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Writing
Competition
Topic: Sustainable environmental development
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Proceedings

of

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On

"Sustainable Environmental Development

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From the organizer's desk

Climate Change and our unsustainable lifestyles are a threat to future generations. How we deal with this effectively will be defined by how well the current and future generations are educated on solutions and handling of the crisis. The involvement of all sections of the society is critical as we move towards a sustainable society. World Environment Day is celebrated globally on 5th June. This year's theme is 'Only One Earth', which draws our attention towards playing our role effectively while living in perfect harmony with nature - without proving a burden on it. Keeping this in view online scientific competition was organized which was open for participation for all.

I hope that this competition shall provide a platform for exchange of innovative ideas and practices between all strata of the society and the stake holders

It is my pleasure to bring forth compendium on "Sustainable Environmental Development". A collection of short articles from a Scientific Writing Competition organized by our team from 15th May to 5th June, 2022.I on behalf of our team am grateful to all those who have contributed in the preparation and compilation of document.

Organizer's

Dr RS Sethi
Dr Amit Sehgal
Dr Shaikh Nasrul Islam
Dr AR Ahlawat

Message from editor in chief

In the present scenario, owing to growing environmental challenges, we need to change our ideas and attitudes towards planet earth which can be made possible only through education. In particular, the aim should be to gather the latest understanding of the issues related to transformations towards sustainable development; the frictions and bottlenecks that hinder transformations, on one hand, and the enabling factors that help to overcome them, on the other hand. I hope that this competition shall provide a platform for exchange of innovative ideas and practices between all strata of the society and the stake holders

I am happy to note "The science world" has organized a Scientific Writing Competition on "**Sustainable Environmental Development**" from 15th May to 5th June, 2022. A good number of participants have taken part in the competition and we had articles from a very diverse background. I wish the organizers all the very best.

Dr RS Sethi
Editor in Chief
The Science world a Monthly e Magazine

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Journey Towards Artificial Intelligent Home

Dr. Yogesh A. Chatur[1], Dr. Abhilasha Singh[2] and Dr. Manish Pandey[3]

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Earth is the only planet in the universe known to have life though search is going on. If we can compare the expansion of universe, the volume of Earth (our residential home) will be very small. This planet is harboring diverse life creatures since its evolution millions year ago. The human life in the seven continents has gone through numerous civilization and colonization which can be seen in footprints of history. The exponential population growth demanded more exploration of natural resources for human needs. The scientific discoveries in last two centuries have decreased the circumference of Earth; in addition to easy communication due to advances in satellite and IT sector. The abrupt utilization of resources has caused global warming leading to incidences of forest fire, avalanche, landslides, draught inflation and food insecurities. The international sister organization WHO-FAO-OIE along with UN are engaged in implementing the policies to upgrade the health facilities for sustainable development so that the disabilities due to emerging diseases, poor infrastructure and poverty could be reduced. The limitations of the discoveries are now being displaced worldwide in the form of pesticides and antibiotic residues along with antibacterial resistance while treating critical condition. The acaricidal resistance is acting as double edge sword responsible for enhancing the hazard of vector and vector borne diseases in livestock and human beings special in rural areas where cases are undiagnosed due to poor health infrastructure.

The prime movement should be attaining the stage of social equality, economic stability and satisfaction to enjoy life. The thought of 'Era of sustainable development' is need to imbibe in the population through effective and participatory involvement of all the 'human being'. Innovative agricultural farming to multiply the harvest yield under control environment to mitigate problem of land crisis and providing safe food without chemical and microbial residues by enforcing the organic farming is the need of hours. Limiting unnecessary use of resources and exploitation of artificial intelligence in each and every aspect could decrease pollution (Nti et al., 2022). The political will power, education, transfer of technologies, innovation of nano/biotechnological rapid solution for agricultural, medical

and pollution control need to in focus so that we can recreate, maintain and transfer safe place to live for coming generation even though they want search and project in space.

We all need to take this initiative and responsibility to care our Earth at local region to have effect on global level.

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Break the Bridge from Green to Grey

Prajjalita Shandilya

"Let us permit nature to have her way. She understands her business better than we do." These words being from Michel de Montaigne, it is time for us to understand that we have already impeded quite an extent in her businesses. In the era of sustainability, it is our responsibility to protect mother nature, or to retreat from activities that cause more harm than the mere benefit of fulfilling our needs like burning of fossil fuels, deforestation, improper sewage drainage, etc. There is no end to health issues despite the immense development in medical sciences, because we are consciously not stepping down from turning the greens into greys. Attaining environmental sustainability is a social, scientific as well as a political issue. The social dimension refers to an aware population about the concept of sustainability, which also shows active participation in guarding their immediate surroundings as well as that plays its part to pass on the information to the next generation. In this era of science, it is possible to find alternative solutions for every problematic dimension of any issue. And the political reference points to the Government, whose governance should assure conservation of flora and fauna, and implementation of strict punishment for those who break laws. The world is round, and if we don't take our steps ahead to plant rather than to cut, it won't be late when the heat will burn us up or the winter will freeze us to death. We need to commit ourselves to nurture mother nature rather than going to hillsides to preserve her in pictures on our smartphones. It was well said by Robert Swan, "The greatest threat to our planet is the belief that someone else will save it." It's however, not too soon nor late for the human race to act. Statistics are not necessary to imply how important sustainable development of the environment is, unless we care and desire to mask our planet with plastic and live with oxygen masks ourselves someday. Otherwise, it won't remain the survival of the fittest anymore, but a struggle for the entire species, just to breathe.

The Livestock Sector - 18th Sustainable Development Goal

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The Sustainable development goals are meant to represent a generally agreed vision of development that leads to a safe, just, and sustainable environment for all people. They are built on the premise that everyone, even countries, must take responsibility for their part in achieving this objective. The United Nations has developed 17 sustainability goals, known as the Sustainable Development Goals (SDGs), as part of Agenda 2030. The struggle against poverty and hunger, as well as free access to clean water, are among the objectives. They also want to promote responsible consumption and production in order to maintain the environment and ensure everyone's prosperity.

Animal health, welfare, and rights need to be addressed in the 18th SDG. Animal factors have been overlooked in talks about sustainable development, particularly the SDG food, water, sustainable consumption and production, conservation, and climate change. Land degradation, biodiversity loss, high greenhouse gas emissions, poor water quality, low land use efficiency, and epizootics have all been linked to the livestock sector, which covers about 30% of the earth's land surface. Despite this, it supports the lives and food security of approximately 700 million poor smallholders, accounting for 33 percent of global agricultural GDP. Livestock can graze on terrain that isn't ideal for growing crops, transforming low-quality roughage into protein for human consumption and aiding the nutrient cycle. In markets where credit and banking are underserved, they provide fertilizer and traction, as well as insurance and savings. Increases in efficiency have partially reduced the negative effects of increased livestock production. However, with expanding demand for animal products and intensifying repercussions on human health and the environment, it is now more vital than ever to assess the sector's trade-offs in various countries and production methods.

Livestock production not only contributes to environmental sustainability by converting waste energy from humans into highly nutritious animal-sourced foods, reducing organic waste and pollution around the planet, but it also provides food and nutrition security.

Sustainable livestock systems contribute to food security, economic development, environmental stewardship, and sociocultural demands, and are essential for attaining the

majority of the United Nations SDG. They are especially beneficial to human nutrition, health, and economic output. Hence, there is alarming need for inclusion of livestock under Sustainable Development Goals.

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Covid-19 Pandemic and Its Positive Impacts On Sustainable Environmental Development

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The current Coronavirus infection outbreak (COVID-19) has had a big impact on a lot of people's lives. The COVID-19 pandemic has had a large impact on global greenhouse gas emissions, and the short-term lessons learned can be extremely useful in developing successful strategies for long-term environmental and energy challenges. The worldwide outbreak of coronavirus 2019 (COVID-19) has posed serious threats to human health, the environment, energy, and the economy (Chakraborty and Maity, 2020). The strict measures taken to control the spread of COVID-19 resulted in a considerable slowdown in economic activity, which had an impact on the environment by reducing greenhouse gas (GHG) emissions, notably reduced CO_2 levels in the atmosphere. A viable recovery plan is also offered in the context of sustainable environmental and energy development. The effects of such lockdowns have been remarkable, with significant reductions in pollution levels; for example, greenhouse gas emissions, nitrogen dioxide, black carbon, and water pollution have all decreased dramatically, and as a result, water canals have become more transparent than they were prior to the lockdown (Tobías *et al*., 2020; Wang and Su, 2020; Zambrano-Monserrate *et al*., 2020). Similarly, during India's lockdown, the surface water quality in the Lake improved dramatically, with suspended particle matter (SPM) dropping by 15.9% compared to the pre-lockdown phase. The Ganga, India's holy river, is one of the world's most polluted rivers. The water quality of the Ganga River has improved by 40–50 percent, according to real-time water analysis by the Central Pollution Control Board of India. The aquatic life greatly benefits from clean rivers and other bodies of water. Since the lockdown was implemented, many creatures have returned to their natural habitats. Finally, the analysis finishes with an analytical evaluation of the obstacles and future outlook for sustainable environmental development, as well as an assessment of the global environmental and energy ramifications. COVID-19 has beneficial environmental effects that may lead to future behavioural adjustments that will help us achieve positive environmental changes.Waste products from consumption, heating, agriculture, mining, manufacturing, transportation, and

other human activities will deteriorate the environment if pollution is not controlled. As a result, there is an urgent need for suitable policy implementation towards controlling environmental degradation.

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One Earth and One Health

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Introduction

The term environment describes the sum total of physical and biotic conditions influencing the responses organisms in terms of their life, natural behaviour, growth, reproduction and development (Douglas and Holland, 1947). Human beings are co-existing with other lives such as plants and animals in the ecosystem. Thus, the response of one influence the response of another on earth.

Sustainable Environment

Pollution and environmental degradation due to anthropogenic activities resulted many environmental issues such as global warming, heat stress, acid rain, ozone depletion, damage to ecosystems, scarcity and contamination of natural resources. This has serious effects on all lives on earth (i.e.) human, animal and plant health. Thus, there has been major focus on "environmental sustainability" in recent days. The concept is "maintenance of natural capital" i.e., the current generation needs to meet their needs by keeping in mind to preserve environmental health, so that the future generation does not get affected (John, 2011).

One Health Focus

Biodiversity refers to the presence of a variety of plants, animals and microorganisms in a geographical area. This maintains the ecological balance such as improvement of soil quality, formation of a healthy ecosystem, reduces the risks of natural disasters such as soil erosion and climate change (Manisha, 2022). Deforestation and climate change as a result of anthropogenic activities have a serious effect on the availability (both the quality and quantity) of natural resources such as air and water. The growing human population encroaches the wildlife habitats, resulted in human and wildlife conflicts.

Animals play a major role in the ecosystem. Ruminants transform fiber in the pasture into a protein with high a biological value. They serve the society in many ways, such as livestock, pet animals/birds, companions, entertainers, food animals, draught animals and military, etc., Climate change leads to immune suppression and increases the incidence of

infectious and/or zoonotic diseases (60% of emerging infectious diseases are zoonotic in nature) (Johnes *et al*., 2008).

Conclusion

Thus, the health of plants, animals and the environment are interrelated. So, the concept of one health and its implications is foremost essential for sustainable environment development. People need to focus on biodiversity preservation, reuse and regenerate concepts, design any new technology with the view to environmental impacts, minimize pollution and preserve animal health and productivity for sustainable environmental production by keeping in view of ecological, biological and socio-economic views.

" One Earth; One health"

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Sustainable Environmental Development: Challenges and Concerns

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Human wellbeing is closely linked to the health of the environment. Economy and environment are directly related and in the process of economic development, the environmental problems have been ignored or neglected to some degree. Now, the need of the hour is to concentrate on sustainable development. Over the years now we have begun to experience the long-term consequences of exponential industrial growth and energy, tacking environmental sustainability has now become the most compelling and pressing global policy challenge use. It is high time to act to reverse these effects and prevent further damage, ensuring we have healthy places to live for generations to come.

We may in near future be facing threat of environmental doom due to ever widening gap between economic growth and environment conservation. **Environmental sustainability** is the responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future. Both official and independent assessments point to some persistent issues that mandate our immediate attention viz **climate change, natural resource use, waste production, water pollution, deforestation, air pollution, overfishing.**

For some years now air pollution and environmental sustainability are great concerns in **India is the 5th most vulnerable to climate change globally.21 of the world's 30 most polluted cities are in India (IQ Air Report, 2020).** NITI Aayog (2018) estimates that more than 600 million Indians will face 'acute water shortages' in coming years. Natural ecosystems are under tremendous pressure and decline can be witnessed across most of the country with exceptions only in the case of some protected areas and community conserved areas.

Exponential population growth has led to increased farming, which leads to greater greenhouse gas emissions and deforestation. Industrial and technological growth means we need more power than ever. Yet our planet is reaching a breaking point. We are beginning to see the consequences of global warming on ecosystems and communities. That's why now

more than ever businesses need to invest in environmentally sustainable and socially responsible practices, like using clean energy and paying living wages, to secure a livable future.

Achieving goal towards environment sustainability will require specific targets and actions, and also indicators to assess levels of success and failure. Reading about the challenges facing the environment can feel daunting. Yet there's still hope we have to view ourselves as custodians of nature and recognize that goals cannot be achieved without public mobilization and pressure.

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Role Of Animal Products: Ancient Ayurveda to Modern Medicine Developments

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The concept of sustainable environmental development was emphasized by UNCED. In it the need of the present generation without compromising the ability of future generation to meet their own needs. In this article we discuss on how animal product used many year ago in ayurveda and how Current Status of Use of Animals for Human Medicine which definitely helps in to understand one more concept of sustainable environmental development.

Ancient ayurveda by using animal product

The term Ayurveda comprises two words – *ayu* (life) and *veda* (knowledge), thus, deals with various aspects related to health and wellbeing in their diverse aspects In many literature of Ayurveda is full of medicines or formulations made up of animal products. Substances, which are used in medicine and are derived from animals, are grouped under the material derived from animals. There are hundreds of such formulations in Ayurveda, which utilize a variety of animal products. These animal products are much diverse in their habitat of origin and comprise from marine, aquatic, terrestrial or avian species. In terrestrial animals, the products from wild as well as from domestic animals are used in medicine. Among a wide variety of products derived from animals and used in medicine, commonly utilized substances are honey, milk and its derivatives, bile, fat, bone marrow, blood, flesh, feces, urine, skin, semen, ligaments, bones, shell, horn and feathers. Along with many usages of animal substances as medicine, Ayurveda also have developed certain ways of involving animals in human health care without causing harm to them. These approaches are unique to Ayurveda and require their revalidation in view of current science to establish the concept of sustainable medicine.

Current Status of Use of Animals for Human Medicine

Among all prevalent medical systems perhaps Ayurveda is the only system, which has documented so extensively the properties of animals, birds, insects and utilized this knowledge in therapeutics and dietary management. Use of animals and their derivatives as a part of the medicine meant for human use or as a part of the experimental and exploratory studies meant for evolving new researches supposed to be used is solving many of the still

unresolved mysteries of human biology has largely been criticized on human, ethical and environmental grounds. Unscrupulous usage of animal products in TM has led to many undesirable consequences including illegal trafficking of animal products. Pocking of animals for their medicinally important parts has brought many of the wild species under the red data book, for a possibility of their extinction. Many genera and species of wild animals have been considered at the brim of extinction as a consequence of overexploitation either of their own or of their habitat. Worst sufferers of illegal trafficking for animal derivatives are rhinoceros for horn, reindeer for antlers, elephant for tusk, tiger for bone, peacock for feathers and musk deer for musk. TCM has largely been criticized by the world community for its unscrupulous use of animal products in many of its formulations.

The resultant threat upon wild animals was well perceived by international community. IUCN (International Union for Conservation of Nature and Natural Resources) maintained an international list called as red data book, which contains the species under perceived risk. As a remedial measure many countries around the world have banned the formulations, which contain animal parts or the products.

Has Sustainable Environmental Development Become a Technological Concern?

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Introduction

The conventional meaning of sustainable development described it, as the ways of preserving the natural resources and global ecosystems for the betterment of mankind keeping in note the present and future needs. According to UNESCO, sustainable development touches four dimensions viz. society, environment, culture and economy; which are correlated with each rather than being separate components. But this viewpoint has changed quite a lot in these years covering new fields of research and technologies.

Introduction of artificial intelligence can fight climate change and build a sustainable world. Modern era and the use of sophisticated gadgets has switch to creation of new thoughts and ideas each day for a better future. With the growing threat of global warming, the world is going to face serious disasters if not taken into concern. AI can be used to measure the global pollutant emissions as per day basis and then estimated its controls. Further, this data and basic analysis can forecast the future insights that can reduce the harmful impacts. And after analysing and measuring the results we can implement suitable methods to reduce the environmental hazards.

Use of Artificial Intelligence in obtaining Environmental Sustainability

AI plays an important role not only in the field of sustainable development but also in preservation of biodiversity. AI provides measures to accelerate global efforts to combat environmental challenges. It is evident of the fact that we are using AI robots like Alexa and Siri to check weather forecast. Google has been using AI databases model to calculate energy resources and carbon emissions. Carbon tracker is being used in coal plants using AI satellite imagery. AI powered robots can be used to monitor pollution levels, temperature and pH controls. Smart sensors can be used to track illegal environmental damages such as overconsumption of resources, coal mining, traffic flows, illegal fishing, etc. It can also be used to monitor and track records of the endemic species, land use, forest cover, precipitation levels and all other components of biodiversity. AI meters can be used to detect the upcoming natural disasters. Prognostic software can be developed to keep an eye on anti-poaching units. AI usage can be summarized in up gradation of environmental monitoring, enhance biodiversity conservation, sustainable supply chains, disease prediction and conservation of energy grids

Conclusion

AI is already shaping by empowering human and systems as per our needs to make more pronounced work towards creating a healthier planet. If used sensibly, AI can create

wonders together with strong domain knowledge. Equalized potential of AI and human efforts can combat every environmental issue.

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Sustainable Environmental Development

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

Planet earth has existed for millennia, providing its inhabitants with fresh air, water, fossil fuels such as coal, gasoline for energy and electricity production, mineral ores such as iron, aluminum for industrial uses, sand and stone for construction purposes, timber for furniture and housing, fertile land for crop production, river and sea for aquatic farming. Mankind depends on the environment for its existence.

While mother earth has been generous, over exploitation of its resources by humans has led to deleterious effects. India is a leading contributor to global warming. Regular burning of fossil fuels (coal, petroleum, natural gas) for transportation, industrial, commercial or agricultural purposes has led to accumulation of lethal gases- carbon dioxide, nitrous oxide, methane, ozone, fluorinated carbons termed greenhouse gases (GHGs) in the atmosphere. These GHGs traps more of the sun's heat and increases the atmospheric temperature that has led to melting of the artic glaciers and rising of sea level, which disturbs geological patterns leading to natural disasters. The Paris Agreement in 2015 has pledged to limit global warming well below 2°C and pursue efforts to limit it to 1.5°C.

Reducing our carbon foot print is not only our duty but also a goal. At the community level, it can be pursued by switching off electric power supply when not in use, switching to alternate energy sources such as solar, wind or water generated, use of public transport, electric vehicles, rain water harvesting etc. At school level, creating awareness through celebration of world environment day on June 5th, encouraging planting of trees, cleaning of littered waste etc. can be carried out. At state level effluent treatment, planned urbanization, sustainable architecture to increase green cover and policy making at national level is essential. At the research level, drought resilient crops, oil spillage consuming bacteria to curb pollution, hydrogen as energy source are being explored.

Biodiversity loss due to habitat destruction is an imminent byproduct of global warming due to illicit construction activities in eco-sensitive zones and ocean acidification. It can be prevented by planned tourism, rethinking mining and hydroelectric projects and

promoting organic agriculture. Climatic variation leading to reduction in crop yield has resulted in food insecurity, UV associated skin cancers and viral outbreaks such as COVID 19, Nipah, Zika, Ebola and other hemorrhagic fevers.

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Importance And Steps for the Development of A Sustainable Environment For A Better Future

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Introduction

Environmental sustainability, in accordance to the United Nations (UN) World Commission on Environment and Development is defined as functioning in a way that guarantees that future generations have the natural resources, they need to live a life that is equal to, if not better than, present generations. It is also defined as repairing the tumultuous relationship that exists between the planet's two most complex systems: human civilization and the living world.

Why is sustainable development important?

The prime goal of sustainable development is to acquire harmony between environmental sustainability, economic sustainability, and socio-political sustainability. Sustainable development is important because it constantly urges us to conserve and increase our resources by gradually altering how we produce and utilize technological advancements.

It is important because it helps in preventing environmental deterioration and puts more emphasis on environmental conservation.

To prevent overexploitation of natural resources, the creation of a sustainable environment is necessary.

Goals of sustainable development

Poverty must be eradicated.

Elimination of hunger.

Establishing a healthy lifestyle and a sense of well-being.

Ensure high-quality education.

Gender equality must be enforced.

Improved sanitation and clean water.

Increase the availability of low-cost, clean energy.

Assist in the creation of decent jobs and economic growth.

Increase the amount of industry, innovation, and infrastructure available.

Inequality should be reduced.

Mobilize cities and communities to be more Sustainable.

Responsible consumption and production.

Plan for climate action.

Create a submerged life.

Enhance land life.

Ensure that there is peace, justice, and well-functioning institutions.

Building partnerships to achieve the goals.

Steps to ensure the development of a sustainable environment

Conservation of energy.

Reduce your meat consumption.

Reusable alternatives should be used.

Eliminate the use of paper.

Utilize renewable energy sources.

Recycle and reuse.

Grow your own vegetables and fruits.

Conserve water.

Food should never be wasted.

Wear eco-friendly apparel.

Make use of eco-friendly cleaning supplies.

Conclusion

It is critical to conserve resources in order to provide a brighter future for future generations. Furthermore, creating a sustainable environment aid in the creation of a better balance between nature and society, reducing the risk of economic and social instability.

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Sustainable Environmental Development

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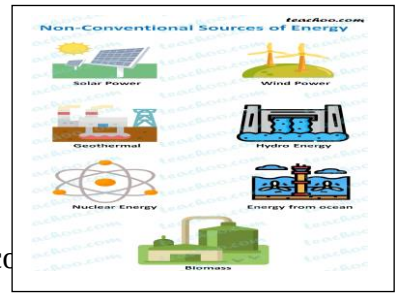
"Only one Earth"

Economic process of world countries is directly affected by environmental destruction. pollution erosion, ozone layer's becoming thin, dangerous flooding increasing in number due to the destruction of settlements and climate changes altogether have a bad effect on people's lives. Environmental sustainability and development are two essential elements in development planning, and in order to enjoy sustainable development we should firm industrial development based on the concept of environmental sustainability.

Sustainability and development need to go hand in hand. If generated waste by people not properly manage is a burden to the environment – single use plastic is an evident example of this use-and-throw culture of waste generation we have developed over the years. As economy poses around environment, and also the economy in general is impacted by climate change and its mitigation. This creates a challenge and also an underlying opportunity.

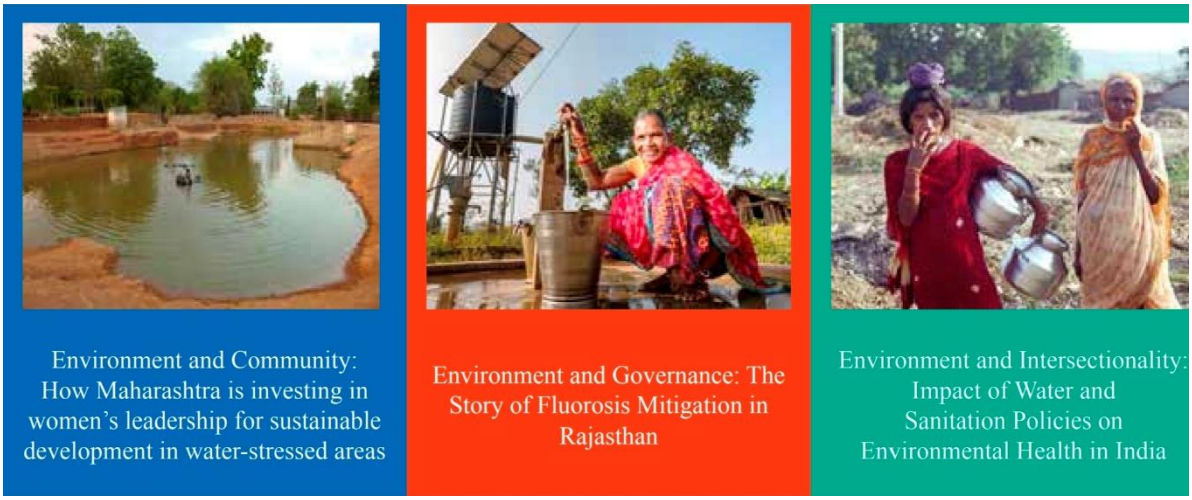


Strategies for Sustainable Environment Development:

Use of

- Non-conventional Sources of Energy
- LPG, Gobar Gas in Rural Areas:
- CNG in Urban Areas: lowered air pollution and the air has becc
- Wind Power: In areas where speed of wind is usually high, wind mills can provide electricity without any adverse impact on the environment.
- Solar Power through Photovoltaic Cells
- Mini-hydel Plants:
- Bio composting
- Bio-pest Control
- LED bulb for reducing Co2 emission step taken by Govt of India through UJALA scheme

Sustainability requires coordinated action for the global commons. India's efforts have recognised this inter-dependence.Through the International Solar Alliance, India's aim is **''One Sun, One World, One Grid''.**



Sustainable development is development that meets the need of the present generation without compromising the ability of the future generation to meet their own needs. Promotion of natural resources, conservation, preserving regenerative capacity of ecological system and avoiding the imposition of environmental risks on future generations would lead to sustainable development.

Recently the United Nations Human Rights Council has unanimously voted for recognising a clean, healthy and sustainable environment as a universal right in Geneva, Switzerland.

Government of India have launched E- Amrit portal for "**Zero- Emission Vehicle Transition Council (ZEVTC)"**

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Mitigating Green House Gas Emission: A Fight for Sustainable Environmental Development

The world has been fighting for decades now to win over environmental pollution. Humans have been contributing thoroughly towards production of Green House Gases (GHGs) which have resulted in extreme climatic conditions. The major GHGs are Nitrous oxide, Carbon dioxide, Methane and Fluorinated gases. These GHGs emitted mainly out of anthropogenic activities built up in the atmosphere, stay for hundreds of years and warm our climate, affecting the atmosphere, ocean, land and soil. Taking India into consideration, unbearable heat waves reaching 47°C in Delhi this year and extreme rainfall with devastating flood situations, sweeping off an entire railway station in Assam speak volumes of the continuation of "Climate Crisis".

There is no single way of mitigating climate change. We need to have a holistic approach towards sustainable environmental development. Following points should be noted:

> It all begins with our personal choices, using public transport or driving cars that uses less gasoline, setting up of solar panels to meet household energy needs, carrying our own paper bags to market are simple choices we can make to reduce individual 'carbon footprint'.

> Cities play tremendous role in controlling environmental pollution. Concepts of 'Urban forest', 'car pool' and 'urban regeneration' which include the concept of replacing concrete with ecofriendly materials like recycled steel, plant based polyurethane rigid foam, Hempcrete etc.should be encouraged which shall appreciable reduce carbon emission.

> GHG emission from agricultural sector accounts for about 25.5% of total anthropogenic emission. It has been estimated that 18% of the annual GHG emission comes from different livestock and 37% of CH_4, which is 21 times more potent than CO_2, comes from fermentative processes in ruminants (McAllister et al., 2011). This is why measures to mitigate CH_4 emission from ruminants needs to be taken up. Few strategies to lower CH_4 from ruminants are as follows:

- Improved genetic selection of animals
- Strategic feeding including supplementations of essential oil and ionophore
- Defaunation of rumen
- Immunization against methanogen

There are various other strategies to reduce GHGs emission from the planet other than the ways sited above. All we need to be is more sensible and judicial with our actions, "making sustainable living the Default Option".

We often at times wonder how our air, trees and mountains were years ago and wish to live back in those times. Is there any way we can breathe in the freshest of air again? The answer is "yes". Scientists say, environment cautious actions for 10 years can revive back earth to its younger self. The government has to play an important role in delivering people transformable options that are affordable and attractive. There is no way men can save the environment other than to join hands to celebrate, protect and heal the planet. After all, we have "only one earth" to call home.

Sustainable Environment Development

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Environmental sustainability is defined as responsible interaction with the environment to avoid depletion or degradation of natural resources and allow for long-term environmental quality. The practice of environmental sustainability helps to ensure that the needs of today's population are met without affecting the ability of future generations to meet their needs.

Important measures for sustainable environmental development include,

1. **Technology**

Technology which is locally adaptable, eco-friendly, resource efficient and culturally suitable should be considered.It mostly involves local resources and local labour. The technology should use less of resources and should produce minimum waste.**Indigenous technologies** are more useful, cost-effective and sustainable. Nature is often taken as a model, using the natural conditions of that region as its components. This concept is known as **"design with nature".**E.g., using Gobar gas instead of petroleum fuels.

2. **Reduce, Reuse, and Recycle Approach**

The 3-R approach advocating minimization of resource use, using them again and again instead of passing it on to the waste stream and recycling the materials goes a long way in achieving the goals of sustainability. It reduces pressure on our resources as well as reduces waste generation and pollution.

3. **Promoting Environmental Education and Awareness**

Making environmental education subject right from the school stage, will greatly help in changing the thinking pattern and attitude of people towards our earth and the environment. 'Earth thinking' will gradually get incorporated in our thinking and action which will greatly help in transforming our lifestyles to sustainable ones. E.g., Practising of Silvi pasture farming.

4. **Resource Utilization as Per Carrying Capacity**

Sustainability of a system depends largely upon the carrying capacity of the system. If the carrying capacity of a system is crossed (say, by over exploitation of a resource), environmental degradation starts and continues till it reaches a point of no return.In order to attain sustainability, Consumption should not exceed regeneration and changes should not be

allowed to occur beyond the tolerance capacity of the system. E.g., In-situ and Ex-situ conservation of Plants and animals

5. Improving Quality of Life Including Social, Cultural and Economic Dimensions

Development should focus on sharing of benefits between the rich and the poor. The tribal, ethnic people and their cultural heritage should also be conserved. Strong community participation should be there in policy and practice. Population growth should be stabilized.

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Mitigation Of Environmental Stress by Seed Priming

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Abiotic & biotic stresses and environmental pollutions are the main constraints of seed germination, radicle emergence and vigor of seedling, which ultimately reduce crop yield and productivity. These unfavorable conditions affect plant growth and crop yield by delaying the start of germination, reducing its growth rate and reducing availability of nutrients from soil. There exist a lot of strategies which can be used for enhancing crop yield sustainably under different stress conditions. Among these, Seed priming is one of the most effective strategies to enhance seed germination and crop yield. Seed priming is a pre-sowing treatment which leads to a physiological state that enables seed to germinate more efficiently. Seed priming is an alternative, low cost, and feasible technique, which can improve various abiotic & biotic stress tolerances through enhanced and advanced biochemical and physiological changes in seed. Seed priming also activates certain antioxidant enzymes like superoxide dismutase (SOD), peroxidase (POD), catalase (CAT) and also other useful osmo-protectants like proline, soluble sugar, soluble proteins, etc. which strengthen the stress tolerance capacity inside the seeds as well as growing plant. Seed priming emerges as an excellent technology for combating detrimental effects of abiotic & biotic stress in crops without much influencing its fitness and vigor. Different methods of Priming have advantages and disadvantages and may not all be equally profitable to use in different crops. In general, chemical treatments have been used more often and more effectively than biological treatments. But some biological priming method's used in combination with physical &chemical priming methods for mitigating stress.

"Sustainable Development and The Environment"

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In addition to social and economic concerns, the environment has been acknowledged for a long time as a crucial pillar of sustainable development. However, since the economic crisis, politicians have shifted their focus to the promotion of economic growth, and some view environmental conservation as an obstacle to "development." Compared to decisions designed to promote economic growth that provide a clear and positive vision of the benefits for at least some members of society while ignoring the negative effects, arguments that seek to convince society of the monetary or non-monetary benefits of healthy ecosystems have arguably been much less successful. Researchers have long stressed the importance of decoupling economic growth from any negative environmental impacts that may result from that growth, so that the latter can continue without jeopardizing the former. The United Kingdom, a developed nation with one of the highest net debts (over 90 percent of GDP), has emphasized that "economic and environmental performance must go hand-in-hand" and that the environment underpins economic activity and prosperity (Everett et al., 2010). Therefore, they must be coupled positively, as a healthy environment promotes livelihood and well-being. The ecosystem goods and services approach has also sought to emphasize the importance of the environment in sustaining human livelihood and happiness. The term "sustainability" will emphasize the environment within the context of sustainable development, in particular the progress made or not in decoupling economic growth from any negative impact on the environment and how the environment supports livelihood, well-being, and economic growth. Specific interventions should focus on technical, policy, and management interventions designed to facilitate this decoupling, in addition to methods for measuring environmental impact.

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Environmental Issues in India and The Way Forward for Sustainable Development

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Introduction

The term "environment" refers to all external factors that surround man, whether living and non-living, material, and non-material. Environment, in its modern sense, encompasses not only the water, air, and soil that make up our surroundings, but also the social and economic conditions in which we live. Supply of resources, sustenance of life, aesthetic value, and assimilation of waste generated by various production and consuming activities are the four major functions of the environment.

Environmental issues in India

Factors such as population expansion, urbanization, industrialization, and poverty, among others, are causing environmental damage in India (Agrawal, 2009). Degrading air quality index, rampant environmental degradation, loss of biodiversity, urbanization in the Himalayas, loss of ecosystem resilience, lack of waste management, depletion of resources (land, air, water), and developing water scarcity are only a few of India's serious environmental concerns (Smil, 2000).

Initiatives to tackle environmental degradation

India's government has taken a number of initiatives to protect the environment. Swachh Bharat Mission, Green Skill Development Programme, NamamiGange Programme, Compensatory Afforestation Fund Act (CAMPA), National Mission for Green India, National River Conservation Programme, and Conservation of Natural Resources and Ecosystems are just a few of them (Jain, 2021).

Sustainable development goals and measures taken for implementation in India

"Sustainable Development" is defined as "development that serves the demands of the present generation without jeopardizing future generations' needs." The Brundtland Commission proposed this term in their 1987 report "Our Common Future." It asks for a deliberate effort to create an ecosystem that is inclusive, sustainable, and resilient for people and the earth (UNESCO, 2021). The main characteristics of sustainable development include

increased per capita income, wise use of natural resources, and resource preservation for future generations. As part of the United Nations 2030 Agenda, the United Nations approved 17 Sustainable Development Goals (SDG) and 169 targets to address the global environmental catastrophe, which includes global warming, climate change, and ozone layer depletion. The newly founded NITI (National Institution for Transforming India) Aayog, which replaced India's 65-year-old Planning Commission, is in charge of organizing SDGs across the country. In addition, the Ministry of Statistics and Programme Implementation is working on developing important indicators to track the progress of the SDGs.

Challenges in Attaining SDGs For India

The major challenges for attaining SDG in India includes lack of suitable indicators to effectively assess the progress of SDGs, huge funding shortfall that hinders the progress of attaining SDGs, limited manpower for monitoring &ownership of implementation process, Incomplete coverage of administrative data is yet another factor that has hampered the measurement of progress (Parida*et al.*, 2022).

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Sustainable Environmental Development

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The overall planetary inheritance and the sum of all resources are characterized as the environment. It is the inter-relationship between all the biotic (all living elements- birds, animals and plants, forests, fisheries) and abiotic factors (air, water, land rocks and sunlight) that influence each other. The environment serves four purposes: it provides resources, absorbs waste, supports life by providing genetic and bio variability, and offers aesthetic benefits.

The environment has been put under tremendous strain as a result of rapid population growth, affluent demand, and industrialization. Our country's development projects have put enormous strain on its scarce natural resources, as well as affecting human health and well-being. The threat to the environment has two dimensions: the threat of environmental devastation caused by poverty, and the risk of pollution caused by prosperity and a fast developing industries. Through various measures, attempts to safeguard the environment, it is also necessary to adopt a path of sustainable environmental development (Tol, 2001; Zofio and Prieto, 2001).

Sustainable environmental development is development that meets the basic needs of all, particularly the poor majority, for employment, food, energy, water, housing, and ensures growth of agriculture, manufacturing, power and services to meet these needs. Sustainable environmental development would be achieved by promoting natural resources, conservation, protecting the regeneration ability of the ecological system, and minimising the imposition of environmental hazards on future generations (Callens and Tyteca, 1999).

The concept of sustainable environmental development was emphasized by the United Nations Conference on Environment and Development (UNCED), which defined it as: 'Development that meets the need of the present generation without compromising the ability of the future generation to meet their own needs'.

- **Strategies for sustainable environmental development (**Karpagam, 2001; Rajagopalan, 2005**)**

S. No.	Strategies	Effect	Example
1.	**Use of conventional Sources of Energy**	Positive environmental impacts	Wind power and solar rays
2.	**LPG, Gobar Gas in rural areas**	It reduces household pollution	Liquefied petroleum gas (LPG) and gobar gas plant
3.	**CNG in urban areas**	Lowered air pollution and the air has become cleaner	Compressed Natural Gas (CNG)
4.	**Wind Power**	Provide electricity without any adverse impact	Wind mills
5.	**Solar Power through Photovoltaic Cells**	Solar energy can be converted into electricity. Free from pollution.	Photovoltaic cells
6.	**Mini-hydel Plants**	Use the energy of streams to move small turbines and then turbines generate electricity	Mini-hydel Plants
7.	**Bio-composting**	Fertilizer and soil Conditioner and to dispose reduced quantity of waste	Cattle dung and earthworms
8.	**Biopest control**	Pest control by natural means	Neem trees, Mixed cropping and growing different crops in consecutive years on the same land

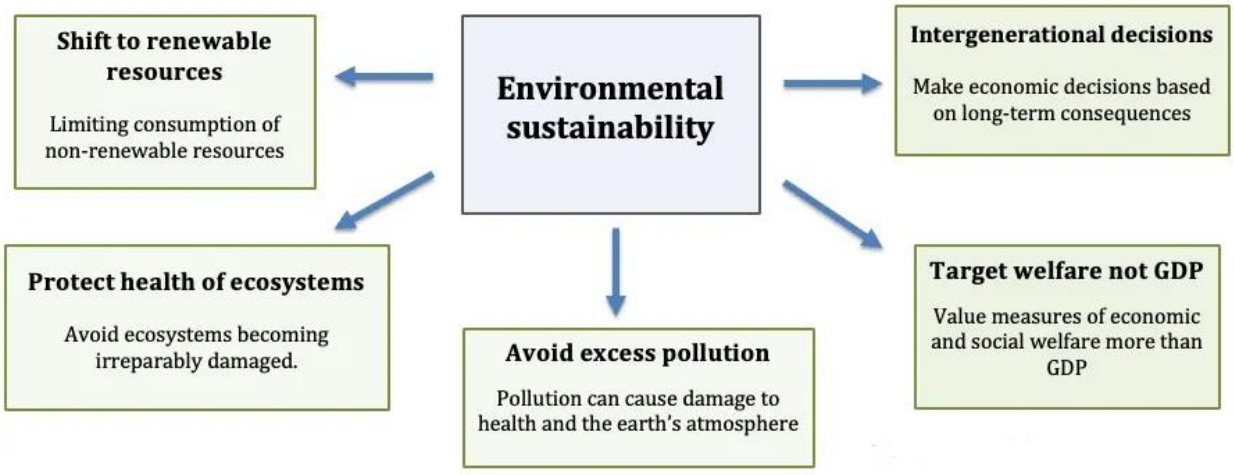

Fig. 1 Environmental sustainability concerned with environmental resources and maintained for future generations.

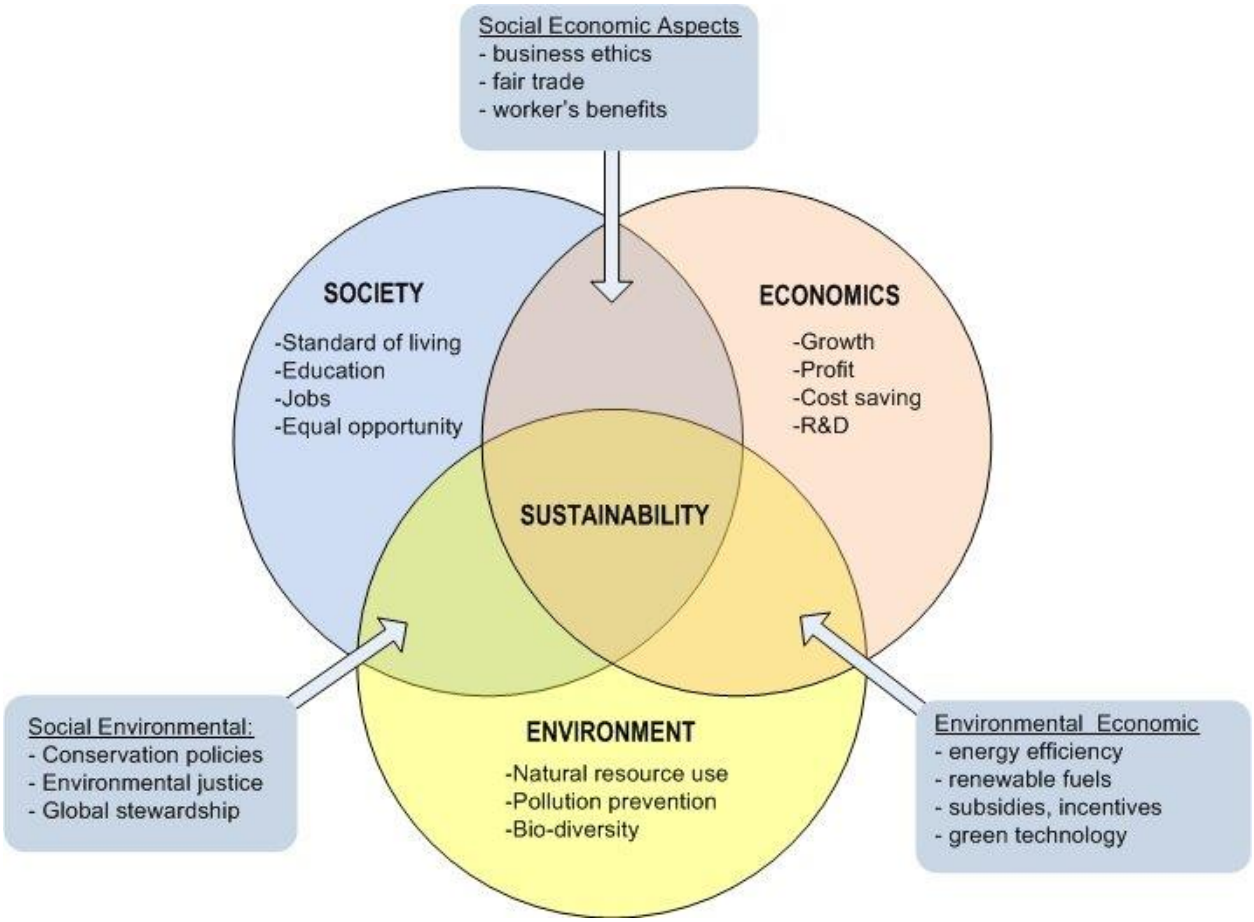

Fig. 2 Interaction of the environmental, economic, and social aspects of sustainable development.

Conclusion

Economic growth, which aims to increase production of goods and services to fulfill the demands of an expanding population, puts more strain on the environment. In the initial stages of development, the demand for environmental resources was less than that of supply. Environmental resources are in more demand than ever before, yet their quantity is restricted owing to exploitation and mismanagement. Sustainable development focuses on promoting the type of development that decreases environmental issues and satisfies current demands without sacrificing future generations' capacity to satisfy their own needs.

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Impact Of Lockdown on Environment and Climatic Variability in India

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Introduction

The outbreak of the deadly novel coronavirus or Severe Acute Respiratory Syndrome Coronavirus-2 that emerged in December 2019, became a worldwide health problem resulting in serious coronavirus disease 2019 (COVID-19). Itcauses a respiratory tract infection which can affecteither upper or lower respiratory tract. This virus was first detected in Wuhan, China, and has millions of total cases worldwide.Globally, as of 4 March 2022, there have been 440,807,756 confirmed cases of COVID-19, including 5,978,096 deaths, reported to WHO.Keeping in mind the increasing number of COVID-19 cases in India also, India observed a 14 hour "Janata Curfew" on March 22, 2020 immediately after which a global lockdown with strict rules was observed which helped to the fight against this situation (Mukherjee*et al*., 2022).

Impact of COVID-19 lockdown on environment

- Air quality& major pollutants: The National Air Quality Index (NAQI) decreased by 43% throughout the lockdown period. There was a considerable difference in the percentage of contaminants in the air before and after the lockdown (-52.68 percent NO_2 and -30.35 percent CO). Improved air quality resulted in better visibility, less stress, and fewer early deaths, among other benefits. At all cities, all pollutants ($PM_{2.5}$, PM_{10}, O_3, NO_2, SO_2, and CO) reduced in value(Somani*et al*., 2021)
- Water quality: Within a few weeks of the lockdown, Ganga's water quality was better than what governmental programmes and regulatory agencies had achieved over decades. This was due to the fact that Indian rivers are self-cleaning.
- Waste generation: During the pandemic, the generation of Biomedical Waste rose by 40 times in many afflicted metro cities in India, whereas the output of Municipal Waste declined. Waste recycling is a critical ecological issue that all countries are concerned about.
- Noise levels: During the lockdown, noise pollution was reduced by 50–75%. This decrease is attributed to a construction and transit standstill. Lockdown, according to seismologists, has resulted in a 50% reduction in worldwide high-frequency seismic

noise, allowing for better monitoring and detection of natural seismic sources such as earthquakes and volcanic activity(The Economic Times, 2022).

- Wildlife:During lockdown, animals and birds were given space that would normally be occupied by humans and their activities. Many creatures were spotted more frequently and in greater numbers than before (migratory birds returned more in number).

Conclusion

Given the current scenario, we can conclude that if we induce climate change, nature will attempt to recover. When the lockdown was over, pollution began at a faster rate, so human efforts to save the environment must continue indefinitely.

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Scientific Approach to Sustainable Environmental Development Against Major Ecological Issues of Concern

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Environment consists of an interplay of physical, biotic and chemical factors which together act upon an organism or an ecological community. Presently, environmental sustainability is one of the major concerns faced by mankind as a result of natural and anthropogenic activities. Environmental sustainability refers to ensuring the conservation of natural resources and habitats in order to make it available for future generations. Nowadays, a number of ecological issues are emerging such as water pollution, air pollution, resource depletion, climate change, etc., which have become a major public health concern. As per reports by USDA and OECD, the average global mean temperature is set to rise by 02°C by 2050. Human-caused rate of extinction of biodiversity is unpredictable and unforeseen. For example, Coral reefs are depleting and estimated to be completely extinct in near future. "Great Pacific Garbage Patch" plastic waste around 1.6 million km^2 in size, floating on the surface Pacific Ocean. In this alarming situation, a multidisciplinary approach is required to restore and sustain the natural balance of our environment. Biotechnological approach and green technology can be the solution. Progress in developing green fuels and novel energy sources could cut down release of green house gases. Biotechnological methods such as bioremediation for replenishing polluted habitats and management of biowaste and pollutants can be used. Sustainable agricultural development with organic farming can be a tool to replace harmful agrochemicals. Advanced technology including green architecture, waste water electricity generator, pyrolysis, biomimicry, electricity-based vehicle, permaculture, eco-villages, and many more could be explored.

Nanotechnology, an emerging scientific field can have a great impact and looks promising to achieve the goals of environmental sustainability. Nanomaterials have physical and chemical characteristics that make them novel and environmentally friendly, save raw materials, energy, water, reduce greenhouse gases and hazardous wastes. For clean energy production, work is going on in developing nanotubes and nanofibers such as titanate nanofibers. Capacitive deionization uses nanoflakes for the treatment and remediation of

polluted water. CO2 capture using nanotechnology-based membranes replacing the filters which are used presently has a high cost. Governments, industries, non-profits, environmental agencies, and at individual levels are required to approach sustainable development, thus forming a multidisciplinary approach. In conclusion, environment has provided us a lot, and it's time to return the favor through sustainable environmental development as our moral responsibility for the betterment of our biodiversity and future generations.

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Sustainable Environmental Development

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‘’Earth provides enough for every man’s needs but for every man’s greed’’ -**Mahatma Gandhi**.

This concept contains three elements: sustainability, environment and development and these three inevitably works as one to make a strong core for not only the planet but for every individual and coming generations. Environmental sustainability is responsibly interacting with the planet to maintain natural resources and not jeopardized ability for our future generation to meet their righteous needs. There are many literal and practical meanings of the concept given by intellectuals across the world.

Here’s a question that pops up in everyone’s mind that what does sustainable environmental development actually means? According to Brundtland commission in its 1987 report, **Our common future**, “Sustainable development is a development that meets the needs of the present without compromising the ability of future generation to meet their own need”. The real catch here is the word “need” and the word “future”. This is one of the angles to ponder about this issue but rather it is a multidisciplinary and profound matter. Aiding the needs of everyone will demand redistributing the available resources and hence is a moral issue indeed. According to Herman Daly, environmental economist, he puts for few points to achieve sustainable development: 1. Limiting the human population to a level within the carrying capacity of the environment. The carrying capacity of the environment is like the ‘plimsoll line’ of the ship which is its load limit mark. In absence of plimsoll line for the economy, human scale grows beyond the carrying capacity of earth and deviates from the sustainable development. 2.Technological progress should be input efficient and not input consuming.3. Renewable resources should be extracted on sustainable basis, that is, the rate of extraction should not exceed rate of regeneration. 4.For non-renewable resources rate of depletion should not exceed rate of creation of renewable resources. 5. Inefficiencies arising from pollution should be under check.

Conclusion:

Development which aimed at increasing the production of goods and services to meet the need of rising population puts greater pressure on environment. Now the world is faced with the increased demand for environmental resources but their supply is limited due to overuse and misuse. Sustainable environment development aims at promoting the kind of

development that minimizes the environmental problems and meet the needs of present generation without compromising the ability of future generation to meet their own needs.

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Sustainable Livestock Production

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Introduction

By 2050, the world's population will rise to 9.7 billion people, according to the UN. As an outcome, the food demand is predicted to increase by 59-98 %. Hence, the demand for meat, dairy, and eggs will rise. Shortly, in near future, a cattle production system that meets the Sustainable Development Goals (SDG) will become inevitable. The need of sustainable livestock production and solutions for achieving it are covered in the following sections.

Livestock and its impact on environment

The world's largest source of methane is livestock farming. They contribute to global greenhouse gas emissions in a variety of ways, with deforestation being the most significant. Livestock agriculture takes up about 45 percent of the land on the planet. For grazing and fodder production, the livestock sector necessitates a vast area of land. As a result, forest lands are being destroyed, which can act as a carbon sink.

The fermentation of intestinal contents by ruminants is the second most common cause. According to FAO, livestock contributes about 14.5% of human-induced greenhouse gas emissions. The livestock industry uses a lot of water. Water consumption for dairy cattle is 75-80 lit/per/day. Massive volumes of waste are produced, and disposal is a bigger challenge (Nath& Kumar, 2021).

Some of the strategies for Sustainable Livestock Production

The sole idea is to boost the efficiency without putting negative effect on animal output. We can use techniques that reduce environmental damage by relieving pressure on mineral reserves or lowering pollution levels, as well as techniques that increase natural resource productivity, like hybrid livestock combinations, methods that protect environment while allowing for better income generation from similar resources, such as feed and diet.

- Cultured meat to be utilized as a red meat alternative. Reusing and efficiently utilizing meat by-products can reduce the environmental effect.
- Pastoral groups must concentrate their strategies on reducing grazing pressure on rangelands and even reversing desertification vermicompost (Kaasschieter et al, 1992).
- Increase agricultural production and sustainability by converting livestock waste into biogas, compost, and vermicompost.
- Methane-reducing feed additives and supplements like tannins, seaweed, fats, and oils, when fed along with grain, hay, or silage will reduce methane emissions by preventing methanogens from proliferating in the rumen.
- New technologies like liveweight measurement, feed detector (feed intake/day/animal), and environmental data collector are being used in Precision Livestock Farming to increase feed conversion efficacy (Banhazi et al, 2012).

Conclusion

Sustainable livestock production solutions should be explored on a pilot basis to suit different geographical regions and socioeconomic conditions before being implemented worldwide. Switching to sustainable production processes as soon as quickly as possible, will help to reduce the impact on the environment.

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The Carbon Footprint of Milk: A Holistic Approach Towards Sustainability for Dairy Farming

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Livestock plays a vital role in the Indian economy with 4.11% of national GDP and 25.6% of agricultural GDP in the year 2020-21, with over 20.5 million people relying on cattle for a living (Ahlawat*et al*., 2021). Farmers in India uses mix farming of crop and animal production in which the output of one operation becomes the input of another, resulting in resource efficiency. Livestock provides employment, food, and draught to farmers in a variety of ways. There is a direct relationship between the intensity of Greenhouse gas emissions and the efficiency with which cattle utilize natural resources. Thus, improvement in efficiency lowers the cost of production. Nitrous oxide (N_2O), methane (CH_4), and carbon dioxide (CO_2) emissions are losses of nitrogen (N), and organic matter in cattle production systems. Table 1 compares several animal products based on their Kg CO_2eq./kg protein. To mitigate GHG emissions various strategies can be used starting from better breeding and animal health to improved feed utilization and reducing energy wastage at the farm level. Nutritional strategies to reduce enteric and manure emissions include ration balancing (like changing forage to concentrate ratio and/or changing the plane of nutrition), rumen modifiers such as ionophores (to shift rumen fermentation product), methanogenesis inhibitors (such as halogenated compounds that block co-enzyme- M), essential oils(by either promoting symbiotic organism or by inhibiting methanogens), additional fat (by limiting the hydrogen availability for methanogens), prebiotics and probiotics (by creating favorable and stable rumen environment) are used and shows effectivity from 10 to 80%.

Table 1: Kg CO_2 eq./ kg protein for different animal products (FAO, 2017)

Product	Kg CO_2 eq./ kg protein
Beef	342
Cattle milk	84
Chevon	189
Goat milk	125

Dung contributes around 10% of the entire carbon footprint of in milk as well meat in dairy cattle. Manure management practices ensure the recovery and recycling of nutrients and energy contained in manure. Milk processing in smaller bulk chilling units at the village level can assist to lower the carbon footprint of the milk by reducing transportation emissions. Poor animal welfare is also connected to decreased production, since it inhibits the cow's ability to breed, lowering milk output and body condition. Illness, for example, might lower feed intake

and shift resources away from productivity and toward infection control. In summary, if we increase the number of products other than milk and meat, the coward may become a self-sustaining economic model (Urine, Dung, Manure).

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Use Of Jatropha as Biofuel, Earthen Pot, Betel Nut Leaf Plates and Banana Leaf as Kitchen Items, And Cow Dung as Biogas as Well As Bamboo Made Water Bottle for Sustainable Environmental Development

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Introduction

Sustainable environment means that the conserve our naturals resources and develop alternative source of power which reduce the pollution and harm to the environment. Some important sustainable environmental development *viz.,* Jatropha, Earthen pot or clay pot, betel nut leaf plate, Banana leaves, Bamboo made water bottle etc.

Jatropha seed is very rich in oil. It contains around 40 percent oil. It is economic, environment friendly and functional. It has been used in Indian for several decades as alternative of diesel as biodiesel in remote rural and forest areas. The people of remote rural and forest areas used jatropha oil in diesel generator and engines directly after extraction from seeds. It increases the economy of rural poor people of India. Jatropha oil has carbon neutral affinity and the large-scale production of Jatropha improve the carbon emission profile.

Day by day, world is moving towards the traditional system. The benefits of the clay are economic and it can be purchase form anywhere, it retained the original taste and nutrition of the food because these are porous in nature, clay pot is heat resistance and it save the oil during cooking, alkali in nature as well as porous in nature that's why keep water cool in summer season in rural area. Apart from clay pot is non pollutant and it can replace the use of plastic.

Betel nut leaf plates also consider as bio plates. These plates are non-pollutant, eco-friendly, biodegradable, resistance to heat, cool, compostable, oven safe, water resistant and withstand to oily food. It can be used as an alternative of plastic items. The microparticles of plastic plate causes harm to human health like cancer.

Banana leaves also can be used as an alternative of plastic items. Banana leaves has lots of health benefit like environment friendly and easily available. When we, take hot food in banana leaves, then it releases vitamin C.

Bamboo made water bottle can use as an alternative of plastic bottle which one eco-friendly, biodegradable and non-pollutant.

Cow dung can be used for biogas production in Kitchen instead of LPG gas cylinder. The biogas is cheap and eco-friendly

Conclusion

The use of Jatropha as Biofuel, Earthen Pot, Betel Nut Leaf plates and Banana leaf as Kitchen items, Cow dung as Biogas and bamboo made water cane used for sustainable environmental development. These are non-pollutant, environment friendly and improve the health status of animal as well as human health.

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Why Should We Think About Sustainable Environmental Development?

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This globe is a home to different kinds of animals; various types of birds million species of plants and many more creatures besides human. Nowadays the concepts of globalization bring every constituent of the world together. Economic development; technology development brings everything into a fingertips. People now only run after money and luxurious life. There is only few to think about the nature. Do really buy everything with money? No; we are not buying everything in exchange of money but in exchange of environment too.

The growing population of the world is become a matter of discussion in the global platform. The more people means more energy consumption; more resources utilization. To minimize the loss of natural resources and conservation of Energy sources for our future generation the idea of sustainable environmental development comes into existence. In simple sustainable development means development that meets the present generation without compromising the ability of the future generations.

Why do we follow sustainable development? Every resource of the world is not renewable like water and air. There are some non renewable energy sources too like coal petroleum. Once the non renewable energy sources are used it takes several thousand years to form it back. But these sources are itself a important part of the Modern world. The electricity generation plant needs coal to produce Electricity petroleum needs to run vehicles. We can't imagine the world without electricity and vehicle right now. Not only non renewable sources but renewable sources need attention too. Many countries like Qatar; Israel are the most at risk from a water crisis. According to the Science Journal Nature approximately 42 million trees are cut down each day. If it's going on in the same way we are going to push our future generations to a dark World.

What can we do now? We should use all the natural sources wisely. To minimize the water loss we can close the tape when we don't need it. To save electricity we should only switch on the appliances in need. We can also use solar power plant. To save petroleum we can switch to bicycle for traveling shorter distance. We can use newly developed electric

motor cycle or cars too. As the energy sources we can use solar cooker and goober gas too for cooking.

Together the Government of each country and people of it must be aware of the circumstances that we have to face if we don't do necessary right now. Altogether we can definitely gift a green and beautiful World to our next generation.

Reference

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