



SUSTAINABLE DEVELOPMENT, ENERGY AND CLIMATE CHANGE

This Infographic analyses progress made by India in climate change, sustainable development and energy access

SUSTAINABLE DEVELOPMENT GOALS

The UN Sustainable Development Goals (SDGs), adopted in September 2015, constitute a universal agreement to end extreme poverty

There are 17 SDGs based on the Millennium Development Goals (MDGs)

They cover social, economic and environmental dimensions

India played an important role in shaping the SDGs

INDIA SUSTAINABLE DEVELOPMENT GOALS

India's several programmes directly contribute to the advancement of the SDG agenda. e.g. PMJDY

Reinforcing India's commitment to the national development agenda & SDGs, India presented its 1st VNR on implementation of SDGs in July, 2017 in the High-Level Political Forum (HLPF) at United Nations, New York

PMJDY or Pradhan Mantri Jan Dhan Yojana is the world's largest financial inclusion programme

VOLUNTARY NATIONAL REVIEWS

The VNR or Voluntary National Reviews report is an analysis of progress under various initiatives in the country

The VNR report focused on 7 SDGs:

- 1 No Poverty
- 2 Zero Hunger
- 3 Good Health & Well-Being
- 4 Quality Education
- 5 Gender Equality
- 6 Clean Water & Sanitation
- 7 Affordable and Clean Energy
- 8 Industry, Innovation and Infrastructure
- 9 Industry, Innovation and Infrastructure
- 10 Reduced Inequalities
- 11 Sustainable Cities and Communities
- 12 Responsible Consumption and Production
- 13 Climate Action
- 14 Life below Water
- 15 Life below Water
- 16 Peace, Justice and Strong Institutions
- 17 Partnerships for the Goals

NATIONAL SDG INDICATORS & BASELINE

National SDG indicators are set on the line of global SDG indicators endorsed by the UN Statistical Commission

Ministry of Statistics and Programme Implementation is developing draft to regularly track progress of the SDG with base year as 2016

NITI Aayog will collect & document best practices in implementation of SDGs for public use

URBAN INDIA AND SUSTAINABLE DEVELOPMENT

Urban Local Bodies or ULBs can bring operational efficiency & financial viability in urban projects through municipal bonds, PPPs, credit risk guarantees etc.

The government initiated Smart Cities Mission, Swachh Bharat Mission etc to achieve SDG 11 which states: "make cities inclusive, safe, resilient & sustainable"

The expected urban population is approx 600 million by 2031

India is now embarking on a fast rural to urban transition

In July 2015, SEBI allows municipal bodies to issue municipal bonds through private placement or public issue

Challenges Ahead-(in next 20 yrs) financing for creation of urban infrastructure

- ▶ About 39 lakh crore (at 2009-10 prices)
- ▶ 20 lakh crore for operation and maintenance
- ▶ Recovery of user charges is less than 50 per cent on an average in most of ULBs

Four Pillars of Urban Sustainability

Environmental Management

Social Development

Economic Development

Effective urban governance. (World Economic and Social Survey, 2013)

ACCESS TO SUSTAINABLE ENERGY

Around 64% of the population (world average - 38%) lacks access to clean cooking. Consequently, it-

- ▶ Increases the burden on female to collect fuel wood.
- ▶ Affects their health due to more exposure to indoor air pollution

Access to affordable, reliable, sustainable and modern energy is important for achieving the SDGs

- ▶ To have good health, well-being and gender equality.
- ▶ To achieve economic prosperity for industry, innovation & infrastructure, sustainable cities and communities
- ▶ To have a positive impact on girl's education and employment

INITIATIVES TAKEN BY GOVERNMENT FOR IMPROVING ACCESS TO CLEAN ENERGY

Pradhan Mantri Ujjwala Yojana to provide LPG connections to BPL households

Ujjwala Plus to address the cooking needs of deprived people

Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) to achieve 100 per cent village electrification

Focus on energy generation through sustainable sources. Ex - As on 30th November 2017, 18% of the total capacity of electricity was from renewable energy sources

Guidelines Issued for efficient energy use, Etc

Saubhagya Scheme to universal household electrification

INTERNATIONAL SOLAR ALLIANCE (ISA) ENTERED INTO FORCE

It is a coalition of countries lying fully or partially between the Tropics of Cancer & Capricorn, entered into force on 6th Dec, 2017

ISA is the first international intergovernmental treaty-based organization headquartered in India (Gurugram, Haryana)

Major initiative of ISA includes -

- ▶ Development of "Common Risk Mitigating Mechanism" (CRMM) for de-risking & reducing the financial cost of solar projects
- ▶ Establishment of Digital Infopedia which serves as a platform to connect with one another

Presently ISA has three programmes -

- ▶ Scaling Solar Applications for Agricultural Use
- ▶ Affordable Finance at Scale
- ▶ Scaling Solar Mini-grids
- ▶ Note- Two are Under Process - Scaling Solar Rooftops and Scaling E-Mobility & Storage

ISA's strategic partners are United Nations including its organs

INDIA AND CLIMATE CHANGE

INDIA HAS ALWAYS BEEN ENGAGED

Constructively under United Nations Framework Convention on Climate Change (UNFCCC)

Actively in developing guidelines for effective implementation of the Paris Agreement on climate change

INITIATIVES TAKEN BY INDIA

National Action Plan on Climate Change & State Action Plans on Climate Change - includes eight national missions covering -

- ▶ Solar
- ▶ Energy Efficiency
- ▶ Agriculture, Etc
- ▶ Water
- ▶ Knowledge
- ▶ Himalayan Ecosystem
- ▶ Sustainable Habitat
- ▶ Forestry

Mission on strategic knowledge for Climate Change - India has established 8 Global Technology Watch Groups in the areas of-

- ▶ Renewable Energy Technology
- ▶ Manufacturing
- ▶ Enhanced Energy Efficiency
- ▶ Green Forest
- ▶ Advanced Coal Technology
- ▶ Sustainable Habitat
- ▶ Sustainable Agriculture
- ▶ Water

Climate Change Action Programme -

- ▶ For Building And Supporting Capacity at Central & State Levels
- ▶ Strengthening Scientific & Analytical Capacity For Climate Change Assessment
- ▶ Establishing Appropriate Institutional Framework

National Adaptation Fund on Climate Change to support concrete adaptation activities, not covered in any scheme

Forest and Tree cover has increased (despite ongoing development) transforming country's forests into a net sink

Pradhan Mantri Krishi Sinchayee Yojana for extending the coverage of irrigation and improving water use efficiency

Zero Effect, Zero Defect to enhance energy efficiency and resources efficiency in MSMEs

National Mission for Clean Ganga to rejuvenate the river

To promote greener actions SEBI issued the circular on the disclosure requirements for Issuance and Listing of Green Debt Securities in May, 2017

AIR POLLUTION IN DELHI - POSSIBLE SOLUTIONS

In recent years, the National Capital Delhi & adjoining areas have experienced poor air quality starting winter due to the proximate 4 top reasons -

- ▶ Crop residue, biomass burning
- ▶ Vehicular emissions & redistributed road dust
- ▶ Massive construction, Power plants, industry, other
- ▶ Winter temperature inversion, humidity & (absence of) wind

REMEDY SUGGESTED BY NATIONAL GREEN TRIBUNAL AND SUPREME COURT DECISIONS

Short-Term Emergency Plan (when 24-hourly PM2.5 exceeds 300-400 µg/m3):

- ▶ Incentive payments to farmers, coordinated across states & NCR
- ▶ Heavy penalties on agricultural waste burning using satellite and mobile based applications in NCR

Medium And Long-range Actions:

- ▶ Phase-out old vehicles etc
- ▶ Implement congestion pricing for vehicles
- ▶ Expand & improve public buses to reduce private vehicle use
- ▶ Use technologies to convert agricultural waste into usable concentrated fodder or bio-fuels

As per the Global Climate Risk Index 2018, India is amongst the six most vulnerable countries in the world

In view of this, India needs to build inherent adaptive capacities of individuals, households, & communities to meet future climate change Challenges

Therefore the Fifteenth Finance Commission Terms of Reference outlined climate change as an important climate change for consideration

CONCLUSION

VISIONARIAS INSPIRING INNOVATION

