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Read Inside:
Bridging the Digital Divide

Sustainable Global Development

Read Inside:
Sustainable Development through Technological Innovation

सीधा, सटीक और निष्पक्ष

भारती News

सीधी, सटीक और निष्पक्ष खबरों
के लिए आज ही सब्सक्राइब करें

क्योंकि हम सिर्फ सच दिखाते है, शोर नहीं !!!

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E-MAGAZINE

Contents

Cover Story

Bridging the Digital Divide:
Empowering Women through Information Technology for a Viksit Bharat @ 2047

Other Stories

Editorial

Prof. M. N. Hoda
Editor - in - Chief

Dear Readers,

With immense pride and enthusiasm, we present to you Volume 3, Number 1 of MANZIL - The Official Quarterly Magazine of BVICAM, New Delhi. After the resounding success of previous editions, this edition is dedicated to the theme of Sustainable Development through Technology, aligning with India's ambitious vision of Viksit Bharat @ 2047.

As the world strives to achieve the United Nations Sustainable Development Goals (SDGs), particularly SDG 9, which emphasizes 'Industrial Innovation and Infrastructure Development', Information and Communication Technology (ICT) has emerged as a pivotal enabler. Technology holds the power to accelerate the development process; however, the ultimate objective is to maintain sustainability in this progress. With India's rapid growth across various sectors, it becomes imperative to evaluate the role of ICT in a balanced and responsible manner.

"Technology for everyone!"

The SDGs are designed to balance the three critical dimensions of sustainable development – Economic, Social, and Environmental. In this context, harnessing the potential of advanced technologies is essential to achieve these development goals for the betterment of all.

The integration of Digital Technology within the 2030 Agenda is evident not only through Goal 9 but also through the Technology Facilitation Mechanism and the Science, Technology, and Innovation (STI) Forum. There is now a well-established understanding that Digital Technology can drive progress for all SDGs. To achieve the vision of Viksit Bharat @ 2047, it is essential to harness this potential and bridge the Digital Divide.

In this edition of MANZIL, we aim to explore the multifaceted role of technology in Sustainable Development. Through insightful articles, papers, and expert opinions, we seek to highlight how ICT can be leveraged to address global challenges across various sectors, including healthcare, education, poverty alleviation, and climate action.

As we embark on this journey, let us collectively embrace innovation and technological advancements while ensuring that the benefits reach every stratum of society, leaving no one behind. Together, we can pave the way for a sustainable and inclusive future.

Wishing you all a prosperous and fulfilling New Year ahead!

Warm Regards

Bridging the Digital Divide:

Empowering Women through Information Technology for a Viksit Bharat @ 2047

Dr. Sheel Nidhi Tripathi
Associate Professor, BVICAM, New Delhi

In the journey towards achieving Viksit Bharat @2047, Information Technology (IT) emerges as a game-changer, accelerating India's progress across sectors. From transforming governance to enhancing education, healthcare, and entrepreneurship, IT plays a crucial role in ensuring inclusive and sustainable development. However, the digital divide especially gender-based digital exclusion remains a significant challenge. Bridging this divide is essential to achieving the Sustainable Development Goals (SDGs) and realizing a truly developed India by 2047.

Information Technology: A Catalyst for Growth

Technology is central to Sustainable Development Goal (SDG) 9, which focuses on industry, innovation, and infrastructure. The rapid advancements in digital infrastructure, artificial intelligence, cloud computing, and blockchain have enabled India to make significant strides in economic and social development. Initiatives like Digital India, BharatNet, and UPI have revolutionized service delivery, bringing governance and financial inclusion to the masses.

IT has also played a transformative role in addressing challenges related to SDG 4 (Quality Education) and SDG 3 (Good Health and Well-being) by expanding e-learning platforms, telemedicine services, and remote working opportunities. However, these advancements can only lead to equitable development if digital access is made universal and inclusive.

The Digital Divide: A Barrier to Inclusive Growth

Despite the widespread adoption of technology, the digital divide remains a pressing issue. This divide exists across various dimensions:

- **Urban vs. Rural Divide:** While urban India enjoys seamless internet connectivity and access to digital resources, rural areas still struggle with inadequate infrastructure and digital literacy. According to the NSSO data, only 24% of rural Indian households have access to the Internet, compared to a 66% penetration in cities (inc24)

- **Economic Divide:** The affordability of digital devices and internet connectivity limits access for economically weaker sections of society. According to the Oxfam India Inequality Report 2022, the digital divide in India remains a significant issue, with large portions of the population facing poor or no access to digital services. Approximately 50% of the population lacks access to devices, internet services, or the digital literacy necessary to navigate a digital environment. This divide exacerbates inequalities, as only 32% of households in India are considered digitally literate.(telecomreviewasia.com)

Gender Divide: A major concern is the gender-based digital divide. According to reports, Indian women are 15% less likely to own a mobile phone and 33% less likely to use mobile internet compared to men. According to a survey of 2021, 51 percent of the male population were mobile internet users in India.

On the other hand, 30 percent of the female Indian population had used mobile internet across the country. According to the source, female Indian population had used mobile internet less actively compared to male population in that year. (Tanushree Basuroy- statista.com)

Bridging these gaps is crucial to ensuring SDG 5 (Gender Equality) and empowering women as active contributors to India's economic and social progress.

Women and Digital Inclusion: A Step towards Sustainability

Women's empowerment through IT is pivotal for achieving sustainable development. Digital literacy and access to technology can provide women with new opportunities in education, employment, and entrepreneurship. Some key initiatives aimed at reducing the gender digital divide include:

- **Digital Saksharta Abhiyan (DISHA):** A program focused on providing digital literacy to women in rural areas.
- **Mahila E-Haat:** An online marketing platform enabling women entrepreneurs to sell their products directly to consumers.
- **STEM Education for Girls:** Encouraging more women to pursue careers in Science, Technology, Engineering, and Mathematics (STEM) to bridge the gender gap in tech-driven fields.

Ensuring women's access to IT can drive progress in multiple SDGs, including SDG 1 (No Poverty), SDG 8 (Decent Work and Economic Growth), and SDG 10 (Reduced Inequalities).

Technology for Sustainable Development: A Roadmap for 2047

As India progresses towards Viksit Bharat @ 2047, a strong focus on leveraging IT for sustainable development is essential. Some key strategies include:

- **Expanding Digital Infrastructure:** Ensuring high-speed internet access in every village to bridge the urban-rural divide.

- **Enhancing Digital Literacy:** Introducing comprehensive digital education programs to make every citizen, especially women, tech-savvy.

- **Promoting Women in Tech:** Encouraging female participation in the IT sector through scholarships, mentorship, and financial incentives.

- **Harnessing AI and Big Data for SDGs:** Using emerging technologies to address environmental concerns, optimize resource management, and build climate-resilient solutions in line with SDG 13 (Climate Action)

Information Technology holds the key to India's sustainable future, but its benefits must be accessible to all. Bridging the digital divide especially gender inequality in digital access is crucial for an inclusive and empowered society. By ensuring digital inclusion, enhancing technological education, and providing opportunities for women in IT, India can pave the way for a sustainable and Viksit Bharat @ 2047 a nation where technology serves as an enabler of progress, equality, and innovation.

As the nation moves ahead, the vision of a truly developed India will be realized only when every individual, irrespective of gender or geography, has equal access to the digital world.

Renewable Energy and Sustainable Global Development

Mr. Pushpendra Sachan
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As our planet faces mounting challenges from climate change and resource depletion to environmental degradation renewable energy is rapidly becoming a cornerstone of the quest for sustainable development. Shifting from traditional energy sources to renewable ones like solar, wind, hydro and geothermal doesn't just help reduce carbon emissions and slow climate change. It also holds the key to achieving broader goals in economic, social and environmental sustainability. This transition to cleaner, greener energy is central to realizing the United Nations' Sustainable Development Goals (SDGs), ensuring a better, more equitable future for everyone.

The Crucial Role of Renewable Energy in Reducing Carbon Emissions

One of the most vital contributions of renewable energy is its ability to cut carbon emissions. The burning of fossil fuels like coal, oil and natural gas remains the largest source of greenhouse gases that are driving climate change. While these energy sources have powered modern society for centuries, their environmental cost is too high to ignore. By contrast, renewable energy sources generate electricity with little to no carbon emissions. Solar panels, wind turbines and hydropower plants tap into natural resources that are abundant, clean and sustainable. Transitioning to these energy sources reduces our carbon footprint and mitigates the harmful effects of global warming, including rising sea levels, extreme weather events and disruptions to ecosystems. For countries committed to reaching net-zero emissions, the switch to renewable energy is non-negotiable.

Expanding Energy Access and Fostering Equity

Renewable energy also plays a vital role in providing electricity to underserved regions particularly in developing countries where energy access is critical to economic growth and poverty reduction. According to the International Energy Agency (IEA), over 800 million people still lack access to electricity, most of them living in sub-Saharan Africa and rural parts of Asia. Expanding renewable energy access is essential to meeting the SDG of affordable and clean energy for all (SDG 7). Traditional energy infrastructure, like fossil fuel-based power plants and large-scale grids, can be expensive and challenging to implement in remote or rural areas. In contrast, renewable energy technologies such as solar panels, small-scale wind turbines and off-grid solutions are decentralized, scalable and more affordable for communities without access to existing electricity infrastructure.

By leveraging renewable energy, countries can bring reliable power to millions of people, improving education, healthcare and economic opportunities. For instance, solar-powered schools and clinics in rural areas can offer essential

services to communities that would otherwise lack access to modern infrastructure. This doesn't just power homes it powers hope and progress. In this way, renewable energy helps reduce inequalities and fosters social inclusion, key pillars of sustainable development.

Economic Growth and Job Creation in the Green Energy Sector

Beyond environmental and social benefits, renewable energy offers significant economic advantages. The International Renewable Energy Agency (IRENA) reported that by 2021, the renewable energy sector employed over 12 million people worldwide a number expected to rise as the global transition to clean energy accelerates. Jobs in solar panel manufacturing, wind turbine construction and energy storage are generating new employment opportunities, especially in developing countries where unemployment can be high. Renewable energy technologies are labor-intensive, meaning they have the potential to create more jobs per unit of energy produced compared to fossil fuel industries.

Additionally, investing in renewable energy infrastructure stimulates local economies by attracting investments and driving innovation. As renewable energy technologies become more widespread and affordable, they also create new markets for energy-efficient products, sustainable building materials and green technologies. This green innovation not only drives economic diversification but also builds resilience, reducing a country's dependence on the volatile fossil fuel market and creating long-term, sustainable growth opportunities.

Environmental Sustainability: Protecting Our Planet

At its core, the renewable energy transition is about protecting and preserving our environment. Fossil fuel extraction and consumption have long been linked to environmental harm deforestation, air and water pollution, habitat destruction and loss of biodiversity. In contrast, renewable energy has a much smaller environmental footprint. While producing solar panels, wind turbines and batteries does come with some environmental impact, it's negligible compared to the ongoing damage caused by burning fossil fuels.

Moreover, renewable energy reduces pressure on finite natural resources. Unlike fossil fuels, which are limited and becoming harder and more expensive to extract, renewable energy sources are abundant and, for the most part, inexhaustible. Sunlight and wind are available everywhere and where feasible, hydropower provides a reliable source of energy. Harnessing these resources in a sustainable way allows us to meet our energy needs without depleting the Earth's finite resources or destroying ecosystems.

Challenges in the Transition to Renewable Energy

While the benefits of renewable energy are clear, the global transition is not without challenges. One of the primary obstacles is the intermittency of some renewable energy sources, such as solar and wind power, which depend on weather conditions. To address this, energy storage technologies, like advanced batteries, are essential. These technologies allow us to store excess energy produced during sunny or windy periods for use when production is low. Although progress has been made in recent years, energy storage remains expensive and, in many developing regions, not yet widely accessible.

Another hurdle is the upfront capital required to build renewable energy infrastructure. While the operational costs of renewable energy are typically lower than those of fossil fuels in the long run, the initial investment for technologies like solar farms, wind turbines and grid upgrades can be prohibitively high, particularly for developing countries. Financial support from international organizations, governments and private investors is crucial to overcome these challenges and ensure a smooth, equitable transition to renewable energy worldwide.

A Path to a Brighter, More Sustainable Future

Renewable energy is essential for achieving sustainable global development. It provides cleaner, more efficient energy solutions, fosters economic growth, expands energy access and helps protect the environment. In doing so, it addresses some of the most pressing issues of our time climate change, poverty and inequality. However, realizing the full potential of renewable energy requires a collective effort from governments, businesses and individuals alike to invest in the technologies, policies and infrastructure that will pave the way to a low-carbon future.

The transition to renewable energy is not only an environmental or technological challenge, but a moral one as well. It's about ensuring a sustainable, prosperous, and fair world for future generations. By embracing renewable energy, we can create a more resilient and equitable global economy that benefits both people and the planet. This shift requires global cooperation and a collective commitment to sustainable solutions. With innovation, dedication, and collaboration, we have the power to address climate change and reduce inequality. By prioritizing clean energy, we can build a brighter, greener future for all.

India's Contribution in Achieving Sustainable Development Goals (SDGs)

Dr. Jagriti Basera
Assistant Professor, BVICAM, New Delhi

India has been making remarkable strides in achieving the Sustainable Development Goals (SDGs), showcasing its commitment to the 2030 Agenda for Sustainable Development. Despite global challenges, India has demonstrated significant progress in multiple areas, particularly in eliminating poverty, fostering economic growth, implementing climate action, and enhancing life on land. The government's targeted interventions and policy measures have played a crucial role in this progress.

Significant Progress in SDGs

According to the SDG India Index 2023-24 released by NITI Aayog, India's overall SDG score improved to 71, a substantial rise from 57 in 2018 and 66 in 2020-21. The index, which tracks national and subnational progress across 113 indicators aligned with the National Indicator Framework (NIF), highlights significant advancements in Goals 1 (No Poverty), 8 (Decent Work and Economic Growth), 13 (Climate Action), and 15 (Life on Land).

Among these, Goal 13 (Climate Action) witnessed the highest improvement, with the score increasing from 54 in 2020-21 to 67 in 2023-24. Similarly, Goal 1 (No Poverty) saw an impressive rise from 60 to 72, reflecting the effectiveness of government-led social and economic programs.

Key Government Initiatives Driving SDG Progress

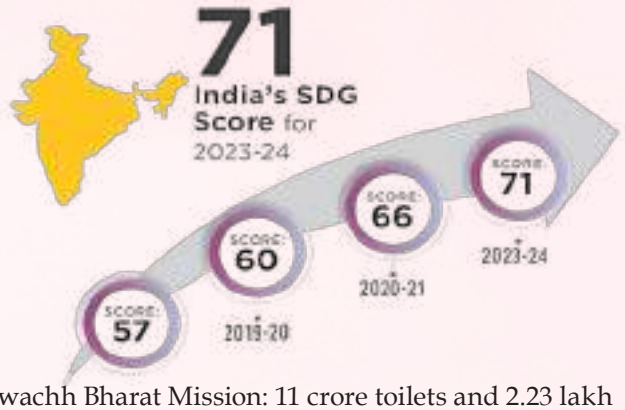
India's achievements in the SDG framework can be attributed to several flagship programs launched by the government. Some of the key initiatives include:

1. Poverty Alleviation and Economic Growth:

* PM Mudra Yojana: Sanctioned 43 crore loans amounting to 22.5 lakh crore, fostering entrepreneurship and economic empowerment.
* Start-Up India and Start-Up Guarantee schemes: Encouraged youth entrepreneurship.

2. Housing, Sanitation, and Clean Energy:

* PM Awas Yojana (PMAY): Over 4 crore houses provided to ensure shelter for all.



* Swachh Bharat Mission: 11 crore toilets and 2.23 lakh community sanitary complexes built in rural areas.
* PM Ujjwala Yojana: Distributed 10 crore LPG connections, reducing dependence on traditional fuels.

3. Health and Well-being:

* Ayushman Bharat-PMJAY: Over 30 crore beneficiaries covered under India's largest health assurance scheme.
* Ayushman Arogya Mandir: 1.5 lakh centers established to provide primary healthcare and affordable medicines.

4. Sustainable Development and Climate Action:

* Renewable Energy Expansion: Solar power capacity increased from 2.82 GW to 73.32 GW in the last decade.
* Non-fossil fuel-based capacity: Around 80% of the 100 GW installed capacity added between 2017 and 2023 comes from renewable sources.

5.Financial Inclusion and Digital Empowerment:

* PM Jan Dhan Yojana: Enabled financial inclusion through direct benefit transfers amounting to 34 lakh crore.
* Digital Revolution: Reduced internet data costs by 97%, boosting access to digital financial services.

India's journey towards achieving the SDGs is a testament to its proactive policy measures, inclusive development strategies, and commitment to sustainable growth. By fostering cooperative federalism and leveraging targeted interventions, India is making steady progress in creating a prosperous and equitable future. With continued efforts, India is well on track to achieving the 2030 Sustainable Development Goals, setting an example for the world in holistic and inclusive development.

Source:
https://pib.gov.in/PressReleasePage.aspx?PRID=2032857

India's Path to Global Leadership in Sustainable Mobility

Dr. Adarsh Singh
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India is swiftly establishing itself as a global leader in sustainable mobility, with the Bharat Mobility Global Expo 2025 in New Delhi underscoring the country's commitment to green transportation. The event highlighted India's growing role in shaping the future of sustainable transportation, showcasing cutting-edge innovations in electric vehicles (EVs) and related technologies. The expo served as a platform for industry leaders to collaborate, exchange ideas, and demonstrate advancements in EV manufacturing, charging infrastructure, and alternative energy solutions.

The Bharat Mobility Global Expo attracted automakers, technology providers, policymakers, and investors. With over 90 product launches, the event illustrated the automotive sector's rapid transition toward sustainability. Among the key launches were VinFast Auto India's electric SUVs, the VF 7 and VF 6, tailored for the Indian market. BMW India unveiled the MINI Cooper S John Cooper Works Pack and BMW X3, while JSW MG Motor India showcased a variety of electric and hybrid models. These launches reflect the growing alignment of the Indian automotive industry with the country's green transportation vision.

The Indian government has played a pivotal role in supporting electric mobility. The PM E-DRIVE scheme, worth $1.3 billion, is designed to encourage EV adoption across various vehicle segments, from two-wheelers to commercial vehicles. The Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) Scheme provides financial incentives, making EVs more affordable for consumers and businesses. Additionally, the Production-Linked Incentive (PLI) Scheme for

Advanced Chemistry Cell (ACC) Battery Storage is fostering domestic battery production, reducing reliance on imports and cutting costs. State-level policies further support EV adoption through subsidies and tax benefits.

India's EV market is experiencing rapid growth, driven by rising consumer awareness, supportive policies, and technological advancements. While EVs currently make up only 2% of total vehicle sales, this figure is expected to rise significantly in the coming years. Declining battery costs are making EVs more competitive with internal combustion engine vehicles, and the expansion of charging infrastructure is key to supporting growth. Companies like Tata Power and BPCL are installing fast-charging stations, making long-distance EV travel increasingly feasible.

However, challenges remain High upfront costs and limited charging infrastructure, especially in rural and semi-urban areas, are barriers to widespread adoption. Additionally, India's reliance on imported lithium-ion batteries raises costs and exposes the country to global supply chain disruptions. Strengthening domestic battery production is essential for long-term sustainability. On the global stage, India is positioning itself as a hub for EV components, such as batteries and power electronics, while exploring green hydrogen as an alternative fuel. Collaborations with global companies like Tesla and Toyota are further integrating India into the global EV supply chain.

India has set an ambitious target to achieve 30% electric vehicle (EV) penetration in the passenger vehicle market by 2030. The country is also focused on expanding electric public transportation to reduce emissions and promote cleaner urban mobility. With strong government backing, including policies and incentives, coupled with significant industry investment and continuous technological advancements, India is positioning itself as a global leader in sustainable mobility. These efforts are expected to accelerate the adoption of EVs, contributing to a greener, more sustainable future.

Sustainable Development Goals: India's Path to a Better Future

Dr. Divyshikha
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The Sustainable Development Goals (SDGs), adopted by the United Nations in 2015, provide a global roadmap for achieving economic growth, social inclusion, and environmental sustainability by 2030. With 17 goals and 169 targets, the SDGs address critical challenges like poverty, hunger, education, gender equality, clean energy, and climate action. India, as the world's fifth-largest economy and home to 1.4 billion people, plays a key role in global sustainability efforts. The country has made significant progress in areas like poverty reduction, renewable energy, and digital inclusion, but challenges remain in sectors such as healthcare, education, climate resilience, and urban planning.

Zero Hunger (SDG 2) focuses on ending hunger and ensuring food security. India is one of the largest food producers, yet malnutrition remains a major concern. Government programs like Poshan Abhiyaan, Mid-Day Meal Scheme, and the Public Distribution System (PDS) have improved food availability, but challenges like food wastage, poor nutrition awareness, and agricultural distress persist. Strengthening sustainable agriculture and ensuring efficient food distribution are key to addressing hunger.

No Poverty (SDG 1) aims to eradicate extreme poverty worldwide. India has made notable progress in poverty reduction, with 271 million people lifted out of multidimensional poverty between 2005 and 2016. Government schemes like Pradhan Mantri Jan Dhan Yojana (financial inclusion), PM Garib Kalyan Yojana (food security), and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) have contributed significantly. However, rural poverty, job insecurity, and rising inflation remain challenges.

Good Health and Well-being (SDG 3) emphasizes accessible healthcare for all. India's Ayushman Bharat scheme provides free health insurance to over 500 million people, and the country has successfully eradicated polio. However, challenges like poor rural healthcare infrastructure, high maternal mortality rates, and rising non-communicable diseases require urgent attention. The COVID-19 pandemic highlighted the need for a stronger public health system.

Gender Equality (SDG 5) promotes women's empowerment. India has seen progress through schemes like Beti Bachao Beti Padhao (girl child education), Ujjwala Yojana (clean cooking fuel), and Maternity Benefit Program. Despite improvements, gender pay gaps, domestic violence, and low female workforce participation remain key challenges.

Affordable and Clean Energy (SDG 7) ensures access to sustainable energy. India is a global leader in renewable energy, with ambitious targets of achieving 500 GW of non-fossil fuel capacity by 2030. Programs like Ujjwala Yojana (clean cooking fuel) and solar energy subsidies have promoted energy access, but challenges remain in rural electrification and transitioning away from coal dependence.

Quality Education (SDG 4) ensures inclusive and equitable education. India has improved school enrollment rates, with initiatives like Sarva Shiksha Abhiyan, National Education Policy (NEP) 2020, and Digital India e-learning programs. However, high dropout rates, lack of infrastructure in rural schools, and digital inequality remain concerns.

Clean Water and Sanitation (SDG 6) focuses on access to safe drinking water and sanitation. The Jal Jeevan Mission aims to provide tap water to every rural household by 2024, and the Swachh Bharat Abhiyan successfully improved sanitation facilities. However, groundwater depletion, water pollution, and urban water shortages require urgent intervention.

Decent Work and Economic Growth (SDG 8) promotes sustainable economic growth and job opportunities. India's Make in India, Skill India, and Startup India initiatives have boosted employment, but unemployment, informal labor, and income inequality persist. Strengthening labor laws, digital skilling programs, and fair wage policies is essential for inclusive growth.

Reduced Inequality (SDG 10) calls for equal opportunities. India's reservation policies, financial inclusion programs, and social welfare schemes aim to address disparities. However, caste-based discrimination, gender inequality, and rural-urban income gaps continue. Expanding economic empowerment programs and ensuring equal digital access is necessary.

Responsible Consumption and Production (SDG 12) promotes sustainable resource use. India has banned single-use plastics, but high industrial waste, food wastage, and unsustainable consumer habits remain issues. Encouraging eco-friendly products, circular economy models, and corporate responsibility is crucial.

Industry, Innovation and Infrastructure (SDG 9) focuses on sustainable industrialization. India is advancing in digital connectivity and manufacturing through Atmanirbhar Bharat and Smart Cities initiatives. However, MSMEs (Micro, Small, and Medium Enterprises) still struggle with funding and technology adoption.

Sustainable Cities and Communities (SDG 11) focuses on urban development. With rapid urbanization, challenges like slums, traffic congestion, and pollution have worsened. The Smart Cities Mission and Metro Rail expansion are improving urban infrastructure, but affordable housing, waste management, and public transport need stronger policies.

Climate Action (SDG 13) is a major concern for India, which is vulnerable to floods, droughts, and heatwaves. The National Action Plan on Climate Change (NAPCC) promotes renewable energy and afforestation, but stronger emission reduction policies and disaster management strategies are needed.

Peace, Justice, and Strong Institutions (SDG 16) call for transparent governance. India's Digital Governance, RTI Act, and E-courts system have improved justice delivery, but corruption, judicial delays, and human rights issues need stronger interventions.

Life Below Water (SDG 14) and Life on Land (SDG 15) focus on protecting ecosystems. India's coastlines and biodiversity are at risk due to pollution and deforestation. Initiatives like Project Tiger, Green India Mission, and Blue Economy projects help, but stricter conservation policies and sustainable fishing practices are required.

Partnerships for the Goals (SDG 17) emphasize global cooperation. India plays an active role in G20, BRICS, and UN initiatives, working on global sustainability projects. Strengthening private sector involvement, CSR initiatives, and international collaborations will accelerate progress.

India has made significant strides in achieving SDGs, but challenges like climate change, economic inequality, and resource management require collective action from the government, businesses, and citizens. With a strong policy framework, technological advancements, and social awareness, India can lead the way toward a sustainable future. The next decade is crucial, and achieving the SDGs will determine the nation's long-term economic and social prosperity.

Sustainable Global Development: A Path towards a Better Tomorrow

Ms. Harshita Banga
BVICAM, New Delhi

The world stands at a critical juncture where the need for sustainable development is no longer optional but essential. With pressing global challenges such as climate change, resource depletion, and social inequality, the concept of sustainable global development aims to ensure economic growth, environmental protection, and social equity for current and future generations.

What is Sustainable Global Development?

Sustainable global development refers to a model of progress that meets the needs of the present without compromising the ability of future generations to meet their own needs. It focuses on balancing three critical pillars:

1. **Economic Sustainability –** Promoting economic growth and innovation while ensuring equitable resource distribution.

2. **Environmental Sustainability –** Preserving natural ecosystems, reducing carbon footprints, and transitioning to renewable energy sources.

3. **Social Sustainability –** Creating inclusive societies that provide equal opportunities, education, and healthcare for all.

Challenges in Achieving Sustainable Development

Despite widespread recognition of its importance, achieving sustainable global development is fraught with challenges: Overdependence on Fossil Fuels: A significant contributor to global warming.

Inequitable Resource Distribution: Widening the gap between rich and poor nations.

Political Resistance: Policies often hindered by short-term goals and vested interests.

Lack of Awareness: Insufficient understanding and prioritization of sustainability in many regions.

Innovative Solutions and Global Efforts

Many nations, organizations, and individuals are pioneering initiatives to tackle these challenges:

1. **Renewable Energy Revolution:** Countries like Sweden and Germany are leading the way in shifting to solar, wind, and hydroelectric power.

2. **Circular Economy Models:** Companies are adopting practices to recycle, reuse, and reduce waste.

3. **Global Agreements:** Frameworks like the Paris Agreement emphasize collaborative efforts to reduce carbon emissions.

India's Role in Sustainable Development

As one of the fastest-growing economies, India has a pivotal role in shaping global sustainability. Initiatives like the National Solar Mission, Clean Ganga Project, and the promotion of electric vehicles reflect the country's commitment to green development. Additionally, community-led efforts such as organic farming and afforestation are making a significant impact at the grassroots level.

Sustainable global development is not just an ideal but a necessity to safeguard the planet and its inhabitants. Achieving it requires collective action, innovative thinking, and a shift in mindset toward long-term solutions. By prioritizing sustainability in every decision we make, we can create a resilient world that thrives economically, ecologically, and socially for generations to come.

The Carbon Cost of AI: Rethinking Sustainability in the News Industry

Mr. Chandramouly Pandey
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Artificial Intelligence (AI) has become a pivotal element in the ongoing Fourth Industrial Revolution, influencing nearly every sector, including news and media. It has transformed how content is created, distributed, and how audiences engage with it. However, alongside the celebrating of AI's progress, we must also consider its environmental repercussions. The swift adoption of AI-driven tools in journalism such as automated news generation, content recommendations powered by deep learning and real-time analytics demands substantial computational resources. This reliance leads to considerable environmental strain due to the high energy requirements of data centers and the processes involved in training AI models. Thus, while issues of transparency, accountability, and responsible AI usage are vital, it is equally important to focus on Sustainable AI. This strategy aims to harmonize technological progress with environmental stewardship within India's news and media landscape.

A key component of Sustainable AI in journalism is the commitment to achieving Net Zero emissions. The media sector must not only aim to minimize both direct and indirect emissions from its production and distribution activities but also take into account the wider environmental effects of its content. Reporting on climate change and sustainability is essential for shaping public awareness and fostering collective action but the paradox, however, is that while the media industry emphasizes environmental issues, its own carbon footprint continues to expand. From the deforestation linked to print newspapers to the energy-intensive cloud computing services used by digital news platforms, every facet of media production carries an environmental price.

A report from Cognizant indicates that by 2040, the combined Media and news sectors are expected to rank as the second-largest source of emissions, following agriculture. This finding highlights the critical need for a sustainable shift within the industry. Furthermore, If we talk about India's climate initiatives, they are far better than developed countries and projected to cut carbon dioxide emissions by around four billion tonnes from 2020 to 2030, alongside a 24% decrease in coal-based power generation. While these forecasts are encouraging, they also emphasize the necessity for all sectors, including media, to align with both national and international sustainability objectives. The news and media sector, which accounts for roughly 1% of India's overall GDP, is anticipated to experience significant growth, with a forecasted increase of 10.2%, reaching Rs. 2.55 trillion (approximately US$ 30.8 billion) by 2024. This growth is likely to result in higher energy consumption and carbon emissions, underscoring the urgent need for sustainability within the industry.

To reduce its environmental footprint, the media sector must actively measure and monitor carbon emissions throughout its supply chain. Initiatives for decarbonization should start with the implementation of energy-efficient technologies, sustainable computing practices, and eco-friendly content distribution methods. For example, enhancing data storage efficiency, decreasing dependence on energy-heavy cloud services, and utilizing renewable energy for broadcasting and digital media can greatly diminish the industry's carbon emissions. Additionally, embedding sustainability into everyday operations can promote lasting change. Practical actions, such as promoting remote work to cut down on travel emissions, reducing paper consumption, and improving energy efficiency in newsrooms, can all play a vital role in fostering a more sustainable future.

A systematic method like the 3-E framework Enable, Engage, and Embed can promote sustainable practices within the media sector. To begin with, enabling sustainable practices requires investments in energy-efficient infrastructure, minimizing electronic waste, and adopting environmentally friendly printing methods. Next, engaging with non-governmental organizations and third-sector groups allows media companies to remain updated on best practices, collaborate on sustainability projects, and bolster their reputation as responsible corporate citizens. Finally, embedding sustainable practices into everyday operations ensures that green policies are woven into the organizational culture rather than treated as an afterthought. Beyond internal efforts, it is crucial to develop and enforce policies that advocate for green practices in journalism. Media organizations should establish clear sustainability goals, such as committing to a specific percentage reduction in their carbon footprint over a set timeframe. Additionally, government regulations and industry standards ought to promote sustainable broadcasting practices, responsible digital content management, and eco-friendly advertising strategies. Public awareness initiatives spearheaded by media organizations can further highlight the significance of sustainability, encouraging both industry participants and the general public to embrace environmentally responsible behaviours.

The future of journalism hinges not only on its capacity to embrace AI-driven changes but also on its dedication to sustainability. As the sector progresses and transforms, the incorporation of environmentally friendly practices will help mitigate its ecological footprint and strengthen its position as a responsible societal cornerstone. Sustainable AI in journalism is essential, ensuring that technological progress does not jeopardize the health of our planet. By adopting Net Zero objectives, tracking emissions, integrating sustainability into everyday practices, and developing green policies, the news and media sector can lead the way in responsible innovation while still educating and motivating audiences worldwide.

Voices of BVICAM

Dr. Ritika Wason, Associate Professor

Sustainable global development requires a shift toward renewable energy, promoting cleaner technologies that reduce environmental impact and drive innovation.

Dr. Parul Arora, Associate Professor

Economic growth must be inclusive, ensuring equal opportunities and access to resources for all people, fostering social and environmental justice.

Dr. Saumya Bansal, Assistant Professor

Protecting natural ecosystems and biodiversity is crucial for maintaining life-supporting services and ensuring a stable climate for future generations.

Dr. Rakhee, Assistant Professor

Investment in sustainable infrastructure, such as green cities and efficient transportation, is essential to reduce carbon emissions and improve livability.

Ms. Ayushi Chopra, Associate Professor

Sustainable agriculture practices must be adopted globally to preserve soil health, enhance food security and reduce agricultural environmental damage.

Mr. Shubham Mishra, Assistant Professor

Education on sustainability is key for future generations to understand environmental challenges and contribute to creating a sustainable global future.

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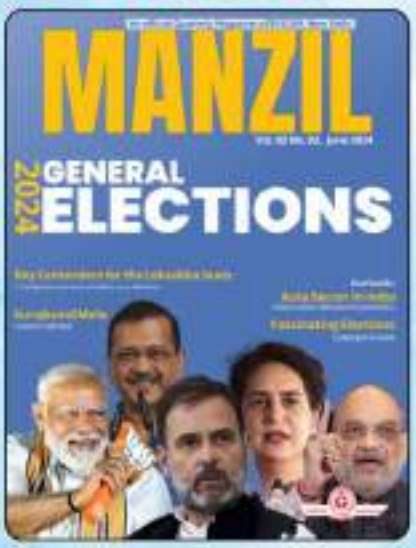

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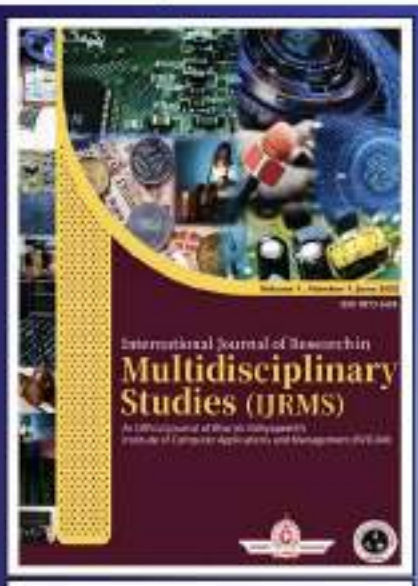

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