिणाम तक पहुंचता है।

इसका अंतिम परिणाम ओर उदेश्य इंसान को मशीनों, एल्गोरिदम, मॉडल्स व्यवस्थाओं द्वारा प्रतिस्थापित करना है। अब कर्मेंद्रिय और ज्ञानेंद्रिय दोनों का स्थान मशीन इंद्रिय, जिसे हम आर्टिफिशियल इंटेलिजेंस, कंप्यूटर एंड टेलीकम्युनिकेशन कहते है।

ये निर्णायक, रचनात्मक, सहयोगात्मक, नियंत्रणकारी सोच से आगे बढ़कर जीव जगत पर संपूर्ण नियंत्रण और प्रतिस्थापित तक जाती है। जिसे हम पुनर्विचार, पुनर्स्थापन, पुनर्वास, प्रतिस्थापना, पूर्ण समाप्ति और कभी ना वापसी की हद तक जाते हैं।

आज केन्द्रीयकर्त वैश्विक पूंजी व्यवस्था, सत्ता, मार्किट ओर ज्ञान विज्ञान ओर मार्किट यानि न्यू वर्ल्ड ऑर्डर के जहाज पर सवार होकर हम इस स्थिति में आ पहुंचे हैं, जहां चंद महत्वकांक्षी, महासक्षम, महास्वार्थी, महाज्ञानी, महासंगठित लोग अपने अनंत स्वार्थ, सत्ता, महत्वकांक्षा और विचारधारा की पूर्ति के लिए समस्त मानवता, समाज, देश, विश्व, मानव सभ्यता, सत्ता को अपने हाथों में ले सकते हैं या ले चुके है। इनके द्वारा ये चंद लोग 800 करोड़ लोगों यानी समस्त मानवता और प्रकृति को अपने हाथों की कठपुतली बना सकते हैं। इनकों अपने द्वारा निर्धारित टिकाऊ विकास लक्ष्यों की पूर्ति के लिए खत्म या सीमित भी कर सकते हैं। ये लोग अपनी इस महत्वाकांक्षा को इसे पूर्णता अंजाम देने की स्थिति में 98ः तक सफल भी हो चुके हैं।

नई वैश्विक व्यवस्था, न्यू वर्ल्ड ऑर्डर, चौथी औद्योगिक क्रांति ह्यूमन बीइंग 2.0 इसी का नाम है। इसी के लिए वैश्विक महामारिया, वैश्विक टीकाकरण, लॉकडाउन, डिजिटल करेंसी, मीडिया, व्यवस्थाएं, विचारधाराएं, संस्थाएं, केंद्रीकरण तकनीकें और वैश्विक सत्ताएं स्थापित की जा रही है। जिसमें वैश्विक इंसानियत, विकास, व्यवस्था के नाम पर चंद निर्णायक लोग, ज्ञान, विज्ञान, तकनीक और हथियारों के द्वारा सदा–सदा के लिए समस्त प्रकृति और मानवता को एक मशीन, मशीनीकृत केंद्रीयकृत व्यवस्था में बदलकर अपनी अनंत भोग, सत्ता, जीवन, ताकत, नियंत्रण की पागल कल्पना को अंजाम देने की स्थिति में आ गए है।

अब हम इस अंतिम प्रश्न तक आकर खड़े हो गए है कि मानव का आज तक पैदा किया गया समस्त ज्ञान, विज्ञान, तकनीक, संभावना, व्यवस्था, दर्शन, अध्यात्म, सभ्यता और संस्कृति का क्या अंजाम होगा?

क्या हम इन संभावनाओं और क्षमताओं का इस्तेमाल मानव प्रकृति सह अस्तित्व के द्वारा समस्त मानवता और आने वाली पीढ़ियों के सुख, शांति, संतोष, संतुलन, आनंद, मुक्ति लिए करेंगें? या चंद लोगों की अनंत भोग, सत्ता, महत्वाकांक्षा, स्वार्थ के लिए इन संभावनाओं को सदा–सदा के लिए समाप्त कर देंगे?

आज समस्त मानव जाति एक महापरिवर्तन के मुहाने तक आ चुकी है, जैसा युग परिवर्तन शायद महाभारत काल में हुआ था। आज समस्त मानवता इस प्रश्न पर खड़ी है कि या तो हम सभी 800 करोड़ लोग और अनंत जीव प्रकृति और मानव एक साथ सुख, शांति, संतोष, संतुलन, आनंद, मुक्ति के लिए साथ जिएंगे या हम अपनी अपनी महत्वाकांक्षा, भय, विचारधारा के युद्ध में फंस कर मानवता और धरती की समस्त संभावनाओं का सम्पूर्ण नाश कर लेंगे। क्या हम मानव निर्मित महाविनाश अर्जित, सृजित करेंगे या धरती को समस्त मानवता और प्रकृति के लिए जीवंत स्वर्ग में बदलेंगे? क्या हम इनका इस्तेमाल जिम्मेदारी के साथ सभी की उपयोगिता और आवश्यकता के लिए करे या अपने निर्मित खिलौनों का खिलौना बन कर खुद को खत्म होने दे।

अंतिम प्रश्न ये है कि अंतिम जबाबदारी या अंतिम परिणाम? सभी या चंद? सार्थक या निर्थक? प्रकृति केंद्रित या मात्र मानव केंद्रित? केंद्रीयकृत या विकेंद्रीयकृत? सुविधा या संतुलन? अब नहीं तो कब?

मैं नहीं तो कौन?

अंतिम परिणाम को पूर्ण जिम्मेदारी के द्वारा बदला जा सकता है।

- दुनिया का विचारों पर गाँव में जियो।
- जल, जंगल, जानवर, जमीन को संभालो जन संभल जाएगा
- हर जीव के लिए आहार विहार, सुरक्षा ओर संवर्धन सुनिश्चित करना।
- मेरा परिवार, मेरा मोहल्ला, मेरा गाँव, मेरा जिला, मेरा राज्य, मेरा देश, मेरी दुनिया।
- हर बुजुर्ग की सेवा, रोगी को इलाज, भूखे को अन्न दृ कोरोना का इलाज करुणा।
- न सरकार न व्यपार सबसे पहले समाज।
- उत्पादन का लक्ष्य वितरण, मुनाफे से पहले उपयोगिया, पुरकता, निरन्तरता, संतुलन।

- व्यापार मुक्त शिक्षा, स्वास्थ्य, न्याय, धर्म, पर्यावरण ओर संबंध।
- गाँव की गोद में शहर, उत्पादन के केंद्र गाँव, शहर विक्री ओर वितरण केंद्र।
- प्रकृति मानव में संतुलन ओर समाधान हेतु विज्ञान, मानव मानव में संतुलन हेतु विवेक, मानव मुक्ति हेतु दर्शन ओर ज्ञान।
- शोषण मुक्त प्रशासन, अन्याय मुक्त समाज, अभाव मुक्त परिवार, अज्ञान मुक्त व्यक्ति कहा से शुरू करे। अपने भीतर शांत ओर स्थिर हो।
- स्वयं में सभान, सचेत, सतर्क रहिए खुद को व्यक्त करिए ओर सभी के साथ जुड़े।
- अपने पैसे, कुशलता, साधन, संभावना को अपने गाँव में रखे ओर इस्तेमाल करे।
- अपने गाँव में निवेश करे, गाँव को उत्पादन ओर वितरण का केंद्र बनाये।
- गाँव के प्रशासन, स्वास्थ्य, शिक्षा, न्याय, को पारदर्शी रखने के लिए लोभ मुक्त, व्यापार मुक्ति करे।
- प्रत्येक गाँव में 2 साल का अन्न, दवा, भंडार, कोष की व्यवस्था करे।
- अपने गाँव के लिए जल, जंगल, जानवर, जमीन की नीति का निर्धारण करे। गाँव में ही गाँव के प्रयास से गाँव की समस्त संपती का रक्षण, संवर्धन, पोषण ओर संवर्धन करे।
- गॉव के हरेक व्यक्ति को रोजगार, शिक्षा, स्वास्थ्य, न्याय ओर समृद्धि के समस्त अवसर गाँव में उपलब्ध हो।
- प्रशासन को शासन मुक्त करे, चुनाव नहीं चयन करे, दस सोपानी व्यवस्था को स्थापित करे।
- सतर्कता, स्वच्छता, स्वास्थ्य, सुरक्षा, समानता, सेवा, सम्मान, समर्पण, सत्य, ओर सरलता के मूल्यों का पालन करे।
- अपने परिवार, मोहल्ले, गाँव, सोसाइटी की समस्त जिम्मेवारी खुद संभाले, गाँव से सरकार निर्धारित हो नाकी सरकार से गाँव।
- जल, जंगल, जमीन, जानवर विषमुक्त, व्यापार मुक्त, लोभ, मुक्त करने का प्रण ले।
- विषमुक्त, शोषण मुक्त, भेदभाद मुक्त, वैमनस्य मुक्त, वर्ग मुक्त, व्यस्तन मुक्त, विरोध मुक्त, बीमारी मुक्त, गाँव हरेक व्यक्ति का हक ओर जिम्मेवारी है।

राजस्थानी साहित्य अर संस्कृति में पर्यावरण चेतना

डॉ. सुरेश सालवी

प्रभारी अध्यक्ष

राजस्थानी विभाग, मोहनलाल सुखाड़िया विश्वविद्यालय, उदयपुर

ई मेलः dr.sureshsalvi@gmail.com, **मो.नं.** 9214560756

राजस्थानी साहित्य अर संस्कृति वीरता, भगती, नीति रै साथै संता री भी री है। अठा रौ साहित्य अर संस्कृति समाज नै मनखपणा री सीख देवतो रियो है। राजस्थान रौ साहित्य होवै या पछै संस्कृति या पछै अठां रा लोक देवी–देवता अर संत अठै तांई कै आमजन भी प्रकृति अर पर्यावरण रै साथै हमेस सावचेत रियौ है। पण आधुनिक जुग में मनख आपणै स्वारथ रै पाण पर्यावरण अर प्रकृति सागै खेल रियो है। राजस्थान में रुंखा, जीव–जिनावरा खातर अठै रो मनख अर समाज अर साहित्य आगै रियो है।

सिर साटे रुंख रहे, तो भी सस्तो जांण।

मध्यकालीन राजस्थान में खेजड़ली रौ विश्नोई आन्दोलन जिणमें अमृता देवी अर उणां री तीन बेटिया आसू, रतनी अर भागू रुंखा खातर आपणी काया होम दी। 363 विश्नोई मनखां रुंखा रै लिपट'र आपणी जान दी। राजस्थानी साहित्य अर संस्कृति में बावड़ी रौ घणौ महतव है। अेक बावड़ी गरमी अर अकाल रै टैम आखै गांव अर आड़ोस–पाड़ोस रै गांवां री पाणी री तिरस नै आपणै ठाड़ा अर मीठी पाणी सूं तरपत करती।आपणै अठै री लोक संस्कृति री बात करा तो दसा माता आद तीज तैवार रुंखा रै महतव नै बतावै।

आपां रै अठै मोटा–मोटा मगरां री बात करा तो अणां मगरां रै गोरमें तलाव भरिया रैवे। जिण सूं मनख समाज, जीव जिनावर, पंखेरुं आपणौ जीवण जीवै।लोक साहित्य अर संस्कृति में लोक देवी–देवता अर संता रौ घणौ महतव है। रामदेवजी रामसरोवर तलाव बणायौ तो जाम्भोजी जम्भलाव तलाव। मेला भी पर्यावरण – हरियाली अमावस रो मेला रै दन बरखा होवै तो आ लोक आस्था है कै आवा वाला समयो आछौ है।

राजस्थानी साहित्य में पर्यावरण अर रितु काव्य घणा रचिया गया। अलवर री षटरितु झमाळ शिवबक्ष पाल्हावत जिणमें छ रितुआ सांस्कृतिक तीज तैवार सागै मगरां, काकड़ री हरियाली अर जिनावरां रौ बखाण है। मेवाड़ में तो बरखा रुत खातर गांव बारणै बाटिया बणावण री रीत है। वागड़ अंचल में रुंख बचावण अर पर्यावरण री रिछा रौ अेक घणौ आछौ उदाहरण है जिणमें कै कंकू नो छांटो। गांव रा मनख रुंखा माथै कंकू रौ छांटो नाखै तो कोई उण रुंख नै नी काटै। इणी'ज भांत सूं आपणै अठै रा लोक देवी–देवता रा ओरण भी पर्यावरण चेतना रौ अेक उदाहरण है। जिणमें कै अणां लोक देवी–देवता रै ओरण सूं लीली लाकड़ी काटण री मनाही है। गोगाजी रै ओरण में तो अेक लोक आस्था जुड़ी है जिणमें कै ओरण सूं सूखी लाकड़िया तो लाई सका पण लीली काट'र नी लावण री आस्था है ओ मान्यौ जावै कै लीली लाकड़ी काटण अर घर लावा पै अै लीली लाकड़ी नाग बण जावैला अर डस लैवेला। आज समाज सूं असी लोक आस्था दूरै होवण लागी है।

आज रै बगत में जद मनखां री जनसंख्या बढ़ती जाय री है। अर मनख आपणै स्वारथ में बंधियोड़ो धरां अर प्रकृति रै नेम कायदा सागै खेल रियो है। आज धरां माता री छाती फोड़–फोड़ हरे'क घर में टयूबवेल लगावण ढूकियो है। नुवी बस्ती बसावण खातर जंगल, जल अर जमीन पै कब्जो करण लाग्यौ है। रुंखा नै बाढ़तो जा रियो है। इण अबखाई री वेला में आपणै साहित्य अर संस्कृति रा नेम भूलण लाग्यौ है। आज धरां, प्रकृति अर पर्यावरण री रिछा खातर स्वारथ नै छोडण आखै जीव जगत रै जीवण री रिछा खातर नैतिक नेम कायदा अंगैजण री दरकार है। आज ओ मनख नी चेतयो आपणी धरां, प्रकृति अर पर्यावरण खातर अेक घणौ जबरौ संकट है।

पृथ्वी को विषपान से बचाएं

डॉ. गुलाब कोठारी
प्रधान सम्पादक, राजस्थान पत्रिका
Email: dmo@epatrika.com

भारत में जन्म देने वाली और पालन–पोषण करने वाली शक्ति को 'मां' कहते है। पिता बीज का वाहक होता है। ब्रह्म और माया जगत के पिता और माता कहे जाते हैं। दोनों ही अदृश्य होते हैं। हम अदृश्य संस्था को ही प्राण अथवा आधिदैविक कहते हैं। चूंकि माता–पिता शरीर में सूक्ष्म रूप से कार्य करते हैं, अतः उनकी देव संज्ञा है। सृष्टि के विकास क्रम में अदृश्य ही पृथ्वी पर स्थूल रूप धारण करता है। पृथ्वी माता है, सूर्य पिता है। सृष्टि के सम्पूर्ण बीज वहीं से चलते हैं।

सृष्टि पितृ प्रधान इसीलिए है कि यह बीज पर आधारित है। पिता वै जायते पुत्रः। गुठली आम का बीज है। इसकी पृथ्वी की योनि में आहुति दी जाती है। गुठली के न रहने पर भी पेड़ बढ़ता रहता है। पेड़ पर आम भी उसी नस्ल के लगते हैं। कौन करता है यह कार्य–? क्या बिना गुठली के उसी नस्ल के आम लग सकते हैं? इसका अर्थ बस इतना ही है कि भले ही गुठली का शरीर अलग हो गया हो, उसके प्राण आम लगने तक पेड़ में कार्य करते हैं। इन्हीं प्राणों के लिए हम 'मातृ देवो भवः', 'पितृ देवो भव' कहते हैं। यही सिद्धान्त सूर्य–पृथ्वी पर भी लागू होता है। सृष्टि के मूल में हमारे माता–पिता हैं। माया की तरह पृथ्वी ही सूर्य को घेरकर उसके चारों ओर परिक्रमा करती रहती है। अपना भरण–पोषण भी करती है, प्रजा को उत्पन्न करके उसका भी भरण–पोषा करती है। 'मां' है ना!

सूर्य से चलकर आत्मा वर्षा के साथ–साथ पृथ्वी की योनि में आहुत होती है। वनस्पति और औषधि रूप में पैदा होती है। अग्नि–सोम रूप युगल सृष्टि का यह दूसरा पड़ाव है। जीव अन्न रूप में पृथ्वी पर चलता है। यही अन्न प्राणियों द्वारा भोग रूप में शरीर की जठराग्नि में आहुत होता है। शरीर के सप्त धातुओं का निर्माण करता है। अन्तिम धातु शुक्र बनता है। यह आगे पुनः अग्नि में आहुत होकर स्थूल शरीर में प्रकट होता है। यह प्रकृति का पांचवां पड़ाव है। माता पृथ्वी अन्न का शरीर पैदा करती है, जो प्राणी के शरीर का आधार बनता है।

पृथ्वी सृष्टि का ही एक अंग है। हम भी उसी तरह पृथ्वी का अभिन्न अंग है। पृथ्वी पर अन्न पंच महाभूतों के सहारे तैयार होता है। प्रत्येक पेड़ को जड़ से फल तक अग्नि–वायु–जल–आकाश–पृथ्वी स्वतः एक निश्चित तंत्र द्वारा नियमित प्राप्त होते हैं। हमारी देह में भी इन महाभूतों का स्थान चक्रों के स्वरूप में निहित है। हमारा मन चन्द्रमा से तथा बुद्धि सूर्य से बनती है। शरीर का मूल पृथ्वी ही है। हमारे सभी अंग–प्रत्यंग प्रकृति की इन औषधियोंध्वनस्पतियों से ही निर्मित–पोषित होते हैं। जब तक पृथ्वी का शरीर स्वस्थ है, हर प्राणी का शरीर स्वस्थ है। जीव की आकृति का मूल आधार पृथ्वी है। मां ही तो आकृति प्रदान करती है। संस्कार भी गर्भ में ही सम्प्रेषित करती है।

अन्न हमारा ब्रह्म है। ब्रह्म ही अन्न के द्वारा शरीर धारण करने के व्यवस्थित तंत्र का पूर्ण रूप से संचालन करता है। बीज का निर्माण प्रकृति और कर्मफलों के अनुरूप करता है। यदि अन्न की प्रकृति और अहंकृति बदलती है, तब स्वतः ही जीव की आकृति बदल जाएगी। विज्ञान के आज जितने भी प्रयोग अन्न पर किए जा रहे हैं–उन्नत बीज, रासायनिक खाद, कीटनाशक–प्रिजर्वेटर आदि –से सारे प्रकृति तंत्र को चुनौति देने का ही कार्य करते हैं और प्रकृति से हारकर जीवन को अधोगति की ओर धकेल रहे हैं।

गीता में कहा है

अन्नाद्भवन्ति भूतानि पर्जन्यादन्नसम्भवः
यज्ञाद्भवति पर्जन्यो यज्ञः कर्मसमुद्भवः। (3–14)

अर्थात् सम्पूर्ण प्राणी अन्न से पैदा होते हैं, अन्न वर्षा से पैदा होता है और वर्षा यज्ञ से होती है। यज्ञ कर्मों से उत्पन्न होता है।

जो जीव वर्षा के माध्यम से आता है, उसमें हमारा कारण और सूक्ष्म शरीर यात्रा करता है। अन्तरिक्ष से आता है। पृथ्वी हमारे स्थूल शरीर में जीव को प्रतिष्ठित करती हैं। शरीर निर्माण के कारक पदार्थ यदि अशुद्ध हैं, तो भवन कमजोर एवं असंतुलित होगा ही। आज अन्न का बीज शुद्ध और प्राकृतिक नहीं रहा। उसका शरीर अनेक आक्रमणों का शिकार हो रहा है। विज्ञान के अस्त्र–शस्त्र जीव को पैदा होने से पूर्व ही नष्ट करने या पंगु कर देने में युद्ध स्तर पर कार्य कर रहे हैं। तब वे किस प्रकार की स्थूल देह का निर्माण करेंगे। क्या ऐसे जीव संवेदनशील हो सकेंगे? मन तो पैदा होने से पहले ही मर जाएगा।

सारा अन्न विषैला हो चुका है। भगवान शंकर की तरह पृथ्वी भी विषपान करने लगी है। यही विष प्राणी शरीर को विषैले–रोगयुक्त शरीर का निर्माण करेगा, करने लगा है। रोग–निरोधक क्षमता खो गई। सभी प्राणी लाचार जी रहे हैं। विज्ञान सूक्ष्म की ओर नहीं मुड़ पाता। आत्मा का स्वरूप कभी नहीं पकड़ पाएगा। शरीर घर है–प्राणी आत्मा है। विज्ञान शरीर में व्यस्त है। जिस प्रकार पृथ्वी रुपी शरीर से, प्राकृतिक संसाधनों से खिलवाड़ कर रहा है। इस विकृति का आरंभ पृथ्वी से ही शुरु होकर प्राणियों के शरीरों में अभिव्यक्त होता है। अतःस्वस्थ सन्तान के लिए माता–पिता का स्वस्थ रहना पहली आवश्यकता है। पर्यावरण का प्रदूषण भाषी मानवता की चेतावनी है। सम्पूर्ण पार्थिव जगत विकृत हो जाएगा।

अन्य कोई मार्ग नहीं

आचार्य अग्निव्रत नैष्ठिक

वैदिक एवं आधुनिक भौतिकी शोध संस्थान, वेद विज्ञान मंदिर, जालोर (राज.)

ई मेल : swamiagnivrat@gmail.com, **मो.नं :** 9414182173

मनुष्य इस सृष्टि का सर्वश्रेष्ठ प्राणी है। इस धरती से इतर किसी भी लोक में जो भी बुद्धिमान विवेकी प्राणी रहते हैं, वे सभी मनुष्य कहलाने के अधिकारी हैं। इधर संपूर्ण सृष्टि अनन्त बुद्धिमत्ता व सामर्थ्य से युक्त चेतना द्वारा अनादि जड़ मूल उपादान पदार्थ से पूर्ण व्यवस्थित व सोद्देश्य की गयी रचना है। इसमें न तो कुछ यदृच्छया है, न निष्प्रयोजन और न ही अव्यवस्थित है। इस कारण मनुष्य को चाहिए कि वह इस सृष्टि की पूर्ण व्यवस्थित रचना व इसके रचे जाने के मुख्य प्रयोजन को जानने का पूर्ण मनोयोग से प्रयास करे। यह मानव इस सृष्टि को जितना–जितना जानता चला जायेगा, उतना–उतना इससे अपना व अन्य प्राणियों का भला करता हुआ अन्त में कैवल्य को प्राप्त होता जायेगा। इसके विपरीत मनुष्य इस सृष्टि के विज्ञान को समझने में जितना–जितना भ्रमित व अपूर्ण रहेगा, वह मनुष्य उतना–उतना दुःख भोगने के लिए विवश होता रहेगा। इसलिए मनुष्य को अनिवार्य रूप से चाहिए कि वह सृष्टि, सृष्टा व स्वयं के विषय में अधिकाधिक जानने व तदनुकूल संसार में व्यवहार करने का पूर्ण प्रयास करे।

आज वर्तमान विज्ञान सृष्टि के विषय में जो–जो सिद्धान्त (वस्तुतः कल्पनाएँ) प्रस्तुत कर रहा है, उन सभी में पारस्परिक अन्तर्विरोध व भ्रामक धारणाओं की बहुलता है। इस कारण संपूर्ण मानव समाज उन भ्रामक धारणाओं के आधार पर अवांछित तकनीक का निर्बाध व स्वच्छन्द उपभोग करके तथा चेतना (ईश्वर व जीवात्मा) के अस्तित्व को न मानकर स्वयं को मात्र एक यन्त्र मानकर अथवा केवल उपभोक्ता मानकर सक्वपूर्ण विश्व को स्वयं ही भीषण दुःखों के महासागर में डुबोने में भी स्वयं को गौरवान्वित अनुभव कर रहा है। जो सृष्टि ईश्वर ने सभी प्राणियों के सुख व आनन्द के निमित्त बनाई थी, उसे नष्ट करता हुआ मानो अपने घर में स्वयं ही आग लगा रहा है। जब तक मनुष्य को इस बात का विश्वास नहीं होता कि वह इस सृष्टि में एक अति क्षुद्र सा जीव है और सब जीवों के शरीर व संपूर्ण सृष्टि रचने वाली एक पृथक सर्वोच्च चेतन, सर्वज्ञ, निराकार, सर्वव्यापक व सर्वशक्तिमती महती साथ है, तब तक संपूर्ण सृष्टि का स्वयं को सम्राट् मानकर स्वच्छन्द व भयंकर व्यवहार करता ही रहेगा। वह अन्य जीवों को भी सतायेगा और प्रकृति का भी अधिक दोहन करता हुआ संपूर्ण विनाश को भी आमान्त्रित करेगा। दुर्भाग्यवश आज यही हो रहा है। संसार के कुछ एक नास्तिक व क्रूर पूंजीपति आज यही ताण्डव कर रहे हैं और यह धरती रहने योग्य रही ही नहीं हैं।

वास्तव में इस संपूर्ण समस्या का कारण है– सृष्टि विज्ञान की चर्चा में चेतन ईश्वरतत्व को नकारना, जो आस्थामात्र का विषय नहीं है, बल्कि इसके बिना कोई भी भौतिक वैज्ञानिक सृष्टि की प्रक्रिया, कम से कम मुझे तो नहीं समझा सकता। आज का भौतिक विज्ञान अनेकत्र इसीलिए ही उलझा है, अन्यथा वह सत्य पर विचार करने को उद्यत हो, तो सभी समस्याओं का समाधान हो सकता है।

सृष्टि की सर्वप्रथम क्या अवस्था होती है? कौनसा जड़ पदार्थ अनादि व अविनाशी हो सकता है, आज इन दो प्रश्नों पर चिन्तन करने की परंपरा या सामर्थ्य ही नहीं हैं। ईश्वर वा आत्मा की चर्चा आते ही वैज्ञानिक दूर क्यों भागता है, यह मेरी बुद्धि में नहीं आता। भला आत्मा व शरीर तथा सृष्टि व ईश्वर को परस्पर विरोधी कैसे मान लिया जाता है? मृत्यु का रहस्य वे वैज्ञानिक भी जानते हैं और मरने से डरते भी हैं, परन्तु जीवात्मा की सच्चाई मानने को तैयार नहीं, इसका अर्थ यह है कि वे शरीर शास्त्र को ठीक–ठीक नहीं समझते। जो सृष्टि में ईश्वर की सत्ता को नहीं मानते हैं, वे सृष्टि विज्ञान वा भौतिक विज्ञान के गंभीर तत्वों को ठीक–ठीक नहीं जानने और न जान सकते।

वास्तव में सृष्टि जिस एकरस, व्यापक व सबसे सूक्ष्म अवस्था में विद्यमान अनादि पदार्थ से उत्पन्न होती है, उसमें स्पन्दन उत्पन्न करने वाला चेतनतत्व ही होता है। चेतना के बिना किसी भी जड़ पदार्थ में किसी भी प्रकार की क्रिया कभी नहीं हो सकती। इस सृष्टि का प्रथम स्पन्दन ही 'ओम्' शब्द की सबसे सूक्ष्म अवस्था 'परा' है। इसी कारण ईश्वर का मुख्य व निज नाम 'ओम्' ही है, अन्य सभी नाम गुणों के अनुसार विशेषणरूप हैं। उस परा 'ओम्' स्पन्दन मात्र से संपूर्ण प्रकृति (पदार्थ की मूल व अनादि अवस्था) तत्काल ही महत्वता मनस्तत्यव में परिवर्तित हो जाती है। तदुपरान्त इस मनस्तत्यव में 'ओम्' स्पन्दनों के द्वारा अन्य अनेक प्रकार के असंख्य स्पन्दन उत्पन्न होने लगते हैं, वे सभी स्पन्दन वैदिक पद व वैदिक मन्त्र हैं, जिनके द्वारा ही कालान्तर में स्पेस, वर्तमान विज्ञान के मूलकण, फोटोन्स आदि की उत्पत्ति होती एवं धीरे–धीरे संपूर्ण ब्रह्माण्ड की उत्पत्ति होती है। यह सृष्टि उत्पत्ति का 'वैदिक रश्मि सिद्धान्त' है। इस सिद्धान्त को समझने से पदार्थ विज्ञान एवं अध्यात्म विज्ञान दोनों को सत्य दिशा मिलकर दोनों का पारस्परिक समन्वय होकर संपूर्ण विश्व में एकता, सुख व शान्ति की स्थापना हो सकती है। इसके अतिरिक्त अन्य कोई मार्ग नहीं है।

जैन विद्या के अनेकान्त सिद्धांत की व्यवहारिकता

डॉ.ज्योतिबाबू जैन
प्रभारी विभाग अध्यक्ष जैन विद्या एवं प्रोंत विभाग
मोहनलाल सुखाड़िया विश्वविद्यालय उदयपुर

अनेकान्त शब्द में दो शब्द हैं– अनेक और अन्त अनेक का अर्थ – एक से भिन्न, दो आदि अन्त शब्द का अर्थ होता है– 'धर्म'। इस तरह अनेक धर्म सहित होना अनेकान्त है।

अनेकान्त शब्द द्वारा महावीर के सिद्धान्त में परस्पर विरोधी भासित हो रहे दो धर्मों को एक ही वस्तु में स्वीकार किया गया है। यही अर्थ अनेकान्त से ग्रहण किया गया है। जैसे वस्तु नित्य भी है अनित्य भी है, वस्तु एक भी है अनेक भी है। इस प्रकार परस्पर विरोधी प्रतीत होने वाले अनेक धर्मयुगलों का पिण्ड वस्तु है, यह बात अनेकान्त द्वारा बतायी जाती है। अनेकान्त का अर्थ है– विरोधी अनन्त धर्मयुगल वस्तु में रहते हैं। इसी अनेकान्तवाद रूपी वृक्ष का फल स्याद्वाद है।

जैन दर्शन में इस नय का बड़ा लम्बा चौड़ा विस्तार किया गया है। जिसके अध्ययन से पता चलता है कि इसकी समन्वयकारी व्यापक दृश्टि ने किसी न किसी नय की अपेक्षा से सभी दर्शनों के सिद्धान्तों का संग्रह कर लिया है, और उसके अतिरिक्त भी अन्य अनेक विकल्पों का यथा चार्वाक – का संग्रह असदभूत व्यवहार नय में हो गया है। न्याय वैशेषिकों का नैगम तथा सद्भूत व्यवहार नय में, अनित्य तथा विशेषवादी बौद्ध का ऋजुसूत्र नय में और वैयाकरणों का शब्द नय में अंतर भाव हो जाता है।

शांतिशिक्षा एवं समरसता का स्वप्न अनेकान्त से ही साकार हो सकता है। अनेकान्त ही जगत में सन्तुलन व समरसता का सर्वोपरि मार्ग है। अनेकान्त तत्व दर्शन है। अनेकान्त जीवन दर्शन है। सर्वत्र 'ही' शब्द का प्रयोग अहंकार तथा हठाग्रह का द्योतक है वहां 'भी' शब्द का प्रयोग सरलता तथा समरसता का द्योतक है। जहां 'ही' शब्द विग्रह, द्वन्द, अशान्ति उत्पन्न करता है। वहां 'भी' शब्द शांति उत्पन्न करता है 'ही' एकान्त दृष्टि का द्योतक है तो भी अनेकान्त दृष्टि का बोधक 'ही' की जिद्द से ही तो दंगे झगड़े होते हैं फलस्वरूप जनहानि धनहानि होने से दो भिन्न–भिन्न बिन्दुओं में समरसता स्थापित करने का प्रयास करता है। मैंने कहा वह ही सत्य न होकर आपका कथन 'भी' कथंचित् सत्य हो सकता है। यह कथन हमें शाति की ओर अग्रसर करता है।

''ही से भी की ओर यदि बड़े सभी हम लोग

छः के आगे तीन हो विश्वशांति का योग'

महावीर का सिद्धान्त कहता है कि हे नित्यवादी सांख्यो तथा वेदान्तियों ।। द्रव्य दृष्टि से आप भी सत्य हो तथा है अनित्यवादी बौद्धों पर्याय दृष्टि से आप भी ठीक कहते हो।

समग्र वस्तु का परिचायक प्रतिपादक तो यही अनेकान्त स्याद्वाद है। समस्त एकान्तों का अन्तर्भाव अनेकान्त में हो जाता है, यह स्याद्वाद ही की तो कृपा है।

सत्य का प्रतिपादन करने की क्षमता अनेकान्त में ही है। यही अन्धकार से प्रकाश में लाने वाला है। भगवान महावीर के सिद्धांत से यदि अनेकान्त स्याद्वाद निकाल दिया जाये तो वह भी अन्य दर्शनों की तरह ही एकान्तवादी अतएव निष्प्राण हो जायेगा। यह अनेकान्त विश्व तत्व प्रकाशक दिव्य चक्षु है। जिससे निश्चित ही समाज में शान्ति समरसता हो सकी है।

भगवान महावीर के अनेकान्त को स्वीकार किये बिना असत्य की कोटि में परिगणित हो जाते हैं। सम्पूर्ण जगत के शब्द वाक्यों को समीचीनता की कोटि में डालने वाला अनेकान्त है।


Science &
Spirituality

GIMMEL: APPLYING THE DRAMATIC GROUNDBREAKING NEPPE-CLOSE NEW DISCOVERY OF GIMMEL—THE PRIMORDIAL THIRD COMPONENT OF REALITY.

Professor Vernon M Neppe
Pacific Neuropsychiatric Institute, Seattle; and
Exceptional Creative Achievement Organization, USA
Email: psyche@pni.org

1. **Key features**

The author, Prof. Vernon Neppe proposes a fundamental model of reality.

He recognizes that reality is a continuous volumetric ongoing quantum but experienced individually as a single finite linear unit embedded within the infinite continuity. Our existence is dynamically changing in a mathematically proven 9-dimensional quantized finite volumetric reality. An indispensable component is 'gimmel'.

2. **Discovery of gimmel:**

With respect, several leading Dimensional Biopsychophysicists worldwide have regarded Neppe and Close's 2015 'gimmel' finding as “the most important theoretical wide-ranging discovery of this century.” Gimmel reflects the previously unrecognized, fundamental unique third, reality component: Gimmel necessarily exists in conjunction with everything. [1-7]

- Gimmel is necessarily in union with every single stable particle in the universe, and in anything that exists permanently. It is neither ephemeral nor a particle.
- Therefore, it is ubiquitous in all of nature including our physical reality.
- Gimmel is the third component of reality besides mass and energy. It appears to be more than 'pure consciousness', bestows mass-energy, and influences all of reality.
- The existence of gimmel is provable mathematically. It is also empirically demonstrated at the quantal, macroworld and cosmological levels.
- Gimmel has existed long before the event horizon (e.g., pre-big bang with theological creation implications).
- Gimmel has spiritual implications, apparently unifying science with spirituality. [8-12] and all reality. [12-15]
- Without gimmel, that unification would be impossible mathematically.
- [16-20]

3. **Neppe's Fundamental Laws of Reality**

The author Vernon Neppe proposes a fundamental model of reality with several laws.Law #1: There are three fundamental components to reality: mass and energy (which are interchangeable), and gimmel.

Law #2: Gimmel is the ostensible bestower of information, it appears linked to 'consciousness', and of relevance to that mass/energy.

Law #3: Gimmel works mathematically. This is unlike the particles called gluons which are mathematically refuted [6] . Gimmel likely plays a role similar to that of the Higgs-Boson particle but it is non-ephemeral. [6]

Law #4: The laws of Nature are fundamental and unified. There is one single law, which extends from the finite through to the infinite and is unified at the quantal, macroreality and cosmological levels.

Law #5: The infinite is fundamental and extends forever. There is an infinity of infinities which extends mathematically, logically, into all of reality, forever.

4. The science:

Professor Vernon Neppe, in conjunction with his great mathematical-physicist collaborator, Edward Close PhD, discovered the concept of gimmel.

Gimmel allows the mathematical and ostensible empirical fundamentals as the finite reality is embedded within the infinite as one unitary entity

The analytical data are based on (theoretical)

- mathematical proofs,
- exact empirical LHC data quantally,
- elementally in the periodic table, and
- best estimates cosmologically plus
- … philosophical awareness.

Remarkably, this principle no longer requires separate rules for quantal, macrophysical and cosmological realities. Reality is unified.

- The quantal reality, when 'normalized' (to 1) fundamental equivalent of electrons normalized, contains exactly the same equivalence scores for the Large Hadron Collider data [21] on normalized particles—the protons (1836) and neutrons (1838)—as the quantal laws within the Neppe-Close model of TDVP (Triadic Dimensional Vortical Paradigm). [22-24]
- The macrophysical demonstrates how the 'life-elements' (H, C, O, N, S, Ca, Mg, and likely Si, plus noble elements Ne, He) contain more gimmel than all other periodic table elements and their atomic numbers (non-isotopic) are exponential multiples of 108.
- Cosmologically, the exact Planck cosmological 'dark' figures are disputes, but applying gimmel they appear to be linked to an equivalent 1,250 proportionate ratio of dark matter to nucleons and dark energy to electrons respectively. [25, 26]
- Philosophically, TDVP is a Theory of Everything (TOE) that works better than all others when analyzing broader criteria (e.g. scoring 39/39 and later extending to 50 criteria and still being 50/50.] (Yet like all other TOEs it does not yet fulfil gravitation demonstrations). [27-29]

5. Perspective summary

We can apply a mathematically proven 9-dimensional quantized finite volumetric reality to everything eliminating quantum weirdness, with cosmological and life-element dilemmas being better explained. This is no longer a speculation as it is empirically also demonstrated: 'TRUE' [30-33] (Triadic Rotational Units of Equivalence) calculations are exactly equal to the normalized LHC.

Gimmel changes the whole: Our 4D finite physical experiential reality is a part of a 9D finite (with 5+ finite dimensions hidden) [27, 34]with infinite existence.

The Neppe-Close Triadic Dimensional Distinction Vortical Paradigm (TDVP) [22]appears legitimate theoretically, and in the context of the empirical and mathematical proofs in spirituality and science.

We must fit all pieces of a profound multidimensional reality jigsaw puzzle together, not just 3S-1t: When we do the laws of nature appear unified and spirituality and science begin to merge. [11, 15, 35-37]. '3S-1t' refers to beyond our usual physical experience of 3-spatial dimensions (length-breadth-height) in a single linear moment in time (the 'present') (except, importantly, the 'dimensions' extending beyond the physical to a continuous infinite.)

TDVP is the prime example of the new broad new specialty of 'Dimensional Biopsychophysics' (DBP) [27, 34] pioneered by Neppe and Close (in 2015)] DBP extends physics, consciousness, spirituality and the biopsychosocial to extra dimensions and applies mathematics empirically. [35, 38]

Our recent profound data suggesting that there is a proven 'quantal extended consciousness'. This becomes calculable because of 'gimmel'. Without gimmel, no stable particle can exist for more than microseconds. [23, 39, 40]. Moreover the figures are very close for Dark Matter in nucleons and Dark Energy in Electrons [25, 26], plus for life elements in the periodic table [25, 26]. This might imply that the Laws of Nature are unified at Quantal, Macroworld and Cosmological levels.

These findings allow a unification of the infinite continuity which embeds the finite reality as one unit. Moreover, Neppe postulates these findings could, at times, allow science and spirituality be unified. This would imply there is free will [41-43], and even that free will can be combined with good and evil as some kind of spiritual progression [44, 45]. These fundamental postulates allow further unification of reality not only for the Earth but all of Cosmic reality and the never-ending infinite continuity.

6. Speculations:

'Nature' implies not only sustaining our planet, and applying a new beginning at a global level. [46-49]. It could imply universal personal truths as well as extending to a spiritual universal reality and the infinite [35, 38]. Effectively, this means the combination at, times, of science and spirituality, in situations where it is difficult to solve reality without both. I call that discipline 'scientific-spirituality'.

It could be argued that the infinite continuity is possibly controlled by a 'Supreme Being'. The Supreme Being would be part of those laws of Nature,[50] [35, 36] [8] plus be above those laws as the Infinite Continuity extends forever.

Gimmel and TDVP even might have relevance in discussing Meaningful Evolution. [51]

Speculatively, gimmel is primordial—likely 'vohu' as in the Bible, (Genesis 1: 1: V2). 'Vohu' biblically is commonly mis-translated as 'masslessness-formlessness'. Yet, gimmel could be the first aspect of reality along with that primordial mass. Neppe has postulated that the Hebrew biblical term 'vohu' is actually gimmel. [8, 36]

Saving Earth requires studying knowledge of fundamentals like the unified laws of nature including the universe and the infinite continuity's role. This implies sustaining of not only our planet, and 3S-1t at a global level, but of all the cosmos, and of quantized reality, and combining science and spirituality.

Gimmel and reality: The mathematical and empirical proof unifying science and spirituality: Edward R Close PhD and Vernon M Neppe MD, PhD

Conventional reality applies Newtonian-Leibnizian mathematical-physics re perhaps denying the nature of our true reality and of mathematics.

The easiest calculation system is actually the extremely fundamental 'Close- calculus-of-dimensional-distinctions. [40] CODD recognizes the quantal nature of realities as integrals. This is quite different from the universally taught Newtonian-Leibnizian infinitesimal calculus [52]that does not rely on quantification and approximates to zero.

CODD is the most fundamental logical system that exists: Mathematicians can apply it to everything quantal, and.

. At that point, much of reality is fundamental, and we can even apply science to spirituality. Legitimate data (like atoms) become integral.

Dimensional-biopsychophysicist and quantal physicist/cosmologist and philosopher/scientist Dr. Edward Close argues reality is mathematically logical and fundamental to a unified reality. [53, 54] So do Max Tegmark [55] and Vernon Neppe [56]. This allows for all the rules of reality to be applied using not infinitesimal calculus. Close's CoDD (following George Spencer Brown's 'Laws-of -Form' [6] [57]. Close's calculus recognizes the unitary components pertaining to the electron being the fundamental unit of reality. This is exceedingly important e.g., it allowed -- Neppe and Close to calculate integral unified LHC elements that are with the Large Hadron Collider data and also a 'mathematical language of logic' that is very fundamental [6]. The Close-Neppe discovery of gimmel, and Close's applications of Vortices as appreciated by Fermat's Last Theorem [58-62] has illustrated this fundamental importance.

We also recognize the key role of mathematics as fundamental in nature, not just as a convenient method for application in calculation and math operations.

Our perception of the volumetric is also fundamentally important and allows apprehension that our realities are never linear as we experience it in our physical 3S-1t reality, but have alternative ways of understanding them when applying the 9-dimensional finite reality (likely 3 time-dimensions and 3 of 'consciousness' and 3 of extended-space) embedded in an infinite continuity. [63]

We can now apply a mathematically proven 9-dimensional quantized finite volumetric reality to everything eliminating quantum weirdness, with cosmological and life-element dilemmas being better explained. This is no longer a speculation as it is empirically demonstrated: TRUE calculations are exactly equal to the normalized LHC. [64, 65] This changes the whole: 4D experience becomes part of 9D finite with infinite existence.

7. Amplification of dimensional realities and gimmel

Physicists are generally trained in the Standard Model of Physics (SMP). [66-68] They perceive and account for only 3 dimensions of space in a moment in time (3S-1t) (a 4-dimensional [4D] model). However, applying the SMP, more than fifty significant conundrums have arisen that are unexplained or incomplete. [42, 69-72] Neppe and Close propose this hypothetical X17 [73] may better be explained by their 9-dimensional model (9D) TDVP-TRUE-gimmel model. TDVP has amplified 'physics' from 4 dimensions to 9D, specifically first postulating and then further demonstrating mathematically the proof— starting with derivations of the Cabibbo angle [74-78]—that 9 dimensions must exist. Moreover, this data is empirically demonstrated because the neutron, proton and electron mass-energy-gimmel equivalence in the Triadic Rotational Units of Equivalence (TRUE) [70, 79] as part of the TDVP model, exactly corresponds with the normalized mass-energy equivalence volumetric data for these particles in the CERN Large Hadron

Collider particles. This data shows definitively that we exist in a 9-dimensional finite, quantized, volumetric, spinning reality. The 9-D finite is furthermore, embedded in an infinite continuity (9D+). Mathematically, applying this 9D+ model definitively requires 'gimmel'. Without gimmel, no particle in the universe would be stable.

TDVP unifies nature because the same laws apply across the quantum, macro-world and cosmological reality. Our 4D experience is simply the physical component of 9D+ existence.

Summary Amplification:

The consistent application of a 9-Dimensional quantized finite reality embedded within the infinite continuity specifically requires applying necessary mathematical calculations— quantal (where the fifty plus unsolved, unexplained or contradictory conundrums can be explained somewhat, and there is no longer Feynman 'quantum weirdness' [80, 81]) , at the macroscale level with more gimmel in the life elements (which, additionally, are consistently all cubic multiples of 108 cubed), and cosmologically, where the correlations with proportionate Dark Matter and Dark Energy are overwhelming. Moreover, these 9-dimensional plus factors together with Triadic Rotational Units of Equivalence (TRUE) [34, 63, 82] and gimmel, allow numerous solutions that couldn't otherwise be solved. For example, importantly, applying the simple mathematics of TRUE, we can demonstrate why gluons, while adequate in 4D [6] are impossible applying 9D. These solutions are simpler because we have markedly adapted George Spencer to applying a new method of mathematical calculation, Edward Close's 'Calculus of Distinctions' (COD) which recognizes quantal limits and that the nature of finite reality is quantized and volumetric.]

8. Close's Mathematical Calculus

The calculus of dimensional distinctions.is quite different from Newtonian Leibnizian infinitesimal calculus.] It's extremely fundamental. The calculus of distinctions is a mathematical system which is the most fundamental logical system that exists. It can be applied to everything quantal, and allow realistic integral calculations.

The problem with prior analyses of reality has been that the applications have been based on Newtonian Leibnizian infinitesimal calculus, whereas in reality, there has to be a 'bottom' [83]-- as with the Close Neppe Calculus of Dimensional Distinctions. [16, 54, 84] This allows quantal limits and unifications and integral calculations. At that point, much of reality is fundamental, and we can even apply science to spirituality.

Integrated within all of this is the idea of good and evil—and of a divine providence, but also limits of being able to perceive our own realities and to control ourselves within those finite limits.) We exist in a 9-dimensional extended reality that is finite, but that finite component is extended onto the infinite continuity. They are all unified and one.

The most fundamental model is Triadic Dimensional Vortical Paradigm—TDVP. It is fundamental because it supports the 9-dimensional model and events happening at one level do not necessarily reflect a multitude of volumetric levels.

The balance to explain the relationship link of the discrete finite and the need for being infinite continuity is through the incompleteness theorem. [85] [86]

The 3S-1t physical reality we experience is just a part of the 9-dimensional reality which might explain why there are 50+ apparent 4-D physical-world anomalies. Gimmel and the related Triadic Dimensional Vortical Paradigm data explains many of these 3S-1t contradictions by applying Gimmel with the 9D quantized finite vortical volumetric model embedded into the infinite continuity (9D+) 9D+ with gimmel

allows a unification of our fundamental laws into one law of nature.] Moreover, Gimmel may have always existed, implying 'something from something'.] Gimmel is not a virtual particle like gluons] and the Higgs Boson [87], though speculatively like them, Gimmel bestows volume for particles with mass and energy but does not contain mass or energy and indirectly therefore only delivers volume ('BVM'). Gimmel in conjunction with mass-energy implies a necessary synergy in the finite. Therefore, we need new different categorical terms (BVM) to ensure that it can be properly integrated into reality. Because of these factors, some Dimensional Biopsychophysicists regard the discovery of gimmel as the single most fundamental scientific breakthrough of this century worthy of the highest of prizes (e.g. independently, Drs Stewart [88], Klein [89], Pokharna [27, 90], Hugenot [91, 92], Hawkes (communication)[93]] : It is ubiquitous and necessary in that single reality that unifies the finite embedding the infinite. Gimmel is strongly linked with Consciousness. But it is subtly different. Whereas consciousness in this context describes a dimensional level hierarchically greater than Space and Time, gimmel includes this fundamental concept of consciousness and requires bestowing volume upon mass-energy. Gimmel is a sine qua non that we have refined and applied over many years. The discovery of gimmel allows for stability, demonstrates how fundamental mathematics is to the very existence of the universe, and allows recognition of a need for a consciousness reflecting perhaps the deepest levels of Consciousness — possibly a 'spirituality', ensuring the Laws of Nature run smoothly. Gimmel provides a way to unify all of reality and apply the same Laws of Nature quantally, in the macro-physical world, and cosmologically. It also provides a unification of science with spirituality, and of the finite with the infinite. Gimmel provides solutions to many of the unsolved riddles of physics, of biology, and of spirituality.

1. Neppe, V.M. and E.R. Close, Relative and dynamic psi, and gimmel: The non-local variants (Part 9). IQNexus Journal, 2015. 7(3): p. 74-83.
2. Neppe, V.M. and E.R. Close, The gimmel pairing: Consciousness and energy and life (Part 13D). IQNexus Journal, 2015. 7(3): p. 122-126.
3. Close, E.R. and V.M. Neppe, Introductory summary perspective on TRUE and gimmel (Part 1) in Putting consciousness into the equations of science: the third form of reality (gimmel) and the "TRUE" units (Triadic Rotational Units of Equivalence) of quantum measurement IQNexus Journal 2015. 7(4): p. 8-15.
4. Close, E.R. and V.M. Neppe, Summary and conclusion gimmel, TRUE and the structure of reality (Part 20). IQNexus Journal, 2015. 7(4): p. 112-114.
5. Neppe, V.M. and E.R. Close, Speculations about gimmel Part 5. World Institute for Scientific Exploration (WISE) Journal 2015. 4(4): p. 21-26.
6. Close, E.R. and V.M. Neppe, Speculations on the "God matrix": The third form of reality (gimmel) and the refutation of materialism and on gluons. World Institute for Scientific Exploration (WISE) Journal 2015. 4(4): p. 3-30.
7. Close, E.R. and V.M. Neppe, Putting consciousness into the equations of science: the third form of reality (gimmel) and the "TRUE" units (Triadic Rotational Units of Equivalence) of quantum measurement IQNexus Journal, 2015. 7(4): p. 7-119.
8. Neppe, V.M. and E.R. Close, Integrating spirituality into science: applying the Neppe-Close Triadic Dimensional Vortical Paradigm (TDVP). IQNexus Journal, 2018. 10(2): p. 7-108.

9. Neppe, V.M. and E.R. Close, Wondrous gimmel: Section 8. In Integrating spirituality into science: applying the Neppe-Close Triadic Dimensional Vortical Paradigm (TDVP). IQNexus Journal, 2018. 10(2): p. 42-47
10. Neppe, V.M. and E.R. Close, Organizing principles in TDVP translated into spirituality: Section 11. In Integrating spirituality into science: applying the Neppe-Close Triadic Dimensional Vortical Paradigm (TDVP). IQNexus Journal, 2018. 10(2): p. 61-66.
11. Neppe, V.M. and E.R. Close, Higher consciousness outside the brain: Science and spirituality through the prism of 9-dimensional physics, gimmel and the infinite. IQ Nexus Journal, 2019. 11(4): p. 5-43.
12. Neppe, V.M. and E.R. Close, Formulating the prongs of the higher consciousness concept. Section 1. In Higher consciousness outside the brain: Science and spirituality through the prism of 9-dimensional physics, gimmel and the infinite. IQ Nexus Journal, 2019. 11(4): p. 6-18.
13. Neppe, V.M., Key Triadic Dimensional Vortical Paradigm (TDVP) and Lower Dimensional Feasibility, Absent Falsification (LFAF) concepts linked with meaningful evolution: Part 4. In Meaningful Evolution, abiogenesis and life solved through gimmel: Translating from the infinite continuity to the discrete finite by applying the Neppe-Close Triadic Dimensional Vortical Paradigm (TDVP). IQNexus Journal, 2019. 11(2): p. 26-38.
14. Neppe, V.M., Perspective: why 'meaningful evolution' is a formidable model of evolution: Part 8. In Meaningful Evolution, abiogenesis and life solved through gimmel: Translating from the infinite continuity to the discrete finite by applying the Neppe-Close Triadic Dimensional Vortical Paradigm (TDVP). IQNexus Journal, 2019. 11(2): p. 62-76.
15. Neppe, V.M. and E.R. Close, The Elusive Mystery Solved: The Gimmel of Consciousness: Section 2. In Higher consciousness outside the brain: Science and spirituality through the prism of 9-dimensional physics, gimmel and the infinite. IQ Nexus Journal, 2019. 11(4): p. 19-43.
16. Close, E.R. and V.M. Neppe, Empirically Verifiable New Approaches To Mass, Quanta, Gimmel, TRUE Units And Calculus: Section 7. In: Derivation and application of TRUE quantum calculus for the analysis of quantized reality. IQNJ, 2021. 13(1 (Part 2)): p. 84-88.
17. Neppe, V.M. and E.R. Close, The Nine Close-Neppe / Neppe-Close/ Discoveries That Have Greatly Changed The Current Conception Of Reality: Section 23. In: Understanding Reality: Towards a unified theory of existence via applied Dimensional Biopsychophysics: Exploring the Triadic Dimensional Vortical Paradigm (TDVP) through demonstrating its fundamental principles, the 4D-9D perspective, the mathematics of a quantum calculus and the empiricism of gimmel. IQNJ, 2021. 13(1. Part 3): p. 133-135.
18. Neppe, V.M. and E.R. Close, Wondrous Gimmel: Section 25. In: Understanding Reality: Towards a unified theory of existence via applied Dimensional Biopsychophysics: Exploring the Triadic Dimensional Vortical Paradigm (TDVP) through demonstrating its fundamental principles, the 4D-9D perspective, the mathematics of a quantum calculus and the empiricism of gimmel. IQNJ, 2021. 13(1. Part 3): p. 139-144.
19. Neppe, V.M. and E.R. Close, Understanding Reality: Towards a unified theory of existence via applied Dimensional Biopsychophysics: Exploring the Triadic Dimensional Vortical Paradigm

(TDVP) through demonstrating its fundamental principles, the 4D-9D perspective, the mathematics of a quantum calculus and the empiricism of gimmel. IQNJ, 2021. 13(1): p. 54-160.

20. Neppe, V.M. and E.R. Close, Prologue to Understanding Reality: Towards a unified theory of existence via applied Dimensional Biopsychophysics: Exploring the Triadic Dimensional Vortical Paradigm (TDVP) through demonstrating its fundamental principles, the 4D-9D perspective, the mathematics of a quantum calculus and the empiricism of gimmel. IQNJ, 2021. 13(1): p. 54-59.
21. Close, E.R. and V.M. Neppe, The problem of determining the mass of the neutron: Section 14: In: Derivation and application of TRUE quantum calculus for the analysis of quantized reality. IQNJ, 2021. 3(Part 2. 1): p. 106-107.
22. Neppe, V.M. and E.R. Close, Applying consciousness, infinity and dimensionality creating a paradigm shift: introducing the triadic dimensional distinction vortical paradigm (TDVP). Neuroquantology, 2011. 9(3): p. 375-392.
23. Close, E.R. and V.M. Neppe The Triadic Dimensional Vortical Paradigm (TDVP) is valid and appropriate: The roles of neutrons and protons, particle emergence including decay and vortical spin - A response. Telicom, 2018. 30(3): p. 95-105.
24. Neppe , V.M. The dyadic, creative Interface with Vernon Neppe (YouTube) On TDVP and the Neppe-Close relationship. New Thinking Allowed 2018; Available from: https://www.youtube.com/watch?v=AtMQdS8_Vck&t=2123s.
25. Neppe, V.M. and E.R. Close, The fourteenth conundrum: Applying the proportions of Gimmel to Triadic Rotational Units of Equivalence compared to the proportions of dark matter plus dark energy: Speculations in cosmology. IQNexus Journal, 2015. 7(2): p. 72-73.
26. Neppe, V.M. and E.R. Close, A data analysis preliminarily validates the new hypothesis that the atom 'contains' dark matter and dark energy: Dark matter correlates with gimmel in the atomic nucleus and dark energy with gimmel in electrons. IQ Nexus Journal, 2016. 8(3): p. 80-96.
27. Pokharna, S.S. and M.L. Kalra, Extension of four dimensional Science to a nine dimensional science can provide a new comprehensive Theory of Everything (TOE) (poster), in 33rd Gujarat Science Congress Program and Abstracts. 2019, February 2-3: L J Institute of Applied Sciences, Ahmedabad, India. p. 66.
28. Neppe, V.M. and E.R. Close, A proposed Theory of Everything that works: How the Neppe-Close Triadic Dimensional Distinction Vortical Paradigm (TDVP) model provides a metaparadigm by applying nine-dimensional finite spin space, time and consciousness substrates and the transfinite embedded in the infinite producing a unified reality. IQNexus Journal, 2014. 16(3): p. 1-54.
29. Neppe, V.M. and E.R. Close, The value of the triadic dimensional distinction vortical paradigm (TDVP) as a Theory of Everything (TOE). Dynamic International Journal of Exceptional Creative Achievement 2012. 1212(1212): p. 2548-2558.
30. Close, E.R. and V.M. Neppe, Defining The Basic Units Of Quantum Mathematics For A Quantum Calculus: Section 10. In: Derivation and application of TRUE quantum calculus for the analysis of quantized reality. IQNJ, 2021. 13(1 (Part 2)): p. 92-97.
31. Close, E.R. and V.M. Neppe, Applying hydrogen-1 and deuterium: The origin of mass: Section 12: In: Derivation and application of TRUE quantum calculus for the analysis of quantized reality.

IQNJ, 2021. 13(1 Part 2): p. 100-101.

32. Close, E.R. and V.M. Neppe, Defining the basic units of quantum mathematics for a quantum calculus: Section 3: In: Derivation and application of TRUE quantum calculus for the analysis of quantized reality. 2018, In submission.
33. Close, E.R. and V.M. Neppe, Understanding TRUE units and gimmel as part of TDVP: chapter 7 IQ Nexus Journal, 2016. 8(4 — V6.122): p. 97-106.
34. Neppe, V.M., S.S. Pokharna, and E.R. Close, Key summation to the Besant-Leadbeater-Neppe-Close TDVP correlation: Chapter 9. In: The remarkable Besant-Leadbeater studies in Quantal Clairvoyance (quantal remote viewing) correlate profoundly with the Triadic Rotational Units of Equivalence quantal models in Triadic Dimensional Vortical Paradigm. IQ Nexus Journal 2019. 11, V10.33(3): p. 57-58
35. Neppe , V.M. Kabbalah, science, and spirituality with Vernon Neppe (YouTube). New Thinking Allowed 2018; Available from: https://www.youtube.com/watch?v=AtMQdS8_Vck&t=2123s.
36. Neppe , V.M., How spirituality and consciousness and science are allied through the Neppe-Close Triadic Dimensional Vortical Paradigm (TDVP). IQNexus Journal, 2018. 10(4): p. 7-30.
37. Neppe, V.M. and E.R. Close, The nine Neppe and Close discoveries that have completely changed the current conception of reality: Section 4. In Integrating spirituality into science: applying the Neppe-Close Triadic Dimensional Vortical Paradigm (TDVP). IQNexus Journal, 2018. 10(2): p. 23-25.
38. Neppe, V.M. and E.R. Close, Unifying science and spirituality: Kabbalah And Jainism: Section 10. In Integrating spirituality into science: applying the Neppe-Close Triadic Dimensional Vortical Paradigm (TDVP). IQNexus Journal, 2018. 10(2): p. 52-60.
39. Close, E.R. and V.M. Neppe, The Proton: Section 13. In: Derivation and application of TRUE quantum calculus for the analysis of quantized reality. IQNJ, 2021. 13(1 (Part 2)): p. 101-106.
40. Close, E.R. and V.M. Neppe, Verifying the CoDD Mass of the Hydrogen Atom with Empirical Data: Section 16. In: Derivation and application of TRUE quantum calculus for the analysis of quantized reality. IQNJ, 2021. 13(1 (Part 2)): p. 112-116.
41. Close, E.R. and V.M. Neppe, The twelfth conundrum: The thought experiment replication of 9 dimensional spin. IQNexus Journal, 2015. 7(2): p. 57-59.
42. Neppe, V.M. and E.R. Close, A Perspective overview of the seventeen conundrums: Abstract IQNexus Journal, 2015. 7(2): p. 8-10.
43. Neppe, V.M. and E.R. Close, On Non-locality III: Dimensional Biopsychophysics. Journal of Consciousness Exploration and Research, 2015. 6(2): p. 103-111.
44. Neppe , V.M., Conceptualizing good and evil in psychiatry and social groups. IQNexus Journal, 2017. 9(3): p. 7-37.
45. Neppe, V.M. and E.R. Close, Free-will: Limited freedom of will and good and evil: Section 12. In Integrating spirituality into science: applying the Neppe-Close Triadic Dimensional Vortical Paradigm (TDVP). IQNexus Journal, 2018. 10(2): p. 67-73

46. Neppe, V.M. and E.R. Close, TDVP in the context of the Psychological Sciences: Part 1. IQNexus Journal, 2014. 15(2): p. 9-16.

47. Close, E.R. and V.M. Neppe, A new paradigm describing the nature of reality and what it implies for the future of science: Preface (Part 2). IQNexus Journal, 2015. 7(4): p. 16-18.

48. Neppe, V.M. and E.R. Close, The fifteenth conundrum: Applying the philosophical model of Unified Monism: Returning to general principles. IQNexus Journal, 2015. 7(2): p. 74-78.

49. Neppe, V.M. and E.R. Close, Fifty discoveries that are changing the world: Why the Triadic Dimensional Distinction Vortical Paradigm (TDVP) makes a difference. IQ Nexus Journal, 2017. 9(2): p. 7-39.

50. Neppe, V.M. and E.R. Close, Perspective: dimensional biopsychophysics: approaching dimensions, infinity, meaning, and understanding spirituality and the laws of nature: Section 13. In Integrating spirituality into science: applying the Neppe-Close Triadic Dimensional Vortical Paradigm (TDVP). IQNexus Journal, 2018. 10(2): p. 71-77.

51. Neppe, V.M., Synopsis: Meaningful Evolution (ME), Darwinian Evolution (DE), Intelligent Design (ID): Part 1. In Meaningful Evolution, abiogenesis and life solved through gimmel: Translating from the infinite continuity to the discrete finite by applying the Neppe-Close Triadic Dimensional Vortical Paradigm (TDVP). IQNexus Journal, 2019. 11(2): p. 8-15.

52. Close, E.R. and V.M. Neppe, Further implications: quantized reality and applying Close's Calculus of Distinctions versus the Calculus of Newton(Part 19). IQNexus Journal, 2015. 7(4): p. 110-111.

53. Close, E.R., The calculus of dimensional distinctions, in Elements of mathematical theory of intellect (monograph), V. Brandin, Editor. 2003, Moscow Interphysica Lab: Moscow. p. 13-20.

54. Close, E.R. and V.M. Neppe, The Calculus of Distinctions: A workable mathematicologic model across dimensions and consciousness. Dynamic International Journal of Exceptional Creative Achievement 2012. 1210(1210): p. 2387 -2397.

55. Tegmark, M., Our mathematical universe: My quest for the ultimate nature of reality. 2014, New York: Knopf. 30-41.

56. Neppe, V.M., TDVP, physics and mathematics – historical aspects: Section 2 In: The intellectual giants who preceded the Triadic Dimensional Distinction Vortical Paradigm (TDVP). IQNJ, 2020. 12(1): p. 26-45.

57. Brown, G.S., Laws of form. 1969, London: Allen and Unwin.

58. Close, E.R., Appendix B: 1965 Proof of Fermat's Last Theorem, in The Book of Atma. 1977, Libra Publishers: New York. p. 93-99.

59. Aczel, A., Fermat's last theorem: unlocking the secret of an ancient mathematical problem. 1996, New York: Four Walls Eight WIndows.

60. Close, E.R., Fermat's Last Theorem. Close's proof in the 1970s. Dynamic International Journal of Exceptional Creative Achievement In press. ( ).

61. Close, E.R., Clarification and explanation of FLT65: A 1965 proof of Fermat's Last Theorem. Dynamic International Journal of Exceptional Creative Achievement, In press.

62. Close, E.R. and V.M. Neppe, Fermat's Last Theorem and the demonstration of vortical movements. Dynamic International Journal of Exceptional Creative Achievement In press.

63. Neppe, V.M., S.S. Pokharna, and E.R. Close, The actual Besant et al evaluations (the 3S-1t data): Chapter 4. In: The remarkable Besant-Leadbeater studies in Quantal Clairvoyance (quantal remote viewing) correlate profoundly with the Triadic Rotational Units of Equivalence quantal models in Triadic Dimensional Vortical Paradigm. IQ Nexus Journal 2019. 11, V10.33(3): p. 24-30.

64. Close, E.R. and V.M. Neppe, Conservation of angular momentum and electron spin: Section 4: In: Derivation and application of TRUE quantum calculus for the analysis of quantized reality. 2010, In submission.

65. Close, E.R. and V.M. Neppe, More questions answered on the elements, TRUE and gimmel (Part 17). IQNexus Journal, 2015. 7(4): p. 82-102.

66. Neppe , V.M. and E.R. with Close, ,, The need to refute: Why the Triadic Dimensional Vortical Paradigm (TDVP) entails far more than the Standard Model of Physics: 4D experience is far less than our 9D+ existence. IQNexus Journal, 2018. 4(1 V9.0i): p. 47-78.

67. Close, E.R. and V.M. Neppe, Translating fifteen mysteries of the universe by applying a nine dimensional spinning model of finite reality: A perspective, the standard model and TDVP. Part 1. Neuroquantology, 2015. 13(2): p. 205-217.

68. Neppe, V.M. and E.R. Close, Limitations of the standard model of physics. Dynamic International Journal of Exceptional Creative Achievement 2012. 1201(1201): p. 2001-2010.

69. Neppe , V.M. Questions and comments: Unexplained conundrums and paradoxes solved through TDVP. 2018 [cited Email to Surendra Pokharna 18 July 2018].

70. Neppe, V.M. and E.R. Close, Translating some conundrums of the universe by applying a 9 dimensional spinning model of finite reality: References. IQNexus Journal, 2015. 7(2): p. 84-88.

71. Neppe, V.M. and E.R. Close, General challenges involving the Neppe and Close research: Why we should approach the many conundrums of reality. IQNexus Journal, 2015. 7(2): p. 11-14.

72. Neppe, V.M. and E.R. Close, How some conundrums of reality can be solved by applying a finite 9-D spinning model. IQNexus Journal, 2015. 7(2): p. 7-88.

73. Neppe, V.M., The scientists who taught principles on which TDVP can be applied: Section 1. In: The intellectual giants who preceded the Triadic Dimensional Distinction Vortical Paradigm (TDVP). IQNJ, 2020. 12(1): p. 7-25.

74. Neppe, V.M. and E.R. Close, The Cabibbo mixing angle (CMA) derivation: Is our mathematical derivation of the Cabibbo spin mixing angle (CSMA) equivalent? IQNexus Journal, 2015. 7(4): p. 120-128.

75. Neppe, V.M. and E.R. Close, Interpreting science through feasibility and replicability: Extending the scientific method by applying "Lower Dimensional Feasibility, Absent Falsification" (LFAF). World Institute for Scientific Exploration (WISE) Journal 2015. 4(3): p. 3-37.

76. Close, E.R. and V.M. Neppe, The seventh conundrum: the mathematical derivation of the Cabibbo mixing angle in fermions. IQNexus Journal, 2015. 7(2): p. 41-43.

77. Close, E.R. and V.M. Neppe, The sixth conundrum: theoretical knowledge on deriving the Cabibbo angle. IQNexus Journal, 2015. 7(2): p. 39-40.
78. Close, E.R. and V.M. Neppe, The Cabibbo mixing angle and other particle physics paradoxes solved by applying the TDVP multidimensional spin model. IQNexus Journal, 2014 14(1): p. 13-50.
79. Close, E.R. and V.M. Neppe, Why TRUE units have to be correct: the mass in the proton: re-affirming the truth of Triadic Rotational Units of Equivalence. Chapter 6 IQ Nexus Journal, 2016. 8(4 —V6.122): p. 70-96.
80. Feynman, R.P., ed. The Feynman lectures on physics. Vol. 3. 1965, Addison-Wesley: USA.
81. Feynman, R.P., Electrons and their interactions. QED: The strange theory of light and matter. 1985, Princeton, New Jersey: Princeton University Press.
82. Close, E.R. and V.M. Neppe, Fifteen mysteries of 9 dimensions: on Triadic Rotational Units of Equivalence and new directions, Part III. Neuroquantology, 2015. 13(4): p. 439-447.
83. Newton, I. Letter to Richard Bentley. 2014 (from 1692) [cited 2014 2014]; Available from: http://scienceau.com/.
84. Close, E.R. and V.M. Neppe, The Proof is in the Pudding: Section 18. In: Derivation and application of TRUE quantum calculus for the analysis of quantized reality. IQNJ, 2021. 13(1. Part 2): p. 124-125.
85. Smullyan, R., Gödel's incompleteness theorems. 1991, Oxford: Oxford University Press.
86. Neppe, V.M. and E.R. Close, Reality begins with consciousness: a paradigm shift that works (5th Edition). Fifth ed. 2014, Seattle: Brainvoyage.com.
87. Heilprin, J., Higgs Boson Discovery Confirmed After Physicists Review Large Hadron Collider Data at CERN, in The Huffington Post. 2013: USA.
88. Stewart, D., Letter of reference for awards to Edward Close and Vernon Neppe. 2018.
89. Klein, A., Comments on the TDVP model final chapters, in Personal communication to VMNeppe. 2011: Seattle and Israel.
90. Neppe, V.M., S.S. Pokharna, and E.R. Close, The remarkable Besant-Leadbeater studies in Quantal Clairvoyance (quantal remote viewing) correlate profoundly with the Triadic Rotational Units of Equivalence quantal models in Triadic Dimensional Vortical Paradigm. IQ Nexus Journal 2019. 11, V10.33(3): p. 5-72.
91. Hugenot, A., Letter on Triadic Dimensional Vortical Paradigm. 2022.
92. Hugenot, A.R., The Death Experience: What It Is Like When You Die. 2012, Seattle: Amazon Kindle.
93. Hawkes, J.W., Cell-Level Healing: The Bridge from Soul to Cell. 2011, New York: Harper Collins.

CO-OPERATION WITH NATURE

Prof.R.M.Pandya
D(Retd) Sr.Scientist, Engineer, ISRO, Ahmedabad
Email: rameshpandyashastri@yahoo.com

Keeping at the centre.a burning issue of ENVIRONMENT & POLLUTION,it is shown how human should have harmony /co-opration with the Nature that is Prakriti.

Spirituality says : The Prakriti consist of 5 fundamental elements called Panch mahabhuts i.e water, fire,air,sky and the earth AS they are born from the divine limbs of the God ,they should be dedicatedly respected and worshipped ,using 5 vedic suktas , one for each element . So the Prakriti was automatically preserved . Polluting them was considered a sin.

Morden science says : Environment consists of 3 spheres namely hydrosphere , lithosphere and atmosphere. In present age, they have been exploited with overconsumption of natural resources.This has resulted into depletion of natural resources,damage to the environment and a great threat of CLIMATE CHANGE. How the pollution has occurred and remedy to save further harm using modern technology with spiritual guidance are discussed.

IMPORTANCE OF SPIRITUALITY TO SAVE THE EARTH AND SUSTAINABLE DEVELOPMENT IN LIFE

Dr Lokeshwari Rathore
Assistant Professor, Department Of Psychology, Bhupal Nobles University, Udaipur
Email: lokeshwarirathore94dlr@gmail.com

"The earth, in a very actual sense, is our mother. We have taken birth from this mother, from Gaia; we are as a supplements of the universe earth and the cosmos of which it is a main part. Our conceptualizing and our spirituality also expands from the psychological dimensions of the universe and the planet. Mother Nature cannot be trifled with and we will have to compensate a heavy consequences for this devastation of land, air and sea."

The current article is an attempt to analyze the spiritual relationship between the essence and the environment. Eco-spirituality is that which links together the diverse faith of religion which includes: Hinduism; and Buddhism and the individual concern for the Earth. The spiritual nature is represented as the factor that must be carried into summing up, in attaining magnificent success in life. It is not only for humankind, but it's also for communities. It is the environment through which the spiritual being of humankind, interacts with other spiritual beings, such as the Supreme Being. Retrieving the spiritual environment appropriately, which involves distribution of significant principles and activities which are narrated as religious activities. Thus, "Eco-spirituality is all about serving people and understanding 'the holy' in this natural world and to recognize their relationship as human beings to all creation. Through this we conclude that we shall get back to environment and rediscover our harmony with all of the creation. Our early forefather forged a strong link with the Universe. Each and every religions invite us once again to acclaim and care for the planet we live in and create a purposeful effort to interchange the manner we live in and acquire a simpler lifestyle as a means of sustaining our earth. This is how spirituality save our planet earth.

TRIALS, TRAVAILS AND TRIBULATIONS OF MOTHER EARTH OVER ITS GEOLOGIC HISTORY AND JAIN PHILOSOPHY AND LIFE STYLE TO RESCUE US FROM AN IMMINENT DISASTER

Narendra Bhandari
Science and Spirituality Research Institute, Jain Academy of scholars, Ahmedabad
Jain Deemed university, Bangalore
Email: nnbhandari@yahoo.com

Ever since its formation about 4.5 billion years ago, from a hot, rotating, disk shaped solar nebula, which broke off from a warm, dense molecular cloud, the Earth has gone through several severe events full of travails and tribulations over its geologic history. It had phases of extreme heat due to an early active Sun, an extremely cold Snow-earth phase, punctuated by many epochs of glaciation, extremely reducing atmosphere of methane, carbon dioxide, ammonia and nitrogen etc, punctuated by abrupt heat due to volcanic eruptions, asteroid and comet impacts etc. As far as physical and chemical conditions are concerned, we can say that the Earth has seen it all, and nothing has distracted it from its goal of being the only planet (so far known) habitating life. In spite of such extreme fluctuations, the life (jiva) found this planet habitable and evolved progressively, in complexity, functionality, brain power etc over the past 3.5 billion years. The journey of life on the earth has not been smooth and eventless. At least 5 major revolutions and 5 mass extinction events have been recorded in the fossil sequences, preserved in the sediments. In this article we will review the eventful geological and biological history of the earth to get the correct perspective of the way nature works with a purpose, and produces conducive conditions in the right measure as and when required. Without this 'One-ness' of all living, and non-living entities, coherence, synchronicity, spontaneity, anticipation and self correcting ability, we would not be here.

Now we are debating ways and means to save the earth. This is only human ego talking and saving earth is only a pretext to save ourselves. Actually we cannot and need not save the earth; it is we who need the earth to survive and not the earth requires us to preserve it. And do we, the most insignificant constituent of the universe, even have power to do it? Evidence will be given to show that after every extinction, which wiped out almost all life from this planet, new and more powerful forms of life evolved and this is nature's preferred way of evolving new species. It however does not mean that we should be careless and unconcerned and spoil everything around us, be it atmosphere, geosphere or biosphere. We should let nature follow it chosen path and live without interfering with it. As Eddington famously said, “when an electron vibrates, the whole universe shakes”. Jain philosophy has discussed all these aspects and emphasises on a non-interfering life style, of course taking resort to 'Punya' and 'Paap' model. Living without a leaving a trace is punya and interfering with natural pathways is sin. We will show how Jain philosophy and life style are capable of resolving the current problems humanity is facing, including the possibility of an imminent major extinction.

VEDIC CONCEPT OF ENVIRONMENT VIS-À-VIS MODERN SCIENCE

M. L. Kalra
Ex Vice Chancellor, Kota University, Kota
D. S. Kothari Institute of Research and Education
Email: kalraml@yahoo.com

In recent days environmental science and ecology are disciplines of modern science under which study of environment and its constituents is done with minute details. As science, they are established in 20th century, but their origin can be seen long back in the Vedic and ancient sanskrit literature in India. In modern Sanskrit the word "Paryavaran" is used for environment, meaning which encircles us, which is all around in our surroundings. According to one indigenous theory established in the Upanishads, the universe consists of five basic elements called Panch Mahabhutas, these are 1. Prithvi or Earth 2. Jala or Water, 3. Agni or Fire and Light, 4. Vayu or Air, and 5. Aakash or Space or ether. Everything comes from varying combination of these five elements and everything ultimately returns to them. These together, therefore, create nature or environment. Purity and sustainability of these five basic elements, therefore ensures the healthy environment for us to live happily on this planet.

Modern science has given the Cartesian world view or what we call western world view which may also be called Newtonian world view according to which this universe is a large machine obeying certain fixed laws, which we know with the help of development of science. Hence we can control the nature and exploit it for our so called development. This world view is based upon reductionist theory according to which everything can be described or resolved in terms of its parts and parts have no relation with each other expect that these when combined (joined) constitutes the thing we are analyzing. The Vedic or Indian world view on the other hand is an integrated world view according to which everything relates to every other thing in the universe. Hence disturbance in one of its parts affects the another irrespective of its location in space and time. This holistic or totalistic view is supported by discoveries in modern science particularly in quantum physics. In late 20th century regarding the wave particle duality behavior shown by elementary particles, principle of non locality, EPR and Aspect experiments, Bohm theory of implicate order and holographic universe, Bell's Theorem etc. Most of the proponents of these theories were influenced by the Vedantic Darshan of Hindu Philosophy.

India's written history goes back to over 5000 years. Archaeological records take this culture further in the past. Its philosophy, thoughts, values, and ethics have always had reverence for all that exist in nature, so much so that it evolved the concept of "Vasudhaiva Kutumbakam" i. e. all that is alive, from plants to human species, belongs to a single family. They have originated from a common source and are interdependent.

In this paper we shall discuss various elements of Vedic concept of environment including Yajna, Yoga, Ayurveda, etc. vis-à-vis theories of modern science and show that if followed in true spirit, the Vedic or Indian concept of environment will solve the burning problems faced by modern humanity like global warming, destruction of ozone layer, extinction of certain species, etc. and will help to sustain Mother Earth.

INTERCONNECTEDNESS, GENERAL SYSTEMS THEORY, QUANTUM ENTANGLEMENT, AND PARASPARGRAHO JIVANAM

Dr. Surendra Singh Pokharna
(Former Scientist, Indian Space Research Organization)
Dr. Daulat Singh Kothari Institute for research and Education, Udaipur
Science and Spirituality Research Institute, Ahmedabad.
Email: sspokharna15@yahoo.com,

If we look at the state of our planet today then we find that more than half of the animals in the world have disappeared since 1970. Every year, we are losing almost 25000 biological species in general and around 150 billion living beings in particular. Almost the entire decline is due to human activity, through habitat loss, deforestation, climate change, over-fishing and hunting. These changes are also attributed to a result of scientific developments, technical advancements and their economic exploitation and resulting consequences on the environment. As per some scientists, we are now moving towards sixth extinction.

On the other side if we look at other side of the coin then we find that the above changes which are mostly due to progress of science which has given us satellites, computers, cars, trains and several medical facilities and others. However, unfortunately science has not been able to produce an ant or even a blade of grass. Probably it is because of this realization that Jain monks take extra ordinary care as not to kill or even harm a smallest insect around them. It is in this scenerio that we have to examine the methodology of science itself to understand reality.

This paper therefore summarizes a need to recognize that interconnectedness is a very important attribute of nature and its various parts. Hence one finds that scientific methods developed to study physical systems are not adequate to study living systems (John Gigch, 1978, Bertalanffy, 1976), because all living systems are essentially irreversible in nature, that is they grow and decay and they are also open systems compared to the physical systems which are closed systems. So the biological and social systems can not be strictly subjected to the process of measurement and hence they are not exactly describable in the strict terminology of the physical, sciences. Also any type of experimentation is not possible in case of human systems (Goldsmith 1990, Jones 1990, Penrose 1990, Deepak Chopra and Menas Kafatos, and Rupert Sheldrake), as they have memory, free will, creativity, tendency to interact strongly with other fellow beings and the environment. Furthermore there are micro controls in the form of thought processes which cannot be easily adjusted in any planned "scientific experiment". They also have a property of infinite amplification because of the thought processes, which makes it difficult to study them in a scientific terminology of space-time invariance condition, which is a must for any study to be treated as strictly scientific. Expressed in a different way, it is now felt that the standard concepts used in any scientific study like compartmentalization, reductionism, causality, mechanism, induction, empiricism and passivism etc. (Goldsmith, 1990, Jones 1990) cannot be used to strictly study the biological systems and social systems. Not only this, the basic parameters used in science like energy, mass, linear momentum and angular momentum are basically defined for closed isolated systems. The limitations on scientific studies also come due to Godel's incompleteness theorems which put another type of restrictions on “scientific studies”. Hence it is necessary to explore General Systems Theory (GST) for better understanding of living systems in general and human systems in particular.

It is also shown that the concept of objective methodology of the modern science provides only a limited view of reality since an observer is treated as separate from the object to be studied and there is no methodology to understand the observer himself or herself. On other hand Jainism argues that actual knowledge is structured in the aatma through which one can have knowledge of the external world as well as the internal world.

As per Jainism, aatma has in infinite powers (shakties) but there are forty-seven major powers (shakties) which are described in Pravchan Navneet written on the basis of sermons given by great sant Kanji Swamy. These sermons are actually based on the original work of great Aacharya Kundakunda Swamy about 2000 years ago in prakrat language, written in most respected scripture known as "Samaysar" and its Sanskrit commentary by Aacharya Amrut Chandji (around 905-955 AD). It indicates that although aatma and matter are different from each other, but both have oscillations through utpad (origination), vyaya (disappearance) and dhruva (conservation) attributes. They describe waves like structure of these shakties. One wavelength of utpad and vyaya is known as a paryaya. Infinite waves are discussed through akrambadhh (not in sequence) paryayas, but each has kramabadha (in sequence) paryays. An in infinitely small part of aatma is practically known as aatma pradesha (discrete unit), which can store huge amount of knowledge. Their definition of interconnectivity in two different ways at three different levels indicates some similarity with quantum entanglement. Five types of in infinities are defined in practical context, which are very interesting and may provide new avenues of thought. An extensive analysis of these shakties indicate interesting similarities with the concept of quantum hologram. The similarity of Jainism with nilpotent quantum mechanics (NQM) is so remarkable that both formalisms use the same term "Mirror" in similar context and with almost similar meaning. The concept of NQM is based on universal rewriting system. Here a fermion and its corresponding vacuum state are described by two vector spaces such that one is dual of the other. The information present in both the vector spaces are exactly same but in different form. One is physical whereas other is nonphysical and hence not observable. The information is of two types viz. local and non-local. Hence this similarity will have huge implications in all walks of life.

Ultimately it appears that the characteristics of a pure soul as described in Jainism may be quite closed to the concept of realization of interconnectedness in nature and hence this idea supports the concept of paraspargrahoJivanam of Jainism. Finally it is proposed that the process of enlightenment as described in Jainism to achieve the highest state of aatma is accompanied by decrease in rate of entropy production at every level. This concept will have huge implications to save and sustain the Mother Earth.


Religious
Perspectives

THE CONTRIBUTION OF TRADITIONAL BELIEFS IN BIODIVERSITY CONSERVATION

Ridhima Shaktawat [1] and Dr. Sangeeta Rathore [2]
[1.] Research scholar, Department of Zoology, B.N. University, Udaipur(Raj.)
[2.] Associate professor & Head, Department of Zoology, B.N. University, Udaipur(Raj.)
Email: shaktawatridhima4@gmail.com

Since ancient times, Indian beliefs have been associated with compassion and respect for nature and its creations. Certain natural ecosystems known as sacred groves or orans are protected by local communities due to religious beliefs and traditional rituals that have been passed down through generations. Sacred groves are areas that include patches of forest or natural vegetation, ranging from a few trees to forests covering several acres. Some example of sacred groves are the Oran of Rohida – a sacred grove of Marwar teak, standing at the Akoli village of Jalore district, Rajasthan, is the precious asset of an economically important timber species in 30–35 ha of area, This sacred grove has 1-year-old to 120-yearold Rohida trees as the dominant species. , the Khejri tree is valued for its moisture-retaining properties, and it is not axed even if it comes between the constructions. The live example of this is cited in Salasar Balaji temple in Sikar district. In Sariska, the spiritual beliefs of the villagers and their vision of the world find their basis in the forest .People here believes that "The Mata protects the forests so they don't cut the trees in the woods because they will be punished by the Mata that lives there. The punishment of the Mata can be stern and can cause the death of a member of the family or a domestic animal. These and many more similar examples show that traditional beliefs of Indian societies have got a deeper understanding of the ecological system and have been completely integrated with nature to evolve sustainable lifestyle.

Keywords- Sacred grooves , Oran , Conservation, Traditional belief.

CONSERVATION OF TREES THROUGH RELIGIOUS PRACTICES

Nirja Shekhawat [1] and Dr. Sangeeta Rathore [2]
[1.] Mrs. Nirja Shekhawat Department of Zoology, B.N. University,Udaipur (Raj)
[2.] Associate professor and head Department of Zoology, B.N. University,Udaipur (Raj)
Email: shekhawatnirja@gmail.com

Cultural practices of conservation generally refer to various traditional and customary practices with in a culture that especially relate to the conservation of natural resources. The community awareness in Rajasthan to save the environment is ages old. The land area near the villages is conserved by naming it after any regional god, goddess, and saint of a great person. Tree worship is one of the, most widespread forms of popular religion in India. Indian worship offering roots, stem, leaves, flowers and fruits to god since time immemorial. This is done as a symbol of gratitude because they believe that life cannot exist without trees. Conservation for trees we worshipped on different occasion like Amla tree on Amla navami, Sacred Peepal tree on Dasha mata vrat, Tulsi pujan ,Banana tree used in many religious ceremonies like lord Ganesha and lord Vishnu pujan,lotus used in Lakshmi and Saraswati puja etc. In Rajasthan State, in khejarli village the 363 peoples (Bishnoi community) are sacrificed their lives to save the kejari trees. Now these days in recent era the villagers of Piplantri (In Rajasthan) plant 111 trees every time a girl child born. These all are the ways to conserve the biodiversity.

Keywords: Conservation, Trees, Rajasthan, Bishnoi Community

TRADITIONAL PRACTICES OF BIODIVERSITY CONSERVATION IN RAJASTHAN (INDIA)

S.S.KATEWA
Formerily Professor and Head, Department of Botany,
M.L Sukhadia University, Udaipur (Raj) India
Email-Akatewa@yahoo.com , Mobile – 941459963

Some of the traditional ways evolved by the devout bectle give us a lesson to conserve the biodiversity. Traditional knowledge, culture and religious beliefs of indigenous people play significant role in conservation of biodiersity. It has been observed that the local culture, spirit, social and ethical principles possessed and practiced by the tribes and tural people have often been the determining factors for Sustainable use and conservation of biodiversity.

Indigenous rituals of the local people in sacred groves serve as a tool for conserving biodiversity. The way communities have been managing sacred groves and conserving biodiversity in-situ is a glaring example of containing and qverting ecological crisic. Sacred groves are distributed over a vide ecosystem and have well developed rich biodiversity with rare, endemic and endangered species. These groves do not just help in conserving valuable biodiversity, soil and water but regulating viable weather and climate cycle on the earth. Sacred groves act as a store house for tribal folklore medicines. These forests are also having a source of livelihood for the local people

ROLE OF NON-POSSESSIVENESS (APARIGRAHA) TO SUSTAIN MOTHER EARTH

Dr. Sushma Singhvi
Ex. Chairperson,Rajathan Sanskrit Academy,Jaipur Emeritus Professor, JVBI Deemed Uni.,Ladnun(Raj.),
Ex. Director (Research), Prakrit Bharati Academy, Jaipur
Email: sushma1830@yahoo.com

In our present reference to the context, the meaning of non-possessiveness is related to the concept of 'no overexploitation of nature' and by the 'co-operation between nature and man'.

In Tattvaartha Sutra, 5.21, the author Uma Swati has hinted at the interdependencies between living beings : 'parasparopagraho jivaanaam'.

The Atharvaveda, 12.1.12 announces that the earth is the mother of all living beings and we are all her sons(children). As such, we should take from the mother earth (nature) only as much as we can restore.

Atharvaveda 12.1.35 rightly pronounces “O-Lord ! this removal should restore soon, I don't want to extract the heart of the mines.”

Non-possessiveness is voluntary and as such a limitation on resources and property for one's own use is also voluntary; i.e. aparigraha or least possession (as per need, not by greed) in thought, by word (speech) and deed. It means :

(1) a livelihood with the least disturbance to nature and fellow beings;

(2) a citizenship like a part of the whole cosmos;

(3) friendship with all living beings including land-earth, air, water, energy and vegetation;

(4) As such, the use of resources received from the mother earth is justified for Society with limited possession for sustaining life, but accumulation, exploitation, excessive consumerism and ownership (of living or non-living substances) is not acceptable in any way. Thus non-possessiveness is a principal which is beyond sustainable economy and a measure for environmental protection and ecological balance to sustain the mother earth.

GOMUTRA (COW URINE): A SUSTAINABLE SUBSTITUTE FOR PHARMACEUTICALS

Dr. Girima Nagda
Assistant Professor
Toxicology Research Laboratory, Department of Zoology,
University College of Science, Mohanlal Sukhadia University, Udaipur
Email- girima.nagda@mlsu.ac.in; girima.nagda@gmail.com , Mobile: +91 9461871527

Gomutra or Cow Urine has been elaborately explained in Ayurveda and in ancient scriptures and literature like Vedas, Sushruta etc. as an effective medicinal substance/secretion of animal origin with innumerable therapeutic properties. The medicinal properties of Cow Urine have made it a common ingredient of ayurvedic medicine. The results of efficacy evaluation of cow urine revealed that pre-treatment with cow urine had the potential to reduce oxidative stress, alleviate histopathological changes and chromosomal aberrations caused due to pesticide toxicity in Swiss mice. When compared with a mixture of purified antioxidants it was found that in many parameters studied cow urine gave better results than the antioxidant combinations. Moreover, it was elucidated that pre-treatment with cow urine along with the antioxidants had a synergistic effect and was very effective in combating pesticide toxicity. Thus, it can be concluded that use of Gomutra along with natural antioxidants can prove to be a better remedy to overcome pesticide toxicity.

Cow urine is an eco-friendly product and its use as a sustainable substitute for pharmaceuticals is advisable which can help in minimizing the environmental pollution caused by pharmaceutical drugs and xenobiotics during their manufacture and by their residues after usage. The use of cow urine therapy in our country over the century as a traditional Ayurvedic practice, is gaining recognition and acceptability the world over due to recent advance in research on cow urine. Further scientific investigation with the use of fresh cow urine "Gomutra", distillate, redistillate, Kamdhenu ark and Panchgavya can open new areas of pharmaceutical research whereby the harmful effects of pharmaceuticals can be overcome as all these products are biodegradable and this could be a step towards sustainable development.

Keywords: Cow urine, pesticide, toxicity, oxidative stress, histopathology, chromosomal aberrations

धरती की रक्षार्थ शाकाहार जरूरी

डॉ. दिलीप धींग
पूर्व निदेशकः अंतरराष्ट्रीय प्रोंत शोध केन्द्र)
Email: drdhing@gmail.com

धरती पर हिंसा–हत्या और खून–खच्चर की घटनाएँ बढ़ती जा रही हैं। भय और आतंक से मानवता सहमी हुई है। ऐसे संकटापन्न समय में अहिंसा के उपवन लगाना और शान्ति के फूल खिलाना अत्यावश्यक है। इसके लिए मांसाहार पर अंकुश आवश्यक है। क्योंकि मांसाहार जीवहत्या का सबसे बड़ा कारण है। मांसाहार के कारण ही प्रतिदिन लाखों मूक प्राणियों को मौत के घाट सुला दिया जाता है। दुःखद आश्चर्य तो तब होता है कि जब धर्म के नाम पर भी कुछ लोग निरीह प्राणियों का वध करते हैं। जब ऐसा होता है तो प्रश्न उठता है कि धर्म का स्वरूप क्या है? यह बात दिन के उजाले की तरह स्पष्ट है कि पशु–पक्षियों को मारना धर्म नहीं है। धर्म तो बचाने में, रक्षा करने में ही हो सकता है। इसलिए जहाँ अहिंसा है, वहाँ धर्म है। मानवता और नैतिकता का आधार भी अहिंसा बनती है।

मानवता और धरती को बचाने के लिए आज जिस चीज की सर्वाधिक जरूरत है, वह है –अहिंसा। अहिंसा के बगैर ढेर सारी सुविधाओं के बीच भी आदमी सुखी नहीं है। कुछ लोग अहिंसा की अवधारणा को सिर्फ मानव की अहिंसा तक सीमित रखना चाहते हैं। लेकिन उनकी यह सोच नितान्त अधूरी है। मानव की भूख शांत करने के लिए दूसरे प्राणियों का संहार करना प्रकृति और संस्कृति दोनों के विरुद्ध है। इसीलिए दुनियाभर के महापुरुष शाकाहार पर जोर देते रहे हैं। शाकाहार का सम्बन्ध सिर्फ अहिंसा और जीवदया से ही नहीं है। शाकाहार का सम्बन्ध स्वास्थ्य, पर्यावरण और मानव की आदतों से भी है। शाकाहार मानव को शांतिप्रिय व अनुशासित बनाता है। वह क्रूरता, आक्रामकता, तोड़फोड़ और विध्वंस का निषेध करता है। इसके विपरीत मांसाहार मानव को क्रूरता का अभ्यस्त बना देता है। हिंसा के ताप से संतप्त मानवता को बचाने के लिए अब करुणा और संवेदनशीलता का अभ्यास और प्रशिक्षण बेहद जरूरी है।

यह एक सर्वमान्य और सर्वस्वीकार्य तथ्य है कि जैसे हमें अपनी जान प्यारी है, वैसे ही संसार में हर जीव को अपनी जान प्यारी होती है। इसलिए कभी किसी प्राणी का अपने स्वाद, स्वार्थ और शौक के लिए संकल्पपूर्वक वध नहीं करना चाहिये। केवल धर्म–दृष्टि से ही नहीं, अपितु नीति की दृष्टि से भी अहिंसा का यह सिद्धान्त तर्कसंगत, सार्वभौमिक और समाधानकारी है।

समय की गति के साथ दुनिया के विभिन्न हिस्सों में तरह–तरह के परिवर्तन हुए। इन परिवर्तनों में जीवन के मूल्य और मानदण्ड बदल गये। एक ओर मानव जाति ने उन्नति की, दूसरी ओर मानवीय मूल्यों का क्षरण हुआ। कोरी भौतिकवादी विकास की अवधारणा के साथ दुनिया के सामने अनेक समस्याएँ पैदा हो गईं। जिनमें प्रदूषण, युद्ध और आतंकवाद जैसी विश्वव्यापी समस्याएँ भी हैं। पहले और दूसरे विश्व युद्धों की विनाशकारी विभीषिका देख चुकी मानवजाति किंकर्तव्यविमूढ़ हो गई।

दुनिया के बड़े–बड़े मंचों पर बड़े–बड़े लोग इकट्ठे होने लगे और बड़ी–बड़ी बातें करने लगे कि धरती को बचाया जाना चाहिये। धरती का वर्तमान और भविष्य कैसे सुरक्षित और शान्तिमय हो सकता है। एक ओर शान्ति के सम्मेलनों का आयोजन और दूसरी ओर हथियारों की होड़ा होड़ी हो रही है। एक ओर मानवाधिकारों की रक्षा के लिए कानून–कायदे बनाए जा रहे हैं, दूसरी ओर धरती की निर्दोष मूक प्रजा की हत्या के लिए यांत्रिक बूचड़खाने खोले जा रहे हैं। इंसान का यह दोगलापन स्थायी शान्ति की राह में रोड़ा बना हुआ है।

यह निर्विवाद है कि शांति का स्थायी और निरापद उपाय अहिंसा है। लेकिन अहिंसा की सद्राह पर चलने वालों का अभाव है। अहिंसा एक व्यापक अर्थ वाला शब्द है। दुनिया में समस्त श्रेष्ठताओं में अहिंसा की भावना कार्य करती है। अहिंसा के अनेक चरण हैं। उनमें प्रथम चरण है–आहार में अहिंसा अथवा अहिंसक आहार। भला जिसके आहार में ही क्रूरता है, उसके जीवन से करुणा की धारा कैसे बहेगी? प्रश्न है वह अहिंसक आहार,क्रूरतारहित आहार कौनसा है? इस प्रश्न का सुस्पष्ट, सरल और सर्वमान्य उत्तर है–शाकाहार। शाकाहार सिर्फ आहार ही नहीं, अपितु मानवीय जीवन प्रणाली है। एक ऐसी जीवन प्रणाली, जिसमें मानव–मानव के बीच तथा मानव और पशु–पक्षियों के बीच सहअस्तित्वपूर्ण सम्बन्धों का सम्मान है।

मानव के लिए शाकाहार एक वैज्ञानिक आहार है। इसकी वैज्ञानिकता कई दृष्टियों से सिद्ध है और आधुनिक शोधों में भी शाकाहार की उपयोगिता स्थापित हुई है। प्रकृति, पर्यावरण, आत्म–विद्या, शरीर–विज्ञान, आयुर्विज्ञान आदि दृष्टियों से शाकाहार की उपयोगिता सर्वविदित है। शाकाहार मनुष्य के सिर्फ शरीर को ही पोषण नहीं देता है, अपितु वह मन, मस्तिष्क और आत्मा को भी तृप्त करता है। इसके विपरीत मांसाहार का उद्‌गम ही हिंसा और हत्या से होता है। आदमी ने बड़े–बड़े यांत्रिक बूचड़खाने खोलकर उपकारी पशु–पक्षियों के साथ भारी विश्वासघात किया है। प्रतिदिन करोड़ों दर्दभरी चीखें, तरंगें वातावरण में फैलती हैं और संसार में दुःखों का सर्जन करती हैं। विज्ञान और तकनीक के क्षेत्र में आश्चर्यकारी विकास करने वाले मानव को अब यह विचार करना चाहिये कि दूसरे प्राणियों का खून किये बगैर अपनी भूख कैसे मिटाई जा सकती है।

'पर्यावरण :जीव-सृष्टि का रक्षावरण'

चैतन्य संघाणी

मो.नं. 9898706530

''हम एल्म के वृक्ष पर दवाई का छिड़काव करते हैं और फिर अगली बसंत में उन वृक्ष के ऊपर रॉबिन पक्षियों के गीत नहीं सुनाई देंगे ,उसका कारण यह नहीं होगा कि हमने रोबिन पक्षियों पर दवाई डाली थी लेकिन उसका कारण यह होगा की जो दवाई हमने एल्म के वृक्ष पर छिड़काव की थी वह अब एल्म ,जंतु और रोबिन के सुपरिचित चक्र में व्याप्त हो गई है'': राचेल कार्सन द्वारा लिखी हुई पुस्तक साइलेंट स्प्रिंग में 1962 में इस तरह का उल्लेख आता है.....

मानव इतिहास में भयंकर से भयंकर युद्ध से भी अगर कोई बड़ी भूल हो तो वह है :अस्तित्व की रचना को न समझ कर, अपने को विशेष मानकर ,अपने स्वार्थ के लिए पर्यावरण के साथ की गई छेड़छाड़ जब कोई भयंकर युद्ध होता है तब एक पक्ष जीतता है और कुछ लोग जो बच जाते हैं वह विजेता कहलाते हैं और शासन करते हैं। लेकिन हमने पर्यावरण के विरुद्ध जाने अनजाने में जो युद्ध छेड़ा है उसमें सिर्फ हमारा ही नहीं पूरी जीव सृष्टि का नाश होने की संभावना है ,जो जीव सृष्टि को आधुनिक विज्ञान की सीमित दृष्टि से देखा जाए तो अभी तक पृथ्वी के अलावा और कोई ग्रह मिल नहीं पाया है जिसमें वह अस्तित्व मान हो...

यानी इसमें कोई संदेह नहीं कि पर्यावरण का नुकसान रोकना अत्यंत आवश्यक हैः क्योंकि पर्यावरण ही है इस अनंत ब्रह्मांड की बराबरी में अत्यंत अत्यंत अत्यंत सूक्ष्म ऐसे हमारे अस्तित्व के लिए हमारा '''रक्षावरण'''

चंद्र ,मंगल ,गुरु और सैकड़ों सैकड़ों ग्रह तो पूरे के पूरे खाली है.. तो फिर मनुष्य वहां क्यों नहीं चला जाता? क्योंकि वहां हम जिंदा रह सके ऐसा पर्यावरण नहीं है। तो फिर मनुष्य ने खोजी हुई किसी भी बाह्य संपदा से सबसे ज्यादा मूल्यवान हमारा पर्यावरण है :हम अपने घर में मूल्यवान वस्तुओं को कितना सुरक्षित रखते हैं? लेकिन हम पर्यावरण के साथ क्या कर रहे हैं!!! बुद्धिमान कहलाने वाले मनुष्य की सबसे बड़ी मूर्खता में से यह एक है.

भारत में अति प्राचीन समय से कहां गया है कि ..

–हमें किसी भी जीवित प्राणी का वध करने का अधिकार नहीं है ,वह जीवित सृष्टि कोई भी हो सनातन संस्कृति तो यह कहती है की सामान्य घासपूस को भी हम बिना कारण न तोड़े।

– पानी की एक बूंद में भी असंख्य जीव विद्यमान है ,उसका संपूर्ण रुप से ध्यान से उपयोग करें।

–हमारी संस्कृति में पहले से ही पीपल जैसे पेड़ों की महत्ता धार्मिक रूप से ज्यादा की गई है, आज आधुनिक विज्ञान की दृष्टि से हम यह जान सकते हैं कि ऐसे कुछ वृक्ष अन्य वनस्पति के मुकाबले ज्यादा ऑक्सीजन देते हैं।

– भारत में धार्मिक परंपराओं और कुछ जरूरी धार्मिक क्रियाओं के भाग रूप हम गाय से लेकर चींटी तक को खाना देते हैं और उसका धार्मिक महत्व रखते हैं स

–सदियों से भारत में ऊर्जा के स्रोतों को परमात्मा के स्वरूप मानकर पूजा जाता है और कुछ धार्मिक क्रियाएं भी उनकी ऊर्जा का मनुष्य इस्तेमाल कर सकें इसलिए निर्मित हुई है जैसे ''सूर्य पूजा''

भारतीय संस्कृति का मूल अध्यात्म अपने शुद्ध स्वरूप में हमारी समग्र पृथ्वी को बचाने का सूक्ष्म आयोजन शताब्दियों पहले करके बैठा है.. उसके स्वरूप के कुछ बिंदु और भविष्य की संभावनाओं को हमारे पर्यावरण को बचाने के उद्देश्य से अध्यात्म और विज्ञान का समन्वय करके देखते हैं.....

चौतन्य संघाणी(:9898706530)

तत्व चिंतक ,लेखक और व्यवसाय से नायाब तहसीलदार और एग्जीक्यूटिव मैजिस्ट्रेट ,कलेक्टर ऑफिस ,आनंद

जुलाई 2020 में माननीय मुख्यमंत्री श्री विजय भाई रुपाणी द्वारा उनकी चार आध्यात्मिक पुस्तकों का विमोचन हुआ था

अगस्त 2021 में पूज्य स्वामी रामदेव और आचार्य बालकृष्ण द्वारा उनकी नई चार आध्यात्मिक पुस्तकों का विमोचन हुआ

जीएसटीवी पर सुखनी शोध में और सोहम टीवी पर सच्चे सुख की ओर उनके लोकप्रिय आध्यात्मिक टीवी कार्यक्रम है जो लाखों लोग नियमित देखते हैं

कॉन्पिटिटिव एग्जाम पर सात पुस्तके लिखी है

यूट्यूब और अन्य सोशल मीडिया के माध्यम से भारतीय अध्यात्म के विषयों का अनेक प्रवचन द्वारा वैज्ञानिक निरूपण

युवा वर्ग भारतीय अध्यात्म की किताबों से जुड़ पाए इसलिए सालों से अभियान चला रहे हैं


Health, Happiness,
Ahimsa, Peace etc

ARTIFICIAL INTELLIGENCE VERSUS NATURAL INTELLIGENCE: EVOLVING TO VIOLENCE-FREE WORLD

Nikhil Shah
Founder Cilans Sustems, Ahmedabad, APAC Ambassador for the Broadband Forum
Email: shahnikhilb@gmail.com , Mo: 9998822287

The debate between artificial intelligence (AI) and natural intelligence (NI) has been ongoing for decades. While NI has been the predominant form of intelligence for centuries, the rise of AI has led to a new era of possibilities and challenges. AI has been touted as a potential solution to many of the world's problems, including climate change, but it is important to understand the potential drawbacks and unintended consequences of using AI. This session will explore the key differences between AI and NI, and examine the potential benefits and drawbacks of each.

History tells us that humans are always looking for something faster, easier, more effective, and more convenience to finish their work; therefore, the pressure for further development motivates humankind to look for a new and better way of doing things. The desire to create new things with NI becomes the incentive for human progress including the development of AI. As AI continues to transform various industries, it is important to understand its ethical side and also long-term impact on mother nature.

In addition to discussing the general aspects of AI and NI, this session will also focus on how AI can study the environment around us and how we can make the world a better place with reduced violence. As technology continues to advance, AI can play a crucial role in identifying and mitigating violent behaviour. By analyzing patterns in data, AI can help predict and prevent acts of violence or unintended killings before they occur. Additionally, AI can be used to improve communication and understanding between different cultures, ultimately reducing the likelihood of conflict.

HEALTH, HAPPINESS, PEACE & PROSPERITY (H2P2) TO SAVE MOTHER EARTH

Dr. Kanak Madrecha
Global Peace Ambassador
(Global Peace Innovators/Dubai)
EMail: dr.kanak.madrecha@gmail.com, Mo- 097150-6583159

Mother Earth can be saved better if each of 7.6 Billion Human Beings living on this Mother Earth is considerate of Mother Earth.

That will happen faster if each of 7.6 Billion Human Beings is enjoying the best of Health, Happiness, Peace & Prosperity (H2P2).

Global Peace Innovators (Non-Profit Global Organization) was founded by undersigned in 2019 (Pre-COVID-19) to inculcate a peace mindset amongst all human beings across 200+ countries across the globe with the following 10 Strategic Objectives to be achieved on this Mother Earth by 2050:- .

1. Zero Wars between 2 or more Countries or "Factions" within a country
2. Zero Killings in all Countries in the world
3. Zero Major Injuries in all Countries in the world
4. Zero Kidnappings in all Countries in the world
5. Zero Rapes in all Countries in the world
6. Zero Abortions in all Countries in the world

7. Zero Suicides in all Countries in the world
8. Zero Court Cases in all Countries in the world
9. Zero Fights in all Countries in the world
10. Zero Divorces in all Countries in the world

So far, we attracted, retained & developed 216 Peace Ambassadors (PAs) from 61 Countries (6 Continents) who believe, think & practice peace in their own lives and promote the same to their family members, friends, colleagues, neighbours and all stakeholders to whom they connect with during the year either physically or virtually. These are doctors, engineers, lawyers, professors, journalists, business owners, government officers (male & female - age ranging from 20 to 85). Some of them have high credentials & expertise even to mediate peace in 2 parties at conflict. We have so far held 9 Global Peace Conferences on Zoom to meet/brainstorm how to achieve Global Peace. We have now planned to conduct online peace promotion sessions (1 hour each) to cover 1 Billion People from 100+ countries in the next 5 years. My Conference Paper will describe more details of this Global Peace Project.

CONCEPT OF AJIVA HIMSA, CONSEQUENCES AND REMEDIES

Sadhvi Pranshu Shree Ji M.S.
Researcher-Jain University (Deemed-to-be University)

Violence is normally defined as harming living beings physically or hurting them psychologically by action, thought and speech. This leads to intolerance, crime and disharmony at all levels, personal, family, social life and even in international affairs. To create a harmonious and peaceful life the principle of Non-violence is practiced and it forms a core principle of Jain lifestyle. In recent times, violence is not confined to hurting living beings but, in pursuit of prosperity, comfort, and dominance, has extended to wasteful exploitation of earth resources and unsustainable development. This concept is developed in this article and is termed as 'ajiva himsa'.

It is shown that whereas jiva himsa has a belated effect on the person committing it, ajiva himsa has immediate consequence as it instantaneously degrades the environment, immediately affecting the health and behaviour of the person committing it. This calls for a disciplined and frugal life style, minimal use of natural resources. Solutions arising from Ajiva himsa are proposed based on Jain philosophy. The serious consequences of ajiva himsa are described and solutions are proposed without sacrificing comfort and ease of living.

India has great heritage of philosophy and culture and ethics. One of the important principles of Indian, and specially Jain lifestyle is the practice of Non-violence. The inception of this principle in religions like Hinduism, Jainism, and Buddhism have impacted innumerable lives of people throughout the ages and brought harmony, peace, and tolerance in diverse Indian societies. Though there are deviations in thoughts and action at every stage of human development, the principle of nonviolence is preserved and scrupulously followed by the followers of Jainism with utmost care and belief. The principle of Nonviolence is usually related to living beings, both gross and subtle, highest to the weakest life forms. Nonviolence has two dimensions: physical and psychological. Physical violence is committed though action and psychological violence through, speech and thoughts.. It has deep connection with all the spheres of human activity. With the evolution and development, specifically materialistic development where humans have striven for ease in living together with pleasure and comfort. Such practices have resulted in excessive greed of materialistic possessions. This has led human beings on the path of 'Ajiva himsa' destroying natural resources and excessive and wasteful manufacturing of goods. Such a development is unsustainable and the products create life hazards for all living beings across the earth.

नागरिक स्वस्थ तो पृथ्वी स्वस्थ-(जीवन जीने की कला)

डॉ आई एल जैन

वरिष्ठ हृदय रोग विशेषज्ञ, संत तरेसा चिकित्सालय, उदयपुर

Email: driljain@rediffmail.com

प्रयास के प्रकाश से ही बाधाओं के अंधेरे दूर होते हैं। प्रकाश का वास्तविक अर्थ है, अंधेरे की समाप्ति। ऋग्वेद में सर्वाधिक पवित्र 'अग्नि' को माना गया है। अग्नि पंचभूत व्यापी है और धरती, जल, पवन, नभ सब में व्याप्त है। गौतम बुद्ध कहते है–'अप्प दीपो भव' जिसका सीधा अर्थ है कि आत्मज्ञान से ही राह मिलेगी। यह संभव है–स्वस्थ शरीर–स्वस्थ पृथ्वी से वातावरण स्वस्थ रहेगा। स्वस्थ वातावरण से मन, काया, हृदय, स्वस्थ रहेंगे तो प्रसन्नता के हारमोन्स (Hapiness Hormones Serotonin, Dopamine, Endrophins) का अधिक स्राव होगा। इससे आपसी मधुर व्यवहार का वातावरण बनेगा और समाज में उचित सकारात्मक सोच उत्पन्न होगी। इससे वातावरण स्वस्थ रहेगा और पृथ्वी स्वस्थ रहेगी।

जीवन रसमय हो अर्थात् जीवन को आनन्दमय बनाने के लिए पृथ्वी में नौ तरह के रस होते हैं। इससे प्रसन्नता के परमाणु का स्राव होता है जिससे मनुष्य प्रसन्न रहता है इससे शरीर में नव रस सक्रिय रहेंगे। इससे करुणा का संचार होगा। जीवन में यश रहेगा व मरने के बाद भी समाज देश में यश रहेगा। जीवन में अहंकार, मान, माया, लोभ नहीं रहेगा और जीवन सार्थक बनेगा। समाज में सामंजस्य रहेगा।

ईश्वर को धन्यवाद दें कि आपके पास प्रसन्न रहने के 9 कारण हैं कि–

1. आप देख सकते हैं,
2. आप सुन सकते हैं,
3. आप चल सकते हैं,
4. आपके सर पर छत हैं,
5. आपके पास भोजन हैं,
6. आपके पास परिवार है,
7. आप पढ़–लिख सकते हैं,
8. आप साफ पानी पी रहे है,
9. आप अपने बड़ों का, गुरु का आशीर्वाद प्राप्त कर सकते हैं।

स्वस्थ रहने के लिए अपने आपको प्रसन्न रहना होगा। उसके लिए आपके पास तीन सबसे मूल्यवान चीजें होनी चाहिए–

1. परिवार, 2. दोस्त और 3. सेहत

असली खुशी वह होती है जो खुद महसूस की जा सके, बिना किसी साथी के, बिना किसी किन्तु परन्तु के, बिना किसी तर्क–वितर्क के। (by Soloman Alikam & Acharya Tarun Sagar ji)

स्व–नियमन / आत्म संयम (Self Regulation) &

जीवन व पृथ्वी की संरचना कुछ इस तरह की है कि आप आपना सेल्फ रेगुलेशन को नहीं देख सके, केवल महसूस कर सके। आप वो कर सकते हैं जो करना चाहते हैं। आप अपने शरीर की उपेक्षा कर सकते हैं, लेकिन यह शरीर कभी भी अपनी उपेक्षा नहीं करेगा। गर्भावस्था से ही यह शरीर ईमानदारी के साथ आपकी देखभाल शुरू कर देता है। आपका शरीर एक मशीन की तरह अपनी देखभाल स्वयं कर रहा है, यह देखभाल करना नहीं छोड़ता। रात में सोने के दौरान आप अचेत होते हैं, तब भी आपका शरीर हजारों प्रक्रियाओं को नियंत्रित करता रहता है और शरीर में दिनभर जितनी भी टूट–फूट हुई है, उसकी क्षतिपूर्त्ति कर, अगले दिन के लिये

नई ऊर्जा भर देता है। यह शरीर का स्वचालित नियंत्रण आपको जीवित, स्वस्थ और चलायमान रखता है। इसी क्षमता को सेल्फ रेगुलेशन कहते हैं। हमारे शरीर की 50 लाख करोड़ से अधिक कोशिकाएं सेल्फ रेगुलेशन प्रणाली पर कार्य कर रही है।

अगर आप अपने शरीर को अपनी देखभाल करने देंगे तो यह आपका हो जायेगा। आपके शरीर का सबसे बड़ा विश्वसनीय व सहयोगी साथी है सेल्फ रेगुलेशन। सेल्फ रेगुलेशन में आप हस्तक्षेप बंद कर दे तो, आपका शरीर तंदुरूस्त व तरोताजा रहेगा। इसके लिए जरूरी है उचित सात्विक आहार, उचित योग व 6 से 8 घण्टे की निद्रा।

शरीर और सुपर कम्प्यूटर दोनों एक जैसे हैं, लगातार इनपुट और आउटपुट को प्रोसेस करते रहते हैं, तो कम्प्यूटर ठीक से काम करता रहता है। इस शरीररूपी कम्प्यूटर में जानवरों की चर्बी व नकारात्मक कचरा भरते रहेंगे तो धीरे–धीरे यह कम्प्यूटररूपी शरीर शिथिल होकर काम करना बंद कर देगा। हर नकारात्मक सोच से शरीर और मन के बीच की साझेदारी कमजोर होकर, सेल्फ रेगुलेशन को खत्म कर देगी व शरीर आलस्यमय व शिथिल रोगी हो जायगा।

अभी तक हमने शरीर को सुरक्षित करने की क्षमता 'होम्योस्टेसिस' को हल्के से देखा है, छुआ है। शरीर की संरचना कुछ इस तरह से की गई है कि आप सेल्फ रेगुलेशन न देख सके, ताकि आप वह कर सके जो करना चाहते हैं। जैसे चलना, फिरना, रक्तचाप बनाये रखना, रक्त संचालन, रोगप्रतिरोधक क्षमता बनाये रखना, ब्लड शुगर बनाये रखना, शरीर के तापमान को नियमित करना, स्वर साधना, श्वास संचालन, माँसपेशियों व हड्डियों का घनत्व, हारमोन्स् का आयु के अनुपात में स्थिरीकरण, सोचना, बोलना, लिखना, देखकर, सुनकर तथानुरूप कार्य सम्पादित करना व तद्नरूप हारमोन्स का प्रवाह बनाये रखना होता है। सकारात्मक सोच से Hapiness Hormones (Serotonin, Dopamine, Endrophins) आदि का नियमन हर क्षण अपने आप होता रहता है।

इस सब का लक्ष्य है, हमारा होम्योस्टेसिस को दूरूस्त रखना। होम्योस्टेसिस में बाधा आने पर शरीर संकेत देता है–आप सावधान हो जाइये, बुखार आ रहा है, बीपी कम ज्यादा हो रही है, माँसपेशियों में कमजोरी, पाचन क्रिया में गड़बड़ी–एसिडिटी, उल्टी, दस्त, कब्ज, पेशाब कम/अधिक आना, जोड़ों में दर्द, साँस फूलना आदि वो संकेत हैं कि आपका शरीर सेल्फ रेग्यूलेट नहीं हो रहा है, अतः आपको उसके अनुसार शरीर विशेषज्ञों से परामर्श कर उचित इलाज कराएं ताकि शरीर का होम्योस्टेसिस वापस ठीक से काम कर सके। (साभार पुस्तक– What you are hunger for?)

पृथ्वी पर जीवन यात्रा–

ब्रह्म आत्मा है, माया शरीर है। शरीर पंच कोशीय होता है। 1. अन्नमय कोश (स्थूल देह), 2. प्राण मय कोष, 3. मनोमय कोष, 4. विज्ञान मय कोष एवं 5. आनन्द मय कोष। इनके अंदर आत्मा प्रतिष्ठित रहता है। इस शरीर का रक्षक असु (प्राण) है। प्राणाग्नि से शरीर की सत्ता है। प्राणाग्नि के स्वरूप की रक्षा रक्त करता है। हृदय द्वारा होने वाला रक्त संचार ही प्राणाग्नि को सुरक्षित रखता है। रक्त की रक्षा चेतन आत्मा पर निर्भर है। यही हमारी जीवन यात्रा है।

जीवन यात्रा में पृथ्वी पर जल का होना आवश्यक है। बिना जल के बिना चेतन आत्मा शरीर की रक्षा नहीं कर पायेगा। जल रहेगा तभी जीवन रहेगा। जल रहेगा तभी कल रहेगा।

पृथ्वी पर जीवन जलवायु पर निर्भर करता है। जलवायु वातावरण स्वस्थ रहेगा, प्रदूषण मुक्त रहेगा तभी हमें स्वच्छ जल, स्वच्छ हवा, प्राणवायु व हरित क्रांति आयेगी। हरित क्रांति के लिए ग्रीनमेन्योरिग (ऑरगेनिक खाद) से हमें ऑरगेनिक सब्जी, फल, अन्न मिलेंगे जो पौष्टिक होते हैं और स्वास्थ्य के लिए लाभकारी है। मौसम के अनुसार हमें सब्जियाँ, मोटा अनाज, फल जी नागरिकों का स्वास्थ्य दोषमय (रोग मुक्त) रहेगा।

अच्छे स्वास्थ्य के लिए और शरीर के सेल्फ रेगुलेशन के लिए हमें निम्न बातों का ध्यान रखना होगा–

- हमें खेती बाड़ी में अहिंसक खाद का प्रयोग करना चाहिए जिससे सूक्ष्म जीवाणु सुरक्षित रह सके।
- मोटे अनाज जो आपके आसपास उपलब्ध हो का प्रयोग करना है।

- शरीर पर जहाँ तक संभव हो सूती वस्त्र का उपयोग हो। इससे केमिकल प्रदूषण रुकेगा।
- शरीर स्वस्थ रहे इसके लिए हमें निरंतर योगाभ्यास करना चाहिए।
- आयु बढ़ाने के लिए हमे भगवान ने टांगे दी है। जितना आप तेज चलेंगे, हमारी आयु में बढ़ोतरी होगी। जैसे–जैसे उमर बढ़ती है शरीर क्षीण होने लगता है। अतः क्षीणता को रोकने और active हम बढ़ाने के लिए पांव सदा सक्रिय रखना है।

कोपेन्हेगान (Copenhagan-Denmark University) के अध्ययन में पाया गया कि 2 हफ्ते (14–15 दिन) के रेस्ट (पदंबजपअपजलद्ध से पांव की माँशपेशियों की ताकत एक तिहाई कम हो जाती है, जो हमारी उम्र के 10–15 वर्ष कम कर देती है। जिस तरह चलना–घूमना आवश्यक है, उसी तरह पांव की कसरत हर जोड़ के लिये और माँसपेशी की ताकत के लिए जरूरी है।

ध्यान करने से मन की शांति व एकाग्रता बनी रहती है। सकारात्मक सोच के लिए भी ध्यान आवश्यक है। यह हेपीनेस हारमोन्स को भी सक्रिय करता है।

अच्छी नींद 6–8 घण्टे की शरीर के अवयव की रिपेयर के लिए आवश्यक है।

परिवार के साथ समय बिताने व भोजन से भी हमारी सोच व स्वास्थ्य अच्छा रहेगा।

हमने देखा की इंसानी शरीर के लिए स्वयं नियमन (Self Regulation) Lवास्थ्य के लिए आवश्यक है, उसी तरह प्रकृति (पृथ्वी) के लिए उसका वातावरण का नियमन जरूरी है। पृथ्वी के वातावरण के नियंत्रण के मुख्य अवरोधक है– (1) ग्लोबल वार्मिंग, (2) ओजोन की परत का घटना, (3) वातावरण में प्रदूषण, (4) पानी का धरती का अमलत्व बढ़ना (Acidification), (5) मिट्टी की गुणवत्ता में परिवर्तन (Damaging Matural Soil Complex)] (6) जंगल का घटना (Deforestation)] (7) विशुद्ध जहरीले पदार्थ की अधिकता (Gentoxicity Sp. Plastic), (8) भूमि में जरूरी बेक्टेरिया व जीवाणु व छोटे जीवों का खत्म होना ैचपबपमे म्गजपदबजपवदद्ध, (9) इकोलोजिकल इम्बेलेन्स (Ecological Imbalance), आदि। (साभार– Book Principles of Jain Philosophy by Dr. N L Kachhara, Page 131-136)

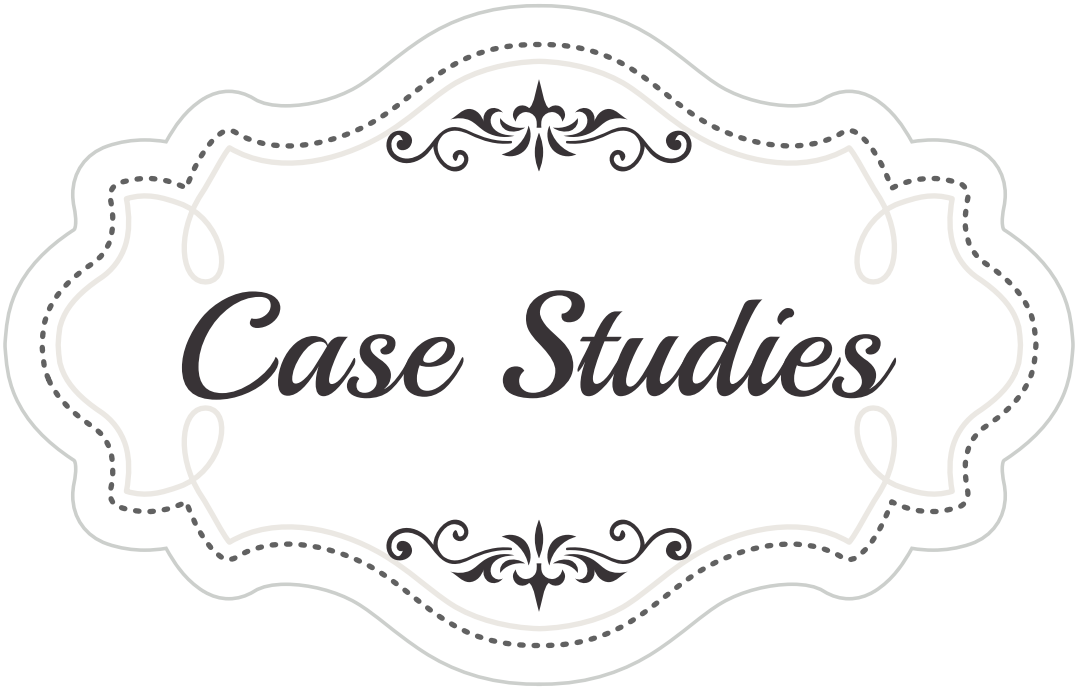
अतः हम देखते हैं कि पृथ्वी व नागरिक के स्वास्थ्य के लिए दोनों का स्वयं नियमन जरूरी है। उन नियमन में बाधक तत्त्व को हटाने के लिए नियम आवश्यक है। हमारे प्रयासों से ही बाधाओं के अंधेरे दूर होंगे। जैसे एक दीपक की लो से कई दीपक जल सकते हैं और अंधेरा दूर हो सकता है, एक बुद्ध, महावीर, विवेकानंद, गांधी के प्रयासों से करोड़ो लोगों के जीवन में चेतना का उजाला आ जाता है। वैसे ही जरूरत है कि कर्म की बातों को परिश्रम के स्नेह में भीगोकर, वातावरण को शुद्ध बनाना है।

चरक संहिता में भी लिखा है–

ॐ सर्वेभवन्तु सुखिनः सर्वे सन्तु निरामयाः।

सर्वे भद्राणि पश्यन्तु मा कश्चिद दुःखभाग भवेत्।।

अर्थात् है भगवान पृथ्वी के सभी प्राणी स्वस्थ रहे, सबका कल्याण हो–जल, पृथ्वी, वायु, आकाश व अग्नि का यथा स्थान उपयोगिता अनुसार वातावरण बना रहे, इसमें सबका भला है।


Case Studies

WETLANDS RESTORATION – A GEOSPATIAL APPROACH

J.K. Garg
Tribhuvan College of Environment and Development Sciences Nalanda University Centre, Neemrana, Rajasthan
Email: directorenv@teds.ac.in; gargjk@gmail.com, Mo: 9313583845

Wetland ecosystems are facing natural and anthropogenic pressures resulting in deterioration of their health, integrity, and resilience. In India, majority of wetlands, both inland and coastal, are failing to withstand the increased stress resultant from these pressures. Resultantly, such wetlands are not able to perform their designated functions and provide their designated ecosystem services. Conventional methods commonly use point physico-chemical measurements to characterize and monitor the health of wetland ecosystems. These methods fail to capture the information in spatial domain. Space-borne remote sensing techniques in different parts of electromagnetic spectrum, got a spurt in its usage ever since the first scientific inventory of Indian wetlands was carried out by Garg et al in 1998. In recent years, remote sensing techniques have emerged as a standalone tool for assessment of health and integrity of wetlands and other aquatic ecosystems.

Remote sensing derived variables provide critical inputs for the assessment of wetlands dynamics, health, and restoration of wetlands thus contributing significantly to achieving many of the UN Sustainable Development Goals. Present article exemplifies, through a few case studies, the use of remote sensing and Geographical Information System for inventorying, assessment of health, and restoration of wetland ecosystems.

Key Words: Wetlands, remote sensing, GIS, ecosystem services, restoration,

LIGHT POLLUTION AND PLANT FITNESS: - A CASE STUDY ON MIMOSA PUDICA

Deepak Kumar and Vineet Soni
Plant Bioenergetics and Biotechnology Laboratory, Department of Botany,
Mohanlal Sukhadia University, Udaipur, Rajasthan, India
Email: deepakswamihmo@gmail.com, vineetsonijnu@gmail.com

With the growth of the human population, urbanization and advances in lighting technology, the use of artificial light at night (ALAN) has significantly increased in the last few decades which has caused photopollution and various negative effects on all the components of the ecosystem. Urban areas became flooded with artificial lights. Exposure of continuous light on plant's growth and development presents a challenge because plant responses are contradictory and far from being fully understood. Therefore, in the present investigations, experiments were carried out to understand the impacts of continuous (24/0 h) exposure of white, blue, green and red lights on the expression of various biophysical parameters like chlorophyll fluorescence OJIP kinetics, specific energy fluxes, phenomenological energy fluxes, the density of reaction centers, quantum yields and the performance indexes of M. pudica were studied. Results of present physiological studies indicate that the response of plants under different light conditions varies from species to species. Present studies clearly indicate that the photosynthetic machinery of M. pudica is affected and regulated differently under various light spectra and photoperiods. It was noted that the continuous exposure light adversely affected the growth and productivity of M. pudica.

Key words: Abiotic stress, Light-Pollution, Mimosa pudica, Photosynthesis, Chlorophyll fluorescence


General

ENVIRONMENTAL POLLUTION'S EFFECTS ON EARTH'S BIODIVERSITY

Dr. SABIHA SINDHI Assistant Professor
Department of Zoology,
Mohan Lal Shukhadia University, Udaipur
Email: drsabihasindhi@gmail.com

Although environmental pollution is not a recent phenomena, it continues to be the biggest threat to people, animals, and plants as well as one of the main causes of disease and mortality worldwide. Urbanization, industrialisation, mining, and exploration are human activities that have had the greatest impact on worldwide environmental pollution. Pollution still has an influence despite the increased attention it has received due to its serious long-term effects. We are all shook by the impending nightmare of man-made pollution and environmental deterioration since it is so severe. In the densely inhabited regions of the northern hemisphere, the protective ozone barrier is decreasing twice as quickly as scientists previously believed. Global warming will soon result from significant changes in weather patterns brought on by the accumulation of greenhouse gases. A number of catastrophic effects, including the emergence of cancerous and tropical diseases, disruption of the ocean food chain, rising sea levels, submersion of many islands, melting of small land-based glaciers, flooding in many low-lying coastal areas, loss of harvest, etc., are threatened by the destruction of the ozone layer and further warming of the earth's surface. Documents state that there is still time for international organizations, national governments, and local governments to deploy cutting-edge resources to balance the living environment and inspire intellectuals to live sustainably.

Keywords: Environmental pollution, morbidity, mortality, ozone shield, cancer, and tropical diseases.

FOREST RIGHTS ACT (FRA); ENVIRONMENT AND CLIMATE CHANGE

Juned Khan Komal
Programme Director
Society for Promotion of Wastelands Development (SPWD)
Email: juned@spwd.org; www.spwd.org, Mo: 99289 10051

The Forest Rights Act (FRA) 2006 was enacted to undo the historical injustice done to tribal and other indigenous communities by recognizing their right to forestland and forest resources, many saw it as a giant step forward towards real empowerment of small and marginal farmers. For them, forests provide so many benefits that they would stay guardians to help India in many of its missions, including augmenting water resources and combating climate change. The goods and services including timber, food, fodder, medicines, hydrological cycle, shelter, culture, aesthetic and recreation are provided by the forests. Growing development is causing threat to the existence of these useful and important ecosystems. It is necessary to formulate a correct conservation strategy and sound management plan for restoration of these critical ecosystems. Forests are fragile ecosystems which perform three major functions: productive, protective and regulative. With immense human-induced pressure on the ecosystem and the services it provisions, an alarming decrease of pollinators has affected the pollination of numerous wild and cultivated plants. The unpredictable weather pattern, increased frequencies of pest attacks like that of recent locust attacks in parts

of western India, rapid decline in numbers of pollinators like bees, birds and animals have a cascading effect on the ecosystem, economies and societies. Forests play a critical role in the world's desperate fight to combat climate change. A Land - forests, trees and grasses - act as a 'sink' for carbon dioxide (CO2); which means that it removes a part of the CO2 that is emitted through human activity. There is more to this. The fact is that land is also a source of emissions- burning of forests, along with other disturbances, adds to CO2 in the atmosphere. Therefore, scientists must estimate what is the amount sequestered by forests; and this estimation depends on a variety of complex factors.

Over a decade after its introduction, FRA's poor performance in terms of its implementation and poor quality of forest rights recognition has been a huge loss of opportunity. The main barriers with regard to implementation relate to the structural conditions, which define power of the state verses powerlessness of the scheduled tribes and other forest dependent communities. The most important part of letting indigenous and local communities stay in forests is not just the benefits they derive, but the larger contribution they are making at a time when the entire world is trying to find ways to increase forest cover to fight the disastrous impacts of climate change. Conservation of natural forests is therefore the best solution to fight global climate change and its local impacts. . Policymakers will have to confront the question of whether they want to follow business-as-usual approaches in which the centralizing tendencies in forest governance reassert themselves, or whether alternative models of decentralized, community-based, multi-objective forestry might be promoted as a longer term and environmentally more just solution. The government must bring in all these local and global evidences to stop the eviction of these people that would benefit its mission to meeting its climate goals committed to the Paris Climate Agreement.

SUSTAINABLE DEVELOPMENT, UNESCO GOALS AND CONSERVATION OF BIODIVERSITY

Dr. R.K. GARG
Vice-President, Indian Environmental Society, DELHI
Email: rk_garg10@yahoo.com

Generally, development and conservation had been regarded as conflicting ideas, as conservation is understood as the protection of resources, and development as the exploitation of resources. The concept of sustainable development emerged as a compromise between the notions of development and conservation, which came to be seen as interdependent issues. The term 'sustainability', a noun used in ecology to refer to a state or condition that can be maintained over an indefinite period, was introduced on a more regular basis than before into development discourses. At the start of the 1970s the term 'Sustainable Development' was coined, probably by Barbara Ward (Lady Jackson), founder of the International Institute for Environment and Development.

The United Nations commissioned a group of 22 people from developed and developing countries to identify long-term environmental strategies for the international community. This World The Commission on Environment and Development (WCED), better known as the Brundtland Commission, submitted its report, entitled Our common future, to the UN in 1987 (WCED 1987). The 193-Member United Nations General Assembly 'formally adopted the 2030 Agenda for Sustainable Development, along with a set of

bold new Global Goals, which Secretary-General Ban Ki-moon hailed as a universal, integrated and transformative vision for a better world'. The following Goals were identified: No Poverty, Zero Hunger, Good health and Well Being, Quality Education, Gender Equality, Clean Water and Sanitization, Affordable Clean Energy, Decent work and Economic Growth, Industry Innovation and Infrastructure, Reduced Inequalities, Sustainable Cities and Communities, Responsible Consumption and Production, Climate Action, Life Below Water, Life on Land, Peace, Justice and Strong Institutions and Partnerships for the Goals.

"Biodiversity" is most commonly used to replace the more clearly defined and long established terms, Species Diversity and Species Richness. Biologists most often define biodiversity as the "totality of genes, species and ecosystems of a region". An advantage of this definition is that it seems to describe most circumstances and presents a unified view of the traditional types of biological variety previously identified species. As per available data, the varieties of species living on the earth are 1753739. Out of the above species, 134781 are residing in India although surface area of India is 2% of the earth's surface. Wildlife Institute of India has divided it into ten biogeographical regions and twenty five biotic provinces. India is one of the twelve mega diversity nations of the world.

The paper deals details about the reasons of the Mega-B|iodiversity of India, Threats to biodiversity, reintroduction of Cheetah in India and concern of biologists for this as well as role of environmental education for achieving the goals of sustainable development in the country.

NATURE AT RISK: DO WE CARE

Maheep Bhatnagar
Rtd Professor and Head, Zoology Dept., Dean and Chairman, Faculty of Science,
Mohanlal Sukhadia University, Udaipur, India
Email: m.maheep@gmail.com

Scientists have already warned that mother earth is very moving 6th extinction. In last 550 years' earth has faced five extinctions, all natural and during this large number of species of flora and fauna have disappeared. But surely sixth extinction will be mistakes of mankind. Why to save Mother earth, because Mother Earth" its analogy to our mother a superior life-giving power. Without her we would not have life and a future. including food and water for all living things. Ecosystems support all life on Earth. Healthier the ecosystems, healthier the planet - and its people. Restoring our damaged ecosystems will help to end poverty, combat climate change and prevent mass extinction. Our planet is changing and we need to act quickly. The best way to save Mother Earth is by reducing our carbon footprint and carbon emissions. By setting sustainability goals and sticking to them, we can help make a difference in the planet's health. One can make a big difference in helping save the environment by Follow the three "R's" reduce, recycle and reuse to conserve natural resources and landfill space. Cut down on what you throw away. How can we care for mother earth? Start by planting trees, recycling, disposing wastes properly, and reducing the use of plastics that has a huge effect in the environment. By these simple actions, we could save many lives. We should save the mother earth so that our future generations can live in a safe environment. We can save the earth by saving trees, natural vegetation, water, natural resources, electricity, etc. We should strictly follow all the possible measures to control the environmental pollution and global warming.

Ten Simple Things to Save the Earth

1. Live by the mantra- Reduce, Reuse, and Recycle.
2. Keep our surroundings clean.
3. Plant more trees.
4. Conserve water and water bodies.
5. Educate people about the significance of conserving nature
6. Cycle more and drive fewer cars on the road.
7. Use less power consuming LED lights or use solar power
8. Volunteer your time to help clean things up
9. Give up single use plastic. ...
10. Eat seasonal & local
11. Help to save the bees. ...
12. Conserve energy.

We all can follow "Nurture Nature, go green, save green and breathe clean. If you cut a tree you cut down a life. Time among trees is never time wasted. Change and progress in sustaining mother earth is impossible. Without changing our minds, we cannot change our destiny.

APPLICATION OF SCIENCE AND TECHNOLOGY IN SAVING ENVIRONMENT

Dr Prakash Ramchandra Kondekar
Hon Director,Indian Institute of Naturopathy,Mumbai.
Email: kondekar.prakash@gmail.com

Earth came into existence some 4.54 billions of years ago.

The creation of the Earth has a bearing on the life on the Earth million years thereafter,in turn on Human beings.

All the earth Sciences taught the Mankind how to take care of the Nature.

FOSSIL Fuels and Global warming and Society

The burning of fossil fuels by humans is the largest source of emissions of Co2 ,contributes to global warming.By using Science and Technology,a Flameless gas stoves has been introduced in the developed countries which is more efficient,cleaner and ecofriendly hence there is a decrease in the air pollution. Saving the environment.

Life on Earth is based on carbon and water. Water is an excellent solvent.

All the researches ultimately lead to the enhancement of average healthy human longevity and environmental conservation.Animals play very important role in environmental conservation. Leaves falling into streams and rivers would have encouraged the growth of aquatic vegetation; this would have attracted grazing invertebrates and small fish that preyed on them; "Other part of Science relates to Human development which is defined "as the process of enlarging people's freedoms and opportunities and improving their well-being.

Science was therefore distinguished as the knowledge of nature.

Impact of Science on Society

It is interesting to note some of the thoughts of Dr Albert Einstein…

And I quote…" I believe in God-who reveals himself in the orderly harmony of the Universe. I believe that intelligence is manifested throughout all Nature.

Science must learn to leave in Harmony with all these magnificent gifts of God to Humanity.At one point of time,India use to import various food grains.But after the development of Agricultural Science,the Green Revolution took place in India and it became self sufficient in food grains.So Science and Technology should work together to make the Society happy.

The main benefit of INTERNET to the SOCIETY is the reduction in the use of papers for correspondence and record purpose.

Excess use of Mobile can also be harmful to the body.

The great masterly commentary on ShreemadBhagwadGeeta is Dnyaneshwari,written by Saint Dnyaneshwara,as also various other scriptures which are generally considered to be purely religious,are the most scientific and philosophical narrations of the principles or the universal laws of life and nature.

The journey from the Saint Dnyaneshwara to Einstein and beyond is replete with spirituality and closely linked to the Scientific realities and Scientific enquiries whose ultimate goal is the searching of Truth.

" Union of Science and Religion alone will bring peace to the Mankind"said Swami Vivekanand.It is further said that,one should not look at our great scriptures like,Vedas,Geeta,Upnishads,Dnyaneshwari or Gatha as mere religious scriptures but as the divine principles and laws of life and Scientific realities of the Nature. In last ten thousand years there are number of achievements because of science and technology of which the beneficiary is none other than man viz-a-viz society and environment.

The ultimate aim and goal of medical sciences is the attainment of optimum physical and mental health.

Science and Yoga

Non violence and Yoga is India's cultural heritage.Yoga deals with the 'inner world' the psyche and science with the 'outer world'which includes the body.Both are complimentary to each other.Yoga and Science can only emerge through sustained and serious joint effort by a man,a Scientists and Yoga teachers.

Computers and Mobile phones could store a lot many data which has saved lot many lives of trees by saving the paper.

Calculators and Computers reduced the thinking power of people,resulting in the less utilization of Brain Power in human beings.Hobbies like Drawing and painting among the children have became mechanical.

Thus Science, society and environment linkage will be very much essential for the health of the people and also health of the Society.Though Human beings with the help of Science and Technology can do many wounders as like in the past,in future also,fact remains that they cannot control the NATURE fully.

Hence the Scientists and religion Gurus will have to be brought together by the Universities, so as to have a healthy minds of the healthy people in the healthy Society with healthy environment.

CURRENT ENVIRONMENTAL ISSUES OF CLIMATE CHANGE AND THEIR IMPACTS ON THE EARTH: HOW A PERSON CAN CONTRIBUTE TO CLEAN ENVIRONMENT WITH BEHAVIOURAL CHANGE

Prof. Dr. Hiteshkumar A. Solanki
Head, Environmental Science Department,
Department of Botany, Bioinformatics & Climate Change Impacts Management,
Gujarat University, Ahmedabad – Gujarat
email: hasolanki@gujaratuniversity.ac.in

An environment is generally defined as the surroundings or conditions in which a person, animal or plant survives or operates. How does anyone navigate its way from regulatory compliance tasks which cost time, effort, and money to the bottom-line returns of sustainability and environmental stewardship? Firstly, we need to look at the issues first, and then list a myriad of strategies that bring the fruits of smart thinking to every good citizen. These environmental issues are Climate Change. Energy, Water, Biodiversity and Land Use, Chemicals, Toxics and Heavy Metals, Air Pollution, Waste Management, Ozone Layer Depletion, Oceans and Fisheries, Deforestation, etc. Discussing each of these issues in depth goes beyond the scope of this segment of current situation. However, if there are still disbelievers around the globe about our own human fingerprint as a cause of climate change and global warming. Climate change is the big environmental problem that humanity will face over the next decade, but it isn't the only one. We'll take a look at some of them from water shortages and loss of biodiversity to waste management and discuss the challenges we have ahead of us. The third decade of the 21st century has begun and the environmental challenges we have ahead of us, set out in the UN's 2030 Agenda for Sustainable Development, are many. This global plan of action adopted in 2015 puts forward specific measures to achieve a world that is fairer, more prosperous and more respectful of the environment within ten years. In this regard, the UN itself warns that we are running late, and the question now is whether we still have time to save the planet. Environmental issues are a warning of the upcoming disaster. If these issues are not controlled, there will soon be no life on earth.

There have been several issues around the world due to which there are various geo-political, social, and religious conflicts in the world where most of the time people choose violent acts to prove their point or get justice. Behavioural change is about altering habits and behaviours for the long term. The majority of research around environmental and health-related indicates that small changes can lead to enormous improvements in people's health and life expectancy. Non-violence is the one key that have very effective impact on human behaviour. Five stages of change have been conceptualized for a variety of problem behaviours. These five stages of change are precontemplation, contemplation, preparation, action, and maintenance. There are around 60 ways to implement behavioural change in human through Non-violence (Ahinsa).

Keywords: Climate Change, Environment, Geo-political, Behavioural Science, Health, Non-violence.

PARENTING IN THE ERA OF GLOBALIZATION

Dr. Devendra Balhara

We are all products of the environment and culture that raise us. The things inculcated in us tend to stay forever. Those who grow up in peaceful and nurturing environments become adults who value peace and strive to create it in the world around them. Parenting plays a critical role in shaping children's values, beliefs and behaviours: how will the child think, why will he think a particular way, how he'll act at home, how he'll act outside, what will he work for, what will he need, what his lifestyle will be like, what will he give back, all these depend on the environment he gets while growing up.

In that sense parenting becomes not solely about bringing a child into the world, giving them food, shelter, clothes or paying for them to go to school. It becomes a complex role, an ongoing process of guiding, nurturing, supporting and educating a child, teaching them how to oppose the wrongs and participate wholeheartedly in the things that act as a catalyst for the betterment of society.

Our times are characterised by change so it is only natural for our parenting techniques to change as well. A reader might question, at this stage, the need for the same. Our happiness indexes are going down, while crime rates are going up. Suicide rates have been increasing drastically and so are the rates of depression among the masses. So while we may have been on a steep upward trend for technological advancement, it would not be wrong to say that mentally our quality of life has taken a blow.

So we aim to start at the source and reshape parenting because it has far reaching impacts on not only children but also society as a whole. Since parents have a responsibility to not only work for their own child but also to give to the society their child will be becoming a part of because society will also play an equal part in shaping his trajectory, it becomes a cycle of giving and receiving. What you put out is what you end up getting back. If we put out good, we get good in return and society starts changing for the better for future generations. And it all starts with a changed parenting style - parenting for peace, harmony and sustainability.

The first change we need to make is to stop thinking that a child is the property of the parents, or a way for them to live their lost dreams. He is a unique individual with his own thoughts, feelings, and desires that the parents should acknowledge and treat with respect. Every child is born different, their skill set varies and so does their aptitude. Through analysing the things they do it's possible to identify what they are made for and to figure out their talent, whether they have aptitude for something or not and different techniques on how to develop it. All this should be the part of parenting styles which focus on nurturing and raising happy children in a calm and peaceful environment.

Now the next thing we need to alter is how we view secluded parenting. It's sort of become a trend, we view things in the light where there's every man for himself, but the closer we look, the more we see how it's harming us, especially when it comes to raising a child. We cannot have this outlook and think that it is only the parents or the teachers in school who educate the child. And so to speak, "it takes a village to raise a child."

It is a proverb that suggests that raising a child is not just the responsibility of the parents but rather a collective responsibility that involves the broader community. The emphasis is on the need for parents to

take an active role in the upbringing of children, even if they are not their own because it is all these people their own child will be interacting with and learning from.

To understand it better let's delve into our own Indian history of societal culture. Our societies were formed by 18 varnas and 36 biradaris with people ranging from all sorts of walks of life and diverse professions. Every village had people who could do different works and once you had folks who collectively added to the 72 arts of life, that's what made the essence of a society and society itself. A child's growth and development in such a system were influenced not only by their immediate family but also by the wider community in which they lived because it was normalised to think that children were not just the future of their families but also the future of their communities and society at large.

A major flaw of secluded parenting stems from the concept of increase of nuclear families over joint families. There tends to be limited diversity and lack of perspective which affects the child's outlook towards life. However the major affect it has is on mehtodical learning that forms the basics of cognitive and critical thinking and development in a child. A joint family system allowed the children to learn in harmony with nature, that is in the order of hearing, speaking, reading and writing. But instead of following this, we put the kids to writing first, reading later and then going reverse from there since parents cannot exactly give adequate time to their children in this economy. Either they rely on house-help or simply send them to various schools where a child's natural learning environment and pace gets disturbed.

There becomes a disconnect between the children and nature. They spend hours in schools, then tuitions, and coming back to the ever increasing technology, but there seems to be a lack of interaction with their surroundings. And to compensate for this, quality time with parents gets reduced to going to the mall or the movies and hide and seek with friends turns to video games. So it's up to us to change this, to not view it as the new normal because it's not.

Now another key point is about sustainability. India in its heart is the land of villages: villages that are self sufficient with trees and land and water and unlimited resources, meaning whatever it needs, it can get on its own. If our villages have schools at par with all the others with a common curriculum and children don't have to go out to different places every morning, it would save lacs of tonnes of petrol/diesel and energy while preventing unnecessary pollution from commute buses, motorcycles and cars. Society has a significant influence on children's lifestyles, including their consumption patterns and environmental behaviors. With uniform education in every village without any interference of money, a healthcare system of its own, and adequate job opportunities in the heart or around the place, it's only a matter of time that our schools become environment friendly, playing key role in global sustainability.

This kind of parenting will involve values like critical thinking, community building, compassion and empathy and will, without a doubt, increase our quality of life multifold by contributing to a better world for all. It is essential for creating a healthy society by building a strong foundation that rests on peace, harmony and sustainability. After all, everyone's good is our own.

MODIFY LIFE STYLE AND DEVELOPMENT MODEL TO SAVE EARTH

Dr. K.P. Talesra

Let us look at the realities of earth degradation, climate is fast changing on earth, level of sea is rising, glaciers are fast melting, carbon foot print is increasing, earthquacks and psunamies are frequent, intolerance and violence are sky rocketing, drinking water resources are drying up, rivers are polluted, forest cover is fast receding. The message of earth to us is loud and clear that it is degrading every second. If we really desire to save earth and not offering the lip sympathy only, we shall have to honestly analyse the factors causing damage to mother earth.

The causes are not far to seek. The consumeristic culture and life style, greed of man, the parameters of development, violence and non vegetarism, imperialistic nations waging wars etc are some of the culprits.

The natural question is, what is the way out? First and foremost is to redefine development. If GDP remains the only yard stick to measure development of a nation, we are in for worse days. Mine more, produce more, consume more, if remain a measure of progress we shall have no parking places on roads, no green cover on earth, no fresh air to breath and no peace of mind and ultimately no earth that can sustain life.

The only options are, to lead a life in harmony with nature, life that does not disturb ecology, adopt the principle of live and let live, take to vegetarianism. We should take hints from the life of Lord Mahaveer and his teachings to Sustain Mother Earth.

CRISIS (C) – RESPONSE (R) – TRANSITION (T) FRAMEWORK:

An integrated Sensemaking and Consensus building tool to facilitate
a multi-dimensional (Energy, Ecology, Economy & Technological) response
to humanity's existential predicament or Anthropocene

Sudhir Shetty
Founder: Global Crisis Response

Globalized Industrial Civilization (GIC) is premised on ecological abundance & macro-economic stability for its sustenance. But scientific evidence indicate that we have now entered an age of Anthropocene (or global resource scarcity & chaos) where disruptions may become a new norm. Collapse (abrupt or managed) of GIC is almost inevitable, partly on account of human nature and partly due to the momentum created by infrastructure lock-ins. As opposed to mainstream response (characterized by strategies of risk avoidance & mitigation) we at GCR acknowledge the higher risk probability of unmanaged collapse or contraction of GIC (much before Biospheric collapse triggered by Climate tipping points). Therefore we propose C-R-T Framework that prioritizes risk preparedness, risk management & deep adaptation. It is time that humanity actively choose between transition by design rather than by disaster.

INFLUENCE OF CLIMATE CHANGE ON HIMALAYAN GLACIERS

Anil V. Kulkarni
Divecha Centre for Climate Change,
Indian Institute of Science, Bangalore

The Himalayan mountain range is one of the significant water Towers of Asia and stores a large amount of snow and glaciers. Glaciers are ice masses slowly moving down the valley, generating runoff during summer. Moreover, the area experiences snowfall during winter and melts during summer. Therefore, water is supplied during hot and dry seasons, making many Himalayan rivers perennial. It has helped in sustaining Indian civilization in North India. However, water availability from these sources will significantly change due to the influence of climate, which will be further discussed during the presentation.

The Himalayan region is experiencing a higher rise in temperature than the global and Indian subcontinent means, influencing snow and glacier distribution in the Himalaya. It will have a profound effect on the availability of water in mountains and plains. Therefore, changes in the modern lifestyle are necessary to preserve the ecological balance of the Himalayan region. However traditional Indian way of living is well suited to conserve the Himalayan area, where panchbhut is worshipped, which restricts the overexploitation of natural resources. Therefore, modern scientific thoughts are well embedded in traditional Indian living, which will be further elaborated during the presentation.

EMPHASIZE ON ENVIRONMENTAL CONCERNS BY NATIONAL EDUCATION POLICY

Jyoti Panwar[1] and Dr. Sangeeta Rathore[2]
Department of Zoology ,B.N.University, Udaipur (Rajasthan)
Email: jyotisingh010683@gmail.com

Environmental education is the need of the hour. As the world's progressing in its environmental problems such as climate change, global warming, deforestation and pollution the need of environmental education is necessary. Different countries of the world have taken initiative towards environmental education for the masses so has India. Government of India formulated National Policy on Education (NPE) to promote and regulate education in India. In both rural and urban India, policy covers elementary education to higher education. In 1986,second National Policy on Education was broadcasted by Prime Minister Rajiv Gandhi . According to National Policy on Education, 1986 (NPE) “protection of the environment is a value which must form an integral part of the curriculum at all stages of education”. With the implementation of the National Policy on Education (NPE) 1986, Environmental Education has received greater attention in school education as well as at college level. The National Policy of Education (NPE) 1986 envisaged the protection of the environment as the core element of education at all levels it should be developed as one of the values among the children. The Policy as also recommended the creation of environmental consciousness among all ages starting with school education. Recently third National Education Policy approved by Prime Minister Narendra Modi known as NEP 2020. In new education policy 2020 sustainable development has been given.

We need to pay attention on global change to make environmental education more pertinent. A problem that causes a lack of change in students' attitudes is that they do not view environmental issues as their own life problems.

ENVIRONMENTAL FRIENDLY PRACTICES TO SAVE MOTHER EARTH

Dr. Sangeeta Rathore
Associate professor & Head Department of Zoology, B. N. University, Udaipur (Raj.)
Email: rathoresangeetaudr@gmail.com

Environment is surroundings in which organisms live or operates. Environment provides all the resources required for the existence of living beings. Environment is constantly changing with increase in global warming, natural disaster, weather patterns etc. Our planet is facing various types of environmental issues. These includes pollution, climate change, overpopulation waste disposal etc. We are surrounded by outdoor as well as indoor pollution. For many people the risks of health may be greater due to exposure of air pollution indoor than outdoor. We always blame government and system but now this is the time we should take initiative to save environment. The indoor air can get toxic with particulate matter like dust, smoke, allergens, mould and gases like VOCs(volatile organic compounds) along with chemical fumes from cooling and heating appliances. There are various measures to create a pollutant-free home like avoid using synthetic air fresheners, scented candles, switch to homemade cleaning products with natural ingredients like vinegar, borax, baking soda and essential oils. Raising awareness about water and waste water so that we can reuse in many other purposes . Recently ,plastic has become integral part of our life that is major cause of pollution so avoid plastic food packaging for day to day use. For outdoor pollution we should take these extra steps to reduce pollution. Plant and care for tress, drive less, pool car, use public transport, switch to electric car, conserve energy at home, at work, minimizing air emissions, water discharges, waste disposal and the dispersion of toxic substances, fostering the sustainable use of renewable resources.

Keywords: Environment, pollution, conserve energy.

अखण्ड व्रत विचार से जन्म लेगा स्वस्थ समाज

मुनि संबोध कुमार 'मेधांष'

सृष्टि का यह वीभत्स रूप क्यों है, क्यों ग्लेशियर पिघलकर समूची धरती को जलमग्न बनाने को आतुर है, क्यों सूरज की किरणें विटामिन डी परोसने के बजाय अनजाने मृत्यु की ओर धकेल रही है? प्रश्न अनगिनत है और प्रत्युत्तर निरा एक "मन की अनहद कामनाओं की सिद्धि के लिए किए असंवैधानिक पुरुषार्थ के परिणाम"। जब वातावरण विषाक्त होकर जीवन को तबाही के कठघरे में खड़ा करने लगे तो भगवान महावीर समाधान प्रदान करते हैं। भगवान महावीर का आप्त स्वर है–

"आयतुले पयासु"

सृष्टि के सभी प्राणियों को आत्मतुल्य समझो, हम इसे ब्रह्मास्त्र ही मान लें। सत्य, न्याय, पारस्परिकता, प्रेम, सद्भावना, अहिंसा इन शब्दों का अस्तित्व है इस सूत्र में। ये जो वैषम्य है हमारे आसपास मिट्टी, पानी, हवा में। यह केवल इसलिए है कि हम एक दूसरे के अस्तित्व को स्वीकार करने से कतराते हैं और इस समस्या के दरवाजे पर समाधान की दस्तक तब तक नहीं हो सकती जब तक हम चैतन्य को इस ब्रह्म विचार से प्रशिक्षित नहीं कर लेते कि 'सभी जीव जीना चाहते हैं, मरना कोई नहीं चाहता'। अहिंसा के बिना सह–अस्तित्व और सह–अस्तित्व के बिना अहिंसा कभी फलित नहीं हो सकते।

पर्यावरण रक्षा कवच है हमारी सृष्टि का और इसकी सुरक्षा में तब तक सेंध नहीं लग सकती जब तक व्रती समाज के सृजन का विचार कमजोर ना हो जाए, यह वह कुनबा होगा जो अपनी खुशियों के लिए औरों की प्रसन्नता की हत्या करने के बारे में कभी नहीं सोचता, अहंकार, क्रोध, ईर्ष्या, महत्त्वाकांक्षाओं के जमीन में करुणा, संवेदना, प्रेम को नहीं दफनाता। यही से बस यही से जन्म लेता है। भगवान महावीर का आर्ष स्वर जीवन में 'परस्परोग्रह जीवानाम'। जैन मुनि महाव्रती है। महाव्रती अर्थात् अखण्ड व्रत। अहिंसा, सत्य, अचौर्य, ब्रह्मचर्य, अपरिग्रह। चर्चित भाषा में जैन साधु–साध्वी छह काया के पालनहार होते हैं। यही सही है, अगर आप पृथ्वीकाय, अपकाय, तेजस्काय, वायुकाय, वनस्पतिकाय की अन्तः मस्ती को छिन नहीं रहे हैं, अगर आप किसी की प्रसन्नता के बीच राग–द्वेष की दीवार नहीं बना रहे हैं तो आप सभी जीवों के अभिभावक है। जैन आचार मीमांसा में प्रकृति के एक–एक तत्त्व के संरक्षण–संवर्धन के सूत्र निर्देशित हैं। जैन आगम कहते हैं हम जहां सांस ले रहे हैं वहां 'दत्त्वओ, खेत्तओ, कालो, भावो' द्रव्य क्षेत्र, काल और भाव के अनुरूप सभी जीवों से व्यवहार हो, यही मुनि जीवन का सर्वोच्च आदर्श है।

महात्मा गांधी अहिंसा के महान पक्षधर थे। उन्होंने अमेरिकी सेंट एलिजाबेथ एन सेटन (774–1821) को उद्धृत करते हुए लिखा है–Live Simply so that others may Simply Live. 'सहजता से जिए ताकि सभी सहजता से जी पाए। उपभोग की सीमाओं का तय होकर अपरिग्रह में लौटना यहीं से शुरू होता है। हम अपरिग्रह के बिना पर्यावरण के सौंदर्य की कल्पना नहीं कर सकते। यह नॉन रिसाइकल वाली चीजों के खरीद और उपभोग पर शिकंजा कसेगा। हम यहां उपभोक्तावाद की नहीं उपयोगितावाद की संभावनाएं तलाशेंगे।

दुनिया में औसत रूप में मांसाहारियों की अपेक्षा शाकाहारी 50–54 प्रतिशत कम है। यह भयावह वातावरण के जन्म के संकेत के लिए काफी है। खाद्य से जुड़े ग्रीन हाउस गैस उत्सर्जन में शाकाहारियों की तुलना में 99 से 102 प्रतिशत अधिक गैस उत्सर्जित करते हैं।

ये जो तापमान में अचानक वर्द्धमानता की झलक है, ये जो फसलों और कृषि पर अनचाहा असर है, यह जल जो अब पीने लायक नहीं रह पाया है, यह जो मानवीय सेहत हाशिए पर जा चुकी है, ये जो ध्रुवों पर बर्फ का पिघलकर पानी में बदलना है, यह संकेत है एक ऐसे भविष्य का जो मानव के अस्तित्व पर सवालिया निशान लगाएगा।

INFLUENCE OF DARWINISM'S ON THE ORIGIN OF SPECIES AND JAINISM'S PARASPAROPAGRAHO JIVĀNĀM IN MODERN CONTEXT.

Ms Varsha Shah

Charles Darwin (1809–1882) introduced historicity into philosophy of Biology instead of physics and chemistry. Darwin's explanation for this great unfolding of life through time–the theory of evolution by natural selection, transformed understanding of the living world, much as the ideas of Galileo, Newton, and Einstein revolutionized our understanding of the physical universe.

The evolutionary proposals (1859) that of naturalist Jean- Baptiste Lamarck, had endorsed linear evolution, a teleological march toward greater perfection that had been in vogue since Aristotle's concept of Scala Naturae (Natural Ladder).

In this respect Jainism has a similar but with a different stand. The scientific classification of beings based on the number of senses is exclusively an unique contribution of the Jainas which displays precisely all those features that are denied to the evolutionary process of Darwin's principle of Natural Selection or "Survival of the fittest" by both neo-Darwinists. The relationship between "soul" and "its state of living being" has been distinguished. There is no discrimination about the nature of soul (underlying entity) in all living being, the distinction being only in respect of the degree of their knowledge, intuition etc. owing to the difference in karmic veils that cover/distort them. The subtlest Bio-diversity, maintain the integrity and stability of the larger systems of which they are part.

The main theme of this article is to lighten the staggering problems like environmental issues that confront us and spark some thinking that will encourage us to become agents of change in the newly emerging world.

Keywords: Darwins and Neo-Darwinists, Scala Naturae, Survival of the fittest, Teleological goals, Hardy-Weinberg equilibrium, Ātma (underlying entity), Sthāvarkāyika-Jivās (immobile beings), Āgama, Sustainability, Ahiṃsā, Greed, Bio-diversity, Parasparopagraho jivānām, Ecology.

[2] Ms.Varsha Shah (Research Assistant), Centre for Studies in Jainism under the umbrella institute, K.J. Somaiya Institute of Dharma Studies.

GLOBAL ADAPTATION METHODS TO CLIMATE CHANGE

Ms.Vandana Paliwal
Research Scholar Department of botany B.N.University

Climate change is a long-lasting change in the weather arrays across tropics to polls. It is a global threat that has embarked on to put stress on various sectors. This study is aimed to conceptually engineer how climate variability is deteriorating the sustainability of diverse sectors worldwide. Specifically, the agricultural sector's vulnerability is a globally concerning scenario, as sufficient production and food supplies are threatened due to irreversible weather fluctuations. In turn, it is challenging the global feeding patterns, particularly in countries with agriculture as an integral part of their economy and total productivity. Climate change has also put the integrity and survival of many species at stake due to shifts in optimum temperature ranges, thereby accelerating biodiversity loss by progressively changing the ecosystem structures.. Secondary data is used to identify sustainability issues such as environmental, social, and economic viability. Therefore, mitigating the impacts of climate change must be of the utmost importance, and hence, this global threat requires global commitment to address its dreadful implications to ensure global Climate change is a long-lasting change in the weather arrays across tropics to polls. It is a global threat that has embarked on to put stress on various sectors. This study is aimed to conceptually engineer how climate variability is deteriorating the sustainability of diverse sectors worldwide. Specifically, the agricultural sector's vulnerability is a globally concerning scenario, as sufficient production and food supplies are threatened due to irreversible weather fluctuations. In turn, it is challenging the global feeding patterns, particularly in countries with agriculture as an integral part of their economy and total productivity. Climate change has also put the integrity and survival of many species at stake due to shifts in optimum temperature ranges, thereby accelerating biodiversity loss by progressively changing the ecosystem structures. This paper summarizes current thinking about planned adaptation. It starts with an explanation of key adaptation concepts, a description of the diversity of adaptation contexts, and a discussion of key prerequisites for effective adaptation. b

THE CONTRIBUTION OF IN VITRO TECHNOLOGY TO CONSERVE THREATENED PLANT SPECIES: A REVIEW

Dr Sunita Jain
Assistant Professor, Department of Botany, Bhupal Nobles' University, Udaipur.
Mail id: sunitajain130799@gmail.com, Mobile: 8003949351

The continuous loss of biodiversity has create a serious threat to the survival of mankind. Worldwide one third of the plant species are threatened The reason is increasing population, increasing market demand, overexploitation and habitat destruction. Biodiversity loss also been linked to climate change and can be regarded as a complex problem with no linear solutions. As the conservation of biodiversity is a global concern, several strategies including in situ and ex situ methods have been adopted. In vitro techniques have found increasing use in the conservation of genetic traits of endangered and commercially valuable plant species and this tendency is likely to continue as more and more species face risk of extinction. Plants have a special feature to reproduce asexually and through in vitro propagation methods, number of plantlets can be obtained in short time and space. There are limited publication relating conservation of threatened plant species. This review article highlights the role of in vitro techniques for the large scale multiplication and conservation of the same. It includes three main in vitro culture techniques, organogenesis ie. direct and indirect shoot regeneration and embryogenesis ; rhizogenesis and callogenesis. Cryopreservation is also an in vitro technique provides a cost

effective and long term conservation option for species with non-orthodox seeds. This work summarizes that in vitro technologies are potentially useful tools and can play an important role in the conservation of biodiversity. Long term storage of propagating material is challenging and the potential application of cryopreservation is significant in this area.

Keywords: Threatened species, micropropagation, cryopreservation, biodiversity conservation, in vitro technology.

पर्यावरण संकट की गंभीरता

प्रो. भगवती प्रकाश शर्मा

Email: Email: bpsharma131@yahoo.co.in

सृष्टि रचना से अब तक हमारे पर्यावरण व पारिस्थितिकी तंत्र के सम्मुख, आज जैसी गंभीर चुनौतियां कदाचित ही कभी उत्पन्न हुई होंगी। विगत शताब्दी में वायुमण्डल के औसत तापमान में 1 डिग्री सेन्टीग्रेड से अधिक की वृद्धि से आज समुद्र का जल स्तर 6–8 इंच बढ़ गया है। इससे पृथ्वी के तटीय क्षेत्रों के कई भाग व अनेक द्वीप जलमग्न हुये हैं। कई पादप व जन्तु प्रजातियाँ भी विलोपित हुयी हैं। फसलों की उत्पादकता प्रभावित हुयी है। इस संबंध में पर्यावरण बदलाव पर कार्यरत अन्तर्शासकीय पैनल द्वारा भी उत्तरोत्तर जिन गंभीर से गंभीरतम भाब्दों में चेतावनियाँ जारी की जा रही हैं, वे अत्यंत चिंताकारक हैं। विगत 100 वर्षों में बढ़े तापमान के कारण पिघलते हिमनदों (ग्लेशियर) व ध्रुवीय बर्फ के पिघलने से समुद्र का जल स्तर जो 6–8 इंच बढ़ गया है, वही अगले 100 वर्शों में 36 इंच बढ़ सकता है, यदि तापमान इसी गति से बढ़ता रहेगा तो पृथ्वी के समग्र बर्फ के पिघल जाने पर हमारी पृथ्वी पुनः जलमग्न हो जाएगी।

पर्यावरण परिवर्तन पर कार्यरत अन्तर्राष्ट्रीय पैनल की हाल की चेतावनी विश्व के संपूर्ण जनजीवन और समस्त जीव सृष्टि के लिये गंभीर संकटों के प्रति आगह करने वाली है। विश्व के 120 देशों के प्रतिनिधि के रूप में कार्यरत इण्टर गर्वमेन्टल पैनल ऑन क्लाइमेट चेन्ज, ने विश्व के बढ़ते तापमान, पिघलते हिमनदों और बढते सामुद्रिक जलस्तर के बारे में गंभीर चेतावनी दी है। विश्व के बढते तापमान के कारण दक्षिणी गोलार्द्ध में कृषि फसलों के जल्दी पक जाने से फसलों की उत्पादकता में भारी गिरावट आ सकती है और भारत सहित दक्षिणी गोलार्द्ध के कई देशों में खाद्य संकट उपजने की संभावनाएँ बढ़ जायेंगी। इस अन्तर्राष्ट्रीय पैनल के ताजा प्रतिवेदन के अनुसार पिछले 50 वर्षों में पृथ्वी के उत्तरी गोलार्द्ध में बर्फ की मात्रा आधी रह गई है। ऐसा भी अनुमान है कि आगामी 20 से 25 वर्षो में तापमान इसी तरह बढ़ता रहा तो, हिमालय के हिमनद पिघल सकते हैं और गंगा नदी मौसमी नदी में बदल सकती है। यह भी उल्लेखनीय है कि जहाँ 20 वीं शताब्दी में वातावरण के तापमान में वृद्धि के कारण समुद्र का जलस्तर प्रतिवर्ष 1.8 मि.मी. बढ़ रहा था, वहीं हाल के वर्षों में समुद्र का जलस्तर अब 3.2 मि.मी. वार्षिक की दर से बढ़ रहा है। बढ़ते तापमान से वायु मण्डल की नमी या आर्द्रता को धारण करने की क्षमता बढ़ जाती है। प्रति एक डिग्री तापमान वृद्धि से वायुमण्डल में आर्द्रता 7 प्रतिशत तक बढ़ जाती है।

वै ि वक वातावरण में बढ़ रही इस विशमता के परिणामस्वरूप जन जीवन व सम्पूर्ण जीव सृश्टि के लिये उपजते संकटों के प्रति आज सारा वि व गम्भीर रूप से चिन्ताग्रस्त है। इन्हीं चिन्ताओं के चलते प्रति वर्ष हो रहे 1992 के क्योटो प्रोटोकॉल व 2015 के पेरिस समझौते को छोड़ कर कोई सार्थक पहल नहीं हो पायी है। पेरिस समझौते में ग्रीन हाउस गैसों के उत्सर्जन में कमी की जो प्रतिबद्धतायें विविध राष्ट्रों ने की हैं उनसे भी तापमान में औद्योगीकरण प्रारम्भ होने के बाद हुयी वृद्धि को 2 डिग्री सेण्टीग्रेड की सीमा में रख पाना असम्भव होगा। इन प्रतिबद्धताओं के बाद भी तापमान 3.6 से 4.8 डिग्री सेण्टीग्रेड तो बढ़ेगा। इसके अत्यन्त गम्भीर दुष्परिणाम होंगे।

INTERNATIONAL CONFERENCE 22nd to 24th April 2023

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विज्ञान तीर्थ श्री शंखेश्वरपुरम पालीताणा पूजनीय आचार्य श्री लब्धि चन्द सागर जी महाराज साहब के आशीर्वाद द्वारा स्थापित एवं कार्यरत संस्थान है। आचार्य श्री की शुभेच्छा है कि इस संस्थान में विज्ञान की पृष्ठभूमि में जैन दर्शन की समझ को सशक्त किया जाए और इस हेतु जैन दर्शन और विज्ञान पर शोध को निरन्तर आगे बढ़ाया जाए। उद्देश्यों की पूर्ति हेतु जैन आचार्यों, संतों, श्रावकों, वैज्ञानिकों, दार्शनिकों आदि के लिए समय–समय पर गोष्ठियाँ भी संस्था द्वारा आयोजित की जाती है।

डॉ. डी.एस. कोठारी शोध एवं शिक्षा संस्थान, उदयपुर विश्व विख्यात वैज्ञानिक , मानवतावादी एंव महान शिक्षाविद् पद्म विभूषण डॉ. डी.एस. कोठारी के चिन्तन की परम्परा को आगे बढ़ाते हुए देश –विदेश के वैज्ञानिकों, विचारकों द्वारा स्थापित संस्था है। मानवीय कल्याण को दृष्टिगत रखते हुए शोध एवं शिक्षा के क्षेत्र में अनवरत नवाचार में सन्नद्ध है।

विज्ञान समिति उदयपुर, वर्ष 1959 में वैज्ञानिक डॉ. के.एल. कोठारी द्वारा स्थापित स्वैच्छिक संस्था जो विगत 64 वर्षों से विज्ञान लोकप्रियकरण, महिला सशक्तीकरण, ग्रामीण विकास, पशुपालन, वनीकरण, चिकित्सा, अभावग्रस्त वर्ग उन्नयन, दर्शन–विज्ञान–प्रबुद्ध वार्ताएँ, प्रतिभाशाली विद्यार्थियों में छात्रवृत्तियाँ वितरण जैसे अनेक कार्यों में अपने 250 से अधिक विशेषज्ञ समर्पित सदस्यों के माध्यम से अनवरत कार्यरत हैं।