



Dhyeya IAS's Yojana Gist

Theme: G20 India 2023

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G 20 FOR THE PLANET, PEOPLE, PEACE, AND PROSPERITY

The G20 Presidency under the leadership of India focused on an ambitious and inclusive approach, placing the interests of the Global South at its core.

- The New Delhi Leaders' Declaration (NDLD) with 83 paragraphs was achieved with unanimous consensus, highlighting the power of unity in addressing common challenges.
- The declaration shifted the focus from conflict and division to development and cooperation, emphasizing policy and regulatory coherence, trade, investment, and climate action.
- It reiterated a commitment to fighting corruption and fostering transparency, accountability, and integrity in both public and private sectors.

Sustainable and Inclusive Growth:

- The declaration stresses the importance of strong, sustainable, balanced, and inclusive economic growth, recognizing the role of private enterprises, especially MSMEs and startups.
- It advocates for trade and investment policies and reform of the World Trade Organization (WTO).
- The declaration commits to addressing skill gaps, promoting decent work, and ensuring access to opportunities and resources for sustainable development.



Accelerating Progress on the SDGs:

- The world is facing critical challenges with only 12% of SDG targets on track, necessitating immediate attention to address climate change, forest loss, and weather-related disasters.
- The looming 1.5°C temperature increase, driven by alarming trends like the loss of 50 million hectares of forests from 2015 to 2020 and rising weather-related disasters, disproportion.
- Post-Covid recovery presents additional challenges with high inflation, restrictive credit, and debt distress in many developing nations.
- It delivered an action plan for accelerating SDG progress and endorsed G20 Principles on Data for Development (D4D).

- India's G20 presidency successfully championed both the climate and development agendas, avoiding the need to choose between poverty alleviation and environmental protection.
- India's G20 presidency recognized the significant impact of climate change on health and established a Global Initiative on Digital Health to address evolving health challenges.
- India's approach to global challenges aligns with philosophies emphasizing harmony with the Earth, sustainable growth, and inclusivity, rooted in the country's cultural heritage.
- Inspired by thinkers like Pandit Deen Dayal Upadhyay and Mahatma Gandhi, India's philosophy reflects the essence of the 2030 Agenda, focusing on leaving no one behind and balancing economic prosperity with environmental harmony. This holistic approach has guided India's sustainable growth trajectory.
- The annual SDG financing gap, ranging from billions to trillions of pounds, underscores the essential role of economic growth in sustainable development and the transition to clean energy.
- The 'G20 2023 Action Plan to Accelerate Progress on the SDGs' is a significant achievement, promoting equitable, strong, sustainable, and inclusive economic growth while addressing challenges related to access to finance and technology.

Green Development:

- The G20 New Delhi Leaders' Declaration (NDLD) introduces the 'Green Development Pact,' a global commitment to sustainable economic growth, aligning NDCs with Paris Agreement goals, and enhancing climate action across mitigation, adaptation, and support.
- It includes High-Level Principles on hydrogen, critical minerals, renewable energy, and ecosystem preservation, with a focus on ending plastic pollution.
- India's LiFE initiative promotes sustainable practices and emissions reduction by 2030.
- The NDLD emphasizes climate justice, calling for financial and technological support from the Global North and setting ambitious climate finance goals by 2024.
- Developed economies acknowledge £5.9 trillion by 2030 for developing countries' NDCs and an annual £4 trillion for clean energy.
- G20 calls for improved Multilateral Development Banks (MDBs) and explores financial measures.
- India advocates UN reforms, including restructuring the UN Security Council for Global South countries' benefit.

Technological Transformation:

- India's digital public infrastructure (DPI) has transformed lives through initiatives like digital payments, Co-Win, DigiLocker, and DBT.
- G20 recognizes the significant financial needs for developing countries, highlighting the importance of improved Multilateral Development Banks (MDBs) and financial measures.
- India leads UN reforms, with a focus on restructuring the UN Security Council to benefit the Global South.
- India's DPI model serves as a global example for socio-economic transformation.
- The One Future Alliance supports LMICs in developing their DPI systems for societal betterment.

Gender Equality:

- The declaration promotes human-centric development, emphasizing gender equality and women-led development.
- It highlights women's empowerment, gender-inclusive climate action, and food security.
- The G20 established the Women's Working Group, a significant step toward women's empowerment.

Voice Of Global South:

- India advocated for the African Union (AU) to become a permanent member of the G20, recognizing Africa's significant role in global economic growth.
- India actively included African nations like Egypt and Nigeria in G20 discussions, with African Union representatives, resulting in the highest-ever African participation.
- The 'Voice of the Global South Summit' gathered 125 countries and 18 Heads of State from the Global South, providing a platform for expressing concerns and priorities on the global stage.
- These efforts aimed to reshape international discussions to better represent contemporary realities and the influence of the Global South.

A People G 20:

- India championed inclusivity at the international level and among its citizens through Jan Bhagidari events.
- Over 220 meetings in 60 cities engaged more than 25,000 delegates, making the G20 accessible to people from diverse backgrounds.
- The Ministry of Education organized events involving over 233 million participants to raise awareness of G20 priorities.
- Jan Bhagidari included various activities, such as lectures, Model G20 meetings, festivals, quizzes, and more.
- India's cooperative federalism approach led to transformative urban development and promoted cultural heritage, tourism, and employment.
- Engagement Groups like Labor20, Science20, and Youth20 saw substantial citizen participation, spanning diverse regions, with social media amplifying the reach.

Conclusion

In an era marked by growing global divisions, India's G20 Presidency stood out as a testament to the transformative power of collective efforts. Prime Minister Modi aptly referred to it as a 'people's presidency,' encapsulating the spirit of the world's largest democracy. Throughout its tenure, India placed a strong emphasis on inclusivity, human-centric development, and engagement with its citizens. This approach illustrated the potential for collaborative, people-driven action to create a more equitable and promising future on the global stage.

BHASHINI APP:-

- At the G20 Summit, a Russian delegate had a surprising encounter with technology. The 'Bhashini' responded to his query in his native language, highlighting the remarkable progress in technology. The Digital India Experience Zone at the International Media Centre showcased cutting-edge technologies, offering a glimpse into the future.
- The Bhashini and its Bot Jugalbandi were created as part of India's Ministry of Electronics and Information Technology's initiative to demonstrate India's digital infrastructure capabilities to G20 delegates. This aligns with the theme of India's

G20 presidency, 'One Earth, One Family, One Future,' which emphasizes inclusivity.

- Bhashini plays a crucial role in breaking language barriers, promoting inclusivity, and empowering people to access digital services in their native language, ultimately contributing to a better-informed citizenry. It acts as a hub for collaboration and community, including the Bhasha Daan section where individuals from diverse backgrounds contribute to various crowd-sourcing initiatives, reflecting India's ethos of 'Unity in Diversity.'
- Bhashini is a platform that enables people to interact in their own language and dialect. It extends its utility to assist individuals in filling out forms in their native dialect through a feature phone using Interactive Voice Response (IVR). At its core, Bhashini aligns with the essence of a vibrant democracy, promoting 'Jan Bhandari' or people's participation. This platform offers an opportunity to enhance and strengthen democracy by facilitating engagement and participation in one's own language.
- Bhashini widens horizons and provides opportunities for both domestic and international communities. The Jugalbandi Bot is one of its applications, enabling last-mile service delivery at the grassroots level in India.

INDIA'S RISING INFLUENCE: G20 SUMMIT PUTS INDIA ON THE WORLD STAGE

India's G20 Presidency was hailed as a significant achievement. Attributed to the Prime Minister's transformative vision. The New Delhi Leaders' Declaration underlines India's diplomatic prowess. India's G20 Presidency cements its global stature as a champion of peace.

The G20's Global Significance

- Represents 85% of global GDP, over 75% of global trade, and two-thirds of the world's population.

Challenges Faced by India

- Inherited the presidency during a challenging period.
- Impact of the Covid pandemic and the Ukraine conflict.
- Threats of global recession, high inflation, and energy, food, and debt crises.

India's Bold Leadership

- Pledge for an 'inclusive, ambitious, decisive, and action-oriented' presidency.
- Setting a precedent for a more inclusive and interconnected world order.
- Focused on diversity as a unifying force.
- Over 200 G20 meetings were held across India's states and union territories.
- Showcasing India's rich cultural heritage to visiting delegates.
- Fostered genuine connections among nations.
- Projecting India's best practices on the global stage.

The 'People's G20' Initiative

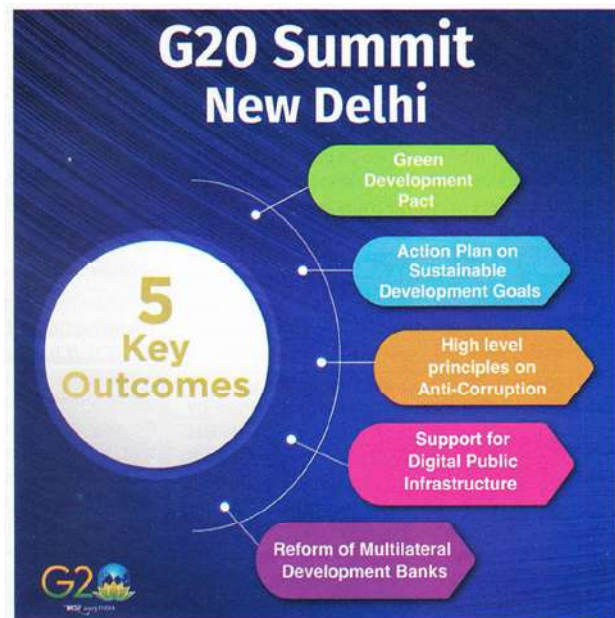
- Involvement of over 1.5 crore citizens.
- Jan Bhagidari initiative spanning 37 different areas of human endeavor.
- G20 University Connect Programme involving 101 universities.
- India's G20 logo symbolized national pride.

Historic New Delhi Leaders' Summit

- Adoption of the G20 New Delhi Leaders' Declaration.
- Placing tourism prospects and traditional handicrafts on an international platform
- Rooted in cultural ethos, India's 'One Earth One Family One Future' philosophy.
- Success in uniting the G20 through collaborative action.
- Promoting "healing, harmony, and hope for all."
- Unprecedented achievements under India's leadership.

Human-Centric Globalization

- Transformation of the G20 into a 'People's G20'.
- Involvement of over 1.5 crore citizens through Jan Bhagidari.
- G20 University Connect Programme and collective effort behind India's G20 logo.



- The success of the Leaders' Declaration despite complex multilateral negotiations.
- The Prime Minister's unwavering dedication to global partnership and shared humanity.

Inclusivity and Global Representation

- Priority on creating a more inclusive world.
- Acceptance of India's proposal to include the African Union as a permanent member of the G20.
- Making the G20 one of the most representative international groupings.

Global Digital Public Infrastructure Repository

- India's initiative to create a Global Digital Public Infrastructure Repository.
- Voluntary sharing of open-source mechanisms by non-G20 and G20 countries.
- Promoting a mutually beneficial ecosystem.

Reform of Multilateral Institutions

- Commitment to reform Multilateral Development Banks.
- Addressing global debt issues.
- Reflects India's proactive approach.

Diplomatic Turning Point

- India's G20 Presidency is a diplomatic turning point.
- India's dynamic leadership and ability to bridge global cleavages.
- Rising as a potent force on the world stage.

Sustainable and Inclusive Growth

- Prioritizing sustainable and inclusive growth in the declaration.
- Commitment to strengthen global value chains, aid developing countries and encourage sustainable investment.
- Focus on skill development, decent work, and SDGs.
- Commitment to enhancing global food security and nutrition.
- Welcome to India's proposal for the G20 Millets and Other Ancient Grains International Research Initiative (MAHARISHI).
- India's leadership in climate action and securing commitments from developed countries.

Conclusion

India's G20 Presidency has been a monumental achievement marked by transformative leadership and a commitment to fostering global collaboration. Rooted in the ethos of 'One Earth One Family One Future,' India has exemplified how inclusive, human-centric globalization can bridge divides and promote healing and hope. The historic declaration, inclusive initiatives, and the acceptance of the African Union as a permanent member have showcased India's ability to make the G20 more representative. By prioritizing sustainability, open-source cooperation, and global well-being, India has shaped a brighter and harmonious future, leaving a profound and enduring legacy of leadership on the world stage.

GREEN DEVELOPMENT PACT ROADMAP TO A SUSTAINABLE FUTURE

Introduction:

Sustainable development's core principle is to balance economic, environmental, and social aspects, addressing current needs while safeguarding the future. Climate change underscores the need for global policy reevaluation, with India leading by example. As the G20 President, India prioritized climate and environmental sustainability, stressing the urgency of cross-sector adaptation to protect livelihoods and development, particularly in developing nations.

The significance of collaboration in environmental efforts is profound. Partnerships are essential for achieving sustainable progress, and the Global Biofuel Alliance stands as a shining exemplar of the constructive collaborative spirit that defined India's G20 Presidency.

About G-20:

- The G20 countries collectively represent two-thirds of the world's population, contribute to 85% of the global Gross Domestic Product (GDP), and account for 75% of international trade.
- The increasing global environmental concerns have prompted nations to intensify their focus on green and resilient development.
- The G20 leaders, during the New Delhi Leaders' Declaration, adopted the Green Development Pact, demonstrating their collective commitment to addressing crucial matters related to the environment.

Key Initiatives of the Green Development Pact**Protection and Conservation of Forests and Ecosystems**

- The Green Development Pact places major emphasis on ecosystem restoration and the commitment to restore at least 30% of all degraded ecosystems by 2030.
- This initiative is a significant step towards addressing environmental degradation.
- Additionally, the G20 aims to reduce land degradation by 50% by 2040 on a voluntary basis, with the support of the Gandhinagar Implementation Roadmap and Information Platform.

Action Against Marine Plastic Litter

- The G20 members have committed to taking action against marine plastic litter. This initiative recognizes the pressing need to protect ocean-based ecosystems and harness the potential of the blue economy in a sustainable manner.
- The adoption of High-Level Principles for a Sustainable and Resilient Blue/Ocean-based Economy demonstrates the G20's determination in this regard.

Resource Efficiency and Circular Economy

- The G20 recognizes the critical role of the circular economy, extended producer responsibility, and resource efficiency in achieving sustainable development.
- India, as the G20 Presidency, has launched the Resource Efficiency and Circular Economy Industry Coalition (RECEIC) to promote these principles.
- The circular economy focuses on reducing waste generation by reusing, refurbishing, and recycling products and materials, which conserves natural resources and creates job opportunities in various sectors.

Mission LiFE - Lifestyle for Environment

- The G20 countries, inspired by India's Prime Minister, have embraced the concept of Mission LiFE, which emphasizes promoting mindful resource utilization and sustainable lifestyles.
- This mission is divided into three phases: Change in Demand, Change in Supply, and Change in Policy. It aims to transform individuals into "proplanet people" who adopt sustainable lifestyles.

Climate Change and Financing

- The G20 leaders recognize the need for climate action and financing.
- They reaffirm the commitment to mobilizing \$100 billion per year for developing countries and acknowledge the role of blended finance, private finance, and risk-sharing facilities in mobilizing climate finance.
- The G20 Technical Assistance Action Plan (TAAP) and recommendations to overcome data-related barriers to climate investments have also gained endorsement.



Disaster Risk Reduction (DRR) and Resilience Building

- The Pact aims to streamline efforts to build resilience against disasters through the institutionalization of the Disaster Risk Reduction (DRR) Working Group.
- It calls for accelerating progress on early warning and early action, strengthening national and local capacities, innovative financing tools, private sector investment, and knowledge sharing.
- Resilient urban infrastructure is recognized as a key requirement for future-ready cities.

Technology Development and Transfer

- The Pact recognizes the importance of technology development and transfer on voluntary and mutually agreed terms.
- It emphasizes capacity building and financing for meaningful, long-term impact in addressing environmental challenges

Conclusion

The Green Development Pact for a Sustainable Future encompasses a wide range of environmental initiatives, addressing the social, economic, and environmental aspects of sustainable development. It offers a clear roadmap for a resilient future and reinforces the G20 member states' efforts towards achieving Sustainable Development Goal (SDG) targets. This pact underlines the importance of global collaboration and commitment to creating a more sustainable and environmentally conscious world.

DESIGNING A CIRCULAR ECONOMY WORLD

The global population is projected to reach nearly 10 billion by 2050, driving increased demand for various products and services, including food, fashion, travel, and housing. Consequently, the annual extraction of materials has surged from 22 billion tonnes in 1970 to 70 billion tonnes in 2010, with expectations of doubling by 2060. In less than eight months this year, humanity's ecological resource consumption exceeded Earth's annual regenerative capacity, intensifying pressure on finite natural resources and leading to resource insecurity, biodiversity loss, pollution, rising emissions, and climate change.

To align with the Sustainable Development Goal on Responsible Consumption and Production (SDG 12) and address these challenges, it is imperative to embrace more sustainable lifestyles and facilitate a just transition. This transition necessitates substantial investments in policy support, eco-friendly products, low-carbon alternatives, improved infrastructure, services, technologies, and capacity building across various sectors.

Circularity - A Blueprint for Sustainability

- Circularity represents a paradigm shift in consumption and production. It is a concept that underscores the importance of using materials for as long as possible at their highest possible value.
- This approach covers the entire lifecycle of products and materials, from designing products to be long-lasting and repairable to ensuring that materials can be recovered through recycling at the end of a product's life.
- The primary goal of circularity is to reduce the adverse environmental and socio-economic impacts resulting from unsustainable consumption and production.
- These impacts include resource insecurity, biodiversity loss, pollution, growing emissions, and climate change. Furthermore, circularity aims to avoid and minimize waste generation while creating opportunities for green jobs and circular business ventures.

Individual Lifestyle Choices Impacting Sustainability

Individual lifestyle choices play a pivotal role in facilitating the transition towards sustainable and low-carbon lifestyles. It's noteworthy that around two-thirds of greenhouse gas emissions are directly linked to households and lifestyles.

Four key areas are central to achieving sustainability and low-carbon living:

- **Mobility:** Transitioning towards eco-friendly modes of transportation and reducing the carbon footprint associated with travel.
- **Housing and Energy Use:** Embracing energy-efficient practices in housing and reducing energy consumption.
- **Dietary Choices and Food:** Shifting towards sustainable food sources and reducing food waste.
- **New Business Models:** Reimagining industries, such as the fashion sector, which has witnessed an alarming increase in consumption and waste. The fashion industry's consumption has more than doubled over the past 15 years, while the number of times a garment is worn before being discarded has decreased by 36%.

G20's Commitment to Circularity and Sustainable Consumption and Production

- The G20, during India's presidency, has emphasized the need for commitments to promote sustainable consumption and production.

- The High-Level Principles on Lifestyles for Sustainable Development, adopted by the G20, acknowledge the vital role played by the circular economy and resource efficiency in achieving sustainable development.
- The G20's focus on circularity and sustainable consumption and production is pivotal in addressing the global material footprint while meeting the basic needs of all individuals.

India's Proactive Approach to Circular Economic Growth

- The Government of India has shown a proactive approach to advancing the circular economy, resource efficiency, and sustainable consumption and production.
- India's transition to manufacturing-led growth offers a promising opportunity to integrate circular economy approaches into various manufacturing sectors.
- Reports indicate that this transition could generate a net economic benefit of approximately USD 624 billion annually in India by 2050, compared to a business-as-usual scenario.
- Transitioning to a circular economy can also have a global impact on employment, potentially creating six million jobs.

Initiatives to promote the Circular Economy:

- India has taken several initiatives to promote resource efficiency and circular economic growth, including the Draft National Resource Efficiency Policy (2019), the Steel Scrap Recycling Policy, the Vehicle Scrapping Policy, and sectoral action plans on circular economy.
- Additionally, India is a member of the Global Alliance on Circular Economy and Resource Efficiency (GACERE), a coalition of governments dedicated to advocating for a global, just circular economy transition and more sustainable resource management.
- India has also launched the Resource Efficiency and Circular Economy Industry Coalition, which aims to enhance collaboration among businesses and facilitate experience sharing, capacity building, and actions for the circular economy transition.
- Mission LiFE: Mission LiFE, launched by India, is a global movement that operates based on three principles:
 - **Nudging Behaviors Towards Responsible Consumption (Demand):** Encouraging individuals to adopt sustainable and responsible consumption patterns.
 - **Enabling Markets to Respond Swiftly to Changing Needs (Supply):** Creating a market ecosystem that supports and provides sustainable alternatives.
 - **Influencing Government and Industrial Policy to Support Initiatives (Policy):** Advocating for policy changes that support sustainable lifestyles.
- The Government of India has embedded the importance of sustainable lifestyles in its policies, emphasizing its role in combating climate change. One of the significant areas of focus is sustainable tourism, which can significantly accelerate the transition to low-carbon and circular business solutions.

Case Study- Fashion Industry:

The fashion industry is a compelling example of the need for circularity. The sector has experienced an alarming increase in consumption, with fashion consumption more than doubling over the past 15 years. However, the number of times a garment is worn before

being discarded has decreased by 36%. This has led to an alarming amount of clothing waste, equivalent to the value of \$460 billion, being discarded worldwide every second. Despite these trends, the fashion industry is not yet on the road to circularity.

Global Initiatives for Circular Economy and Sustainable Consumption and Production

Several global initiatives, frameworks, and tools support the transition to circularity and sustainable consumption and production:

- **UNEP's Report on Lifestyles:** UNEP provides the latest science-based evidence on lifestyles. Its report, '1.5-degree lifestyles: towards a fair consumption space for all,' offers policy recommendations on reducing lifestyle carbon footprints.
- **The Life Cycle Initiative:** This initiative offers tools and frameworks to support sustainable consumption and production.
- **Global Opportunities for Sustainable Development Goals (GO4SDGs):** This initiative aims to promote sustainable development by aligning efforts with the Sustainable Development Goals (SDGs).
- **International Resource Panel (IRP):** IRP provides scientific assessments to guide resource management and policy options for achieving sustainable consumption and production.
- **10-Year Framework of Programmes on Sustainable Consumption and Production:** This framework focuses on the promotion of sustainable consumption and production patterns.
- **Sustainable Consumption and Production Hotspots Analysis Tool (SCP-HAT):** This tool supports the identification of areas where sustainable consumption and production efforts can have the most significant impact.

The Road Ahead - A Global Transition to Circular and Green Economic Growth

- A global transformation of consumption and production patterns is imperative to address the environmental, economic, and social crises we face.
- This transformation must occur swiftly and comprehensively to align with the magnitude of the challenges facing humanity. Environmental, economic, and social challenges must be addressed collectively, with a sense of urgency that matches the scale of these challenges.
- At the same time, it is essential to recognize the specific needs of each country and respect their developmental circumstances. India's proactive measures in embracing the circular economy, resource efficiency, and sustainable consumption and production are indicative of its commitment to these principles.

Conclusion

The shift towards circular and sustainable consumption and production is no longer an option but a necessity. The global population is growing, and with it, the demand for resources and services. It is imperative that we transition to circular economic growth, adopt sustainable lifestyles, and promote responsible consumption and production to mitigate environmental degradation, reduce greenhouse gas emissions, and preserve our planet for future generations. Through international cooperation, commitment, and transformative action, we can pave the way for a greener, more sustainable future.

ENERGY TRANSITION IN INDIA

India, a fast-growing major economy with over 1.4 billion people, faces the urgent need for sustainable and secure energy while tackling climate change and environmental issues. Recently, India has shifted its focus from fossil fuel-driven growth to sustainable development through renewable energy sources. This transition offers a cleaner and greener energy landscape and has the potential to reshape India's energy future.

The Need for Energy Transition:

Environmental Concerns:

- For decades, India heavily relied on fossil fuels such as coal, oil, and natural gas to fuel economic growth. However, this reliance has had severe environmental and social consequences.
- The burning of fossil fuels has led to greenhouse gas emissions, contributing to global warming and climate change.
- Additionally, conventional energy sources have resulted in harmful air pollution, impacting both the population's health and the economy.

Commitment to Climate Change Mitigation:

- India, as a signatory to the Paris Agreement, has committed to reducing carbon emissions and playing a role in combating climate change.
- To fulfill its COP 21 commitments, India has set ambitious targets for transitioning to renewable energy sources.

Government Initiatives:

The Government of India has demonstrated a strong commitment to promoting renewable energy through various policies and initiatives:

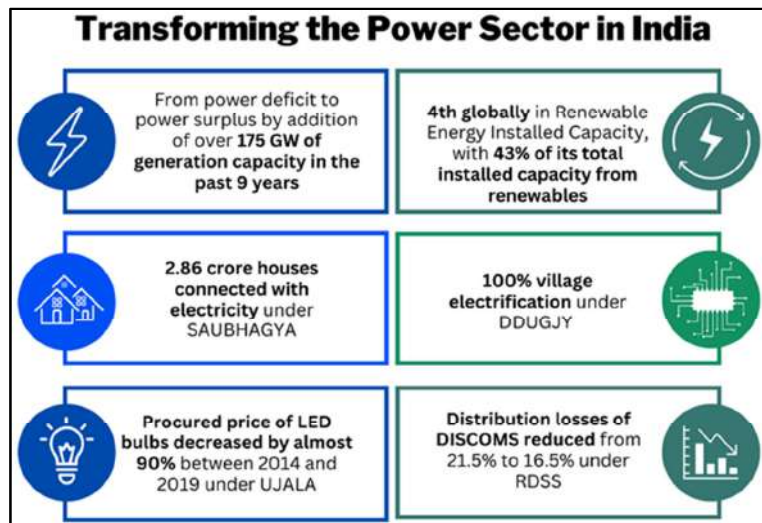
- **National Action Plan on Climate Change (NAPCC):** Introduced in 2008, NAPCC laid the foundation for India's sustainable development goals and launched national missions targeting climate change mitigation and adaptation.
- **National Solar Mission:** Launched in 2010, this mission aimed to promote solar energy technologies and reduce the cost of solar power generation. It initially set a target of 20 GW by 2022, which was later increased to 100 GW. The overall target for renewable energy was also revised to 175 GW, with the latest goal being 500 GW of non-fossil fuel electricity generation capacity by 2030.
 - **Solar Parks Scheme:** Aiming for 40 GW of capacity.
 - **Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyaan (PM-KUSUM) Scheme:** Targeting 30.8 GW.
 - **Rooftop Solar (RTS) Phase-2 Scheme:** Setting a target of 4 GW.
 - **CPSU Scheme (Phases 1 & 2):** Aiming for 8.2 GW.
 - Solar PV module manufacturing capacity has increased from 10 GW in 2018 to 25 GW in 2023, with a 150% increase.



- Solar PV cell manufacturing capacity doubled from 3 GW to 6 GW during the same period.
- To encourage local manufacturing, Production Linked Incentive (PLI) schemes have been launched.
- **National Green Hydrogen Mission (NGHM):** Targeting 5 MMTPA production capacity by 2030.
- **A wind turbine manufacturing capacity** of over 15 GW annually with 70-80% indigenization has been developed.
- **Skilling programs**, such as Suryamitra and Vayumitra, have trained over 32,000 individuals.
- **The Green Energy Corridor scheme** has focused on transmission lines and substations to ensure the evacuation of power generated through renewable energy sources.
- **Inter-State Transmission System (ISTS)** charges waiver has been extended for all renewable energy projects, including Green Hydrogen Projects and offshore wind projects.

India has made significant strides in its transition to renewable energy:

- Against the target of 175 GW, India has installed 172 GW of renewable energy capacity by the end of FY 2023, a 126% increase from 76 GW in FY 2014.
- Solar capacity has increased by about 200%, with the addition of approximately 45 GW.
- Wind capacity has increased by 9 GW during the same period.
- The share of renewable energy in the generation mix has risen from 17.2% in FY 2014 to 22.5% in FY 2023.
- The power sector in India has attracted \$78 billion in investments, including over \$10 billion through Foreign Direct Investment (FDI).
- The government has provided budgetary support of over Rs 20,000 crore during this period.
- India now ranks fourth globally in installed renewable energy capacity, including wind, bioenergy, and solar.



key challenges

- **Intermittency of Renewable Sources:** One primary concern is the intermittent nature of renewable energy sources, such as solar and wind. Fluctuations in generation make it challenging to balance electricity supply and demand. Advanced energy storage technologies like batteries and pumped hydro storage are vital to storing excess energy during peak generation periods and releasing it during low-generation times.

- **Grid Integration:** Integrating renewable energy into the existing grid infrastructure requires significant investments and upgrades. Developing a robust transmission network capable of handling intermittent and decentralized energy sources is essential for maintaining grid stability and reliability.
- **Challenges in Implementation:** Several challenges have been witnessed in the implementation of renewable energy schemes and programs:
 - **Land Availability:** The availability of land for renewable energy projects has been a significant challenge. Preparing State Renewable Energy Plans that consider available land resources can help address this issue.
 - **Regulatory Issues:** To achieve renewable energy installation targets, State Governments need to take earnest action on aspects such as compliance with Renewable Purchase Obligation (RPO), timely adoption of tariffs by State Electricity Regulatory Commissions (SERCs), and avoiding the imposition of additional charges by the States.
 - **Transmission Infrastructure:** Realistic planning of transmission infrastructure and regular monitoring, along with prompt remedial actions, are essential to achieve renewable energy targets.
- **Economic and Environmental Implications:** India's transition to renewable energy sources carries both economic and environmental implications:
 - The growth of the renewable energy sector would stimulate job creation and technological innovation.
 - Attract foreign investment and reduce reliance on fossil fuel imports, enhancing energy security.
 - Decrease vulnerability to global energy market fluctuations, making a significant contribution to addressing climate change.
 - A shift away from fossil fuels significantly reduces carbon emissions, mitigates air pollution, and safeguards public health.
 - India's commitment to renewable energy aligns with its international climate pledges and enhances its global reputation as a leader in sustainable energy practices.

Conclusion

India's shift to renewable energy marks a significant move toward a greener future, driven by ambitious targets and innovative policies. Solar and wind power adoption, alongside exploration of other renewables, highlights India's commitment to economic growth and environmental well-being.

To address integration challenges, public-private collaboration, international partnerships, technology, and workforce development are essential. India's renewable energy journey signifies not only a shift in power generation but a commitment to a cleaner, more sustainable future, inspiring global climate action.

DIGITAL PUBLIC INFRASTRUCTURE & PUBLIC PARTICIPATION

In a digitalized world, a robust Digital Public Infrastructure (DPI) is vital for resilience, service delivery, and innovation. It caters to diverse sectors and ensures equitable participation in the digital economy, from urban innovators to rural artisans.

The G20 Leaders' Declaration during India's Presidency highlights technology's role in bridging digital divides and fostering inclusive and sustainable development. This article explores the declaration's key aspects, emphasizing its importance in building inclusive, secure, and accountable digital ecosystems.

DPI in India

- Under the central theme of "Vasudhaiva Kutumbakam," translating to 'One Earth, One Family, One Future,' the G20 India Presidency highlighted the significance of equitable economic growth and a shared vision for the future.
- In alignment with this vision, India is planning to establish a Global Digital Public Infrastructure Repository (GDPIR), a digital repository of DPI.
- **Role of DPIs in India's Digital Transformation:**
 - In India, the adoption of Digital Public Infrastructures (DPIs) like Aadhaar, in conjunction with Jan Dhan bank accounts and mobile phones, has played a pivotal role in shifting ownership of transaction accounts.
 - The JAM Trinity has substantially accelerated financial inclusion, increasing it from 25% in 2008 to over 80% within the past six years.
 - This achievement, which could have taken up to 47 years without DPI implementation, resonates with the importance of safe, secure, and inclusive DPI highlighted in the G20 New Delhi Leaders' Declaration.
- **Government-to-Person Programs and UPI:**
 - Government-to-Person programs and the Unified Payments Interface (UPI) have been integral to India's digital landscape. India has established one of the world's largest digital Government-to-Person (G2P) architectures using DPI, enabling the transfer of approximately Rs 32.29 trillion directly to beneficiaries across various government schemes.
 - The Unified Payments Interface (UPI) in India has become a rapid and instantaneous payment network, recording over 10.586 billion transactions totaling approximately Rs 15.76 trillion in August 2023. UPI's international linkage with 11 countries aligns with the G20's focus on financial inclusion, facilitating quicker, cost-effective, and transparent cross-border payments.
- **India Stack and Account Aggregator System:**
 - India Stack, India's fundamental DPI, has fostered innovation, healthy competition, market expansion, and financial inclusion. It has streamlined the Know Your Customer (KYC) processes, with a total of 16.47 billion eKYC transactions facilitated by 232 eKYC Authentication Agencies (KUA) to date.
 - India's Account Aggregator (AA) system empowers individuals to have control over their financial information, ensuring that no data is shared without their consent.

Key Initiatives

1. Digital India Initiative & BharatNet Project:

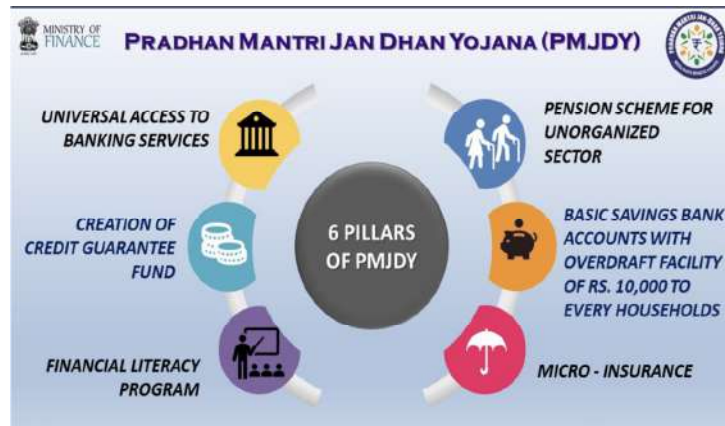
- Launched in 2015, the Digital India Initiative aligns with the G20's commitment to narrowing the digital divide.

- Focuses on providing digital infrastructure and promoting digital literacy.
- As of 11 September 2023, the BharatNet project successfully connected 202,028 Gram Panchayats, with 658,685 kilometers of optical fiber cables (OFC) installed.
- Deployment of 643,789 Fiber-To-The-Home (FTTH) connections and 104,675 Wi-Fi hotspots for last-mile connectivity.
- The BharatNet project plays a pivotal role in enhancing digital connectivity in rural areas.
- Significant progress with over 202,028 Gram Panchayats connected, providing access to digital services.
- Deployment of 643,789 Fiber-To-The-Home (FTTH) connections and 104,675 Wi-Fi hotspots for last-mile connectivity.

2. Pradhan Mantri Jan Dhan

Yojana (PMJDY):

- PMJDY, a critical initiative for financial inclusion, aligns with the G20's emphasis on public participation.
- As of 13 September 2023, the total number of beneficiaries across various types of banks amounted to 50.41 crore, with a significant proportion being rural-urban females.
- Cumulative deposits in their accounts reached a total of Rs 20,494.18 billion, with 34.26 crore Rupay Debit Cards issued to beneficiaries.
- PMJDY has had a transformative impact on financial inclusion and access to banking services.
- Substantial participation of rural-urban females, signifying gender-inclusive financial services.
- Massive cumulative deposits and widespread distribution of Rupay Debit Cards to beneficiaries.



3. Make in India and Startup India:

- The Make in India initiative strengthens India's self-reliance in technology and reduces dependency on imports.
- Aligns with the G20's focus on innovation, technology transfer, and fostering a secure digital environment.
- Business requests and investments in the pipeline totaling \$201.12 billion have been generated, fostering local production and job creation.
- Startup India nurtures entrepreneurship, aligning with the G20's commitment to promoting responsible and inclusive use of digital technology.
- Inclusive support to startups, including access to funding, mentorship, and regulatory reforms.
- The establishment of 108 unicorns signifies the program's success in fostering entrepreneurship and growth.

4. Smart Cities Mission:

- Integration of Digital Infrastructure in Urban Development:
- The Smart Cities Mission, primarily an urban development initiative, integrates digital infrastructure components.
- Aligns with the G20's emphasis on building Digital Public Infrastructure (DPI).
- Involves 100 mission cities, 7,934 projects, and an estimated cost of Rs 170,392 crore, enhancing both physical and digital aspects of urban living.

5. Aadhaar:

- Aadhaar plays a pivotal role in enabling digital services and identity verification, aligning with the G20's emphasis on data protection, privacy, and secure digital infrastructure.
- Recent statistics indicate 1.38 billion Aadhaar numbers generated, 788.64 million Aadhaar records updated, and 100.33 billion authentications, along with 16.42 billion eKYC processes completed.
- Aadhaar's ongoing importance ensures the smooth operation of India's digital infrastructure, enabling secure and efficient digital services and identity verification.

6. UMANG & DigiLocker:

- The UMANG app provides secure and inclusive access to a wide range of government services, aligning with the G20 Leaders Declaration 2023.
- With 56 million registered users and 3.849 billion transactions processed, UMANG showcases its comprehensive reach and importance as a digital platform.
- DigiLocker advances paperless governance by providing citizens with authentic digital documents.
- Enhancing the accessibility and authenticity of digital documents while streamlining government-citizen interactions.



7. Central Bank Digital Currency (CBDC):

- The launch of e?-R by the Reserve Bank of India (RBI) aligns with the G20 Leaders Declaration 2023 regarding CBDCs.
- Reflects India's approach to embracing modern digital currency solutions and aligns with global trends in CBDC development.

8. Artificial Intelligence (AI):

- MeitY's schemes and programs accelerate AI implementation and development in India.
- MeitY's commitment to promoting responsible AI for achieving Sustainable Development Goals (SDGs) demonstrates India's dedication to using AI for public benefit.
- Efforts include reskilling/up-skilling IT professionals, capacity building, research centers, and international collaborations.

Conclusion

The G20 Declaration underscores the pivotal role of Digital Public Infrastructure (DPI) in driving inclusive and sustainable development. India's commitment to DPI initiatives, including Aadhaar and the JAM Trinity, has accelerated financial inclusion and set a global standard for impartial digital transformation. India's leadership in technology adoption, exemplified by the Unified Payments Interface (UPI), aligns with the G20's goals, making it a model for other nations. India's success story inspires countries striving for inclusive digital futures. The G20 Leaders' Declaration highlights the transformative potential of DPIs in fostering a more equitable and prosperous global digital landscape.

BUILDING SAFETY, SECURITY, RESILIENCE, AND TRUST IN THE DIGITAL ECONOMY

The G20, established in 1999 in response to the Asian financial crisis of 1997-98, has evolved to address a wide range of global issues, including the digital economy, trade, sustainable development, health, agriculture, energy, environment, climate change, and anti-corruption.

The digital economy holds a central place in the G20's agenda, with its contribution to the global GDP exceeding 15% and its rapid growth over the past decade, outpacing the physical world GDP. Prime Minister Narendra Modi emphasized the need for a G20 consensus on high-level principles for a secure and resilient digital economy at a Digital Economy Ministerial Meeting.

The Digital Economy Working Group:

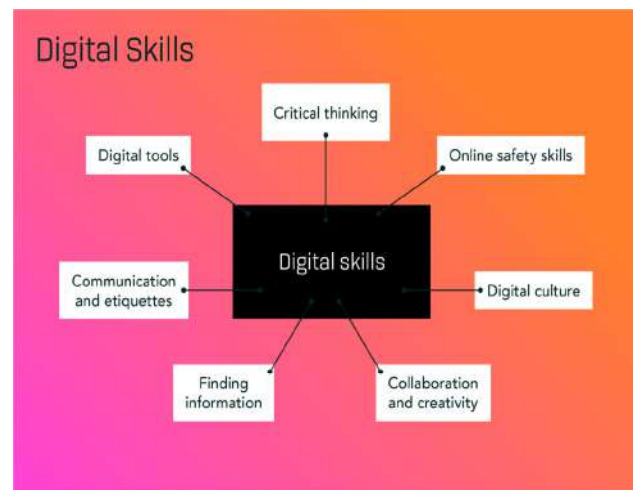
The Digital Economy Working Group engaged in extensive discussions on three primary pillars: Digital Public Infrastructure, Security in the Digital Economy, and Digital Skilling.

- **Digital Public Infrastructure (DPI):**

- G20 achieved a DPI definition: secure, interoperable digital systems for equitable public and private access.
- DPI follows legal frameworks, fostering development, inclusion, innovation, trust, competition, and human rights.
- DPI serves as a promising digital transformation tool for both public and private sectors.
- Governance and institutional capabilities are vital for safety, security, and SDG achievement.
- G20 adopted a framework for LMICs' DPI development.
- India's Aadhaar, UPI, and Digilocker contributions emphasized privacy and data protection.
- India proposed a Global Digital Public Infrastructure Repository (GDIPR) with potential OFA support for LMIC capacity building.

- **Security in the Digital Economy:**

- G20 prioritizes safety, security, resilience, and trust in the digital economy.
- These priorities have been consistent since 2017.
- India's G20 Presidency further stressed their importance.
- Interconnected digital dependencies across sectors and borders pose security risks.
- Global cooperation is needed for a safe and secure digital economy.
- Addressing security threats involves enhancing the capacity of key stakeholders.
- G20 established non-binding High-Level Principles to promote safety, security, resilience, and trust in the digital economy.



- These principles draw from best practices and aim to strengthen resilience through a security culture, capacity building, and multi-stakeholder cooperation.
- **Digital Skilling:**
 - Digital skills are broadly defined as the skills needed to “use digital devices, communication applications, and networks to access and manage information,” from basic online searching and emailing to specialist programming and development.

The G20 High-Level Principles for Building Safety, Security, Resilience, and Trust in the Digital Economy can be summarized as follows:

1. Security and Trust

- Foster a human-centric culture of security and trust in the digital economy.
- Promote cyber hygiene and industry-led standards based on openness, transparency, and consensus.
- Encourage businesses and MSMEs to implement good practices and risk management to maintain global supply chain integrity.
- Promote "security by design" and phased risk management with encryption measures for digital solutions, including emerging technologies.
- Enhance resilience in key sectors and provide grievance redressal mechanisms for victims of malicious digital technology use.

2. Capacity Building

- Collaborate with relevant stakeholders, including international organizations, to prioritize capacity building.
- Explore an interdisciplinary approach covering strategy, governance, technology, regulation, culture, economics, incident response, and crisis management.
- Provide guidance and awareness for online safety and security, focusing on inclusivity and accessibility.
- Promote lifelong learning opportunities for digital technology users.
- Encourage young people, especially women and girls, to consider careers in digital security.

3. Research and Development

- Advance research in advanced and emerging technologies for enhanced security.
- Share best practices and recommendations from international organizations to address security threats.
- Support research projects on topics like the economic costs of security incidents and their impact on businesses and underrepresented communities.
- Promote studies measuring security-related digital divides and their impact on economies.

4. Multistakeholder Cooperation

- Partner with businesses, civil society organizations, academia, international organizations, and the technical community to promote security.
- Develop opportunities for public-private partnership collaboration and engagement.
- Support the sharing of trends on vulnerabilities faced by non-governmental stakeholders in the digital environment.
- Facilitate engagement between businesses and industry incident response teams.

5. Strengthening Resilience of Essential Services

- Protect essential services in the digital economy from security threats.

- Encourage businesses to assess the security of their supply chains for essential services using evidence-based approaches.

6. Support for MSMEs in the Security Ecosystem

- Support MSMEs offering security solutions and services to scale up and innovate.
- Provide guidance and support to MSMEs for secure operation in a digital environment.
- Create opportunities for MSMEs to engage with governments, shape policy approaches, and share good practices.
- Mobilize cooperation, funding, and support for MSMEs to enhance their security capacity.

Conclusion

In conclusion, addressing the potential risks in the digital economy is critical, especially for vulnerable groups like children, youth, and women. While digital tools offer opportunities, they also expose them to cyber threats. The G20's commitment to cyber education and awareness, as outlined in the Cyber Education and Awareness Toolkit, is a crucial step to protect their rights and dignity. This holistic approach will foster safety, trust, and resilience in the digital economy. It aligns with the G20's vision of a united digital future that empowers all while ensuring safety and security.

RESPONSIBLE USE OF AI: BRIDGING INNOVATION AND ETHICS

Artificial Intelligence (AI) is revolutionizing the way humans interact, industries function, and societies are structured. Its vast potential across multiple domains has given rise to numerous applications, including data analysis, logistics, decision-making, autonomous vehicles, cybersecurity, security, surveillance, and inventory management.

However, while AI augments human capabilities and addresses pressing challenges, it also raises critical ethical and societal concerns that necessitate responsible development and deployment.

G20 New Delhi Leaders' Declaration and Responsible AI

- The G20 Summit held in New Delhi in September 2023 addressed various aspects of Responsible AI (RAI).
- Most G20 members have been working to establish regulations for the responsible use of AI, with the European Union's proposed AI Act being a comprehensive attempt to create a regulatory framework.
- The New Delhi Leaders' Declaration emphasizes the importance of harnessing AI responsibly for the public good, with a focus on inclusivity, human-centricity, and protection of human rights and safety.
- The declaration also commits to addressing issues such as transparency, fairness, accountability, regulation, ethics, biases, privacy, and data protection in AI development and deployment.
- Furthermore, the G20 reaffirms its commitment to the G20 AI Principles of 2019, which prioritize a human-centered approach to AI development.
- Investment in human capital development is another key aspect, supporting educational institutions and teachers to keep pace with technological advances, including AI, and preparing the youth for the job market, mitigating the potential economic impacts of AI.

Ethical Risks of AI

- The increase in AI incidents and controversies, as tracked by the AIAAIC database, highlights the ethical misuse of AI.
- According to the AIAAIC (AI, Algorithmic, and Automation Incidents and Controversies) database, which tracks incidents related to the ethical misuse of AI, the number of AI incidents and controversies has increased 26 times since 2012.
- Concerns about gender and racial bias in AI applications, such as healthcare and finance, have been raised.
- AI is not neutral and can amplify existing biases or introduce new ones if datasets are incomplete or skewed. Biased machine learning algorithms can also perpetuate these biases.
- The development of AI models involves potential biases introduced by human developers and within the black box of AI systems, making them challenging to understand and correct.
- Ethical concerns extend to issues like copyright infringement, privacy violations, and the misuse of AI in defense, surveillance, and cybersecurity.
- Several artists have accused apps of training their algorithms based on images and illustrations scraped from the web without the original artists' consent.
- This application of AI in drone warfare has the potential to escalate violence and raise ethical questions.

- Critics have also pointed out the misuse of AI for illegal surveillance in various contexts.
- In the realm of cybersecurity, generative AI applications pose security threats by enabling cybercriminals to conduct malware attacks, such as mass-producing phishing emails for spreading malware and gathering sensitive information.
- The rise of deepfakes, which can create realistic but fake content, poses a significant threat to national security and trust in media.
- For example, in March 2022, a deepfake video of Ukrainian President Volodymyr Zelenskyy, purportedly asking his troops to surrender, caused confusion among Ukrainian citizens amid military conflict with Russian forces.
- Moreover, there are concerns about AI automation's impact on the labor market, potentially altering employment landscapes in economies that heavily rely on human labor.

Responsible AI (RAI)

- Responsible AI (RAI) involves designing, developing, and deploying AI systems that empower employees, businesses, and society in a fair manner.
- RAI encompasses considerations related to fair, explainable, and trustworthy AI systems.
- India has been actively working on RAI since 2018 and has outlined seven principles for responsible AI: safety and reliability, equality, inclusivity, privacy and security, transparency, accountability, and protection of positive human values.
- These principles have been incorporated into India's first RAI Hub and Toolkit, aimed at promoting user trust and safety.
- India holds the chair of the Global Partnership on Artificial Intelligence (GPAI), a multi-stakeholder initiative that brings together experts from various sectors, including science, industry, civil society, international organizations, and governments.
- The GPAI focuses on the responsible development of AI through its Responsible AI working group.
- India's chairmanship of GPAI is significant because the Global South is underrepresented in the forum, with only four out of 29 members from this region (Argentina, Brazil, India, and Senegal).
- India is well-positioned to bridge this divide and ensure that less developed economies can benefit from the technological advancements in AI.
- The annual GPAI Summit will be hosted in New Delhi on December 12-14, 2023.
- At the previous summit in Tokyo, India encouraged GPAI members to collaborate on establishing a common framework of rules and guidelines for data governance to prevent harm to users and ensure the safety of both the internet and AI.

Conclusion

The rapid rise of AI and its applications underscores the need for global consensus and regulatory frameworks for its ethical and responsible use. The G20 New Delhi Leaders' Declaration demonstrates a commitment to addressing these challenges, emphasizing a human-centered and responsible approach to AI development. The G20 members must follow this declaration by adopting anticipatory regulation, fostering diverse stakeholder collaboration, and conducting over-the-horizon thinking to ensure AI's ethical and inclusive deployment.
