GOVERNMENT

POLICY REPORT





SUSTAINABILITY

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Extended Producer Responsibility Guidelines to Reduce Plastic Footprints through Sustainable Packaging Practices

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On 27th April 2023, the Ministry Of Environment, Forest and Climate Change (MoEFCC) notified the amended rule for Plastic Waste Management in India. It's been almost a year since single-use plastic items have been banned by the Government of India. The move later followed with the notification of the Guidelines on Extended Producer Responsibility (EPR) for plastic packaging vide Plastic Waste Management (Amendment) Rules, 2022.

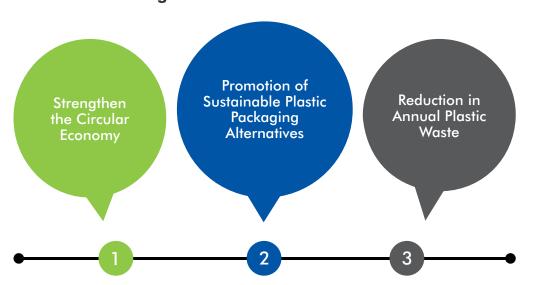
These two provisions are implemented to address plastic pollution and restrict the high usage of low-quality, high-littering potential plastic waste. The efforts are accelerated to reduce the plastic footprint and move towards sustainable plastic packaging with the promotion to recycle and reuse plastic. Under new EPR rules, the producers and manufacturers of plastic and related products will be made responsible for the entire life cycle of their plastic product including recollection, recycling, and final disposal through identification of ecological alternatives to address the concerns.

Year-wise Status of Plastic Waste Generation in India

| S. No. | Year | Plastic Waste Generated (TPA) |
|--------|---------|-------------------------------|
| 1. | 2015-16 | 1,589,418 |
| 2. | 2016-17 | 1,589,714 |
| 3. | 2017-18 | 660,787 |
| 4. | 2018-19 | 3,360,043 |
| 5. | 2019-20 | 3,469,780 |

Source: https://pib.gov.in/PressReleaselframePage.aspx?PRID=1906385

Significance of EPR Guidelines



The new EPR rules have set mandatory provisions related to recycling and reusing rigid plastic packaging to reduce the further generation of littered and un managed plastic waste. This will add up to the central government's assistance to the States/UTs for plastic waste management under the Swachh Bharat Mission.

Year-Wise Target Of Minimum Level Of Recycling Of Plastic Waste

| Year | Target (% of Extended Producer Responsibility) |
|-----------------|--|
| 2024-25 | 30-50 |
| 2025-26 | 40-60 |
| 2026-27 | 50-70 |
| 2027-28 onwards | 60-80 |

Source: https://pib.gov.in/PressReleaselframePage.aspx?PRID=1898892

Segregation and state of February Line of Line of

The online centralized EPR portal by the Central Pollution Control Board (CPCB) is assisting Producers, Importers, and Brand Owners (PIBOs) to mandate the new EPR provisions of the country concerning segregation, recycling, and reuse of plastic waste for better accountability, traceability, and transparency.

The seven modules of the existing EPR portal facilitate the registration of PIBOs, issue and exchange of plastic credits, issue of EPR certificates, real-time transaction monitoring with Plastic Waste Processors (PWP), levy of environmental compensation along with annual return fillings for the stakeholders among many other features.

Source: https://eprplastic.cpcb.gov.in/#/plastic/home



Source: https://eprplastic.cpcb.gov.in/#/plastic/home

Thus, the EPR guidelines will put pressure on the plastic industry to reduce ill impacts on the environment through sustainable practices and move towards plastic neutrality while satisfying consumer preferences. The vibrant startup ecosystem in India including MSMEs has a big role to play regarding scaling up the innovation capacity in the area of plastic packaging. Additional public and private investment will be needed to accelerate the efforts along with raising awareness among consumers to give back and

Extended Producer Responsibility (EPR) for Plastic Packaging

reuse plastic waste through the adoption of a sustainable lifestyle for a clean and green India.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG)

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India Set to Achieve US\$ 250 Billion Target for Textile Sector by 2030 through Creation of ESG Task Force

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Recently, the Ministry of Textiles has soft-launched a dedicated e-commerce website for handloom and handicrafts during the 'Saurashtra Tamil Sangamam'. A target of US\$ 250 billion has been set for the Textile sector by 2030 including the US\$ 100 billion export for which the setting up of an ESG Taskforce has also announced in the same event. The moves will help manufacturers and exporters and bring vibrancy to the Indian Textile Sector.

The ESG certification is expected to double the value of Indian textiles in the global market. Around 4.5 crore employed workers in the industry especially local artisans and women will get the direct benefit from this cost advantage and add up to the vision of developing the Indian economy in the Amrit Kaal.

Quick Facts about India's Textile Industry

28 168 31 Mn

Trained Artisan Energy Intensive Textile Units Functional Textile Parks

Source: https://www.investindia.gov.in/sector/textiles-apparel

India's Textile Sector: Leading the Chart

Largest Global Producer and Consumer of Cotton

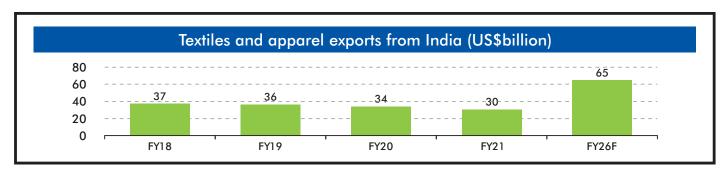
Second Largest Producer of Polyester, Silk, and Fibre across Globe

Second Largest Manufacturer of PPE in the World

Fifth Largest Producer of Technical Textiles in the World

Second Largest Employer Sector in India after Agriculture

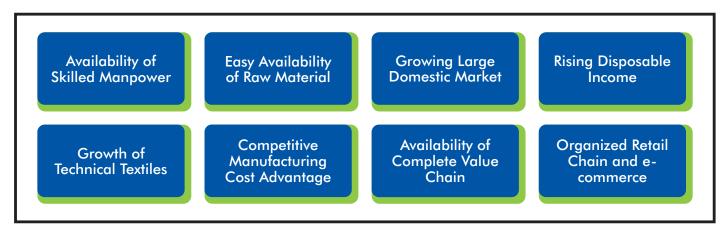
The fiscal year 2022 has seen a 41% YoY increase in India's textile and apparel exports including Indian handicrafts and achieved the mark of US\$ 44.4 billion worth of export. This trend has been expected to continue and the industry has a projection to touch the mark of US\$ 190 billion by 2025-26.



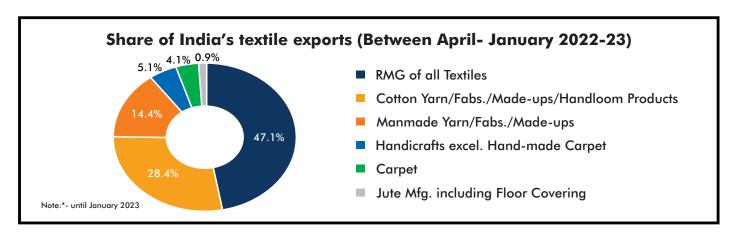
Source: https://www.ibef.org/industry/textiles

India's textile industry has strong production support in a variety of ranges in natural fibers such as cotton, jute, silk, and wool as well as synthetic fibers like polyester, nylon, and viscose. India is the largest producer of cotton in the world and offers a wide array of textile and apparel exports in the global market.

Drivers of Growth for the Indian Textile Sector



It thus holds the 4% share of total global trade in the textile and apparel segment. In the first month of the current year i.e. January 2023, **India has achieved the target of around US\$ 76.8 billion in the export of ready-made garments (RMG) of cotton** along with a range of accessories.



Source: https://www.ibef.org/industry/textiles

Due to the high demand for Indian textiles in the global market, the government is trying to grow the technical textile sector that promises superior quality. The Production Linked Incentive (PLI) scheme is helping to attract major investment in the domain. The growth scenario coupled with the formation of the ESG task force will push the industry into a sustainable path and motivate the stakeholders for the realization of set targets in the years to come.



GREEN TOURISM

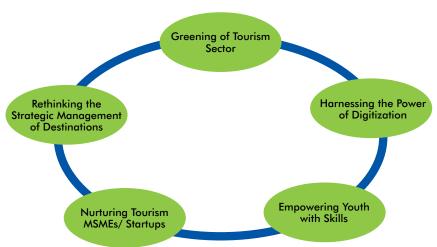
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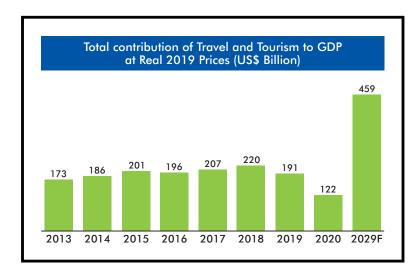
Green Tourism as a Vehicle for Achieving SDG has been Prioritized Under India's G20 Presidency

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India under its G20 Presidency prioritizing green tourism to achieve various SDG targets that will lead to a sustainable, responsible as well as resilient path for the sector's growth. The sector has the power to directly impacts the life and livelihood of the regional population and thus harness its power through skilling up, digitization, and other innovative ideas that will promise new growth prospects in a consensus-based approach.

Five Priority Areas for Tourism Under India's G20 Presidency





Source: https://www.ibef.org/industry/tourism-hospitality-india

In a geographically varying and culturally diverse country like India, green tourism has lots of hidden potential with a contribution of around 6%to India's GDP and an employment share of around 7%. India's push for the promotion of sustainable tourism practices is also playing a crucial role in creating new opportunities for global tourism. India is among the leaders in skilled hospitality and management professionals to provide the required thrust to the tourism sector.

India's G20 Presidency is providing a global platform to showcase India's capabilities in the area that can further add up to the growth of the Indian economy. The G20 events will help in creating awareness about green tourism possibilities present in the country and identifying niches such as rural and archaeological tourism. This will be a global stage to discuss the livelihood and business opportunities present in the sector that can accelerate the global race to achieve the various SDG targets such as poverty alleviation, decent work opportunities, etc.

Strategic Pillars for the Development of Green Tourism



Central Government Ministries

State Governments

Key Stakeholders in Green Tourism Development

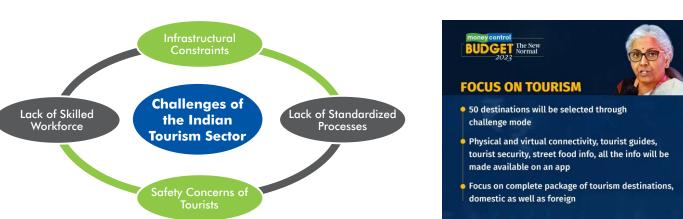
Non-government Organizations

Industry

Infrastructural

India has prioritized its vision to promote green growth through the provisions in the Union Budget 2023-24. For this, bringing various stakeholders such as Private investors, NGOs, local communities, etc on a common platform and attracting around 30.5 million tourists by 2028 along with the rising number of domestic tourists and travellers will be mandated.

Still, the country faces multiple challenges in the fair growth of the tourism sector. For which the government is taking a 360-degree view to develop a resilient and sustainable tourism infrastructure with enhanced connectivity. The identified 50 new tourism destinations and 59 new air routes will help further boost the growth of the sector.



The G20 presidency has provided a major recovery to the scenario of India's tourism sector. In 2022, with 6.19 million foreign tourist arrival, India has seen growth of 305% in comparison to 1.52 million foreign tourist arrival in the previous year. India thus leading from the front on **the phenomenal recovery in global tourism through around 11 million FTAs** that will provide the needed strength to India's sustainable tourism practices.

RENEWABLE ENERGY

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India aims to achieve 50% of Total Installed Electric Power Capacity from Non-fossil Fuel Sources by 2030

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India already achieving more than 40% of its total installed electric capacity from non-fossil fuel sources, has increased the target further to achieve 50% of total installed electric power capacity from non-fossil fuels by 2030. The revised targets are part of India's updated Nationally Determined Contributions (NDC) submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in August 2022. Through such ambitious targets, India positioned itself in 4th global rank in total renewable power capacity addition while accelerating India's growth traction towards green energy transition.

Snapshots of India's Renewable Energy Landscape

1,000+ GW

160 gw

40%

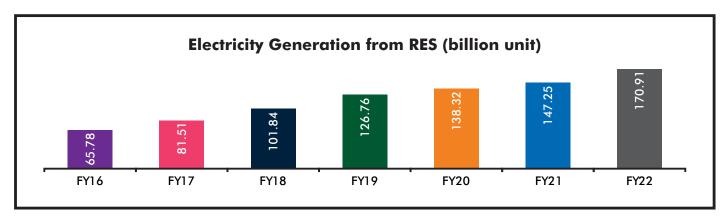
Renewable energy potential in India

Installed renewable energy capacity (as of May 2022)

Share in total installed capacity

Source: https://www.investindia.gov.in/sector/renewable-energy

India in its fight against climate change has set the roadmap to achieve net zero emission by 2070 along with a reduction emission intensity target of 45% of its GDP from the 2005 level by 2030. These enhanced targets are well-versed with India's Long-term Low Carbon Development Strategy and will help in monitoring, and reviewing the climate-sensitive goals. Being instrumental in the formation of the International Solar Alliance (ISA) and the 4^{th} largest installed capacity of solar power across the world, India promises a smooth transition from fossil fuels to renewable sources (RES).



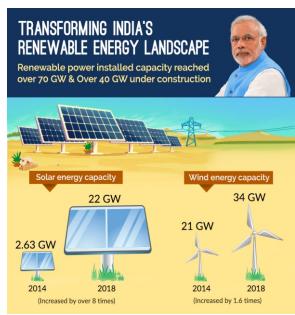
Source: https://www.ibef.org/industry/renewable-energy/infographic

India aims to prepare a comprehensive transmission plan to support 500 GW of non-fossil fuel-based installed capacity by 2030. With the rising population and rise in disposable income, the energy demand of the country is rapidly increasing. The government thus trying to bridge this gap through non-fossilfuel-based sources such as solar, wind, hydro power, bioenergy, etc.



India in the first six months of the fiscal year 2022-23 has seen a sharp rise of 76% in crude oil import bill. The continuously changing geopolitical scenario and rising import bills are compounding India's energy concerns that havean impact on all the sectors of the Indian economy. To address these diverse issues at the core and ensure energy security, the Government of India is knitting up a comprehensive policy landscapearmored through enhanced non-fossil fuels energy capacities.





India is progressing rapidly in the area of renewable energy and reducing its dependence on fossil fuels but still, it has a long way to go as it is mostly dependent on the import of solar and other modules from foreign countries. The climate change scenario also plays an important role in defining the future of India's energy mix along with the continuous upgrade in its energy infrastructure to support green growth with circular economy solutions.

TECHNOLOGY 4.0

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India's National Quantum Mission to Scale-up Scientific Research Towards Next Quantum Revolution

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The Government of India has recently approved the National Quantum Mission (NQM) to catch up with the next quantum revolution through seed, nurturing, and scaling up scientific as well as industrial research and development (R&D). The multiple benefits of Quantum Technology (QT) with the rising computational abilities is to develop a vibrant and innovative ecosystem to out stand India in the area of QT and its applications.

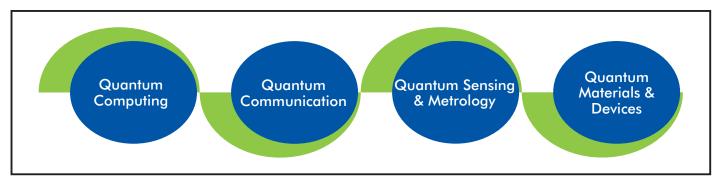
Details of National Quantum Mission

- O1 Total Budget Layout is of Rs 6003.65 Crore Between 2023-24 to 2030-31
- It will Develop Magnetometers with High Sensitivity in Atomic Systems and Atomic Clocks for Precision Timing, Communications, and Navigation
- It will Support Design and Synthesis of Quantum Materials Such as Superconductors,
 Novel Semiconductor Structures and Topological Materials for fabrication of
 Quantum Devices
- Development of Single Photon Sources/ Detectors, Entangled Photon Sources to be Developed for Quantum Communications, Sensing, and Metrological Applications.



In the next eight years, with a budgetary outlay of Rs 6003.65 crores, the Department of Science & Technology will develop and support QT devices along with its application that will enable long-distance secure communication.

Domains of Quantum Technology



The mission will target to develop quantum computers of intermediate scale with 50-1000 physical qubits at various platforms including superconducting and photonic technology with secure and reliable quantum communication over a range of 2000 km. Thematic hub-based setup in the top National and academic R& D institutes will focus on the identification and generation of basic and applied research-based knowledge in the mandated areas to provide a competitive edge for India in the QT domain across the globe.

For the cross-sectoral benefits of quantum technology especially in the areas like energy, finance, health, and space, the government over time has pushed for a dedicated mission for quantum technologies and its various application areas. These developments are expected to scale up India's effort to boost the Quantum Technology-led economic growth scenario.



Timeline of Formulating National Strategy for Quantum Technology

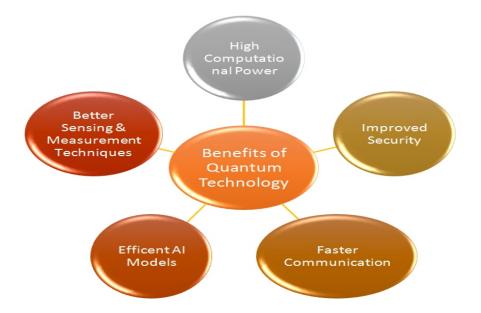
2018

2023

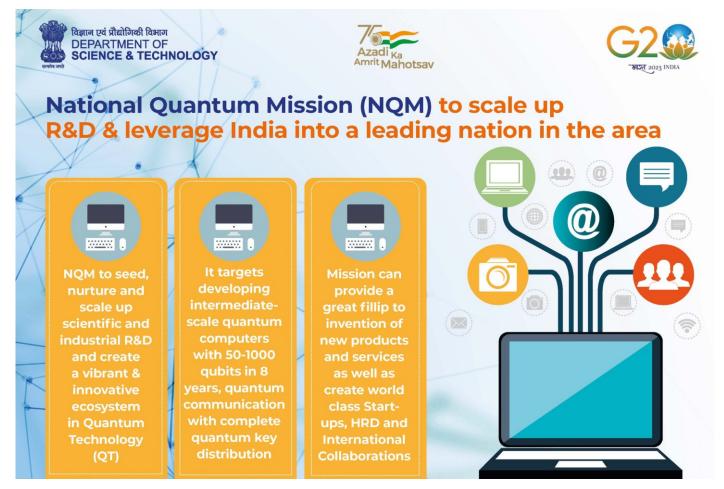
Approval of the Launch of National Mission on Interdisciplinary Cyber-Physical Systems to Make India a Leading Player in the Domain Government of India Approved National Quantum Mission to Aid Scientific and Industrial Research and Development in Quantum Technology

2020

Rs 8000 Crore Budget Allocated to national Mission on Quantum Technologies & Applications for Five Years The NQM will stand India on the Global Quantum map progressing towards the potential QTs under the second quantum revolution. For this, India is expecting to boost indigenous quantum technology development along with supporting infrastructure and a skilled workforce in the area of secure data transmission and communication.



Besides this, to reap its full potential, the R&D needs to bring down the expenses to develop specialized equipment with a wide array of applications including a solution to the environmental sensitivity of QT to temperature variations, magnetic fields, etc. The enthusiastic and vibrant startup ecosystem and international collaborations have the potential to encourage indigenous research and achieve quantum readiness to make India future ready.



Resources

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