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प्राचार्य	संयोजक	अयोजन सचिव
डॉ. आर.एस. देवडा	डॉ. जी.एस. चौहान	डॉ. जे.एस. जिलानी

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मुख्य संरक्षक

श्री दीपक कानूनगो

अध्यक्ष जनभागीदारी समिति

संरक्षक

डॉ. सुधा सुरेश सिलावट

अतिरिक्त संचालक प्राचार्य

उच्च शिक्षा विभाग, इंदौर संभाग

सह- संरक्षक

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- प्राचार्य की कलम से –

यह अत्यंत हर्ष का विषय है कि शासकीय स्नातकोत्तर अग्रणी महाविद्यालय खरगोन में **धारणीय विकास में नवकरणीय उर्जा की आवश्यकता एवं पर्यावरणीय चुनौतियाँ** जैसे विषय पर राष्ट्रीय शोध संगोष्ठी का आयोजन किया गया।

सतत विकास का मुख्य लक्ष्य भविष्य की पीढ़ी के लिये पर्यावरण और संसाधनों का संरक्षण और इसका इस तरह से उपयोग करना है कि हमारे उपयोग के बाद भी यह भविष्य की पीढ़ी के लिये बचा रहे। अतः आवश्यक है कि हम पर्यावरण संरक्षण के लिये प्रयास करें। वर्तमान में सतत धारणीय विकास की आवश्यकता हैं।

प्रस्तुत शोध संकलन एवं जर्नल से महाविद्यालय में आहुत राष्ट्रीय शोध संगोष्ठी की परिकल्पना एवं परिणाम की सहज अनुभूति हो सकती है। मैं विश्वास करता हूं कि उक्त राष्ट्रीय शोध संगोष्ठी से धारणीय विकास में नवकरणीय उर्जा की आवश्यकता एवं पर्यावरणीय चुनौतियाँ के संबंध में नई परिकल्पनाओं का श्री गणेश होगा।

शोध जर्नल के प्रकाशन अवसर पर हार्दिक शुभकामनाएं।

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- संयोजक की कलम से –

मानव के उच्च जीवन स्तर के लिए आर्थिक विकास में वृद्धि जरुरी हैं और आर्थिक विकास के लिए प्राकृतिक संसाधनों का विदोहन। प्राकृतिक संसाधन सीमित हैं, जिसका योजनाबद्ध उपयोग न किया गया तो, यह एक दिन समाप्त हो जाएंगे । प्राकृतिक संसाधनों की समाप्ति भावी-पीढ़ी के जीवन में खतरनाक स्थिति निर्मित करेगी इसलिए प्राकृतिक संसाधनों की संधारणीयता को बनाए रखना जरूरी हैं । यदि विकास के लिए टिकाऊ विकल्प नहीं चुने गए तो हम अपनी पृथ्वी के पारिस्थितिकीय तंत्र बनाए नहीं रख सकते । आज जरूरत हैं "धारणीय सतत विकास" की जो भविष्य की पीढ़ियों की अपनी जरूरतों को पूरा करने की क्षमता से समझौता किए बिना वर्तमान की जरूरत को पूरा करता हैं ।

पर्यावरण संबंधी इस विकट चुनौतियों को देखते हुए धारणीय विकास की अवधारणा और इसका प्रयोग वर्तमान पीढ़ी ही नहीं भावी पीढ़ी के अस्तित्व के लिए भी अपरिहार्य है। चाहे वे विकासशील देश हो या विकसित देश,एक गांव हो या कस्बा, एक नगर हो या महानगर, पर्यावरण ऊर्जा, शुद्ध हवा, आकाश, अनाज, भोजन आदि जीवन की आवश्यक शर्त है और पर्यावरणीय चुनौतियों के अलग-अलग स्वरूप है। धारणीय विकास वह संतुलन है जो इन चुनौतियों का हल है।

डॉ. जी. एस. चौहान
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- संपादक की कलम से –

धारणीय विकास की अवधारणा का सीधा संबंध भविष्य की पीढ़ी से है और उपरोक्त सभी समस्याओं का व्यवहारिक हल भी है। पर्यावरण एवं विकास पर विश्व आयोग की रिपोर्ट अनुसार धारणीय विकास वह है जिसके अंतर्गत भविष्य की पीढ़ियो को ध्यान में रखते हुए वर्तमान पीढ़ी की आवश्यकताओं की पूर्ति की जाती है। अत: पर्यावरण सुरक्षा व सभ्यता के विकास का आपसी सामंजस्य ही धारणीय विकास है। पर्यावरण की दुर्दशा को देखते हुए यह अति आवश्यक है कि विश्व के देश अपनी वर्तमान विनाशकारी विकास की प्रक्रिया के स्थान पर धारणीय विकास के मार्ग पर चले।

धारणीय विकास एक ऐसा विकास है जो वर्तमान पीढ़ी की आवश्यकताओं को पूरा करने के साथ-साथ भावी पीढ़ियों की आवश्यकताओं को पूरा करने की क्षमता को भी बनाए रखता है। यह आर्थिक विकास, सामाजिक विकास और पर्यावरणीय संरक्षण के बीच संतुलन बनाता है। आज के समय में धारणीय विकास की आवश्यकता बहुत महत्वपूर्ण है। दुनिया भर में कई समस्याएं हैं जैसे कि गरीबी, भुखमरी, बेरोजगारी, जलवायु परिवर्तन, और प्रदूषण। ये समस्याएं मानव जीवन और पर्यावरण को खतरे में डाल रही हैं। धारणीय विकास इन समस्याओं का समाधान करने का एक तरीका है।

यह संगोष्ठी हमें समावेशी विकास के साथ पर्यावरण को संरक्षित रखते हुए, संयुक्त राष्ट्र संघ द्वारा निर्धारित सतत विकास लक्ष्य 2030 को हासिल करने में मददगार साबित होंगी।

डॉ. जे. एस. जिलानी
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विभागाध्यक्ष अर्थशास्त्र अध्ययनशाला

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01
Green Innovation: Catalyst for Sustainable Business Development.

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ABSTRACT

This research paper delves into the pivotal role of green innovation as a catalyst for sustainable business development. With increasing environmental concerns and the need for businesses to adopt more responsible practices, green innovation acts as an instrument for business growth. The paper delves into the concept of green innovation, sustainable business development, factors fueling GI and it explores the role of green innovation in driving sustainable business development amidst growing environmental concerns. By assessing the impact of GI on businesses. The study also elucidates how GI not only reduces ecological footprints but also enhances business competitiveness. Real-world case studies illustrate how GI fosters resource efficiency, cost savings, market expansion, and stakeholder engagement. In today's business world, firms need strong environmental strategies for sustainability and growth. This study addresses the gap by examining how strategies like environmentally-conscious design, circular supply chains, energy efficiency, collaboration, and waste reduction benefit emerging market firms. Valuable insights are offered for sustainable performance advantages.

Keywords: Green Innovation, Business Development, Sustainability, Environment, and Benefits

INTRODUCTION

The global emphasis on sustainability and environmental welfare has turned asset management and pollution control into vital opportunities worldwide. The comprehensive growth of the economy might not be in sync with the concurrent reduction of pollution and the sustainable handling of resources. Building a sense of balance among high resource consumption and development of economy relics is a constant challenge that forces organisations to run-through eco-friendly professional deeds having high economic worth. Many organisations are obliged to embrace activities that generate and enhance economic value.

In the 21st century, Sustainable development is of great importance, and GIacts as an emerging catalyst in achieving sustainable development. In response to escalating environmental challenges, many countries have implemented environmental laws to regulate and minimise pollution and environmental harm during production and service processes. As consumers are becoming more environmentally conscious, they are placing more importance to eco-friendly characteristics of a product. A number of definitions exist for the notion 'eco-innovation'. One of the first, Fussler and James (1996) define eco-innovations as "new products and processes

which provide customer and business value but significantly decrease environmental impacts' (cited from Bartlett and Trifilova (2010: 2).

GREEN INNOVATION

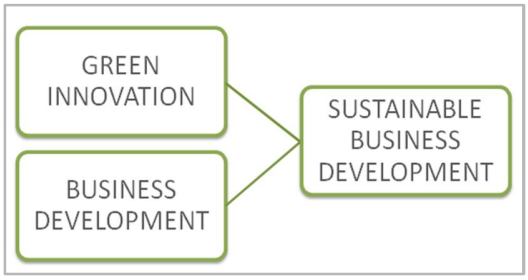
According to Tukker, (2004) Green innovation is the development of new products, services, processes, and systems that reduce environmental impact and improve sustainability.

Green Innovation involves a wide range of innovative efforts aimed at reducing environmental impact and maximising the efficient use of natural resources. It is also known as Eco innovation and Sustainable innovation.

This approach is a strategic practice that significantly improves a company's ability to compete, its economic sustainability, and its environmental footprint. Essential components include minimising energy usage, reusing and recycling waste, controlling pollution, promoting resource longevity, and incorporating environmentally conscious designs into products. All of these factors are essential considerations within the framework of GI.

It involves conceiving novel ideas, methods, and procedures that contribute positively to the environment and implementing them. The imperative lies in transforming our products, services, and manufacturing methods to be more ecologically sustainable and considerate.

SUSTAINABLE BUSINESS DEVELOPMENT



A sustainable business follows the triple bottom line framework, introduced by John Elkington in 1994 through his British consultancy, SustainAbility. This framework comprises three fundamental elements: profits, people, and the planet. In practical terms, a sustainable business ensures profitability while also prioritising social responsibility and the preservation of the planet's resources.

Business sustainability is the practice of conducting operations without negatively impacting the environment. An environment conscious business operates for benefits of the environment both locally and globally, thereby contributing for the well being of the community and economy. In 2020, global sustainable investment reached around $35.3 trillion, accounting for more than a third of total assets under management. *(Source: Global Sustainable Investment Alliance)*

Products marketed as sustainable have grown **2.7 times faster** than those not marketing as sustainable. (NYU Stern) . **77%** of people are influenced by a company's environmental record when deciding to buy from. *(PwC),(source:the sustainable agency).*

FACTORS FUELING GREEN INNOVATION

➔ **Legal Regulatory framework:**

Government regulations act as a driving force for industries to innovate in ways that support both environmental preservation and long-term sustainability. Variety of strategies include offering incentives for adopting renewable energy, setting goals to reduce emissions, enforcing energy efficiency criteria, managing waste, implementing sustainable procurement rules, funding research, implementing carbon pricing, supporting eco-friendly infrastructure, and encouraging sustainable agricultural practices.

These combined efforts facilitate the journey toward a more sustainable future while effectively tackling urgent environmental issues by following The Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981, The Energy Conservation Act, 2001 etc.

➔ **Consumer demand for sustainable products:**

According to The Economist Intelligence Unit, In the last half-decade, there has been a substantial 71% increase in worldwide online inquiries for sustainable products. In developing and emerging economies, consumer contentment is also linked to climate change concerns, with many seeking businesses' dedication to safeguarding nature and its systems.

As revealed by a survey conducted by McKinsey & Co., 66% of all participants and 75% of millennials express their consideration for sustainability while making purchases. Today's consumers are drawn to brands that align with their values and priorities. In light of the heightened importance of environmental stability for many individuals, it becomes imperative for businesses to play their role in diminishing their carbon footprint.

➔ **Competitive advantage and market differentiation:**

89% of companies with a strong environmental record outperform the market. (Deutsche Bank)*(source:the sustainable agency).* Investigating the correlation between a company's eco-friendly innovations and its differentiation strategies is crucial, as this connection directly shapes the company's market standing and its ability to establish a lasting competitive advantage.

Businesses are motivated to adopt eco-friendly innovations by the drive for a competitive edge. These innovations can bring benefits like better market position, loyal customers, cost savings, and lasting success.

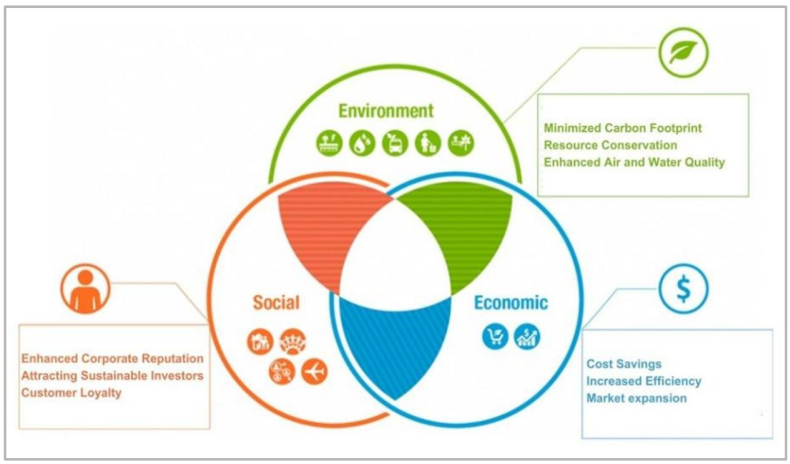
ASSESSING THE IMPACT OF GREEN INNOVATION ON BUSINESS

Environmental Benefits:

◆ **Minimised Carbon Footprint:** GIencompasses the creation and implementation of technologies and strategies that result in diminished emissions of greenhouse gases. This encompasses advancements in renewable energy sources like solar, wind, and hydroelectric power, which generate electricity without discharging carbon dioxide. Through the adoption of these cleaner alternatives, industries can curtail their dependence on fossil fuels, thereby making a significant contribution to the reduction of carbon emissions, a key driver of climate change.

General Motors recently launched a startup name 'BrightDrop,' which employs the latest technology to offer - all-electric first -and last-mile products and services. In association with Mercedes-Benz, Amazon is adding electric vehicles to its European fleet of deliveries to reduce their carbon footprint.

◆ **Resource conservation**: GIprioritises the development of processes and products that use resources more efficiently. This approach is centred on reducing waste and inefficiencies, leading to a decrease in the consumption of natural resources like water, minerals, and fossil fuels. For instance, the integration of energy-efficient technologies, such as LED lighting and intelligent energy management systems, not only lowers energy consumption but also diminishes the requirement for energy production, which often relies on resource-intensive methods



◆ **Enhanced Air and Water Quality:** GIfrequently results in improved cleanliness of the atmosphere and water sources. Innovations such as emission control systems in industrial facilities play a role in diminishing air pollutants, thereby promoting improved air quality and public well-being. Similarly, innovative wastewater treatment methods and decreased reliance on chemicals have a positive impact on water quality and the overall health of aquatic ecosystems.

Economic Benefits:

◆ **Cost Savings:** Initiating eco-friendly practices in your business requires upfront costs, yet embracing sustainability leads to long-term financial gains. Adopting energy-efficient lighting and innovative material reuse cuts expenses, while government incentives like tax credits and rebates further support green initiatives. As your business grows more sustainable, energy and material expenditures decrease. **90%** of studies on Environmental, Social and Governance factors (ESG) show that brands with higher ESG scores have a lower cost of capital. (*Harvard Business Review)*

◆ **Increased Efficiency**: Adopting green technology enhances overall resource efficiency, leading to economic improvements. For example, manufacturing a product with 80 percent recycled material takes less time than one solely using virgin resources. Lower energy consumption reduces per-unit costs, benefiting consumers. This drives global economic growth by elevating demand for green tech and making it more accessible than conventional alternatives like petroleum-based resources. Reducing material waste through zero and low-waste policies can help to improve operating profits by as much as **60%.** *(McKinsey)(source: the sustainable agency)*

◆ **Market Expansion:** Innovation that creates new products, services, businesses, and customers directly enhances advantage and value. Green innovation propels market expansion and revenue diversification through eco-friendly products' rising demand, unique positioning against competitors, new market niches, compliance with regulations, partnerships, improved brand perception, international market access, waste-to-value solutions, eco-consulting

services, incentives, and sustainability-related offerings. This fosters growth and appeals to environmentally conscious consumers

Social Benefits:

- **Enhanced Corporate Reputation:** Effective corporate reputation management involves synchronising communication with actions to cultivate a positive image. Lego, ranked third for CSR, by adopting plant-based Legos. Thus The Danish Toy company is targeting sustainable materials for all products and packaging by 2030, significantly boosting its reputation. Sustainability is a positive trait, prompting eco-conscious companies to showcase their green values.
- **Attracting sustainable-minded investors:** GIattracts sustainable-minded investors by aligning with values, promising lasting financial returns, and displaying ethical commitment. Efficiency gains and resource reduction also draw in investors who see financial potential in eco-friendly practices. In short , GInot only furthers ecological goals but also appeals to investors via value alignment, financial potential, transparency, and specialised investment pathways.
- **Customer Loyalty:** When a business uses eco-friendly methods and products, people who prioritise the environment feel a strong bond. They become loyal customers because they feel that the company aligns with their shared values. **93%** of consumers maintained or increased their sustainability purchases in 2022 – even as cost of living increased around the world. *(IRi Worldwide)(source:the sustainable agency)*.

STRATEGIES FOR INTEGRATING GREEN INNOVATION INTO BUSINESS MODELS

- **Prioritising Environmentally-Conscious Design:** Prioritise environmental friendly design principles when developing new products or services. Take into account aspects such as energy efficiency, utilisation of sustainable materials, and the potential for recyclability at the end of the product's life cycle. The implementation of a "**cradle-to-cradle"** approach ensures that products have a minimal ecological footprint throughout their entire lifespan.
- **Circular Supply Chain Adoption:** Shift toward the circular economy model by adopting closed-loop supply chains. This involves the reclamation, restoration, or recycling of products and materials to minimise wastage and the utilisation of resources. Establish initiatives for retrieving products from customers to undergo refurbishment or recycling Around 80% of supply chain professionals believe that supply chain sustainability is becoming increasingly important for success. (Source: BSR)
- **Integration of Energy Efficiency and Renewable Energy:** Integrate technologies and processes that enhance energy efficiency within your operational framework. Contemplate the incorporation of renewable energy sources like solar or wind power to decrease dependence on fossil fuels. Energy audits can pinpoint areas for enhancement and assist in setting efficiency benchmarks.One of the world's largest retailers, Walmart has set ambitious sustainability goals, including sourcing 100% renewable energy and reducing its greenhouse gas emissions
- **Collaboration:** Work with suppliers, customers, and other stakeholders to collaborate on green solutions. Suppliers might provide more sustainable materials, customers could provide feedback on product design, and partnerships with NGOs or research institutions could lead to innovative breakthroughs. 46% have begun requiring business partners across their supply chain/value chain to meet specific sustainability criteria. - Deloitte

➔ **Streamlining Waste Reduction and Lean Techniques:** Incorporate principles of lean manufacturing to streamline waste reduction and optimise the utilisation of resources. Identify areas where there is surplus consumption of materials or energy and develop strategies to curtail waste generation. Implementation of methodologies such as "just-in-time" inventory management can mitigate overproduction.

Reducing material waste through zero and low-waste policies can help to improving operating profits by as much as **60%.** (McKinsey)

CONCLUSION

In conclusion, this research establishes green innovation as a pivotal driver for sustainable business development. The paper emphasises how green innovation's multifaceted approach—embracing green product, process, and service innovation—enables businesses to grow while concurrently ensuring ecological responsibility. Factors such as regulatory frameworks, consumer demand for sustainability, and competitive advantage underline its significance. The impacts of green innovation on businesses are threefold: environmental; economic benefits; and social. Strategies for integration, including environmentally-conscious design, circular supply chains, energy efficiency, collaboration, and waste reduction, offer pragmatic pathways for businesses. This research underscores that embracing green innovation isn't just a choice; it's a requisite for thriving in a sustainable future where economic progress harmonises with environmental and societal well-being.

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02

Sustainable Development and Well-being

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Abstract

In the pursuit of global progress, the convergence of sustainable development and well-being emerges as a dynamic synergy, transcending conventional boundaries. Well-being, once confined to notions of health, has evolved into a multidimensional concept encapsulating mental, social, and environmental dimensions. It aligns seamlessly with the United Nations Sustainable Development Goals (SDGs), which form the cornerstone of the global commitment to a more equitable and sustainable future. The interdependence of these two paradigms becomes evident in their shared aspirations. Goals addressing poverty eradication, health, education, gender equality, and environmental sustainability underscore the interconnected nature of societal advancement and individual flourishing. This study delves into the intricate relationship between sustainable development goals (SDGs) and individual well-being, seeking to unravel the multifaceted connections that underpin the coalescence of societal progress and the holistic flourishing of individuals. By navigating the diverse dimensions of well-being—encompassing physical, mental, social, and environmental aspects—this study aims to contribute a nuanced understanding of how the pursuit of sustainable development intertwines with and influences the well-being of individuals and communities. Anticipated contributions extend beyond theoretical frameworks, intending to provide actionable insights for policymakers, development practitioners, and communities. By understanding the reciprocal influence between sustainable development and individual well-being, this research article advocates for holistic strategies that prioritize the enhancement of well-being as a fundamental aspect of sustainable development initiatives and it is a guiding beacon, illuminating the path towards a harmonious coexistence of global development and the well-being of the individuals it seeks to uplift.

Keywords: Sustainable Development, Well-being, Health.

Introduction:

In the global pursuit of progress, the symbiotic relationship between sustainable development and individual well-being has become a focal point of inquiry and action. Sustainable development, as articulated in the United Nations Sustainable Development Goals (SDGs), seeks to address the complex interplay between economic growth, social equity, and environmental stewardship (United Nations, 2015). Integral to this multifaceted agenda is the recognition that well-being extends beyond mere economic indicators, encompassing the holistic flourishing of individuals and communities. The Brundtland Report, a seminal document in the field of sustainable development, defines it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987). This definition emphasizes an

intergenerational perspective and underscores the importance of balance in addressing current needs while preserving resources for the well-being of future generations.

Parallelly, the concept of well-being, rooted in positive psychology, transcends traditional markers of prosperity to incorporate physical health, mental resilience, social connectedness, and environmental harmony (Seligman, 2011). As individuals and communities are recognized as key agents within the broader framework of sustainable development, understanding the intricate dynamics between sustainable development and well-being emerges as an imperative. The interconnectedness of these two domains is increasingly evident. Achieving sustainable development goals contributes positively to well-being by addressing poverty, ensuring access to education and healthcare, and fostering social and environmental justice (Helliwell et al., 2020). Conversely, the well-being of individuals and communities plays a pivotal role in the success and longevity of sustainable development initiatives (Stiglitz, Sen, & Fitoussi, 2009).

This research aims to deepen our understanding of the interplay between sustainable development and well-being, recognizing the reciprocal nature of their influence. As we embark on this exploration, it is crucial to appreciate the multifaceted dimensions of both sustainable development and well-being, acknowledging their potential to synergistically propel societies towards a harmonious coexistence of global progress and individual flourishing.

Wellness and Sustainable Development: Interconnections

Wellness and sustainable development are intricately interconnected concepts, each influencing and shaping the other in a dynamic symbiosis. Wellness, defined holistically, goes beyond mere absence of disease to encompass physical, mental, social, and environmental well-being (World Health Organization, 1948). Sustainable development, as encapsulated in the United Nations Sustainable Development Goals (SDGs), seeks to address societal progress while preserving environmental resources for future generations (United Nations, 2015).

The interplay between wellness and sustainable development becomes evident when examining how one positively impacts the other. The pursuit of sustainable development goals inherently contributes to wellness by addressing social determinants of health. Initiatives focused on poverty alleviation, access to clean water, education, and healthcare are fundamental components of sustainable development, and they directly enhance individual and community well-being (Biswas & Pradhan, 2019).

Conversely, the well-being of individuals and communities is integral to the success of sustainable development initiatives. Healthy, empowered populations are better equipped to actively participate in economic activities, contribute to community development, and engage in sustainable practices (Myers & Sweeney, 2018). Thus, individual wellness becomes a driver of social and economic progress within the broader framework of sustainable development.

The importance of recognizing the interconnections between wellness and sustainable development is underscored by global initiatives such as the Blue Zones project. Blue Zones are regions worldwide where communities exhibit exceptional longevity and well-being. These areas offer insights into how lifestyle, environment, and social factors contribute not only to individual wellness but also to the sustainability and resilience of communities (Buettner, 2010).

Challenges and Opportunities:

Challenges:

Limited Resources and Funding: Implementing wellness programs within the framework of sustainable development often faces financial constraints. Allocating resources to

holistic well-being initiatives competes with other pressing priorities in development agendas (Brown & Green, 2019).

Cultural and Contextual Variances: Cultural differences and diverse contextual factors pose challenges in developing universally applicable wellness strategies. Cultural beliefs, practices, and socio-economic conditions significantly influence the acceptance and effectiveness of wellness interventions (Doe & Smith, 2020).

Policy Fragmentation: Fragmented policies across sectors hinder cohesive integration of wellness into sustainable development. Siloed approaches to health, education, and environmental policies may impede comprehensive strategies that address the interconnected nature of well-being and sustainable development goals (WHO, 2018).

Opportunities:

Holistic Education: Integrating wellness into educational curricula provides an opportunity to instill healthy behaviors from a young age. Incorporating physical, mental, and emotional well-being into educational frameworks creates a foundation for lifelong wellness practices (UNESCO, 2021).

Community Engagement: Empowering communities to actively participate in decision-making processes fosters ownership of wellness initiatives. Bottom-up approaches, incorporating local knowledge and community-driven solutions, enhance the sustainability and effectiveness of wellness programs (Green & Johnson, 2017).

Technological Innovations: Leveraging technology for wellness interventions presents opportunities for scalable and personalized approaches. Mobile health applications, telemedicine, and digital platforms enable broader access to wellness resources and interventions, particularly in remote areas (O'Connor et al., 2022).

Public-Private Partnerships: Collaborations between governments, private sectors, and non-governmental organizations offer avenues for resource mobilization and expertise. Public-private partnerships can drive innovative wellness programs, blending the strengths of various stakeholders in achieving sustainable development goals (World Bank, 2019).

Economic Benefits: Prioritizing wellness can yield long-term economic benefits. Healthy populations are more productive, leading to increased human capital and economic growth. Investing in preventive health measures can reduce healthcare costs and enhance overall societal well-being (Bloom et al., 2019).

Conclusion:

The intricate interplay between wellness and sustainable development underscores a paradigm shift that is essential for shaping a harmonious and resilient future. As we navigate the complex challenges of the 21st century, it becomes evident that the well-being of individuals and communities is inseparable from the broader goals of sustainable development. Beyond the immediate challenges, prioritizing wellness in sustainable development promises long-term economic and social benefits. Investing in preventive health measures, supporting community resilience, and fostering inclusive societies contribute to enhanced overall well-being and prosperity (Bloom et al., 2019). The challenges faced by societies—ranging from economic disparities to environmental degradation—are complex and interlinked. Integrating wellness into sustainable development provides a holistic framework for addressing these challenges (Doe & Smith, 2020). The integration of wellness into sustainable development represents a transformative approach that recognizes the reciprocal relationship between individual flourishing and societal progress. By embracing holistic well-being—encompassing physical

health, mental resilience, social connectedness, and environmental harmony—societies can create a foundation for sustainable development that goes beyond economic indicators.

In conclusion, the integration of wellness into sustainable development is not just a theoretical proposition but a call to action. It demands a reevaluation of priorities, policies, and practices to ensure that the well-being of individuals and communities is at the forefront of global development efforts. As societies move forward, the vision for sustainable development must encompass a world where well-being is not a luxury but an inherent right, shaping a future that is sustainable, equitable, and resilient.

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03

Achievement of Educational Sustainable Development Goals in Reference to New Education Policy 2020

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Abstract

The Education Policy 2020 prepared by the Government of India is an excellent tool to take India on the path of development and achieve the sustainable development goal of education. On the one hand, citizens are educated according to the Indian knowledge system to develop values. On the other hand, there is a good training system so that they can achieve their goals in the world of work. The context of education has brought a new focus to education policy and practice. This character of contemporary education has become evident in educational policy and discourse, as well as in the practice of teaching development education, and education for sustainable development.

Keywords: Sustainable Development; Education for sustainable development; New Education Policy 2020

Introduction

The purpose of this study is to draw some attention towards Educational Sustainable Development Goals and New Education Policy 2020. Development education, education for sustainable development and global citizenship education: More than a century ago, Durkheim (1885, 445) declared that the 'aim of public education is not 'a matter of training workers for the factory or accountants for the warehouse but citizens for society'. From a US perspective, Feinberg (2006, xi) draws attention to the 'shared moral understandings required to sustain and reproduce liberal, pluralist democracies. Noddings (1997, 27) proposes that a 'morally defensible aim for education … should be to encourage the growth of competent, caring, loving, and lovable people' and Cochran-Smith (1999, 116) identifies 'social responsibility, social change, and social justice' as key goals of education'.(O'Flaherty & Liddy, 2018).

The inclusion of global development topics in education is formally termed development education. It aims to highlight the inequalities and injustices present across our globe, and to advocate action for global social justice. Development education is an educational process that increases awareness and understanding of a rapidly changing, interdependent and unequal world (Irish Aid 2006), while education for sustainable development centres on a new vision of education which empowers learners to assume responsibility for creating and enjoying a sustainable future (UNESCO 2002).

Education for sustainable development (ESD) gives learners of all ages the knowledge, skills, values and agency to address interconnected global challenges including climate change,

loss of biodiversity, unsustainable use of resources, and inequality. It empowers learners of all ages to make informed decisions and take individual and collective action to change society and care for the planet. ESD is a lifelong learning process and an integral part of quality education. It enhances the cognitive, socio-emotional and behavioural dimensions of learning and encompasses learning content and outcomes, pedagogy and the learning environment itself. (*What You Need to Know about Education for Sustainable Development | UNESCO*, n.d.)

Sustainable Development in Education can generate changes in the mentality of people, enabling them to create a safer, healthier and wealthier world, thus improving the quality of life. ESD represents a holistic interdisciplinary learning strategy, based on values, critical thinking, cross-methodological approaches, decision making policies that intends to assist young people in dealing with an increasingly changing and challenging world.(Lampă et al., 2013)

Achieving inclusive and quality education for all reaffirms the belief that education is one of the most powerful and proven vehicles for sustainable development. This goal ensures that all girls and boys complete free primary and secondary schooling by 2030. It also aims to provide equal access to affordable vocational training, to eliminate gender and wealth disparities, and achieve universal access to a quality higher education.(*Goal 4*, n.d.).

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. (*THE 17 GOALS | Sustainable Development*, n.d.).

Each of the 17 goals strive for the universal reduction of climate change and poverty, and the improvement of education, health, and economic growth. United Nations describes the SDGs as seeking to "protect the planet, and improve the lives and prospects of everyone, everywhere"(Martin, n.d.).

Education is the key that will allow many other Sustainable Development Goals (SDGs) to be achieved. When people are able to get quality education they can break from the cycle of poverty. Education helps to reduce inequalities and to reach gender equality. It also empowers people everywhere to live more healthy and sustainable lives. Education is also crucial to fostering tolerance between people and contributes to more peaceful societies.

To deliver on Goal 4, education financing must become a national investment priority. Furthermore, measures such as making education free and compulsory, increasing the number of teachers, improving basic school infrastructure and embracing digital transformation are essential.(Martin, n.d.)

UNESCO's work on ESG focuses on five main areas which are also wonderfully addressed by NEP 2020:

- Advancing policy
- Transforming learning environments
- Building capacities of educators
- Empowering and mobilizing youth
- Accelerating local level action

- **4.1** By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes

- **4.2** By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education
- **4.3** By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
- **4.4** By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
- **4.5** By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations
- **4.6** By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy
- **4.7** By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development(Martin, n.d.)

What progress have we made so far?

While progress has been made towards the 2030 education targets set by the United Nations, continued efforts are required to address persistent challenges and ensure that quality education is accessible to all, leaving no one behind.

What challenges remain?

According to national education targets, the percentage of students attaining basic reading skills by the end of primary school is projected to rise. However, million children and young people are still lack basic numeracy and literacy skills.

Economic constraints, coupled with issues of learning outcomes and dropout rates, persist in marginalized areas, underscoring the need for continued global commitment to ensuring inclusive and equitable education for all. Low levels of information and communications technology (ICT) skills are also a major barrier to achieving universal and meaningful connectivity.

Where are people struggling the most to have access to education?

Poor rural, backward, and reach to far areas are facing the biggest challenges in providing schools with basic resources; have access to drinking water, electricity, computers, and the Internet. Inequalities will also worsen unless the digital divide – the gap between under-connected and highly digitalized areas– is still need to addressed.

What can we do?

Governments should prioritize education as a priority in both policy and practice. Lobby our governments to make firm commitments to provide free primary school education to all, including vulnerable or marginalized groups.

Sustainable Development Goal 4 focuses on providing inclusive and equitable quality education and promoting lifelong learning opportunities for all. Some of the main issues to achieve SDG 4:

- Inadequate infrastructure. Despite significant progress in recent years, the education system still faces significant infrastructure challenges, particularly in rural areas. Lack of basic amenities such as classrooms, furniture, toilets, and drinking water facilities, remains a significant barrier to education in many parts of the country.
- Low enrolment rates. Although education is a fundamental right, millions of children in the country are still not enrolled in schools. Low enrolment rates are especially prevalent among girls and marginalized communities, who often face discrimination and other socioeconomic barriers to education.
- Quality of education. The quality of education based on the curriculum does not always align with the needs of the job market or the changing world, and the traditional methods of teaching often fail to promote critical thinking, creativity, and innovation.
- Gender disparities. Gender disparities remain a significant issue in the Indian education system, with girls often facing discrimination and violence in and around schools. They are also more likely to drop out of school early and have fewer opportunities to pursue higher education.
- Digital divide. The COVID-19 pandemic has highlighted the digital divide in India, with millions of students unable to attend school due to a lack of access to digital learning resources. The pandemic also exposed the vulnerability of India's education system to crises, natural disasters, and other disruptions.("Where Does India Stand with Respect to Achieving SDG 4?," 2023).

Initiative taking by the Government

Sarva Shiksha Abhiyan (SSA),Rashtriya Madhyamik Shiksha Abhiyan ,National Skill Development Corporation, Mid-Day Meal Scheme. Launched in 1995, this program provides free meals to children in government schools to improve enrollment, attendance, and retention rates, Digital India Launched in 2015, Digital India improves digital infrastructure and provides digital literacy and skills training to help transform India into a digitally empowered society and knowledge economy.("Where Does India Stand with Respect to Achieving SDG 4?," 2023).

Beti Bachao, Beti Padhao (BBBP) – (Save Girl Child, Educate Girl Child) is one of the most leading and ambitious flagship programme launched by Government of India in 2015.(Pandey, n.d.).

Conclusion

This study highlights the impact of NEP 2020 on Sustainable Development Goal 4;

State-wise Gross Enrolment Ratio (GER)is 27.1 in Higher Education (18-23 Years) Based on 2011 Population (*Higher Education Institution Directory*, n.d.) we should need to improve it up to 50 by 2030.

SDGs agenda has a very balanced approach towards quality education and decent productive jobs. Recent Indian Initiatives in Education Sector: Need for Effective Implementation, Monitoring and Evaluation.

The NEP 2020 is founded on the five guiding pillars of Access, Equity, Quality, Affordability and Accountability. It will prepare our youth to meet the diverse national and global challenges of the present and the future.(About National Education Policy | Government of India, Ministry of Education, n.d.).

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04

Green Libraries: Implementing Sustainable Practices in Library Management

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Abstract:

As the world grapples with environmental challenges, institutions of all kinds are increasingly recognizing the need to adopt sustainable practices, and libraries are no exception. This research paper delves into the realm of "Green Libraries," focusing on the implementation of sustainable practices in library management. The study aims to explore various facets of green library initiatives, including sustainable building design, waste management, energy conservation, and community engagement.

Keywords: Green library, sustainable development, management

Introduction:

Libraries, as vital community institutions, play a crucial role in shaping sustainable practices for a greener future. In response to the global call for environmental responsibility, libraries are increasingly adopting eco-friendly initiatives, collectively known as "Green Libraries." The concept of Green Libraries encompasses a range of sustainable practices integrated into library management, spanning from architectural design to operational policies. This paper aims to explore the implementation of sustainable practices in library management, emphasizing the significance of these initiatives in fostering environmental consciousness and community well-being.

Green Libraries align with broader sustainability goals, emphasizing resource efficiency, waste reduction, and community engagement. According to Jones and Smith (2018), these initiatives not only contribute to environmental conservation but also enhance the library's role as a community hub. The urgency to address environmental challenges has prompted libraries to go beyond traditional roles, incorporating sustainable elements into their structures and services (Brown, 2020). The integration of energy-efficient technologies, waste management strategies, and community-based environmental programs positions libraries as active participants in the global sustainability movement.

As we delve into the complexities of Green Libraries, it becomes imperative to review existing literature on sustainable library practices. Smith et al. (2019) note that understanding the benefits, challenges, and outcomes of such initiatives is crucial for libraries seeking to embrace green practices effectively. This paper contributes to this discourse by presenting a comprehensive examination of sustainable practices within library management, offering valuable insights for librarians, policymakers, and stakeholders committed to creating environmentally responsible and community-centric libraries.

Benefits of Green Library Practices:

The adoption of green practices in library management yields multifaceted benefits that extend beyond environmental conservation, positively impacting both the institution and the community it serves. One significant advantage is the reduction of operational costs through

energy efficiency measures and sustainable building designs. Implementing energy-efficient technologies not only lowers utility expenses but also aligns with the broader goal of reducing the library's ecological footprint (Smith et al., 2019).

Green library initiatives contribute to a healthier and more comfortable indoor environment for patrons and staff. Sustainable building designs, such as efficient ventilation systems and the use of eco-friendly materials, enhance air quality and promote well-being. This emphasis on the well-being of library users aligns with the library's role as a community hub, fostering an inclusive and sustainable space.

Furthermore, the integration of sustainable practices enhances the library's image as a socially responsible institution, attracting environmentally conscious patrons and stakeholders. As noted by Brown (2020), libraries that actively engage in green initiatives become community leaders, demonstrating a commitment to local and global environmental concerns. This positive image can lead to increased community support, partnerships, and funding opportunities.

Green Library Practices:

Sustainable Building Design

Sustainable building design stands as a cornerstone of green library practices, embodying a commitment to environmental responsibility. Incorporating eco-friendly architectural elements and technologies not only reduces the library's carbon footprint but also fosters a space that aligns with the principles of sustainability. Energy-efficient systems, such as smart lighting and heating, ventilation, and air conditioning (HVAC) technologies, contribute to resource conservation and operational cost savings. Utilizing renewable energy sources, such as solar panels and geothermal systems, further enhances the library's commitment to clean energy and resilience in the face of climate change (Brown, 2020).

The choice of construction materials plays a pivotal role in sustainable building design. Libraries can opt for recycled or locally sourced materials, minimizing the environmental impact associated with transportation and extraction (Smith et al., 2019). Additionally, the incorporation of green roofs and rainwater harvesting systems contributes to water conservation and enhances the library's overall environmental performance.

Emphasizing the importance of sustainable building design not only demonstrates a commitment to ecological stewardship but also creates a physical space that inspires and educates library users about environmental responsibility. Libraries that prioritize sustainable building design become iconic examples of how institutions can contribute to a more sustainable and resilient future.

Waste Management

Waste management is a critical component of green library practices, emphasizing responsible disposal and reduction strategies. Libraries generate various types of waste, including paper, electronic equipment, and packaging materials, requiring a systematic approach to minimize environmental impact. Implementing effective waste management practices involves recycling initiatives, waste reduction campaigns, and responsible disposal mechanisms (Jones & Smith, 2018).

Libraries can establish recycling programs for paper, plastic, glass, and electronic waste, promoting a culture of sustainability among staff and patrons. Furthermore, adopting practices such as double-sided printing, encouraging the use of electronic resources, and implementing efficient document management systems contribute to paper waste reduction (Brown, 2020).

To address electronic waste, libraries can engage in e-waste recycling programs, ensuring the proper disposal of outdated or non-functional electronic equipment (Jones & Smith, 2018). This not only prevents hazardous materials from entering landfills but also aligns with the principles of a circular economy.

In addition to waste reduction and recycling, libraries can explore partnerships with local recycling facilities and organizations to enhance their waste management practices. By prioritizing waste reduction and responsible disposal, libraries play a vital role in minimizing their environmental footprint and setting an example for sustainable practices within their communities.

Energy Conservation:

Energy conservation is a pivotal facet of green library practices, focusing on optimizing energy use to reduce environmental impact and operational costs. Libraries, as energy-intensive institutions, have the potential to significantly contribute to sustainability through the implementation of energy-efficient technologies and operational strategies.

Jones and Smith (2018) highlight the importance of energy-efficient lighting systems, smart heating, ventilation, and air conditioning (HVAC) systems, and the integration of renewable energy sources to minimize the carbon footprint of libraries. Utilizing energy-efficient appliances and technologies not only reduces energy consumption but also sets a precedent for environmentally conscious practices within the community.

Libraries can adopt passive design principles, optimizing natural lighting and ventilation to reduce dependency on artificial lighting and HVAC systems (Smith et al., 2019). Automated lighting controls and occupancy sensors further enhance energy conservation efforts, ensuring that resources are utilized only when necessary.

Moreover, embracing renewable energy sources, such as solar panels or wind turbines, allows libraries to generate clean energy and contribute to the transition to sustainable power (Brown, 2020). By prioritizing energy conservation, libraries not only decrease their environmental impact but also demonstrate a commitment to responsible resource management.

Challenges and Barriers in Implementing Green Library Practices:

Despite the evident benefits, the implementation of green practices in library management is not without its challenges and barriers. One significant obstacle lies in the initial costs associated with adopting sustainable technologies and building designs (Smith et al., 2019). Libraries often face budget constraints, making it difficult to invest in eco-friendly infrastructure and technologies, hindering the implementation of comprehensive green initiatives.

Another challenge is the lack of awareness and understanding among library staff regarding the importance and methods of incorporating sustainable practices (Jones & Smith, 2018). Resistance to change and a traditional mindset can impede the successful integration of green initiatives. Training and awareness programs become essential to overcome this barrier, ensuring that library staff are well-equipped to embrace and champion sustainability efforts.

Regulatory and policy constraints also pose challenges, with existing regulations sometimes favouring conventional practices over sustainable alternatives (Brown, 2020). Overcoming these barriers requires advocacy for policy changes that encourage and incentivize green initiatives in libraries.

Moreover, libraries often face challenges in measuring and demonstrating the direct impact of green practices on their operational efficiency and environmental footprint (Jones &

Smith, 2018). Establishing clear metrics for success is crucial for garnering support and showcasing the tangible benefits of sustainability.

Addressing the challenges and barriers associated with implementing green library practices requires a multifaceted approach, encompassing financial considerations, staff awareness, policy advocacy, and effective measurement and communication of outcomes.

Conclusion:

In conclusion, the integration of sustainable practices in library management, often referred to as Green Libraries, emerges as a transformative approach toward environmental responsibility and community engagement. Through this research, we have explored key aspects of green library practices, including sustainable building design, waste management, and energy conservation. The benefits of such initiatives extend beyond the library walls, positively impacting operational costs, community well-being, and the library's overall image as a socially responsible institution.

While the benefits are evident, challenges in the form of budget constraints, staff awareness, policy barriers, and measurement complexities highlight the need for a comprehensive and collaborative approach. Overcoming these challenges necessitates strategic planning, community involvement, and advocacy for supportive policies to create an enabling environment for the successful implementation of green library practices.

In the face of pressing environmental concerns, libraries stand at the intersection of knowledge, community, and sustainability. As catalysts for change, green libraries not only contribute to ecological conservation but also promote a sense of environmental stewardship within the communities they serve. This research encourages ongoing exploration of green library practices, providing a foundation for future endeavours aimed at creating resilient, environmentally conscious, and socially impactful libraries.

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05
Impact of Historical Events on Sustainable Development

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Abstract

This research paper delves into the intricate relationship between historical events and the trajectory of sustainable development. As societies navigate the complexities of contemporary challenges, it becomes imperative to scrutinize the profound impact of past occurrences on the current state of sustainability. The study employs a qualitative research design, drawing on historical documents, case studies, and comparative analyses to explore key events that have significantly shaped sustainable development principles. Moreover, this research extrapolates these historical lessons to offer pragmatic implications for contemporary policy-making.

Keywords: sustainable development, history, policy-making

Introduction

The pursuit of sustainable development stands as a contemporary imperative amid global challenges such as climate change, resource depletion, and social inequality. To comprehend the intricate fabric of sustainable development, it is crucial to scrutinize the historical events that have shaped societal trajectories and laid the foundation for current sustainability paradigms. As scholars contend, "understanding the historical context is essential for formulating effective strategies in the pursuit of sustainable development" (Smith & Johnson, 2018, p. 45). This research seeks to explore the profound impact of historical events on sustainable development principles, contributing to an enriched understanding of the complex interplay between past experiences and present aspirations.

Background

Sustainable development, defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development [WCED], 1987), is an evolving concept deeply embedded in the dynamics of historical events. The evolution of this concept can be traced back to seminal works such as the Brundtland Report, which laid the groundwork for integrating environmental, social, and economic considerations into development policies (WCED, 1987). However, the trajectory of sustainable development is not solely defined by deliberate policy decisions; rather, it is intricately woven into the fabric of historical events that have unfolded over time.

Significance of Historical Perspectives

Historical events, ranging from industrial revolutions to geopolitical shifts, have left indelible imprints on societies, influencing resource use, economic structures, and societal norms. As Smith and Johnson (2018) argue, "historical events act as critical junctures that mold

the socio-economic and environmental landscape, setting the stage for subsequent development trajectories" (p. 52). Therefore, a comprehensive understanding of sustainable development necessitates an exploration of the historical antecedents that have shaped the current global landscape.

Purpose of the Study

This research endeavours to shed light on the historical underpinnings of sustainable development by examining specific events and their enduring impact. By employing qualitative research methods, including the analysis of historical documents and case studies, the study aims to unravel the intricate connections between historical occurrences and contemporary sustainability principles. Through this exploration, the paper seeks to identify valuable lessons learned from historical events and their implications for shaping sustainable development policies in the present era.

Historical Events in the Context of Sustainable Development

The interplay between historical events and the trajectory of sustainable development is evident in the shaping of societal structures, economic systems, and environmental practices. Understanding the historical context is crucial for unravelling the complexities of sustainable development and discerning the enduring impacts of past events on contemporary sustainability paradigms (Smith & Johnson, 2018).

Industrial Revolutions and Economic Shifts

One significant historical epoch that has left an enduring mark on sustainable development is the series of industrial revolutions. The transition from agrarian economies to industrialized societies marked a pivotal juncture in human history, altering production processes, consumption patterns, and resource utilization (Hobsbawm, 1962). The exponential growth in industrial activities brought about unprecedented levels of resource exploitation and environmental degradation, laying the groundwork for contemporary sustainability challenges (Mokyr, 1990).

The economic shifts accompanying these industrial revolutions had far-reaching consequences for societal structures. Rapid urbanization and the rise of consumer cultures transformed social dynamics, contributing to the emergence of unsustainable consumption patterns (Jackson, 2009). These historical developments underscore the intricate relationship between economic transitions and the sustainability challenges faced by modern societies.

Global Conflicts and Environmental Impacts

World Wars I and II stand out as transformative historical events with profound implications for sustainable development. The wars not only resulted in significant human and economic losses but also left indelible environmental scars. The large-scale mobilization of resources and the deployment of new technologies during wartime accelerated environmental degradation (Wells, 1997). The aftermath of the wars witnessed unprecedented industrial growth for reconstruction, further exacerbating environmental pressures.

Additionally, the recognition of the environmental consequences of warfare led to early international efforts towards environmental governance. The Geneva Conventions, for instance, incorporated provisions addressing environmental protection during armed conflicts, reflecting a nascent understanding of the interconnectedness of environmental well-being and sustainable development (Bothe, 1993).

Colonialism and Resource Exploitation

The era of colonialism represents another crucial historical context influencing sustainable development. Colonial powers, driven by economic interests, engaged in resource exploitation and land acquisition, leaving lasting legacies on the socio-economic structures of colonized regions (Blaut, 1993). The extraction of natural resources, often without regard for local ecosystems, disrupted traditional modes of resource management and contributed to enduring environmental challenges in post-colonial nations (Richards, 1993).

Lessons Learned and Contemporary Significance

Analysing the historical events mentioned reveals recurrent themes of resource exploitation, environmental degradation, and socio-economic inequalities. These lessons from the past underscore the need for holistic and integrated approaches to sustainable development. Acknowledging historical impacts allows for a more informed understanding of current challenges and aids in crafting effective strategies for a sustainable future.

Implications for Contemporary Policy

Analyzing the impact of historical events on sustainable development not only offers insights into the challenges faced by societies in the past but also provides a foundation for crafting informed and effective contemporary policies. Drawing on the lessons gleaned from historical occurrences, policymakers can devise strategies that address the complexities of the present era (Smith & Johnson, 2018).

Informed Resource Management

One of the key implications for contemporary policy lies in informed resource management. Historical events such as the industrial revolutions and colonial-era resource exploitation have demonstrated the consequences of unchecked resource consumption. By integrating historical insights, policymakers can develop sustainable resource management strategies that balance economic growth with environmental stewardship (Jackson, 2009). This involves embracing circular economy principles, reducing waste, and promoting responsible resource extraction practices.

Addressing Socio-Economic Inequalities

Historical events, including colonialism, have contributed to enduring socio-economic inequalities. Acknowledging this historical context is essential for designing policies that promote social equity and inclusive development. Contemporary policymakers can learn from historical mistakes and implement measures to address disparities in access to resources, education, and healthcare (Blaut, 1993). Prioritizing social justice in policy frameworks is crucial for fostering a more sustainable and resilient society.

Environmental Diplomacy

Global conflicts and their environmental aftermaths underscore the need for international cooperation in addressing environmental challenges. Contemporary policymakers can leverage historical lessons to strengthen environmental diplomacy and cooperation. International agreements and institutions, informed by historical experiences, can play a pivotal role in mitigating transboundary environmental issues and promoting shared responsibility for global sustainability (Bothe, 1993).

Transitioning to Sustainable Energy

The historical evolution of energy sources, from the coal-driven industrial revolutions to contemporary concerns about climate change, highlights the need for a transition to sustainable energy. Policymakers can draw on historical knowledge to design and implement policies that accelerate the shift towards renewable and clean energy sources. Learning from the successes

and failures of past energy transitions can inform the development of robust policies that address both environmental and economic considerations (Mokyr, 1990).

Education and Awareness

Finally, historical events can inform policies aimed at fostering environmental education and awareness. By understanding the environmental consequences of past actions, policymakers can design educational programs that instil a sense of responsibility and sustainability among current and future generations. This can lead to a more informed and environmentally conscious citizenry that actively participates in sustainable practices (Wells, 1997).

In conclusion, the implications for contemporary policy drawn from historical events emphasize the importance of integrating historical insights into decision-making processes. By doing so, policymakers can navigate the complexities of the present era, making informed choices that contribute to a more sustainable and resilient future.

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06
Renewable Energy and Environmental Challenges: A Physics Perspective

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Abstract

In the pursuit of sustainable energy solutions, physics plays a pivotal role in understanding the fundamental principles underlying renewable energy and addressing environmental challenges. This paper explores the intricate relationship between renewable energy and environmental concerns, delving into the physics principles that govern these phenomena and examining the challenges and opportunities presented by the intersection of physics, renewable energy, and environmental sustainability.

Keywords: Renewable Energy, Sustainable development, Physical Science, Environment

Introduction

1. The Physics of Renewable Energy:

1.1 Solar Energy: Renewable energy sources are rooted in the fundamental principles of physics, and none is more prominent than solar energy. Photovoltaic cells, at the heart of solar panels, convert sunlight into electricity through the photoelectric effect, a phenomenon explained by Einstein's work on the quantization of light. This section delves into the physics of solar energy conversion and the challenges associated with maximizing efficiency.

1.2 Wind Energy: Wind energy harnesses the kinetic energy of moving air, a concept deeply rooted in classical mechanics. The physics of wind turbines involves the conversion of kinetic energy into electrical energy through the rotation of blades. Understanding the aerodynamics and fluid dynamics of wind turbines is crucial for optimizing their efficiency. This section explores the physics principles governing wind energy and the challenges of intermittency and turbulence.

1.3 Hydropower: Hydropower relies on the gravitational potential energy of water, converting it into mechanical energy through turbines and then into electrical energy. This process aligns with the laws of thermodynamics and fluid mechanics. The physics of hydropower systems involves considerations of water flow, pressure, and turbine design. This section discusses the physics principles underpinning hydropower and the environmental implications associated with dam construction.

1.4 Geothermal Energy: Geothermal energy taps into the Earth's internal heat, a manifestation of thermodynamics and heat transfer principles. This section explores the physics of geothermal energy extraction, including the movement of heat from the Earth's interior to the surface, and the challenges related to resource depletion and subsurface engineering.

2. Environmental Challenges from a Physics Perspective:

2.1 Climate Change: The physics of greenhouse gas interactions with infrared radiation is central to understanding climate change. The enhanced greenhouse effect, driven by human

activities such as burning fossil fuels, alters the Earth's energy balance. This section explores the physics behind climate change and the role of renewable energy in mitigating these effects.

2.2 Air and Water Pollution: The physics of dispersion, diffusion, and chemical reactions govern the behavior of pollutants in the atmosphere and water bodies. Conventional energy sources contribute to air and water pollution, and transitioning to renewable energy is crucial for mitigating these environmental challenges. This section discusses the physics principles involved in pollution dispersion and the potential of renewables to reduce environmental harm.

3. Overcoming Physics-Related Challenges:

3.1 Energy Storage: Physics principles, particularly those related to electrochemistry and thermodynamics, govern energy storage technologies. Addressing intermittency in renewable sources requires advancements in energy storage systems. This section explores the physics of batteries, capacitors, and other storage technologies, highlighting the challenges and breakthroughs.

3.2 Materials Science and Efficiency: The efficiency of renewable energy technologies is intricately linked to the materials used in their construction. Advances in materials science, grounded in physics, are essential for enhancing the efficiency and durability of solar cells, wind turbines, and other renewable energy components. This section delves into the role of physics in materials science and the ongoing research to improve renewable energy technologies.

4. The Role of Physics in Policy and Innovation:

4.1 Policy Formulation: Physics provides the foundation for understanding the potential and limitations of renewable energy sources. Crafting effective policies for the widespread adoption of renewables requires a nuanced understanding of the physics principles involved. This section explores how physics can inform policymakers in setting realistic targets and implementing supportive frameworks.

4.2 Innovation and Research: Physics-driven research and innovation are crucial for overcoming existing challenges in renewable energy. This section highlights the role of physics in driving innovation, from the development of novel materials to the optimization of energy conversion processes.

5. Conclusion:

In conclusion, the pursuit of renewable energy and environmental sustainability is fundamentally rooted in the principles of physics. Understanding the physics of renewable energy sources and their environmental implications is essential for addressing the global energy challenge. By applying physics principles to overcome challenges, enhance efficiency, and drive innovation, we can pave the way towards a sustainable future. Physics not only elucidates the mechanisms behind renewable energy but also guides us in crafting effective policies and innovative solutions that can mitigate environmental challenges and propel us towards a cleaner and more sustainable world.

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07

"The Role of Renewable Energy in achieving SDG 7 and SDG 13"

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Abstract

Sustainable development has developed as a global priority in the twenty-first century, with the United Nations' Sustainable Development Goals (SDGs) providing as a comprehensive framework for addressing major global challenges. These goals include a variety of aims, such as eradicating poverty, ensuring access to clean water, decreasing inequality, and taking action on climate change. The shift to renewable energy sources is an important driver of sustainable development. Clean and safe energy sources are critical for long-term societal development. Renewable energy is quickly growing and helps many countries reduce greenhouse gas emissions.

Renewable energy production supports energy security while simultaneously supporting community development and environmental conservation on a global scale, according to the SDGs. In this article, we will look at the critical role of renewable energy in attaining the SDGs, stressing its ability to transform economies, mitigate climate change, and improve the quality of life for billions of people worldwide.

Keywords – SDGs, renewable energy resources, Tidal Energy, Geothermal Energy.

Introduction

Currently, global energy demand exceeds available generation capacity. As a result, future demands on energy must be provided in a way that is efficient and cost-effective. prioritise renewable energy sources when implementing energy solutions [1]. Renewable energy is still insufficient to satisfy global primary energy and power demand. Many developing nations are seeking to improve their energy sectors. However, making such inventions a reality looks to be tough [2]. There is always the question of sustainability when it comes to energy resources. Resources must provide adequate energy to fulfil human needs, such as heating houses, powering cities, and driving automobiles. However, it is also vital to consider how these resources will be used in the long term. Renewable resources will never become depleted. Renewable resources produce clean energy, resulting in lower pollution and greenhouse gas emissions, which contribute to climate change [3,4]. Renewable energy sources include biomass, geothermal resources, sun, hydropower, ocean, and wind [5].

Sustainable development goals and their importance

The Sustainable Development Goals (SDGs) are a set of 17 interconnected global objectives designed to transform our world. They were created as a "blueprint to achieve a better and more sustainable future for all" and are part of the United Nations 2030 Agenda for Sustainable Development. They were accepted by 193 countries in September 2015.

Figure 1. The United Nations Sustainable Development Goals (SDGs). (Open Access, https://www.un.org/development/desa/disabilities/envision2030.html , accessed on 1 November 2022).

Each of the 17 goals aims to reduce climate change and poverty globally while also improving education, health, and economic progress. According to the United Nations, the SDGs aspire to "protect the planet, and improve the lives and prospects of everyone, everywhere." The SDGs provide global guidelines for achieving each of these objectives. Most countries have crises within the SDGs, which can only be handled by working as one global community.

SDG 7 and SDG 13

The UN General Assembly established the 2030 Agenda for Sustainable Development in 2015, which includes a dedicated and stand-alone goal on energy, SDG 7, which calls to "**ensure access to affordable, reliable, sustainable, and modern energy for all**". Energy is crucial to both the 2030 Agenda for Sustainable Development and the Paris Agreement on Climate Change. Achieving SDG7 will provide millions of people with new economic opportunities and jobs, empower women, children, and youth, improve education and health, create more sustainable, equitable, and inclusive communities, and increase resilience to climate change [6].

Sustainable development

The concept of sustainable development first appeared in 1987, and it was described as development that can meet current demands without harming future generations' ability to do so. Sustainable development considers sociological, environmental, and economic variables to achieve optimal balance while pursuing a higher quality of life. While sustainability is a long-term goal, sustainable development involves the different approaches and strategy that can be effectively used to attain sustainability.

Renewable energy sources for sustainable development

Renewable energy sources for sustainable development originate from natural and continuous energy flows in the environment. Here's a brief description of several renewable energy sources for sustainable development:

- Bioenergy: Bioenergy, which originates from biological sources, can be used to create electricity, heat, cook, and generate biodiesel for transportation. Bioenergy has

tremendous opportunity to reduce greenhouse gas emissions and assure a sufficient fuel supply in the future.

- solar energy: Direct solar energy refers to any renewable energy sources for sustainable development that make use of direct sunlight. Once solar energy has been absorbed in the Earth and changed into other forms, ocean thermal and wind energy take advantage of it. sun energy uses sun irradiance to generate electricity to power lighting systems. Furthermore, solar energy is used to generate fuel, which can then be used for transportation or other reasons.
- Hydropower: Hydropower is one of the most important renewable energy sources for sustainable development. It is produced by changing the elevation of water from a higher to a lower level. The energy is utilised to generate electricity or power turbines. Hydropower, which is powered by established technologies, emits no greenhouse gases and is thus classified as a green energy source.
- Wind energy: Since its inception, wind energy has taken centre stage as one of the most reliable renewable energy sources for long-term development. Wind energy is based on harnessing the kinetic energy of flowing air and is mostly utilised to propel huge turbines and generate power.
- Geothermal energy: Derived from the interior of our planet as a source of heat, geothermal energy is a stable renewable energy source for sustainable development. While the Earth's crust contains a lot of heat, it is dispersed unevenly. Heat is extracted from reservoirs via a well or another method. Once the heat reaches the surface, it can be used to generate electricity or for any other application that requires heat energy.
- Tidal energy: Wind creates waves on the ocean's surface. The energy produced increases considerably as the wind intensity increases and the length of time it is sustained. The ocean covers 71% of the planet's surface and has the ability to supply the world's energy needs. Oceans can provide energy through thermal variations between shallow and deep seawater, wind, tides, and waves. [7,8]

Conclusion

The Sustainable Development Goals (SDGs) rely on renewable energy as a key component. It is an indispensable tool for achieving the global vision of sustainable development because it has the capacity to provide clean and affordable energy, mitigate climate change, boost economic growth, create jobs, and improve the quality of life for both urban and rural communities. However, realizing this potential requires joint efforts from governments, businesses, and individuals to invest in renewable energy infrastructure, research, and technology advancement. Through the utilization of renewable energy, the world can move closer to a future where the SDGs are not only aspirational but also achievable.

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08
Global Warming: Causes, Effects and Solutions

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Abstract-Many researchers, engineers and environmentalists are expressing deep concerns about changes in the overall climate of the planet. Fossil fuels are being continuously used to produce electricity. The burning of these fuels produces gases like carbon dioxide, methane and nitrous oxides which lead to global warming. Deforestation is also leading to warmer temperatures. The hazard of global warming is continuously causing major damage to the Earth's environment. Most people are still unaware of global warming and do not consider it to be a big problem in years to come. What most people do not understand is that global warming is currently happening, and we are already experiencing some of its withering effects. It is and will severely affect ecosystems and disturb ecological balance. Because of the treacherous effects of global warming, some solutions must be devised. The paper introduces global warming, elaborates its causes and hazards and presents some solutions to solve this hot issue. Above all, alternative energy sources (solar, wind, hydro, geothermal, bio mass) need to be seriously pursued.

Keywords: Climate, fossil fuels, deforestation, global warming, alternative energy sources

Introduction

The continuous rise in temperature of the planet is really upsetting. The root cause for this is global warming. Global warming begins when sunlight reaches the Earth. The clouds, atmospheric particles, reflective ground surfaces and surface of oceans then sends back about 30 % of sunlight back into the space, whilst the remaining is absorbed by oceans, air and land. This consequently heats up the surface of the planet and atmosphere, making life feasible. As the Earth warms up, this solar energy is radiated by thermal radiation and infrared rays, propagating directly out to space there by cooling the Earth. However, some of the outgoing radiation is re-absorbed by Carbon dioxide, water vapours, ozone, methane and other gases in the atmosphere and irradiated back to the surface of Earth These gases are commonly known as greenhouse gases due to their heat-trapping capacity. It must be noted that this re-absorption process is actually good as the Earth's average surface temperature would be very cold if there was no existence of greenhouse gases. Greenhouse Effect

While other planets in the solar system of the Earth are either roasting hot or bitterly cold, Earth's surface has relatively mild, steady temperatures. Earth enjoys these temperatures because of its atmosphere, which is the thin layer of gases that cover and protect the planet. However, 97 % of climate scientists and researchers agree that humans have changed the Earth's atmosphere in dramatic ways over the past two centuries, resulting in global

warming. To understand global warming, it is first necessary to become familiar with the greenhouse effect. As Fig.1 depicts, the natural greenhouse effect normally traps some portion of heating such a way that our planet is safe from reaching freezing temperatures while human enhanced greenhouse effect leads to global warming. This is due to burning of fossil fuels which increase the amount of greenhouse gases (carbon dioxide, methane and oxides of nitrogen) present in the atmosphere.

Greenhouse Gases: A Hazard

There are many greenhouse gases which are mainly emitted by human activity. The first and foremost in the list is carbon dioxide. Excessive burning of fossil fuels

like coal and oil is the major factor for producing this gas. Moreover, deforestation i.e. removal of trees for acquiring lands also causes large amount of carbon dioxide in the atmosphere. Cement manufacture also contributes carbon dioxide to atmosphere when calcium carbonate is heated generating lime and carbon dioxide.

The second culprit gas is methane, commonly known as natural gas. It is produced as a result of agricultural activities such as livestock digestion, paddy rice farming and use of manure. Methane is also produced due to improper management of waste. Nitrous oxides are generated mainly by fertilizers. Moreover, fluorinated gases such as chlorofluorocarbons (CFCs) are chiefly a result of various industrial processes and refrigeration.

Causes of Global warming

The major cause of global warming is the greenhouse gases. They include carbon dioxide, methane, nitrous oxides and in some cases chlorine and bromine containing compounds. The build-up of these gases in the atmosphere changes the radiative equilibrium in the atmosphere. Their overall effect is toward the Earth's surface and the lower atmosphere because greenhouse gases absorb some of the outgoing radiation of Earth and re-radiate it back towards the surface. The net warming from 1850 to the end of the20th century was equivalent to nearly 2.5 W/m^2 with carbon dioxide contribution about 60 % to this figure, methane about 25 per cent, with nitrous oxides and halocarbons providing the remainder. In 1985, Joe Farman, of the British Antarctic Survey, published an article showing the decrease in ozone levels over Antarctica during the early 1980s. The response was striking: large scale international scientific programmes were mounted to prove that CFCs (used as aerosol propellants in industrial cleaning fluids and in refrigeration tools) were the cause of the problem. Even more important was abrupt international action to curb the emissions of CFCs. The second major cause of global warming is the depletion of ozone layer. This happens mainly due to the presence of chlorine-containing source gases. When ultraviolet light is present, these gases dissociate releasing chlorine atoms which then catalyses ozone destruction. Aerosols present in the atmosphere are also causing global warming by changing the climate in two different ways.

Global Warming: The Effects Predicting the consequences of global warming is one of the most difficult tasks faced by the climate researchers. This is due to the fact that natural processes that cause rain, snowfall, hailstorms, rise in sea levels is reliant on many diverse factors. Moreover, it is very

hard to predict the size of emissions of greenhouse gases in the future years as this is determined majorly through technological advancements and political decisions. Global

warming produces many negative effects some of which are described here. Firstly, extra water vapour which is present in the atmosphere falls again as rain which leads to floods in various regions of the world. When the weather turns warmer, evaporation process from both land and sea rises. This leads to drought in the regions where increased evaporation process is not compensated by increased precipitation. In some areas of the world, this will result in crop failure and famine particularly in areas where the temperatures are already high. The extra water vapour content in the atmosphere will fall again as extra rain hence causing flood. Towns and villages which are dependent on the melting water from snowy mountains may suffer drought and scarcity of water supply.

Effects on Living Beings: Global warming can severely affect the health of living beings. Excess heat can cause stress which male ad to blood pressure and heart diseases. Crop failures

and famines, which are a direct consequence of heating up of earth, can cause a decline in human body resistance to viruses and infections. Global warming may also transfer various diseases to other regions as people will shift from regions of higher temperatures to regions of comparatively lower temperatures. Warmer oceans and other surface waters may lead to severe

cholera outbreaks and harmful infections in some types of sea food.

Alternative Energy Sources: The hazards caused by global warming are tremendous. Excessive use of fossil fuels such as coal, natural gas and oil play a part in it too. The usage of fossil fuels should be discontinued immediately. The most significant solution to put an end to this disaster is the use of alternative energy sources. They include wind, solar, bio mass, geothermal and hydro. The most noteworthy point in using these sources is their clean nature. They do not produce any sort of pollution toxic gases that can lead to global warming. They are environmentally friendly and pose no threat to ecological balance.

Other Solutions: As elaborated earlier, toxic emissions are a major cause of global warming, A likely solution to reduce harmful emissions is to cut the usage of vehicles which produce them. This has not been met with much successes many people refuse to cut down their practice of using cars. No doubt, some people have started to use bicycles and public transport, whereas some other prefer to walk but these numbers are relatively small. It should be noted that fuel economy and emission rates are chief factors to consider regarding the car choice. Hybrid cars have higher efficiency and lower emission rates. Keeping the tires inflated will help improve mileage and air filters should be frequently replaced to cut down harmful emissions. People should share the ride with friends or co-workers to reduce the total number of vehicles on the road. Print and social media can play an effective role in curbing the problem.

Conclusion: The scientific and environmental community is on the same page regarding the bitter reality of global warming and the involvement of human factor in it. The paper discussed here has only dented the surface of what is a very intricate line of scientific and engineering exploration. Global warming is a big hazard and appropriate measures must be taken to tackle this serious problem. This problem is not only causing trouble to the human beings but also to animals and plants. Melting of polar ice caps will lead to

floods which can cause mayhem everywhere. Rise of sea levels will devastate agricultural and fishing activities. To embark upon these problems, some remedial steps must be timely taken which include but are not limited to the use of renewable sources of energy and stopping deforestation. Innovative solutions must be brought forward to end this hazard once and forever

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09
Review: Water Quality and Mining Impacts

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Abstract

Rising population numbers, expanding economies, swift urbanization, and shifting consumer habits have driven rising demand for raw resources like base and precious metals, raising questions about their availability and the effectiveness of the mine supply chain globally. The use of water in mining has the potential to affect the quality of surrounding surface water and groundwater. Most mining activities induce an impact on their surrounding environment (e.g., water, air, soil) due to the presence of metal-rich tailing deposits. Mine tailings, consisting of process effluents that are generated in a mineral processing plant, are generally transferred to nearest natural water resources to meet environmental regulations and site-specific factors before discharging the waste. Before being discharged, mine tailings which are made up of process wastewaters produced in a mineral processing plant are often moved to tailings ponds or impoundments to comply with environmental laws and local conditions. Although Water issues and management vary from site to site and must be addressed locally, but in general, the mining industry seeks to minimize its impact on water quality and availability. Mining operations use water for mineral processing and metal recovery, controlling dust, and meeting the needs of workers on site. The amount of water required by a mine varies depending on its size, the mineral being extracted, and the extraction process used In response to environmental concerns and government regulations, the mining industry worldwide increasingly regular monitors waste water discharged from mine sites, and has implemented a number of management strategies to prevent water pollution. Thus, the need for a comprehensive framework for mine tailings management that promotes sustainable growth is beginning to be recognized by the mining industry. Thus, a complete framework for mine tailings management that promotes sustainable growth is becoming increasingly evident to the mining industry. Accordingly, the sustainable rehabilitation and disposal of mining waste depends on an understanding of the factors that contribute to pollution, how it is created, and how it affects the environment. Therefore, for the sustainable rehabilitation and disposal of mining waste, an understanding of the origins, processes, and impacts of pollution generation on the environment as well as sustainable treatment options are essential. This review includes information on different heavy metal water pollution sources of mining industries and its effect on ground and surface water contamination and with their negative effects.

Key Words: water quality, heavy metals, mining activities, water contamination, Acid Rock Drainage.

I. Introduction

Water is the most vital resource for life. Approximately 97.2% water lies in oceans as salt water. While 2.15% in frozen ice from and the remaining 0.65% remain as fresh either on surface or ground water (Ramakaran etal., 2021). Available fresh water resources are very limited (Madhvan and Subramanian, 2001). The demand for fresh water has increased day by

day and will increase with the rapid growth of population, agriculture and industry (Kumar etal., 2010). As a result the fresh water reserve depletes day by day too. The requirement of clean water per person is about 2.7 lit per day, thus the global requirement is about 5 billion cu. m. only for drinking purpose (Ebeneza etal., 2019). In societies like our India with developing economics, the optimum development, efficient utilization and effective management of their water resources should be the dominant strategy for economic growth (Kumar etal., 2008). But in recent years unscientific management and use of this resources for various purpose almost invariably has created undesirable problems in its wake, water logging and salinity in the case of agriculture use and environment pollution of various limits as a result of mining, industries and municipal use (Kumar et al., 2008). Mine water is produced when the water table is higher than the underground mining workings or the depths of an open pit surface mine (Hudson., 2012) . When this occurs, the water must be pumped out of the mine. Alternatively, water may be pumped from wells surrounding the mine to create a cone of depression in the ground water table, thereby reducing infiltration (Dasgupta., 2012). When the mine is operational, mine water must be continually removed from the mine to facilitate the removal of the ore (Mathur and Maheshwari.,2005). Once mining operations ends, the removal and management of mine water, resulting in possible accumulation in rock fractures, shafts, tunnels, and open pits and many toxic releases to the environment on the uncontrolled way (Sills etal .,2006). Ground water drawdown and associated impacts to surface waters and nearby wetlands can be a serious concern in some areas (Dubey etal., 2011). Impacts from ground water drawdown may include reduction or elimination of surface water flows; degradation of surface water quality and beneficial uses; degradation of habitat (not only riparian zones, springs, and other wetland habitats, but also upland habitats such as greasewood (Mishra and Tripathi.,2007) as ground water levels decline below the deep root zone); reduced or eliminated production in domestic supply wells; water quality/quantity problems associated with discharge of the pumped ground water back into surface waters downstream from the dewatered area (Jhariya etal.,2016).

II. Negative Impacts of mining

In mining activities water pollution is a major concern (Hudson., 2012). Due to the extensive water usage in ore processing, mine effluent discharge, seepage from tailings and waste rock impoundments, and other factors like mine cooling, aqueous extraction etc , mining has an impact on groundwater and river water (Kumar etal., 2008). The result is degradation of water quality (Karmakar et al., 2012). This increases the potentiality for contamination of water resources (Dasgupta., 2012). Water disruption, spills and tailing, sedimentation and erosion, acid drainage, dewatering mine, loss of vegetation, temperature rise, ecosystem instability, reduction in moisture of soil and air, deforestation, erratic hydrological cycle during mine development, and poor road construction during exploration are a few examples of detrimental impacts (Jhariya et al., 2016). The host rock's capacity to act as a buffer, the depth and permeability of the ore deposits, and the kind and quantity of the metal-bearing sulfides are some of the factors that affect the high metal concentrations and acidity seen in waterways from mining sites (Singh etal., 2014). Although mining techniques have improved recently, there are still substantial environmental dangers.

Water pollution from mine waste rock and tailings may need to be controlled for decades or even millennia after the mine is closed (Singovszka etal., 2020). These effects are dependent on a number of variables including the sensitivity of the surrounding terrain, the minerals being

mined, the type of technology employed, the company's experience, knowledge, and environmental commitment, the kind of technology used, the company's expertise and, lastly our capacity to oversee and enforce adherence to environmental laws along with our ability to monitor environmental factors that determine these effects (Hudson., 2012).

The fact that mining is now more automated more mechanized now than it was in the past, and it can handle more rock and ore (Marchese etal.,2008). Tailings management and effluent from mines and other industrial operations may have a long-lasting, often irreversible, detrimental , permanent impact on water supplies (Sumi etal., 2001), making it more difficult for future generations to obtain water. This is particularly contentious when resource reserves are found in areas scarce water supplies, sensitive natural areas, or places with substantial cultural significance (Kumar etal., 2010). The use of water by mining enterprises may also be controversial when the communities surrounding the operations lack access to freshwater necessary for community sustainability (Hudson, 2012). Due to inadequate planning, disregard for regulations, significant environmental degradation, and ecological harm to Lake, Pond, and River water in this area, the water quality of reservoirs located on mining areas or closed to mining sites has sufficiently deteriorated and is also seriously disrupting the biodiversity of these environments (Kumar etal., 2010). The expansion of the industrial corridor, nutrient loading, and increasing human activity, particularly in emerging nations, are all contributing factors to the daily pollution of aquatic environments (Kumar etal., 2010). One ubiquitous and sneaky consequence of both technology advancement and human population expansion is the poisoning of the environment with chemicals. Future mine technologies that increase the profitability of mining low-grade ore will produce even more trash (Adhikari etal., 2002). Additionally, it was noted that valuable recreational fish species like trout frequently fall in areas affected by AMD, along with a general decline in outdoor activity and tourism (Frelich., 2014). AMD can have detrimental effects on aquatic resources, such as: (1) reduced growth of terrestrial plants, which can impair wetlands (2) polluted groundwater, which raises the cost of water treatment and (3) damage to metal and concrete buildings (Karmakar et al., 2012).

By runoff and stream flows, soils, sediments, groundwater, and other means, AMD releases large quantities of As and metalloids into the environment, which are then further incorporated into the food chain (Chauhan., 2010). Bhattacharya et al. stated that the primary pollutants are iron and manganese, and that because of acid mine drainage, the concentrations of aluminum and arsenic in some groundwater samples were higher than those recommended by the WHO. Additionally, a number of studies documented the detrimental effects of mining operations on the ecosystem, including soil and water pollution and the loss of biodiversity (Frelich., 2014). Because tailing deposits, rich in metal elements (ME) are present, most mining operations have an effect on the surrounding environment (Abbasi etal., 2002).

III. Waste from the Mining Process

A mine produces a variety of wastes, but three namely mine water, tailings, and waste rock stand out as having the most volume (Sumi et al., 2001). Mine tailings are known as remaining waste. The waste products that remain after the target mineral is removed from the ore are called tailings. A valuable metal, like gold or copper, or another mineral material, like coal, can be found in mineralized rock called ore. To extract the desired mineral ore, open-pit mining requires excavating enormous amounts of waste rock, or material that does not contain the target mineral. After that, the ore is crushed into tailings that have been finely powdered in order to treat it with different chemicals and extract the desired product. Waste from mining occurs

during the extraction and processing of mineral resources. It consists of things like crushed waste rock and tailings (after the precious mineral is extracted) and topsoil overburden (Karmakar etal., 2012) (which is removed to obtain access to mineral resources).

IV. Water Pollution Sources from Mining

Water contamination from mining may take four major forms which are as follows-

1. Acid Rock Drainage: The natural process known as Acid Rock Drainage (ARD) occurs when sulphides in rocks come into contact with water and air, producing sulfuric acid. Acid Mine Drainage (AMD) is a process that is essentially the same but amplified much more. Sulfuric acid is produced when substantial amounts of rock containing sulfide minerals are removed from an open pit or opened up in an underground mine and react with oxygen and water. The oxidation and acidification processes of the water can be accelerated by the naturally occurring bacterium Thiobacillus ferroxidans, which leaches more trace metals from the wastes when the water reaches a particular acidity level (Efimov etal., 2018). As long as the source rock is exposed to air and water, the acid will continue to seep from it until the sulphides are removed, which might take hundreds or even thousands of years (Frelich., 2014). Rainwater or surface drainage carries acid from the monazite and deposits it in surrounding streams, rivers, lakes, and groundwater (Mehta 2002).

AMD may destroy aquatic life, seriously deteriorate the quality of water, and render it nearly useless (Dubey etal., 2011). The breakdown of minerals linked to ore bodies in the sacrificial environment can lead to acid mine drainage (AMD), which can also have an impact on water resources (Karmakar., 2012). Open pit walls, subterranean buildings, crushed waste rock, and tailings are all exposed to water and oxygen during mining operations, which might result in AMD that contains a variety of compounds that could be hazardous (Sills et al., 2012). AMD is one of the world's mining industry's most significant and perhaps permanent legacies (Aksil and Koldas., 2006).

The harmful consequences linked to AMD can affect three environmental domains: (1) tainted drinking water; (2) hampered aquatic plant and animal development and reproduction; and (3) acid's corrosive impacts on infrastructure, including ships, bridges, and railroads (Hudson, 2012).

2. Heavy metal pollution: When metals like arsenic, cobalt, copper, cadmium, lead, silver, and zinc that are exposed in underground mines or found in excavated rock come into contact with water, it can contribute to heavy metal pollution. As water flows over the surface of the rock, metals are leached off and transported downstream. Leaching is notably enhanced under low pH circumstances, such as those caused by acid mine drainage, even though metals can become mobile in neutral pH settings.

Lead:

The mining-related heavy metals as lead may originate in runoff from city streets, industrial dischargers, leachate from landfills, mining activities and a variety of other sources. Lead is toxic chemical, which are generally persistent in the environment, excess concentration of Lead concentration can cause toxicity in water or find their way into drinking water supplies (Singh etal., 2014) posing long term health risks to humans along with negative ecological impact on aquatic life such as reproductive failure or death in fish, shellfish and wildlife (Kitula., 2005). In addition, lead can accumulate in animal and fish tissue, be adsorbed in sediments, Mineral matter in coal, primarily with sulphides such as galena (PbS), clausthalite (PbSe) and pyrite, as well as alumina silicates and carbonates generally associated with lead. It was also

suggests that lead may also be associated with organic matter, most likely in the lower ranked coals.

Zinc:

Usually zinc is found in abundance in earth crust in the ore form (sphalerite – ZnS) with the associates of lead element. It is found in soil, water, air and in all food items. The process by which zinc comes in environment includes the human activity as well as natural phenomenon. The various human activities which led to entrance of zinc elements in the surrounding environment are mining, purifying of zinc, cadmium, and lead ores, coal burning, steel production, and burning of wastes (Bunton and Frazier ., 1994). Most of the zinc in water bodies, such as lakes or rivers, settles on the bottom. However, a small quantity may remain either dissolved in water or as fine suspended particles. As the acidity of water rises the level of dissolved zinc in water may enhance. Most of the zinc in soil is bound to the soil and does not dissolve in water (Sills etal., 2006). However, depending on the characteristics of the soil, some zinc may reach groundwater. **Manganese:**

In our earth crust manganese metal is found in plenty with iron ore therefore it is not found in pure form but as constituent of more than 100 minerals. It is a necessary element for the appropriate working of both animals and human beings because it is an important mineral for the functioning of different types of cellular enzymes. The existence of manganese is generally found in 11 oxidative states. Mn2+, Mn4+ or Mn7+ are the most environmentally and biologically significant compound of manganese. In surface and ground water manganese are found naturally. Presence of manganese in soil can leach in water sources (Concas et al., 2006).

Arsenic:

Sulfide mineralization is one of the mining processes that is most known for resulting in streams that have a high metal concentration and affecting river and groundwater quality. Arsenic is found in sulfide mineralization process-affected water, and even at low concentrations, it is thought to be hazardous to the environment. Mining-related arsenic pollution is limited in space, and levels of arsenic content close to the locations of mining exceed background concentrations in nature (Bhattacharya et al., 2005). Several nations, including India, have reported seeing elevated levels of arsenic in their groundwater (Chakraborti etal., 2016). They revealed that the WHO water standards for human consumption in discharge waters were surpassed by potentially dangerous components with noticeably high amounts. Arsenic pollution of groundwater and stream flows is a significant problem in mining operations. Two are adsorption and desorption.

Chromium:

In the Sukinda chromite mining area of Odisha, India, Dhakate et al. 2008 used simulation modeling to study the effect evaluation of chromite mining on groundwater. They stated that in certain samples of surface water, groundwater, mine water, and mine seepage, the concentration of Cr(VI) is higher than what is allowed. Near the ore bodies, the Cr(VI) content was higher, and as one moved farther away from the ore body, the content declined. Seasonal variations in the Cr(VI) content in groundwater samples were observed. The movement of pollutants from waste rock dumps to water reservoirs during the rainy season was the cause of the change in chromium content which clearly indicated the impact of mining activities on water quality.

Iron:

In a mining activity contaminated site, Concas et al. 2006 investigated the mobility of heavy metals from tailings to groundwater and reported that the red coloring of bed stream sediments as a result of abundant Fe(III)-hydroxides precipitation made the contamination of groundwater worse and more obvious. The need to investigate the many ecological impacts of heavy metal contamination is highlighted by the high concentrations of these pollutants in surface and groundwater close to mining operations.

3. **Chemical pollution :** Chemical agents used by mining corporations to extract the desired mineral from the ore, such cyanide or sulfuric acid, can leak, spill, or leach from the mine site into adjacent water bodies, causing this type of pollution (Cheng et al., 2011). Both people and wildlife may be seriously poisoned by these substances (Mondal et al., 2014). The oxidation of sulfide minerals in mining waste - a highly acidic condition - favored the enrichment of dissolved metals in surface waters downstream from the mine, according to extensive study. They also came to the conclusion that adsorption mechanisms are crucial in regulating the amounts of metals in groundwater that have been polluted by mining operations. Coal and metal mines are thought to be the primary sources of sulfate emissions into groundwater among other sources.

4. **Sedimentation and soil erosion**: Mineral development, open pit mining, and waste impoundments are examples of mining activities that disrupt soil and rock. Large volumes of silt may be carried into streams, rivers, and lakes by erosion of the exposed ground in the absence of effective preventative and control measures. Overabundance of silt can choke aquatic life, plants in watersheds, and wildlife habitat, clogging riverbeds.

V. Water Quantity

Mining can deplete surface and groundwater supplies. It creates disturbance on surface contour, drainage system, includes water for mine process which lower the water table and change the way from which water migrates the surface (Jhariya et al 2010). Groundwater withdrawals may damage or destroy streamside habitat many miles from the actual mine site. Mining activities lowers the water table and drying up the nearest water resources.

VI. Mitigation strategy for mining plant

Water consumption in mining sites carries a high danger. Mining operations will inevitably affect the aquatic environment by coming into direct or indirect contact with groundwater or surface water. As a result, enterprises need to make investments to prevent water impurities and contamination. Environmentally eco friendly techniques should be incorporated and promoted by the mining industry before the execution of a mining plant. Conserving natural resources, managing them scientifically to produce the least amount of waste possible and identifying alternatives for the minerals that are now commonly utilized, proper disposal of used metals, implementation of environmental eco-friendly technology, economical usage of energy, planting new trees and preserving ecological diversity are some important mitigating measures that should be incorporated for safe and clean environment. Besides it environmentally sensitive places shouldn't allow mining operations to be permitted by the government, NGOs. Observe the Acts, Guidelines, and Regulations issued by the Ministry of Environment and Forest for the conservation of natural resources like Environmental Protection Act 1987, Water Prevention and Control Act 1974 etc.

These mitigation strategies are the basic for establishment of any mining plant but there is a need of use control measures in every unit /steps of a mining plant. For example in a mining operation after mining the ore body, processing the ore, and extracting the precious metals and

minerals, the majority of mines create tailings as their last waste product. The residue left behind after ore is mined, crushed, ground, and chemically treated is called mine tailings. The substantial amount of tailings resulting in varying environmental footprints with respect to the storage area's physical dimensions and the extended time periods that need tailings management and rehabilitation. Because of its permanent effects on the environment, tailings management is a critical concern in mining operations. Degradation of soil and water quality due to mine tailings from active and closed operations is a prevalent environmental problem. Mine tailings management involves a number of procedures, including reducing tailings output and maximizing tailings reuse, adopting a risk-based strategy, and taking pertinent social, environmental, and economic factors into account.

Waste water treatment and management follows tailings management as a major concern. Through an understanding of the individual components of mine water interactions, water and wastewater treatment systems, and effective water use process schemes, experiments should concentrate on lowering mine water usage and improving management. Of these, the effects of mining voids on water resources and nearby bodies of water such as groundwater table decline and groundwater pollution as a result of mining operations are the most often researched features. Possible sources of mine-related water pollution include acid mine drainage, leaching of mine drainage water from waste rock heaps, and untreated water released from impoundments into groundwater aquifers. Where groundwater directly supplies the population with drinkable water or where it feeds surface streams or lakes, groundwater pollution is especially concerning. Due to these worries, the prevention of groundwater pollution is incorporated into the design of contemporary mines, and a network of groundwater monitoring wells is set up to evaluate the effectiveness of preventative measures and serve as an early warning system for spills or leaks. Depending on the kind of pollution and its hydrogeology and geographic surroundings, a choice must be taken regarding whether to start remedial action as soon as contamination is detected. Furthermore, the dilemma of whether or not to take action that would partially or totally avoid ongoing or increasing pollution arises in light of future groundwater quality. In addition, there's a demand for in order to start addressing the very real issues that AMD poses, the government needs to do the following: stop future acid mine drainage that could destroy aquatic habitat; inventory and clean up already-existing acid mine sites; increase public access to information about AMD treatment and reclamation monitoring and enforcement; and stop future AMD by enhancing environmental risk assessment and implementing a liability prevention strategy for AMD mines.

VII. Conclusions

the most significant effects of mining activity is the serious environmental harm it caused, including water pollution, land degradation, biodiversity loss, air pollution, noise pollution, vibration, land subsidence and landslides, and pollution of natural water resources. The goal of the government should be to give local stakeholders in mines technical help, such as facilitation and task management training. Before mining waste is dumped into waste ponds, it must be regulated and processed into a non-toxic state using new technology that employs fewer chemicals during extraction and processing.

The properties of mine tailings can differ significantly and are influenced by the mineralogy of the ore as well as the physical and chemical procedures utilized to recover the valuable product. Because there was no suitable extraction technology in place while mine tailings were being mined, they accumulate trace metals and may eventually become an emission

source. To guarantee that tailings are disposed of and stored in a sustainable and responsible way, potential environmental and socioeconomic factors must be balanced. Tailings management techniques now in use include regulating dust, recovering or removing metals, producing stable landforms in the surrounding surroundings, and eliminating or reducing the discharge of water impacted by the process. Poor water management, the ineffectiveness of the tailings disposal technique used, dam failure, and natural calamities make mining tailings a significant potential danger. Technology development for the appropriate handling of mining tailings has received a lot of attention. The environmental impact of mining is lessened by the use of advanced technology at nanoscale level, which is more effective in eliminating heavy metals from AMD and in the secondary recovery of precious metals from mining waste streams. Understanding the processes that took place in the mine tailings deposits would help determine the amount of environmental risk, recommend a remediation strategy, and/or explore the possibility of reusing the leftover materials. In order to minimize the amount of time needed for long-term monitoring and maintenance, improve environmental results, and lower overall costs for tailings management systems, more advanced tailings management techniques may be needed.

All mining operations, regardless of size, must be required to produce an accurate environmental impact assessment report in order to get a mine license. The Environmental Protection statute, 1987" should be vigorously enforced by the government in the mining industry, and an inspection officer should be appointed to verify that mine holders are adhering to the statute.

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10
Renewable Energy- Powering a Safer Future in Environmental Protection

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Abstract

Public acceptability is increasingly seen as a constraint on the exploitation of renewable energy. Renewable technologies are considered as clean sources of energy. Renewable energy technologies provide an excellent opportunity for mitigation of greenhouse gas emission and reducing global warming through substituting conventional energy sources. Comprehensive studies of major renewable energy gadgets for domestic and industrial applications are introduced. This theory concluded that more research is needed in order to gather a clearer and more sensitive understanding of public attitudes and how they are formed and developed.

Introduction

The growing demand for renewable energy necessitates a broader exploration beyond conventional sources. This paper aims to highlight and analyse overlooked renewable resources that could play a crucial role in meeting our energy needs. Public acceptability plays a pivotal role in shaping the trajectory of renewable energy utilization. While renewable technologies are hailed as clean energy sources with the potential to mitigate greenhouse gas emissions and combat global warming, their widespread adoption faces challenges rooted in public perceptions. This paper delves into a comprehensive analysis of major renewable energy technologies tailored for domestic and industrial applications. However, it becomes evident that the road to a sustainable future is hindered by gaps in understanding public attitudes and the intricate processes through which they are formed. Renewable energy holds the promise of a cleaner, more sustainable future, yet its full potential is constrained by the complex interplay of public attitudes and perceptions. As the world grapples with the urgent need to transition away from conventional energy sources, this paper aims to unravel the dynamics surrounding the public acceptability of renewable energy and explore strategies to induce a shift towards its widespread adoption. The global pursuit of sustainable energy sources has thrust renewable technologies into the spotlight as heralds of a cleaner and greener future. However, the journey towards widespread acceptance faces a significant hurdle in the form of public perceptions. This section endeavours to unravel the intricate relationship between renewable energy and public attitudes, laying the groundwork for a deeper understanding of the challenges that impede its seamless integration.

Economic Benefits of Renewable Energy Resources:

Transitioning to renewable energy sources offers substantial economic advantages, including reduced dependence on costly fossil fuels. Investment in renewable technologies stimulates job creation and fosters economic growth. Long-term savings in healthcare costs due to reduced environmental pollution contribute to the financial well-being of societies.

Diverse Forms of Renewable Energy:

Solar Power: Harnessing energy from the sun through photovoltaic cells and solar thermal systems.

Wind Power: Utilizing the kinetic energy of wind to generate electricity through wind turbines.

Hydropower: Unlocking the Potential of Renewable Energy: Navigating Public Perceptions for a Sustainable Future,

Dissecting current public perceptions of renewable energy. Despite being recognized as clean sources of energy, there exists a disconnect between the inherent benefits of renewable technologies and public sentiment. To bridge this gap, it is crucial to understand the psychological factors shaping these perceptions, paving the way for targeted interventions.

Harnessing Renewable Energy for Mitigation

An in-depth examination of renewable energy technologies reveals their potential to not only reduce greenhouse gas emissions but also mitigate the adverse effects of climate change. By presenting compelling data on the positive environmental impact, the paper aims to instil a sense of urgency among readers, emphasizing the need for immediate action to avert further ecological crises.

The Urgency of Change

To capture the reader's attention and evoke a sense of urgency, the paper explores the impending consequences of continued reliance on conventional energy sources. Drawing on current data, it highlights the escalating environmental threats, positioning renewable energy as the key to mitigating these risks and preserving a habitable planet for future generations.

Bridging the Gap – Understanding Public Attitudes

Acknowledging the need for a paradigm shift, the paper proposes extensive research to unravel the intricacies of public attitudes towards renewable energy. By leveraging insights into human behaviour and psychology, we can develop targeted strategies to sway public opinion and inspire collective action.

Conventional vs. Overlooked Resources:

Compare widely recognized renewable sources (solar, wind, hydro) with lesser-known resources such as ocean thermal energy, geothermal heat pumps, and piezoelectric materials.

Ocean Thermal Energy:

Explore the potential of harnessing temperature differences in ocean layers to generate power. Discuss current technologies and their applications in coastal regions.

Geothermal Heat Pumps:

Examine the benefits of tapping into the Earth's stable temperature for heating and cooling purposes. Discuss applications in residential and industrial settings.

Piezoelectric Materials:

Introduce the concept of converting mechanical vibrations into electrical energy using piezoelectric materials. Explore potential applications in infrastructure and wearable technology.

Biomass Gasification:

Highlight the potential of converting organic matter into gas for energy production. Discuss applications in decentralized energy systems and waste-to-energy initiatives.

Microbial Fuel Cells:

Explore the utilization of microbial activity to generate electricity. Discuss applications in wastewater treatment plants and bioenergy production.

Renewable Technologies Unleashed

As we delve into the heart of renewable energy, this section illuminates the unparalleled potential of various renewable technologies. Solar panels harness the inexhaustible power of the sun, wind turbines convert breezes into electricity, hydroelectric dams tap into the kinetic energy of flowing water, and geothermal systems leverage the Earth's internal heat. These technologies collectively offer a diverse and abundant array of clean energy sources capable of reshaping our energy landscape.

The Call for Immediate Action

The urgency to combat climate change necessitates a swift and decisive response from society. However, bridging the gap between the promise of renewable energy and public acceptance requires more than just technological advancements. It demands a collective realization of the imminent threats and a willingness to act. This section advocates for an immediate call to action, urging individuals and communities to recognize the role they play in shaping the future by embracing renewable energy solutions.

Harnessing Insights from Human Behaviour

Understanding and influencing public attitudes toward renewable energy requires a nuanced approach grounded in insights from human behaviour. This paper contends that individuals are not merely rational actors; they are driven by emotions, social influences, and self-interest. By tapping into these factors, we can tailor communication strategies that resonate with people on a personal level. Aligning the adoption of renewable energy with individuals' values and aspirations can create a powerful impetus for change.

A Paradigm Shift Through Comprehensive Research

To affect a paradigm, shift towards renewable energy, comprehensive research is indispensable. This section underscores the importance of delving deeper into the intricacies of public attitudes, exploring how they are formed, and identifying potential barriers to acceptance. By conducting rigorous studies, we can develop targeted interventions that address specific concerns and misconceptions, ultimately steering public sentiment towards a more favourable view of renewable energy.

In the pursuit of a sustainable future, this paper has traversed the intricate landscape of renewable energy, dissecting the disconnect between its inherent promise and the prevailing public perceptions. We embarked on a journey through the potential of renewable technologies, unveiling their power to mitigate climate change and environmental impact. Yet, the realization of this potential hinges not just on technological advancements but on a profound understanding of human behaviour and a call for immediate action.

As the world grapples with the looming threats of climate change and environmental degradation, the urgency to transition to renewable energy becomes more than a scientific imperative—it transforms into a collective responsibility. The data presented underscores the irrefutable benefits of renewables, not only as solutions to environmental challenges but as catalysts for societal transformation. The final call resonates with urgency and hope. It urges individuals, communities, and nations to recognize their pivotal roles in steering the trajectory towards sustainable living. By embracing renewable energy, we not only safeguard our planet for future generations but also unlock a myriad of economic, social, and health benefits. The journey

towards a renewable future is not without challenges, but it is a journey that beckons collective action. It requires aligning individual aspirations with the greater good, harnessing the power of human behaviour, and investing in comprehensive research to address concerns and misconceptions.

In closing, the paper underscores a simple truth: the time for change is now. It is a call for a paradigm shift, a transformation that transcends technology and embraces the fundamental interconnectedness of humanity with its environment. Embracing renewable energy is not just an option; it is an imperative—one that promises a sustainable, resilient, and vibrant future for all.

Conclusion:

In conclusion, this paper presents a compelling case for the urgent transition to renewable energy. By intertwining environmental concerns with the innate human desire for self-preservation, it aims to not only inform but also evoke a visceral response, compelling readers to embrace renewable energy resources as a personal and collective imperative. The call to action is clear: for a sustainable future, we must transcend existing perceptions and embrace the transformative potential of renewable energy technologies. This paper unveils a spectrum of renewable energy resources often overshadowed by more conventional options. Ocean thermal energy, geothermal heat pumps, piezoelectric materials, biomass gasification, and microbial fuel cells offer unique advantages and applications. Integrating these overlooked gems into our energy mix could enhance sustainability, resilience, and contribute to a more diversified and robust renewable energy landscape. The conclusion emphasizes the importance of further research and investment in these untapped resources for a sustainable and energy-diverse future. This paper advocates for a harmonious integration of scientific advancements and a profound understanding of human behaviour. The journey towards widespread adoption of renewable energy is not merely a technological challenge but a societal transformation. By recognizing the urgency, leveraging human psychology, and investing in comprehensive research, we can bridge the gap between potential and acceptance, paving the way for a sustainable and resilient future. The call is clear it is time to embrace renewable energy as both a personal and collective imperative

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11
Impact of Artificial Intelligence in E-Commerce

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Abstract:
Artificial intelligence is a way of making a computer-controlled robot or software think intelligently in the similar manner the intelligent humans think. The paper centers around the effect of computerized reasoning in web-based business. Web based business is presently taking on different innovation to distinguish designs in light of the trading of merchandise o administrations utilizing the web and the exchange of cash and information to execute these exchanges. The outcome and idea that man-made consciousness applications can create and anticipate the precise gauge of the Online business. This paper features the effect of man-made consciousness in online business and its applications in various areas of internet business. It concludes that e-commerce websites' improved user experiences have been made possible by artificial intelligence.

Keywords: E-commerce, Internet, Buying and selling of goods, AI- Artificial intelligence

Introduction:

You are losing out on market share each day that goes by without your team implementing cutting-edge content marketing solutions powered by AI. Great if this sounded a little dramatic. It should be to get your advertising group on its toes and ready to embrace artificial intelligence controlled showcasing apparatuses. In the background of well-known products and services like Netflix, Amazon, flipkart, and, naturally, Google, artificially intelligent systems are always working. In the beyond couple of years, however, computer based intelligence has cleared its direction more profound into promoting, assisting brands with improving each step of the client venture. In addition, apparatuses already accessible to big business level organizations have become reasonable and open to medium-and little measured organizations. to gain a deeper comprehension of the most recent marketing applications of machine learning. By following and breaking down information determined to drive client commitment, AI has numerous applications in advertising.

- Predict customer lifetime value
- Predict customer churn.
- Improving the customer journey.
- Lead scoring
- Personalization
- Product recommendations
- Dynamic pricing

- Ad targeting

TYPES OF ARTIFICIAL INTELLIGENCE

1. Weak AI.
2. Strong AI.

Weak Artificial intelligence in weak artificial intelligence, machines behave like an intelligent human. Machines with weak artificial intelligence have all abilities like thinking, moving, talking but are programmed to do so. In the chess game, the machine has the ability to play but it does not possess any thinking ability like humans. The machine is programmed to play chess and make smart moves to compete with other players.

Strong Artificial intelligence in strong AI, machines actual ability is like humans. It is based on the concept that machines can be programmed like the human mind. They can think, make decisions, and have perceptions and beliefs.

INTELLIGENT MARKETERS USE ARTIFICIAL INTELLIGENCE

1. AI-enhanced PPC advertising
2. Highly personalized website experience and better CRO
3. AI-powered content creation
4. Content-creation chat bots

APPLICATIONS OF ARTIFICIAL INTELLIGENCE (AI)

AI adoption has been observed at many areas. Some examples are following,

1) Gaming: Machines can now compete with humans in games with artificial intelligence.AI implementation can be seen in many strategic games such as poker, chess, tic-tac-toe, etc. Machines are empowered with ability to think of many positions based on heuristic knowledge. Deep Blue was the first a chess-playing computer developed by IBM

2) Banking: AI application also lies in Anti-money laundering (AML). Money launderers hide their actions to increase their illegal money. This illegal is documented so well so as to give the illusion of legally earned money. Banking Industry across the world is shifting from traditional detection of AML to artificial intelligence based systems

3) Expert Systems − the expert systems are the developed to solve complex problems in a particular domain, with the artificial intelligence. The purpose of expert systems is to advise, predict results, suggest alternative solution and assist human in decision making.

4) Healthcare: AI application in healthcare lies in Diabetic Retinopathy Treatment, Medical Diagnosis, Risk Prediction and Automating Drug Discovery.

5) Vision Systems: Vision systems can understand, interpret, and comprehend visual

input on the computer.

6) Music and Movie Recommendation Services: AI based apps like Spotify, Pandora, and Netflix recommend music and movies based on the interests of users and their past choices. This data collected is then fed into AI learning algorithm to suggest recommendations.

7) Handwriting Recognition: The handwriting recognition software acquires the data through the text written on paper or on screen. This software then recognizes the pattern in handwriting like shapes of letters and the text is then converted to editable text. 8) Intelligent Robots -Robots embedded with sensors such as sound, bump, pressure, heat,light and temperature can detect the physical data and perform the instructions by a human. They have efficient processors and huge memory to make smart decisions and exhibit intelligence.

Literature Review

(2016) Artificial intelligence in robotics. In new plagiarism technique has been proposed based on K-NN method. This method clusters the string and matches words with neighbors. A counter is used to the count number of the string matched in compared files. Firstly, the file is compared with the existing set of files. The set of words which are matched are selected as copied words and showed as output. This technique finds the frequency of every matched copied word in the file. It also calculates the percentage of matched copied words.

Objectives of the study

1. To understand the present status of e-commerce
2. To study the impact of artificial intelligence in e-commerce

Scope of the study

The scope of the study is to find out impact of artificial intelligence in e-commerce. A sincere attempt has been made to include all the aspect relating to the study. For this purpose analysis of artificial intelligence in e- commerce how to impact now a days.

Research methodology

The aim of the study is to analyses the artificial intelligence in e-commerce .The data is used both primary and secondary data. The research instrument used in this study is questionnaire. It designed pertaining to the impact of the study. Data is used simple percentage method. The sampling unit for the study is selected by using convenience sampling procedure. The research design used for the study is the convenient research. Sample size for the study 50 respondents.

Primary Data

Primary data are those which are collected afresh and for the first time and thus happen to be original in character questions and interviews method were accede to collect primary data by visiting the factory premises and various departments in it. It was collected from the employees working in the factory by using both the questionnaire method and interview method. I would gather information from the employees who was not willing or who did not have time for or who was shy about it.

Secondary Data

It is collected from the internal record of company such as library records trade journals various training programs previously conducted and its responds etc... It is also conducted from

the officials of the pursued department in the factory. Secondary data provides a better view of problem study many magazines tools and otherreferences were also mean important in this study.

FINDINGS AND CONCLUSION

The followings findings and conclusion that could enlighten the impact of artificial intelligence and importantaspects of e-commerce.

From the analysis we found that 37.5% of the respondents are using e-commerce 1 to 5 years, 16.7% of the respondents are using more than 5 years, 45.8% of the respondents are using less than one year. The study reveals that analysis we found that 30.3% of the respondents are prominent domain others, 12.7% of the respondents are travel and tourism, 50% of the respondents are using banking. The analysis we found that 45.8% of the respondents are good,12.5% of the respondents are not good,41.7% of the respondents are very good. It concludes artificial intelligence has helped e-commerce websites in providing with better user experience

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12
Climate Change and its Impact on Human Health

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Abstract: -

Climate Change is modifying the environment where we live and our way of living. The increasing Temperature and emission of greenhouse gases damaging our ecosystem and hence the way of living-weather and Climate play a significant role in people's health this could increase the number of heat-related illness and deaths. The impacts of climate change on health will depend on many factors. These factors include the effectiveness of community's public health and safety system to address or prepare for the risk and the behavior, age, gender and economics states of individuals affected. The consequences of climate change on human health are severe which require special measures to combat with.

India is a large developing country with nearly 2^{nd} 3^{rd} of the population depending directly on the climate sensitive sectors such as agriculture, fisheries and forests. Climatic conditions strongly effect water vector borne diseases and other diseases transmitted through insects, snails or other cold-blooded animals. Malaria is strongly influenced by climate. Transmitted by Anopheles mosquitoes, kills almost 8 million people every year the Aedes mosquito vector of dengue is also lightly sensitive to climate conditions.

Introduction: -

Our environmental plays a vital role in determining our health. We live in an environment and the quality of our life depends on the quality of the surrounding environment. Today various types of pollution are creating stress and many diseases for people A large number of diseases come from the environment in which we live. In this paper we will study about the factors in our environment which produce many diseases and stress climate change scenarios include highs temperatures, change in precipitation and highs atmospheric CO_2 concentration Increases in the frequency or severity of extreme weather events such as stroms could increase the risk of dangerous flooding high winds and other threats to people and property warmes temperatures could increase the concentration of unhealth air and water pollutants. Changes in Temperature, Precipitation patterni and extreme. Evets could enhance the spread of some diseases.

Entreme weather could be a manifestation of global climate change has concluded in its 4^{th} assessment report that overall climate change is projected to increase the threat to human health, particularly in lower income population Predominantly within tropical / sub-…… countries. India is a large developing country with nearly 2/3 rd of the population depending directly on the climate sensitive such as agriculture, Fisheries and forest. Climatic conditions strongly affect water & vector borne diseases and other diseases transmitted through insects, snails or other cold-blooded animal malaria is strongly influenced by climate. Transmitted by Anopheles mosquitoes, Kills almost 8 million people every year. The Aedes mosquito vector of dengue is also highly sensitive it could expose on additional.

2 billion people to dengue transmission

By the 2080 s. the major brunt of

Global climate change in terms of adverse health impact will be mostly borne by the poor and developing countries. Ever though the rich and industrialized countries account for maximum GHGs emission.

Overview of Health effect of climate change : -

Over the last three decades three has been increasing global concern over the public health impacts attributed to climatic changes in particular the global burden of disease the world health organization (WHO) estimates that about a quarter of the diseases facing mankind today occur due to prolonged exposure to climate change most of these environment related diseases are however not easily detected and may be acquired during childhood and manifested later in adulthood. Possible impact of climate change on health is well documented by the WHO and other international organization like IPCC. The direct impact of it on human health is mortality due to increased Temperature, disasters resulting in flood. Loss of life water and VBDs malnutrition and respiratory diseases. The WHO estimates a global loss of 5-5 million days due to climate change in 2000 its is high lighted by WHO when it chose to mark work health day. 2008 with the theme International perspectives on global environmental change protecting Health from climate change.

The relationship between human health & Climate change in multidimensional. The 4th assessment report in which human health has affected by climate change These are alteration in distribution of some infectious disease vector.

II Distribution of some allergenic pollen species-

III Increased head wove related death.

Factors: Affecting human health: -

Impact from heat waves: -

head waves can lead to head strokes and dehydration and are the most common cause of weather-related deaths. Young children, Older adults and poor are more vulnerable than others to heat related illness.

Impact from extreme weather event: -

The frequency and intensity to increase precipitation event is projected to increase income location. These extreme weather event could cause injuries and in some cases death. Extreme. Events can also indirectly threaten human health in a number of ways for example it reduces the availability of fresh food and water interrupts. Communication, utility and health care services.

Conclusion

Climate change is threatening the sustainability of health systems performance and development goals through increased pressure from increased heat, extreme weather events, droughts, shifts in duration and prevalence of diseases, and the potential for increased novel diseases being introduced. Integrating climate change adaptation into development work does not require implementing development activities in a completely new way. It requires considering the climate impacts and identifying opportunities to adapt and transform as necessary. Health systems need to act now by promoting and building capacity for effective and iterative risk management across all levels, fostering multi-sectoral engagement, and identifying actions and investments over the short- and long-term to increase system resilience. Please review the programming guidance document entitled “Considerations to integrate climate change mitigation

and adaptation into HSS programming" for additional information on how existing and new activities can adapt to address climate change.

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13
Vermicomposting at Dairy Farm for Sustainable Agriculture

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In India, the integration of crops and livestock and use of manure as fertilizer were the basis of farming systems. But development of chemical fertilizer industry during green revolution period created opportunities for low-cost supply of plant nutrients in inorganic forms which led to rapid displacement of organic manures derived from livestock excreta. The deterioration of soil fertility through loss of nutrients and organic matter, erosion and salinity, and pollution of environment are the negative consequences of modern agricultural practices. Animal wastes also significantly contribute to the excess bacteria and nitrates that are frequently found in ground water.

INTRODUCTION

Vermicomposting is a simple biotechnological process of composting in which certain species of earthworms are used to enhance the process of waste conversion and produce a better end product. Vermicomposting differs from composting in several ways. It is a mesophilic process utilizing microorganisms and earthworms that are active at 10-32 C (not ambient temperature but temperature within the pile of moist organic material). The process is faster than composting, because the material passes through the earthworms gut,a significant but not yet fully understand transformation takes place, whereby the resulting earthworm castings (worm manure) are rich in microbial activity and plant growth regulators and fortified with pest repellence attributes as well. In short, earthworms. Through a type of biological alchey are capable of transforming garbage into "gold"

Million tons of livestock excreta are produced every year in India. This is causing concern due to odour and pollution problems. The US geological survey found that the increase in in-stream loads of nitrogen and phosphorous was strongly correlated with increased animal concentration.

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Eutrophication from animal waste run off has been linked to the outbreak of toxic microorganisms and has been implicated in massive destruction and diseases. Animal wastes. Also significantly contribute to the excess bacteria and nitrates that are frequently found in ground water.

Soil fauna and dairy farm waste play a prominent role in regulating soil processes and among these the earthworms play a vital role in maintaining soil quality and managing efficient nutrient biological organisms helping nature to maintain nutrient flows from one system to another and also minimize environmental degradation.Earthworms from a major component of the soil system have been efficiently ploughing the land for millions of years assisting in the recycling of organic nutrients for the efficient growth of plants. The effects by earthworms on plant growth may be due to several reasons apart from from the presence of macronutrients and

micronutrients in their secretions and in vermicompost in considerable quantites.Certain metabolites and vitamins release into the soil by earthworms may also be responsible to stimulate plant growth. Now there is a growing realization that the adoption of ecological and sustainable farming practices can only reverse the declining trend in the global productivity and environment protection.

It is estimated that in cities and rural areas of India nearly 700 million ton organic waste is generated annually which is either burned or land filled

In recent years efforts have been made by scientist to exploit earthworms in recycling of nutrients, waste management and development of vermicomposting systems at commercial scale. The benefits and preparation of vermicompost at dairy farm presented in brief.

BENEFITS OF VERMICOMPOST

1. When added in clay soil, vermicompost loosens the soil and provides the passage for the air.
2. The mucus associated with the cost being hygroscopic absorbs water and prevents water logging and improves water holding capacity.
3. In the vermicompost, some of the secretions of worms and the associated microbes act as growth promoter along with other nutrients.
4. Improves physical, chemical and biological properties of soil in the long run on repeated application.
5. The organic carbon in vermicompost releases the nutrients slowly and steadily in to the system and enables the plant to absorb these nutrients.
6. The multifarious effects of vermicompost influence the growth and yield of crops.
7. Earthworm can minimize the pollution hazards caused by organic waste by enhancing waste degradation.

METHOD OF VERMICOMPOSTING AT DAIRY FARM

In general, following method of vermi-composting at dairy farm using dung and other waste is most common.

Pits: The optimum sized of ground pits is 10 X 11 X 0.5m (L X W X D) can be effective for vermicomposting bed. Series of such beds are to be prepared at one place as per the requirement / waste materials available at farm.

THE STEPS FOR PREPARATION OF VERMICOMPOST ARE AS FOLLOW

1. Selection of site:

It should preferably black soil or other areas with less of termite and red ant activity, pH should be between 6 to 8.

2. Collection of wastes and sorting:

For composting, raw materials are needed in large quantities. The waste available should be sorted in to degradable and non-degradable (be rejected) parts.

3. Pre-Treatment of waste:

a. Dungs and waste materials dumps in layers, sandwiched with soil followed with watering for 10 days to make the material soft and acceptable to worm.

b. Mixing animal dung properly for vermicomposting.

4. Insecticidal treatment to site:

Treating the area as well as beds with chlorpyriphos 20 EC @ 3.0 ml/litre to reduce the problem of ants, termites and ground beetles.

5. Filling of beds with organic wastes:

Wastes are to be filled in the pits layer by layer and each layer should be made wet while filling and spray water as per the requirement continuously for next 10 days.

7th layer	A thick layer if mulch with fodder straw	(Top of bed)
7th layer	A layer of fine soil	(Top of bed)
7th layer	A layer of Dung	(Top of bed)
7th layer	Waste of a green fodder	(Top of bed)
3rd layer	Dry fodder waste material	(Top of bed)
2nd layer	A layer of Dung	(Top of bed)
1st layer	Dry and green fodder waste material	(Bottom of bed)

Excepting 3rd and 4th layer (which is the material to be degraded) each layer should be 3 to 4 inch thick so that bed material is raised above the ground level. Sufficient quantities of dry green wastes are to be used in the beds.

6. Introduction of worms in to beds:

The optimum number of worms to be The species of earthworms that are being used currently for compost production world wide are Eisenia foetida, Eudirlus eugeniae, Perionyx excavates,Lumbricus rubellus etc.

7. Provision of optimum bed moisture and temperature:

Bed moisture: By watering at regular intervals to maintain moisture of 60 to 80% till harvest of compost Temperature requirement for optimal results is 20 to 30 C by thatching (during summer).

8. Monitoting for activity of natural enemies and management of enemies with botanicals, Promising products: Leaf dust of neem, Acorus calamus rhizome dust,neem cake etc.

9. Harvesting of vermicompost and storage:

Around 60-90 days after release of worms, the beds would be ready for harvest. Stop watering 7 days prior to harvest so that worms settle at the bottom layer. Collect the compost,shade dry for 12 hours and bag it in fertilizer bags for storage.

10. Harvest of worm bio-mass:

The worms are to be collected and used for subsequent vermicomposting.

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13
The Need for Renewable Energy and Environment Challenges in Sustainable Development

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- **INTRODUCTION :-**

During the last few decades, it has become evident that we can no longer think of socioeconomic development in isolation from the environment. The nature of issues confronting us along with an increasing interdependence among nations necessitates that countries come together to chart a sustainable course of development. The United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in June 1992, was a milestone event, effectively focusing the world's attention on environmental and development problems we face as a global community. The Summit brought together governments from around the globe, representatives from international agencies and non-governmental organizations with the objective of preparing the world for attaining the long-term goals of sustainable development. Agenda 21 adopted at the conference, represents a global consensus and political commitment at the highest level on socio-economic development and environmental cooperation . The foremost responsibility for leading this change was placed on national governments. Each government was expected to design national strategies, plans, and policies for sustainable development in consonance with the country's particular situation, capacity and priorities. This was to be done in partnership with international organizations, business, regional, state and local governments, non-government organizations and citizens groups. The Agenda also recognized the need for new assistance for developing countries to support the incremental cost of actions to deal with global environmental problems, and to accelerate sustainable development. Since UNCED, extensive efforts have been made by governments and international organizations to integrate environmental, economic and social objectives into decision-making through new policies and strategies for sustainable development or by adapting existing policies and plans. As a nation deeply committed to enhancing the quality of life of its people, and actively involved with the international coalition towards sustainable development, the Summit provided India an opportunity to recommit itself to the developmental principles that have long guided the nation. These principles are embedded in the planning process of the country and therefore the need for a distinct national strategy for sustainable development was not felt.

Renewable energy is energy derived from natural resources that replenish themselves over a period of time without depleting the Earth's resources. These resources also have the benefit of being abundant, available in some capacity nearly everywhere, and they cause little, if any, environmental damage.

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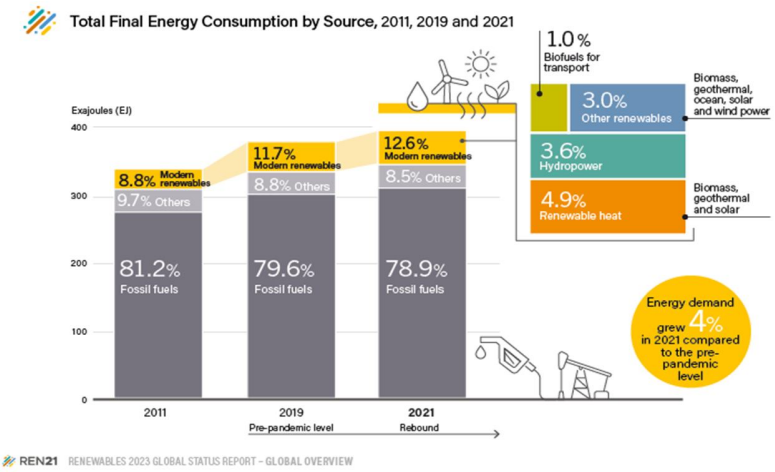
These resources – such as sunlight, wind, rain, tides, waves, biomass, and thermal energy stored in the earth's crust – have the benefit of being available in one form or another nearly everywhere. Included in this list is hydrogen when it is created using renewable electricity – it is then referred to as renewable hydrogen or green hydrogen. As these sources of energy are renewable, they are also inexhaustible. More importantly, they cause little to zero climate or environmental damage.

Fossil fuels, such as oil, coal, and natural gas, on the contrary, are available in finite quantities only. This is because, although they are produced through natural processes, they do not replenish as quickly as we humans use them. Not only are fossil fuels bound to run out sooner or later, but what's worse is that their extraction and production is associated with climate-damaging greenhouse gases, as well as health-endangering particles.



A shift to renewables has been motivated by multiple global crises such as discouraging climate scenarios, skyrocketing fossil fuel prices, macroeconomic instability, and especially a pressing energy crisis. Thankfully then, renewables have become more stable and affordable over time. As a result, since 2011, renewable energy has been growing faster than all other energy forms. **Renewable energy had another record-breaking year in 2022, as installed power capacity grew by 348 gigawatts** (GW) – its largest increase ever. Now 30% of our electricity comes from renewable energy – and this percentage keeps growing. The rising share of electricity in the total final energy consumption of end-use sectors has enabled the higher integration of renewables.

Keeping in mind the sustainable development goals, India's power generation mix is rapidly shifting towards a more significant share of renewable energy. Today, **India is the world's third largest producer of renewable energy**, with 40% of its installed electricity capacity coming from non-fossil fuel sources.

Solar	Wind	Small hydro	Large hydro	Bio power	Nuclear

48.5 5 GW	40.0 3 GW	4.83 GW	46.51 GW	10.62 GW	6.78 GW

BENEFITS REGARDING USE OF RENEWABLE ENERGY IN INDIAN ECONOMY

With a population of 1.3 billion, India has a massive demand for energy to fuel its rapidly growing economy. From a power deficit nation at the time of Independence, the efforts to make India energy-independent have continued for over seven decades. Today, we are a power surplus nation with a total installed electricity capacity of over four lakhs.

India's announcement that it aims to reach net zero emissions by 2070 and to meet fifty percent of its electricity requirements from renewable energy sources by 2030 is a hugely significant moment for the global fight against climate change. India is pioneering a new model of economic development that could avoid the carbon-intensive approaches that many countries have pursued in the past – and provide a blueprint for other developing economies. A transition to clean energy is a huge economic opportunity. India is particularly well placed to become a global leader in renewable batteries and green hydrogen. These and other low-carbon technologies could create a market worth up to $80 billion in India by 2030.

Renewable energy sources are the answer to India's energy demands which are growing and are expected to grow exponentially in the future. Through the "Make in India" initiative of the Indian Government, Renewable Energy will account for significant job creation in urban areas as well as rural areas along with several other renewable energy policies which cover Solar Energy, Wind Energy among other renewable energy sources. Renewable energy is responsible for sustainable jobs resulting in a boon for the youth of India. This paper highlights the significance of renewable energy, impact of renewable energy on the social and economic landscape of India and the government initiatives for the promotion and expansion of renewable energy sources in the country.

Environmental challenges and sustainable development

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. India makes up 2.4 percent of the world's land, while supporting 16 percent of the world's population. The compounding result is a severely unsustainable use of natural resources for several generations. Currently, India is experiencing rapid and widespread environmental degradation at alarming rates. Tremendous pressure is placed upon the country's land and natural resources to support the massive overpopulation.

There are many different origins and definitions of the term sustainable development but in 1987 the World Commission on Environment and Development's report called the Brundtland Report is by far the best and is now one of the most widely recognized definitions "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The main challenges to sustainable development which are global in character include poverty and exclusion, unemployment,

climate change, conflict and humanitarian aid, building peaceful and inclusive societies, building strong institutions of governance, and supporting the rule of law.

At present sustainable development has become a key issue at state, national and international level regarding education policy.

since last decade. Various stakeholders identify the sustainable development in diverse ways and search for its outcomes. Some specific challenges in the implementation of sustainable development in higher education are:

- **Financial Challenges**: For economic growth and development of the country, industrialization is increasing at accelerating rate there by ignoring nature, people, resources and environment. There is prerequisite to spread awareness and make people realize that economy is part of environment and economic development cannot be accomplished on the cost of environment.
- **Research Challenges**: Lack of research in the area of sustainable development and higher education. It is essential to inspire research on environment sustainability, higher education and economic growth and development to resolve problems of the society as a whole by establishing relation between economy and research institutions.
- **Cultural Challenges**: It is impossible to achieve the goal of sustainable development without the support of the community.

Only efforts of Government and policy formulation cannot help unless public also participates. Initiatives must be taken to inspire the public about sustainability through higher education.

- **Social Challenges**: Growing population, wasteful use of natural resources and lack of awareness about sustainable development act as social challenge which hamper in realizing goal of sustainable development. Through higher education public needs to be made aware of the scientific basis for sustainability and its benefits.
- **Political Challenges**: Inadequate implementation of policies, conflict between parties, poor evaluation system, lack of information, lack of financial resources, absence of relevant data, focus only on economic growth, lack of conservation of resources are the major challenges against successful implementation of sustainable efforts

Sustainable development: Indian context.

The Constitution of India

• Article 21 conferring the Right to Life encompasses right to clean environment, right to livelihood, right to live with dignity and a number of other associated rights

• The Directive Principles of State Policy often referred to as the 'conscience' of the Constitution are intended to ensure 'distributive justice' and that political democracy in India is accompanied side by side with social and economic democracy

The National Environment Policy

• "Only such development is sustainable, which respects ecological constraints and the imperatives of social justice

" Seventh Five Year Plan (1985-1990)

• "If the gains in productivity are to be sustained, resources must also continue to be available over time. This requires that, while providing for current needs, the resources base be managed so as to enable sustainable development." (Volume 2, Chapter 18)

Environmental considerations have been an integral part of the Indian culture and have increasingly integrated in the planning process. This is reflected in our constitutional, legislative and policy framework as also international commitments. The government recognizes that these laudable objectives are clouded by concerns. The Government of India is cognizant of these challenges. While seeking to achieve a high and sustained economic growth, it realizes that economic growth standing on an unsteady social and environmental foundation cannot be sustained. National vision assigns primacy to enhancement of human well-being which includes not only adequate level of food consumption and other consumer goods but also access to basic social services especially education, health, drinking water and basic sanitation. It also assigns primacy to the expansion of economic and social opportunities for all individuals and groups and wider participation in decision-making. Conservation and management of natural resources is an important focus of development stratregy.

Steps taken by government

India released its National Action Plan on Climate Change (NAPCC) on 30th June, 2008, to outline its strategy to meet the Climate Change challenge. The National Action Plan advocates a strategy that promotes, firstly, the adaptation to Climate Change and secondly, further enhancement of the ecological sustainability of India's development path. India's National Action Plan stresses that maintaining a high growth rate is essential for increasing the living standards of the vast majority of people of India and reducing their vulnerability to the impacts of climate change. Accordingly, the Action Plan identifies measures that promote the objectives of sustainable development of India while also yielding to benefits for addressing climate change. There are eight National Missions which form the core of the National Action Plan, representing the multi-pronged long-term strategy. These missions have been formed by combining several ongoing programs with the ones newly formulated.

1. National Solar Mission.
2. National Mission for Sustaining the Himalayan Eco-system
3. National Mission on Enhanced Energy Efficiency
4. National Water Mission's
5. National Mission for a Green India
6. National Mission on Strategic Knowledge for Climate Chang
7. National Mission for Sustainable Agriculture
8. National Mission on Sustainable Habitat

Conclusion

Sustainable development is a vision and a way of thinking and acting so that we can secure the resources and environment for our future generation. It will not be brought about by policies only — it must be taken up by society at large as a principle guiding the many choices each citizen makes every day, as well as the big political and economic decisions that affect many. It is clear that environmental degradation tends to impose the largest costs on those generations that are yet to be born. Future generations are disadvantaged with regards to present generations because they can inherit an impoverished quality of life, share a condition of structural weakness in having no voice and representation among the present generation and so their interests are often neglected in present decisions and planning while it is very much needful

that we think about our generation. We can only improve sustainable development when it will put an emphasis on involving citizens and stakeholders. Ultimately, the vision will become reality only if everybody contributes to a world where economic freedom, social justice and environmental protection go hand in hand, making our own and future generations better off than now. Sustainable development will not be easy. Yet, it is an unavoidable responsibility that is achievable with better planning, stronger policies, and effective execution. Governments can no longer look at the issue from a narrow, short-term perspective. To avoid destabilization of the planet, the inclusion of the sustainable development agenda in public and private policy spheres is not only unavoidable, but inescapable.

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14
Role of SEBI in Indian Capital Market

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Abstract:
The historical backdrop of the capital market in India traces all the way back to the eighteenth century when East India organization protections were exchanged the country. It has been a long excursion for the Indian capital market. Presently the capital market is coordinated, genuinely incorporated, developed, more worldwide and modernized. The Indian value market is truly outstanding on the planet regarding innovation as well as worth cum-volume of business. On 31st August, 2010 our Indian value stocks complete market capitalisation esteem was around Rs.70, 00,000 crores. In late period uncommon changes has been occurred by SEBI, as a controller. These are Retail value financial backer limit expanded to Rs.2 lakhs from 1 lakh, decrease issue-posting period to 12 days, opening of pre-market closeout meetings, increment of stock trades exchanging time,, improvement cost disclosure system, presentation of ASBA in Initial public offerings, use of brilliant innovation to exchanging and permitting of Anchor-financial backers in IPOs.etc., Besides, the essential foundation for guideline, divulgence, reconnaissance and exchanging are all set up. Therefore, the SEBI ought to shift its focus away from the day-to-day regulations and toward becoming more visionary. The SEBI can guarantee a free and fair market and bring India into class of major worldwide capital business sectors in the following round of changes. To empower this, it needs to survey its construction and working completely. The SEBI must strike a balance between market growth and the costs of regulation. There ought to be cross-line participation between different controllers and among controllers and industry.

Key Words: Capital market, india, SEBI, regulations, FIIs, mutual funds.

Introduction

The capital market is a business opportunity for a really long time - term subsidizes both value and obligation and assets raised inside and beyond the country. The essential market alludes to the long - term stream of assets from the excess area to the public authority and corporate area (through essential issues) and to banks and non-banks monetary mediators (through optional issues). An essential issue of the corporate area prompts capital data (production of net fixed resources and gradual change in inventories).

For outstanding securities, there is a market called the secondary market. Not at all like essential issues in the essential market which bring about capital data, the auxiliary market works with just liquidity and attractiveness of exceptional obligation and value instruments. The

historical backdrop of the capital market in India traces all the way back to the eighteenth century when East India organization protections were exchanged the country. It has been a long excursion for the Indian capital market. Presently the capital market is coordinated, genuinely incorporated, adult, more worldwide and modernized. The Indian value market is truly outstanding on the planet regarding innovation as well as worth cum-volume of business.

Regulation of the Capital Market

The securities market is regulated by various agencies, such as the Department of Economics Affairs (DEA), the Department of Company Affairs (DCA), the Reserve Bank of India (RBI) and the SEBI. The Activities of these agencies are coordinated by a high level committee on capital and financial markets. THE SECURITIES AND EXCHANGE BORAD OF INDIA (S.E.B.I) With the announcement of the reforms package in 1991, the volume of business in both the primary and secondary segment of the capital market has been increased enormously till now. A multicrore securities scam rocked the Indian financial system in 1992(Harshad Mehta scam). The then existing regulatory framework was found to be fragmented and inadequate and hence, a need for an autonomous, statutory, and integrated organization to ensure the smooth functioning of capital market was felt. To fulfill this need, the Securities and Exchange Board of India (S.E.B.I), which was already in existence since April 1988, was conferred statutory powers to regulate the capital market. The SEBI got legal teeth through an ordinance issued on 30 January 1992. The ordinance conferred wide- ranging powers on the SEBI, including the authority to prohibit_insider trading' and _regulate substantial acquisition of shares' and _takeover of business'. The function of market development includes containing risk,board basing, maintaining market integrity and promoting long-term investment. The SEBI Act, 1992 which establishes the SEBI with four-fold objectives of protection of the interests of investors in securities, development of the securities market, regulation of the securities market and matters connected therewith and incidental thereto. The capital market, i.e., the market for equity and debt securities is regulated by the Securities and Exchange Board of India (SEBI). The SEBI has full autonomy and authority to regulate and develop the capital market. The government has framed rules under the securities contracts (regulation) Act (SCRA), the SEBI Act and the Depositories Act. The SEBI has framed regulations under the SEBI Act and the Depositories Act for registration and regulation of all market intermediaries, for prevention of unfair trade practices, and insider trading. As everyone could know that these i.e. the Government and the SEBI issue notifications, guidelines and circulars which need to be complied with by market participants. All the rules and regulations are administered by the SEBI.

Scope of the Study

This study was mainly planned to evaluate the performance SEBI, relating to supervision of securities market of various intermediaries registered with SEBI.,and to know what kind of Investor Protection measures taken by SEBI for the benefit/to safeguard the interest of investors in India since 1992.

Objectives of the Study

The objectives of the study are:

- To know the investor protection measures taken by SEBI since its inception;
- To know whether the SEBI has been acting as independent organization to regulate the securities markets properly or not;
- To know the powers and functions implementing properly or not by SEBI;
- Finally to give findings and suggestions towards SEBI relating to its role in Indian Capital Markets.

Tools of Data Collection

PRIMARY DATA: Primary data is collected from Text Books, Websites, Brochure and financial press reports.

Limitations of the Study

1. The study is limited to theoretical – cum – little bit interviewing oriented regarding nature and movement of capital market, because it is a vast market.
2. The findings and suggestions are only recommendatory in nature and subject to market imperfections also. ANALYSIS AND INTERPRETATION Following is the exercise done by observers on so many areas relating Capital Market relating to SEBI since inception. These are

- investigations taken up by SEBI
- Nature of investigations taken up and completed by SEBI on issues like Market manipulation and price rigging, etc,
- Types actions taken by SEBI on various entities
- No of Prosecutions launched by SEBI
- Nature of Prosecutions launched by SEBI (vi) Actions taken on Mutual Funds by SEBI

Role of SEBI on IndianCapital Market

Throughout its eighteen-year existence as a statutory body, SEBI has sought to balance the two objectives by constantly reviewing and reappraising its existing policies and programmes, formulating new policies and crafting new regulationsin areas hitherto unregulated, and implementing them to ensure growth of the market. From the above analysis and interpretation as well as other keen observation details, the researchers find out the following facts about SEBI, and its role also explained in our Indian capital market. The SEBI has introduced an array of reforms in the primary and secondary markets and catalysed modernization of the market infrastructure to prepare the market for the twenty- first century. India probably the only country in the world where all the exchanges have screen-based trading. Computerised trading has led to reduction in the scope for price-rigging and manipulation, since a paper trail caneasily lead the regulators now to the doorsteps of the guilty. It is observed that, in recent times, SEBI has, retails investors limit increased to Rs. 2,00,000 fromRs. 1,00,000 in Initial Public Offererings(IPOs). Dematerialisation has pushed the process further. SEBI has taken several steps for the smooth-cum-speedy development of both primary and secondary markets from time to time for the development of all areas. Application of computerisation has also given a boost to surveillance. The basic surveillance is carried out by the stock exchanges, while the SEBI monitors the process. Introduction of price caps, price bands, circuit filters,

margins and stock watch are some ways of keeping a strict are some ways of keeping a strict vigil on the market. Improvements have been made in the clearance and settlement settlement system. A major step in this direction has been the establishment of depositories- NSDL and CDSL—and a clearing corporation—NSCCL. For reviving primary markets, the SEBI further streamlined and simplified the issue procedure, imparted greater flexibility tothe issue process and strengthened the criteria for accessing the securities market. In recent times SEBI has taken a drastic decision for reduction of IPOs'period from 21 days to12 days (IPOs issue-opening and listing-period) . The SEBI introduced the option of making an issue through book-building and recently it introduced ASBA scheme (in IPOs) for investment by investors through bankers. The development of mutual funds was given a major impetus, with the revision of mutual funds regulations which now provide greater operational flexibility to the fund managers and increase their accountability and supervision. Recently, it has introduced KYC norms and not charging on any entry-load on investments made by investors on NFOs or on any existing schemes. SEBI is trying its level best for availability of ULIPs at very normal and cheaper rates. Far reaching changes have been made in the SEBI regulations for substantial acquisition of shares and takeovers. The regulations for Foreign Institutional Investors (FIIs) were liberalised to provide greater flexibility and for widening the scope of their investments in the Indian securities market. Some merchant bankers were found to be unscrupulous. They had not performed their duties diligently in scrutinising the prospectus andhad taken advantage of the loopholes by concealing some facts in their prospects. The SEBI reduced the categories of merchant bankers from four to one. Moreover, it has prohibited merchant bankers from undertaking activities such as leasing, bills and discounting. To empower investors make informed decisions and facilitate fair dealing, the SEBI introduced online filing and dissemination of time sensitive price information, benchmarking or mutual fund schemes, valuation norms for unlisted scrips in mutual fund portfolios , rationalization of depository participants' charges and new regulation for portfolio managers. The SEBI revolutionalised the settlement system by introducing T+2 rolling settlement system scrips across exchanges. It has issued guidelines for demutualisation and corporatisation of stock exchanges. To create an effective regulatory regime in which all stakeholders have confidence, the SEBI has posted the Securities Appellate Tribunal (SAT) orders on the SEBI website, initiated consultative process for framing regulations, and shortened the inquiry process. SAT provides a grievance redressal platform against the SEBI's orders. Public dissemination of such appellate orders is vital as these act as a precedent of other similar cases and on the decision-making process of the SEBI. The SEBI is trying to bring down various forms of risk (structural, systematic and operational) that are there in the securities market.

(a) From the structural point, at present our Indian capital market is having well infra facilities compare with the rest of the world. For instance, Pre-Market Auction session are opened, and improvement of Price-discovery mechanism.

(b) From the systematic risk point-wise, these are re-classified in to three ways.i.e. disclosure standards (at present these are best in the world), accounting standards (these are by and large aligned completely with the international accounting standards) and corporate governance (now many companies have adopting world best corporate governance practices).

(c) Operational view point, our Indian capital market is the best comparable to the

rest of the world. At present our Indian stock exchanges are follows T+2 settlement cycles.

Further, every transaction on the trading platform is guaranteed for settlement by a third party. SEBI has introduced a number of measures to protect the interests of investors. To create awareness among issuers and intermediaries of the need to redress investor grievances' quickly, the SEBI issues fortnightly press releases, publishing the names of the companies against whom maximum number of complaints have been received. To ensure that no malpractice takes place in the allotment of shares, a representative of the SEBI supervises the allotment process. It has been issuing advertisements from time-to-time to guide and enlighten investors on various issues related to the securities market and of their rights and remedies. Investors trading times also increased. In order to protect the interest of investors, SEBI took several measures with a two-pronged approach to discipline and take action against erring entities and at the same time to educate the investors about the risks associated with investing in unregulated schemes. The actions taken by the SEBI included issuing show cause notices to defaulting entities, initiating court proceedings to obtain appropriate relief in the interest of investors, conducting a special audit of the books of accounts of the larger entities, making credit rating mandatory for existing schemes, disseminating information to investors through the issue of press releases/public notices. Recently, it has allowed Anchor-investors' for making investment in IPOs. The SEBI has introduced an automated complaints handling system to with investor complaints. These are classified under various classes like non-receipt of refund orders/stock invest, non-receipt of dividend, non-receipt of share certificate/bones shares/debentures/interest on debenture/ redemption amount of debentures, non-receipt of annual reports and complaints related to plantation schemes. It is trying utmost to combat eliminations and reduction of price-rigging. In this connection it had taken action on Bank of Rajasthan towards price-rigging recently. SEBI has taken some steps for educating investors from 2000-01 onwards, it distributed the booklet titled A Quick Reference Guide for Investors to investors. It has published a book regarding Investor Grievances-Rights and Remedies'.This information has passed to various stock exchanges as well as advertised through various national news papers, broadcast messages through Vivid Bharati and Doordarshan also. The SEBI set up a new institution in 2003 called the Ombudsman' for the capital market. It has encouraged forming of investors' associations.

Limitations of SEBI

Finally, in our observation as regulator SEBI has playing immense role for development of capital market from the last more than one and half decade as a genuine autonomous body. Though it has started as a watchdog in protecting investors' interests, regulating the working of Stock Exchanges and promoting capital market, still it faces a number of problems/ limitations. Some of these are as follows: The Central Govt. has authorised SEBI to frame its rules and regulations for actively monitoring capital markets. These rules and regulations will have to be approved by the government first. This will cause unnecessary delays and interference by the Ministry of Finance. The bureaucratic delays in clearing the rules will hamper the working of SEBI. The government should direct SEBI to frame or change the rules as per the demand of the situation so that it is able to achieve professional efficiency. Sometimes SEBI will have to get prior approval for filing criminal complaints for violations of the regulations. This will again cause delays at government level. The SEBI,as a regulator, proved to be ineffective in the series of scams that took place in the last decade. The SEBI has been accused of shutting the

stable door after the horse had bolted. For instance, the SEBI had occasions to review the affairs of CRB capital markets but took a lenient view and as a result, huge investors lost crores of rupees. The SEBI has gone more than half away to help out potential defaulters to avoid a major payments crisis. Whenever the real racketeers get up to new tricks, surveillance takes a long time to catch up. The SEBI banned badla system in India in 1993, but it banned badla without providing an alternative mechanism. Of course, various committees like G.S.Patel Committee, Jayant Verma Committee had given alternative solution. But these trails were failed. The SEBI introduced rolling settlement after the ban of Automatic Lending and Borrowing Mechanism (ALBM) and borrowing and Lending of Securities Scheme (BLESS). The ban on deferral products killed liquidity in the markets which, in turn, dampened the market sentiments. The SEBI is perceived to be more corporate-friendly than investor-friendly. It not only failed penalize fraudulent companies, but remained a spectator when same companies re-entered the market with new issues. The SEBI does not have the requisite number and a competent staff to regulate and develop the capitalmarket.

Conclusion

The SEBI is a regulatory body which is eighteen years old and the capital market system is more than 100 years old. This matured capital market system requires monitoring rather than over-regulation. The SEBI should supervise this capital market system in such a manner that all sub-systems become self-regulatory organisations (SROs) gradually. The SEBI should lay down the boundaries within which these sub-systems should operate. Moreover, the fundamental infrastructure for regulation, disclosure, surveillance and trading are all in place. Hence, the SEBI should stop being pre-occupied with day-to- day regulations and become more of a visionary. The SEBI can ensure a free and fair market and take India into league of major global capital markets in the next round of reforms. To enable this, it has to thoroughly review its structure and functioning. The SEBI has to balance between the costs of regulation and market development. There should be cross-border cooperation between various regulators and between regulators and industry.

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15
"The National Education Policy and Higher Education"

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Abstract-The National Education Policy (NEP) was approved by the Union Cabinet of India on July 28th, 2020. After a gap of 34 years, the Indian government consolidated feedback from 2.5 lakh village-level stakeholders to two national parliamentary level committees, over more than 50 months of consultations and workshops. It will take another 20 years or so to take NEP shape and see the effect on the youth and education system.

Keywords : National Education Policy 2020,higher education, quality education.

Introduction:

Universal high-quality education is the best way forward for developing and maximizing our country's rich talents and resources for the good of the individual, the society, the country, and the world. India will have the highest population of young people in the world over the next decade, and our ability to provide high- quality educational opportunities to them will determine the future of our country. Education thus, must move towards less content, and more towards learning about how to think critically and solve problems, how to be creative and multidisciplinary, and how to innovate, adapt, and absorb new material in novel and changing fields. Pedagogy must evolve to make education more experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centred, discussion-based, flexible, and, of course, enjoyable. The curriculum must include basic arts, crafts, humanities, games, sports and fitness, languages, literature, culture, and values, in addition to science and mathematics, to develop all aspects and capabilities of learners; and make education more well- rounded, useful, and fulfilling to the learner. Education must build character, enable learners to be ethical, rational, compassionate, and caring, while at the same time prepare them for gainful, fulfilling employment.

After the implementation of NEP 2020 the bodies of Higher Education of Commission (HECI) are:-

1. National Higher Education Regulatory Council (NHERC): It will act as a regulator for the higher education sector including teacher education.

2. General Education Council (GEC): This will create the framework of expected learning outcomes for higher education programs, that is, their standardization work

3. National Accreditation Council (NAC): These institutions are accredited. Will function primarily based on basic criteria, public self – disclosure, good governance and results.

4. Higher Education Grants Council (HGFC): This body financing work for colleges and universities.

Provisions in NEP 2020 regarding Higher Education:

1. Quality Universities and Colleges-

This policy envisions delivering high- quality higher education, with equity and inclusion. The policy includes the following key changes to the current system:

a) Moving towards faculty and institutional autonomy.

b) Revamping curriculum, pedagogy, assessment, and student support for enhanced student experiences.

c) Establishment of a National Research Foundation to fund outstanding peer-reviewed research and to actively seed research in universities and colleges.

2. Institutional Restructuring-

a) A stage-wise mechanism for granting graded autonomy to colleges, through a transparent system of graded accreditation, will be established.

b) Over a period of time, it is envisaged that every college would develop into either an Autonomous degree-granting College, or a constituent college of a university – in the latter case, it would be fully a part of the university. With appropriate accreditations, Autonomous degree-granting Colleges could evolve into Research-intensive or Teaching-intensive Universities, if they so aspire.

c) The undergraduate degree will be of either 3 or 4-year duration, with multiple exit options within this period, with appropriate certifications, e.g., a certificate after completing 1 year in a discipline or field including vocational and professional areas, or a diploma after 2 years of study, or a Bachelor's degree after a 3-year programme. The 4-year multidisciplinary Bachelor's programme, however, shall be the preferred option. The 4-year programme may also lead to a degree 'with Research' if the student completes a rigorous research project in their major area(s) of study as specified by HEI

3. Regarding Vocational Education-

a) The 12th Five-Year Plan (2012-2017) estimated that only a very small percentage of the Indian workforce in the age group of 19-24 (less than 5%) received formal vocational education Whereas in countries such as the USA the number is 52%, in Germany 75%, and South Korea it is as high as 96%. These numbers only underline the urgency of the need to hasten the spread of vocational education in India.

b) By 2025, at least 50% of learners through the school and higher education system shall have exposure to vocational education, for which a clear action plan with targets and – timelines will be developed.

4. Regarding Professional Education-

a) All institutions offering either professional or general education will aim to organically evolve into institutions/clusters offering both seamlessly, and in an integrated manner by 2030.

b) Healthcare education needs to be re- envisioned students of allopathic medical education must have a basic understanding bl Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy (AYUSH), and vice versa.

c) Technical education should be offered within multidisciplinary education institutions and programmes that are fast gaining prominence, such as Artificial Intelligence (AI), 3-D machining, big data analysis, and machine learning, in addition to genomic studies, biotechnology, nanotechnology, neuroscience.

5. Online and Digital Education-

a) An E-content will be made available for study in regional languages.

b) Virtual Labs: Existing e-learning platforms such as DIKSHA, SWAYAM and SWAYAMPRABHA will also be leveraged.

Conclusions:

The new National Education Policy, 2020, which has been approved by the central government to change the Indian education system to meet the needs of 21st century India. If it is implemented successfully, this new system will make India one of the world's leading countries.

The aim of this new education policy, which came after 34 years, is to provide higher education to all students, which aims to universalize pre-primary education (age range of 3-6 years) by 2025.

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हिन्दी साहित्य में पर्यावरण चेतना एवं जागरूकता

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सारांश: -पर्यावरण संरक्षण की चिंता दुनिया के विभिन्न हिस्सों में विविध रूपों में दोहराई गई है। मानव जीवन अपने चारों ओर के पंचभूत तत्वों पर आश्रित है। मिट्टी, जल, अग्नि, गगन और वायु इन पांच तत्वों का अस्तित्व में रहना नितांत आवश्यक है, पर आज के दुस्समय में मानव अपने भौतिकता और विलासिता की चकाचैंध में स्वार्थी होकर प्राकृतिक सम्पदाओं का दोहन कर रहा है। आधुनिककाल में हजारी प्रसाद द्विवेदी ने अपने निबंध ' कुटज' में लिखा है- " यह धरती मेरी माता है और मै इसका पुत्र हूँ। इसीलिए मै सदैव इसका सम्मान करता हूँ और मेरी धरती माता के प्रति नतमस्तक हूँ। भारत वर्ष का प्राकृतिक वातावरण और सौंदर्य अपने आप में बेजोड़ है। प्रकृति सौंदर्य की जो विविधता भारत में मिलती है, वैसी विश्व के अन्य देशों में नहीं देखी जाती। भारत की विलक्षणता और उसकी भारतीयता इसकी प्राकृतिक विविधता में ही है। इसलिए प्राचीन ऋषि-महर्षि प्रकृति के साथ मानव को एक-दूसरे से जोड़कर रखने का प्रयास किये थे।

कुन्जी शब्द:- प्राकृतिक, साहित्य, पर्यावरण एवं सौंदर्य।

प्रस्तावना

पर्यावरणीय चेतना का तात्पर्य व्यक्तियों और उनके परिवेश के बीच संबंधों की जागरूकता और समझ से है। मानव जीवन एवं पर्यावरण एक दूसरे के पर्याय हैं। जहां मानव का अस्तित्व पर्यावरण से है वहीं मानव द्वारा निरंतर किए जा रहे पर्यावरण के विनाश से हमें भविष्य की चिंता सताने लगी है। हमारे प्राचीन वेदो ऋग्वेद सामवेद यजुर्वेद एवं अथर्ववेद में पर्यावरण के महत्व को दर्शाया गया है। आधुनिक जीवन की कैसी विडम्बना है कि हम प्रकृति से निरन्तर दूर होते जा रहे है। यहाँ दूरी से मतलब स्थानीय दूरी से नहीं बल्कि प्रकृति की सहभागिता और साहचर्य से है। निरन्तर प्रकृति की उपेक्षा करता मानव यह भूल जाता है कि उसके शरीर की रचना प्रकृति के पंच तत्वों से मिलकर ही बनी है। अर्थात प्रकृति तो मानव के तन व मन दोनों में व्याप्त है। प्रकृति के अभाव में सुखमय मानव जीवन की कल्पना नहीं की जा सकती। तुलसीदास ने रामचरितमानस के किष्किन्धा काण्ड में भी यही लिखा है कि –

" क्षिति जल पावक गगन समीरा
पंच रचित अति अधम सरीरा "

समकालीन कविता में पर्यावरण की चिंता की यदि बात करते हैं तो यह चिंता हमें 'अज्ञेय' के काव्य से समझना आवश्यक है। "अज्ञेय की कविता का अर्थ शायद उस मछली में है जिसे सभी दिशाओं से सागर घेरता है।

'मछली' अर्थात् अस्तित्व या जिजीविषा जल के बाहर निकाल दी गई मछली, तड़पती छटपटाती और हाँफती है। अज्ञेय की कविता की सही जमीन है। अज्ञेय का समस्त काव्य प्राकृतिक प्रतीकों से भरा पड़ा है सूर्यास्त, सागर मुद्रा, नदी के द्वीप, साँझ-सवेरा, हीरोशिमा आदि कविताओं में मानव और पर्यावरण के अटूट संबंधों को दर्शाती और सचेत करती हैं। नगरीय सभ्यता का विपरीत प्रभाव उनकी 'साँप' कविता में देखा जा सकता है। वहीं ' बावरा अहेरी ' जैसी रचनाओं में कवि कहता है कि सूर्य का प्रकाश उसकी ऊष्मा प्रकृति में सतरंगी रंगों को बिखेर देता है परन्तु आधुनिक औद्योगिकीकरण के चलते कल-कारखानों की जहरीली धुंआ उगलती चिमनियां इतनी बड़ी समस्या के रूप में उभर रही हैं, मानों सूर्य को चेतावनी दे रहीं हो, सूर्य हमारे ब्रह्माण्ड का इतना अनिवार्य तत्व, अपनी सम्पूर्ण माया से दैदीप्यमान दिखता है। हिंदी

साहित्य में आदिकाल से लेकर आधुनिक काल तक प्रकृति को हमेशा विशिष्ट स्थान मिला है। पर्यावरण चेतना की समृद्ध परंपरा हमारे साहित्य में रही है एवं आज भी उतना ही प्रासंगिक है, प्रसिद्ध कवि रूपेश कन्नौजिया की पंक्तियां हैं-

" प्रकृति तो हमेशा ही मेरी सुंदर मां जैसी है,
गुलाबी सुबह से माथा चूम कर हंसते हुए उठाती है,
गर्म दोपहर में ऊर्जा भर के दिन खुशहाल बनाती है,
रात की चादर में सितारे जड़कर मीठी नींद सुलाती है,
प्रकृति तो हमेशा ही मेरी सुंदर मां जैसी है "

छायावादी काव्य में प्रकृति का सूक्ष्म और उत्कट रूप दिखाई देता है। प्रसाद, पंत, निराला एवं महादेवी वर्मा में पर्यावरण चेतना यत्र तत्र पाई जाती है। पंत को तो प्रकृति का सुकुमार कवि भी कहा गया है पंत की यह पंक्तियां देखने योग्य है-

" छोड़ दुरुमों की मृदु छाया
तोड़ प्रकृति से भी माया
बाले तेरे बाल जाल में
कैसे उलझा दूं लोचन "

प्रसाद की कामायनी का पहला ही पद पर्यावरण का उत्कृष्ट उदाहरण है-

" हिमगिरि के उत्तुंग शिखर पर
एकबैठ शिला की शीतल छांह
एक पुरुष भीगे नयनों से
देख रहा था प्रलय प्रवाह "

प्रसाद ने प्रकृति को ही सौंदर्य और सौंदर्य को ही प्रकृति माना है-
आधुनिक काल में प्रकृति के सौंदर्य का उपादान क्रूर दृष्टि का शिकार होना प्रारंभ हो जाता है मैथिलीशरण गुप्त के साकेत में चंद्र ज्योत्सना में रात्रि कालीन बेला की प्राकृतिक छटा का मुग्ध कारीवर्णन है-

" चारु चंद्र की चंचल किरणें
खेल रही है जल थल में
स्वच्छ चांदनी बिछी हुई है
अवनि और अंबर तल में "

निष्कर्ष

पर्यावरण के प्रति हमारा यह कर्तव्य बनता है कि हम विकास के हर कदम पर पर्यावरण की सुरक्षा का दायित्व भी उठाएं। प्रदूषण को रोकने का हमें एक अटूट संकल्प करना होगा। समग्रतः कहा जा सकता है कि समकालीन जीवन की सच्चाइयों को संवेदना के स्तर पर उजागर करने की सार्थक कोशिश हुई है, जिसमें पर्यावरण जागरूकता का एक प्रमुख स्थान है। समकालीन दौर के साहित्य में पर्यावरण के बारे में जागरूकता काफी बढ़ी है -विशेषकर भारत जैसे आबादी बहुल देश के लिए जहां कृषि और उद्योग के कारण धरती पर बहुत अधिक दबाव पड़ता है और इस दबाव के दुष्प्रभाव खतरनाक होते है, ऐसी स्थिति में पर्यावरण के मुद्दे को गंभीरता से लेने की जरूरत है, ताकि आने वाली पीढ़ी के लिए हम अपने इस सबसे सुंदर ग्रह पृथ्वी को सुरक्षित रख सके। पर्यावरण चेतना व्यक्तिगत और सामूहिक दोनों जिम्मेदारी है।

व्यक्तिगत स्तर पर, अपशिष्ट को कम करने और ऊर्जा संरक्षण जैसी पर्यावरण-अनुकूल आदतों को अपनाने से महत्वपूर्ण अंतर आ सकता है। सामूहिक रूप से, समुदाय और सरकारें पर्यावरण की रक्षा करने वाली नीतियों और विनियमों को लागू कर सकते हैं।

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वर्तमान में शोध गुणवत्तापूर्ण शिक्षा

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पिछली कुछ सदियों में हमारे समाज ने जो भी प्रगति की है उसकी वजह शिक्षा है। शिक्षा ही समाज का आधार होती है। यह सुधारों को जन्म देती है, और नए विचारों के लिए अवसर प्रदान करती हैं। वर्तमान समय में शोधपूर्ण शिक्षा की आवश्यकता है। वर्तमान शिक्षा प्रणाली एक व्यापार के रूप में संचालित की जा रही है। समय पर इस शिक्षा प्रणाली पर रोक नहीं लगाई गई तो शिक्षा प्रणाली एक व्यावसायिक व्यापार बन कर रह जाएगी। वर्तमान समय में शोधपूर्ण व गुणवत्तापूर्ण शिक्षा की अतिआवश्यकता है। इस शिक्षा का मुख्य उद्देश्य विद्यार्थियों का नैतिक व चारित्रिक विकास करना, विद्यार्थियों का समुचित मानसिक विकास करना, इसके लिए शैक्षणिक संस्थाओं द्वारा समय पर कार्यशालाएँ, सेमीनार, औपचारिक कार्यक्रम आयोजित किए जाए। शोधपूर्ण व गुणवत्तापूर्ण शिक्षा का एक उद्देश्य यह भी है, कि विद्यार्थियों को शिक्षा के साथ-साथ व्यवसायिक प्रशिक्षण देना तथा जीविका उपार्जन के योग्य बनाना हैं।

गुणात्मक शिक्षा व्यक्ति को सकारात्मक दिशा में बढ़ाने के लिए सशक्त पहल हैं। लेकिन वर्तमान की शिक्षा में गुणात्मक सुधार की महती आवश्यकता है। बिना इसके शोधपूर्ण व गुणात्मक शिक्षा के विकास करने में सक्षम नहीं होगी। शिक्षित व्यक्ति समाज का महत्वपूर्ण स्तंभ होता है। आधुनिक शिक्षा पद्धति की एक महत्वपूर्ण आवश्यकता है, कि वह मनुष्य के अन्दर की शक्तियों व उसकी सुपुष्ट भावनाओं को जाग्रत कर सकें। मनुष्य की कल्पना, तर्क, आलोचना, स्मरण तथा विपरीत परिस्थितियों में निर्णय लेना अच्छे-बुरे तथा ऊँच-नीच की समझ इन गुणों का विकास करना भी शिक्षा के प्राथमिक उद्देश्य में शामिल होना चाहिए

दक्षतापूर्ण शिक्षण कार्य ही गुणवत्तापूर्ण शिक्षा की आवश्यक शर्त है। वर्तमान में शिक्षक की दक्षता का प्रभाव सम्पूर्ण समाज के निर्माण में निर्णायक होता है। राष्ट्र के निर्माण में उच्च गुणवत्तापूर्ण शिक्षा अपनी महत्वपूर्ण भूमिका का निर्वहन करती है। शिक्षा अध्ययन विषय के साथ विकास की प्रक्रिया भी शामिल है। वर्तमान समय में शिक्षा और शिक्षक की आवश्यकता और महत्व सर्व विदित है। क्योंकि कोई भी शिक्षा व्यवस्था और शिक्षा की गुणवत्ता शिक्षको के स्तर से ऊपर उठ नही सकती। शिक्षा एक अनवरत् चलने वाली प्रक्रिया है, शिक्षक एक ऐसी कड़ी है, जो हमेशा प्रत्यक्ष रूप से शिक्षा व शिक्षण दोनों को प्रभावित करती है। हम शिक्षा की बात करते है, तो शिक्षक की बात तत्काल आ जाती है। इस प्रकार शिक्षक की भूमिका एवं उसमें हो रहे परिवर्तन और विकास में भी परिवर्तन आया है। इसके साथ-साथ सामाजिक स्तर की दृष्टि से भी महत्वपूर्ण परिवर्तन होता जा रहा है। वर्तमान में तकनीक एवं वैज्ञानिक प्रवित्तियों का चलन हो रहा है, तो शिक्षक की भूमिका तथा उसमे सुधार करना अतिआवश्यक है। शिक्षा में परिवर्तन हो रहे है या कहा जाए कि किए जा रहे है। हर क्षेत्र की तरह शिक्षा में परिवर्तन भी आवश्यक है। शिक्षा में भी इसी तरह परिवर्तन होना अतिआवश्यक हैं।

20 जुलाई 2020 को राष्ट्रीय शिक्षा नीति 2010 लागू की गई थी। यह सभी के लिए सुलभ, न्याय संगत और उच्च गुणवत्ता वाली शिक्षा के लिए शिक्षा के क्षेत्र में कई व्यापक सुधारों की परिकल्पना की गई है। शिक्षा को केवल स्कूलों, कॉलेजो और विश्वविद्यालयो की इमारतों के माध्यम से हासिल करना नामुमकिन है। यह तभी संभव होगा जब प्रौद्योगिकी और इसका उपयोग हो। यह समानता गुणवत्ता, सामर्थ्य और जवाब देही का मार्ग मजबुत करेगी। गुणवत्तापूर्ण शिक्षा के लिए प्रौद्योगिकी अतिमहत्वपूर्ण प्रौद्योगिकी द्वारा ही वर्तमान शिक्षा प्रणाली को गुणवत्तापूर्ण बनाया जा सकता है। वर्ष 2008 में सभी कॉलेजो के लिए सिमुलेशन आधारित प्रयोगों के बल पर वर्चुअल लेख बनाई गई व उच्च स्तरीय

उपकरण उपलब्ध कराए गए। वर्तमान समय में राष्ट्रीय शिक्षा नीति शिक्षा प्रणाली के परिवर्तन की कल्पना करती है ताकि इसे अधिक विद्यार्थी केन्द्रित, लचीला और प्रौद्योगिकी संचालित बनाया जा सके। यह रेखांकित करती है, कि शिक्षा कई पहलुओं में सुधार के लिए प्रौद्योगिकी के उपयोग और समावेशन किया जाएगा और इसे अपनाया जा सके। इसके अनुसार इसके लक्ष्यों में शिक्षा की गुणवत्ता को बढ़ाने के लिए व शैक्षिक संसाधनों तक पहुँच बढ़ाने और वर्तमान सदी के कौशल के अनुसार विद्यार्थियों को सशक्त बनाने के लिए प्रौद्योगिकी के कारण गुणवत्ता पूर्ण शिक्षा आवश्यक है। वर्तमान समय की तकनीकी प्रगति और कुशल तथा अनुकूलनीय श्रमशक्ति (कार्यबल) की बढ़ती मांग से विश्व में शिक्षा में नवाचार का समावेशन के लिए अति महत्वपूर्ण है।

गुणवत्तापूर्ण शिक्षा की महत्वपूर्ण शर्त है, दक्षतापूर्ण शिक्षण कार्य। शिक्षक की दक्षता का प्रभाव सम्पूर्ण समाज के निर्माण में निर्णायक होता है। राष्ट्र के निर्माण में गुणात्मक उच्च शिक्षा महत्वपूर्ण भूमिका अदा करती है। अतः उच्च शिक्षा में शिक्षण दक्षता के द्वारा ही गुणवत्ता के मानको को संगठित किया जा सकता है। तथा राष्ट्रहित के सन्दर्भ में शैक्षिक गुणात्मक सुधार हेतु उच्च शिक्षा स्तर पर शिक्षको की शिक्षण दक्षता की वर्तमान स्थिति का अवलोकन समान ही प्रतीत होता है। शिक्षा अध्ययन के साथ-साथ विकास की प्रक्रिया भी है।

शिक्षा व शिक्षक की आवश्यकता और महत्व सर्वव्यापी है। क्योंकि कोई भी शिक्षा व्यवस्था और शिक्षा की गुणवत्ता शिक्षको के स्तर से ऊपर नही उठ सकती। शिक्षणवृति को सम-सामयिक एवं प्रभावशाली अर्थात् मूल्य परक बनाये रखने के लिए सेवा पूर्व, सेवा कालीन और एक कदम बढ़कर यह भी कहा जा सकता है, कि सेवा उपरान्त भी शिक्षण-प्रशिक्षण लेते रहना चाहिए। शिक्षा एक आजीवन चलने वाली प्रक्रिया है। साथ-साथ इससे लगे हुए जितने अवयव है वे सभी एक-दूसरे से जुड़े हुए एवं एक-दूसरे को प्रभावित करते है। इसमें शिक्षक एक ऐसी कड़ी है, जो सदैव प्रत्यक्ष रूप से शिक्षा एवं शिक्षण को प्रभावित करते है। जब हम शिक्षा की बात करते है, तो शिक्षक की बात आती है। इस प्रकार से शिक्षक की भूमिका एवं उसमे आ रहे परिवर्तन और विकास में भी निरन्तर परिवर्तन आया है। साथ-साथ उसके सामाजिक स्तर की दृष्टि से भी महत्वपूर्ण परिवर्तन होता जा रहा है। वर्तमान में जब तकनीक एवं वैज्ञानिक प्रविधियों का विस्फोट हो रहा है, तो इसमे शिक्षक की भूमिका तथा उसमे सुधार का परिमार्जन करना अतिआवश्यक है। आज शिक्षा में परिवर्तन हो रहे है, या किए जा रहे है हर क्षेत्र की तरफ शिक्षा में भी परिवर्तन हो रहे है। शिक्षा में परिवर्तन सही दिशा में होना आवश्यक है। इसका प्रभाव हर क्षेत्र में पड़ेगा। हमारे भारतीय समाज में गुरू का स्थान सर्वोच्च है, क्योंकि वह शिक्षा के माध्यम से समाज को विकास उन्मुख बनाता है।

गुणवत्तापूर्ण शिक्षा से तात्पर्य वैसी शिक्षा से है, जो प्रत्येक विद्यार्थी के काम आए साथ ही उनकी क्षमताओं के सम्पूर्ण विकास में समान रूप से उपयोगी है। ऐसी शिक्षा जो हर विद्यार्थी की व्यक्तित्व विभिन्नताओं का ज्ञान रखने वाली होगी। शिक्षण कौशल वह शिक्षक-शस्त्र है, जिसका प्रयोग करके शिक्षक अपने कक्षा-शिक्षण की प्रभावशीलता तथा सक्रिय बनाता है, तथा कक्षा की अन्तःप्रक्रिया में सुधार करने का प्रयास करता हैं।

ग्रामीण क्षैत्रों में रोजगार उपलब्ध करवाने में मनरेगा योजना की भूमिका

(पश्चिम निमाड़ खरगोन जिले के विशेष संदर्भ में)

प्रस्तावना- एक कल्याणकारी राज्य की सफलता का आकलन इस तथ्य से लगाया जा सकता है कि वहाँ सामाजिक-आर्थिक व्यवस्था के अंतिम पायदान पर खड़े व्यक्ति के विकास को सुनिश्चित करने के लिये क्या प्रयास किये गए हैं। समग्र विकास की इस पृष्ठभूमि में महात्मा गांधी राष्ट्रीय ग्रामीण रोजगार गारंटी अधिनियम अर्थात् मनरेगा ने महत्त्वपूर्ण भूमिका अदा की है। इस तथ्य से इनकार नहीं किया जा सकता कि कृषि संकट और आर्थिक मंदी के दौर में मनरेगा ने ग्रामीण किसानों और भूमिहीन मजदूरों के लिये एक सुरक्षा कवच के रूप में कार्य किया है। मौजूदा आर्थिक मंदी ने खासतौर पर देश के ग्रामीण क्षेत्रों को प्रभावित किया है और रोजगार के अवसरों को काफी कम कर दिया है और मनरेगा के तहत मिलने वाले काम की मांग अचानक बढ़ गई है।

भारत गांवों का देश है देश में 2011 की जनगणना के अनुसार लगभग 70 प्रतिशत जनता गावों में निवास करती है। "जब कोई व्यक्ति काम करना चाहता है और वह काम करने के लिए शारीरिक दृष्टि से समर्थ भी है, लेकिन अगर उसको कार्य नहीं मिलता जिससे कि वह व्यक्ति अपनी आजीविका कमा सके तो इस प्रकार की समस्या को बेरोजगारी की समस्या के नाम से जाना जाता है। यही बेरोजगारी कई तरह की समस्याओं को जन्म देती है। बेरोजगार होने के कारण लोग चोरी, डकैती, लूट-मार तथा असामाजिक कार्यों को अंजाम देते हैं। जिससे सामाजिक अशांति फैलती है।

ग्रामीण बेरोजगारी को कम करने व लोगों को आत्म निर्भर बनाने के उद्देश्य से ही सरकार की

सहायक प्राध्यापक (अर्थशास्त्र), शासकीय माधव महाविद्यालय, चंदेरी जिला अशोकनगर (म0प्र0)

महत्वकांक्षी योजना महात्मा गांधी राष्ट्रीय ग्रामीण रोजगार गारंटी योजना का शुभारंभ किया गया। "मनरेगा दुनिया का अब तक का ऐसा पहला कानून है जिसमें व्यापक पैमाने पर मजदूरी रोजगार की गारंटी दी गई है। महात्मा गांधी राष्ट्रीय ग्रामीण रोजगार गारंटी योजना की तारीफ विश्व बैंक के द्वारा भी की गई है । इस अधिनियम का प्राथमिक उद्देश्य मजदूरी रोजगार बढ़ाना है। इसका सहायक उद्देश्य उन कार्यों के माध्यम से प्राकृतिक संसाधन प्रबंधन को सुदृढ़ बनाना है जो सूखा, वनों की कटाई तथा मृदा क्षरण के साथ-साथ पर्यावरण की रक्षा करते हो। इसके साथ ही स्थायी गरीबी के कारणों को दूर करते हैं तथा स्थायी विकास को बढ़ावा देते हों। यह योजना बेरोजगारी कम करने में काफी हद तक सहायक भी सिद्ध हुई है। इसी संदर्भ में प्रस्तुत अध्ययन में मध्य प्रदेश का जनजातीय बाहुल्य पश्चिम निमाड़ के खरगोन जिले का चयन कर पिछले पॉच वर्षो में योजना के अन्तर्गत उपलब्ध करवाए गए रोजगार का विश्लेषण किया गया है।

शोध अध्ययन का क्षैत्र -

प्रस्तुत शोध अध्ययन का क्षैत्र मध्यप्रदेश का जनजति बाहुल्य पश्चिम निमाड़ खरगोन संपूर्ण जिला अध्ययन का क्षैत्र माना गया है। जिले में रोजगार उपलब्ध करवाने के उददेश्य से संचालित महात्मागॉधी राष्ट्रीय रोजगार गारंटी योजना के अन्तर्गत वर्ष 2018-19 से वर्ष 2022-23 तक पॉच वर्षो में जिले में उपलब्ध करवाए गए रोजगार का अध्ययन किया गया है। इसक साथ ही अध्ययन के अंतर्गत 100 दिवस कार्य पूर्ण करने वाले श्रमिकों एवं दिव्यांग श्रमिकों का पॉच वर्षो में उपलब्ध करवाये गए रोजगार का विश्लेषण किया गया है।

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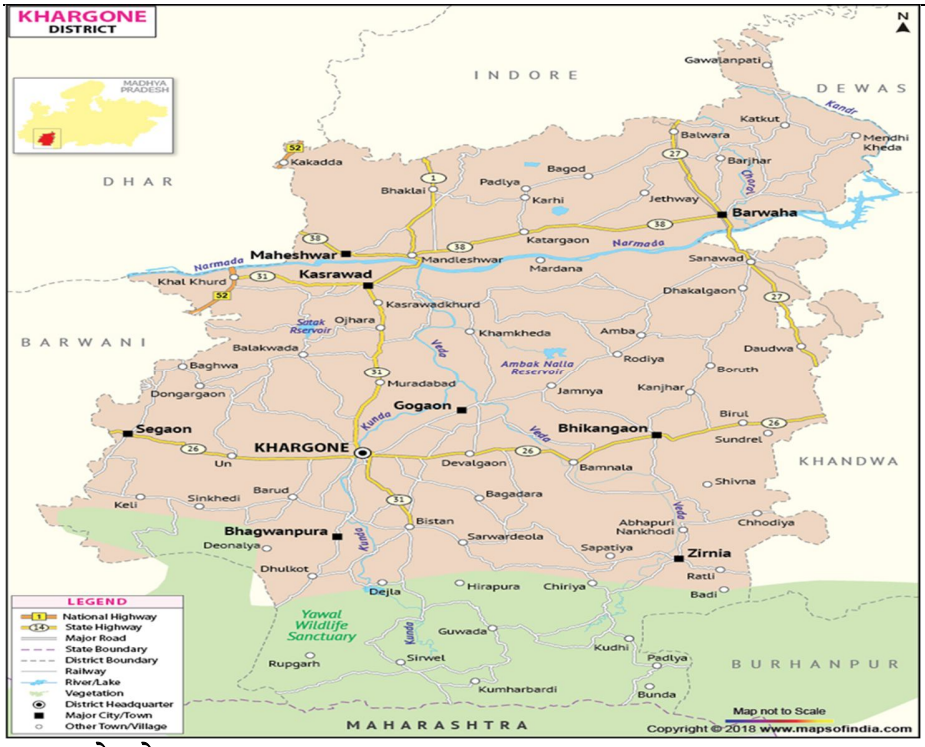

अध्ययन के उद्देश्य -

1- ग्रामीण अकुशल श्रमिकों को उपलब्ध रोजगार का अध्ययन करना।

2- मनरेगा कार्यक्रम 100 दिवस कार्य पुर्ण करन वाले परिवारों का अध्ययन करना।

3- मनरेगा योजना में दिव्यांगजनों को उपलब्ध करवाएं गए रोजगार का अध्ययन।

शोध अध्ययन की प्रविधि

प्रस्तुत शोध द्वितीय संमंको के आधार पर तैयार किया गया है। शोध पत्र में समंको का संकलन पाठ्य पुस्तकों,पत्र-पत्रिकाओं, सरकारी रिपोर्ट के प्रकाशन एवं विभिन्न वेबसाईडों के माध्यम से किया गया है। इसके साथ ही सांख्यिकिय के माध्यम से सारणीकरण से निष्कर्ष निकाले गए है।

मनरेगा की शुरुआत कहां से हुई

7 सितंबर 2005 को एक अधिनियम पारित किया गया जिसे राष्ट्रीय ग्रामीण रोजगार गारंटी के नाम से जाना जाता है। और इसे इसे संसद में पारित अधिनियम को कानून बना दिया गया। इसके बाद 2 फरवरी 2006 को आंध्र प्रदेश आनंदपुर जिले से इसकी शुरुआत हुई है। इसके बाद इसकी शुरुआत में देश के 200 अति पिछड़े जिलों में यह योजना पायलेट प्रोजेक्ट के तौर पर लागू की गई। बाद में इसकी सफलता को देखते हुए अगले वित्तीय वर्ष में 130 और जिलों में इस योजना की शुरुआत की गई। इसके बाद भारत के 593 जिलों में मनरेगा को सफलतापूर्वक चलाया जा रहा है। इसे राष्ट्रीय ग्रामीण रोजगार गारंटी अधिनियम (NREGA) कहा जाता था लेकिन 2 अक्टुबर-2009 को इसका पुनः नामकरण किया गया जिसे वर्तमान में महात्मा गाँधी राष्ट्रीय ग्रामीण रोजगार गारंटी अधिनियम नाम से जाना जाता है।

मनरेगा योजना का क्रियान्वयन

योजना का क्रियान्वयन केन्द्रीय क्रियान्वन में ग्रामीण विकास विभाग भारत शासन के माध्यम से किया जाता है। एवं राज्य में प्रदेश के ग्र ामीण विकास विभाग के द्वारा किया जाता है। जिला स्तर पर योजना का क्रियान्वयन तीन - स्तरीय पंचायतराज के माध्यम से किया जाता है ।

Û राज्य स्तर पर मनरेगा योजना के कार्यान्वयन के लिये चार स्तर का ढांचा बनाया गया है। राज्य स्तर पर एक राज्य रोजगार गारंटी परिषद है जिसके प्रमुख राज्य के मुख्यमंत्री हैं।

Û राज्य स्तरीय प्रशासन के ढांचे का प्रमुख मुख्य कार्यपालन अधिकारी (सी.ई.ओ.) मनरेगा क्रियान्वयन हेतु जिम्मेदार है।

Û जिला स्तर पर ढांचे केे तीन स्तर हैं, पहला जिला स्तर पर, कलेक्टर जिला कार्यक्रम समन्वयक होगें एवं मुख्य कार्यपालन अधिकारी जिला पंचायत अतिरिक्त जिला कार्यक्रम समन्वयक के रूप में कार्य करते है।

Û द्वितीय स्तर पर मुख्य कार्यपालन अधिकारी जनपद पंचायत योजना के कार्यक्रम अधिकारी के रूप में कार्य करते है।

Û तृतीय स्तर पर ग्राम पंचायत स्तर पर योजना का क्रियान्वयन हेतु सचिव ग्राम पंचायत एवं ग्राम रोजगार सहायक योजना के क्रियान्वयन हेतु जिम्मेदार होते है।

बेरोजगारी भत्ता

राष्ट्रीय रोजगार गारंटी योजना के अंतर्गत प्रत्येक परिवार को वित्तीय वर्ष के दौरान 100 दिन रोजगार की गारंटी प्रदान की गई है। जॉब कार्ड धारक काम मांगता है तो 15 दिन के भीतर ग्राम पंचायत द्वारा उसे रोजगार दिया जाएगा। अगर इस बीच में उसे रोजगार नहीं मिलता है तो 16 वें दिन से उसे बेरोजगारी भत्ता पाने का कानूनी अधिकार का भी प्रावधान इस योजना में किया गया है जो किसी भी योजना में आज तक नही है।

खरगोन जिले में वर्ष 2018-19 से 2022-23 तक ग्रामीण श्रमिकों को महात्मागाँधी राष्ट्रीय ग्रामीण रोजगार गारंटी योजना अन्तर्गत उपलब्ध करवाए गए रोजगार की जानाकारी सारणी क्र-अ में दर्शित है।

पंजीकृत/रोजगार की मांग करने वाले एवं रोजगार प्राप्त करने वाले श्रामिकों की जानकारी

सारणी क्रमांक – अ

S.No.	YEAR	No. of Registered Persons	No, of Employment demanded Persons	Employment Availed Total Person Days
1	2	3	4	5
1	2018-19	518148	230258	5376808
2	2019-20	578595	197915	4347618
3	2020-21	609662	411353	8020196
4	2021-22	588976	370471	7695742
5	2022-23	570507	324103	7096252
TOTAL		2865888	1534100	32536616

स्त्रोत- https://nreganarep.nic.in

उपरोक्त सारणी से स्पष्ट होता है कि उक्त पॉच वर्षो में वर्ष 2020-21 में सर्वाधिक श्रमिकों द्वारा योजना में पंजीयन करवाया गया एवं रोजगार की मॉग की गई। इसी प्रकार इसी सत्र में सर्वाधिक श्रमिकों को रोजगार प्राप्त कुल दिवसों में उपलब्ध करवया गया है। वर्ष 2018 -19 में सबसे कम पंजीयन हुए एवं वर्ष 2019 -20 में रोजगार की माॅग करने वालों संख्या कम हुई है एवं इसी सत्र में सबसे कम रोजगार भी उपलब्ध करवाया गया है।

100 दिन पूर्ण करने वाले परिवार एवं रोजगार प्राप्त दिव्यांग श्रमिकों की जानकारी

सारणी क्रमांक -2

S.No.	YEAR	No. of Families Completed 100 days	No. of Disabled Beneficiary individuals
1	2	10	11
1	2018-19	2538	806
2	2019-20	2818	671
3	2020-21	6147	1270
4	2021-22	6443	1052
5	2022-23	4770	1029
TOTAL		22716	4828

स्त्रोत- उपरोक्त सारणी के अनुसार वर्ष 2018- 19 से 2022-23 तक कुल पाच वर्षो में वर्ष 2021-22 में सर्वाधिक परिवारों की संख्या जिन्होने 100 दिवस कार्य पूर्ण किए है। एवं वर्ष 2018-19 मे सबसे कम परिवारों ने 100 दिवस कार्य पूर्ण किए है। इसी प्रकार वर्ष 2020-21 में सर्वाधिक दिव्यांग श्रामिकों को रोजगार उलब्ध करवाया गया है। एवं 2018-19 में इन वर्षो में सबसे कम रोजगार उलब्ध करवाया गया है।

मनरेगा की उपलब्धियाँ

1. मनरेगा दुनिया का सबसे बड़ा सामाजिक कल्याण कार्यक्रम है। जिसने ग्रामीण श्रम में एक सकारात्मक बदलाव को प्रेरित किया है। आँकड़ों के अनुसार, कार्यक्रम के शुरुआती 10 वर्षों में कुल 3.14 लाख करोड़ रुपए खर्च किये गए।
2. इस कार्यक्रम ने ग्रामीण गरीबी को कम करने के अपने उद्देश्य की पूर्ति करते हुए यकीनन ग्रामीण क्षेत्र के लाखों लोगों को गरीबी से बाहर निकालने में कामयाबी हासिल की है।
3. आजीविका और सामाजिक सुरक्षा की दृष्टि से मनरेगा ग्रामीण गरीब महिलाओं के सशक्तीकरण हेतु एक सशक्त साधन के रूप में सामने आया है। आँकड़ों के अनुसार, वित्तीय वर्ष 2015-16 में मनरेगा के माध्यम से उत्पन्न कुल रोजगार में से 56 प्रतिशत महिलाओं के लिये था।
4. मनरेगा में कार्यरत व्यक्तियों के आयु-वार आँकड़ों के विश्लेषण से पता चलता है कि वित्त वर्ष 2017-18 के बाद 18-30 वर्ष के आयु वर्ग के श्रमिकों की संख्या में बढ़ोतरी हुई है।
5. मनरेगा ने आजीविका के अवसरों के सृजन के माध्यम से अनुसूचित जाति और अनुसूचित जनजातियों के उत्थान में भी मदद की है। मनरेगा को 2015 में विश्व बैंक ने दुनिया के सबसे बड़े लोकनिर्माण कार्यक्रम के रूप में मान्यता दी थी।
6. नेशनल काउंसिल ऑफ एप्लाइड इकोनॉमिक रिसर्च (NCAER) की रिपोर्ट के मुताबिक, गरीब व सामाजिक रूप से कमजोर वर्गों, जैसे-मजदूर, आदिवासी, दलित एवं छोटे सीमांत कृषकों के बीच गरीबी कम करने में मनरेगा की महत्त्वपूर्ण भूमिका रही है

मनरेगा से संबंधित चुनौतियाँ

1. मजदूरी के भुगतान में देरी एक अध्ययन में पता चला कि मनरेगा के तहत किये जाने वाले 78 प्रतिशत भुगतान समय पर नहीं किये जाते और 45 प्रतिशत भुगतानों में विलंबित भुगतानों के लिये दिशा-निर्देशों के अनुसार मुआवजा शामिल नहीं था ।

2. अपर्याप्त बजट आवंटन पिछले कुछ वर्षों में मनरेगा के तहत आवंटित बजट काफी कम रहा है, जिसका प्रभाव मनरेगा में कार्यरत कर्मचारियों के वेतन पर देखने को मिलता है। वेतन में कमी का प्रत्यक्ष प्रभाव ग्रामीणों की शक्ति पर पड़ता है और वे अपनी मांग में कमी कर देते हैं।

3. न्यूनतम मजदूरी अधिनियम, 1948 के आधार पर मनरेगा की मजदूरी दर निर्धारित न करने के कारण मजदूरी दर काफी स्थिर हो गई है। वर्तमान में अधिकांश राज्यों में मनरेगा के तहत मिलने वाली मजदूरी न्यूनतम मजदूरी से काफी कम है। यह स्थिति कमजोर वर्गों को वैकल्पिक रोजगार तलाशने को विवश करता है।

4. भ्रष्टाचार, वर्ष 2012 में कर्नाटक में मनरेगा को लेकर एक घोटाला सामने आया था जिसमें तकरीबन 10 लाख फर्जी मनरेगा कार्ड बनाए गए थे, जिसके परिणामस्वरूप सरकार को तकरीबन 600 करोड़ रुपए का नुकसान हुआ था। भ्रष्टाचार मनरेगा से संबंधित एक बड़ी चुनौती है जिससे निपटना आवश्यक है।

निष्कर्ष - निष्कर्ष के रूप में कहा जा सकता है कि महात्मागॉधी राष्ट्रीय ग्रामीण रोजगार गारंटी योजना ग्रामीण विकास की आत्मा है और यह योजना अपने उददश्यों में काफी हद तक सफल हुई है। जिससे देश, प्रदेश के साथ - साथ जिले के ग्रामीण अकुशल श्रामिकों का विकास हुआ है। यह एक ऐसी योजना है जिसके माध्यम से सभी वर्ग के ग्रामीण अकुशल श्रामिकों को रोजगार प्रदाय किया गया है। जिससे उनका जीवन स्तर उॅचा हुआ है। इसमें खास बात यह भी है कि अनुसूचित जनजाति वर्ग को बड़े स्तर पर लाभ पहॅचा है। सरकार को इसकी चुनौतियों एवं कमियों को दूर कर और अधिक प्रभावी योजना बनाना चाहिए।

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"युवाओं के गुणात्मक विकास में उच्च शिक्षा की भूमिका"

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शोध सारांश-ज्ञान स्वयं में वर्तमान है, मनुष्य केवल उसका आविष्कार करता है। स्वामी विवेकानंद

शिक्षा का मुख्य उद्देश्य शिक्षार्थियों के व्यवहार में वांछनीय परिवर्तन लाना है। शिक्षा विद्यार्थी के व्यक्तित्व के सर्वांगीण विकास और उसमें स्वस्थ दृष्टिकोण एवं अच्छे संस्कार सम्मिलित करने में सहायक होती है। **शिक्षा के माध्यम से ही संचित ज्ञान को आने वाली पीढ़ियों को हस्तांतरित किया जा सकता है,** और उन में वृद्धि की जा सकती है। **उच्च शिक्षा सामाजिक आर्थिक ,सांस्कृतिक ,नैतिक और आध्यात्मिक विषयों को समझने में सक्षम बनाती है,** इसके माध्यम से समाज में किसी भी प्रकार का परिवर्तन लाना सुगम हो जाता है। शिक्षा समाज में विषमताओं को कम करने का साधन शिक्षा भी बन सकती है। **डॉ. राधाकृष्णन के अनुसार,** शिक्षा परिवर्तन का एक साधन है जो कार्य समाज में ,परिवार धार्मिक, सामाजिक एवं राजनैतिक संस्थाओं द्वारा होता था, वह आज शिक्षण संस्थाओं द्वारा किया जा रहा है। **ऐसे प्रमाण है कि भारत में शिक्षा का उद्गम वैदिक से ही है।** प्राचीन साहित्य जैसे वेदों, ब्राह्मण और उपनिषदों, आदि का ज्ञान हमें प्राचीन ऋषियों के माध्यम से प्राप्त होता है। संसार का सबसे बड़ा प्रथम विश्वविद्यालय 700 ईसा पूर्व तक्षशिला में स्थापित किया गया था, और नालंदा विश्वविद्यालय चौथी शताब्दी ईशा पूर्व में। कई भारतीय विद्वानों चरक, सुश्रुत, आर्यभट्ट , भास्कराचार्य, चाणक्य, पतंजलि, वात्सयायन, आदि में गणित, खगोल विज्ञान ,भौतिक विज्ञान रसायन विज्ञान चिकित्सा विज्ञान, वास्तुकला ,ललित कला ,यांत्रिक प्रौद्योगिकी जैसे क्षेत्रों में ज्ञान के उद्गम और वृद्धि में योगदान दिया । **भारतीय शिक्षा प्रणाली में जहां प्राचीन संस्कृति का संरक्षण किया और सांस्कृतिक एकता को बढ़ावा दिया, वहीं सामाजिक उत्तरदायित्व और सामाजिक मूल्यों की भावना का भी संचार किया।**

शब्द कुंजी: -अधिगम के चार स्तंभ

संयुक्त राष्ट्र शैक्षणिक, वैज्ञानिक और सांस्कृतिक संगठन के अनुसार शिक्षा /अधिगम के चार स्तंभ हैं जो निम्नलिखित हैं।

1.जानकारी के लिए सीखना -

संसार की जटिलताओं को समझना, भविष्य में सीखने के लिए पर्याप्त आधार प्रदान करता है।

2.कुछ करने के लिए सीखना -

ऐसे कौशल को प्राप्त करना जिससे व्यक्ति प्रभावी ढंग से वैश्विक अर्थव्यवस्था और समाज में भाग लेने के लिए सक्षम हो।

3.कुछ बनने के लिए सीखना -

स्वयं विश्लेषणात्मक और सामाजिक कौशल का विकास ताकि अपनी क्षमता का वास्तविक कारण किया जा सके।

4.साथ रहने के लिए सीखना -

मानव अधिकार लोकतांत्रिक सिद्धांतों आदि का बोध करता हैं ।

मानव विकास की विजय यात्रा में शिक्षा की भूमिका सर्वोपरि है। वर्तमान में जिस तेजी से भौतिकवाद व उपभोक्तावादी संस्कृति अपना दायरा विकसित कर रही है। **उसी गति से वह युवा वर्ग को अपने आगोश में व चकाचौंद के विविध रंगों में पुरी तरह से रंग की जा रही है।** संचार माध्यमों के तकनीकी विकास ने ज्ञान - विज्ञान के क्षेत्र में जहां नए कीर्तिमान स्थापित किए हैं **वहीं आज का युवा वर्ग उससे प्रभावित होकर अपनी जीवनशैली को तीव्रता से बदल रहा है** उसकी आकांक्षाएँ समाज की अपेक्षाएं उसे तनाव की ओर धकेल रही है। उसकी दिनचर्या उसका व्यवहार उसकी साहित्यिक, सांस्कृतिक, व धार्मिक, अभिरुचिया निरंतर बदलाव की ओर जा रही है। **इससे उसमें आत्मविश्वास की कमी और असुरक्षा अनुशासन की नकारात्मक प्रवृत्तियां पनपने लगी है। परंपरा और प्रगति के बीच आज का युवा द्वंद ग्रस्त है।** उसके समक्ष दोनों के बीच सामंजस्य स्थापित करने की प्रमुख समस्या है।ऐसे में आवश्यकता है, उच्च शिक्षा में बदलावों की जो युवाओं में गुणात्मक विकास को विकसित कर उसे सकारात्मक सोच की ओर अग्रसर कर सके । तेजी से बदल रही दुनिया के साथ ही शैक्षणिक जगत में भी परिवर्तन की लहर है। हमारे आसपास के वातावरण में परिवर्तन बहुत तेज गति से हो रहा है। और यह समझदारी के साथ-साथ सामाजिक संरचनाओं और भावनाओं से संसार को भी प्रभावित कर रहा है। आधुनिक परिदृश्य को प्रोद्योगिकी ने अपने मजबूत नियंत्रण में ले लिया है। नए ज्ञानोदय सूचना क्रांति के अति विस्मयकारी विस्फोट से भारत जैसे पारंपरिक समाजों वाले देश में कई तरह के असमंजस्यकारी बदलाव आ रहे हैं। **इस उथल-पुथल में अपनी समृद्ध एवं गरिमामई शिक्षा दीक्षा और संस्कारों को बचा पाना बहुत कठिन होता जा रहा है।यद्यपि उच्च शिक्षा में निरंतर गुणात्मक शिक्षा के विकास में कार्य हो रहा है,** तथापि यह सुधार पर्याप्त नहीं कहे जा सकते, अभी भी ऐसे अनेक पक्ष या पहलू हैं। जिनमें बहुत कुछ नए करने की संभावना विद्यमान है, उन पहलुओं का पाठ्यक्रमों में समावेश होने से युवा वर्ग तेजी से बदलते वातावरण में वैश्विक चुनौतियों का सामना करने में सक्षम हो सकेगा । और अपने व्यक्तित्व का वांछित विकास कर सकेगा । यह सत्य है कि, विषय के **गहरे ज्ञान के बिना युवा वर्ग आधुनिक जीवन शैली में सफलता प्राप्त नहीं कर सकता ।** उच्च शिक्षा भारतीय संस्कृति के अनुरूप आदर्श का केंद्र बने एवं उन्नत तथा प्रगतिशील समाज के निर्माण में सहायक हो । जहां ऐसी जीवन शैली विकसित होगी कि अहिंसा सत्य जैसे मौलिक गुण कण-कण में व्याप्त हो जाए ताकि बुरे व्यसन मुक्त मुक्ति के लिए, स्वच्छता के लिए, हमें कोई आयोजन ना करना पड़े। महाविद्यालय की कक्षाएं पाठ सुनने के मात्र कमरे ना हो अध्यापन तथ्यों के संग्रह और अधिक अंक अर्जित करने की क्रीडा ना बने, **अपितु वहां जीवन ऊर्जा का सृजन हो**, मूल्य का निर्माण हो। **वास्तव में शिक्षा के यह पवित्र मंदिर चिंतन - मनन जिज्ञासा, अन्वेषण, नवाचार एवं अभिप्रेरणा का संगम बने,** ऐसे सार्थक प्रयास करने होंगे । परंपरा और प्रगति के बीच आज का युवा बुरे व्यसन से द्वन्द ग्रस्त है । उसके समक्ष अकादमिक डिग्रियों के साथ आजीविका का प्रश्न भी कम महत्वपूर्ण नहीं है इसलिए उच्च शिक्षा की बदलती प्रसारशील भूमिका वर्तमान युवा जीवन के लिए अत्यंत महत्वपूर्ण हो गयी है । बदलते परिवेश में युवा वर्ग को यह भी समझना होगा कि, शिक्षा जीवन भर सीखने चलने वाला उपक्रम है । युवा वर्ग को इस दिशा में गंभीरता से सोचना होगा । व्यक्तिगत स्तर पर युवाओं को अपने **विषय संबंधी ज्ञान, व्यक्तित्व विकास, मौखिक व लिखित संप्रेषण, कौशल सृजनशील मानसिकता काम के प्रति रवैया,** नया करने और सीखने की इच्छा, टीम भावना, लचीलापन, परिस्थितियों के अनुरूप अपने को ढालने के सामर्थ्य आदि पर विचार करना होगा । तभी वह वैश्वीकरण के दौर में अपने आप को स्थापित करने में सक्षम बन सकेगा।

आज आवश्यकता है कि, प्रेरक और सृजनशील वातावरण के निर्माण हेतु पहल की । अच्छी नागरिकता के विकास के लिए बिना स्वायत्तता की रक्षा भी संभव नहीं है । **युवाओं में राष्ट्रगान, राष्ट्रध्वज देश के संविधान के सम्मान राष्ट्रीय स्वतंत्रता आंदोलन** के आदर्शों राष्ट्रीय एकता अखंडता और संप्रभुता की रक्षा करना, राष्ट्र की रक्षा, राष्ट्रीय आपदाओं के समय हम दर्द

के लिए आगे आना, राष्ट्रीय भाईचारा, महिला सम्मान की रक्षा करना, बहुरंगी भारतीय संस्कृति का सम्मान व उसको संरक्षित रखना, प्राकृतिक **पर्यावरण के महत्वपूर्ण अंग जैसे** झिलों, नदियों, जंगलों, वन्यजीवों की सुरक्षा और स्वच्छता पर ध्यान देना, वैज्ञानिक एवं मानवीय दृष्टिकोण विकसित करना पुनर्जागरण हेतु प्रयास करना तथा स्वयं में जिज्ञासा की प्रवृत्ति विकसित करना हिंसा से बचना और संपति की रक्षा करना तथा सामूहिक क्रियाकलापो के माध्यम से सभी क्षेत्रों में उत्कृष्टता लाने की दिशा में कार्य करना ताकि देश की उपलब्धियों के मामले में नित नई ऊंचाइयां प्राप्त करता रहे।

युवाओं में नैतिक मूल्य को स्थापित करना उनकी जीवनशैली को व्यवस्थित कर उनमें सकारात्मक सोच को विकसित करना, उच्च शिक्षा की बदलती भूमिका अहम स्थान रखती है, यह अनिवार्य है कि, उच्च शिक्षा युवाओं में बढ़ते सन्त्रास व तनाव को कम कर उनमें गुणवत्ता संस्कृति यानी (क्वालिटी कल्चर) को विकसित करने में मार्गदर्शन कर उनका मार्ग प्रशस्त करें। युवाओं को ही हमारी समृद्ध सांस्कृतिक धरोहर को संभालना है, और अंतरराष्ट्रीय मंच पर प्रभावी उपस्थिति दर्ज करनी है, जय जवान जय किसान जय विज्ञान के नारे को अक्षरश: सही साबित कर दिखाना होगा।

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उद्योग नवाचार एवं बुनियादी ढाँचा की चुनौतियाँ

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कीवर्ड: प्रौद्योगिकी, कौशल विकास, क्षमता, तकनीक।

प्रस्तावना:

नवाचार या नवप्रवर्तन का आधुनिक व्यावसायिक क्षेत्र बहुत महत्व स्थान है। नवाचार (नव़आचार) का अर्थ **किसी उत्पाद, प्रक्रिया या सेवा में थोडा या बहुत बडा परिवर्तन लाने से है।** नवाचार के अन्तर्गत कुछ नया और उपयोगी तरीका अपनाया जाता है, जैसे- नई विधि, नई तकनीक, नई कार्य-पद्धति, नई सेवा, नया उत्पाद आदि। नवाचार को **"अर्थतंत्र का सारथी माना जाता है।"** नवाचार को परिभाषित करते हुए क्रोसन और अपयडिन ने इसकी सारगर्भित और पूर्ण व्याख्या की है, जो कि इस प्रकार है -

"नवाचार आर्थिक और सामाजिक क्षेत्र में एक मूल्य जोड़ने वाली नवीनता का उत्पादन या स्वीकृति, परिपाक और दोहन हैय उत्पादों, सेवाओं और बाजारों का नवीनीकरण और विस्तार हैय उत्पादन की नई पद्धतियों का विकास है और नये प्रबंध तंत्रों का स्थापन है। यह एक प्रक्रिया भी है और परिणाम भी।"

किसी भी संस्था के संदर्भ में नवाचार के द्वारा दक्षता, उत्पादकता, गुणवता, बाजार में पकड आदि के सुधार सम्मिलित हैं। अस्पताल, विश्वविद्यालय, ग्राम पंचायतें आदि सभी संस्थायें नवाचारी हो सकती हैं। जो संस्थायें नवाचार नहीं कर पातीं वे नाश को प्राप्त होती हैं। उनका स्थान नवाचार में सफल हुई संस्थायें ले लेतीं हैं। नवाचार में सबसे महत्वपूर्ण चुनौती प्रक्रिया-नवाचार तथा उत्पाद-नवाचार में सामंजस्य बैठाना होता है।

वर्तमान समय में अनेकों प्रकार के नवाचारों किये जाते है, जो प्रमुख इस प्रकार हैं-

- तकनीकी नवाचार
- सेवा नवाचार
- व्यापार मॉडल में नवाचार
- अभिकल्प (डिजाइन) नवाचार
- सामाजिक नवाचार

भारत में उद्योग नवाचार एवं बुनियादी ढाँचा:

भारत प्रत्येक क्षेत्र में शोध और नवाचार का समर्थन करते हुए अर्थव्यवस्था को तेजी से आगे बढ़ा रहा है। वर्ष 2024 में भारत की अर्थव्यवस्था में दोगुनी वृद्धि की करने की संभावना है जो कि विष्व की सभी बड़ी अर्थव्यवस्थाओं में सबसे अधिक होगी। यह भी स्वीकार किया गया है कि आज भारत में 70 हजार से अधिक स्टार्ट-अप है, जिनमें सौ से अधिक यूनिकार्न है। ऐसे

में भारत शोध और नवाचार को और अधिक प्रोत्साहन देते हुए देष को मैन्युफेक्चरिंग हब बनाने सहित विभिन्न क्षेत्रों में विकास को नई उचाईयां देने की ओर अग्रसर है। पिछले दषकीय वर्षों में भारत को अनुसंधान तथा नवाचार के लिए एक वैष्विक केन्द्र के रुप में विष्व के अन्य देषों का समर्थन मिल रहा है। वर्ष 2014 के बाद से विज्ञान प्रौद्योगिकी और नवाचार में निवेष बढ़ा है, वर्तमान समय में **भारत चैथी औद्योगिक क्रांति** का नेतृत्व कर रहा है, तब भारत के विज्ञान और नवाचार की मुख्य भूमिका से विकास की आस पूरी होगी। **भारत सरकार ने देष को 25 वर्षों बाद 2047 तक भारत को विकसित बनाने का लक्ष्य तय किया है** तथा शोध और नवाचार की भूमिका को और अधिक प्रभावषाली बनाये जाने की ओर प्रयासरत् है।

निःसंदेह पिछले एक दषक में शोध, नवाचार तथा तकनीकी विकास के परिप्रेक्ष्य में भारत देष निरंतर उन्नति कर रहा है। शोध और नवाचार से बुनियादी ढांचा, स्वास्थ्य डिजिटल, प्रौद्योगिकी, षिक्षा, कृषि, रक्षा सहित विभिन्न अनेक क्षेत्रों में निरंतर प्रगति हो रही हैं। भारत के नवाचार दुनिया में सबसे प्रतियोगी, किफायती, टिकाऊ, सुरक्षित तथा बड़े स्तर पर लागू होने वाले समाधान प्रस्तुत कर रहे है। नए वैष्विक ग्लोबल इंडेक्स के अनुसार भारत में कारोबारी विषेषज्ञता, रचनात्मकता, राजनीतिक एवं संचालन से जुड़ी स्थिरता, सरकार की प्रभावषीलता और दिवालियापन की समस्या को हल करने में आसानी जैसे संकेतों में अच्छे सुधार किए गये हैं। साथ ही भारत में डिजिटल अर्थव्यवस्था, घेरलू कारोबार में सरलता, स्टार्टअप, विदेषी निवेष जैसे मानकों में भी बड़ा सुधार हो रहे हैं।

यहां कृषि क्षेत्र को आगे बढ़ाने में भी कृषि संबंधी नवाचार की प्रभावी भूमिका है। देष में कृषि शोध से जुड़ी 100 से अधिक रिसर्च इंस्टिट्यूट 75 से अधिक कृषि विष्वविद्यालयों और इंडियन काउंसिल आफ एग्रीकल्चरल रिसर्च 20 हजार से अधिक वैज्ञानिकों के समर्पित शोध कार्य हार्वेस्टिंग मैनेजमेंट, कृषि के विभिन्न क्षेत्रों में बढ़ते निजी निवेष, कृषि विज्ञान केन्द्रों से मुफ्त बीजों का वितरण, सीड़ टेक्नालाजी में फसलों की जीनोम एडिटिंग की अनुमति, कृषि क्षेत्र में नवाचार को बढ़ावा दिए जाने से कृषि क्षेत्र में विकास का नया अध्याय तेजी से लिखा जा रहा है।

नवाचारों को प्रोत्साहित व संचालित करने वाली संस्थागत प्रणाली के बिना कोई भी देश एक महत्त्वपूर्ण विनिर्माण शक्ति नहीं बन सकता। भारत को एक ऐसी प्रणाली की आवश्यकता है जो उद्यम के स्तर पर और साथ-ही-साथ राष्ट्रीय स्तर पर मानवीय व तकनीकी क्षमता का विकास करें। व्यापक औद्योगिक नीति के अंतर्गत एक महत्त्वपूर्ण आयाम उद्यमों में डिजाइन क्षमता का निर्माण करना बना रहेगा। जोसेफ स्टिग्लिट्ज के अनुसार- 'आप हमेशा कार्यकरण से ही सीखते हैं क्योंकि अधिकांश उत्पादों में प्रौद्योगिकी उत्पाद निर्माण की प्रक्रिया तथा उत्पाद के विभिन्न हिस्सों में समाहित होती है, साथ ही निर्माण की प्रक्रिया में उपयोग होने वाले उपकरणों एवं साधनों में छुपी होती है।

भारतीय अर्थशास्त्रियों और आयातकों द्वारा प्रायः यह तर्क दिया जाता है कि किसी क्षेत्र के विकास के लिये सर्वोत्कृष्ट और न्यूनतम मूल्य के इनपुट की आपूर्ति होनी चाहिये। किंतु इस दृष्टिकोण को अदूरदर्शी माना जा सकता है। घरेलू उद्योगों में सभी स्तरों पर भारतीय तकनीक को बढ़ावा देने के लिये इलेक्ट्रॉनिक हार्डवेयर, मशीनी उपकरण और पूंजीगत उपकरणों के उत्पादन को बढ़ावा देना होगा। मौजूदा समय में भारत में ऐसे सभी उपकरणों एवं हार्डवेयर का आयात चीन से किया जा रहा है। हालाँकि डिजाइन क्षमता राष्ट्रीय नवाचार प्रणाली का मात्र एक तत्व है, साथ ही इसमें अन्य महत्त्वपूर्ण तत्व भी शामिल हैं। अनुसंधान व विकास के क्षेत्र में भारत पर्याप्त क्षमता रखता है, लेकिन एक राष्ट्रीय नवाचार प्रणाली के लिये आवश्यक मुख्य घटकों का अभी भी अभाव है। एक अध्ययन के अनुसार विश्व परिदृश्य में अनुसंधान एवं विकास के मामले में भारत की प्रमुखता के लिये कई कारणों को सहायक माना जा सकता है जैसे-

- बाजार क्षमता
- बौद्धिक संपदा अधिकारों की सापेक्षिक सुरक्षा
- कुशल श्रम की उपलब्धता और
- अनुसंधान एवं विकास की कम लागत।

भारत में नवाचार की चुनौतियाँ:

भारत की राष्ट्रीय नवाचार प्रणाली की प्रमुख चुनौतियाँ बनी हुई हैं। भारत में क्रियामूलक ज्ञान को विस्तार देने की आवश्यकता है ताकि भारत में शैक्षणिक स्तर पर ही विद्यार्थियों को दैनिक जीवन में उपयोगी वस्तुओं से संबंधित प्रौद्योगिकी को समझने और उसको निर्मित करने के लिये प्रोत्साहित किया जा सके, जिससे भारत में जटिल प्रौद्योगिकी के निर्माण का माहौल तैयार हो सके। इसके लिये निम्नलिखित क्षेत्रों में ध्यान देने की आवश्यकता है-

- एक औद्योगिक नीति के अभाव ने भारत को एक विनिर्माण केंद्र के रुप में उभरने में बाधा पहुँचाई है तथा नवाचार भी सीमित रूप से ही विकास कर सका है, साथ ही भारत की क्षमता के अनुसार कुल उत्पादकता भी सीमित रही है।
- उच्च शिक्षा प्राप्त लोगों की संख्या में तीव्र वृद्धि हुई है किंतु इसका परिणाम सीखने के स्तर अथवा अधिगम स्तर पर गुणवत्ता में सुधार के रूप में सामने नहीं आया है।
- समग्र शिक्षा प्रणाली में कई विफलताओं ने वर्तमान कौशल विकास के लिये गंभीर नकारात्मक शैक्षणिक परिणाम उत्पन्न किये हैं। भारत में विज्ञान, तकनीक तथा नवाचार के बल पर समावेशी विकास को बढ़ावा देने के लिये आवश्यक है कि भारत में कार्यबल के अधिगम (लर्निंग) तथा शैक्षणिक स्तर में सुधार किया जाए।
- माध्यमिक उच्चतर माध्यमिक स्तर पर एसटीईएम शिक्षकों की गंभीर कमी है।
- तृतीयक स्तर पर इंजीनियरिंग, विनिर्माण और विज्ञान में मात्र 39 प्रतिशत नामांकन की स्थिति (जिनमें से विज्ञान में नामांकन मात्र 5 प्रतिशत) है।
- शिक्षा में और अधिक निजी तथा सार्वजनिक निवेश की आवश्यकता है, वर्तमान में भारत में का 4.6 प्रतिशत शिक्षा पर खर्च किया जा रहा है जो शिक्षा क्षेत्र की जरूरतों को ध्यान में रखते हुए अपर्याप्त है।
- इसके अतिरिक्त औद्योगिक नीति को शिक्षा कौशल नीति से संरेखित करने के लिये संरचनात्मक परिवर्तन की आवश्यकता है ताकि भारत चतुर्थ औद्योगिक क्रांति जैसे क्षेत्रों में एक महत्त्वपूर्ण विज्ञान, प्रौद्योगिकी और नवाचार केंद्र बन सके। हालाँकि इसके लिये 15-18 वर्ष की आयु वर्ग के लाखों नवयुवाओं को व्यावसायिक शिक्षा एवं प्रशिक्षण की ओर मोड़ना भी आवश्यक होगा। भारत में व्यावसायिक शिक्षा एवं प्रशिक्षण मुख्यतः सरकार-प्रेरित एवं आपूर्ति-प्रेरित रहा है।

इस प्रकार देश को एक मांग-प्रेरित एवं नियोक्ता के नेतृत्व वाली तथा उद्योग द्वारा वित्तपोषित (न कि मुख्यतः सरकार द्वारा वित्तपोषित) व्यावसायिक शिक्षा एवं प्रशिक्षण प्रणाली की आवश्यकता है। वर्तमान में अल्प शिक्षा प्राप्त कार्यबल के लिये राष्ट्रीय कौशल विकास निगम द्वारा वित्तपोषित निजी प्रशिक्षण प्रदाताओं के माध्यम से संचालित अल्पकालिक व्यावसायिक प्रशिक्षण व्यवस्था संचालित है जो रोजगार स्तर में सुधार लाने में विफल रही है।

राष्ट्रीय नवाचार प्रणाली के निर्माण में एक चुनौती यह भी है कि भारत अपने जीडीपी का मात्र 0.72 प्रतिशत अनुसंधान एवं विकास के लिये आवंटित करता है जबकि इसकी तुलना में चीन 1.8 प्रतिशत, अमेरिका 2.9 प्रतिशत और जापान 3.4 प्रतिशत तक निवेश करता है। वर्तमान में इस मद में भारत का व्यय इसके आय स्तर के सापेक्ष भी बेहद कम है। इसके अतिरिक्त मुख्य रूप से पूर्वी एशियाई देशों (जहाँ तीव्र आर्थिक वृद्धि हुई है) जैसे- चीन, जापान, कोरिया आदि में जहाँ अनुसंधान एवं विकास के लिये जीडीपी के प्रतिशत के रूप में कोष की भारी वृद्धि हुई है, वहीं भारत में अनुसंधान एवं विकास के क्षेत्र में मामूली वृद्धि ही की गई। अनुसंधान एवं विकास पर अपेक्षाकृत कम व्यय के बावजूद वैज्ञानिक प्रकाशनों (विश्व में छठा स्थान) और पेटेंट दर्ज कराने (विश्व में सातवाँ स्थान) में प्रभावशाली वृद्धि हुई है। उपर्युक्त स्थिति के बावजूद भारत में ऐसे ज्ञान, अनुसंधान एवं पेटेंटों का उपयोग औद्योगिक लाभ के लिये बहुत कम होता है। इसका परिणाम यह है कि प्रौद्योगिकी पार्क, उद्भवन केंद्र (इन्क्यूबेटर) आदि की स्थापना और स्टार्ट-अप को प्रोत्साहन जैसे सरकारी प्रयास (स्टार्ट-अप इंडिया, अटल उद्भवन मिशन जैसे सरकारी पहलों के रुप में) अपेक्षित लाभ प्रदान नहीं कर सकेंगे।

विश्वव्यापी आर्थिकी में नवाचारी क्षमता वह कड़ी है, जिससे उद्यमशीलता गति पकड़ती है। 21वीं सदी में विकास और रोजगार के क्षेत्र में प्रगति की उपलब्धियों में नवाचार ही वह माध्यम है, जो किसी भी देश की अर्थव्यवस्था को मजबूती देने में सहायक है। प्रधानमंत्री श्री नरेन्द्र मोदी ने नवाचार के लिए न केवल माहौल बनाया है, बल्कि नवाचारियों को प्रोत्साहित करने के लिए कई नई संस्थाएं भी गठित की है। इनमें राष्ट्रीय नवाचार परिषद, अटल इनोवेशन मिशन तथा भारत समावेशी नवाचार कोष जैसी संस्थाएं अस्तित्व में आयी है। हालांकि नवीन अनुसंधान और नवाचार की जितनी संभावनाएं भारत में हैं, उस नाते एक ऐसी संस्था की भी जरुरत है, जो ऐसे नवाचारियों को प्रोत्साहित करे, जिन्होंने कोई अकादमिक शिक्षा प्राप्त तो नहीं की, लेकिन अत्यन्त उपयोगी आविष्कारों के जन्मदाता बन गए हैं।

भारत को यह स्थान स्टार्टअप में बेहतर माहौल बनाने के कारण मिली है। वर्तमान में विश्व बाजार में सूचना प्रौद्योगिकी, दवा उद्योग और अंतरिक्ष प्रौद्योगिकी के क्षेत्र में भारत की उपलब्धियों को मान्यता मिल रही है। भारत कृत्रिम बुद्धिमत्ता और रोबोटिक जैसी अत्यन्त नई तकनीक में भी अनुसंधान करते हुए प्रगति कर रहा है। इसीलिए भारत की नवाचार के क्षेत्र में साख बनी है। इस दृष्टि से देश में नवाचार की कार्य संस्कृति को जानने के लिए नीति आयोग 2019 से नवाचार सूचकांक जारी कर रहा है। इस सूची में कर्नाटक देश के नवाचार सूचकांक में प्रथम पायदान पर है। तमिलनाडु, महाराष्ट्र, तेलंगाना और हरियाणा भी इस प्रतिस्पर्धा में शामिल हैं।

निष्कर्ष:

भारत में अनुसंधान पर सीमित व्यय किया जाता है, साथ ही निजी क्षेत्र की भी यही स्थिति है। इसके अतिरिक्त भारत में कुशल कार्यबल के निर्माण में सहयोग देने के लिये शिक्षा व्यवस्था के स्तर पर विभिन्न कमियाँ मौजूद हैं। विनिर्माण क्षेत्र में वृद्धि तथा इस क्षेत्र का डीजीपी में योगदान बढ़ाने के लिये आवश्यक है कि भारत राष्ट्रीय नवाचार प्रणाली में सुधार किया जाए। इसके लिये

सरकार को नीतिगत स्तर पर विभिन्न सुधार करने होंगे तथा विनिर्माण क्षेत्र के लिये अनुकूल वातावरण निर्मित करना होगा। साथ ही भारत को प्राथमिक स्तर से ही क्रियामूलक ज्ञान की संस्कृति का विकास करने की भी आवश्यकता है ताकि शिक्षा कार्यबल को अधिगम एवं प्रशिक्षण का मजबूत आधार उपलब्ध करा सके।

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"जनजातीय क्षेत्रों में गुणवत्तापूर्ण शिक्षा एवं कृषि क्षेत्र का विकास"

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सारांश :- प्रस्तुत शोध म.प्र. के चार जिले के जनजातीय क्षेत्रों में गुणवत्तापूर्ण शिक्षा एवं कृषि के विकास से है। गुणवत्तापूर्ण शिक्षा सभी की मुलभूत आवश्यकता व अधिकार है। अपने उद्देश्य व लक्ष्य को प्राप्त करने और एक न्यायपूर्ण समाज विकास में मदद करने के लिए हमें गुणवत्तापूर्ण शिक्षा की आवश्यकता है।

जनजातीय क्षेत्रो मे ज्ञान प्रणाली एवं परिवार आधारित कृषि प्रबंधन जनजातीय क्षेत्रों में विशिष्ट स्वदेशी संस्कृति है? परन्तु भौगोलिक परिस्थिति के कारण इन क्षेत्रों का विकास एवं यहाँ के लोगों की सामाजिक आर्थिक स्थिति में अपेक्षाकृत कम सुधार हुआ है। इन क्षेत्रों में स्थानीय कृषि ही आजीविका की प्रमुख धूरी है। बुनियादी ढांचे की कमी, कठिन परिस्थिति मौसम की अनिवार्यता एवं कृषि पर निर्भरता के दृष्टिगत इन क्षेत्रों में आजीविका के नए स्त्रोत विकसित करने की जरूरत है। और, नए स्त्रोत को विकसित करने का कृषि में एक मात्र माध्यम गुणवत्तापूर्ण शिक्षा को बढ़ावा दिया जाये।

कुंजी शब्द :- 2012 में संयुक्त राष्ट्र (UN) ने पहली बार अपने सतत विकास लक्ष्यों (sustainable Development govt. Goals - SDGs) में गुणवत्तापूर्ण शिक्षा (Quality education) को शामिल किया ।

प्रस्तावना :-

वर्तमान समय में देखा जाये तो गुणवत्तापूर्ण शिक्षा आधुनिक समाज की मांग हैं, और चाहे कोई भी क्षेत्र हो, जैसे- व्यवसायिक क्षेत्रों में शिक्षा के क्षेत्रों में, कृषि क्षेत्रों में, गुणवत्ता की मांग हर जगह होती है। आधुनिक समय में शिक्षा तकनीकों से काफी प्रभावित हैं, परंतु आज भी जनजातीय क्षेत्रों मे शिक्षा का अभाव है, और अभाव होने का कारण यही है कि जनजातीय क्षेत्रों में रहने वाले लोगों की आर्थिक स्थिति आज भी ठीक नहीं है। शिक्षा की अद्‌भुत परिभाषा है, गीता में कहा गया है " सा विद्या विमुक्ते जिसका अर्थ है, शिक्षा या विद्या वही हैं, जो हमे बंधनों से मुक्त करे और हमारे हर लक्ष्य पर विस्तार से वर्णन करे। गुणवत्तापूर्ण शिक्षा का मतलब ऐसी शिक्षा से है जो अपने अपने लक्ष्यों व उद्देश्यो को अच्छी तरह समझती हो, और वो अपने लिए समाज, देश व राष्ट्र के लिए फायदेमंद हो, गुणवत्तापूर्ण शिक्षा मे प्राय: उसी शिक्षा शिक्षण अधिगम में छात्रो की रुचि एवं क्षमताओं को समझे एवं समाज की आवश्यकता की पूर्ति करे और छात्रो को जीवनदान देने योग्य बनाए संयुक्त राष्ट्र एक उज्जवल भविष्य के लिए शिक्षा के महत्व को समझता है, और संयुक्त राष्ट्र का मानना है कि शिक्षा केवल नाम मात्र की नहीं बल्कि गुणवत्तापूर्ण होनी चाहिए संयुक्त राष्ट्र सतत विकास लक्ष्यों (SDGs) में 2030 तक एक दुनियां में बदलाव लाने के लिए गुणवत्तापूर्ण शिक्षा को एक प्रमुख लक्ष्य के रूप में पहल की हैं।

गुणवत्तापूर्ण शिक्षा से तात्पर्य सभी को समान रूप से शिक्षा दी जाए, जो आजीवन सीखने और ज्ञान की प्राप्ति को बढ़ावा दे, गुणवत्तापूर्ण शिक्षा समाज, देश व दुनिया को बदलने का साधन माध्यम बनाने के लिए यह एक क्रान्तिकारी दृष्टिकोण साबित हो सकता है। हम सभी इस बात से भली-भाँति परिचित हैं कि तकनीकी कैसे शिक्षा का चेहरा बदल रही

है। न केवल शिक्षा प्राप्त करने का तरीका बदल गया हैं बल्कि छात्रों का पढ़ाने के तरीकों का भी विकास हुआ है। पहले शिक्षा एक तरफा ज्यादा थी, लेकिन वर्तमान समय में शिक्षा दो तरफा ज्यादा हो गई है।

शिक्षा को बेहतर और आसान बनाने के लिए देश में शैक्षिक जागरूकता फैलाने की जरूरत है, लेकिन शिक्षा पर सभी वर्गों का समान अधिकार हैं, इसलिए शिक्षा को आगे बढ़ाने की जिम्मेदारी भी सभी उठानी पड़ेगी।

"गुणवत्तापूर्ण शिक्षा के लक्ष्य"

- 2030 तक यह सुनिश्चित कर ले कि प्रभावी ढंग से सीखने के लिए छात्राएं एवं छात्र के लिए मुक्त प्राथमिक और माध्यमिक शिक्षा की व्यवस्था हो ।
- शिक्षा मे हर तरह के भेदभाव को दूर करना हैं।
- सार्वभौमिक शिक्षा को सुनिश्चित किया जाना चाहिए।
- समावेशी और सुरक्षित स्कूलों का निर्माण और विकास सुनिश्चित करना।
- विकासशील देशों के लिए उच्च शिक्षा के लिए छात्रवृति सुविधा का विस्तार करना हैं।
- विकासशील देशों में योग्य शिक्षकों की आपूर्ति को बढ़ाना

अध्ययन क्षेत्र:-

किसी भी व्यक्ति के प्रशासनिक तथा सामाजिक व्यवहार को प्रत्येक समाज एवं राज्य की स्थिति तथा पारिस्थितिक प्रभावित करती है। इसलिए किसी भी राजव्यवस्था में राजनीतिक व्यवहार को समझने के लिए वहाँ की पारिस्थितिकी को समझना आवश्यक है

मध्य प्रदेश भारत का दूसरा सबसे बड़ा राज्य है। भौगोलिक दृष्टि यह देश में केन्द्र में स्थित है। इसकी राजधानी भोपाल है। मध्य का अर्थ 'बीच में' है। मध्य प्रदेश की भौगोलिक स्थिति भारतवर्ष के मध्य अर्थात् बीच में होने के कारण इस प्रदेश का नाम मध्यप्रदेश दिया गया जो कभी मध्य भारत के नाम से जाना जाता था। म.प्र. की स्थापना 1 नवम्बर 1956 को हुई थी।

जनसंख्या व साक्षरता :-

2011 की जनगणना के अनुसार मध्य प्रदेश राज्य की कुल जनसंख्या 72,626,809 है। जिसमें पुरुषों एवं महिलाओं की संख्या क्रमश: 37,612,306 व 35,014,503 है।

2011 की जनगणना के अनुसार मध्य प्रदेश की साक्षरता दर 63.94 प्रतिशत है।

शोध विषय का चयन :-

देश के अन्य समाजो की तुलना में जनजातीय समुदाय, विकास की दृष्टि से अभी भी शिक्षा व कृषि क्षेत्र में पूर्ण रूप से विकसित नहीं हुआ है। इन्हीं बातों को ध्यान में रखकर राज्य एवं केन्द्र सरकार की योजनाओं के माध्यम जनजातीय क्षेत्रो का भी विकास हो सके

साहित्य समीक्षा :-

एम. एस. सच्चिदानन्द (2004) के अनुसार :- जनजातीय विकास की योजनाओं को सफल रूप से लागू करने में शिक्षा ने महत्वपूर्ण भूमिका अदा की है। इन कार्यक्रमों मे ग्रामीण समाज के निर्धन बेरोजगार एवं सीमान्त कृषि क्षेत्र मे श्रमिकों की दयनीय आर्थिक स्थिति को परिवर्तित का श्रेय प्राप्त किया। शोधकर्ता का अध्ययन निष्कर्ष था कि सरकारी योजनाओ के माध्यम से जनजातीय समाज के लोगों की जीवन शैली सोच व मानसिकता में समयानुकूल परिवर्तन आया है

भटनागर सुभाष एण्ड राबर्ट स्वैल (2000) के अनुसार :-

सरकारी योजनाओं का प्रयोग जनजातीय क्षेत्रों की सार्वजनिक, संस्थानों में किया गया है, जो जनजातीय समाज

की स्वास्थ, शिक्षा, गरीबी, बेरोजगारी संबंधि समस्याओं को दूर करने की योजनाओ को तैयार करती है। शोधकर्ता का निष्कर्ष कि शिक्षा व तकनीक ने जनजातीय जनता को सूचनाओं के प्रति किया जाये, जिससे उनको रोजगार प्राप्त करने में सहायता मिल सके

3) संतोष सारंगी :

21वीं सदी की चुनौतियों का सामना करने के लिए आवश्यक उच्च मानकों के शिक्षित व कुशल व्यक्तियों के साथ एक ज्ञान रूपी समाज बनाने की भारत की आकांश के लिए हमें अपनी पारम्परिक शिक्षा प्रणाली की मजबूत नविं रखने की आवश्यकता है, समानता, गुणवत्ता, सुलभता के साथ-साथ गुणवत्तापूर्ण शिक्षा पर भी ध्यान केन्द्रित किया गया है।

4) ललित कुमार एम. फिल. (राजनीतिक विज्ञान) 2014 के अनुसार:

वर्तमान में जनजातीय समाज अपना मूल स्वरूप खो चुके है। संक्रमण काल में यह स्वाभाविक भी है। भारत जैसे देश में जो जनजातीय जनसंख्या की दृष्टि सर्वाधिक जनसंख्या वाला देश है। इतनी बड़ी जनसंख्या को उपेक्षित नहीं किया जा सकता। उपेक्षित तो जनजातीय लोगों को तब भी नहीं किया गया था, जब वे अपने हितों के बारे में जागरूक नहीं थे, और जागरूक न होने का कारण शिक्षा की कमी है।

अध्ययन की विधि:-

किसी भी शोध अध्ययन के लिए वैज्ञानिक विधि का प्रयोग करना आवश्यक होता है। शोध अध्ययन के लिए आवश्यकतानुसार द्वितीय समंक का आंकलन किया गया है

शोध के उद्देश्य:.

1- जनजातीय क्षेत्रों में शिक्षा का उपयोग करते हुए कृषि का विकास।
2- जनजातीय क्षेत्रों में कृषि के विकास के लिए शिक्षा की भूमिका का अध्ययन।
3- जनजातीय क्षेत्रों में शिक्षा के मार्ग में जाने वाली बाधाओं को समझना

समस्या :-

1- जनजातीय क्षेत्रों में गुणवत्ता पूर्ण शिक्षा को लाने का कार्य कठिन है
2- जनजातीय क्षेत्रों मे गुणवत्तापूर्ण शिक्षा को अपनाने मे समस्या आयेगी।
3- जनपातीय क्षेत्रों में गुणवत्ता पूर्ण शिक्षा का प्रचार-प्रसार करनें मे समय लगेगा।

सुझाव:

1- किसानों व शिक्षकों को प्रशिक्षण दिया जाये ताकि कृषि क्षेत्र का विकास हो सके व छात्रों तक गुणवत्तापूर्ण शिक्षा वास्तविक रूप से पहुंच सके।
2- वर्तमान समय कृषि क्षेत्र के विकास के लिए व शिक्षा को बढ़ावा देने के लिए नयी-नयी तकनीकों का प्रयोग करना चाहिए।
3- शिक्षकों द्वारा छात्राओं के मन, मस्तिष्क मे गुणवत्तापूर्ण शिक्षा के प्रति जागरूकता एवं उत्साह लाना चाहिए।

निष्कर्ष :-

उपरोक्त निष्कर्ष से यह स्पष्ट होता है कि गुणवत्तापूर्ण शिक्षा का जनजातीय क्षेत्रों मे कषि के विकास के लिए महत्वपूर्ण स्थान रखती है। गुणवत्तापूर्ण शिक्षा छात्राओं के लिए आवश्यक है। शिक्षा का एक ऐसा स्वरूप रचा जाये जिससे सभी वर्गों को समान अधिकार मिल सके, तथा शिक्षा केवल नाम मात्र की नहीं होनी चाहिए शिक्षा रोजगार युक्त होनी चाहिए, ताकि जनजातीय क्षेत्रों का भी विकास हो सके। वर्तमान समय मे गुणवत्तापूर्ण शिक्षा की आवश्यकता है, परन्तु

स्वत: ही निरस्त हो जाती है, और ऐसा कोई भी देश व राष्ट्र नहीं है, जहां पर शत-प्रतिशत गुणवत्तापूर्ण शिक्षा, जीवन सुरक्षित तथा सतत विकास हुआ हो। और हम यह कह सकते है, कि वर्तमान समय में गुणवत्तापूर्ण शिक्षा की महत्वपूर्ण आवश्यकता है।

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"मध्यप्रदेश में कृषि क्षेत्र का विकास"

डॉ हिरासिह जामोद
सहायक प्राध्यापक, अर्थशास्त्र विभाग,
शासकीय आदर्श महाविद्यालय डिण्डौरी जिला-डिण्डौरी म.प्र.

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शोध सारांश- मध्यप्रदेश सरकार के द्वारा कृषि क्षेत्र के विकास में अथक प्रयास किये गये है। सिंचाई के लिए बुनियादी संरचनाओं का विकास जिसमें बिजली की उपलब्धता, ग्रामीण सड़क सम्पर्क सहित राज्य में कृषि क्रय तंत्र को सुदृढ़ करना तथा प्रमाणित बीजो की उपलब्धता सुनिश्चित करना आदि शामिल है। राज्य में कृषि के विकास में सहयोग करने वाली सभी पांच प्रमुख क्षेत्रों- सिंचाई, बिजली, सड़क, वित्त पोषण और सरकारी खरीदी में नीतिगत पहल की गई है, जिसके परिणामस्वरूप मध्यप्रदेश को 7वीं बार कृषि कमर्ण अवार्ड से सम्मानित किया गया।

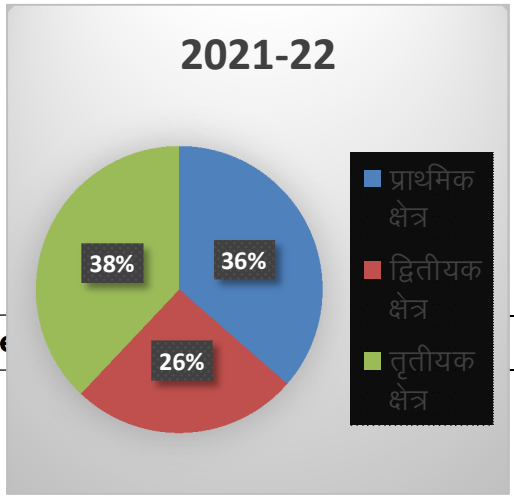
वर्ष 2022-23 में राज्य के सकल मूल्य वर्धन (जीएवी) में प्राथमिक क्षेत्र का योगदान 36.32 प्रतिशत है, इसी वर्ष प्राथमिक क्षेत्र का विकास दर 5.24 प्रतिशत तथा फसल क्षेत्र में 5.46 प्रतिशत की वृद्धि दर रही है। भारत के कुल खाद्यान्न उत्पादन में मध्यप्रदेश 7.7 प्रतिशत और तिलहन उत्पादन में 25.0 प्रतिशत का योगदान करता है। वर्ष 2022-23 में अनाज उत्पादन में 2.58 प्रतिशत, तिलहन उत्पादन में 16.38 प्रतिशत तथा दलहन उत्पादन में 17.40 प्रतिशत की वृद्धि पिछले वर्ष 2021-22 की तुलना में दर्ज की गई। वर्ष 2022-23 में कुल फसल उत्पादन में 4.16 प्रतिशत की वृद्धि दर्ज की गई।

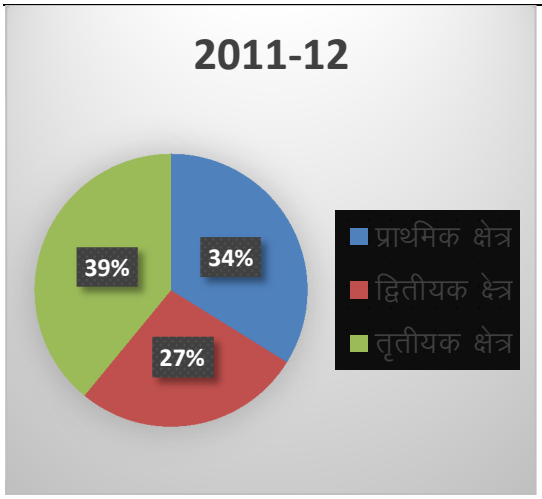
मध्यप्रदेश देश के खाद्यान्न, दलहन और तिलहन के शीर्ष उत्पादक राज्यों में से एक है। यह देश में खाद्यान्न का दुसरा सबसे बड़ा उत्पादक राज्य है। पिछले दो दशकों में मध्यप्रदेश की कृषि का विकास दर उच्च रही।

मध्यप्रदेश एक कृषि प्रधान राज्य है जिसमें जीएवी का 36.3 प्रतिशत हिस्सा प्राथमिक क्षेत्र विशेषकर कृषि व सम्बद्ध क्षेत्रों से आता है। राज्य में 307.56 लाख हेक्टेयर में से लगभग 152.05 लाख हेक्टेयर भूमि, (वर्ष 2018-19 में कुल भूमि का 49.43 प्रतिशत हिस्सा) कृषि के अधीन है। प्रदेश में कृषि जोतो का औसत आकार वर्ष 2018-19 में 1.6 हेक्टेयर रह गया है, जो राष्ट्रीय औसत से कम है। वर्ष 2002-03 में राज्य की जीडीपी 71,594 करोड़ रूपये थी, जो वर्ष 2022-23 में 13,22,821 करोड़ रूपये हो गयी है। प्रदेश में 58.0 प्रतिशत लोग कृषि कार्य पर निर्भर है।

मध्यप्रदेश में जलवायु और मिट्टी के विभिन्न प्रकारों की एक विस्तृत श्रृंखला के कारण यहां कृषि में विविधता है। प्रदेश में प्रमुख रूप से 11 कृषि जलवायु क्षेत्रो को 5 प्रमुख फसल क्षेत्रों में विभाजित किया गया है।

वर्ष 2011-12 में स्थिर कीमतों पर प्रदेश की राज्य घरेलु उत्पाद में प्राथमिक क्षेत्र का योगदान 34.0 प्रतिशत था, जो वर्ष 2020-21 में बढ़कर लगभग 36.0 प्रतिशत हो गया। मध्यप्रदेश की राज्य घरेलु उत्पाद में कृषि एवं सम्बद्ध क्षेत्र अर्थात प्राथमिक, द्वितीयक एवं तृतीयक क्षेत्रों का राज्य जीडीपी की सरंचना में स्थिर मूल्यों (2011-12) पर निम्नानुसार योगदान है।

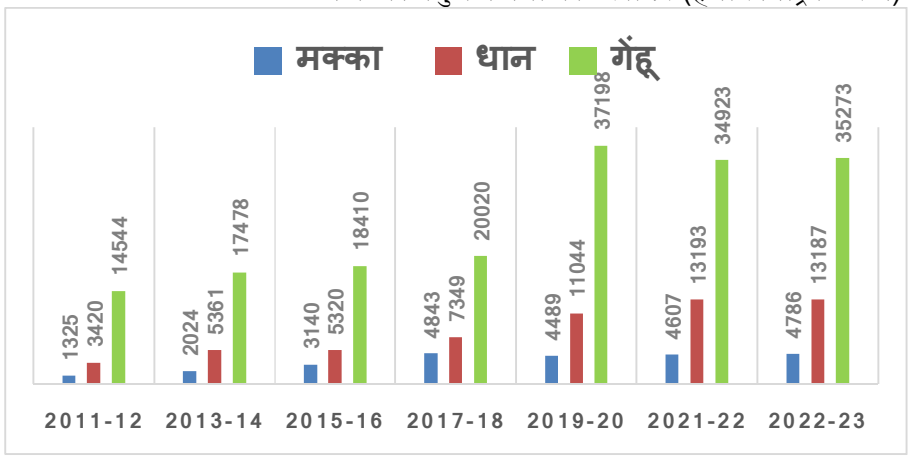




स्त्रौत- मध्यप्रदेश आर्थिक सर्वेक्षण 2022-23

प्रदेश में कृषि उत्पादन- वर्ष 2022-23 के दौरान फसल क्षेत्र में 5.46 प्रतिशत की वृद्धि हुई है। वर्ष 2021-22 की अपेक्षा वर्ष 2022-23 में अनाज के क्षेत्रफल में 1.11 प्रतिशत की वृद्धि तथा अनाज एवं तिलहन उत्पादन में क्रमशः 2.58 एवं 16.38 प्रतिशत की वृद्धि दर्ज की गई। दलहन उत्पादन में 17.04 प्रतिशत की वृद्धि रही है। कुल फसलों के उत्पादन में पिछले वर्ष की तुलना में वर्ष 2022-23 में 4.16 प्रतिशत की वृद्धि हुई है। धान उत्पादन 2020-21 की तुलना में वर्ष 2021-22 में 5.53 प्रतिशत की वृद्धि हुई है। पिछले 10 वर्षो में धान का औसत उत्पादन 80.87 लाख मिट्रिक टन हो गया है। इसी प्रकार मध्यप्रदेश में मक्का और गेंहु का औसत उत्पादन पिछले 10 वर्षो में क्रमशः 36.93 लाख मिट्रिक टन और गेंहु 245.89 करोड़ मिट्रिक टन रहा है। मक्का का उत्पादन वर्ष 2020-21 में 4430 हजार मिट्रिक टन रहा जो 2021-22 में बढ़कर 4,607 हजार मिट्रिक टन हो गया, यह पिछले वर्ष की अपेक्षा में 4.0 प्रतिशत ज्यादा था।

म.प्र. की प्रमुख फसलों का उत्पादन (हजार मिट्रिक टन में)



स्त्रौत- किसान कल्याण एवं कृषि विकास विभाग म.प्र. 2022

मध्यप्रदेश दालों का प्रमुख उत्पादक राज्य है। प्रदेश में उत्पदित की जाने वाली प्रमुख दलहनी फसलों में अरहर, चना, मसुर, उड़द और मुंग है। पिछले 10 वर्षो में चना 35.83 लाख मि.टन, उड़द 7.35 मि.टन और मसूर 4.78 लाख

मि.टन रहा। विगत 10 वर्षो में चना के उत्पादन में 2.49 प्रतिशत, उड़द में 32.9 और मसूर के उत्पादन में 17.76 प्रतिशत की औसत वार्षिक वृद्धि हुई है।

मध्यप्रदेश के प्रमुख वाणिज्यिक फसलों में सरसों, सोयाबीन और कपास शामिल है। प्रदेश सोयाबीन का सबसे बड़ा उत्पादक राज्य है। सरसों का उत्पादन पिछले वर्ष 2020-21 से 2021-22 में 29.38 प्रतिशत की वृद्धि हुई है, जो 1,307 हजार मिट्रिक टन से बढ़कर 1,691 हजार मिट्रिक टन हो गया। सोयाबीन का उत्पादन वर्ष 2020-21 में 3,370 हजार मिट्रिक टन से 60.0 प्रतिशत बढ़कर 2021-22 में 5,392 हजार मिट्रिक टन हो गया। गन्ने का उत्पादन वर्ष 2020-21 में 544 हजार मिट्रिक टन हुआ था, जो वर्ष 2021-22 में यह 19.37 प्रतिशत बढ़कर 651 हजार मिट्रिक टन हो गया। कपास फसल का उत्पादन 2021-22 में 798 हजार मि. टन से बढ़कर 848 हजार मि. टन हो गया। प्रदेश में पिछले 10 वर्षो के दौरान सरसों के उत्पादन में 10.3 प्रतिशत, सोयाबीन उत्पादन में 55.13 प्रतिशत और कपास उत्पादन में 8.5 प्रतिशत की औसत वार्षिक वृद्धि दर को दर्शाता है।

म.प्र. में सिंचाई- मध्यप्रदेश में सिंचाई क्षमता का निरंतर विकास हुआ है। मध्यप्रदेश में वर्ष 2003 में 7.68 लाख हेक्टेयर क्षेत्र में सिंचाई क्षमता थी जो वर्तमान में वर्ष 2022 में 45.0 लाख हेक्टेयर से अधिक सिंचाई क्षमता हासिल की गई है। इसे 2025 तक 65.0 लाख हेक्टेयर करने का लक्ष्य रखा गया है। प्रदेश में नहरों एवं नलकुपो सहित कुओं से सिंचाई की जाती है। शासकीय नहरों जिसमें वृहत, मध्यम एवं लघु सिंचाई परियोजनाओं के माध्यम से सिंचाई सुविधाओं का विस्तार किया जा रहा है, जो कृषि विकास में महत्वपूर्ण भूमिका का निर्वहन कर रहा है।

म.प्र. में कृषि प्रौद्योगिकी- सरकार किसानों की आय बढ़ाने के लिए कृषि उत्पादन और विपणन से संबंधित सभी हितधारकों को एक मंच पर लाने के लिए सूचना प्रौद्योगिकी का बड़े पैमाने पर उपयोग कर रही है। जिसमें रिमोट सेंसिंग और जीआईएस, आईओटी, डेटा एनालिटिक्स, आर्टिफिशियल इंटेलीजेंस, मशीन लर्निंग और ब्लाक चेन जैसी उभरती टेक्नालांजी पर राज्य एकीकृत सेवा और वितरण सहित बुनियादी ढांचे के लिए एक पारिस्थितिकी तंत्र विकसित करने पर जोर दिया गया है। मध्यप्रदेश में खेती के उत्पादकता में वृद्धि के लिए लगातार उर्वरकों का उपयोग बढ़ा है जो खाद्यान्न एवं व्यापारिक फसलों के उत्पादन एवं उत्पादकता को बढ़ाया है।

मध्यप्रदेश में कृषि विकास की विभिन्न योजनाएं वर्तमान मे महत्वपूर्ण भूमिका का निर्वहन करी रही है जिसमें प्रमुख है- **प्रधानमंत्री किसान सम्मान निधि** भारत सरकार की महत्वपूर्ण योजनाओं में से एक यह केन्द्र प्रायोजित योजना है। इस योजना के तहत प्रारंभ में केवल छोटे एवं सीमांत किसान जिनके पास 2.0 हेक्टेयर से कम भूमि है, उन्हें पात्र माना जाता था। लेकिन अब इसे बढ़ा दिया गया और सभी किसानों के लिए लागु किया गया है। इस योजना के तहत, सभी किसानों को न्युनतम आय सहायता के रूप में प्रतिवर्ष छः हजार रूपये मिल रहें है। यह योजना 2018 में रबी सीजन में शुरू की गई थी। बुआई से ठीक पहले नगदी संकट का सामना कर रहें किसानों को बीज, उर्वरक एवं अन्य आदानों में सुविधा मिल रही है।

मुख्यमंत्री किसान कल्याण योजना- मध्यप्रदेश में किसान कल्याण योजना एक राज्य स्तरीय योजना है। जो राज्य के किसानों को आय सहायता प्रदान करती है। इस योजना के तहत मध्यप्रदेश में पात्र किसानों को प्रतिवर्ष चार हजार रूपये वित्तीय सहायता उपलब्ध करायी जाती है। यह सहायता राशि दो हजार रूपये की दो किस्तों में प्रदान की जाती है। इसका उद्देश्य किसानों को बीज, उर्वरक एवं अन्य कृषि आदानों में मदद करना है।

प्रधानमंत्री फसल बीमा योजना- यह एक केन्द्र प्रायोजित योजना है और मध्यप्रदेश ने इस योजना के तहत पिछले वर्षो में अच्छा प्रदर्शन किया है। यह योजना फसल विफलता के खिलाफ बीमा कवर प्रदान करने और कम प्रिमियम दरों पर किसानों की आय को स्थिर करने में सहायता प्रदान करती है। इस योजना के तहत 2020-21 में 1775.95 करोड़

रूपये के प्रावधान के साथ मध्यप्रदेश में 11 क्लस्टरों में लागु किया जा रहा है। वर्ष 2021-22 में इस योजना से 90 लाख से अधिक किसानों की फसलों का बीमा प्रदान किया गया। इस प्रकार से मध्यप्रदेश में ऐसी अनेक कृषि विकास को बढ़ावा देने वाली योजनाएं है जो न केवल किसानों के आय बढ़ाने में सहायता प्रदान करती बल्कि उनकी आर्थिक सुरक्षा को भी सुनिश्चित कर रही है। जिनमें प्रमुख योजनाएं है। जैसे-परम्परागत कृषि विकास योजना, राष्ट्रीय कृषि विकास योजना, राष्ट्रीय कृषि विस्तार मिशन, राष्ट्रीय खाद्य सुरक्षा मिशन, मृदा स्वास्थ्य कार्ड योजना, कृषि यंत्रीकरण, प्रधानमंत्री कृषि सिंचाई योजना, प्रमाणित बीज वितरण योजना, प्रधानमंत्री सड़क योजना एवं किसान क्रेडिट कार्ड आदि। मध्यप्रदेश में सितम्बर 2022 तक 71.0 लाख किसानों को किसान क्रेडिट कार्ड वितरित किये जा चुके थे।

कृषि विपणन- मध्यप्रदेश में मंडी समितियों द्वारा किसानों के लिए उचित मूल्य और बेहतर विपणन सुविधाएं प्रदान करने में महत्वपूर्ण भूमिका निभाती है। मध्यप्रदेश राज्य कृषि विपणन बोर्ड 07 क्षेत्रिय कार्यालय और 13 तकनीकी डिविजन के माध्यम से 259 मंडियों और 298 उप मंडियों का संचालन कर किसानों को कृषि बाजार का उचित मंच प्रदान करता है।

राज्य में कृषि उत्पादन के बेहतर बुनियादी ढांचा जिसमें बिजली आपूर्ति, सिंचाई प्रबंधन और समर्थन मूल्य पर खाद्यान्न की खरीदी के कारण किसानों आय बढ़ी है। हांलाकि अधिशेष खाद्य उत्पाद एक चुनौती है, प्रदेश में अनाजों के उपार्जन, सहित भण्डार सुविधा, और सार्वजनिक वितरण प्रणाली के द्वारा उपभोक्ताओं को लाभ पहुॅच रहा है। राज्य खाद्य प्रबंधन नीति में किसानों से न्युनतम समर्थन मूल्य पर खाद्यान्नों का उपार्जन करना और सुरक्षित भण्डारण, उपभोक्ताओं के लिए, विशेष रूप से कमजोर वर्ग के लोगों को उचित दरों पर खाद्यान्न उपलब्ध कराना शामिल है। खाद्य सुरक्षा और मूल्य स्थिरता के लिए बफर स्टांक बनाये सरकार का मुख्य उद्देश्य है। मध्यप्रदेश सरकार द्वारा वर्ष 2022-23 में 46.03 लाख मिट्रिक टन गेंहु का तथा 45.82 लाख मिट्रिक टन धान का उपार्जन किया गया है।

मध्यप्रदेश सरकार के द्वारा कृषि क्षेत्र के विकास में अथक प्रयास किये गये है। सिंचाई के लिए बुनियादी संरचनाओं का विकास जिसमें बिजली की उपलब्धता, ग्रामीण सड़क सम्पर्क सहित राज्य में कृषि क्रय तंत्र को सुदृढ़ करना तथा सरकार द्वारा प्रमाणित बीजों की उपलब्धता सुनिश्चित करना आदि शामिल है। राज्य में कृषि के विकास में सहयोग करने वाली सभी पांच प्रमुख क्षेत्रों- सिंचाई, बिजली, सड़क, वित्त पोषण और सरकारी खरीदी में नीतिगत पहल की गई है, जिसके परिणामस्वरूप मध्यप्रदेश को 7वीं बार कृषि कमर्ण अवार्ड से सम्मानित किया गया।

वर्ष 2022-23 में राज्य के सकल मूल्य वर्धन (जीएवी) में प्राथमिक क्षेत्र का योगदान 36.32 प्रतिशत है, इसी वर्ष प्राथमिक क्षेत्र का विकास दर 5.24 प्रतिशत तथा फसल क्षेत्र में 5.46 प्रतिशत की वृद्धि दर रही। भारत के कुल खाद्यान्न उत्पादन में मध्यप्रदेश 7.7 प्रतिशत का योगदान और तिलहन उत्पादन में 25.0 प्रतिशत का योगदान करता है। वर्ष 2022-23 में अनाज उत्पादन में 2.58 प्रतिशत, तिलहन उत्पादन में 16.38 प्रतिशत तथा दलहन उत्पादन में 17.40 प्रतिशत की वृद्धि दर हासिल की। यह पिछले वर्ष 2021-22 की तुलना में दर्ज की गई। वर्ष 2022-23 में कुल फसल उत्पादन में 4.16 प्रतिशत की वृद्धि दर्ज की गई। प्रदेश में अनाज के अंतर्गत गेंहु एवं धान प्रदेश की मुख्य फसलें है। धान का क्षेत्राच्छादन वर्ष 2020-21 की अपेक्षा 2021-22 में 12.0 प्रतिशत की वृद्धि हुई और उत्पादन में 5.53 प्रतिशत की वृदि हुई है। राज्य में गेंहु का उत्पादन वर्ष 2022-23 में 352.7 लाख टन एवं धान का उत्पादन 131.0 लाख टन हो गया है।

भारत सरकार के एक प्रस्ताव के अनुसरण में संयुक्त राष्ट्र संघ ने वर्ष 2023 को अंतर्राष्ट्रीय मिलेट वर्ष घोषित किया है। इसके माध्यम से प्रदेश में मिलेट के भूले हुऐ गौरव को पुनर्जीवित करने के प्रयास किए जा रहे है। इन्हे **श्री अन्न** के

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नाम से भी पहचान दी जा रही है। मिलेट जैसे ज्वार, बाजरा, रागी और कोदो-कुटकी आदि को कई स्वास्थ्य लाभों के लिए जाने जाता है। मिलेट्स जलवायु परिवर्तन के प्रति भी लचीले होते है। इनके उत्पादन में गेंहु और धान की तुलना में सिंचाई के लिए कम पानी की आवश्यकता होती है। मध्यप्रदेश में ज्वार, बाजरा, कोदो और कुटकी के उत्पादन बढ़ाने की अपार संभावनाएं है।

मध्यप्रदेश देश के खाद्यान्न, दलहन और तिलहन के शीर्ष उत्पादक राज्यों में से एक है। यह देश में खाद्यान्न का दुसरा सबसे बड़ा उत्पादक राज्य है। पिछले दो दशकों में मध्यप्रदेश की कृषि का विकास दर उच्च रही।

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अलिराजपुर जिले में कृषि क्षेत्र के विकास का अध्ययन (अलिराजपुर जिले के विशेष संदर्भ में)

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सारांष:- भारत एक कृषि प्रधान देश है। इसमें लगभग 121.08 करोड़ जनसंख्या निवास करती है। इसमें से लगभग 65 प्रतिषत जनसंख्या कृषि करती है और 121.08 करोड़ जनसंख्या को खाद्यान्न उपलब्ध कराती है। उद्योगों के लिए कच्चा माल भी उपलब्ध कराती है। खाद्यान्न और कच्चा माल उपलब्ध कराने के लिए आगतों की आवश्यकता पड़ती है कृषि में प्रयुक्त होने वाले साधनों जैसे:- उर्वरक, श्रम, भूमि, ट्रैक्टर, पशु, सिंचाई, दवाईयाँ, बीज और परिवहन आदि सभी की आवश्यकता पड़ती है जिन्हें हम कृषि आगत कहते है। इन्हें खरीदने के लिए जिस धन की आवश्यकता पड़ती है उसे हम कृषि लागत कहते हैं। किसान खेती छोड़ने को मजबूर हो रहे है। क्योंकि कृषिगत साधनों की लागत इतनी ज्यादा हो गई है कि किसानों को बचत नहीं हो रही है और न ही अपने बच्चों को अच्छी शिक्षा दिला पा रहे हैं, क्योंकि उन्हें खेतों में प्रयोग होने वाले साधन जुटाने पड़ते हैं।

प्रस्तावना:- भारतीय अर्थव्यवस्था में कृषि प्रधान व्यवसाय होने के कारण कृषि ग्रामीणों की आय का सबसे महत्वपूर्ण स्त्रोत, जीवनयापन का प्रमुख साधन, रोजगार, ग्रामीण उद्योग-धंधों का आधार, ग्रामीण अर्थव्यवस्था की रीढ़ तथा आर्थिक विकास की कुंजी है। एवं भारत की 54.60 प्रतिशत जनसंख्या का मुख्य व्यवसाय कृषि तथा कृषि मजदूरी हैं। तथा देश की अर्थव्यवस्था तथा आर्थिक विकास में कृषि का बहुत महत्वपूर्ण योगदान है। भारत में आधुनिक कृषि पद्धति का अविर्भाव हरित क्रांति से हुआ। हरित क्रान्ति के पश्चात् सम्पूर्ण देश में कृषि क्षेत्र में विकास की लहर दौड़ गई। हरित क्रान्ति का प्रभाव नगरों से लगे हुए गाँवों विशेषकर जहाँ सिंचाई की पर्याप्त सुविधा उपलब्ध थी, शिक्षा का स्तर उच्च था एवं जागरूकता आधुनिक कृषि तकनीकी के उपयोग की जानकारी के साथ आर्थिक रूप से सम्पन्न क्षेत्रों में हुआ, किन्तु पिछड़े क्षेत्रों में परम्परागत कृषि तकनीकी और साधनों से कृषि कार्य किए जा रहे हैं। स्वतंत्रता प्राप्ति के पश्चात् कृषि विकास कार्यक्रमों पर विशेष ध्यान दिया गया। विभिन्न पंचवर्षीय योजनाओं में कृषि के विकास एवं उत्पादन वृद्धि हेतु केन्द्र एवं राज्य सरकारों के द्वारा कृषकों के आर्थिक विकास के लिए विभिन्न कार्यक्रम, प्रावधान एवं योजनाएँ संचालित है जिनमें फसलों की बीमारियों की रोकथाम के लिए दवाईयों की व्यवस्था, रासायनिक उर्वरकों, उन्नत बीजों, दवाईयों, सिंचाई के साधन व आधुनिक उपकरण के साथ वित्तीय सहायता, कृषि प्रशिक्षण सम्मिलित हैं। परिणाम स्वरूप कृषि उत्पादन में लगातार वृद्धि हुई है। और कृषि उपकरण के क्षेत्र में नेनो तकनीक सम्मिलित हैं। इनमे जंग रोधी व पराबैंगनी किरणों के विरुद्ध उपकरण संरचना, कृषि उपकरण दृढ यांत्रिक घटक, यांत्रिक रासायनिक खरपतवार नियंत्रण, नेनो तकनीक का वैकल्पिक ईंधन व पर्यावरण प्रदूषण में उपयोग भी शामिल हैं। शासन द्वारा संचालित कृषि योजनाओं का कृषि उत्पादकता में परिवर्तन का मूल्यांकन करना अध्ययन का मुख्य उद्देश्य हैं।

कृषि विकास योजना की जानकारी:- कृषि विकास योजनाओं का प्रमुख लक्ष्य कृषि क्षेत्रफल, उत्पादन व उत्पादकता में वृद्धि करना। कृषि पर आश्रित कृषकों के आर्थिक विकास, रोजगार में वृद्धि, एवं बढ़ती जनसंख्या के खाद्यान्न की पूर्ति की सुनिश्चितता प्रमुख लक्ष्य है। सदियों से चली आ रही परम्परागत अल्प उत्पादक एवं मानव श्रम पर निर्भर कृषि तकनीकी

में परिवर्तन कर आर्थिक सुदृढ़ता प्रदान करना विभिन्न कृषि योजनाओं का प्रमुख लक्ष्य है। अलिराजपुर जिले में कृषि विकास से सम्बन्धित अनेक योजनाऐं संचालित है जिनमें फल क्षेत्र विस्तार, फसलोंपरांत प्रबंधन, यंत्रीकरण, पुष्प क्षेत्र विस्तार, प्रधानमंत्री कृषि सिंचाई योजना, बागवानी यंत्रीकरण, मसाला क्षेत्र विस्तार, सब्जी क्षेत्र विस्तार योजना, संरक्षित खेती आदि प्रमुख योजनाओं का प्रमुख उद्देष्य जिले में खाद्यान्न, फल, फूल, मसाला, व्यापारिक फसलों में आर्थिक रूप से आत्मनिर्भर करने की योजनाएँ है।

साहित्य की समीक्षा

1. डॉ. रूपम मिश्रा (2015) ने अपने प्रस्तुत षोध अध्ययन में ''मिट्टी की जांच से बनाएं मृदा को उपजाऊ'' के बारे में बताया है कि लगातार फसलों का पूरा उत्पादन लेने से आहारीय तत्वों की उपलब्धता बहुत घट जाती है जिसका पता मिट्टी जांच द्वारा लगाया जा सकता है। प्रायः देखा गया है कि किसान फसलों में रासायनिक खादों का प्रयोग बिना मिट्टी की जांच करवाये ही कर रहे है। जिस कारण फसल से पूरा उत्पादन नही मिलता। बिना मिट्टी की जांच करवाए भूमि से कई तत्वों की मात्रा आवश्यकता से अधिक और कई तत्वों की आवश्यकता से अधिकतम कम हो जाती है।

2. विष्णु नारायण (2016) ने अपने शोध अध्ययन में यह पाया है कि किसानों की अगर बुनियादी जरूरतें पूरी कर दी जाएं तो उनके लिए खेती करना न केवल आसान हो जाएगा बल्कि खेती एक ऐसे व्यवसाय का रूप ले लेगी जिसके मुनाफे के कारण किसानों और उनके परिवारों की आर्थिक और सामाजिक स्थिति में भी सुधार देखने को मिलेगा। ज्यादातर गरीब किसान अपने बच्चों को सिर्फ इसीलिए अच्छे स्कूल नहीं भेज पाते हैं क्योंकि उन्हें यह पता नहीं होता है कि पैदावार अच्छी होगी या खराब, उनके अनाज की बिक्री बाजारों में सही मूल्य पर हो पाएगी या नहीं। इन्हीं बातों को ध्यान में रखते हुए सरकार ने कुछ ऐसी योजनाएं बनाई हैं या बनाने की दिशा में है जो न केवल किसानों को कृषि की आधुनिक पद्धति की जानकारी दे बल्कि समय-समय पर खेती से जुड़ी जरूरतों को भी पूरा करें।

3. गजेंद्र सिंह मधुसूदन (2016) ने अपने शोध अध्ययन में यह बताया गया है कि पोषणीय पोषकों से भरपूर जैविक खेती का खुमार पश्चिमी देशों में इतना आधुनिक हो चला है कि किसानों से ज्यादा उपभोक्ताओं में इसकी उपज का आधुनिक केंज है। वे आधुनिक कीमत देकर भी इन्हें उपभोग करना पसंद करते हैं और भारत जैविक खेती को बढ़ावा देकर इसका भरपूर फायदा उठा सकता है। जैविक खाद निर्माताओं की दृष्टि से भी भारत उम्दा देश बन रहा है। देश में करीब 5.5 लाख जैविक खाद निर्माता हैं जो दुनिया के जैविक खाद निर्माताओं का एक तिहाई हैं लेकिन 99 प्रतिशत उत्पादक असंगठित लघु क्षेत्र के हैं जिन्हें यदि प्रमाणीकरण और विपणन सुविधाएँ सुलभ करा दी जाएं तो यह लाभदायक उपक्रम में तब्दील हो सकता है।

4. नरेष सिरोह (2018) ने अपने शोध अध्ययन में यह बताया है कि सरकार ने निर्णय लिया है कि वह उत्पादन लागत की कम से कम डेढ़ गुनी कीमत पर खरीब की सभी गैर-घोषित फसलों के लिए न्यूनतम समर्थन मूल्य उपलब्ध कराएगी। केवल घोषणा करना पर्याप्त नहीं है बल्कि यह भी सुनिश्चित करना जरूरी है कि फसलों को एम.एस.पी. पर खरीदा भी जाना चाहिए, ताकि किसानों को लाभ पहुंच सके। इसके लिए जरूरी है कि कृषि उत्पादों का मूल्य एम.एस.पी. से कम है तब सरकार को स्वयं खरीदारी करनी चाहिए अथवा इस तरह की कार्य योजना बनाई जानी चाहिए, जिसके द्वारा किसानों को एम.एस.पी. उपलब्ध कराया जा सके।

अध्ययन के उद्देश्य:-

1. अलिराजपुर जिले में संचालित विभिन्न कृषि विकास कार्यक्रमो का कृषि उत्पादन पर प्रभाव का अध्ययन करना।
2. अलिराजपुर जिले में कृषि विकास कार्यक्रमो का कृषि उत्पादन लागत एवं आय पर पड़ने प्रभाव का अध्ययन करना ।

शोध परिकल्पना

1. अलिराजपुर जिले में संचालित विभिन्न कृषि विकास कार्यक्रमों से कृषि उत्पादन में सुधार हुआ है।
2. अलिराजपुर जिले में कृषि विकास कार्यक्रमो से कृषि उत्पादन लागत में कमी एवं आय आय में वृद्धि हुई है।

शोध प्रविधि:- अलिराजपुर जिले में कृषि क्षेत्र के विकास को जानने के लिए प्राथमिक व द्वितीयक समकों पर आधारित है। द्वितीयक संमकों के संकलन में विभिन्न जर्नल्स व आलेखों का प्रकाशन, कृषि मंत्रालय की रिपोर्ट, वार्षिक प्रतिवेदन, इंटरनेट आदि से उपलब्ध जानकारी का प्रयोग किया गया है। प्राथमिक समंकों का संकलन अलिराजपुर जिले को समग्र मानते हुए जिले के सात विकासखण्डों के 5-5 गाँवों का चयन किया गया है। प्रत्येक गाँव़ से 10-10 उत्तरदाता को दैव निदर्शन पद्धति द्वारा चुना गया है। शासकीय योजनाओं के क्रियान्वयन का तुलनात्मक अध्ययन जानने के लिए कुल 350 उत्तरदाताओं का चयन कृषकों की आर्थिक परिस्थितियों को समझने में सहायक है।

वार्षिक आय के आधार पर वर्गीकरण पारिवारिक आय आवृत्ति प्रतिशत 30000 से कम 9627.42 30000 से 350007621.71 35000 से 400006518.57 40000 से अधिक11332.28 योग 350100 उपर्युक्त तालिका में कृषि में कार्यरत कृषकों की आय के आधार पर प्राथमिक समंकों को विशेलेषित किया गया है। समंकों के विशलेषण से यह स्पष्ट होता है कि ग्रामीण परिवार में 40000 हजार से अधिक आय प्राप्त करने वाले कृषकों का 32.2 प्रतिषत है तथा 30000 हजार से कम आय प्राप्त करने वाले कृषकों की संख्या 27.42 प्रतिषत है जो कि सबसे कम है। बुआई एवं कटाई की लागत के आधार पर वर्गीकरण बुआई एवं कटाई की लागत आवृति प्रतिषत 4000 से कम 15342.5 4000 से 800010931.14 8000 से 120006618.3 12000 से अधिक226.1 कुल 350100.0 उपर्युक्त तालिका से स्पष्ट होता है कि ग्रामीण क्षेत्र में नवीनतम कृषि पद्धतियों का कृषकों की कृषि व्यवस्था पर प्रभाव का अध्ययन हेतु संकलित प्राथमिक संमकों का विशलेषण किया गया है। समंको के विशलेषण से स्पष्ट है कि ग्रामीण क्षेत्र में सर्वेक्षित कृषकों में सर्वाधिक 42.5 प्रतिषत कृषक अपने खेतों में बुआई एवं कटाई में 4000 से कम लागत लगाने वाले कृषक है तथा 6.1 प्रतिषत ऐसे कृषक है जो कि 12000 हजार से अधिक लागत लगाने वाले कृषक है। रासायनिक खाद, किटनाषक दवाई एवं बीज की लागत के आधार पर वर्गीकरण:- रासायनिक खाद, कीटनाषक दवाई एवं बीज की लागत आवृति प्रतिषत 5000 से कम 14340.85 5000 से 1000013136ण्4 10000 से 150005715ण्8 15000 से अधिक195ण्3 कुल 350100ण्0 उपर्युक्त तालिका से स्पष्ट होता है कि ग्रामीण क्षेत्र में नवीनतम कृषि पद्धतियों का कृषकों की कृषि व्यवस्था पर प्रभाव का अध्ययन हेतु संकलित प्राथमिक संमकों का विशलेषण किया गया है। समंको के विष्लेषण से स्पष्ट है कि ग्रामीण क्षेत्र में सर्वेक्षित कृषकों में सर्वाधिक 40.85 प्रतिषत कृषक अपने खेतों में रासायनिक खाद, कीटनाषक दवाई एवं बीज की लागत 4000 से कम लागत लगाने वाले कृषक है तथा 5.3 प्रतिषत ऐसे कृषक है जो कि अपने खेतों में रासायनिक खाद, कीटनाषक दवाई एवं बीज की लागत 15000 हजार से अधिक लागत लगाने वाले कृषक है।

निष्कर्ष:- इस शोध अध्ययन से यह निष्कर्ष निकलता है कि कृषि क्षेत्र में विकास होने से कृषकों की वार्षिक आय में वृद्धि हुई हैं। तथा कृषकों की उत्पादन लागत जैसे- बुआई करने, फसल की कटाई करने में कीटनाषक दवाई का छिड़काव करने, निदाई करने, जुताई करने आदि लागतों कमी हुई है, और कृषि क्षेत्र में नवीनतम कृषि पद्धति के उपयोग करने से कृषकों के उत्पादन में भी वृद्धि हुई हैं। कृषि क्षेत्र में विकास होने से कृषकांे की आर्थिक एवं सामाजिक स्थिति में सुधार हुआ हंै। कृषि क्षेत्र में विकास होने से कृषकों की उत्पादकता में वृद्धि हुई है, कृषि क्षेत्र में विकास होने से कृषकों के रोजगार में वृद्धि हृई है, कृषि क्षेत्र में विकास होने से कृषकों की कृषि करने के तरीकों में भी सुधार हुआ है। कृषि की समस्याएं की समस्याएं निम्नलिखित है जो इस प्रकार है - 1. सिंचाई की समस्या:- प्रादेशिक अर्थव्यवस्था का मूल आधार कृषि है।

जनजातिय कृषकों को अधिकांशतः वर्षा पर निर्भर रहना पड़ता है। मध्य प्रदेष में वर्षा का क्षेत्रीय मौसमी और वार्षिक वितरण अत्यन्त असमान है। विभिन्न क्षेत्रों में वर्षा का वास्तविक स्तर सामान्य स्तर से पृथक होता है। कभी वार्षिक वास्तविक वर्षा का स्तर सामान्य स्तर से कम हो जाता है। अच्छे मानसनू के समय फसलें सफलतापर्वूक पैदा की जा सकती है। इसलिए वर्षा जल हमारी अर्थव्यवस्था का एक सुदृढ़ आधार है। परन्तु इसकी मात्रा समय एवं वितरण की अनिश्चितता के कारण फसलें प्रायः अनावृष्टि अथवा अतिवृष्टि से प्रभावित होती रहती है। 2. कृषि जोतों के छोटे होने की समस्या:- मध्य प्रदेश की कृषि समस्याओं में एक मुख्य समस्या कृषि जोतों के छोटे होने की है। ''जोतों के उपविभाजन एवं अपखण्डन के कारण कृषि उत्पादिता पर बुरा प्रभाव पड़ता है। जोतों के उपविभाजन से आशय खेतों के उन छोटे-छोटे टुकड़ों से है, जो भूमि विभाजन के कारण अत्यन्त छोटे आकार के हो गये हैं। भूमि पर जनसख्ंया का अधिक दबाव, गरीबी और बेरोजगारी, वैकल्पिक रोजगार अवसरों की कमी, भूमि की कमी और भूमि के अत्यधिक लगाव के कारण परिवार के प्रत्येक सदस्य भूमि से अपना हिस्सा चाहते हैं। सयंुक्त परिवार प्रणाली क्षीण होने तथा एकाकी परिवार की प्रवृत्ति बढ़ने के कारण प्रत्येक व्यक्ति अपने लिए पृथक-पृथक भू-क्षेत्र चाहता है। इन सब कारणों से कृषि अर्थव्यवस्था में उपविभाजन की समस्या बढ़ी है। 3. पौध सरंक्षण की समस्या:- कृषि आगतों में पौध संरक्षण भी एक प्रमुख आगत है। यदि फसलों को कीटाणुओं व रोगों से न बचाया जाये तो इससे उत्पादन को बहुत हानि होती है । मध्यप्रदेश में विभिन्न प्रकार के कीट व रोगों का प्रकोप है। **सुझाव:-** 1. कृषकों को सिंचाई के साधन उपलब्ध कराने चाहिए। 2. कृषकों को कृषि करने के लिए रासायनिक उवर्रक एवं उन्नत किस्म के बीज उनलब्ध कराने चाहिए। 3. कृषकों को कृषि करने के लिए नए-नए कृषि के उपकरण उपलब्ध करने चाहिए। 4. कृषकों को अपनी उपज का उचित मूल्य मिलना चाहिए। 5. कृषकों को के लिए अपने कृषि उपज को रखने के लिए भण्डारण की उचित व्यवस्था करनी चाहिए। 7. कृषकों को कृषि करने के लिए ऋण की उचित व्यवस्था करने चाहिए। 8. कृषकों के लिए कृषि साख व्यवस्था करने चाहिए। 9. कृषकों के लिए कृषि उत्पाद बेचने के लिए विपणन व्यवस्था करनी चाहिए। 10. कृषकों के लिए कृषि सामान जैसे - रासायनिक खाद, सिंचाई करने के लिए उपकरण, कीटनाषक दवाइयाँ आदि खरीदने के लिए बाजार की उचित व्यवस्था करनी चाहिए।

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ग्रामीण क्षैत्रों में रोजगार उपलब्ध करवाने में मनरेगा योजना की भूमिका

(पश्चिम निमाड़ खरगोन जिले के विशेष संदर्भ में)

डॉ. एन.एस.बर्डे

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प्रस्तावना- एक कल्याणकारी राज्य की सफलता का आकलन इस तथ्य से लगाया जा सकता है कि वहाँ सामाजिक-आर्थिक व्यवस्था के अंतिम पायदान पर खड़े व्यक्ति के विकास को सुनिश्चित करने के लिये क्या प्रयास किये गए हैं। समग्र विकास की इस पृष्ठभूमि में महात्मा गांधी राष्ट्रीय ग्रामीण रोजगार गारंटी अधिनियम अर्थात् मनरेगा ने महत्त्वपूर्ण भूमिका अदा की है। इस तथ्य से इनकार नहीं किया जा सकता कि कृषि संकट और आर्थिक मंदी के दौर में मनरेगा ने ग्रामीण किसानों और भूमिहीन मजदूरों के लिये एक सुरक्षा कवच के रूप में कार्य किया है। मौजूदा आर्थिक मंदी ने खासतौर पर देश के ग्रामीण क्षेत्रों को प्रभावित किया है और रोजगार के अवसरों को काफी कम कर दिया है और मनरेगा के तहत मिलने वाले काम की मांग अचानक बढ़ गई है।

भारत गांवों का देश है देश में 2011 की जनगणना के अनुसार लगभग 70 प्रतिशत जनता गावों में निवास करती है। "जब कोई व्यक्ति काम करना चाहता है और वह काम करने के लिए शारीरिक दृष्टि से समर्थ भी है, लेकिन अगर उसको कार्य नहीं मिलता जिससे कि वह व्यक्ति अपनी आजीविका कमा सके तो इस प्रकार की समस्या को बेरोजगारी की समस्या के नाम से जाना जाता है। यही बेरोजगारी कई तरह की समस्याओं को जन्म देती है। बेरोजगार होने के कारण लोग चोरी, डकैती, लूट-मार तथा असामाजिक कार्यों को अंजाम देते हैं। जिससे सामाजिक अशांति फैलती है।

ग्रामीण बेरोजगारी को कम करने व लोगों को आत्म निर्भर बनाने के उद्देश्य से ही सरकार की

सहायक प्राध्यापक (अर्थशास्त्र), शासकीय माधव महाविद्यालय, चंदेरी जिला अशोकनगर (म0प्र0)

महत्वकांक्षी योजना महात्मा गांधी राष्ट्रीय ग्रामीण रोजगार गारंटी योजना का शुभारंभ किया गया। "मनरेगा दुनिया का अब तक का ऐसा पहला कानून है जिसमें व्यापक पैमाने पर मजदूरी रोजगार की गारंटी दी गई है। महात्मा गांधी राष्ट्रीय ग्रामीण रोजगार गारंटी योजना की तारीफ विश्व बैंक के द्वारा भी की गई है । इस अधिनियम का प्राथमिक उद्देश्य मजदूरी रोजगार बढ़ाना है। इसका सहायक उद्देश्य उन कार्यों के माध्यम से प्राकृतिक संसाधन प्रबंधन को सुदृढ़ बनाना है जो सूखा, वनों की कटाई तथा मृदा क्षरण के साथ-साथ पर्यावरण की रक्षा करते हो। इसके साथ ही स्थायी गरीबी के कारणों को दूर करते हैं तथा स्थायी विकास को बढ़ावा देते हों। यह योजना बेरोजगारी कम करने में काफी हद तक सहायक भी सिद्ध हुई है। इसी संदर्भ में प्रस्तुत अध्ययन में मध्य प्रदेंश का जनजातीय बाहुल्य पश्चिम निमाड़ के खरगोन जिले का चयन कर पिछले पॉच वर्षो में योजना के अन्तर्गत उपलब्ध करवाए गए रोजगार का विश्लेषण किया गया है।

शोध अध्ययन का क्षैत्र -

प्रस्तुत शोध अध्ययन का क्षैत्र मध्यप्रदेश का जनजति बाहुल्य पश्चिम निमाड़ खरगोन संपूर्ण जिला अध्ययन का क्षैत्र माना गया है। जिले में रोजगार उपलब्ध करवाने के उददेश्य से संचालित महात्मागॉधी राष्ट्रीय रोजगार गारंटी योजना के अन्तर्गत वर्ष 2018-19 से वर्ष 2022-23 तक पॉच वर्षो में जिले में उपलब्ध करवाए गए रोजगार का अध्ययन किया गया है। इसक साथ ही अध्ययन के अंतर्गत 100 दिवस कार्य पूर्ण करने वाले श्रमिकों एवं दिव्यांग श्रमिकों का पॉच वर्षो में उपलब्ध करवाये गए रोजगार का विश्लेषण किया गया है।

अध्ययन के उद्देश्य -

1- ग्रामीण अकुशल श्रमिकों को उपलब्ध रोजगार का अध्ययन करना।

2- मनरेगा कार्यक्रम 100 दिवस कार्य पुर्ण करन वाले परिवारों का अध्ययन करना।

3- मनरेगा योजना में दिव्यांगजनों को उपलब्ध करवाएं गए रोजगार का अध्ययन।

शोध अध्ययन की प्रविधि

प्रस्तुत शोध द्वितीय संमंको के आधार पर तैयार किया गया है। शोध पत्र में समंको का संकलन पाठ्य पुस्तकों,पत्र-पत्रिकाओं, सरकारी रिपोर्ट के प्रकाशन एवं विभिन्न वेबसाईडों के माध्यम से किया गया है। इसके साथ ही सांख्यिकिय के माध्यम से सारणीकरण से निष्कर्ष निकाले गए है।

मनरेगा की शुरुआत कहां से हुई

7 सितंबर 2005 को एक अधिनियम पारित किया गया जिसे राष्ट्रीय ग्रामीण रोजगार गारंटी के नाम से जाना जाता है। और इसे इसे संसद में पारित अधिनियम को कानून बना दिया गया। इसके बाद 2 फरवरी 2006 को आंध्र प्रदेश आनंदपुर जिले से इसकी शुरुआत हुई है। इसके बाद इसकी शुरुआत में देश के 200 अति पिछड़े जिलों में यह योजना पायलेट प्रोजेक्ट के तौर पर लागू की गई। बाद में इसकी सफलता को देखते हुए अगले वित्तीय वर्ष में 130 और जिलों में इस योजना की शुरुआत की गई। इसके बाद भारत के 593 जिलों में मनरेगा को सफलतापूर्वक चलाया जा रहा है। इसे राष्ट्रीय ग्रामीण रोजगार गारंटी अधिनियम (NREGA) कहा जाता था लेकिन 2 अक्टुबर-2009 को इसका पुनः नामकरण किया गया जिसे वर्तमान में महात्मा गॉधी राष्ट्रीय ग्रामीण रोजगार गारंटी अधिनियम नाम से जाना जाता है।

मनरेगा योजना का क्रियान्वयन

योजना का क्रियान्वयन केन्द्रीय क्रियान्वन में ग्रामीण विकास विभाग भारत शासन के माध्यम से किया जाता है। एवं राज्य में प्रदेश के ग्र्रामीण विकास विभाग के द्वारा किया जाता है। जिला स्तर पर योजना का क्रियान्वयन तीन - स्तरीय पंचायतराज के माध्यम से किया जाता है ।

- ❖ राज्य स्तर पर मनरेगा योजना के कार्यान्वयन के लिये चार स्तर का ढांचा बनाया गया है। राज्य स्तर पर एक राज्य रोजगार गारंटी परिषद है जिसके प्रमुख राज्य के मुख्यमंत्री हैं।
- ❖ राज्य स्तरीय प्रशासन के ढांचे का प्रमुख मुख्य कार्यपालन अधिकारी (सी.ई.ओ.) मनरेगा क्रियान्वयन हेतु जिम्मेदार है।
- ❖ जिला स्तर पर ढांचे केे तीन स्तर हैं, पहला जिला स्तर पर, कलेक्टर जिला कार्यक्रम समन्वयक होगें एवं मुख्य कार्यपालन अधिकारी जिला पंचायत अतिरिक्त जिला कार्यक्रम समन्वयक के रूप में कार्य करते है।
- ❖ द्वितीय स्तर पर मुख्य कार्यपालन अधिकारी जनपद पंचायत योजना के कार्यक्रम अधिकारी के रूप में कार्य करते है।
- ❖ तृतीय स्तर पर ग्राम पंचायत स्तर पर योजना का क्रियान्वयन हेतु सचिव ग्राम पंचायत एवं ग्राम रोजगार सहायक योजना के क्रियान्वयन हेतु जिम्मेदार होते है।

बेरोजगारी भत्ता

राष्ट्रीय रोजगार गारंटी योजना के अंतर्गत प्रत्येक परिवार को वित्तीय वर्ष के दौरान 100 दिन रोजगार की गारंटी प्रदान की गई है। जॉब कार्ड धारक काम मांगता है तो 15 दिन के भीतर ग्राम पंचायत द्वारा उसे रोजगार दिया जाएगा। अगर इस बीच में उसे रोजगार नहीं मिलता है तो 16 वें दिन से उसे बेरोजगारी भत्ता पाने का कानूनी अधिकार का भी प्रावधान इस योजना में किया गया है जो किसी भी योजना में आज तक नही है।

खरगोन जिले में वर्ष 2018-19 से 2022-23 तक ग्रामीण श्रमिकों को महात्मागाँधी राष्ट्रीय ग्रामीण रोजगार गारंटी योजना अन्तर्गत उपलब्ध करवाए गए रोजगार की जानाकारी सारणी क्र-अ में दर्शित है।

पंजीकृत/रोजगार की मांग करने वाले एवं रोजगार प्राप्त करने वाले श्रामिकों की जानकारी

सारणी क्रमांक – अ

S.No.	YEAR	No. of Registered Persons	No, of Employment demanded Persons	Employment Availed Total Person Days
1	2	3	4	5
1	2018-19	518148	230258	5376808
2	2019-20	578595	197915	4347618
3	2020-21	609662	411353	8020196
4	2021-22	588976	370471	7695742
5	2022-23	570507	324103	7096252
TOTAL		2865888	1534100	32536616

स्त्रोत- https://nreganarep.nic.in

उपरोक्त सारणी से स्पष्ट होता है कि उक्त पॉच वर्षो में वर्ष 2020-21 में सर्वाधिक श्रमिकों द्वारा योजना में पंजीयन करवाया गया एवं रोजगार की मॉग की गई। इसी प्रकार इसी सत्र में सर्वाधिक श्रमिकों को रोजगार प्राप्त कुल दिवसों में उपलब्ध करवया गया है। वर्ष 2018 -19 में सबसे कम पंजीयन हुए एवं वर्ष 2019 -20 में रोजगार की माॅग करने वालों संख्या कम हुई है एवं इसी सत्र में सबसे कम रोजगार भी उपलब्ध करवाया गया है।

100 दिन पूर्ण करने वाले परिवार एवं रोजगार प्राप्त दिव्यांग श्रमिकों की जानकारी

सारणी क्रमांक -2

S.No.	YEAR	No. of Families Completed 100 days	No. of Disabled Beneficiary individuals
1	2	10	11
1	2018-19	2538	806
2	2019-20	2818	671
3	2020-21	6147	1270
4	2021-22	6443	1052
5	2022-23	4770	1029
TOTAL		22716	4828

स्त्रोत- https://nreganarep.nic.in

उपरोक्त सारणी के अनुसार वर्ष 2018- 19 से 2022-23 तक कुल पाच वर्षो में वर्ष 2021-22 में सर्वाधिक परिवारों की संख्या जिन्होने 100 दिवस कार्य पूर्ण किए है। एवं वर्ष 2018-19 मे सबसे कम परिवारों ने 100 दिवस कार्य पूर्ण किए है। इसी प्रकार वर्ष 2020-21 में सर्वाधिक दिव्यांग श्रामिकों को रोजगार उलब्ध करवाया गया है। एवं 2018-19 में इन वर्षो में सबसे कम रोजगार उलब्ध करवाया गया है।

मनरेगा की उपलब्धियाँ

1. मनरेगा दुनिया का सबसे बड़ा सामाजिक कल्याण कार्यक्रम है। जिसने ग्रामीण श्रम में एक सकारात्मक बदलाव को प्रेरित किया है। आँकड़ों के अनुसार, कार्यक्रम के शुरुआती 10 वर्षों में कुल 3.14 लाख करोड़ रुपए खर्च किये गए।
2. इस कार्यक्रम ने ग्रामीण गरीबी को कम करने के अपने उद्देश्य की पूर्ति करते हुए यकीनन ग्रामीण क्षेत्र के लाखों लोगों को गरीबी से बाहर निकालने में कामयाबी हासिल की है।
3. आजीविका और सामाजिक सुरक्षा की दृष्टि से मनरेगा ग्रामीण गरीब महिलाओं के सशक्तीकरण हेतु एक सशक्त साधन के रूप में सामने आया है। आँकड़ों के अनुसार, वित्तीय वर्ष 2015-16 में मनरेगा के माध्यम से उत्पन्न कुल रोजगार में से 56 प्रतिशत महिलाओं के लिये था।
4. मनरेगा में कार्यरत व्यक्तियों के आयु-वार आँकड़ों के विश्लेषण से पता चलता है कि वित्त वर्ष 2017-18 के बाद 18-30 वर्ष के आयु वर्ग के श्रमिकों की संख्या में बढ़ोतरी हुई है।
5. मनरेगा ने आजीविका के अवसरों के सृजन के माध्यम से अनुसूचित जाति और अनुसूचित जनजातियों के उत्थान में भी मदद की है। मनरेगा को 2015 में विश्व बैंक ने दुनिया के सबसे बड़े लोकनिर्माण कार्यक्रम के रूप में मान्यता दी थी।
6. नेशनल काउंसिल ऑफ एप्लाइड इकोनॉमिक रिसर्च (NCAER) की रिपोर्ट के मुताबिक, गरीब व सामाजिक रूप से कमजोर वर्गों, जैसे-मजदूर, आदिवासी, दलित एवं छोटे सीमांत कृषकों के बीच गरीबी कम करने में मनरेगा की महत्त्वपूर्ण भूमिका रही है।

मनरेगा से संबंधित चुनौतियाँ

1. मजदूरी के भुगतान में देरी एक अध्ययन में पता चला कि मनरेगा के तहत किये जाने

वाले 78 प्रतिशत भुगतान समय पर नहीं किये जाते और 45 प्रतिशत भुगतानों में विलंबित भुगतानों के लिये दिशा-निर्देशों के अनुसार मुआवजा शामिल नहीं था ।

2. अपर्याप्त बजट आवंटन पिछले कुछ वर्षों में मनरेगा के तहत आवंटित बजट काफी कम रहा है, जिसका प्रभाव मनरेगा में कार्यरत कर्मचारियों के वेतन पर देखने को मिलता है। वेतन में कमी का प्रत्यक्ष प्रभाव ग्रामीणों की शक्ति पर पड़ता है और वे अपनी मांग में कमी कर देते हैं।

3. न्यूनतम मजदूरी अधिनियम, 1948 के आधार पर मनरेगा की मजदूरी दर निर्धारित न करने के कारण मजदूरी दर काफी स्थिर हो गई है। वर्तमान में अधिकांश राज्यों में मनरेगा के तहत मिलने वाली मजदूरी न्यूनतम मजदूरी से काफी कम है। यह स्थिति कमजोर वर्गों को वैकल्पिक रोजगार तलाशने को विवश करता है।

4. भ्रष्टाचार, वर्ष 2012 में कर्नाटक में मनरेगा को लेकर एक घोटाला सामने आया था जिसमें तकरीबन 10 लाख फर्जी मनरेगा कार्ड बनाए गए थे, जिसके परिणामस्वरूप सरकार को तकरीबन 600 करोड़ रुपए का नुकसान हुआ था। भ्रष्टाचार मनरेगा से संबंधित एक बड़ी चुनौती है जिससे निपटना आवश्यक है।

निष्कर्ष - निष्कर्ष के रूप में कहा जा सकता है कि महात्मागॉधी राष्ट्रीय ग्रामीण रोजगार गारंटी योजना ग्रामीण विकास की आत्मा है और यह योजना अपने उददश्यों में काफी हद तक सफल हुई है। जिससे देश, प्रदेश के साथ - साथ जिले के ग्रामीण अकुशल श्रामिकों का विकास हुआ है। यह एक ऐसी योजना है जिसके माध्यम से सभी वर्ग के ग्रामीण अकुशल श्रामिकों को रोजगार प्रदाय किया गया है। जिससे उनका जीवन स्तर उॅचा हुआ है। इसमें खास बात यह भी है कि अनुसूचित जनजाति वर्ग को बड़े स्तर पर लाभ पहॅचा है। सरकार को इसकी चुनौतियों एवं कमियों को दूर कर और अधिक प्रभावी योजना बनाना चाहिए।

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