Center for Study of Science, Technology & Policy

INTRODUCTORY REMARKS: 2050 PATHWAYS

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2050 Pathways Platform Annual Meeting 2018
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Outline

- Context for Climate Policy in India
- India's Development Context
- Study: Energy Pathways for Desired Quality of Life in India
- Points for Discussion

Context for Climate Policy in India

Paris Agreement

peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.

India NDC (2030)

- 40% fossil-free installed capacity
- Reduce emission intensity of GDP by 33%–35% from 2005 levels
- Additional carbon sinks of 2.5 to 3 billion tonnes of CO_2e

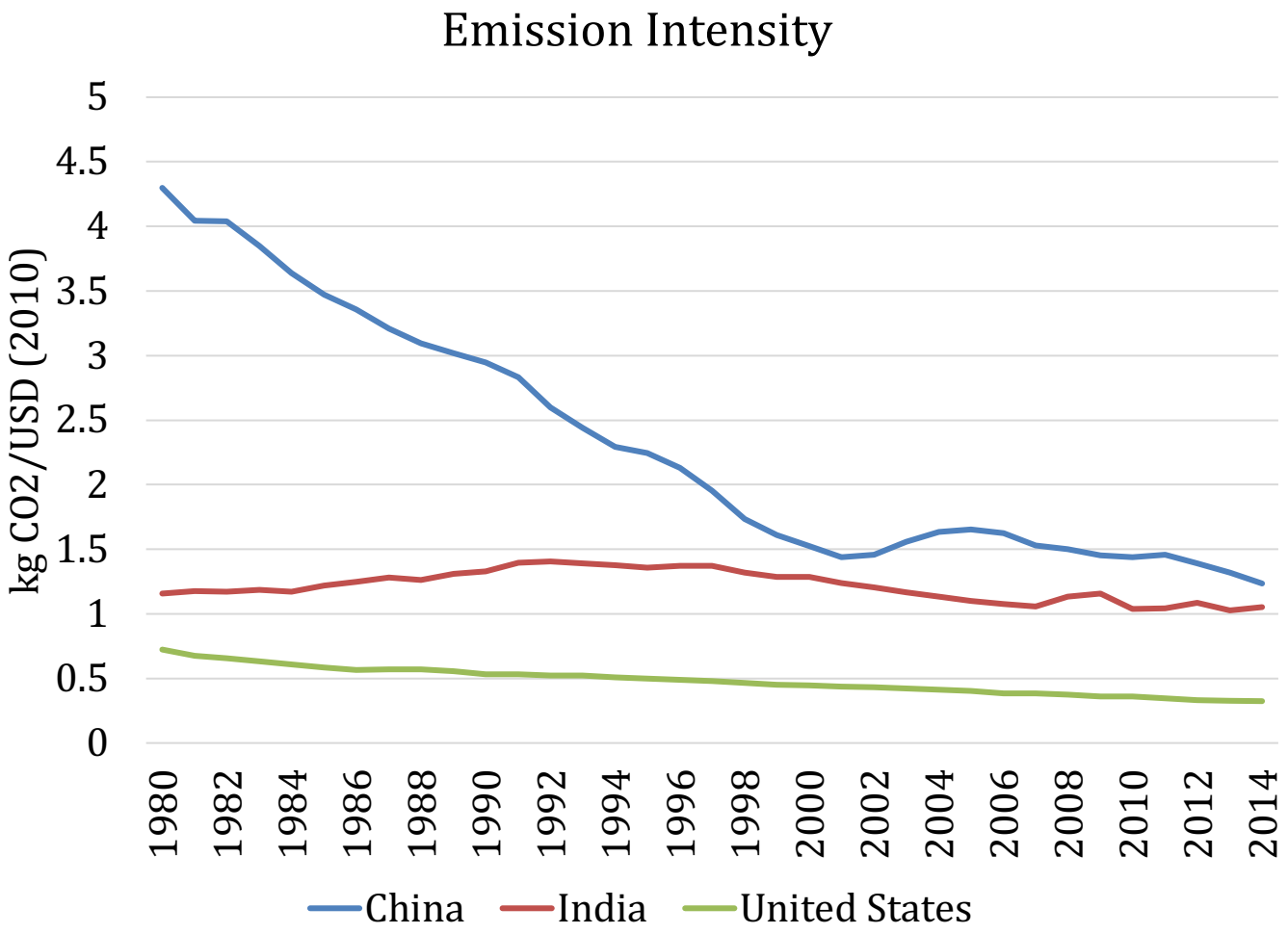
CSTEP's Work

- Expert Committee on Low Carbon Inclusive Growth Strategies (2012)
- Transition Towards a Green Economy in Karnataka (2014)
- Sustainable Development Framework for India's Climate Policy (2015)
- GHG Platform: Time-series national and state level inventories (2015–till date)
- Low Carbon Strategies for Low Carbon Development (Ministry of Environment, Forests and Climate Change) (2018-2019)

India's Development Context

- Examples of development challenges-
  - 300 million people lack electricity;
  - 500 million rely on biomass for cooking
  - 63 million houses needed
  - Largest working population by 2050

India's Development Context

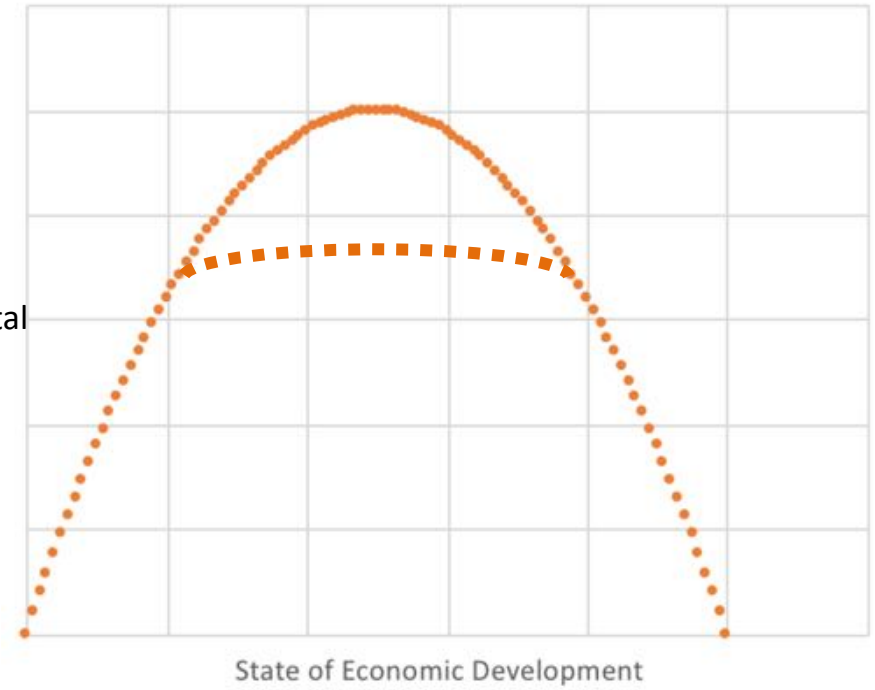


Kuznets Curves

Inequality,

Urban–Rural Divide

Environmental Penalty



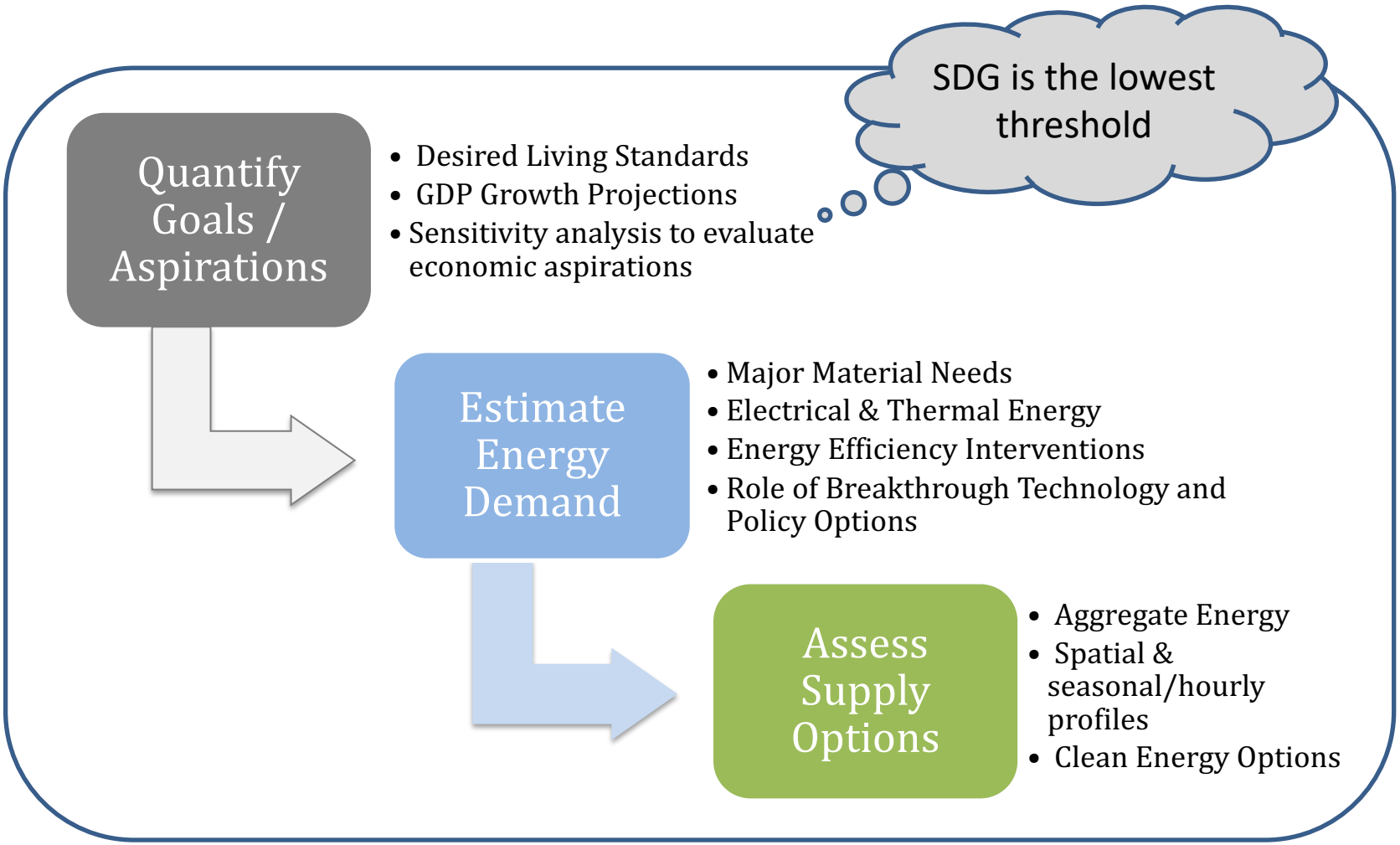
Can India adopt a growth pathway by minimising environmental penalty ?

Research Questions

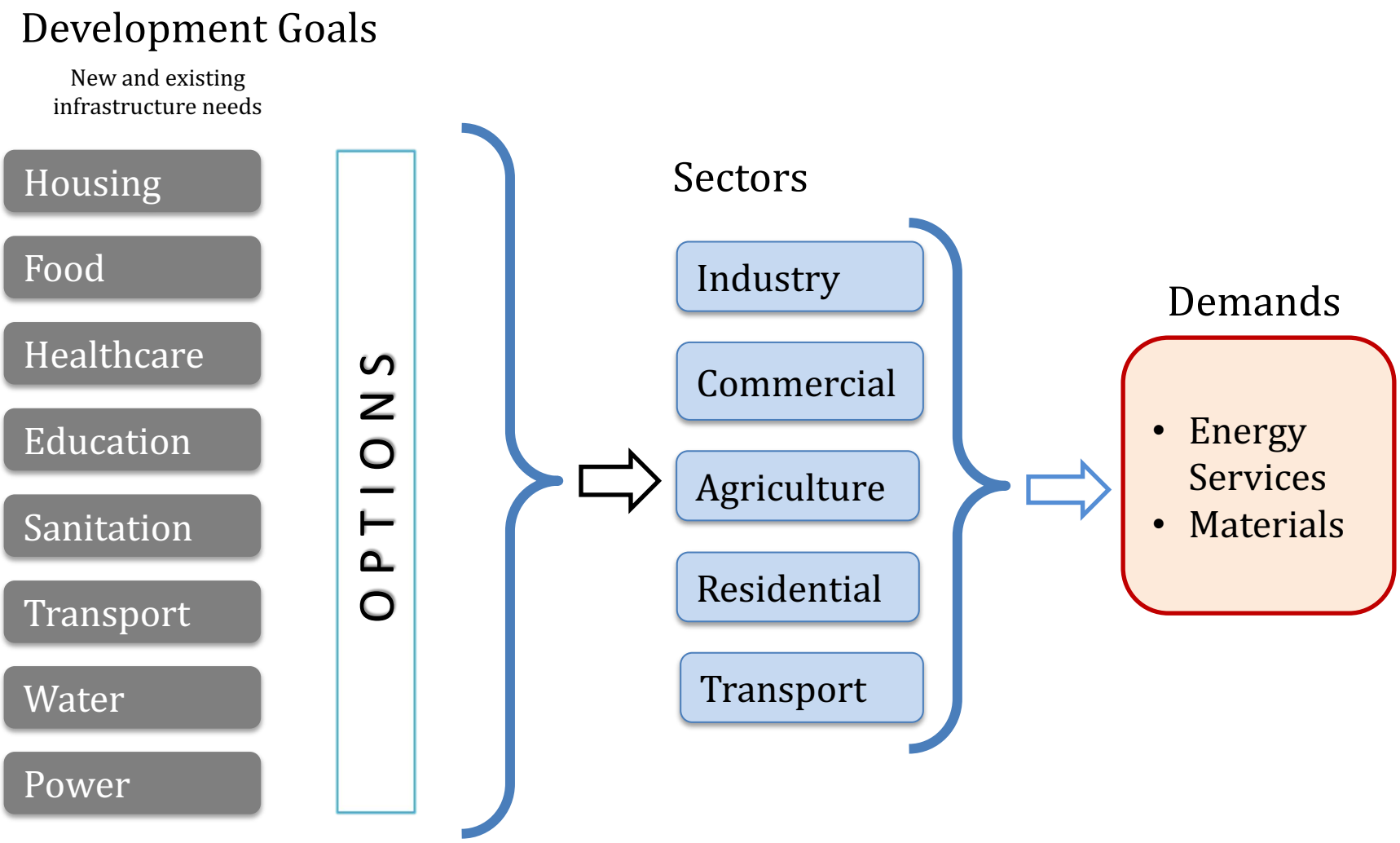
*What are the materials, energy & emission implications for India to achieve the desired standard of living for **all**?*

Are there choices that put us on lower emission pathways? Are there some that are compatible with a Global 1.5^0C to 2^0C pathway?

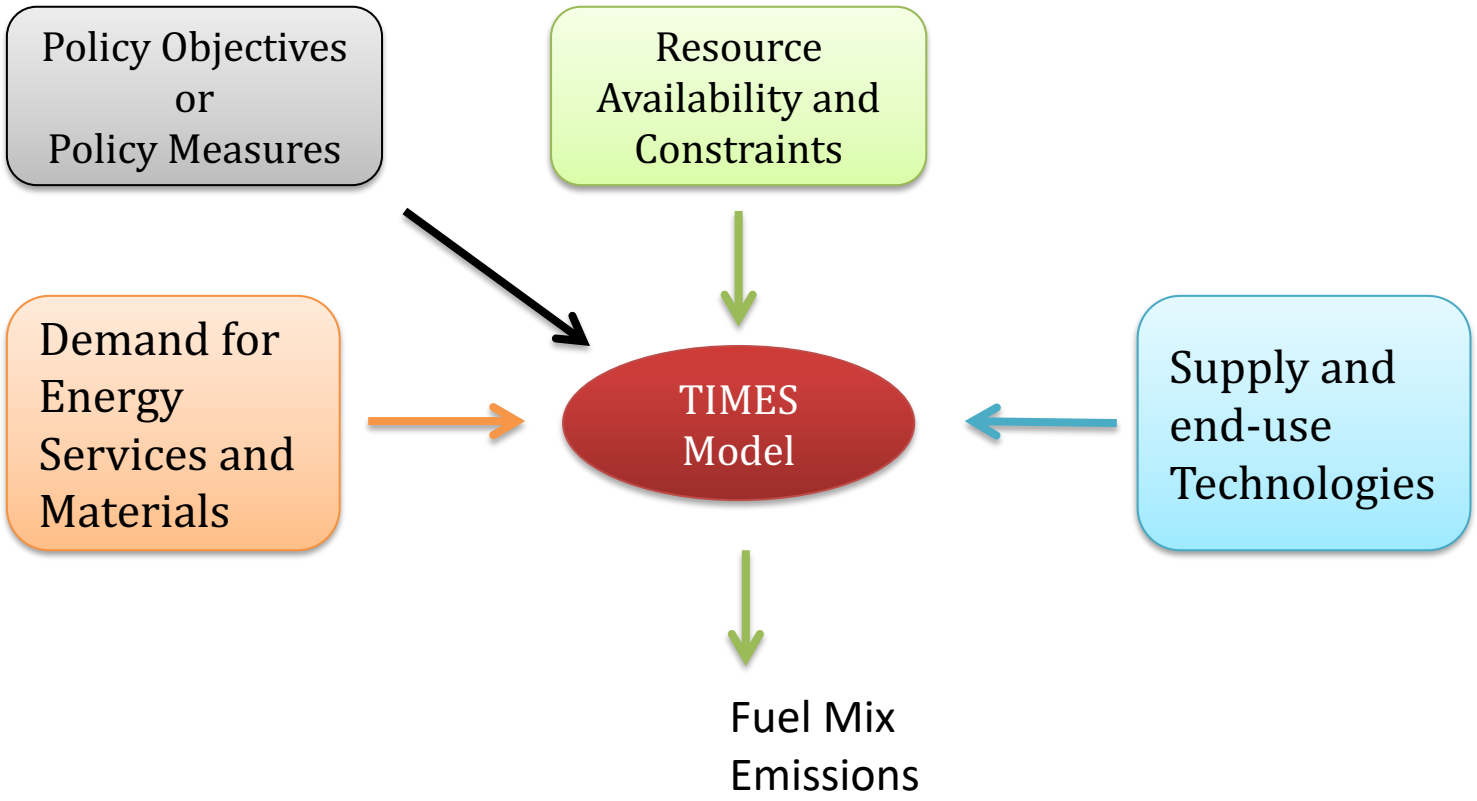
Current Study's Conceptual Framework



Approach for Pathways Analysis – Demand estimation



Approach for Pathways Analysis – modeling to explore different system configurations that meet demands



Visualisation of Analysis

Goal Definition → Goal Wise Needs → Sector Wise Needs → Supply Options → Insights

Decision **A**nalysis for **R**esearch and **Plan**ning

Unique Aspects of the Study

- Addressing "inclusive growth" explicitly
  - Quantifying developmental aspirations & 'Desired Living Standards'
  - Bottom–up assessment of material and energy needs, considering various interlinkages and options.
- Dissemination and stakeholder engagement is an integral part of the design
  - Scenarios explored using an interactive computational, visualisation platform – DARPAN
- Modular framework
  - Our vision is for it to be readily applicable to state and district levels. Goals and options will be different by region.

For Discussion

1. Current processes to account for existing & projected socio-economic priorities

2. Mobilisation of the administration, civil society and private sector in LTS discussions

3. Trade-offs to be addressed

THANK YOU