YOJANA MAGAZINE ANALYSIS

(February 2025) (Part 4/4)

TOPICS TO BE COVERED

PART 1/4

- PM KUSUM: EMPOWERING FARMERS WITH SOLAR ENERGY
- ENERGY SECURITY IN INDIA

PART 2/4

- INDIAN CARBON MARKETS
- SMART CITIES MISSION & ROLE OF ENERGY EFFICIENCY

PART 3/4

- SCOPE & OPPORTUNITIES FOR RENEWABLE ENERGY IN RURAL INDIA
- GREEN HYDROGEN

PART 4/4

- BIOFUELS AS A PROMISING SUBSTITUTE FOR HIGH CARBON ENERGY SOURCE
- PRAGATI: DRIVING INDIA'S DEVELOPMENT WITH PURPOSE



BIOFUELS AS A PROMISING SUBSTITUTE FOR HIGH CARBON ENERGY SOURCE

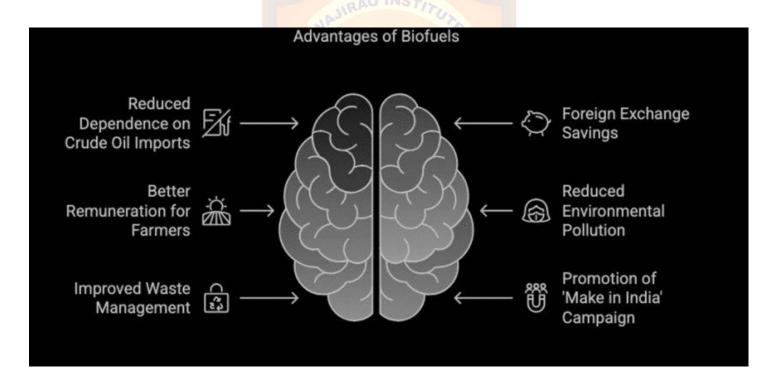
- The demand for energy is increasing, but fossil fuels are no longer sustainable due to their environmental impact.
- Biofuels, derived from renewable biomass, offer a strategic advantage for both sustainable development and energy security.
- The National Policy on Biofuels (NPB) 2018 aims to enhance biofuel generation and create a sustainable biofuel ecosystem.
- Jatropha curcas, a non-edible feedstock, is identified as a key source for biodiesel production.

ABOUT BIOFUELS

- Biofuels are renewable fuels made from biomass, used primarily for:
 - Transportation
 - Heat generation
 - Power generation



- The most common biofuels are **ethanol** and **biodiesel**, which:
 - Offer environmental benefits
 - o Help reduce greenhouse gas emissions
- Biofuels contribute to sustainable development, reduce dependence on fossil fuels,
 and enhance national energy security.



NEED FOR ALTERNATIVE ENERGY SOURCES

 Access to affordable and clean energy is essential for health, development, and wellbeing.

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- Conventional energy sources, especially fossil fuels, harm the environment.
- There is a growing need for alternative energy sources to address:
 - Climate change
 - Biodiversity loss
 - Pollution

Biofuels are emerging as an ideal solution to meet India's energy needs sustainably.

BIOFUELS IN INDIA

- India's biofuel initiative began in 2003, focusing on molasses for bioethanol and
- Challenges in biofuel production:
 - Inconsistent production
 - High costs
 - Limited land availability
 - Selection of feedstock

A **coherent policy** with a **long-term vision** is needed to sustain India's biofuel efforts, offering benefits like **energy security**, **economic growth**, and a **higher quality of life**.

HOUSEHOLD ENERGY & BIOFUELS

- Household energy is crucial for health and well-being.
- Unaffordable or inadequate access to energy can have adverse consequences.
- Biofuels can provide a viable solution for household energy needs, offering:
 - Social benefits
 - Environmental benefits

JATROPHA CURCAS

- Jatropha curcas is a non-edible oilseed identified as a suitable feedstock for biodiesel production in India.
- Advantages of Jatropha:
 - Can grow in arid zones and degraded lands
 - Resistant to pests and diseases
 - Attracts pollinators
 - Sequesters carbon
 - o Provides valuable byproducts



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NATIONAL POLICY OF BIOFUELS

- NPB 2018 aims to increase biofuel production and establish a sustainable biofuel ecosystem in India.
- The government aims to meet 20% of India's diesel demand using biofuels, which will require:
 - Significant land resources
 - Major investment
- The NPB 2022 amendment advanced the target for achieving 20% bioethanol blending in petrol to 2025-26 and expanded the range of eligible feedstocks.

CHALLENGES & OPPORTUNITIES

Challenges:

- Need for research and development
- Technology transfer to improve biofuel production
- Mainstreaming biofuel adoption
- Promoting sustainable production practices

Opportunities:

- Reducing greenhouse gas emissions
- Improving air quality
- Promoting rural development

CONCLUSION

energy production and consumption. By addressing the challenges and leveraging the opportunities, India can use biofuels to Achieve energy security, Promote environmental sustainability, Drive economic growth.

PRAGATI: DRIVING INDIA'S DEVELOPMENT WITH PURPOSE

- The **PRAGATI** (Pro-Active Governance and Timely Implementation) initiative has played a significant role in accelerating **infrastructure development** and improving **governance** in India.
- Launched in 2015, PRAGATI follows the 'Minimum Government, Maximum Government, using technology and collaboration to speed up progress and reduce delays.

KEY FEATURES

PRAGATI focuses on **collaboration**, **transparency**, and **technology** to ensure efficient project management and **timely implementation**. Some of its key achievements include:

- 340 stalled projects worth Rs 17.05 lakh crore (\$205 billion) have been reviewed since its launch.
- Significant reduction in delays and improved completion timelines.

- Streamlined environmental and forest clearances, reducing approval times:
 - Environmental clearance approval time dropped from 600 days to 70-75 days.
 - o Forest clearance approval time dropped from **300 days** to **20-29 days**.
- Improved grievance redressal mechanisms, such as CPGRAMS, and reduced passport issuance times.

IMPACT ON KEY PROJECTS

PRAGATI has been instrumental in accelerating several important infrastructure projects, including:

- Bogibeel Rail and Road Bridge: Completed in 3 years after over two decades of delays.
- Jammu-Srinagar Baramulla Rail Link: On track for completion by 2025, overcoming years of stagnation.
- Navi Mumbai Airport: Resolved land acquisition hurdles, set for launch by
 December 2024.





- Bengaluru Metro Rail: Expedited land acquisition for Phase 1, enabling the metro's launch in 2017.
- Haridaspur-Paradeep Rail Connection: Resolved funding and land acquisition issues, leading to the inauguration of the rail line in 2020.
- Dahisar-Surat Section, National Highway 8: Enabled progress on the service road,
 with safeguards for wildlife and compensation for landowners.
- Varanasi-Aurangabad Section, National Highway 2: Addressed land record challenges, speeding up the project's completion.

LEADERSHIP & GOVERNANCE

PRAGATI has created a culture of **transparency** and **responsiveness** within the government. Key aspects include:

- Use of real-time data and proactive problem-solving.
- Promotion of cooperative federalism, with both Central and state governments working together for shared goals.

INFLUENCE ON OTHER SCHEMES

PRAGATI's success has driven technology adoption in several other important government schemes, including:

- Swachh Bharat Mission: Built 12 crore toilets and created ODF (Open Defecation
 Free) villages.
- Jal Jeevan Mission: Increased tap water access for rural households from 17% in
 2019 to 74% in February 2024.
- Saubhagya Scheme: Achieved universal electrification.
- Vibrant Villages Programme (VVP): Transformed 46 Northeast villages into India's 'First Villages'.
- Light House Projects: Promoted innovation in housing construction with digitized technology.
- SVAMITVA Initiative: Enabled legal land ownership records for rural residents using drone technology.



GLOBAL BENCHMARK FOR GOVERNANCE

PRAGATI has set a **global benchmark** for governance by promoting:

- Transparency, accountability, and efficiency in project implementation.
- The use of technology like drone feeds and GPS tracking for real-time data collection and quick decision-making.
- Digital dashboard approach for enhanced project oversight across sectors.
- Fostered **public participation** through a robust **feedback loop**, allowing citizens to directly influence governance.

CONCLUSION

PRAGATI has transformed **governance** in India, showcasing the power of **technology**, **collaboration**, and **decisive leadership** in driving development and achieving tangible results. Its success serves as an inspiration for other countries aiming to improve **infrastructure delivery** and enhance **governance effectiveness**.