GOVERNMENT

POLICY REPORT





SUSTAINABILITY

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India's Navigation Plan to Resolve Energy Trilemma among Availability, Affordability, and Sustainability

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India is navigating through the energy trilemma by making steady progress on all three aspects availability, afford ability, and sustainability. It is ensuring the steady flow of energy systems with rational prices irrespective of volatile international fuel prices due to changing geopolitical scenarios and other disruptions. India has been preparing itself to sustain a 3% annual growth in energy demand till 2040 in comparison to global energy demand growth of 1%.

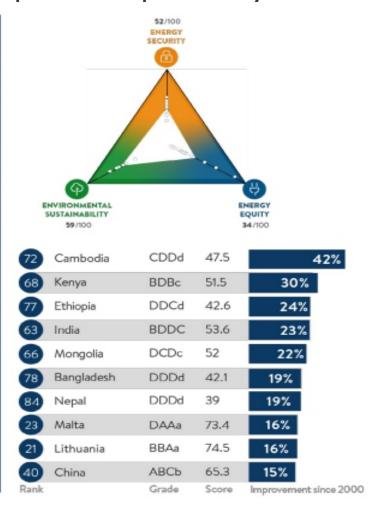
Comparative Chart Of International Petrol And Diesel Prices Versus India

Petrol (INR/Itr)				Diesel (INR/Itr)		
Country	April 22	April 23	(%)	April 22	April 23	(%)
Bangladesh	77.03	96.92	26	71.66	84.51	18
Sri Lanka	65.85	85.12	29	45.63	81.37	78
Nepal	97.89	112.67	15	87.16	110.77	27
France	145.23	173.45	19.43	143.63	161.27	12.28
Italy	140.34	169.12	20.51	139.04	157.95	13.60
UK	127.02	148.15	16.63	137.58	164.41	19.50
India (Delhi)	105.41	96.72	-8	96.67	89.62	-7

Source: https://pib.gov.in/PressReleasePage.aspx?PRID=1927172

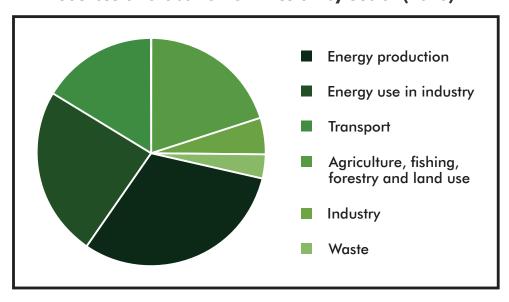
The World Energy Trilemma Index 2022 has also identified India's effort to make the transition to clean energy along with ensuring continuous availability of fuels to run the wheel of economic prosperity. This has also helped the country to maintain the lowest price inflation as energy is a primary requirement across the sectors. India has also secured its place in the top five overall improver countries in the 2022 Trilemma index which is a testimony to India's successful navigation plan for a secure, equitable, and sustainable transition of energy for its vast population.

Top 10 Overall Improver Country List under World Energy Trilemma Index 2022



The Trilemma index has come at a time when the world is experiencing major disruptions and absorbing frequent energy shocks due to multiple crises. It is throwing several challenges before the world economy to take as sustainable path with ensuring energy security. To tackle the climate change scenario it's important to take a forward path towards clean energy across the sectors but making it equitable and sustainable is a big challenge for a developing country like India.

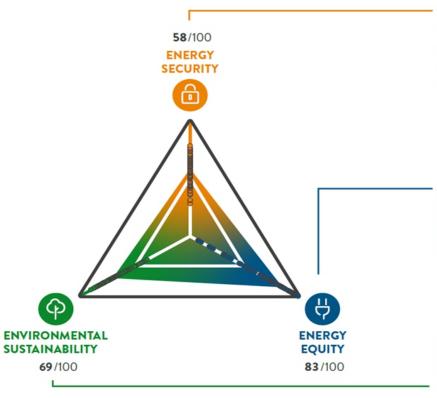
Sources of Global GHG Emission by Sector (2020)



Sources: https://www.worldenergy.org/assets/downloads/World_Energy_Trilemma_Index_2022.pdf?v=1669842216

Thus, the index is guiding the world economies including India to continue its effort in energy transition through a baseline design. It can help in understanding the impact and progress of respective policy designs and efforts to sail through the energy trilemma and attain green economy objectives in the long term. This will show the path of opportunities in India's energy transition and propose a way forward for improvements.

World Energy Trilemma Index 2022 Ranking Baseline Representation



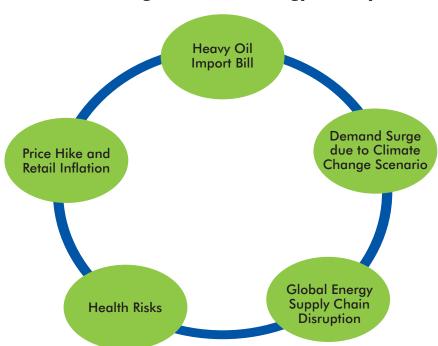
Reflects a nation's capacity to meet current and future energy demand reliably, withstand and bounce back swiftly from system shocks with minimal disruption to supplies.

Assesses a country's ability to provide universal access to affordable, fairly priced and abundant energy for domestic and commercial use.

Represents the transition of a country's energy system towards mitigating and avoiding potential environmental harm and climate change impacts.

To keep India inline with global efforts, the **NITI Aayog has also launched State Energy and Climate Index (SECI) to track state/ UT-level efforts** to ensure healthy competition in achieving affordable, accessible, and efficient clean energy transition by addressing the persistent challenges.

Challenges to India's Energy Security



India has also accelerated its effort to decarbonize the Indian economy while achieving its NDC target of net zero emission by 2070 and ensuring reliable energy access for its population to achieve the UN Sustainable **Development Goals**. The future socioeconomic growth of India is based on the equitable distribution of affordable energy choices. Thus, the country is leaping on India's ambitious journey for energy security through a major push to renewable energy capacity enhancement, grid integration, and energy storage, among others.

CARBON MARKET

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Carbon Credit Trading Scheme for Decarbonisation of the Indian Economy

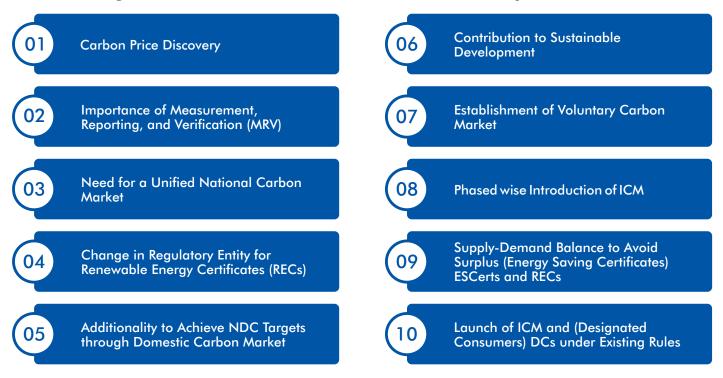
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The Government of India is envisaging a phase-wise plan to develop an Indian Carbon Market (ICM) that can balance the Green House Gas (GHG) Emissions through a trade of Carbon Credit Certificates (CCCs).

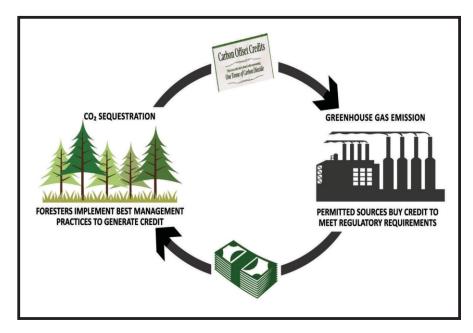
1 Carbon Credit= 1 Ton Of Carbon Dioxide Or The Equivalent in Other Greenhouse Gases

To develop a centralized mechanism for the process the Bureau of Energy Efficiency (BEE), the Ministry of Power along with the Ministry of Environment, Forest & Climate Change have been given the responsibility to ensure smooth energy transition efforts for the establishment of a Carbon Credit Scheme (CCS) based on some basic building blocks.

Building Blocks of the Indian Carbon Market Identified by BEE Stakeholders



India is currently under an energy savings-based market mechanism. In contrast, a carbon credit is an offset mechanism that permits the emission of a set amount of CO_2 or GHG. This is equated to one tonne of CO_2 removal, reduction, or sequestration from the atmosphere and provides a greater push toward decarbonization of the economy.



Source: https://www.insightsonindia.com/2023/03/30/draft-carbon-credit_trading-scheme/

It will create a competitive domestic market that can incentivize climate change efforts through low-cost innovative choices and develop carbon credits through sustainable projects. The ICM will play a major role in emission reduction with the use of clean technologies and carbon credit certificates (CCC). To achieve an effective carbon credit mechanism in place along with higher energy efficiency and conservation, the Government of India has come up with the Energy Conservation (Amendment) Act, 2022 in consultation with BEE.

Salient Features of Energy Conservation (Amendment) Act 2022

Provisions to Establish Carbon Markets to Encourage Carbon Trading and Reduce Net Carbon Emission Levels

Mandates the Use of Non-fossil Sources of Energy such as Green Hydrogen, Ethanol, Biomass, etc

Provision to Establish Domestic Carbon Market

To Ensure Energy Efficiency, Brought Large Residential Buildings under Energy Conservation Regime

Enhancement of the Scope of Energy Conservation Building Code to Promote Energy Conservation in Large Building

Strict Enforcement of Energy Conservation Measures through Amended Penalty Provisions

Increased the Size of the Governing Council of BEE

Empowered the State Electricity Regulatory Commissions to Ensure Effective Implementation of Energy Conservation Regulation

The development of the carbon market in India is expected to achieve India's NDC commitments such as reducing emission intensity by 45% of GDP by 2030 from 2005 level. Currently, the ICM works on Perform, Achieve, and Trade (PAT)scheme, which through various marketing mechanisms is supporting the growth of carbon trading in the Indian carbon market to achieve climate obligations.

Categories of Carbon Markets

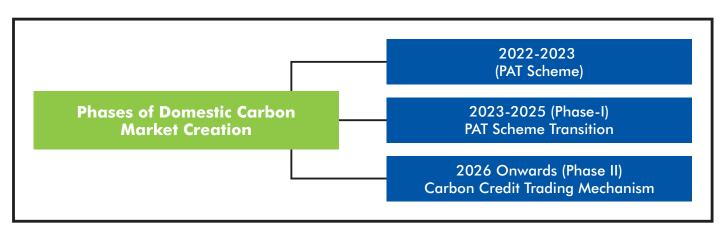
Compliance Market

- Responsible for Trasitioning from PAT Schemes
- This will Contribute in Compliance of law

Offset Market

- Responsible for Transitioning from Project based REC/CDM to a Carbon Trading Mechanism
- This is also known as Voluntary Market where Issuance, Buying, and Selling of carbon Credits will take Place

The growth of India's domestic carbon market has been planned in a due course of time in two different phases from 2023i.e. phase I between 2023-2025 and phase II from 2026 onwards. This phased-wise development will be based on effective policy implementation that will be capable of creating a sustainable mechanism to support the collaborations.



Hence, the ICM will play an instrumental role in achieving India's commitment to climate change and green economy. This will help in incentivizing Indian entities to reduce their emission intensity. It will also motivate them to contribute to achieving the climate targets through the consultation of major stakeholders such as Accredited Energy Auditors, Carbon Verifiers, etc, and develop a reliable, and robust carbon credit trading system in India soon.



CLIMATE CHANGE

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First Urban Climate Film Festival to Raise Awareness about Environmental, Social and Economic Impacts of Climate Change on Urban Settlements

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The first-of-its-kind Urban Climate Film Festival has been organized in New Town, Kolkata in the first week of June 2023. It has **leveraged the power of film medium to make aware the general public of the evil impacts of climate change on urban settlements** under the Urban Track of G20 (U20).

The festival was launched in March 2023 and has been organized by the National Institute of **Urban Affairs through** City Investments to Innovate, Integrate, and Sustain (CITIIS) and supported by the Ministry of Housing and Urban Affairs (MoHUA), French **Development Agency,** the European Union and Green Smart City **Corporation Limited,** New Town, Kolkata. It is focused to achieve the various objectives concerning the urban settlements equipped with climate-resilient planning.

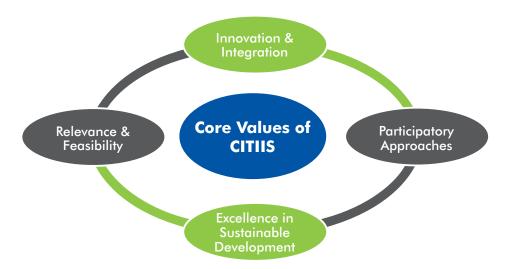


Objectives of the Urban Climate Film Festival

Employ the Powerful Medium of Film to Enlighten Audiences about Environmental, Social, and Economic Impacts of Climate Change on Urban Settlements

Trace the Conversations about Building Climate-resilient Cities and Invite Inputs from the Public on Same Encourage Public to Undertake
"Environmentally Responsible
Behaviours" in line with U20 Priority
Areas and Prime Minister of India's
inspiring Call through the LiFE Mission

The CITIIS program is mandated to assist India's 12 Smart Cities to implement innovative and sustainable urban infrastructure planning. The festival will help in raising awareness regarding sustainable urban development practices by demonstrating cooperation among stakeholders.



16 climate change-related movies from 12 countries including India were **showcased** at the event by giving an interactive platform to discuss urban infrastructure planning modalities including urban lifestyle. The CITIIS program will focus on mentor ship support to achieve appropriate, achievable, and viable solutions for the same.

> Thus, the festival has brought the global perspective to ignite public conversation regarding changing structures of urban settlements due to climate change by leveraging the power of visual media. It will prioritize spreading awareness about

climate adaptation

and mitigation plans

Three Tier Mentorship Model of CITIIS



Source: https://citiis.niua.in/ourusp

among citizens and motivate them to adopt environmentally responsible behaviours as emphasized under LiFE Mission for sustainable urban development in the time to come.



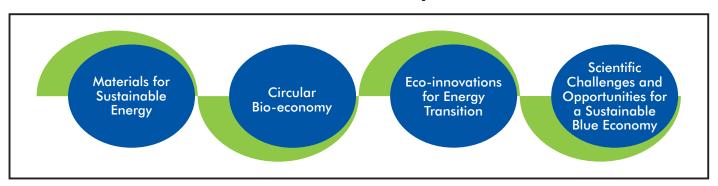
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G20 Research and Innovation Initiative Gathering (RIIG) Conference to Develop Equitable Society under India's G20 Presidency

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India's first-ever G20 Presidency is promising a lot to the globe due to India's pivotal role in prioritizing its commitments to an equitable society worldwide. It is becoming the voice of the unheard and thus is amplifying India's vision of prosperity and progress of mankind on the global stage. To take it further, the development of a sustainable blue economy through innovative and scientific means has become the agenda for the G20 RIIG conference at Diu.

RIIG Conference Priority Areas



The conference has been brought together by the Ministry of Earth Science where more than 35 foreign delegates, 40 Indian delegates, and other invitees were assembled at Diu. Earlier the other three RIIG Conferences on Materials for Sustainable Energy, Circular Bio-economy, and Eco-innovations for Energy Transition have been concluded at Ranchi, Dibrugarh, and Dharamshala respectively. This conference has given G20 members, delegates, invitees, experts, etc a global platform to share knowledge on various subthemes around sustainable blue economy along with exchanging the best practices.

Major Key Sub-themes under RIIG Conference, Diu

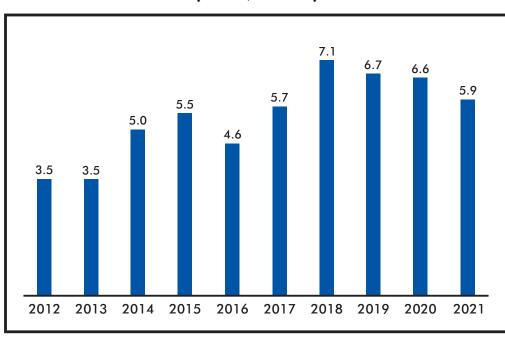
Blue Economy Sectors and Opportunities			
Marine Pollution			
Coastal and Marine Ecosystems and Biodiversity			
Observations, Data, and Information Services			
Coastal and Marine Spatial Planning			
Deep-sea Exploration, New and Renewable Offshore Energy			
Blue Economy Policies and Strategies			

India has a long coastline and has a multipronged plan around coastal area development to transform the blue economy around it with a significant improvement in coastal infrastructure that can save the natural marine ecosystem worldwide. The various policy models discussed in the conference have brought new ideas for the development of the blue economy and led to the formulation of guidelines for Scientific Research Infrastructure Sharina Maintenance and Networks (SRIMAN). It will also help in strengthening India's marine ecosystem and the growth of the National Blue Economy at the core.



In India, the coastal economy sustains more than 4 million human resources which are part of the world's second-largest fish production. The RIIG conference has realized the need for creating a central repository for all Science & Technology data that will in the future help to address the challenges of the blue economy and ocean environment with international cooperation through efficient research and innovation.

Yearwise Performance of Indian Marine Exports (In US\$Billions)



Thus, India has aim to bring G20 member countries to a consensus around the central idea of making a sustainable blue economy that is focused on scientific research and innovation to achieve social justice. It has allowed discussion of ocean climate change development to address climate resilience, exploration of deep-sea biodiversity, etc to achieve socioeconomic justice across the globe.

Source: https://www.ibef.org/blogs/importance-of-india-s-blue-economy

DIGITAL INDIA

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'SAMARTH' Campaign to Promote Digital Transactions in Rural India

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India is leading on the global chart for making the highest real-time transactions with 89.5 billion transactions in the year 2022 with a record YoY growth of 76.8%. Real-time digital transactions are the future of the modern economy and thus the Government of India has mandated to increase its reach upto rural India. To achieve this, the Ministry for Rural Development and Panchayati Raj has come up with the 'SAMARTH' (SashaktMahila, Atmanirbhar Rashtra) Campaign for 'Promotion of Digital Transactions in 50,000 Gram Panchayats' across rural India.

Features of SAMARTH Campaign

Coverage of 50,000 Gram Panchayts with Low Digital Penetration from Aspirational Districts and Regions

Target of Reaching 2.5 Crore Rural Households, especially Women Member of Self Help Groups

Arranging Training and Awareness Camps on Various Digital payment Modes such as UPI, BHIM app, etc

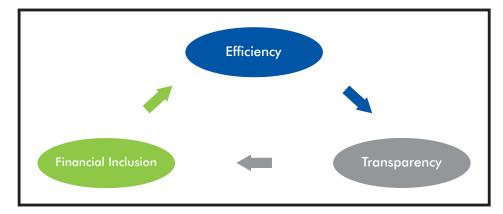
Facilitate Opening of Bank Accounts and Linking of Aadhar and Mobile Numbers for Digital Payments

Encouraging Adoption of Digital payments

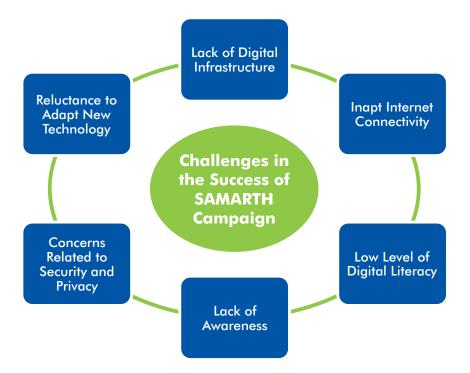
Close Monitoring and Reward Mechanism on Predefined Indicators for the Performance of Gram Panchayats, SHGs, Bank Mitras, etc

It will add up to the success of India's ambitious Digital India campaign and push rural India towards Atmanirbharta through the promotion of digital financial empowerment. It will further reduce the cash requirement and bring transparency and accountability to public service delivery at the ground level.

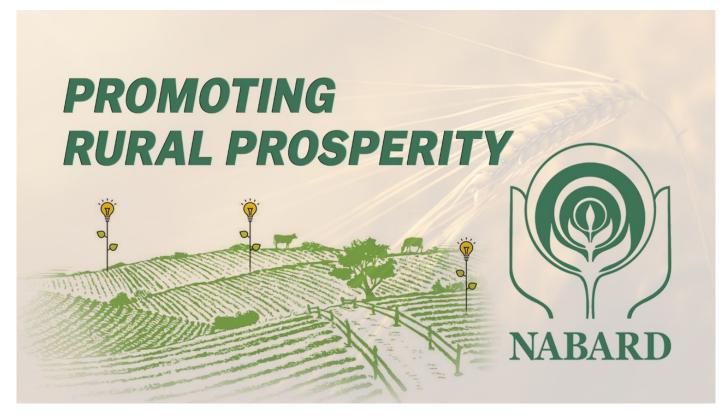
Significance of SAMARTH Campaign



This will smoothen the linkages of rural India with formal financial services and create opportunities to market access for high-income generation and improvement to the livelihoods. The campaign is a **joint initiative of the Ministry of Rural Development and Panchayati Raj, the National Bank for Agriculture and Rural Development (NABARD), and Common Service Centres (CSCs)** to sensitize the rural population through training, workshops, competitions as well as awards.



The Covid-19 pandemic has brought the focus to the advantages of digital transactions and thus scaling them up in rural India in a specified time frame under the campaign will bring new opportunities for growth and development for the Indian economy. This will benefit the rural economy in real means with the upgrade of digital infrastructure and increase in digital rural literacy rate to support the quality use of diverse digital payment modes over the years. It will create a supportive environment to flourish innovation and entrepreneurship in rural India with the growth of the digital economy in the time to come.



Resources

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