Climate Tech Startups as Enablers of Climate Action in India through Policy Synergies

CLIMATE COLLECTIVE

Executive Summary

Subnational governments play a vital role in shaping climate solutions because they best understand the challenges and opportunities unique to their states. As India moves towards its net-zero goal, technology transition has become essential. Climate tech is the key tool to fastrack the process; a strategic investment opportunity that combines environmental necessity with economic potential.

Despite strong national commitments, most states currently face two critical challenges:

- First, there is **limited visibility into the climate tech ecosystem** at the state level, making it difficult to identify opportunities and design effective interventions
- Second, many **current policies have not yet integrated climate tech as a key component** across sectors such as energy, mobility, and solid waste management, which are critical to meeting both climate and development objectives.

Global experience shows that climate tech can both mitigate climate risks and drive economic growth. Indian states too can unlock similar benefits by adopting a data-driven policy approach. With better visibility into the climate tech ecosystem, states can identify priority opportunities, attract investment, and design policies that align climate action with economic growth.

Through this initiative, Climate Collective Foundation (CCF) will support state governments with a **data visualization dashboard**, built on the **Climate Tech Startup Ecosystem Readiness Framework**, to showcase the status of the state and highlight areas where they can act as enablers for the growth of climate tech startups. By integrating climate tech into green-sector policies, states can turn intent into action by achieving climate goals while creating jobs, strengthening industries, and boosting state GDP.

Statement of Purpose

We seek to provide an evidence-based overview especially for the subnational policy makers on the role of climate tech startups in advancing the national climate agenda while generating co-benefits across economies, employment & innovation and how they can be leveraged as a tool by synchronising the climate polices and start up policies at the state & national level.

Audience: State-level policymakers, senior officials at RE SNAs, senior officials at startup SNAs, state incubators
Rationale for State Selection: The study focuses on Kerala, Tamil Nadu, Karnataka, and Goa as primary regions, while Gujarat, Maharashtra, and Uttar Pradesh are included for their progressive initiatives in climate action and climate-tech policy integration.

Why Climate Tech Matters for States

The term "climate tech" is often used interchangeably with "clean tech," but a precise definition is crucial for effective policy formulation. Climate tech refers to the technologies, innovations and solutions designed to address climate change and its impacts. States that actively support startups in this space stand to gain across four dimensions:

Economic Benefit

*Becoming a climate tech leader could help India capture a share of the **US$3.1 trillion global climate tech market by 2030, while mobilizing the US$1.5 trillion investment** needed domestically for its energy transition.*

Social Benefit

*India's climate transition has the potential to create **74 million green jobs by 2050,** including **3.5 million direct jobs in renewables by 2030** - transforming livelihoods and driving inclusive growth.*

Environmental Benefit

*Leadership in climate tech can enable India to avoid **4 billion tonnes of CO_2 emissions by 2030**, directly advancing its 500 GW renewable energy and 2070 net-zero targets.*

Health Benefit

*Reducing air pollution through clean technologies could **save up to 1.7 million lives annually** and yield health and productivity benefits valued at **US$18–604 billion per year.***

State Policy Landscape & Status of Climate Tech Integration in State Policies

With sectors such as energy, transport, agriculture, and forestry lying within state jurisdiction, subnational policymakers are uniquely positioned to drive climate innovation that is locally relevant and impactful. **34 States and Union Territories have already prepared State Action Plans on Climate Change (SAPCCs)**, demonstrating leadership in aligning national goals. Many states have also embedded climate priorities within their startup and industrial policies, opening pathways for climate tech to emerge as a driver of both growth and resilience.

However, at the policy design level the integration of climate technologies remains fragmented. Climate tech is often treated as a peripheral element rather than a cross-sectoral enabler. The lack of policy linkages and coordination with different departments limits the ability of climate tech to scale and deliver measurable outcomes.

This readiness matrix below provides an overview of how seven Indian states1 are embedding climate tech into their policy frameworks. Readiness here highlights the degree of integration that is already visible and where further alignment opportunities exist, with green indicating the clear integration of climate tech across policies & institutional mechanism , yellow indicating the partial integration with focus only on some of the subsector technologies like EV and red indicating absence of climate tech integration at the state level policies.

Category	Kerala	Tamil Nadu	Karnataka	Goa	Gujarat	Maharashtra	Uttar Pradesh
1 *Sectoral Policy Integration*							
SWM Policy	No mention	No mention	No mention	No mention	No mention	No mention	No mention
EV Policy	No mention	Yes – EV promotion	Yes – EV promotion	No mention	No mention	No mention	Yes – EV promotion
Energy Policy	No mention	No mention	No mention	No mention	No mention	No mention	No mention
State Climate Action Plan	No mention	No mention	Mentions climate/ clean tech	Mentions climate/ clean tech	Mentions climate/ clean tech	No mention	Mentions climate/ clean tech
Identifying Climate Tech as Key Sector in Startup/ Industrial Policy	Climate tech identified	Climate tech identified	Climate tech identified	Climate tech identified	Climate tech identified	Climate tech identified	Climate tech identified
2 *Institutional Enablers*							
Support Mechanisms Relevant to Climate Tech	Present	Present	Present	Present	Present	Present	Present
Presence of Climate Task Force/Body	Present	Present	Present	Present	Present	Present	Present
3 *Financial Support*							
Budget Allocation/ Fund for Climate Technologies (2025-26)	None	Dedicated allocation	Dedicated allocation	None	Dedicated allocation	None	Dedicated allocation

Inference: *All seven states recognize climate tech within their startup and industrial policies, showing strong intent. Karnataka, Gujarat, and Uttar Pradesh stand out with dedicated funds for climate tech. The opportunity across all states is to integrate climate tech into core green-sector policies such as solid waste management, energy, and mobility. By embedding climate tech across sectoral policies and strengthening institutional coordination, states can move from intent to measurable outcomes in terms of mobilising private investment, creating green jobs, and accelerating their contribution to India's net-zero pathway.*

Climate Tech Startups as a Tool

Climate technologies provide a pathway to stronger energy security, deep decarbonization, enhanced adaptation and resilience, advancement of the circular economy, and new avenues for industrial growth.

Job Creation Engine

- While SMEs provide stability, research confirms that high-growth startups are the true engines of net job creation. Climate tech is uniquely positioned to generate multi-sector employment—from renewable energy grid management to sustainable agricultural supply chains

Rapid Commercialization of Climate Solutions

- Agility is the startup's competitive moat. By streamlining the transition from lab-scale innovation to affordable, deployable solutions, startups are the primary vehicle for India to meet its 2070 Net Zero commitments ahead of schedule.

Strategic Competitiveness for India

- India can spearhead the green revolution with deep climate tech, building on our industrial strengths and R&D to mirror past breakthroughs in energy, mobility, and semiconductors. Delivering energy security and lasting economic resilience.

Inclusive Growth & Women Participation

- Climate tech startups absorb talent across the skills-spectrum from advanced R&D to blue-collar roles.Green sectors are particularly well suited to Increasing women's workforce participation, especially in EV services ,waste management and resilient infrastructure where cultural barriers are lower.

To realize this potential, subnational policymakers need practical ways to embed climate tech into sectoral policies and ensure measurable outcomes.

The Climate Collective Foundation (CCF) helps states do this by aligning four key policy enablers with actionable tools:

Climate Tech Data & Solution Visibility

CCF provides the Climate Tech Dashboard, a dynamic repository of local climate tech startups and validated solutions ready for immediate adoption. This allows the state to fast-track pilots and deploy solutions for critical sectoral mandates (e.g., SWM, Energy, EV).

Talent & Innovation

Leveraging CCF's experience running 70+ climate tech accelerators (like Climate Launchpad, Electron Vibe) and the Climate Startup School, CCF can help states design and run regional acceleration programs. These initiatives can help states build a sustainable pipeline of high-potential, sector-specific climate tech startups, transform local talent into green job creators, and strengthen regional innovation ecosystems.

Investment Mobilization

Climate Collective Foundation facilitates high-impact convenings like Climate Drinks, Climate Pitch and the Mosambi Climate Conference, providing platform for state officials to connect with vetted global investors and capital partners to mobilize blended finance and de-risk early-stage capital for climate tech ventures.

R&D and Regulatory Benchmarking

Climate Collective Foundation offers actionable knowledge products such as global case studies, reports on best practices etc. to identify effective regulatory models. This ensures the state's industrial and sectoral policies are evidence-based and optimized to minimize regulatory hurdles for climate tech growth.

By embedding climate tech into policies today, states can not only accelerate India's net-zero journey but also unlock a multi-trillion-dollar opportunity in jobs, investment, and industrial leadership. CCF proposes to support this transition by partnering with state governments through the Climate Tech Dashboard. A pilot initiative and collaborative roundtable will serve as initial steps to shape data-driven policies and position states as key leaders in India's climate transition.

Annexure

Need for a Climate Tech Taxonomy

India currently does not have a **defined taxonomy or umbrella framework** for climate tech. As a result, projects and innovations that qualify as climate tech are **scattered across multiple sectoral policies**—energy, mobility, agriculture, waste, water, and industry—without being explicitly recognized under a common category. This fragmentation makes it difficult for states to identify, prioritize, and channel resources effectively into climate tech solutions.

Globally, climate tech is often structured through clear **taxonomies that group technologies under common domains**, enabling governments and investors to assess opportunities, design incentives, and track progress more systematically. Such a taxonomy can help states in India move beyond ad-hoc interventions to a **cohesive framework that recognizes climate tech as a standalone sector.**

The figure below shows the main sectors and sub-sectors where climate tech startups are growing globally and in India. It also highlights cross-cutting technologies such as Climate AI, Climate Risk tools, Climate Fintech and Blockchain, which can be applied across these sectors to strengthen their impact.

DECARBONISATION				CIRCULAR ECONOMY		ADAPTATION & RESILIENCE		
ET	**ID**	**M&T**	**CR&U**	**WR&R**	**IC&RE**	**CrA&FS**	**WS&M**	**BE&UR**
> Clean Power Generation > Energy Storage & Management > Decarboni-sation > Green Hydrogen & Alternate Fuels	> Fuel switching > Low-Carbon Materials > Process Optimisation & Efficiency	> EVs & Charging Infrastructure > Public & Shared Mobility > Sustainable Trucking, Aviation & Shipping > Logistics & Supply Chain Decarbonisati-on	>Engineered Carbon Removal > NbS > Carbon Markets & MRV	> Plastics & Packaging Alternatives > Material recovery > e-waste & Battery Recycling > Food Waste & Up-cycling > Reuse models	> Materials Innovation > Manufactur-ing & Supply Chain Circularity > Textile & Fashion Circularity	> Precision Agriculture > Alternative Proteins & Sustainable Food > Climate-resilient Crops > Agri-biotech	> Desalinati-on & Water Recycling > Flood & Drought Management > Coastal & Riverine Protection	> Climate-resilient Buildings > Cooling & Heat Stress Solutions > Disaster Tech/ Extreme Weather Early Warning Systems
Climate AI								
Climate Risk								
Climate Fintech								
Blockchain								

Source: Climate Collective Foundation