22/04/2024 Monday

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**DAILY NEWS ANALYSIS** 

POLITY

ECONOMICS

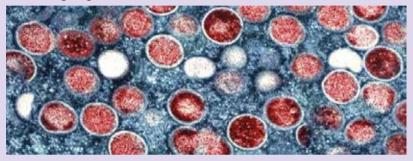
TECHNOLOGY

**ECOLOGY** 

#### SCIENCE AND TECHNOLOGY

# The Mpox Virus Uses A 'Genomic Accordion' To Evolve And Infect Humans

**CONTEXT:** Researchers are studying the rapidly evolving mpox virus, particularly its "genomic accordion" regions, to understand how it transmits and potentially develop better prevention strategies in the face of ongoing outbreaks.



**BACKGROUND:** Mpox outbreaks are on the rise, with a recent variant particularly adept at human-to-human transmission. Scientists are studying the virus's unique ability to expand or contract its genome (the "genomic accordion") to understand its evolution and develop effective prevention strategies. This research, like the success of smallpox eradication, highlights the importance of global health efforts to combat emerging threats.

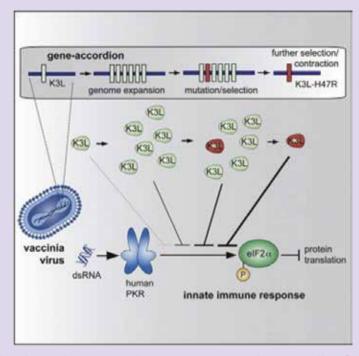
#### MPOX VIRUS AND THE GENOMIC ACCORDION

#### WHAT IS GENOMIC ACCORDION?

A **genomic accordion** refers to the remarkable ability of some viruses, like the mpox virus (previously called monkeypox), to **dynamically change the size of their genome**. Imagine an accordion that expands and contracts to create sound – the genomic accordion works in a similar way, but instead of air, it's the genetic material that expands and contracts.

- **Expansion:** The virus can increase its genome size by two main methods:
  - Gene duplication: The virus makes copies of existing genes within its genome. This can potentially introduce new functionalities or enhance existing ones.
  - Accumulation of mutations: The virus accumulates changes in its genetic code over time. These mutations might be beneficial, neutral, or even detrimental.
- **Contraction:** The virus can decrease its genome size by two main methods:
  - Deletion of gene stretches: The virus removes unnecessary or non-functional sections of its genome, streamlining its genetic code.
  - Gene inactivation: The virus renders existing genes non-functional, potentially because they are no longer needed or might even be harmful.

This rhythmic expansion and contraction of the genome is why it's called an accordion. It allows the virus to adapt to its environment and evade selective pressures.



#### Why does the mpox virus use a genomic accordion?

By changing its genome size, the mpox virus can evolve in several ways:

- **Gaining new functions:** By duplicating genes or acquiring mutations, the virus might gain new abilities, such as the ability to infect new hosts or resist existing treatments.
- Enhancing existing functions: Duplicating genes or specific mutations can strengthen existing functionalities, like increasing transmissibility or virulence (causing more severe disease).
- **Becoming more efficient:** Deleting unnecessary genes or inactivating non-essential ones can make the virus smaller and more efficient, potentially aiding its survival.
- Evading the immune system: Mutations or gene deletions can help the virus evade detection by the host's immune system, allowing it to replicate and spread more easily.

#### Importance of understanding the genomic accordion:

Scientists studying the mpox virus believe that the genomic accordion plays a crucial role in its evolution and ability to infect humans. By understanding how these accordion regions work, researchers can:

- Identify how the virus is adapting and becoming more transmissible.
- Develop strategies to target these regions and prevent the virus from expanding or contracting its genome in ways that benefit it.

22/04/2024 Monday — April =

 Predict how the virus might evolve in the future, allowing for a more proactive approach to prevention and treatment.

The concept of the genomic accordion highlights the dynamic nature of viruses and the importance of ongoing research to combat emerging threats like mpox.

#### **Evolving Threat**

- Mpox outbreaks are on the rise, with a major outbreak in 2022-2023.
- A recent variant (clade IIb) is particularly adept at human-to-human transmission.

#### **Smallpox - A Cautionary Tale**

- Smallpox, another poxvirus, caused immense devastation in the past.
- The success of smallpox eradication highlights the importance of global health initiatives.

#### The Mpox Virus

- Mpox is a DNA virus with a unique ability to expand or contract its genome.
- These expansions and contractions are called "genomic accordions."

#### **New Study on Mpox Genome**

- Researchers sequenced the mpox virus from the 2022 outbreak.
- They identified the genomic accordion regions influencing human-to-human transmission.
- These regions were previously thought to be uninformative.

#### **Mpox Clades and Lineages**

- Mpox genomes can be divided into clades (I and II) and lineages.
- The 2022 outbreak involved a new lineage (clade IIb) with high transmissibility.

#### **Recent Outbreak in the DRC**

- A large mpox outbreak occurred in the Democratic Republic of Congo (DRC) in 2023-2024.
- This outbreak involved clade I and showed high transmissibility and mortality.
- Genetic data suggests a distinct lineage within clade I emerged from a recent zoonotic spillover.

#### Importance of Genomic Surveillance

- Studying the mpox genome helps us understand its evolution and develop prevention strategies.
- Ongoing research and global health efforts are crucial to combat mpox and other emerging threats.

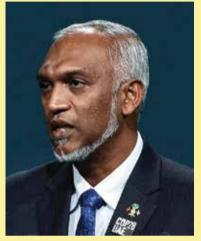
#### CONCLUSION

The mpox virus's ability to dynamically change its genome size,known as the "genomic accordion," presents a significant challenge in controlling its spread. By understanding how this mechanism allows the virus to adapt and evolve, researchers can develop more effective prevention strategies. This includes identifying how the virus becomes more transmissible, evades the immune system, or gains new functionalities. The success story of smallpox eradication demonstrates the power of global health initiatives in combating emerging threats. Studying the mpox genome through ongoing research is crucial for staying ahead of the virus's evolution and developing effective vaccines and treatments. By working together, scientists and public health officials can mitigate the threat of mpox and other emerging viral diseases.

#### INTERNATIONAL RELATIONS

# Muizzu's Party Marks Big Win In Maldives Parliamentary Polls

**CONTEXT:** President Mohamed Muizzu of the Maldives, backed by his ruling People's National Congress (PNC), secured a significant parliamentary majority, reshaping the legislature and signaling a shift towards closer ties with China while fulfilling campaign promises such as the withdrawal of Indian military presence.



# 1. Parliamentary Election Outcome:

- The ruling People's National Congress (PNC) in the Maldives won a decisive victory in the parliamentary elections.
- President Mohamed Muizzu gained significant control over the legislature, consolidating power six months into his presidency.

#### 2. Political Landscape Shift:

The PNC's win reshapes the

Maldivian parliament, previously dominated by the Opposition Maldivian Democratic Party (MDP), now favoring President Muizzu's administration.

 Despite internal political divisions within Muizzu's camp due to former President Abdulla Yameen's formation of a new party, the PNC secured a "super majority" in parliament.

#### 3. Strategic Policy Shifts:

- President Muizzu, who advocated for the removal of Indian military presence, succeeded in implementing this campaign promise.
- He also pledged to enhance strategic ties with China, signaling a shift in foreign policy priorities during his state visit earlier in the year.

#### 4. Economic Challenges and Voter Turnout:

- President Muizzu faces economic challenges, including warnings from the International Monetary Fund about the country's high risk of debt distress.
- Despite these challenges, voter turnout in the parliamentary election remained substantial, with 76% of eligible voters casting their ballots.







22/04/2024 Monday — April

#### ECONOMICS

### **Sobering Assessment**

**CONTEXT:** The global economy is recovering, but the gap between rich and poor countries is widening, with the poorest nations struggling to recover from the pandemic and needing more support from wealthier countries.

**BACKGROUND:** The global recovery is uneven. Wealthy nations bounce back, but the poorest struggle. The pandemic hit them harder, leaving them with crippling debt, rising inflation, and limited resources for essentials. The international community isn't offering enough support, leaving millions facing hunger and a bleak future. This neglect hurts not just these countries, but global prosperity itself.

# UNEVEN GLOBAL RECOVERY: RICH NATIONS SURGE, POOREST COUNTRIES STRUGGLE

Widening Gap: Wealthier nations, led by the US, are experiencing a rebound with the IMF revising its 2024 growth forecast to 3.2%.

- Lagging Behind: In contrast, the poorest countries, particularly in Africa, Latin America, Pacific Islands, and Asia, are struggling. These nations suffered the most significant economic output decline during the pandemic compared to pre-pandemic projections (World Bank, "Global Economic Prospects," June 2023:
- Reasons for Lag: Several factors contribute to this disparity:
  - Unequal Pandemic Impact: Poorer countries with weaker healthcare systems and limited social safety nets faced a more severe economic downturn due to the pandemic.
  - Mounting Debt Burden: These nations are now saddled with increased debt incurred during the pandemic, limiting their ability to invest in crucial areas like education and healthcare.
  - Rising Inflation: Inflation further hinders growth and exacerbates food insecurity, disproportionately affecting the poorest populations (IMF, "World Economic Outlook," April 2024: .
  - Lack of Support: The international community is criticized for not providing enough financial assistance to these struggling economies. The World Bank reports that half of the world's 75 poorest countries are experiencing a widening income gap with the wealthiest, marking a "historic reversal" of development (World Bank, "A Lost Decade for the Poorest?," April 10, 2024:
- Humanitarian Crisis: This situation is particularly alarming because these poorest nations house a quarter of the world's population (1.9 billion people) and are home to 90% of people facing hunger or malnutrition (World Bank blog, April 10, 2024).
- Global Impact: The argument presented is that neglecting these countries not only hurts their citizens but also hinders global prosperity in the long run. A stable and prosperous global community requires addressing the needs of all nations.

This uneven recovery highlights the need for increased international support for the poorest countries. Measures like debt relief, increased financial aid, and technology transfer can help bridge the gap and foster a more inclusive global economic recovery.

**CONCLUSION:** The glaring disparity in global economic recovery, with affluent nations thriving while the poorest struggle, demands urgent international solidarity and support. This gap, worsened by unequal pandemic effects, soaring debts, inflation, and insufficient aid, has triggered a widespread humanitarian crisis. Neglecting these economies harms their people and endangers global stability and prosperity. To tackle these issues, measures like debt relief, increased aid, and technology sharing are vital for a more inclusive and sustainable recovery. International cooperation and solidarity are paramount for ensuring a brighter, fairer future for all nations.

#### POLITY AND GOVERNANCE

## On The Fall In Household Savings

**CONTEXT:** A recent plunge in household savings in India has sparked concerns about the nation's economic health. This analysis delves into the reasons behind the decline, exploring how it might impact household debt, consumption patterns, and ultimately, stable economic growth.



#### **THE GIST**

- The decline in household savings is brought about by a drastic reduction in net financial savings as the household net financial savings to GDP ratio attained a four-decade low.
- The rise in household debt burden has two concerns for the macroeconomy. The first concern is about debt repayment and financial fragility. Since the repayment capacity depends on the income flow, a key criterion for evaluating a household's debt sustainability is the difference between interest rate and the income growth rate.
- The second concern pertains to the implication on consumption demand. Over and above disposable income, the consumption expenditure of the household can be affected by their wealth, debt, and interest rate.

#### 1. Overview of Household Savings Trends:

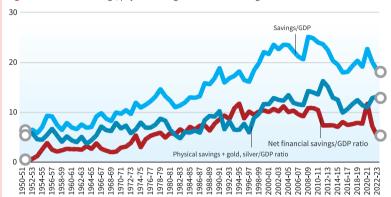
- Recent debates in India focus on the decline in household savings, notably seen in the drop of the household net financial savings to GDP ratio to a four-decade low.
- Figure 1 illustrates the trend in household savings, physical savings, gold, and net financial savings, showing a significant reduction in net financial savings despite a slight recovery in physical savings.

22/04/2024 Monday — APRIL

## The rising debt burden

The household balance sheet trends indicate a broader change in the structure of the economy. The change in composition of the asset side of the household balance sheet towards financial assets indicate some degree of financialisation of the economy

Figure 1: Household savings, physical savings and financial savings as a share of GDP



**Figure 2:** The household borrowing-income ratio, debt-income ratio and the ratio between household physical savings and gross financial savings



Figure 3: The gap between lending rate and interest rate-income growth

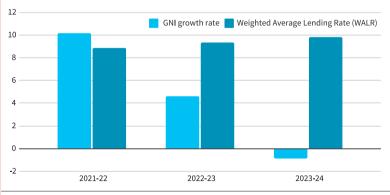
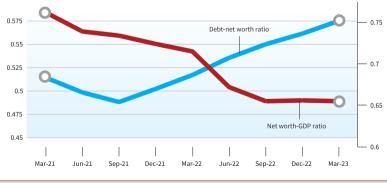


Figure 4: Household net worth GDP ratio and debt-net worth ratio



#### 2. Interpreting Lower Financial Savings:

- Household net financial savings reflect the difference between gross financial savings and borrowing.
- Factors contributing to reduced net financial savings include increased borrowing for consumption or investment and higher interest payments.
- Figure 2 depicts trends in household borrowing, debt, and the ratio of physical savings to gross financial savings, highlighting a rise in household liabilities and a shift towards financial assets.

#### 3. Implications of Higher Debt Burden:

- Rising household debt raises concerns about debt repayment, financial fragility, and reduced consumption demand.
- Figure 3 shows a declining trend in the difference between lending rates and income growth rates, indicating challenges in debt sustainability.
- Higher household debt can lead to credit rationing, reduced credit disbursement, and lower consumption expenditure.

#### 4. Macroeconomic Implications:

- Procyclical leverage and compositional changes in household balance sheets pose vulnerabilities.
- Policy measures like higher interest rates to combat inflation may exacerbate household debt burdens and impact consumption and aggregate demand.
- The shift towards financial assets indicates a broader trend of financialization in the economy, potentially making economic growth more fragile and jobless.

**Conclusion:** The trends in household savings and debt highlight the need for policies that balance inflation concerns with household debt sustainability and consumption stability to support economic growth and stability.

#### **POLITY AND GOVERNANCE**

# Unique ID Must Be Generated For Organ Donation: Centre

**CONTEXT:** To prevent commercial organ trade, especially involving foreigners, India's health ministry is requiring a unique ID system for all organ transplants.



22/04/2024 Monday — April =

# CRACKING DOWN ON ORGAN TRADE IN INDIA: NEW MEASURES BY THE HEALTH MINISTRY

#### Unique ID System for Organ Transplants:

- To address concerns about commercial organ trade, especially involving foreigners, the Ministry is mandating a unique ID system for all organ transplants.
- This ID, called a NOTTO-ID, will be assigned to both the donor and recipient by the hospital through the National Organ and Tissue Transplant Organisation (NOTTO) website.

#### • Stricter Monitoring for Foreign Nationals:

- The new directive comes in response to reports of malpractice and a rise in organ transplants involving foreign citizens in India.
- Local authorities will be required to implement stricter monitoring of these procedures.
- Additionally, the Ministry has instructed state authorities to investigate all transplants involving foreign nationals.

#### Ensuring Ethical Practices:

- To prevent illegal organ trade, the NOTTO-ID will be mandatory for allocating organs from deceased donors.
- For transplants with living donors, the ID must be generated within 48 hours of surgery.
- State authorities will conduct regular inspections of transplant hospitals. These inspections will focus on:
  - The quality of transplant procedures.
  - Post-operative care provided to both donors and recipients.
  - Overall transplant outcomes.
- Any violations of the Transplantation of Human Organs and Tissues Act (THOTA) of 1994 will be investigated. Penalties may include suspension of a hospital's transplant license.

#### POLITY AND GOVERNANCE

# Net Direct Tax Collections Exceed 2023-24 Target

**CONTEXT:** India's net direct tax collections exceeded the 2023-24 target, driven by a surge in personal income tax collections, while corporate tax contributions dipped slightly.



# INDIA'S NET DIRECT TAX COLLECTIONS SURPASS 2023-24 TARGET



#### Revenue surge

India's net direct tax collections for FY 2023-24 reacher ₹19.58 lakh crore, marking a 17.70% increase over the previous fiscal year's ₹16.64 lakh crore

- Personal income tax constituted 53.3% of the total net direct tax collection while corporate taxes formed 46.5%
- The provisional figures exceeded both the Budget estimates (BE) and revised estimates (RE) by 7.40% and
- 0.67% respectively
- Net personal income tax collections (including STT) amounted to ₹10.44 lakh crore, showing a growth of 25.23%
- Net corporate tax collection amounted to ₹9.11 lakh cror

#### Overall Growth:

 India's net direct tax collections reached ₹19.58 lakh crore in 2023-24, exceeding the revised target and growing 17.7% compared to the previous year.

#### **Shifting Composition:**

- Personal income tax (PIT) and securities transaction tax (STT) saw a significant surge, contributing 53.3% of the total collection, up from 50.06% in 2022-23.
- Corporate tax contribution dipped slightly to 46.5% from 49.6%.

#### Year-End Surge:

- The final fortnight of the financial year witnessed a rise in net tax collections primarily driven by PIT and STT.
- Corporate tax collections, however, saw a slight decline.

#### **Collection Details:**

- Gross direct tax kitty for 2023-24 reached ₹23.37 lakh crore, reflecting an 18.5% growth over the previous year.
- Gross PIT and STT receipts stood at ₹12.01 lakh crore, with a ₹76,000 crore increase between March 17 and 31.
- While gross corporate tax collections grew slightly by the year-end, net corporate tax receipts (after refunds) decreased.

# ANALYSIS OF THE ABOVE FIGURES Positive Implications:

- Increased Government Revenue: Exceeding the target and experiencing a 17.7% growth signifies a significant boost to government revenue. This can help fund public welfare programs, infrastructure development, and other government initiatives.
- Stronger Individual Performance: The surge in personal income tax suggests a growth in individual incomes or a widening of the tax net capturing more individuals. This could indicate a strengthening economy with rising salaries or increased business activity.
- Active Stock Market: The rise in securities transaction tax (STT) implies increased activity in the stock market, potentially reflecting investor confidence and economic optimism.

#### **Potential Concerns:**

- Shifting Tax Burden: The increasing share of personal income tax and STT compared to corporate tax might indicate a shift in the tax burden towards individuals and the stock market. This could raise concerns about the fairness of the tax system or discourage corporate investment.
- **Corporate Tax Refunds**: The decline in net corporate tax receipts despite a slight increase in gross collections suggests a

22/04/2024 Monday — April =

rise in corporate tax refunds. This could indicate companies utilizing various tax breaks or facing financial difficulties requiring refunds.

• Sustainability of Growth: It's important to analyze if the surge in personal income tax is due to a long-term trend or a temporary increase. A one-time jump might not be sustainable for future revenue projections.

**CONCLUSION:** The figures paint a mixed picture. While exceeding the target and witnessing growth are positive signs, the shifting tax composition and decline in net corporate tax raise questions about the long-term sustainability and potential impact on different sectors of the economy.

#### POLITY AND GOVERNANCE

## Preparing India For Water Stress, Climate Resilience

**CONTEXT:** India faces a critical juncture, needing to adapt to water scarcity and climate change. The author emphasizes that managing these challenges requires a comprehensive approach recognizing the interconnectedness of water, food, and energy systems. This integrated strategy is crucial for building a sustainable and resilient economy.

# THE LOOMING WATER CRISIS: A WAKE-UP CALL FOR INDIA

#### **India Faces a Perfect Storm:**

- Hotter summers and longer heat waves are predicted by the India Meteorological Department (IMD), raising concerns about water stress
- The current approach of reactive disaster relief for acute water shortages is inadequate.
- Climate change demands a long-term strategy that acknowledges the interconnectedness of water, food, and energy systems.

#### **India's Water Scarcity Challenges:**

- India supports 18% of the world's population with only 4% of global freshwater resources.
- Nearly half of India's rivers are polluted, and major reservoirs are at critically low levels.
- The country is the largest user of groundwater, further straining this vital resource.
- Three-quarters of India's districts are vulnerable to extreme weather events.



#### **Beyond Disaster Preparedness:**

- While India invests in disaster preparedness, the nature of climate shocks is evolving.
- Sudden events like heavy rainfall and slow-onset stresses like reduced water retention require a different approach.
- Seasonal disaster responses are no longer sufficient for long-term climate resilience.

#### Water: The Economy's Lifeline

- Traditionally, water management has been siloed, neglecting its crucial role in the economy.
- Water connects hydrological, food, and energy systems, impacting millions of livelihoods.
- Precipitation feeds both soil moisture (green water) and surface water (blue water), vital for agriculture, the largest employer in India.
- Changing monsoon patterns with increased short-duration heavy rains threaten crop production.

#### Water's Role in Clean Energy Transition

- Green hydrogen, a pillar of clean energy, relies on water for production.
- Pumped storage hydropower, essential for grid stability, also depends on water resources.

#### The Devastating Impact of Climate Change

- Water-related disasters are on the rise globally, with 75% occurring in the last two decades.
- India has witnessed a significant increase in flood-related events.
- Freshwater resources have crossed a critical planetary boundary, highlighting the urgency of action.

#### The Path to Water Security

- Effective water governance requires policies that recognize the water-food-energy nexus.
- Scaling up green hydrogen production needs to consider water availability.
- Water use efficiency through practices like wastewater reuse is crucial.

#### **Building a Water-Secure Economy**

- Data-driven baselines are essential for quantifying water savings and informing policy decisions.
- Financial instruments and markets need to support adaptation investments in water management.
- Strengthening wastewater management, promoting climate-resilient agriculture, and exploring desalination are key strategies.
- Leveraging Corporate Social Responsibility (CSR) initiatives can bridge the adaptation funding gap.

#### A Call to Action

- · Systemic change takes time, but steps can be taken now.
- More coherent water, energy, and climate policies are essential.
- Enabling new financial instruments and markets for adaptation investments is critical.
- Water security is the foundation for a climate-resilient India.

22/04/2024 Monday — APRIL

#### **CONCLUSION: A WATER-SECURE FUTURE FOR INDIA**

India's water crisis demands immediate and coordinated action. By acknowledging the interconnectedness of water, food, and energy systems, India can develop a comprehensive strategy for water security. This strategy should prioritize efficient water management practices, investment in climate adaptation measures, and a shift towards more coherent water, energy, and climate policies. Embracing innovation and leveraging public and private resources are crucial for building long-term climate resilience. With a proactive approach, India can navigate the looming water crisis and secure a sustainable future for its people and its economy.

#### **POLITY AND GOVERNANCE**

# **Empower The Guardians of The Earth, Do Not Rob Them**

**CONTEXT:** The Andaman and Nicobar Islands administration's decision to create wildlife sanctuaries threatens to displace indigenous communities and ignores their traditional land management practices, raising concerns about conservation efforts that disregard the rights of the very people who have protected these lands for generations.



- INDIGENOUS RIGHTS UNDER THREAT IN ANDAMAN AND NICOBAR ISLANDS
- Traditional Practices Ensure Sustainability
- The Payuh, indigenous people of South Nicobar, have relied on and protected small islands for generations.
- Meroë and Menchal islands hold spiritual significance and are managed by community elders for sustainable resource use.
- These traditional practices align with modern concepts of conservation and sustainable use.
- Disregarding Indigenous Claims
- The Andaman and Nicobar (A&N) administration plans wildlife sanctuaries on Meroë, Menchal, and Little Nicobar Island.
- This decision disregards the Payuh's traditional land ownership and management systems.
- The A&N administration did not consult with the indigenous communities before creating the sanctuaries.
- Questionable Sanctuary Selection
- The chosen islands, Meroë and Menchal, may not have significant coral reefs or Megapode bird populations.

• Critics suspect the sanctuaries are a ploy to distract from environmental damage caused by a planned mega-project.

#### **Devastating Consequences of the Mega-Project**

- The proposed mega-project on Great Nicobar Island threatens biodiversity and indigenous communities.
- The project would destroy forests, coral reefs, and nesting grounds for endangered species.
- It would displace indigenous communities and disrupt their traditional way of life.

#### The Importance of Indigenous Guardianship

- Indigenous peoples globally face eviction from their lands under the guise of conservation or development.
- They are the original caretakers of a significant portion of the world's biodiversity.
- Empowering indigenous communities is crucial for sustainable conservation practices.

#### The Call to Action

• The current approach to conservation in the Andaman and Nicobar Islands undermines indigenous rights.

#### **POLITY AND GOVERNANCE**

## The Challenges of Renewable Energy

**CONTEXT:** The urgency for climate action demands a rapid transition to renewable energy, but India's ambitious goals raise concerns. This article explores the potential pitfalls of large-scale solar parks, highlighting the need for development models that prioritize both environmental sustainability and social justice.



**BACKGROUND:** Rapid renewable energy development in India faces a balancing act. While crucial for combating climate change, large-scale solar farms, a central pillar of this strategy, risk social and environmental disruption. This approach has potential pitfalls, including land rights issues, competition for water resources, and threats to biodiversity. This emphasizes the need for renewable energy models that prioritize both environmental sustainability and social justice.

22/04/2024 Monday — APRIL

# THE BALANCING ACT OF RENEWABLE ENERGY IN INDIA

#### The Urgency for Climate Action

- Climate change demands a rapid shift to renewable energy sources, as highlighted by UN Climate Change Executive Secretary Simon Stiell.
- The need for sustainable development, poverty reduction, and job creation adds complexity to this transition.
- Our current development models are unsustainable and contribute to greenhouse gas emissions.

#### **Challenges of Large-Scale Solar Parks**

- India's ambitious plan to achieve Net Zero emissions by 2070 relies heavily on large-scale solar parks.
- The vast amount of land needed (potentially half the size of Tamil Nadu) raises concerns.

#### **Local Impacts: A Mixed Picture**

- Bhadla, Rajasthan: Farmers lost sacred common lands and grazing areas due to solar park development.
- Pavagada, Karnataka: Some farmers gained income by leasing land for solar parks, but water security and economic disparity remain challenges.

#### **National and Regional Concerns**

- Water Scarcity: Solar panel cleaning requires significant water resources not factored into current planning.
- Land-Use Competition: Solar parks may compete with agriculture and other productive activities, impacting food security.
- Biodiversity Loss: The ecological impact of large-scale solar parks on open natural systems like deserts is under-researched.

#### **Uncertainties and Future Considerations**

 The feasibility and economic viability of emerging low-carbon technologies add uncertainty to the long-term plan.  The impact of climate change itself adds another layer of complexity.

#### Pathways for Sustainable Renewable Energy Development Experimenting with Ownership Models

• Community ownership of solar parks can generate revenue, support local businesses, and improve energy access.

#### **Strengthening Regulations and Safeguards**

- Revise environmental and social impact assessments to include solar and wind park development.
- Establish fair compensation mechanisms for land acquisition and leasing.
- Involve local governance units in planning and siting processes to align development goals.

#### **Rethinking Wasteland Classification**

 Recognize common lands under the Forest Rights Act to ensure equitable outcomes.

#### **Exploring Innovative Solutions**

• Research and implement agrivoltaics, which combines solar energy generation with agriculture.

#### **Addressing Employment Shifts**

- Large-scale renewable energy projects can create job losses in some sectors.
- Develop skilling and training programs to equip workers for the changing job market.

#### **CONCLUSION: A Second Green Revolution**

The transition to renewable energy presents an opportunity to create a sustainable future. By anticipating and addressing the challenges, we can develop a model that balances climate change mitigation with social justice and environmental protection.

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