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# THE CLIMATE TECH WAVE: WHY INDIA'S GREEN ECONOMY IS JUST GETTING STARTED

just the past few years, the global narrative around climate change has shifted from long-term concern to immediate action. Climate tech — once considered niche or philanthropic — is now at the center of innovation, investment, and impact. Across India, a quiet but powerful revolution is underway, driven by startups that are blending deep-tech, grassroots insight, and environmental purpose to build solutions that matter.

The urgency is real: intensifying heatwaves, erratic monsoons, floods, water stress, and deteriorating air quality are no longer future projections — they are daily headlines. But amid these daunting challenges lies a rare moment of opportunity. Climate mitigation and adaptation have opened up a new frontier for Indian innovation — one where the goals of economic growth, environmental sustainability, and rural development align more than ever before.

From regenerative agriculture and industrial decarbonization to clean mobility, circular economy models, and carbon removal platforms, Indian startups are building solutions that are climate-conscious, commercially viable, and globally scalable.

### A Fertile Ground for Climate Tech Startups

India presents a uniquely fertile ground for climate-tech entrepreneurship. Unlike more mature economies, where solutions often start in labs or top-down policy mandates, innovation here is deeply context-aware, emerging directly from on-the-ground needs.

Startups like Varaha Carbon are helping small scale farmers adopt regenerative practices that generate verified carbon credits. In return, farmers receive a share of the revenue — transforming sustainability into livelihood. Platforms like Recykal are digitizing waste collection and reverse logistics, turning trash into traceable value chains. Agri-input efficiency, energy monitoring, carbon accounting, water-tech, biochar, EV infrastructure — all are fast-growing sub-sectors in this emerging ecosystem.



**CA MAYANK DESAI** 

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What's changed recently is not just the increase in startup activity, but the quality of the solutions — grounded in tech like AI, remote sensing, IoT, and blockchain, and designed for scalability.

### Why It's the Right Time for Startups

For climate-tech entrepreneurs, timing is everything, and right now, the momentum is clearly on their side. Here's why:

- Policy Backing: From India's Net Zero 2070 pledge to production-linked incentives (PLIs) for green manufacturing, policy support is at an all-time high.
- Customer Demand: ESG mandates, conscious consumers, and net-zero corporate goals are pushing demand for sustainable solutions across industries.
- Tech Maturity: Tools that were once expensive or unavailable — satellite imaging, smart sensors, carbon modeling software — are now within reach for early-stage startups.
- 4. Access to Capital: Global climate funds, development finance institutions, and India-focused VCs are increasingly backing first-time founders in this space.

This is a rare convergence of purpose and profit - a moment for founders to build startups that create real-world impact and have a strong business model at their core.

### WHY INVESTORS ARE TAKING NOTICE

The investor interest in India's climate tech space is no accident — it's data-backed and future-aligned. Globally, the voluntary carbon market is projected to reach \$100 billion by 2030. Circular economy initiatives could unlock \$1 trillion globally, and India's cleantech transition is expected to require \$10 trillion in investments by 2070.

For venture capitalists, family offices, and institutional funds, climate tech offers:

- Deep Impact, Broad Applicability: Climate startups cut across sectors — agriculture, energy, logistics, real estate, waste — allowing diversified exposure.
- New Revenue Models: These businesses are often asset-light but data-rich, with potential for SaaS-like recurring models (carbon credits, monitoring platforms, etc.) as well as infrastructure-backed long-term returns.
- Exit Visibility: As corporates look to acquire ESG capabilities and global markets enforce sustainability disclosures, M&A and strategic acquisitions are increasing in this space.

Climate tech isn't just a high-impact bet — it's becoming a high-return asset class with long-term relevance.

### India's Moment on the Global Stage

India's strength lies in its ability to build frugal, scalable, and impactful solutions. As the world looks for replicable models to address climate concerns in developing economies, India is emerging as both a proving ground and an export hub for innovation.

2024 has already seen landmark moves: from Varaha's \$8.7M Series A Funding Round and launch of India's first industrial biochar credits on Puro Earth, to partnerships with global giants like Coca-Cola, IKEA, and Shell in sustainability-led pilots. International eyes are watching — and investing. And we're still early.

# FINAL WORD: BUILDING FOR THE PLANET AND THE PORTFOLIO

Climate tech is not just about saving the planet — it's about redefining business models for the next decade. For startups, it's an invitation to lead with purpose. For investors, it's a chance to fund the next wave of high-impact innovation.

The next unicorns may not look like the last. They won't just move money, sell products, or deliver services — they will remove emissions, restore ecosystems, and redesign entire value chains.

In India, the green economy is no longer a prediction — it's a reality taking root, with startups at the heart of this transformation.





### **Climate Tech:**

Technology solutions aimed at reducing greenhouse gas (GHG) emissions or addressing the impacts of climate change.

AgriTech / Regenerative Agriculture: Techniques and tech to restore soil health and sequester carbon.







# THE CLIMATE CAPITAL RUSH: INDIA'S GREEN UNICORNS IN THE MAKING

India's climate tech story is no longer a whisper, it's a resounding chorus echoing across boardrooms, pitch decks, and policy papers. The recent IPO of Ather Energy, an electric two-wheeler pioneer born out of IIT-Madras, was more than just a market event, it was a market signal. Climate tech is no longer a fringe play; it's prime time. From electric vehicles and green hydrogen to circular economy models and smart agrisolutions, India's innovators are not just chasing trends, but they're rewriting the rules of sustainability.

### THE CLIMATE STARTUP SURGE

Over the past decade, more than 2,600 climate tech startups have sprouted in India. While only 800 remain actively funded today, the momentum is undeniable. In 2023 alone, Indian climate tech ventures raised a whopping \$1.29 billion which is over 4x the investment levels of 2018. By 2024, India accounted for 38% of Asia's climate tech startups, showcasing its growing dominance in the green economy.

The reasons? A potent mix of:

- A large, climate-vulnerable population,
- · A digitally savvy startup talent pool, and
- · Ambitious national sustainability targets.

From cleaning the air to saving the soil, startups are building scalable, affordable, and high-impact solutions, proving that climate action can also be commercially attractive.





Offritten by,

# MR. KASHYAP PANDYA

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### GREEN IS THE NEW VC DARLING

A diverse tribe of venture capital firms has planted deep roots in the Indian climate tech space. These investors aren't just looking for unicorns; they're backing zebras - resilient, regenerative, and responsible businesses.

Some of the frontrunners include:

- Aavishkaar Capital Championing impact-first models across sectors
- Ankur Capital Investing in deep tech and inclusive climate innovation
- Omnivore Betting on smarter, greener agriculture
- Avaana Capital Focused on decarbonisation and resilience
- Green Frontier Capital Funding renewable energy and sustainable mobility
- Blume Ventures Early believers in carbon mitigation innovation
- Sequoia Spark and Lightsmith Group Bringing global capital to Indian climate ventures

And these investors are offering far more than just capital. They bring networks, domain mentorship, and global scale partnerships which are key ingredients for success in a complex sector.

### WHY VCs Are Betting Big on Climate Tech

The reasons are as rational as they are responsible:

- Massive Market Pull: India's 1.4 billion population, rapid urbanisation, and growing middle class demand cleaner alternatives - from energy to mobility to food.
- Policy Push: From a net-zero 2070 commitment to schemes like FAME, PLI for batteries, and green hydrogen missions, India is putting climate at the core of economic planning.
- Tech Tailwinds: Falling costs of solar, storage, and sensors are de-risking climate innovations. What was once a moonshot is now mainstream.
- Global Alignment: As capital worldwide chases ESG goals, Indian climate startups are becoming strategic plays in global decarbonisation efforts.
- "Investors follow growth in the (customer) market. We know that businesses and consumers are making the change from carbon-emitting technology to carbonneutral technology," says one of the active ClimateTech investors.

### WHAT'S TRENDING GLOBALLY IN CLIMATE TECH

Climate tech isn't just booming in India, it is breaking records worldwide. In 2024, global investment in the energy transition crossed \$2.1 trillion, up 11% year-on-year. Venture funds like Energize Capital (\$430M raised) and Lowercarbon Capital are channelling billions into next-gen climate solutions across clean energy, carbon capture, regenerative agriculture, and more.

From Al-powered energy grids in Europe to biochar carbon removal startups in Africa, climate tech has gone borderless and business-critical. India, with its unique mix of scale, need, and talent, is increasingly seen as the global sandbox and launchpad for climate innovation.

### THE ROAD AHEAD: FROM GREENTECH TO GREAT TECH

The climate tech journey in India is just beginning. But if it's to truly deliver on its promise, here's the VC playbook for the next phase:

- Be Patient Climate tech isn't a quick-flip story.
   Returns may take time, but they'll be resilient and real.
- Co-Invest and Collaborate Forge partnerships across corporate, policy, and academic ecosystems to de-risk and accelerate scale.
- Go Glocal Build in India, solve for the world. From irrigation to insulation, India's frugal innovations have global legs.
- Invest Inclusively Climate change impacts the vulnerable the most. Fund startups that build not just for the wealthy, but for the many.

As the saying goes, "The best time to plant a tree was 20 years ago. The second-best time is now."

For climate-conscious investors, that tree is innovation and it's ready to bear fruit.





Carbon Capture and Storage (CCS):

Technologies to capture and store CO<sub>2</sub> from industrial processes or the atmosphere.

Energy-as-a-Service (EaaS): Business model providing energy solutions via subscription rather than ownership.





Scope 1, 2, 3 Emissions:

Categories of GHG emissions — direct (Scope 1), indirect (Scope 2), and value-chain-wide (Scope 3).





### Climate Tech Startups – June 2025 Newsletter

### WHAT IS CLIMATE TECH?

At its core, climate technology encompasses the tools and services that decarbonize the economy and help society adapt to climate change. In practice, this spans renewable energy and storage, electric and low-carbon transport, energy efficiency, carbon capture and storage, climateagriculture, resilient infrastructure, smart data/analytics and more. Startups in climate tech develop innovations that remove existing carbon (e.g. direct air capture, reforestation projects), reduce future emissions (e.g. batteries, green hydrogen, energy-efficient buildings) or boost resilience (e.g. flood warning systems, droughtresistant crops). In short, climate tech startups target the largest sources of global emissions and climate risk, across energy, industry, mobility, food/agriculture and other sectors.

### GLOBAL CLIMATE TECH MARKET OUTLOOK

Market Size & Growth: As the world intensifies efforts to combat climate change, Climate Tech has emerged as one of the fastest-growing sectors globally. According to The Business Research Company, the global Climate Tech market is projected to grow from \$26.12 billion in 2024 to \$32.49 billion in 2025, charting an impressive CAGR of 25.0%. By 2029, the market is expected to surpass \$79.45 billion, reflecting the rising demand for clean technologies, sustainable infrastructure, and decarbonization solutions across industries.

### Climate Tech Global Market Report 2025

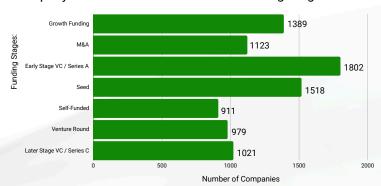


These projections are fueled by accelerating climate mandates and government interventions worldwide. Major economies like the U.S. (via the Inflation Reduction Act), the EU (with the Fit-for-55 package), and China (through carbon-pricing expansions) are driving substantial capital into the sector.

Furthermore, corporate governance is aligning with climate goals—over 73% of S&P 500 boards have elevated climate oversight, indicating strong institutional momentum toward net-zero commitments. At the same time, U.S. and EU green subsidies have reached several hundred billion dollars, catalyzing both innovation and investment across energy, transportation, agri-tech, and industrial decarbonization verticals.

### **FUNDING LANDSCAPE:**

Company Distribution Across Various Funding Stages



Climate tech continues to attract strong investor interest, with an average funding of USD 61.5 million per round-a sign of growing confidence in the sector's long-term potential. According to TechCrunch, the median deal size reached USD 7 million in 2024, while median pre-money valuations rose to USD 44.5 million, up from USD 31.5 million last year. Over 19,900 funding rounds have taken place across all stages, led by early-stage VC (1,802 companies) and seed funding (1,518 companies)highlighting a robust innovation pipeline. Significant activity is also seen in growth funding (1,389) and M&A (1,123). Per CTVC, USD 30 billion was invested in 2024, a 14% dip YoY-smaller than 2023's 24% decline-indicating improving investor sentiment. The ecosystem is vast, with 5,000+ funded startups and 12,200+ active investors, pointing to deep and diversified market participation.

### • **Germany** keeps moving forward with a solid **7.8**% growth rate.

It's exciting to see India and China taking bold steps in digitalizing legal services, while mature markets like the USA, Japan, and Germany are also embracing innovation to stay ahead.

### Indian Climate Tech Landscape

### India's Decarbonisation Drive: Current Initiatives

While central government leads most climate action, states are now stepping up—initiating measures like climate tracking and tailored action plans.

### State-Level Climate Action

33 states and union territories have adopted State Action Plans on Climate Change (SAPCC) to tackle region-specific climate challenges.

### State Climate Change Centres (SCCCs)

The Department of Science and Technology (DST) has launched SCCCs in 12 states, including J&K, Himachal Pradesh, Uttarakhand, and West Bengal, to strengthen vulnerability assessment, awareness, training, and capacity building.

### Policy Snapshot – IEA Insights

According to the International Energy Agency (IEA), India currently has over 210 active climate policies and measures—comprising 160 national, 44 state, and 6 miscellaneous initiatives.

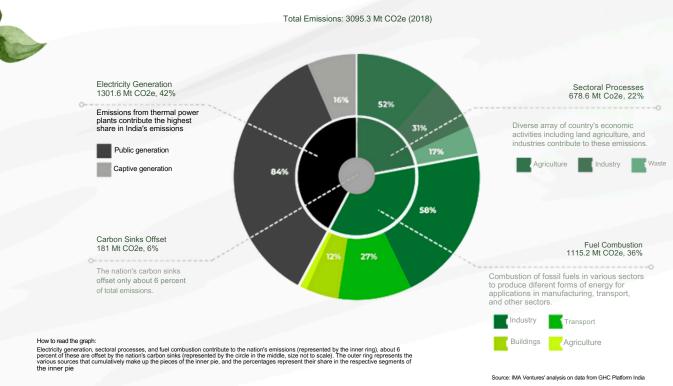
### 8 Flagship Missions under the National Climate Plan

Under the National Action Plan on Climate Change (NAPCC), India runs eight targeted missions:

- 1. National Solar Mission
- 2. National Water Mission
- 3. National Mission for Enhanced Energy Efficiency
- 4. National Mission on Sustainable Habitat
- National Mission for a Green India
- 6. National Mission for Sustainable Agriculture
- 7. National Mission for Sustaining the Himalayan Ecosystem
- 8. National Mission on Strategic Knowledge for Climate Change

### India's Emission Snapshot

# INDIA'S EMISSION MAP



- Total Emissions (2018): 3095.3 Mt CO₂e
- India is the 3rd largest emitter of CO₂e globally.

### **EMISSION BREAKDOWN:**

• Electricity Generation – 42% (1301.6 Mt CO<sub>2</sub>e)

Major contributor, primarily from thermal power (public and captive generation).

• Fuel Combustion - 36% (1152 Mt CO<sub>2</sub>e)

Emissions from fossil fuel use in industry (58%), transport (27%), buildings (12%), and agriculture (2%).

• Sectoral Processes – 22% (678.6 Mt CO<sub>2</sub>e)

Includes emissions from agriculture (52%), industry (31%), and waste (17%).

• Carbon Sinks Offset - 6% (181 Mt CO<sub>2</sub>e)

India's forests and green cover absorb only a small share of total emissions.

### **ECOSYSTEM SIZE:**

India has **800+ climate tech startups** active today. Combined funding (equity, debt, grants) of these startups exceeded **\$3.6B from 2014–2024**. A recent analysis estimates about **\$7.2B** of VC flowed into Indian climate tech from 2018–2023, reflecting strong investor interest. However, most of that has gone to early-stage firms; only ~3% of Indian climate startups have crossed Series B, highlighting a funding gap at growth stages.

**Key Sectors (Startups):** Climate startups in India cluster around a few themes.

### 1. Energy Generation & Consumption:



### **Smart Joules (Founded 2014)**

Sector: Energy Management

Overview: Offers cooling-as-a-service and automation

tech to cut energy waste in buildings.

Impact: ₹190 Cr energy cost saved, 23.55 Cr kWh saved,

1.64 Lakh tonnes CO<sub>2</sub> cut.

Funding: ~\$6.5 Mn from ADB Ventures, Sangam

Ventures, etc.

### Fourth Partner Energy (Founded 2010)

Sector: Solar PV / Renewable Energy

Overview: End-to-end RESCO providing solar, wind, hybrid, battery, and e-mobility solutions for commercial and institutional alignment.

institutional clients.

Funding: \$289 Mn from Norfund, BII, The Rise Fund, and

others.

### Inficold (Founded 2015)

Sector: Energy Storage

Overview: Builds solar-integrated cold storage and

cooling systems with thermal energy storage.

Funding: \$2.84 Mn from Sangam Ventures, Soonicorn

Ventures, and more.

### 2. Food And Agriculture:



### Absolute (Founded 2015)

**Sector:** Precision Agriculture

Overview: Offers data-driven farm solutions via 'Upaj',

leveraging satellite, IoT, and soil biomarking.

Impact: Reached 1.7 Mn+ farmers, analyzed 50K+ soil data

points, developed 250+ APIs.

Funding: \$115 Mn+ from Alpha Wave, Sequoia, Peak XV,

etc.

### Khethworks (Founded 2015)

Sector: Solar-Powered Farm Equipment

Overview: Builds solar irrigation systems for small

farmers, enabling year-round cultivation.

Funding: \$124K from Social Alpha, MIT, Villgro, Sangam

Ventures, etc.

### **GoodDot (Founded 2016)**

Sector: Cultivated / Plant-Based Meat

Overview: Produces plant-based meat alternatives;

available in ready meals.

Funding: Raised from Sixth Sense Ventures, Unovis, YMS

inance

Recognition: PETA India's Trailblazing Business Award

(2017)



### 3. TRANSPORT AND MOBILITY



### **Euler Motors (Founded 2018)**

**Sector:** Electric Mobility

Overview: OEM for commercial EVs; known for India's first cargo 3W EV with DC fast charging. Offers >300 charging stations, Charge-on-Wheels service, and preventive maintenance.

Funding: \$106 Mn from BII, Green Frontier, Athera, Blume, Alteria Capital, and others.

### Hygenco (Founded 2022)

**Sector:** Alternative Fuel

Overview: Develops ammonia-based green hydrogen systems for industrial and mobility use (terrestrial &

marine).

Funding: \$25 Mn+ from Neev Fund.

### PI Green Innovations (Founded 2019)

**Sector:** Emission Mitigation

Overview: Creator of 'Carbon Cutter' - a compact, filterless device capturing >90% PM emissions in real-

time (PM2.5-PM10).

Funding: \$5 Mn from Opus Consulting, JCSS, and angel

investors.

### 5. WASTE MANAGEMENT AND CIRCULARITY



### Recykal (Founded 2015)

Sector: Waste Management

Overview: A tech-driven platform that connects producers, waste generators, recyclers, and facilitators in India's waste management ecosystem.

Funding: ~\$50 Mn from 360 One, Morgan Stanley, Circulate Capital, Triton, and others.

Impact: Linked to 1050+ service providers, 190 urban local bodies, 325 recyclers, and processed 400,000 MT material.

### 4. INDUSTRY AND INDUSTRIAL DECARBONISATION



### Promethean Energy (Founded 2014)

Sector: Industrial Energy Efficiency

Overview: Develops waste heat recovery and thermal energy solutions for industrial and commercial use, targeting the 50% energy loss in input systems.

Funding: \$488K from Sangam Ventures.

### GreenJams (Founded 2019)

Sector: Alternative Materials & Resource Planning

Overview: Creates Agrocrete - a carbon-negative building material offering higher insulation, reduced mortar needs, and faster, cheaper construction.

Funding: ~\$370K from InsightEdge.

Impact: 350% higher insulation, 60% less mortar, 50% lower cost.

### **LivNSense (Founded 2018)**

Sector: Industrial Decarbonization

Overview: Develops GreenOps, a decarbonization platform for factories, capturing and analyzing emissions data across 50+ global plants.

Funding: \$3.25 Mn from VNB Holdings, IIMA Ventures,

Pavestone Capital, and angels.

Impact: 60+ TB emissions data and 55K+ green data tags.

### **ElementRe Technologies (Founded 2023)**

Sector: Circular Economy

Overview: Recycles end-of-life lithium-ion batteries for reuse in energy storage and microgrids; extracts valuable cathode materials for new battery production.

Funding: ~\$2 Mn from Stellaris, The Rise Fund, OTP, Accel, AngelList, Apex, and Indus Capital.

Impact: Enables battery-grade material recovery and battery reuse.

### Facion Labs (Founded 2016)

Sector: Water-as-a-Resource

Overview: Offers IoT and data analytics for industrial water management-tracking usage, distribution, quality, and maintenance to enhance efficiency.

Funding: ~\$2.8 Mn from Empower India, Supreme Overseas, Lets Venture, Aar Em Ventures, and Neev Fund. Impact: 10Bn+ daily data points analyzed, 1000+ users, 300+ projects.

### **FUNDING TRENDS:**

### **Stage Wise Snapshot**

Stage	Number of Deals (Jul 24 - Sep'24)	Total Funding in (Jul 24 - Sep 24)	Total Funding in (Apr 24 - Jun 24)
Seed	17	20	43
Series A	11	91	61
Series B	3	54	84
Later Stages	3	162	50
Total	34	326	238

### **Sector Wise Analysis**

Stage	Number of Deals (Jul 24 - Sep'24)	Total Funding in (Jul 24 - Sep 24)	Total Funding in (Apr 24 - Jun 24)
Sustainable Mobility	16	220	182
Energy	3	6	7
Waste Management & Circular Economy	11	90	18
Climate-smart Agriculture & Food	1	3	19
Environment and Natural Resources	3	8	1
Others	0	0	12
Total	34	326	238

Indian climate-tech fundraising spiked in 2023-24. For example, FY2024 total climate deals far exceeded prior years, and Q4 2023 saw major EV rounds (Ather's IPO prep, Ola Electric's \$300M+, BluSmart's \$20M+). In FY2025 H1 (Apr-Sep 2024) India recorded ~\$564 M in climate-tech investments – a 37% QoQ jump (Q2 vs Q1). EV/mobility startups alone took >70% of that funding. Concurrently, Series B+ rounds grew (notably in mobility and waste): about \$216 M was deployed in later-stage (B+) deals in Jul-Sep 2024, up from ~\$119 M in the prior quarter. Early-stage (seed/Series A) share shrank correspondingly. In short, Indian investors are plowing money into scale-up rounds for mobility and circular-tech ventures as startups prove product-market fit.

### India's Climate Startup Ecosystem

India's climate-tech space is rapidly growing, with a diverse mix of unicorns, emerging disruptors, and early-stage innovators across sectors like electric mobility, renewable energy, agritech, and circular economy.



Ather Energy

Sector: Electric Vehicles (2-wheelers)

**Overview:** One of India's first movers in the premium electric scooter space, Ather has scaled nationwide and recently went public, establishing itself as a leader in urban e-mobility.



ReNew Power

Sector: Renewable Energy

**Overview:** A decacorn and one of India's largest clean energy companies, ReNew Power builds and operates wind, solar, and hybrid power projects, accelerating the country's clean energy transition.



MittiLabs

Sector: AgriTech / Methane Mitigation

**Overview:** Focused on reducing methane emissions from rice farming, MittiLabs uses innovative water and soil management techniques, contributing to climate-resilient agriculture.



Grüne Kraft

**Sector:** Waste to Energy / Circular Economy

**Overview:** Specializing in compressed biogas production, Grüne Kraft transforms organic waste into clean energy, supporting India's push towards sustainable waste management.



Sector: Recycling / Circular Economy

**Overview:** A key player in industrial and consumer waste recycling, the startup leverages tech-driven processes to promote zero-waste ecosystems and circular supply chains.



Sector: Green Hydrogen

**Overview:** An emerging innovator developing affordable hydrogen fuel cells, Protonas Energy is driving interest in India's nascent green hydrogen economy with promising early traction.

### Policy & Programs:

Government initiatives are boosting the sector. For example, India's target of 500 GW non-fossil power by 2030, rising biofuel blending mandates, and the production-linked incentive (PLI) scheme for battery manufacturing all drive climate innovation. Startup programs like Mission LiFE and collaborations (e.g. GEAPP/ENTICE for climate-tech incubators) are also catalyzing early-stage firms.

### **INVESTOR LANDSCAPE:**

Both domestic and global investors are active. Indian climate rounds have drawn traditional VCs and specialized funds. Major Indian VC/PE firms (Omnivore, Aavishkaar, Blume Ventures, Sequoia India, etc.) and corporate funds (e.g. CIIE/ADB's India Climate Ventures) participate. International climate funds (Aavishkaar's EIVF, Circulate Energy, Energy Access Ventures) and development finance (USAID, UNDP, etc.) are also important. Notably, Omnivore and Orios have co-led rounds like Varaha (see below). The **Indian Impact Investors Council (IIC)** reports a maturing investment landscape with growing late-stage funding, though they urge more risk capital for Series B and beyond.

### EMERGING TRENDS & OPPORTUNITIES

Looking to the future, several frontiers and trends stand out for founders and investors:

- Heavy Industry Decarbonization: Hard-to-abate sectors (steel, cement, chemicals) are gaining attention. Innovations like green hydrogen production, carbon-capture cement processes, and alternative materials are emerging. For example, startups are developing electrolyzers for green H<sub>2</sub> (replacing fossil fuel-derived hydrogen) and "green cement" that embeds captured CO<sub>2</sub> into building materials. While still early, breakthroughs here could unlock multi-billion-dollar opportunities: cement alone accounts for ~8% of global emissions, so clean processes (e.g. Fortera's carbon-capturing cement) are highly valued.
- Carbon Removal & Markets: The scaling voluntary carbon market is a major opportunity. Global firms and nations will need to offset hard-to-remove emissions, so demand for high-quality removal credits (biochar, direct air capture, reforestation) is set to skyrocket. Morgan Stanley forecasts voluntary carbon markets growing from \$2B in 2020 to ~\$100B by 2030. Indian startups like Varaha (agricultural offsets) and budding ventures in biochar or DAC could capture part of this. Likewise, digital platforms for carbon accounting and data (spurred by new disclosure rules) are in demand globally and in India.
- Climate Adaptation & Resilience: As extreme weather intensifies, tech for adaptation is becoming mainstream. This
  includes precision agriculture (drought- and flood-resilient crops), Al-driven risk modeling (wildfire or flood prediction),
  and climate-smart infrastructure (cooling systems, resilient energy grids). Nearly 28% of climate tech deals in early 2024
  were in adaptation/resilience, and that trend should accelerate. Startups that help businesses and communities manage
  climate risk will find a growing market.
- Al and Data Analytics: Artificial intelligence continues to pervade climate solutions. Beyond autonomous vehicles (which captured ~62% of climate-Al funding in 2024), Al is being applied to optimize energy grids, forecast renewable output, design new materials, and automate carbon-tracking. Founders using Al/ML to unlock efficiency (e.g. predictive grid balancing, smart charging, precision carbon modeling) are attractive to investors. Indeed, climate Al startups raised 14.6% of all climate VC in 2024.

- Green Finance & Policies: The investment landscape is evolving. Non-dilutive finance (debt, grants, offtake agreements) and blended models are on the rise. Governments worldwide are creating new funding streams (India's green bonds, carbon credit demand, sustainability-linked loans). Meanwhile, regulatory tailwinds (expanded carbon pricing in APAC, stricter emissions rules, subsidy programs) continue to create guaranteed markets for climate solutions. Startups and investors that align with these policies e.g. building qualifying projects for subsidy schemes can benefit.
- Circular Economy & Materials: Resource efficiency and circularity remain critical. Innovations in recycling (plastics, batteries), sustainable packaging (e.g. agricultural-waste mycelium products), and circular supply chains are growing. Investors see strong returns in enabling reuse/upcycling technologies. (For example, Dutch startups are using blockchain to track EV batteries for second-life reuse.) In India, plastic recycling, waste-to-value, and eco-friendly materials startups are attracting attention, reflecting global moves to decouple growth from resource use.
- Emerging Sectors: Other areas on the horizon include marine technologies (e.g. blue carbon projects), climate-smart
  financial services (insurtech for disasters, ESG risk scoring), and net-zero digital infrastructure (energy-efficient data
  centers, carbon-aware computing). As the energy transition unfolds, any technology that cuts emissions or climate risk in
  a scalable way can be a high-potential bet.
- In summary, climate tech is entering a maturing phase. Founders should aim for differentiated, capital-efficient solutions in emerging niches, while leveraging supportive policies and cross-sector partnerships. Investors will watch for entrepreneurs who can commercialize deep-tech solutions (AI, advanced materials, biotech) and tap into the enormous global capital seeking climate impact. The next years promise a rich pipeline of opportunities from green hydrogen factories and carbon-removal farms to smart-agriculture analytics and resilient-city platforms all driving the shift toward a low-carbon economy.







Scope 1, 2, 3 Emissions:

Categories of GHG emissions — direct (Scope 1), indirect (Scope 2), and value-chainwide (Scope 3).

**RECs (Renewable Energy Certificates):** Proof that electricity was generated from a renewable source.





**Energy Transition:** 

The shift from fossil fuels to renewable energy sources.

CleanTech:

Broader term encompassing technologies that reduce environmental impact.



### VARAHA CARBON (GURUGRAM, INDIA)

Founded: 2022 Stage: Series A

Total Equity Funding: \$12.7M (across 2 rounds)

Varaha Carbon is a rising climate tech startup at the forefront of India's carbon credit economy. Headquartered in Gurugram, Varaha offers a techenabled platform that partners with smallholder farmers to deploy nature-based climate solutions such as regenerative agriculture, reforestation, and biochar production. These initiatives help sequester carbon from the atmosphere, generating verifiable carbon credits that are sold on global voluntary carbon markets.

### Business & Revenue Model

At the heart of Varaha's model is a shared-value approach. Farmers are trained and equipped to implement low-carbon practices; in return, Varaha monitors carbon sequestration using AI, satellite imaging, and remote sensing tools. The credits generated are sold to corporations seeking to meet sustainability goals, with ~60–65% of the revenue shared back with the farmers. This model not only drives environmental sustainability but also improves rural incomes, unlocking climate finance at the grassroots level.

### TRACTION & FUNDING

Varaha's scalable model has gained strong market validation. In February 2024, the startup raised \$8.7 million in Series A funding led by RTP Global, with participation from Omnivore, Orios Venture Partners, and Japan's Norinchukin Bank. Previous backers include strategic climate-focused funds, reflecting confidence in Varaha's market potential.

In addition, the company's leadership and innovation have been globally recognized. Varaha's CEO was featured in the **TIME 100 Climate Leaders list** in 2024 — a significant milestone for Indian cleantech entrepreneurs.

### **INNOVATION AND IMPACT**

In **November 2024,** Varaha launched **India's first industrial biochar-based carbon credits** on the **Puro Earth** platform — expanding beyond agriculture into industrial carbon removal. This demonstrates Varaha's intent to diversify its impact portfolio while maintaining its data-driven verification standards.

To date, Varaha has engaged thousands of farmers and brought marginal lands into productive, sustainable use. With partnerships like **Coca-Cola India, IIT Kharagpur,** and **The Nature Conservancy,** the startup is building a credible, science-backed brand in the global carbon space.

### TRACTION & FUNDING

With voluntary carbon markets expected to reach \$100 billion by 2030, Varaha is strategically positioned to lead India's entry into this transformative space. Its combination of climate innovation, inclusive development, and data integrity makes it a case study for scalable impact in emerging economies.



# **FUNDING NEWS & UPDATES**



### Stride Green raises \$3.5 Mn in seed round

Gurugram-based climate-tech platform Stride Green has raised \$3.5 million in seed funding from Micelio Technology Fund and Incubate Fund Asia. This funding will aid team growth and technology enhancements in India's clean energy sectors, like electric mobility and renewable energy. Founded by Ishpreet Gandhi and Vivek Jain, Stride Green offers asset financing and lifecycle management solutions for sustainable businesses, managing over 3,000 cleantech assets and collaborating with OEMs and logistics firms for leasing and financing. Plans for further expansion are underway.



# Agri-biotech startup GreenGrahi raises Rs 32 Cr led by Avaana Capital

Agri-biotech startup GreenGrahi has secured Rs 32 crore (\$3.73 million) in funding led by Avaana Capital, with support from Huddle and others. The funds will enhance its insect biomanufacturing platform, aid talent recruitment, and support international growth. Founded in 2021 by Siddharth Sharma and Shivali Sugand in Bengaluru, GreenGrahi produces insect-based ingredients for animal and plant nutrition, as well as biofertilisers and biopesticides. The startup serves over 10 clients and aims to expand its team and enter markets in the US, UK, and EU.



# Deeptech startup ALT CARBON raises \$12 Mn in seed round

Deeptech startup ALT CARBON has raised \$12 million in seed funding led by Lachy Groom, with support from Shastra VC and angel investors. Co-founder Shrey Agarwal shared the news on LinkedIn. The funding will aid carbon dioxide removal (CDR) projects in South Asia and R&D initiatives. Founded in 2023 by Shrey and Sparsh Agarwal in Bengaluru, the startup aims to remove 5 million metric tons of CO2 by 2030, focusing on the Darjeeling Revival Project to revive degraded soils and collaborate with local farmers.



## Nikhil Kamath invests \$20 Mn in GreenLine's \$275 Mn round

GreenLine Mobility Solutions, part of the Essar Group, has secured a \$275 million equity investment to deploy over 10,000 clean-energy trucks and establish refuelling and EV charging stations in India. This includes a \$20 million contribution from Zerodha co-founder Nikhil Kamath. The initiative aims to reduce 1 million tonnes of carbon emissions annually, as GreenLine's trucks can cut CO2 emissions by up to 30%. The company operates LNG-powered trucks for long-haul transport and electric vehicles for short-haul operations, serving sectors like FMCG, ecommerce, metals, mining, cement, oil, gas, and chemicals.



### GROWIT raises \$3 Mn in Series A round led by GVFL

GROWIT, a Surat-based agritech firm, has raised \$3 million in Series A funding led by GVFL, with participation from Veloce Opportunities Fund and Hyderabad Angels. Founded in 2020, GROWIT offers soil-to-harvest solutions like soil health testing devices and mulch films to help farmers boost productivity and cut costs. With over 650 franchise partners across 12 Indian states, the company has reached more than 225,000 farmers. GROWIT plans to expand its domestic presence and export to Africa and other markets while adapting to evolving agricultural needs.



### "HOW TO AVOID A CLIMATE DISASTER" BY BILL GATES

### An Essential Read for Climate Tech Founders and Innovators

In a world where the climate crisis looms large, "How to Avoid a Climate Disaster" by Bill Gates stands out as a **clear-headed, solutions-focused guide**. Far from being just another climate book, it's a **strategic manual** for the innovators, technologists, and founders who are actively building the future — especially in the climate tech space.

Gates brings together decades of work, research, and funding in climate and energy innovation, presenting a **science-backed, action-oriented** view of what it will truly take to bring the planet to **net-zero emissions**.

### **KEY LESSONS FOR CLIMATE TECH STARTUPS**

### 1. Net-Zero Is the New North Star

Gates emphasizes that reducing emissions isn't enough — we must aim for net-zero. For startups, this means not just focusing on mitigation, but also investing in removal technologies and full-lifecycle sustainability. It redefines product design and company vision.

### 2. The Green Premium = Your Market Opportunity

One of the most compelling ideas is the "Green Premium" — the cost difference between a fossil-fuel-based product and its green alternative. Whether it's clean cement, sustainable jet fuel, or plant-based protein, startups that eliminate this premium can unlock mass-market adoption. The book effectively frames these premiums as innovation gaps waiting to be filled.

### 3. Innovation Will Outpace Regulation

While policy and public funding are essential, Gates makes it clear that technological breakthroughs are our best bet. This is particularly energizing for climate tech founders — your ingenuity, speed, and risk appetite can outmaneuver traditional approaches.

### 4. Focus on the Hard Problems

From steel and cement to agriculture and shipping, the hardest-to-decarbonize sectors are often the least crowded with startups — yet they are the most in need of change. These "tough tech" challenges represent massive untapped potential for deep-tech innovators.

### 5. Collaboration is Critical

Gates is candid: solving climate change isn't a solo mission. Climate tech founders must think beyond the startup — partnering with governments, corporates, researchers, and financiers to truly scale and make global impact.

### Why This Book Belongs on Your Shelf

For Founders: It helps you think like an impact investor — prioritizing scalability, affordability, and emissions impact.

**For Investors:** It clarifies which sectors offer high leverage for innovation, guiding smart climate-aligned capital deployment.

For Ecosystem Builders: It encourages aligning talent, policy, and capital toward breakthrough innovation, not incremental change.

### **FINAL TAKEAWAY**

"How to Avoid a Climate Disaster" is not just a diagnosis of the problem — it's a **strategic action map.** It challenges startup founders to think bigger, bolder, and more collaboratively.

If you're building a solution in climate tech — whether in energy, carbon removal, mobility, materials, or food systems — this book will **sharpen your mission**, **validate your vision**, **and connect you with the global conversation** around decarbonization.

In short: Read it not just to understand the problem — but to build the solution.





Did you know renewable energy is now cheaper than fossil fuels?

Thanks to advances in solar, wind, and battery storage technology, many countries are generating clean energy at a lower cost than coal or gas.



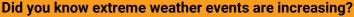
Rising temperatures, droughts, and unpredictable weather patterns are reducing crop yields and threatening global food supplies.





Did you know businesses are adopting carbon-neutral goals?

More companies are committing to net-zero emissions by adopting green energy, offset programs, and sustainable practices to reduce their carbon footprint.



Heatwaves, floods, hurricanes, and wildfires are becoming more frequent and intense due to global warming, impacting millions of lives every year.





Did you know climate tech investments are booming?

Startups focusing on carbon capture, clean energy, sustainable agriculture, and green transportation are attracting billions in global funding as the world races to fight climate change.



Global angel investment platform, empowering startups by providing growth capital and connect.

### **FOR STARTUPS**

To raise funds from UNISYNC, please submit your details at <a href="https:bit.ly/UnisyncStartup">https:bit.ly/UnisyncStartup</a>

### **FOR INVESTORS**

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