Development Imperatives amidst Climate Crisis
Reflections on the 2019 UNEP Emissions Gap Report

Navroz K. Dubash
Release of the 2019 Emissions Gap Report
New Delhi
26th November 2019
UNEP 2019 EGR carries important messages

- Emissions continue to grow, after a short slowdown – 1.5%/yr
- Delay makes the task harder – much harder
- We are not seriously considering consumption-based emissions, embodied carbon flows from south to north
- Paris pledge fulfilment – leaders, laggards and those of confused status
  - India projected to overcomply by 15%
- Net zero targets – but smaller countries, long-term goals, and uncertain plans
- Co-benefits are a route forward
- Focus on big structural transitions
  - Energy shift to renewables
  - Demand side
The Emissions Gap and its Discontents

- More stringent target (well below 2 degrees) + delayed action = unbridgeable gap?
- Unasked, and unanswered, questions about burden sharing embedded in global least cost models
- National models necessarily flatten complexity and transition dynamics
- Growing tension between highlighting urgency and highlighting mitigation opportunities
- Way forward? Dive into national complexities
Predicting energy and emissions future is challenging, especially for countries like India

Energy Demand: Locking in a Low Demand Trajectory

- Energy demand is projected to significantly increase in the coming decades
  - Building sector will see the largest growth, with its share in the overall demand going up
  - Industrial demand will continue to dominate, and will see the largest absolute increase

- Energy efficiency measures can lead to significant energy savings (around 25% savings in 2047)
- India benefits a lot more from energy efficiency relative to rest of the world
  - Each unit of end-use energy conserved can lead to multiple units of avoided primary energy

Sources: Top figure: recreated based on data from Energizing India, NITI Aayog 2017
Bottom figure: from Prof. Arnulf Grubler's presentation at CPR in 2018, based on PFUDB IIASA
Lock-in to demand: India’s unique urban transition

**United States**

2015 Population by Density Class (pp/km²)

<table>
<thead>
<tr>
<th>Density Class (0-200)</th>
<th>0-200</th>
<th>200-1k</th>
<th>1k-2k</th>
<th>2k-4k</th>
<th>4k-8k</th>
<th>8k-10k</th>
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<th>28k-40k</th>
<th>40k-80k</th>
<th>80k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>218.4m</td>
<td>252.3m</td>
<td>281.3m</td>
<td>321.2m</td>
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<tr>
<td>Built-Up Area (000s km²)</td>
<td>134.1</td>
<td>159.4</td>
<td>175.3</td>
<td>195.5</td>
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<tr>
<td>Average Pop. Density (pp/km² of BU Area)</td>
<td>1.07</td>
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**India**

2015 Population by Density Class (pp/km²)

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<tbody>
<tr>
<td>Population</td>
<td>618.8m</td>
<td>867.8m</td>
<td>1050.3m</td>
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<td>Built-Up Area (000s km²)</td>
<td>120.2</td>
<td>134.0</td>
<td>175.5</td>
<td>256.7</td>
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<td>Average Pop. Density (pp/km² of BU Area)</td>
<td>4.54</td>
<td>5.86</td>
<td>5.45</td>
<td>4.65</td>
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How can India Re-think Urban Mobility?

SOURCE: LSE CITIES
How can India handle its Air pollution Emergency

Air pollution levels high across India, especially North India

1 in 8 premature deaths in India attributed to air pollution; affects nearly every organ of the body

Sources of air pollution exposure nationally

Multi-headed sectoral challenge, need to act on all major sources in parallel

Year-round problem, in rural and urban areas.

Source: Apte and Pant, 2019. Toward cleaner air for a billion Indians, PNAS.

India has Many Reasons to Shift away from Coal

The true costs of coal versus renewable energy

Source: CECFEE (ISI Kolkata) analysis
Systematising climate governance

Coordination across siloes hinges on clear strategy and an empowered coordinator

Systems must have the capacity to balance developmental and climate trade-offs across policy cycle

States implement but lack funds, capacity and coordination mechanisms

An evolving narrative around climate politics in India

3. Hindustan Times, 24th November 1991

2009

- Energy independence
- Preserve rainforests
- Sustainability
- Green jobs
- Livable cities
- Renewables
- Clean water, air
- Healthy children
- etc., etc.

2019

Recognising the climate crisis | HT Editorial
The world, and India, face an existential threat. Wake up to it

1. Words matter: The impending catastrophe of our times—a drastic modification of the world’s climate, and steeply rising global temperatures—seems minor when you call it a “climate change”. The term does not correctly reflect the enormity of the existential threat. This is why, from today, Hindustan Times will call this emergency what it is—a “climate crisis.”
Questions for India’s Policy Process

• A more deliberate and strategic approach to key transitions?
• A richer national climate strategy and planning framework?
• A negotiating approach that takes more seriously climate crisis?