Centre for Social and Economic Progress
CSEP
Independence | Integrity | Impact

DISCUSSION PAPER - 27
JUNE 2025

Mapping Global Climate and Health Governance

Exploring India's Role

Neethi V Rao
Pooja Ramamurthi
Priyanka Tomar

CSEP RESEARCH

Centre for Social and Economic Progress (CSEP)
CSEP Research Foundation
6, Dr Jose P. Rizal Marg, Chanakyapuri,
New Delhi - 110021, India

Recommended citation:
Rao, N. V., Ramamurthi, P., and Tomar P., (2025). *Mapping Global Climate and Health Governance: Exploring India's Role* (CSEP Discussion Paper 27). New Delhi: Centre for Social and Economic Progress.

The Centre for Social and Economic Progress (CSEP) conducts in-depth, policy-relevant research and provides evidence-based recommendations to the challenges facing India and the world. It draws on the expertise of its researchers, extensive interactions with policymakers as well as convening power to enhance the impact of research. CSEP is based in New Delhi and registered as a company limited by shares and not for profit, under Section 8 of the Companies Act, 1956.

Designed by Umesh Kumar

Mapping Global Climate and Health Governance

Exploring India's Role

Neethi V Rao
Fellow
Centre for Social and Economic Progress
New Delhi, India

Pooja Ramamurthi
Fellow
Centre for Social and Economic Progress
New Delhi, India

Priyanka Tomar
Research Associate
Centre for Social and Economic Progress
New Delhi, India

Table of Contents

List of Figures

List of Tables

Abbreviations

ADB	Asian Development Bank
AMR	Antimicrobial Resistance
AR5	Fifth Assessment Report
AR6	Sixth Assessment Report
ATACH	Alliance for Transformative Action on Climate Change and Health
BRICS	Brazil, Russia, India, China, South Africa, Iran, Egypt, Ethiopia, and the United Arab Emirates
C-DAC	Centre for Development of Advanced Computing
CDRI	Coalition for Disaster Resilient Infrastructure
COP	Conference of Parties
COVAX	COVID-19 Vaccines Global Access
CRHS	Climate Resilient Health System
FAO	Food and Agriculture Organization
GAVI	Global Alliance for Vaccines and Immunisation
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHHIN	Global Heat Health Information Network
GHG	Greenhouse Gas
HAP	Heat Action Plan
ILO	International Labour Organization
IMD	Indian Meteorological Department
IPCC	Intergovernmental Panel on Climate Change
ISA	International Solar Alliance
JICA	Japan International Cooperation Agency
LDC	Least Developed Countries
LiFE	Lifestyle for Environment
LMIC	Low- and Middle-Income Countries
MDB	Multilateral Development Banks
MEA	Ministry of External Affairs
MoEFCC	Ministry of Environment, Forest, and Climate Change
MoHFW	Ministry of Health and Family Welfare
NAPCCHH	National Action Plan on Climate Change and Human Health
NCDC	National Centre for Disease Control
NDC	Nationally Determined Contributions
NDMA	National Disaster Management Authority
NIMHANS	National Institute of Mental Health and Neurosciences
PEPFAR	President's Emergency Plan for AIDS Relief
PIB	Press Information Bureau
RBI	Reserve Bank of India
SAPCCHH	State Action Plan on Climate Change and Human Health
SDG	Sustainable Development Goal

SIDS	Small Island Developing States
SLCHS	Sustainable Low-Carbon Health Systems
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Funds
USAID	United States Agency for International Development
WEF	World Economic Forum
WHA	World Health Assembly
WHO	World Health Organization
WMO	World Meteorological Organization
WOAH	World Organisation for Animal Health

Executive Summary

Climate change has both direct and indirect effects on human health, disproportionately affecting vulnerable populations. Climate induced disruptions in healthcare due to extreme weather events, vector-borne diseases and food and water insecurity underscore the urgency of integrating health into climate policies. The World Health Organization (WHO) estimates that climate change will contribute to an additional 250,000 deaths annually between 2030 and 2050 due to malnutrition, disease, and heat-related illnesses globally. As climate change accelerates, these health risks are becoming a critical global concern, necessitating the integration of health within climate policy frameworks.

India becomes a vital country to analyse in the context to global climate and health governance. Its large population and geographic vulnerabilities, means that the country will face a disproportionately high burden of mortality, disease, and economic losses from climate change. Hence, this discussion paper examines the increasing prominence of health in global climate discourse and action and goes on to analyse India's role in this context.

Growing Prominence of Health in the Climate Agenda

The paper systematically documents the evolution of health from being relatively marginal in the climate change agenda to becoming an integral part of climate negotiations in forums such as the United Nations Framework Convention on Climate Change (UNFCCC), Conference of Parties (COPs), as well as other multilateral forums, including the G20 and G7. It begins with the 2015 Paris Agreement, which laid the groundwork for recognising health as an integral aspect of climate action, and continues with subsequent COPs that introduced health-specific climate commitments and mechanisms to support countries in achieving Climate Resilient Health Systems (CRHS) and Sustainable Low-Carbon Health Systems (SLCHS). Simultaneously, the paper notes that international development actors have recognised the shortfall in available climate financing for health-related adaptation and have begun to work towards remedying this situation. The "Guiding Principles for Financing Climate and Health Solutions," developed by a consortium of multilateral development banks (MDBs), funders, countries, and philanthropies, provides a roadmap for synergistic and focused attention towards supporting equitable, inclusive, and holistic climate and health solutions.

Mitigating Systemic Challenges by Integrating Climate and Health

The current climate governance system is mired in several weaknesses that have impeded accelerated progress on climate change.

- Political will for climate action is diminishing worldwide with the rise of nationalist leaders, influenced by entrenched interests and poor public engagement with climate change issues. The recent decision by the Trump administration to withdraw from the Paris Agreement exemplifies this trend. Persistent shortfalls in fulfilling climate financing commitments from the Global North further raise concerns about the credibility of these commitments and the feasibility of equitable climate solutions.

- There is growing recognition that a polycentric, multi-stakeholder approach which looks beyond the UNFCCC process is required for climate action. However, current global climate governance system has not been very successful in integrating non-state and subnational voices into decision-making processes, despite their critical role in translating international and national commitments into practical actions on the ground.

- Shaped by an agenda spearheaded by the Global North, there has been an emphasis on mitigation actions focused on emissions reductions, despite nations in the Global South advocating for a greater focus on adaptation. The global community has acknowledged the need to look at climate change through the lens of development. However, in practice, creating the linkages between developmental goals and climate action have remained weak.

The paper posits that adopting a health perspective through proactive engagement by emerging powers of the Global South, such as India, may offer potential alternative strategies to advance in the face of these challenges. Historically, India has been effective in amplifying the voice of the Global South in international negotiations by building coalitions, as seen

with the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement and, more recently, with the Pandemic Fund. Raising developmental concerns related to climate change, particularly regarding health, across multilateral and regional forums has also proved to be an influential strategy for groupings like the Small Island Developing States (SIDS) and Least Developed Countries (LDCs) to gain influence and resources.

- Using a health framing in the climate change debate has been a useful policy strategy to overcome interest groups, such as those in the fossil fuel industry, by fostering public engagement. Highlighting the health impacts of climate change in global, regional, and sub-regional forums can help maintain momentum despite diminishing political will for climate action in traditional climate forums like the COP.

- Global health presents a powerful model for translating global consensus into accelerated action at local levels through cross-country exchanges of knowledge and resources. Mechanisms like the President's Emergency Plan for AIDS Relief (PEPFAR), the Global Alliance for Vaccines and Immunisation (GAVI), and, more recently, the COVID-19 Vaccines Global Access (COVAX) initiative potentially offer useful lessons for undertaking climate action.

- Demonstrated interest in supporting action on sustainability and health across stakeholders, including the private sector, as well as greater alignment with the sustainable development agenda, can help synergise global development finance and reduce reliance on climate finance transfers from donors in the Global North.

- Global networks of sub-national actors working on developmental issues such as health can make progress even when vertical processes of climate policy and planning prove ineffective. The strategic integration and intersectoral coordination with public health professionals, civil society, and private sector actors across diplomatic and policy channels can help push for greater accountability and alignment with the sustainable development agenda.

India's Approach to International Climate-Health Engagement

Recognising the growing convergence of climate and health interests globally, we examine India's approach to international engagement. We find that the country has been cautious and tentative –acknowledging the significance of the climate and health agenda while being reluctant to sign on to global frameworks, such as the WHO Alliance for Transformative Action on Climate Change and Health (ATACH). India has started to make nascent efforts through its interventions and diplomacy, including by engaging with multilateral development banks (MDBs), developmental organisations, and bilaterally. Key Indian initiatives include the Lifestyle for Environment (LiFE) movement that reframes climate policy as a broader sustainability issue, as well as leadership in multilateral institutions such as the International Solar Alliance (ISA) and the Coalition for Disaster Resilient Infrastructure (CDRI). However, these actions are so far limited and the paper makes a case for India to engage more proactively in the global climate and health agenda. The paper identifies the benefits available to India through such a strategic approach.

1. **Meeting Gaps in Financing**: Currently, government expenditure on health is only 1.4% of Gross Domestic Product (GDP), significantly lower than comparable economies, reflecting substantial underfunding and neglect of its health system needs. The pathway towards climate resilience will inevitably require greater resources for overall health system strengthening. The increasing availability of international climate-health financing initiatives can provide access to additional investments for India to support its climate-health programmes as well as broader health system strengthening efforts.

2. **Strengthening Domestic Institutional Capacity and Preparedness**: Beyond financing, India faces structural challenges in implementing an integrated climate-health strategy. Its current climate and health policies remain fragmented, with poor accountability and institutional inefficiencies. International experience, such as the Dutch Global Health Strategy (2023–2030) and Australia's Climate and Health Alliance, provides valuable insights that India can adapt to its unique context.

3. **Knowledge Exchange Platforms of Best Practices**: Platforms like ATACH, the Global Heat Health Information Network (GHHIN), among others, provide opportunities for a diverse range of actions including sub-national governments and non-state actors to leverage global collaboration on climate-health best practices. For instance, the forthcoming Climate and Health Hub, supported by the ADB, is an avenue for regional knowledge exchange on innovative climate change mitigation and adaptation best practices in health, from government, civil society, and the private sector.

4. **Positioning India as a Climate-Health Innovation Hub**: India's geographic and population diversity, technological expertise, low-cost healthcare solutions, and strategic partnerships position it as a leader in climate-health adaptation, benefiting both domestic and Global South nations. Through its international engagements, India can move closer towards becoming a credible development partner and replicate successful domestic health and climate initiatives in other developing countries.

5. **Championing Inclusive Global Governance**: Health has historically been an important avenue for India to advocate for the collective needs of the Global South at international forums. India can continue to strengthen its South-South cooperation by using its health diplomacy to build coalitions and bridge the gap between Global North funding and the needs of vulnerable nations.

Conclusion and Future Directions

The integration of health into global climate governance presents an opportunity for India to simultaneously strengthen its healthcare resilience and enhance its geopolitical standing. However, achieving these goals requires:

- A clearly defined national strategy integrating climate and health policies.
- Enhanced institutional coordination to prevent fragmented implementation.
- Expanded global engagement to leverage international funding opportunities.
- Scaling up research and knowledge-sharing to develop scalable, transferable solutions.
- Fostering South-South cooperation in climate-health policy and technology transfer.

This discussion paper calls for further research into India's policy effectiveness, financing strategies, and governance mechanisms, ensuring that its climate-health initiatives are both impactful and sustainable. India must act strategically and proactively to maximise the benefits of climate-health convergence while advancing its domestic and global interests.

1. Introduction

There is growing recognition of the profound impacts of climate change on human health, both directly and indirectly. Direct impacts include increasing mortality and morbidity from extreme weather events such as heatwaves, storms, and floods, as well as the spread of vector-borne diseases such as malaria, dengue, and yellow fever. Indirectly, climate change affects critical determinants of health, including access to healthcare, livelihoods, food, water, and community support systems. While climate change affects all populations, the most vulnerable—those already marginalised or deprived—will bear the heaviest burden (Costello et al., 2023).

The World Health Organization (WHO) estimates that between 2030 and 2050, climate change will contribute to an additional 250,000 deaths annually due to malnutrition, malaria, diarrhoea, and heat stress globally (WHO, 2023a). Furthermore, by mid-century, the global economy could shrink by up to 18% of its Gross Domestic Product (GDP) if temperatures rise by 3.2 degrees Celsius. Asian economies are projected to experience the most significant impact, with GDP losses reaching up to 26.5% compared to a scenario without climate change (Guo et al., 2021).

Recognising these widespread effects, global institutions have increasingly integrated health concerns into climate policy. Since the 2015 Paris Agreement, the United Nations Framework Convention on Climate Change (UNFCCC) has launched initiatives at the intersection of health and climate. The Intergovernmental Panel on Climate Change (IPCC) has also intensified its focus on the scientific and policy dimensions of climate-induced health challenges. Other multilateral forums, such as the G7,[1] BRICS,[2] and the World Health Assembly (WHA) have reinforced international commitments to addressing these issues. Meanwhile, multilateral development banks (MDBs) and philanthropic organisations are mobilising investments at the climate-health nexus. In 2024, the Development Bank Working Group for Climate-Health Finance (a network of MDBs and public development banks) introduced a joint strategy to maximise investments in this area (World Bank, 2024a).

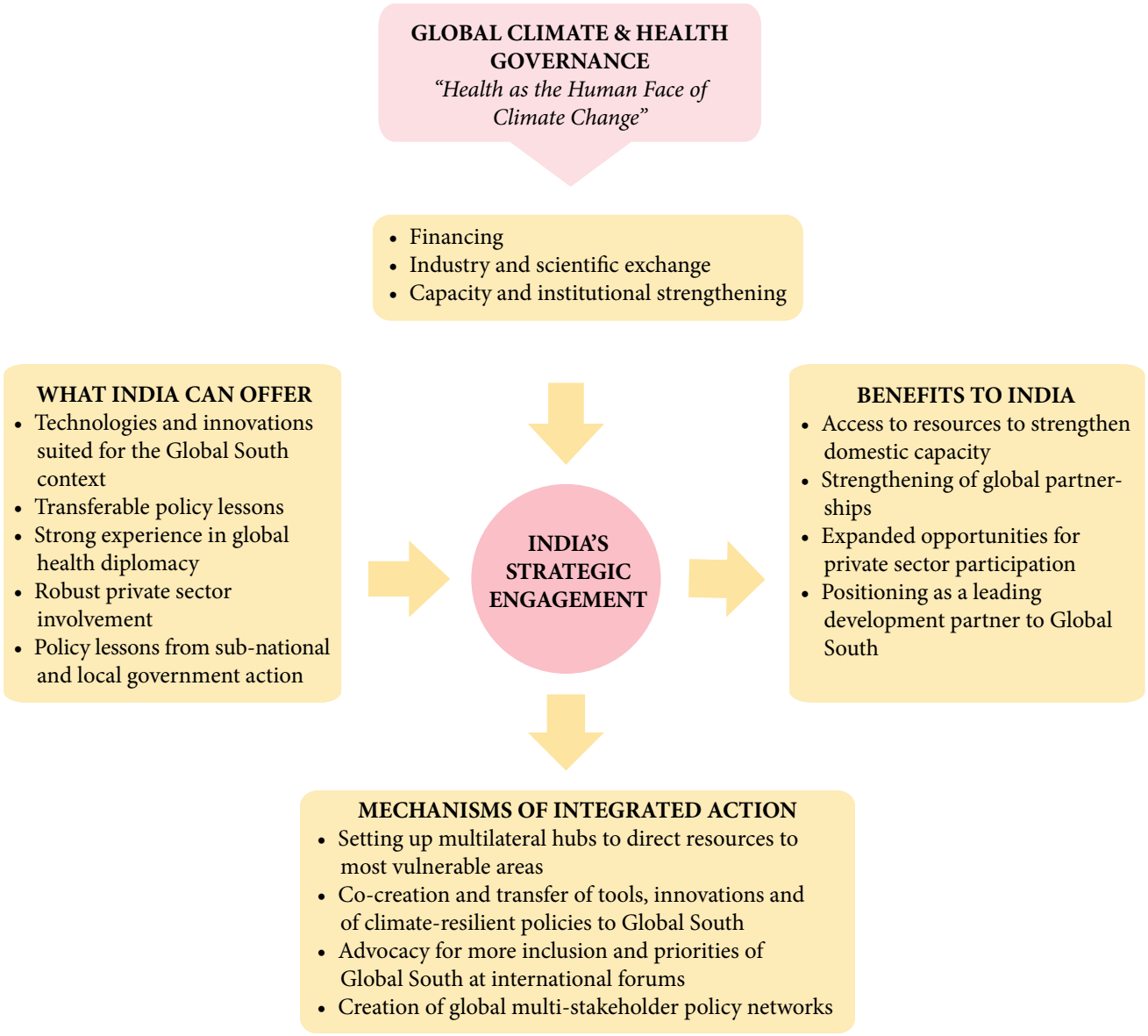
For India, prioritising health within climate discussions is particularly crucial. Given its large population and geographic vulnerabilities, the country faces a disproportionately high burden of mortality, disease, and economic losses (Bush et al., 2011). India is already among the five nations most exposed to extreme heat and air pollution (Lopes, 2021). By 2100, heat stress is projected to cause 1.5 million excess deaths annually, comparable to the country's current mortality rate from all infectious diseases combined (Climate Impact Lab, 2019). Rising temperatures will also lead to an increase in respiratory diseases, strokes, ischaemic heart disease, and other health conditions (Fu et al., 2018).

Additionally, the International Labour Organization (ILO) estimates that by 2030, heat stress will lead to the loss of 80 million full-time jobs worldwide, with India accounting for 43% (34 million) of those losses (ILO, 2019). This will result in up to a 4.5% reduction in India's GDP (Reserve Bank of India [RBI], 2023). Health distress resulting from excessive heat will especially impact sectors such as agriculture, construction, and manufacturing, potentially slowing economic growth, widening income inequality, and reversing progress towards the Sustainable Development Goals (SDGs) (Salas & Jha, 2019).

Understanding India's approach to managing the climate impacts on human health and well-being is of critical importance. While research on India's domestic efforts is growing (Brand et al., 2024; Gupta et al., 2021), its role in shaping global climate-health policies remains underexplored. A foreign policy perspective is essential for two reasons. Firstly, climate change threatens to overwhelm India's already strained healthcare system, which faces underinvestment and infrastructure limitations (Kandi, 2023; Ugargol et al., 2023). However, the global recognition of health as the "human face of climate change" presents an opportunity for India to secure international funding, knowledge exchanges, and technological support to strengthen its own health systems. At a recent conclave with the Asian Development Bank (ADB), Ministry of Health and Family Welfare (MoHFW) Secretary Apurva Chandra emphasised

[1] G7 is an intergovernmental grouping consisting of Canada, France, Germany, Italy, Japan, the United Kingdom (UK), and the United States of America (USA).
[2] BRICS is an intergovernmental organisation consisting of Brazil, Russia, India, China, South Africa, Iran, Egypt, Ethiopia, and the United Arab Emirates (UAE).

Figure 1: Conceptual Summary



Source: Developed by Authors'.

that international collaboration ensures India's health sector is better equipped to address climate challenges (Press Information Bureau [PIB], 2024).

Secondly, India can leverage its history of health diplomacy to emerge as a leader in addressing climate-related health challenges in the Global South—an approach that aligns with its geopolitical and economic interests. At the same ADB conclave, G20 Sherpa Amitabh Kant highlighted India's potential to pioneer innovative solutions at the intersection of climate and health. By scaling, mainstreaming, and co-developing these solutions, India can provide a model for sustainable development globally (PIB, 2024).

To achieve these goals, a clear policy and research agenda is needed—one that examines how India can actively engage with the growing global discourse on climate and health.

As the global climate discourse increasingly emphasises health, India, as the world's most populous country, is being called upon to respond. This discussion paper examines India's current positions within an evolving global framework of climate and health and argues that deeper, more strategic engagement with the global climate and health agenda is in India's interests. Sections 2 and 3 systematically document the evolution of health within global climate governance and finance, presenting evidence for the growing prioritisation of climate-resilient health systems and the expanding ecosystem of financing, noting the efforts of international development agencies in this area. Section 4 highlights some weaknesses of the current

climate governance system and suggests that adopting a health framing of the issue can help sidestep some of these challenges. Section 5 examines India's engagement in existing global regimes before outlining the rationale in Section 6 for India to invest strategically and proactively in climate and health, both domestically and internationally. Finally, in Section 7, the paper identifies key areas of future research and policy action necessary to support India's strategic engagement at the intersection of climate and health. The paper underlines the positive mutualism between focused domestic and foreign policy engagement for India in the climate and health agenda.

Figure 1 presents a conceptual summary of the main arguments of the paper, illustrating how the global convergence of the climate and health governance agendas presents additional pathways to secure resources for climate action, including financing, knowledge, and expertise. India can leverage these resources to derive domestic benefits and contribute to the global agenda through proactive and strategic engagement on climate and health.

2. Rising Prominence of Health Within the Global Climate Agenda

The IPCC first highlighted the health impacts of climate change in its 1990 assessment report. Over time, the language has evolved from describing these impacts as "likely" to "unequivocal." In 2014, the IPCC's Fifth Assessment Report (AR5) dedicated an entire chapter to human health, adaptation, and the developmental co-benefits of climate mitigation. This report played a pivotal role in establishing scientific evidence on how climate change affects human health (Woodward et al., 2014). The latest report (Sixth Assessment Report [AR6]) further emphasises that temperature changes, both in average levels and extreme fluctuations, have significant health implications, reinforcing the need to integrate health considerations into climate action (Lendrum et al., 2022).

However, the healthcare sector itself is a contributor to climate change, accounting for 4.4% of global greenhouse gas (GHG) emissions. If classified as a country, the health sector would rank as the fifth-largest emitter globally. Over 70% of healthcare-related emissions come from supply chains, including the production, transport, and disposal of medical goods and services. India had the lowest per capita emissions among the 43 countries studied by Karliner et al., (2019), but in absolute terms, it is the seventh-largest emitter of health-related emissions.

As evidence of climate change's health impacts continues to grow, health stakeholders are increasingly engaging in climate discussions. The first Lancet Commission on Climate Change, established in 2009, described climate change as "the biggest global health threat of the 21st century." The second commission, set up in 2014, followed up to provide a policy roadmap for accelerating mitigation and adaptation efforts, informing discussions at the UNFCCC's annual Conference of Parties (COP).

2.1 Health in Climate Negotiations: The COP

Historically, health has not been a central focus in climate negotiations. However, since the 2015 Paris Agreement (COP21), it has gained increasing recognition. The evolution of the health discourse at COPs has followed a structured path: starting with understanding climate change's health impacts, establishing global mechanisms to monitor these effects, and finally promoting actions towards climate-resilient, low-carbon health systems.

COP21–COP25: Laying the Groundwork

COP21 in Paris marked a turning point by explicitly recognising health as a critical concern in climate action. Governments were encouraged to address climate-related health risks through their Nationally Determined Contributions (NDCs) (Dasandi et al., 2021). The agreement's preamble underscored that the health benefits of climate action outweigh its economic costs and affirmed the "right to health" for all populations. In addition to its emphasis on equity and adaptation, the agreement introduced a framework of differentiated responsibilities for climate action, while emphasising adaptation actions based on the principles of equity (WHO, 2015).

To track progress on health-related commitments under the Paris Agreement, the independent international collaboration "Lancet Countdown on Climate Change and Human Health" was established in 2016 with support from the Wellcome Trust.

Subsequent COPs continued to advance the climate-health agenda. At COP23 in 2018, the presidency launched the "Special Initiative on Climate Change and Health in Small Island Developing States (SIDS)" (WHO, n.d.). COP24 saw the release

of WHO's "Special Report on Health and Climate Change," calling for urgent government action (WHO, 2018). By COP25, the first "Global Climate and Health Summit" was held, fostering collaborations, knowledge exchange, and best practices while enhancing the role of health stakeholders in climate action.

COP26–COP27: Strengthening Commitments

At COP26 in Glasgow, health gained greater prominence with the inclusion of the "Health Programme" within the main agenda (Blom et al., 2022). Two health-specific commitments emerged:

- Climate Resilient Health System (CRHS)—strengthening healthcare systems to withstand climate change.
- Sustainable Low-Carbon Health Systems (SLCHS)—reducing the carbon footprint of the health sector.

So far, 84 countries have committed to CRHS, and 77 to SLCHS.

To further support the integration of climate and health policies, the WHO launched the Alliance for Transformative Action on Climate Change and Health (ATACH) in 2022. ATACH assists countries in implementing their commitments through advocacy, technical support, and access to financing. Participating countries report progress on four key indicators: Vulnerability and Adaptation Assessments, Health National Adaptation Plans, GHG Emissions Assessments, and Low-Carbon and Sustainable Health System Action Plans, using 2020 as the baseline year for monitoring (ATACH, n.d.).

COP28–COP29: Developing frameworks for action

COP28 saw significant advancements in climate-health discussions. The Declaration on Climate and Health, signed by 149 countries, formally recognised the increasing health risks posed by climate change. The declaration emphasised three core priorities:

- Building climate-resilient health systems.
- Enhancing cross-sectoral collaboration to reduce emissions.
- Increasing financial support for climate-health solutions.

For the first time, COP28 featured a Climate-Health Ministerial, attended by 110 health ministries, including 49 health ministers. As part of the declaration, countries committed to embedding health considerations in the Paris Agreement and UNFCCC processes and ensuring that future NDCs incorporate health concerns (COP28 Declaration, 2023).

COP28 also introduced the UAE Framework for Global Climate Resilience, which established a Global Goal on Adaptation that includes health among the key sectors requiring urgent adaptation action.

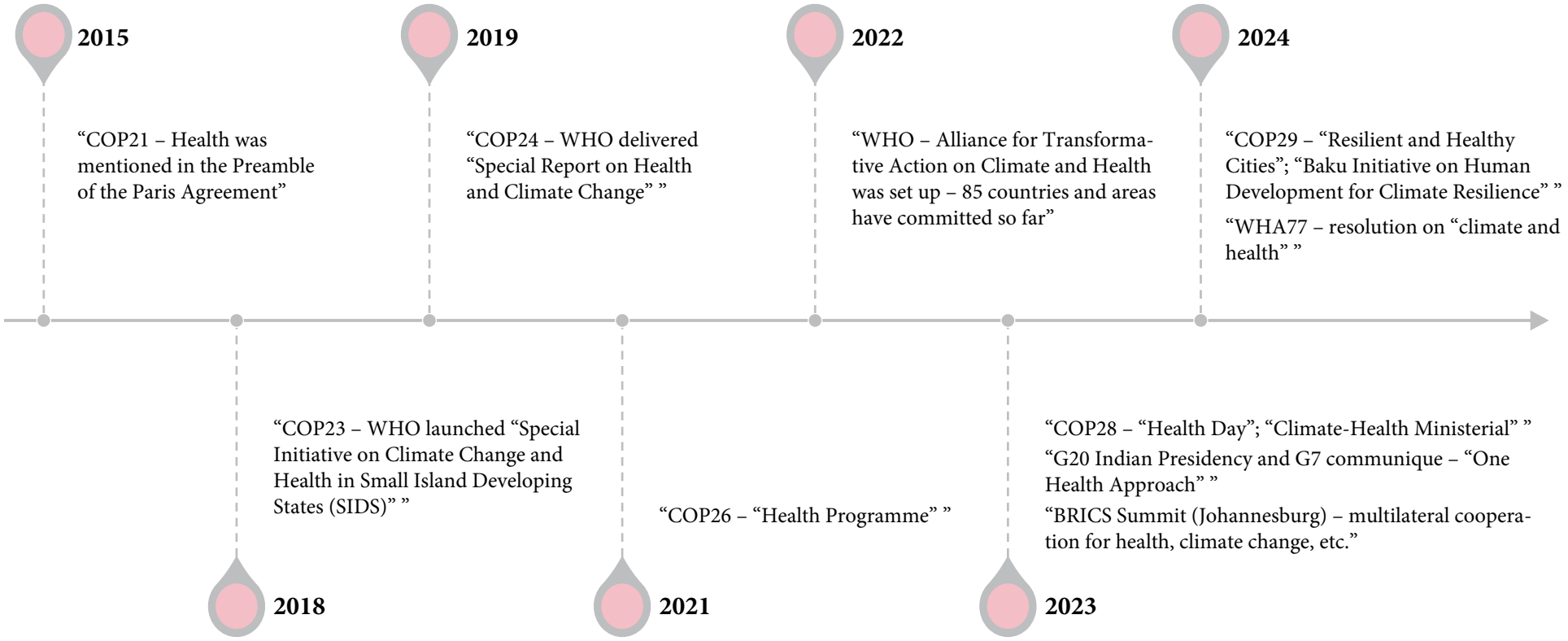
At COP29, a Climate-Health Plenary featured high-level discussions on climate, One Health, and human development. The presidency also launched a continuity initiative on climate and health, ensuring sustained efforts across COP26–COP30. While these frameworks and declarations are non-binding, they highlight the growing importance of health in climate negotiations and signal stronger involvement of health stakeholders in shaping global policy (Fidler, 2023).

2.2 Health in Other Multilateral Forums

While the UNFCCC's COP system plays a critical role in setting global climate goals, the next phase of implementation requires action through other international mechanisms (Depledge, 2024). Health considerations are increasingly being integrated into climate action across various multilateral forums, as demonstrated by the following milestones:

- G7 Communiqués (2022 and 2023) committed to making their health systems environmentally sustainable and climate-neutral by 2050.
- BRICS Johannesburg II Declaration (2023) emphasised integrating health within climate resilience strategies.
- G20 Health Ministerial Declarations (2024) reaffirmed a focus on climate change, health equity, and the One Health approach.
- 77th WHA (WHA77, 2024) adopted a resolution on "Climate and Health," outlining actions such as:

Figure 2: Timeline of Developments on "Climate Change and Human Health"



Source: Developed by Authors'.

- Implementing a health-in-all-policies approach
- Conducting climate vulnerability and adaptation assessments
- Integrating climate data into health surveillance
- Developing national plans for low-carbon, environmentally sustainable health systems (WHO, 2024a).

In July 2024, Brazil, as the G20 president, endorsed the UAE Declaration on a Global Climate Finance Framework, launched at COP28, to align climate action with socio-economic development, including health (COP28, 2024). As Brazil prepares to lead COP30 and BRICS in 2025, it is driving momentum for social justice and health equity, particularly for marginalised populations. To summarise, Figure 2 provides a quick snapshot of the timeline of events pushing the global agenda on climate change and human health.

3. Financing Climate and Health

Post-COP28, international development partner agencies and philanthropic foundations are mobilising investments for climate and health, a severely underinvested and fragmented sub-space. The shortfall in financing requirements for anticipated adaptation interventions in global health systems ranges between USD 26 billion and USD 56 billion annually (Hammerstein et al., 2024). Only a meagre 2% of total adaptation funding and half a per cent of overall climate funding is allocated to improving health outcomes, despite more than 90% of countries including health in their NDC plans (Kuzmak, 2023).

In 2023, to address this gap, "Guiding Principles for Financing Climate and Health Solutions" were developed by a consortium of MDBs, funders, countries, and philanthropies, including the WHO and its ATACH Working Group on Financing which included the Global Fund to Fight AIDS, Tuberculosis, and Malaria, the Green Climate Fund (GCF), and the Rockefeller Foundation. These guiding principles were endorsed by over 40 financial and civil society organisations at COP28. They focus on creating equitable, inclusive, accessible, and holistic financing and technology solutions, by building the core policymaking and implementation capacities of countries, communities, and financing institutions to deliver climate and health solutions (WHO, 2023b). Collectively, USD 1 billion has been mobilised for climate and health during COP28, although it is unclear how much of this has resulted from re-labelling existing development efforts (Ravelo, 2023). Moreover, this amount seems like a drop in the ocean considering the shortfall in health-related adaptation alone ranges in the tens of billions of dollars (Hammerstein et al., 2024), but it is still a step in the right direction. Encouragingly, these allocations are being supplemented by additional actors such as the IKEA Foundation and the Wellcome Trust (see Table 1).

The World Economic Forum (WEF) also launched its "Climate and Health Initiative" in 2023 to strengthen societal resilience by addressing the increasing health challenges of climate change through public-private partnerships. With this, the WEF is also making a business case for industry leaders to implement climate adaptation strategies and mitigate health impacts.

The WHO, along with the GCF and United Nations Development Programme (UNDP), has already matched funding to establish the "Climate and Health Co-Investment Facility" in the long run. USD 122 million is promised for the global climate and health investment programme, which will function in collaboration with ATACH to boost support for developing countries in Africa, Asia, and south-eastern Europe.

Furthermore, in 2024, the Development Bank Working Group for Climate-Health Finance—a network of MDBs and public development banks, co-convened by the ADB, World Bank, and others—developed a joint strategy to maximise investments in the climate-health nexus by employing a science-based approach and appropriate financial instruments. The group's joint approach includes understanding climate-health investments; identifying regional and country-specific vulnerabilities, needs, and efficiency gaps; building capacity; supporting solutions backed by evidence and aligned with population health needs and local contexts; mobilising synergistic financing; and focusing on transparency, outcomes, and accountability (World Bank, 2024a). Table 2 presents an indicative list of the types of interventions proposed for health systems that are funded and supported by multiple global organisations. Together, these various initiatives present opportunities for countries to leverage funding for improved health and sustainable, climate-resilient health systems.

Table 1: Major Proposed/Available Financing Initiatives for Global Climate and Health Actions, with Potential Opportunities for India

Initiatives and Agencies Involved	Funding Proposed	Main Focus Areas
WHO and MDB (2024)	EUR10 million (~ USD 10.82 million) (WHO and European Investment Bank); contributions from the African Development Bank and Inter-American Development Bank are forthcoming.	• Primary healthcare in vulnerable and underserved communities. • To build resilience against pandemic threats like mpox and the climate crisis.
Global Climate and Health Programme by GCF, UNDP, and WHO (2023)	Funds authorised: USD 1.5 million from the GCF Project Preparation Facility and a matching grant of USD 1.56 million from UNDP and WHO, seeking to deploy USD 122 million initially.	• To promote climate-resilient, sustainable, and low-carbon health systems. • Plan to develop the "Climate and Health Co-Investment Facility."
Global Environment Facility (GEF), UNDP, and WHO (2023)	USD 17.85 million.	• To Improve Health System Resilience of SIDS: Kiribati, Solomon Islands, Tuvalu, and Vanuatu
Climate and Health Initiative of the ADB (2023)	The initial seed grant of USD 7 million is expected to catalyse at least USD 10 for every USD 1 through co-financing and co-investments. At least 15% of their annual health portfolio is allocated to supporting climate-focused projects.	• Knowledge generation. • Innovative financing. • Country capacity building. • Strategic partnerships. • Incubating innovations. • High-level advocacy on climate change and health.
Climate and Health Program of the World Bank (2024)	Integrating climate considerations through its USD 30 billion health portfolio, which is already active in more than 100 countries.	• Assessment of climate and health vulnerabilities. • Country specific evidence to tailor investments. • Surveillance and early warning systems. • Climate proofing health facilities. • Strengthening health workforce capacity. • Improving health service delivery.
Global Fund to fight AIDS, Tuberculosis, and Malaria; Gates Foundation and Foundation S (Sanofi) (2025)	A USD 50 million Climate and Health Catalytic Fund, with a matching agreement by the Gates Foundation and Foundation S – The Sanofi Collective.	• Help vulnerable countries intensify their climate and health response by supporting local solutions. • Strengthening health systems. • Promoting low-carbon, sustainable healthcare technologies.
Wellcome Trust (2023)	GBP 100 million (approximately USD 125.5 million)	Research related to climate change and health encompasses various critical areas. For example, it involves studying the biological effects of extreme heat, developing early-warning systems for infectious diseases, and assessing the health benefits of emission-reduction policies.
The Rockefeller Foundation (2023)	USD 100 million	• Testing and scaling solutions through community-driven innovation with a focus on vulnerable groups. • Sustainable financing mechanisms, especially for supporting mitigation and adaptation efforts in low- and middle-income countries (LMICs). • Policy and partnerships for strengthening collective response.
Clean Air Initiative by Bloomberg Philanthropies, Clean Air Fund, and C40 Cities (2023)	USD 30 million	• Helping selected cities tackle air pollution. • Cut carbon emissions and boost public health through funding. • Technical support, management of air quality data. • Community engagement, and capacity building.

Sources: (WHO, 2024 b), (GCF, 2023), (WHO, 2023c), (PHU, 2023), (World Bank, 2024b), (The Global Fund, 2025), (Wellcome, 2023), (The Rockefeller Foundation, 2023), and (C40 Cities, 2023).

4. Systemic Challenges of Climate Governance and the Advantage of Integrating Health

Even as the paper examines the growing convergence of climate change and health, it notes that the present climate change governance architecture is hindered by systemic weaknesses. Integrating a health perspective into climate strategies can perhaps promote a co-benefits approach, and assist governments and actors, particularly in the Global South, in finding alternative pathways to progress.

4.1 Bringing Adaptation to the Forefront

The climate governance architecture reflects the structural imbalance of power within the overall multilateral system. Decision-making power within multilateral climate forums remains disproportionately concentrated in the Global North (Borghi et al., 2024; Ciplet et al., 2022). This structural imbalance continues to shape priorities in ways that may not fully align with the needs of the Global South. The prevailing emphasis on mitigation, which channels much of the available resources towards infrastructure and emission reduction projects, is one example of this.

Raising developmental concerns related to climate change, especially health, across multilateral and regional forums has proved to be an influential strategy for groupings like the SIDS and Least Developed Countries (LDCs) to gain influence and resources (Kalaidjian & Robinson, 2022; Thomas et al., 2020b). Building Global South coalitions premised around health equity has been a useful negotiating strategy in the past such as with the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement and, more recently, on the Pandemic Fund (Chattu et al., 2021; Roul, 2024). A similar strategy can be adopted to bring adaptation to the forefront of climate negotiations by underlining the health impacts that are already being felt across the developing world.

4.2 Reinforcing Political Will for Climate Action

Entrenched interest groups, as well as the lack of awareness and public engagement, have contributed to political inertia on climate action (Kinley et al., 2021). The return of President Donald Trump and the United States' renewed withdrawal from the Paris Agreement signal a significant setback for global climate efforts. This decision is likely to embolden other nations resistant to accelerated climate action, indicating the waning political will among global leaders for climate action. For example, Saudi Arabia's energy minister recently downplayed the COP28 commitment to transitioning away from fossil fuels, framing it as merely one of several policy options rather than a definitive obligation (Lo, 2025).

Positioning climate change as a public health issue has been proposed as a strategy to overcome entrenched resistance from interest groups, particularly in the fossil fuel industry, by mobilising public engagement (Watts et al., 2015; Pillay & Bergh, 2016). Climate policies that emphasise health benefits, such as reducing fossil fuel use to lower respiratory disease rates, are much more measurable, ensuring greater accountability as well as a tangible rationale for urgent intervention. Evidence from Ontario, Canada, for example demonstrates that linking coal phase-out policies to health benefits significantly bolstered public and political support for implementation (Millar et al., 2020).

4.3 Sustaining Momentum Beyond Climate Forums

Observers have also highlighted institutional weaknesses, advocating for reforms of the UNFCCC (COP Reform—Club of Rome, 2024), which requires near-unanimous approval from all members. Given the varied and complex needs, priorities, and policy contexts of nations, achieving global consensus on issues that extend beyond broad generalities is often challenging. Most climate agreements rely on voluntary NDCs that are often vague and difficult to monitor, leading to poor accountability for pledges and initiatives (Nasirotousi et al., 2024).

By emphasising the health impacts of climate change, policymakers could maybe sustain engagement in multilateral and regional forums, even when traditional climate institutions such as the UNFCCC prove inadequate. The global health sector provides a valuable model for how decentralised, transnational cooperation can drive progress at local levels (Shiffman et al., 2016). Mechanisms like the US President's Emergency Plan for AIDS Relief

(PEPFAR),[3] Global Alliance for Vaccines and Immunisation (GAVI),[4] and, more recently, the COVID-19 Vaccines Global Access (COVAX)[5] initiatives potentially offer potentially useful lessons. Key strategies, including intersectoral coordination, coalition-building, and international institutional support for monitoring and implementation, have proven effective in public health and could be adapted to climate governance (Shiffman, 2017). Further, highlighting the concerns of the health and climate intersection beyond UNFCCC forums in smaller groupings such as G20, BRICs, Quad could also be an effective catalyst.

4.4 From Climate Finance to Financing Sustainable Development

The reliability of political commitments to climate action is further undermined by persistent shortfalls in financial transfers from the Global North. These failures raise critical concerns about the credibility of international climate finance and the feasibility of equitable climate solutions. Traditional climate finance and governance have fallen short of addressing the full spectrum of climate-related risks.

Adopting a broader, more holistic lens towards climate change, beyond emissions, can better align it with sustainable developmental goals. The private sector's increasing focus on sustainability offers another avenue for expanding climate finance and action. The green economy, particularly within the health sector, presents substantial investment opportunities. A Morgan Stanley survey among investors, for example, identified climate and health as the two most pressing concerns in sustainable investing (Morgan Stanley, n.d.). Greater collaboration between public and private stakeholders is essential to establish effective governance mechanisms for climate and health financing (Bracking & Leffel, 2021). By centring health equity in climate policies, international organisations and governments can ensure that adaptation efforts prioritise those most affected.

4.5 Integrating Sub-National and Civil Society Stakeholders

Another significant weakness of the global climate governance system is its inability to effectively integrate subnational actors into decision-making processes. Despite growing recognition of the need for a decentralised, polycentric governance landscape (De Mello & Ter-Minassian, 2024b; Hsu et al., 2017), few global initiatives meaningfully incorporate subnational governments, limiting the potential for bottom-up climate action.

Civil society coalitions are already playing a crucial role in shaping international climate negotiations by influencing governments, donors, and multilateral organisations (IIED, n.d.). Networks of subnational actors working on health and development can advance climate action, even when vertical processes of climate policy and planning prove ineffective. Global networks of subnational actors can facilitate cross-country knowledge-sharing and collaboration. The strategic integration and intersectoral coordination with public health professionals, civil society, and private sector actors across diplomatic and policy channels can help push for greater accountability and alignment with the sustainable development agenda.

5. India's Global Engagement on Health and Climate

To understand the implications of the growing global convergence on climate and health, as detailed in the previous sections, we mapped India's international climate-health engagement and found it characterised by duality. While the country has been reluctant to commit to agreements at multilateral forums, it has often emphasised the importance of the health-climate intersection. It has not undermined efforts to mainstream the health-climate agenda but has called for developed countries to lead the way. Concurrently, India has used this discourse to highlight its own domestic initiatives and has made it a

[3] PEPFAR, led by the Bureau of Global Health Security and Diplomacy, represents the largest commitment by any nation to combat a single disease with the United States, investing over USD 110 billion in the global HIV/AIDS response. It has saved 26 million lives, prevented millions of infections, and advanced HIV/AIDS control in more than 50 countries (US Department of State, n.d.).

[4] GAVI is an international organisation that improves global access to vaccines, particularly in low-income countries. Since its inception in 2000, GAVI has helped vaccinate over one billion children, preventing more than 18 million deaths from infectious diseases (GAVI, n.d.).

[5] COVAX is a global initiative co-led by GAVI, the WHO, and the Coalition for Epidemic Preparedness Innovations (CEPI) to ensure equitable access to COVID-19 vaccines worldwide. It has delivered over two billion vaccine doses to 146 countries, prioritising low-income nations and reducing the pandemic's impact (UNICEF, n.d.).

sectoral focus within India-led multilaterals such as the International Solar Alliance (ISA) and the CDRI. Indian engagements around climate-resilient health systems, have tended to be utilised as opportunities to engage with the Global South.

5.1 India's Positions Within Multilateral Climate and Health Governance

India ratified the Paris Agreement, aligning its climate commitments with the broader recognition of the "right to health." However, six years later at COP26, India declined to commit to climate-neutral health systems by 2050 and chose not to join the ATACH. Instead, the Prime Minister of India announced the "Lifestyle for Environment (LiFE)" as a broad framework emphasising sustainable lifestyles as central to climate action, to be practised at all levels, including individual, sub-national, and national. LiFE reframes climate policy as a broader sustainability issue, integrating human development, health, and mental well-being. Under this initiative, public health plays a key role, with specific activities aimed at improving nutritional outcomes and reducing air pollution—both of which are critical for health (Ministry of Environment, Forest, and Climate Change [MoEFCC], n.d.). However, this has so far not translated into targeted policy measures that move beyond advocacy and communication.

Although the Indian government extended its support to the Climate-Health Ministerial at the United Arab Emirates, the health ministry delegation did not participate in the Health Day at COP28, nor did it sign the non-binding COP28 Declaration on Climate and Health. The government explained this decision by citing the need to balance developmental and climate concerns (Mint, 2023).

In 2023, India's G20 Presidency marked a shift towards greater engagement with the climate-health agenda. The New Delhi Health Ministers' Meeting Document explicitly recognised climate change as a driver of health emergencies, highlighting its role in exacerbating infectious disease outbreaks, increasing the severity and frequency of natural disasters, and overwhelming healthcare systems. The declaration committed to building climate-resilient health systems, developing low-carbon healthcare supply chains, and mobilising resources for sustainable health infrastructure. India also expressed support for ATACH at the G20 level, though it has yet to formally join the initiative.

Additionally, India promoted the One Health Approach under its G20 leadership, reinforcing the importance of cross-sectoral collaboration. This initiative is guided by the Quadripartite One Health Joint Plan of Action (2022–2026)—a framework developed in partnership with the Food and Agriculture Organization (FAO), the United Nations Environment Programme (UNEP), the World Organisation for Animal Health (WOAH), and the WHO. The One Health approach underscores the interconnectedness of human, animal, and environmental health, positioning climate change as a critical determinant of public health outcomes.

Translating Commitments into Action

There are early indications that India's climate-health commitments are beginning to materialise through concrete initiatives. A new Climate and Health Hub for knowledge exchange is set to be established in India with support from the ADB, aiming to facilitate research, policy dialogue, and capacity-building. Additionally, the Indian health ministry organised the "Climate and Health Solutions India Conclave," emphasising the urgent need to integrate climate considerations into health planning. The conclave brought together key domestic and international stakeholders, including the MoEFCC, the Indian Meteorological Department (IMD), the NCDC, State governments, private sector representatives, and global agencies. Discussions underscored the necessity of tailoring climate-health solutions to regional contexts and integrating private sector actors in planning, piloting, scaling, and mainstreaming resilient health innovations (PIB, 2024).

Table 2 provides an indicative list of the types of climate-health interventions that India has been engaging with that are being supported by various stakeholders, including through cross-sectoral collaborative efforts.

Table 2: Selective Overview of Interventions with Development Partners in India

Category	Agency Involved	About the Project/Initiative
Provision of Climate Services for Health	WHO–World Meteorological Organization (WMO) collaboration.	The development and use of climate services to enhance public health, such as through the Global Heat Health Information Network (GHHIN), initiated in 2016, and the creation of heat action plans (HAPs) for several cities in India from 2013 onwards, have been significant.
Provision of Climate Services for Health	National Oceanic Atmospheric Administration (NOAA).	Joint research on oceanography, meteorology, climate change, and tropical cyclone forecasting, aimed at enhancing weather prediction in the Indian Ocean region through data sharing and joint modelling, was initiated in the early 2000s.
Provision of Climate Services for Health	Belmont Forum.	Since 2013, support has been provided to scientists engaged in global research on environmental change and extreme hazards through joint calls. The agreement with the Ministry of Earth Sciences encompasses themes such as freshwater security, coastal vulnerability, food security, land-use change, climate predictability, inter-regional linkages, biodiversity and ecosystems, Arctic monitoring, and mountain sustainability.
Capacity Building and Knowledge Creation	Wellcome Trust.	With USD 2.3 million in funding, the initiative aims to build data capacity by equipping professionals with the skills needed to address critical issues at the intersection of climate and health by 2032.
Capacity Building and Knowledge Creation	United States Agency for International Development (USAID).	As part of the Infectious Disease Detection and Surveillance project (established in 2018, a five-year, USD 120 million initiative operating in more than 20 countries in sub-Saharan Africa and Asia), efforts are being made to strengthen the antimicrobial resistance (AMR) detection and surveillance system in India, in close collaboration with the National Centre for Disease Control (NCDC). For instance, the project supported the development of Sikkim's State Action Plan for the containment of AMR.
Capacity Building and Knowledge Creation	UK Research and Innovation (UKRI).	To utilise One Health strategies to explore and collaboratively develop solutions for zoonotic diseases affecting forest communities in India (approximately USD 2.9 million for January 2021 to March 2025).
Capacity Building and Knowledge Creation	Coalition for Disaster Resilient Infrastructure (CDRI).	Handbook and guidelines for hospital resilience based on global best practices for the resilience of critical health infrastructure.
Capacity Building and Knowledge Creation	United Nations Children's Funds (UNICEF).	Technical support for developing the National Action Plan on Climate Change and Human Health (NAPCCHH) and the State Action Plan on Climate Change and Human Health (SAPCCHH).
Capacity Building and Knowledge Creation	WHO REACH 2035.	Developing a global research agenda on climate and health, including researchers and experts from India (from 2023 onwards).
Implementation of Mitigation Efforts	UNICEF.	Solarisation and off-grid energy solutions for vaccine cold chains, electrification, heating and cooling at health facilities, and medical warehouses.

Category	Agency Involved	About the Project/Initiative
Implementation of Mitigation, Adaptation, and Resilience Efforts	World Bank.	• Solar power solutions for health facilities in Nagaland as part of the Nagaland Health Project (completed in 2024, USD 60 million). • First Resilient Kerala Programme (completed in 2021, USD 250 million), followed up with a subsequent programme for 2022–2026, along with other partners, with an investment of approximately USD 530 million, enhancing overall resilience to withstand extreme weather events. • Supporting India's Livestock Health and Disease Control Programme by improving disease surveillance, benefiting participating states of Assam, Karnataka, Maharashtra, Odisha, and Madhya Pradesh (USD 82 million loan for 15 years).
Implementation of Adaptation and Resilience Efforts	Japan International Cooperation Agency (JICA).	A loan of INR 2,942 crore (~ USD 340 million) was issued in 2022 to the Government of India for the Assam Health System Strengthening Project, primarily aimed at developing secondary- and tertiary-level medical facilities and enhancing the capacity of medical personnel.
Implementation of Mitigation and Clean Energy Efforts	IKEA Foundation.	With EUR 48 million (~ USD 50 million) in support, the initiative will upgrade 25,000 healthcare facilities in 12 Indian States with sustainable energy by 2026, in partnership with the Ministry of Health, State Health Missions, and the SELCO Foundation.

Sources: (GHHIN, n.d.), (DST, n.d.), (Data.org, 2023), (USAID, 2023a), (IZR, n.d.), (CDRI, n.d.), (WHO, 2023d), (UNICEF, 2022), (World Bank, n.d.), (EWS, 2023), (World Bank, 2023), (JICA, 2022), and (IKEA Foundation, 2023).

Beyond domestic initiatives, India has also participated in key international climate-health negotiations, adopting the WHA77 resolution on climate and health and endorsing the "G20 Declaration on Climate and Health" under Brazil's presidency. However, despite these diplomatic engagements, India's decision not to formally join ATACH remains a significant gap, limiting its access to financial and technical resources available through the initiative.

5.2 India's Focus on Health Within its Own Multilateral Climate Initiatives

A major way for India to engage with the Global South has been through the creation of climate-focused multilaterals established in New Delhi, including the ISA and the CDRI (Sinha, 2021). Both initiatives underscore India's leadership in global climate resilience efforts, with emerging implications for the health sector.

- The ISA, launched in 2015, aims to mobilise over USD 1 trillion to install 1,000 GW of solar capacity worldwide, expanding access to clean energy. Recognising the intersection between energy and health, ISA launched "ISA CARES", an exclusive health sector initiative in 2023. The initiative uses a blended financing model to support the solarisation of primary health centres in several LDCs and SIDS. ISA has also collaborated with the ADB to collate evidence on the impact of energy access on healthcare systems, reinforcing the role of clean energy in building climate-resilient health infrastructure.
- The CDRI, established in 2021, promotes the development of climate- and disaster-resilient infrastructure through technical support, capacity-building, and partnerships across the globe. Its "Health Infrastructure Resilience Programme" aims to improve the planning, design, and management of healthcare facilities at primary, secondary, and tertiary levels. CDRI has developed frameworks for assessing hospital resilience in India and has created a global platform for knowledge-sharing on best practices in climate-adaptive health infrastructure.

India's engagement in climate-health multilateralism reflects a deliberate strategy to enhance its influence in the Global South, particularly with smaller states in Asia and Africa. These initiatives highlight India's interest in addressing the climate-health nexus on its own terms by showcasing its technological expertise, innovation, and policy solutions. However, these efforts are still in their nascent stages, with modest financial commitments necessitating significant scaling-up to achieve a meaningful impact.

6. The Indian Imperative to Increase Engagement in Climate Change and Health Initiatives

India has hesitantly and selectively engaged with the global agenda on climate and health. The country has announced that initiatives at the intersection of climate and health are important. However, there has been reluctance to sign global declarations and initiatives with specific goals. This is partly reasonable, as India cannot commit to reducing emissions from its health system in a manner that may be infeasible, given the growing health needs of its population. This was the argument presented when India did not sign the COP28 declaration, citing the burden on a healthcare system still struggling to meet the needs of the underserved population.

However, as a large and rising global power with ambitions of climate leadership, India will inevitably have to respond to the rising prominence of health in the global climate discourse. The strategic reorientation of current efforts on climate and health towards proactive engagement in the global agenda could provide substantial benefits to India, without necessarily inducing additional fiscal strain or committing to binding targets. This section discusses how India can take advantage of the emerging new spaces and opportunities in the global climate and health agenda to serve both its domestic and foreign policy interests.

6.1 Meeting Gaps in Financing

From a health perspective, climate change in India is not merely a future concern but a present and growing crisis. Currently, India's healthcare system is already strained by inadequate funding and systemic inefficiencies, which will become more burdensome with climate change. India's public health spending, amounting to about 1.4% of its GDP, and per capita health expenditure of approximately USD 75, are among the lowest globally. By 2030, it is estimated that USD 16 billion annually will be required to address India's climate-related healthcare aspects. While part of this funding can come from private and public sources, we argue that by leveraging international organisations, India can meet some of its financial goals. For instance, in 2024, the ADB approved a loan of USD 170 million for India to strengthen health infrastructure with a cross-cutting focus on creating green and climate-resilient healthcare facilities. In 2022, only 4%, or about USD 1 billion, of India's total climate action funding was allocated to climate-related health projects. Of this USD 1 billion, more than 50%, or USD 506 million, came from international funding by the Global North (Quadria Capital et al., 2024). This clearly shows that MDBs and development finance institutions are the leading drivers of climate and health funding in India today. Being more proactive in its global engagement can help India access additional loan-free investments that can be directed to contextually appropriate initiatives by the government.

Since climate issues impact every aspect of the health system, mobilising additional resources for health-related climate adaptation reinforces more traditional health system strengthening efforts. Conversely, leveraging the health angle can help India claim resources to tackle climate-related issues even in the face of waning global momentum or poor Global North ownership in addressing climate change more broadly.

6.2 Strengthening Domestic Institutional Capacity and Preparedness

Beyond financing, India faces significant gaps in institutional capacity, resources, and workforce availability for climate-health adaptation (Kurian, 2024). This results in weak policy integration and fragmented implementation, leading to disjointed vertical programmes that fail to form a cohesive national strategy on health system resilience and preparedness. For example, while the Ministry of Health oversees the NAPCCHH, which includes heat-related illnesses, the National Disaster Management Authority (NDMA), chaired by the prime minister, has been driving HAPs across the country. This distributed accountability potentially leads to inconsistencies and incoherence in India's domestic and international climate-health stance.

To address this, India needs a multi-stakeholder governance framework that aligns efforts across ministries, State governments, and private-sector partners. Models such as the Dutch Global Health Strategy (2023–2030) and Australia's Climate and Health Alliance offer templates; however, India must tailor its approach to its unique policy environment, requiring additional research and capacity-building. Strengthening international cooperation with countries facing similar challenges can provide valuable insights to overcome institutional and policy weaknesses.

6.3 Knowledge Exchange Platforms of Best Practices

Cross-country collaborations on health-related adaptation are increasingly necessary for advancing implementation efforts. Some early initiatives have already been established, such as the GHHIN, a joint WHO–WMO collaboration aimed at facilitating knowledge exchange on heat-related risks. The South Asian chapter of GHHIN was set up with the involvement of the IMD and the Indian Institute of Public Health, Gandhinagar, which motivated the development of the pioneering HAP for Ahmedabad. This plan is credited with helping to avoid 1,190 heat-related deaths annually since its launch in 2013 (Hess et al., 2018). The forthcoming Climate and Health Hub, supported by the ADB, is another avenue for regional knowledge exchange on innovative climate change mitigation and adaptation best practices in health, from both public and private sectors.

Recognising the complementarity of climate engagement and progress towards achieving SDGs, India proposed "Localising SDGs." Endorsed at the High-Level Political Forum on Sustainable Development in 2022, it is evolving into a model for integrating climate-health solutions at the subnational level. By focusing on the co-benefits of climate action on other welfare objectives, including public health, countries are beginning to mainstream the efforts of subnational governments in developing, updating, and implementing their NDCs (Lyden et al., 2021). As the intersection of health and climate change gains greater relevance, cross-country efforts to systematically document and promote the uptake of learnings from other similar contexts would support the more timely and forceful integration of climate-related concerns into local development action.

6.4 Positioning India as a Climate-Health Innovation Hub

The absence of strong global leadership in climate adaptation within the health sector presents a potential opportunity for India. With its vast and diverse geography, ecology, and epidemiology, the country serves as an excellent testing ground for developing scalable, affordable, and low-carbon health solutions tailored to resource-constrained settings. By positioning itself as a provider of climate-resilient health innovations through greater R&D investments, India can bridge the gap between Global North donors and the practical needs of the Global South.

India has already demonstrated its capability in this regard through triangular cooperation. The country can further integrate climate resilience into its existing scientific and health innovation partnerships, such as with France (Ministry of External Affairs [MEA], 2023) and other nations (MEA, 2024). Domestically, initiatives like the CDRI and the ISA provide platforms for State and non-State actors to collaborate on context-specific climate-health strategies. For instance, the State Disaster Management Authority, in partnership with the WHO, is assisting Sikkim in climate-proofing its healthcare infrastructure. Lessons from Sikkim's experience could be extended to similar geographies, such as Nepal and Bhutan (CDRI, n.d.). Additionally, showcasing success in initiatives such as building a database of climate-induced diseases, risk maps for climate-sensitive geographical areas, improved early-warning mechanisms, and intersectoral governance mechanisms are all opportunities to build and consolidate India's leadership while responding to the global convergence on climate and health (NCDC, 2023).

India has also engaged in various bilateral, trilateral, and plurilateral agreements with developed countries, frequently showcasing Indian innovation in an appropriate health and climate context in a third country. A notable example is the triangular partnership between USAID and India in Fiji which leverages Indian telemedicine solutions to strengthen healthcare delivery during extreme weather events (see Box 1).

Box 1: Telemedicine in Fiji—A Climate-Resilient Healthcare Solution

India has a history of exporting telemedicine technology to the Global South. In 2008, in collaboration with the Hyderabad-based Care Group of Hospitals, India implemented a USD 2.13 million project to expand healthcare access in rural Ethiopia (Malone et al., 2008). More recently, a 2023 initiative between India and Fiji, facilitated by USAID, introduced telemedicine as a climate adaptation strategy to address healthcare disruptions caused by extreme weather events.

As a SIDS, Fiji faces heightened vulnerability to climate-induced disasters such as cyclones, necessitating robust climate-resilient infrastructure. Telemedicine was identified as a practical solution to ensure healthcare continuity during and after such crises. As part of the initiative, delegations from Fiji—including government officials, civil society representatives, and private sector actors—received hands-on training in India's e-Sanjeevani telemedicine programme at the Centre for Development of Advanced Computing (C-DAC) in Mohali. Additionally, they participated in capacity-building programmes at the National Institute of Mental Health and Neurosciences (NIMHANS) in Bangalore, focusing on the implementation of mental health services in disaster rehabilitation.

The initiative also led to policy-level collaborations between Indian and Fijian officials to develop a roadmap for integrating India's digital health model into Fiji's healthcare system (USAID, 2023b). Kamlesh Prakash, High Commissioner of the Republic of Fiji to India, described the programme as a potential "game changer" for telemedicine and psychosocial care in the Pacific region, particularly as climate disasters become more frequent and severe.

While India has previously engaged in health technology transfers, this initiative is significant because it explicitly positions digital healthcare innovation as a climate adaptation strategy. Such projects highlight India's ability to co-create multi-sectoral solutions that integrate health and climate resilience, offering scalable models for other Global South nations.

6.5 Championing Inclusive Global Governance

India aspires to be the "Voice of the Global South" and has long leveraged health diplomacy to strengthen South-South cooperation (ET, 2023). This has included expanding access to affordable vaccines and generic medicines, providing humanitarian assistance, and supporting health infrastructure and human resource development in partner nations (Chattu et al., 2021; Mol et al., 2021). This health diplomacy has occurred bilaterally, through multilateral frameworks, South-South networks, and multilateral agencies (Chaturvedi, 2016).

India has also used its health diplomacy to advocate for more inclusive global governance arrangements. An example is India's interventions in the Global Pandemic Treaty negotiations, arguing in favour of equitable access to products and technologies worldwide (Roul, 2024). Given that climate change poses one of the greatest threats to health systems in LDCs and SIDS, India has an opportunity to expand its influence in these regions. With the West being inconsistent in fulfilling its commitments, India can build on its historical goodwill to forge stronger South-South partnerships and gain geopolitical prominence in these vulnerable countries.

7. Discussion and Conclusions

Global momentum will likely make health an integral part of climate geopolitics in the future. Advocacy, backed by unequivocal scientific evidence, has supported the narrative of health as the "human face of climate change." This narrative is now beginning to translate into support for initiatives to create resilient and low-carbon health systems, such as the ATACH, as well as earmarked financing for climate and health activities across mitigation, resilience, and adaptation. India would benefit from being proactive in responding to this evolving landscape by substantially increasing its prioritisation of health. This paper summarises how India can leverage the knowledge and resources becoming available due to the rising prominence of the climate-health nexus globally to further its own domestic and foreign policy goals.

From finding more room for health experts in its climate contingents at international forums to investing more in its health system, India needs to adopt a more definite posture on issues related to climate and health. The good news is that India is already starting to engage on multiple fronts on the larger issue of climate and health through its existing policies and programmes. However, these activities so far seem disjointed, and have not been consolidated into a coherent actionable strategy to contribute to the converging global climate and health governance and take advantage of the opportunities that might result as a consequence.

India has urgent development needs and a substantially underfunded health system that can benefit from the increased availability of resources. Furthermore, the complexity and diversity of Indian healthcare contexts can offer opportunities to identify transferable lessons and global public goods on efficiently and equitably managing the health impacts of climate change. Progress on both these fronts can help India raise its global standing as an exemplar and a torchbearer.

India stands at a pivotal moment in the global climate-health discourse. While its engagement has so far been cautious, the increasing prominence of health in climate action presents a strategic opportunity. By actively participating in global initiatives, strengthening domestic institutional capacity, leveraging international financing, and positioning itself as a hub for climate-health innovation, India can both safeguard its own population and enhance its global standing as a leader in climate and health diplomacy.

Our discussion paper has highlighted the key arguments that make it attractive for India to engage in the global agenda on health and climate. However, several questions remain before India can realise its ambitions of being perceived as a leader in the context of evolving global governance on climate and health.

More research is needed to assess the efficiency and effectiveness of India's current models of action on climate and health. As discussed, several policies and programmes exist, but the extent to which they present a successful model of action that may be replicable at scale is not yet clear. Additionally, more studies are required to identify the roles of other stakeholders, including local government authorities, non-governmental organisations, and community members, in the effective implementation of these policies. Relatedly, there are questions around political will and policy capacities, including possible policy instruments or platforms that can be leveraged for multi-stakeholder action on climate and health. More evidence is also needed to understand how best to deploy solutions or develop models of sustainable action in various implementation contexts.

Finally, there is a need to monitor and assess the nature of financing for action on climate and health, ensuring that it is directed to the areas of greatest need. A deeper exploration of innovative financing is imperative to ensure sustainable funding for resilient health systems. Strengthening India's efforts on each of these fronts would be necessary for the country to attract and effectively leverage the opening of new spaces and opportunities globally.

In summary, an effective international health and climate agenda for India can aim to address the following questions:

- What should India's strategy be for engaging effectively in the global climate and health agenda?
- What would be the appropriate institutional and diplomatic channels?
- Which technology, financing, and policy innovations should India focus on for scalable transfer to the Global South?
- How can India integrate the multiple stakeholders involved in the health and climate agenda into international engagements?
- How can India monitor and assess the effectiveness of its global climate and health engagements?

This discussion paper raises these questions to contribute to India unlocking its full potential to leverage international resources to address the future catastrophic damages of climate change on health systems and to strengthen its global health diplomacy. Given the massive gaps and urgency around sustainable development, global governance regimes must evolve to become more efficient, responsive, and equitable. India, as the most populous country and a rising global power, has a crucial role in shepherding this evolution.

References

ATACH. (n.d.). Commitment Tracker. https://www.atachcommunity.com/our-impact/commitment-tracker/; https://www.atachcommunity.com/our-mission/

Blom, I. M., Beagley, J., & Quintana, A. V. (2022b). The COP26 health commitments: A springboard towards environmentally sustainable and climate-resilient health care systems? The Journal of Climate Change and Health, 6, 100136. https://doi.org/10.1016/j.joclim.2022.100136

Borghi, J., Garcia-Dorado, S. C., Anton, B., Gerardo, D., Gasparri, G., Hanson, M., Soucat, A., Bustreo, F., & Langlois, E. (2024b). Climate finance opportunities for health and health systems. *Bulletin of the World Health Organization*, *102*(5), 330–335. https://doi.org/10.2471/blt.23.290785

Bracking, S., & Leffel, B. (2021). Climate finance governance: Fit for purpose? *Wiley Interdisciplinary Reviews Climate Change*, *12*(4). https://doi.org/10.1002/wcc.709

Brand, H., Rao, N., & Jayaram D. (2024a). Climate Change and Public Health: Governance and Challenges, Manipal University Press

Bush, K. F., Luber, G., Kotha, S. R., Dhaliwal, R., Kapil, V., Pascual, M., Brown, D. G., Frumkin, H., Dhiman, R., Hess, J., Wilson, M. L., Balakrishnan, K., Eisenberg, J., Kaur, T., Rood, R., Batterman, S., Joseph, A., Gronlund, C. J., Agrawal, A., & Hu, H. (2011). Impacts of Climate Change on Public Health in India: Future Research Directions. *Environmental Health Perspectives*, *119*(6), 765–770. https://doi.org/10.1289/ehp.1003000

C40 Cities (2023). Michael R. Bloomberg and Sadiq Khan launch USD 30 million Breathe Cities initiative to take clean air global. https://tinyurl.com/mtbzf3f6

Campbell-Lendrum, E. W. (2022). Review of IPCC Evidence 2022: Climate Change, Health and Well-being. WHO.

CDRI. (n.d.). Health. https://shorturl.at/Jxtvf

Chattu, V. K., Singh, B., Kaur, J., & Jakovljevic, M. (2021). COVID-19 vaccine, TRIPS, and global health diplomacy: India's role at the WTO platform. *BioMed Research International*, *2021*, 1–8. https://doi.org/10.1155/2021/6658070

Chaturvedi, S. (2016). Towards health diplomacy: Emerging trends in India's South-South health cooperation. *India's approach to development cooperation*, 45-59, Routledge.

Ciplet, D., Falzon, D., Uri, I., Robinson, S., Weikmans, R., & Roberts, J. T. (2022). The unequal geographies of climate finance: Climate injustice and dependency in the world system. *Political Geography*, *99*, 102769. https://doi.org/10.1016/j.polgeo.2022.102769

Climate Impact Lab. (2019). Climate change and Heat-Induced mortality in India. Tata Centre for Development at UChicago. Available at https://tcd.uchicago.edu/wp-content/uploads/2019/11/IndiaMortality_webv2.pdf

COP reform–Club of Rome. (2024, January 23). An open letter to the UN Secretary General and COP Executive Secretary Reform of the COP process – a manifesto for moving from negotiations to delivery. Available at https://www.clubofrome.org/cop-reform/

COP28. (2024). *Brazil, at G20-COP28 event, joins Global Climate Finance Framework to align climate investment and drive socio-economic development.* Retrieved from COP28: https://www.cop28.com/en/news/2024/07/joins-Global-Climate-Finance-Framework-to-align-climate-investment

Costello, A., Romanello, M., Hartinger, S., Gordon-Strachan, G., Huq, S., Gong, P., Kjellstrom, T., Ekins, P., & Montgomery, H. (2022). Climate change threatens our health and survival within decades. *The Lancet*, *401*(10371), 85–87. https://doi.org/10.1016/s0140-6736(22)02353-4

Dasandi, N., Graham, H., Lampard, P., & Mikhaylov, S. J. (2021). Engagement with health in national climate change commitments under the Paris Agreement: a global mixed-methods analysis of the nationally determined contributions. *The Lancet Planetary Health*, *5*(2), e93-e101.

Data.org. (2023). data.org Unveils Newest Workforce Training Network in India to Tackle Climate and Health. https://shorturl.at/MAUts

De Mello, L., & Ter-Minassian, T. (2024b). Subnational investments in mitigation and adaptation to climate change: Some financing and governance issues. *Public Finance and Management*, *23*(3), 113–131. https://doi.org/10.1177/15239721241259570

Declaration, COP28. (2023). COP28 Declaration on Climate and Health. World Health Organisation.

Department of Science and Technology (DST). (n.d.). India Science, Technology and Innovation Portal. https://shorturl.at/yAbNa

Depledge J. (2024). The future of negotiations under the climate change COP (Conference of the Parties): Implementation is not enough. Dialogues on Climate Change 2024. https://doi.org/10.1177/29768659241293212.

Dutch Global Health Strategy (2023–2030). Ministry of Foreign Affairs and Ministry of Health, Welfare and Sport, Netherlands. https://www.government.nl/documents/publications/2023/03/29/dutch-global-health-strategy

EWS. (2023). The Resilient Kerala Program Additional Financing. https://shorturl.at/cg9wM

Fidler, D. P. (2023). Retrieved from Think Global Health: https://www.thinkglobalhealth.org/article/climate-change-and-health-cop28

Fu, S. H., Gasparrini, A., Rodriguez, P. S., & Jha, P. (2018). Mortality attributable to hot and cold ambient temperatures in India: a nationally representative case-crossover study. *PLoS medicine*, *15*(7), e1002619

GAVI. (n.d.). Leaving no one behind with immunisation. https://www.gavi.org/

GCF (2023). GCF, UNDP and WHO join forces to ramp up climate health support for developing countries. https://www.greenclimate.fund/news/gcf-undp-and-who-join-forces-ramp-climate-health-support-developing-countries

Global Heat Health Information Network (GHHIN). (n.d.). https://shorturl.at/gzSuf

Guo, J., D. K. (2021). *The economics of climate change: no action not an option.* Switzerland: Swiss Re Institute.

Gupta, A.K., Barwal, A., Madan, A. Sood, A. and Bindal, M.K. (eds.) (2021). Health Adaptation and Resilience to Climate Change and Related Disasters - A Compendium of Case Studies. National Institute of Disaster Management, New Delhi, pp 332

Hammerstein, C., Ahlawat, H., Craven, M., & Wilson, M. (2024, August 20). Health-related climate adaptation: How to innovate and scale global action for local needs. McKinsey & Company. https://www.mckinsey.com/mhi/our-insights/health-related-climate-adaptation-how-to-innovate-and-scale-global-action-for-local-needs

Hess, J. J., Lm, S., Knowlton, K., Saha, S., Dutta, P., Ganguly, P., Tiwari, A., Jaiswal, A., Sheffield, P., Sarkar, J., Bhan, S. C., Begda, A., Shah, T., Solanki, B., & Mavalankar, D. (2018). Building Resilience to climate change: Pilot evaluation of the impact of India's first heat Action Plan on All-Cause Mortality. *Journal of Environmental and Public Health*, *2018*, 1–8. https://doi.org/10.1155/2018/7973519

Hsu, A., Weinfurter, A. J., & Xu, K. (2017). Aligning subnational climate actions for the new post-Paris climate regime. *Climatic Change*, *142*(3–4), 419–432. https://doi.org/10.1007/s10584-017-1957-5

IKEA Foundation. (2023). 25,000 Health Facilities Across India are Transforming Public Health Systems to address Growing Critical Climate Issues. https://shorturl.at/3d1nU

International Institute for Environment and Development

(IIED). https://www.iied.org/search?k=civil%20society%20plays%20key%20role%20policymaking%20changing%20climate

International Labour Organisation (2019). Working on a warmer planet: The impact of heat stress on labour productivity and decent work. Retrieved from https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_711919.pdf

IZR. (n.d.). India Zoo Risk: Zoonotic diseases affecting India's forest dependent communities. https://indiazoorisk.ceh.ac.uk/

JICA. (2022). JICA extends ODA loan of INR 2942 crores for project to strengthen Assam's Health System. https://shorturl.at/LvI0s

Kalaidjian, E., & Robinson, S. (2022). Reviewing the nature and pitfalls of multilateral adaptation finance for small island developing states. *Climate Risk Management*, *36*, 100432. https://doi.org/10.1016/j.crm.2022.100432

Kandi V. (2023). All That Glitters Is Not Gold: The Indian Healthcare System. *Cureus*, *15*(6), e39892. https://doi.org/10.7759/cureus.39892

Karliner, J., Slotterback, S., Arup, Boyd, R., Ashby, B., Steele, K., & Pichler, P.-P. (2019). HEALTH CARE'S CLIMATE FOOTPRINT. In *Climate-smart Health Care Series* (Green Paper Number One). Health Care Without Harm and ARUP.

Kinley, R., Cutajar, M. Z., De Boer, Y., & Figueres, C. (2020). Beyond good intentions, to urgent action: Former UNFCCC leaders take stock of thirty years of international climate change negotiations. Climate Policy, 21(5), 593–603. https://doi.org/10.1080/14693062.2020.1860567

Kurian, O. (2024). Time is right for the big healthcare push in India. Observer Research Foundation. Retrieved from https://www.orfonline.org/expert-speak/time-is-right-for-the-big-healthcare-push-in-india

Kuzmak, G. (2023). Retrieved from The Rockefeller Foundation: https://www.rockefellerfoundation.org/insights/perspective/turning-a-spotlight-on-climate-change-health-financing/

Millar, H., Bourgeois, E., Bernstein, S., & Hoffmann, M. (2020). Self-reinforcing and self-undermining feedbacks in subnational climate policy implementation. *Environmental Politics*, *30*(5), 791–810. https://doi.org/10.1080/09644016.2020.1825302

Mint. (2023, December 3). India refuses to sign COP28 Declaration on Climate and Health. Here's why. *Mint*. https://www.livemint.com/news/india/india-refuses-to-sign-cop28-declaration-on-climate-and-health-heres-why-11701618953067.html

Lo, J. (2025, February 8). *"A la carte menu": Saudi minister claims Cop28 fossil fuel agreement is only optional*. Climate Home News. https://www.climatechangenews.com/2024/01/10/a-la-carte-menu-saudi-minister-claims-cop28-fossil-fuel-agreement-is-only-optional/

Lopes, F.(2021). India among five countries with most extreme heat exposure. Retrieved from https://www.indiaspend.com/climate-change/india-among-5-countries-with-most-extreme-heat-exposure-782395

Lyden, P. (2021). Localizing NDCs with inspiration from the 2030 agenda: A closer look at voluntary local reviews and voluntary national reviews. Published by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Malone, B (2008). Telemedicine links Africans to Indian expertise. Retrieved from https://www.reuters.com/article/economy/feature-quottelemedicinequot-links-africans-to-indian-expertise-idUSL0151177/

Ministry of Environment, Forest, and Climate Change, Government of India (MoEFCC, n.d). Mission LiFE Portal. Retrieved from https://missionlife-moefcc.nic.in.

Ministry of External Affairs (MEA). (2023). Horizon 2047:25th Anniversary of the India-France Strategic Partnership, Towards a century of India-France Relations. Retrieved from https://www.mea.gov.in/bilateral-documents.htm?dtl/36806/Horizon_2047_25th_Anniversary_of_the_IndiaFrance_Strategic_Partnership_Towards_A_Century_of_IndiaFrance_Relations

MEA. (2024). Joint Fact Sheet: The United States and India continue to expand comprehensive and global strategic partnership. Retrieved from https://www.mea.gov.in/bilateral-documents.htm?dtl/38323/Joint+Fact+Sheet+The+United+States+and+India+Continue+to+Expand+Comprehensive+and+Global+Strategic+Partnership#:~:text=President%20Biden%20and%20Prime%20Minister%20Modi%20celebrated%20the%20new%20U.S.,precursor%20chemicals%2C%20and%20deepen%20a

Mol, R., Singh, B., Chattu, V. K., Kaur, J., & Singh, B. (2021). India's Health Diplomacy as a Soft Power Tool towards Africa: Humanitarian and Geopolitical Analysis. *Journal of Asian and African Studies*, *57*(6), 1109–1125. https://doi.org/10.1177/00219096211039539

Morgan Stanley. Individual investors' interest in sustainability is on the rise. https://www.morganstanley.com/ideas/sustainable-investing-on-the-rise

Nasiritousi, N., Buylova, A., Fridahl, M., & Reischl, G. (2024). Making the UNFCCC fit for purpose: A research agenda on vested interests and green spiralling. *Global Policy*, *15*(2), 487–494. https://doi.org/10.1111/1758-5899.13356

NCDC (2023). Climate Change and Health: Driving Local Action. A Collection of Case Studies on Adaptation and Mitigation Measures Implemented in Public Health Sector in India. Available at https://ncdc.mohfw.gov.in/wp-content/uploads/2024/06/Climate-Change-Health_Driving-Local-Action_Collection-of-Case-Studies-NPC-CHH-1-1.pdf

PHU (2023). COP28: Summary of the initiatives and financial commitments for climate and health. https://tinyurl.com/5yrzkrwu

PIB, Government of India. (2022, February). *India's stand at COP26.* Retrieved from https://pib.gov.in/PressReleasePage.aspx?PRID=1795071

PIB, Government of India. (2024, June). *National Consultation on Legal Environment Assessment for One Health Activities in India*. Retrieved from https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2028993

PIB, Government of India. (2024, September). Climate and Health Solutions (CHS) India Conclave jointly organized by Ministry of Health and Family Welfare, Government of India and Asian Development Bank inaugurated today in Delhi. https://pib.gov.in/PressReleasePage.aspx?PRID=2058596.

Pillay, C., & Van Den Bergh, J. (2016). Human health impacts of climate change as a catalyst for public engagement. *International Journal of Climate Change Strategies and Management*, *8*(5), 578–596. https://doi.org/10.1108/ijccsm-06-2015-0084

Quadria Capital, HealthQuad, PwC, Thakur, S., Mehta, R., Ralhan, R., Sahai, S., Agarwal, R., Arya, A., Dahiya, N., Aggarwal, Dr. A., Verma, M., Pande, S., Indrodia, Dr. P., Mahobia, Dr. R. K., Kumaresan, K., Garg, Dr. V., & Hoskote, A. (2024). FINANCING THE CLIMATE - HEALTH FRONTIER. In *Quadria Capital*. https://www.pwc.in/assets/pdfs/quadria-capitalfinancing-the-climate-health-frontierreport28-nov-2024.pdf

Ravelo, J. L. (2023). *Donors commit more than $1B for climate-health at COP 28.* Retrieved from DEVEX: https://www.devex.com/news/donors-commit-more-than-1b-for-climate-health-at-cop-28-106714

RBI, Government of India. (2023). Report on Currency and Finance: Towards a Greener Cleaner India. Retrieved from https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/RCF03052023395FAF37181E40188BAD3AFA59BF3907.PDF

Roul, A. (2024). India's moment for global health leadership. Think Global Health. Retrieved from https://www.thinkglobalhealth.org/article/indias-moment-global-health-leadership

Salas, R. N., & Jha, A. K. (2019). Climate change threatens the achievement of effective universal healthcare. *BMJ*, l5302. https://doi.org/10.1136/bmj.l5302

Shiffman, J., Schmitz, H. P., Berlan, D., Smith, S. L., Quissell, K., Gneiting, U., & Pelletier, D. (2016). The emergence and effectiveness of global health networks: findings and future research. *Health Policy and Planning*, *31*(suppl 1), i110–i123. https://doi.org/10.1093/heapol/czw012

Shiffman, J. (2017). Four challenges that global health networks face. *International Journal of Health Policy and Management*, *6*(4), 183–189. https://doi.org/10.15171/ijhpm.2017.14

Sinha, A. (2021). *Infra and solar alliance: India's climate vision.* Retrieved from The Indian Express: https://indianexpress.com/article/explained/explained-iris-cdri-infrastructure-climate-change-7601611/

The Economic Times (ET). (2023, September 6). G20: How India emerged as the voice of Global South. https://economictimes.indiatimes.com/news/india/g20-how-india-emerged-as-the-voice-of-global-south/articleshow/103410416.cms?from=mdr

The Global Fund. (2025). Global Fund Unveils Pioneering Climate and Health Fund to Accelerate Global Action. https://tinyurl.com/bdz3hysf

The Rockefeller Foundation. (2023). The Rockefeller Foundation Commits USD 100 Million To Test and Scale Climate and Health Solutions Globally. https://shorturl.at/FPzg9

Thomas, A., Baptiste, A., Martyr-Koller, R., Pringle, P., & Rhiney, K. (2020b). Climate change and small island developing states. *Annual Review of Environment and Resources*, *45*(1), 1–27. https://doi.org/10.1146/annurev-environ-012320-083355

Ugargol AP, Mukherji A, Tiwari R. (2023). In search of a fix to the primary health care chasm in India: can institutionalizing a public health cadre and inducting family physicians be the answer? The Lancet Regional Health - Southeast Asia 2023;13:100197. https://doi.org/10.1016/j.lansea.2023.100197.

UNICEF. (2022). Solar Direct Drives bring vaccines closer to vulnerable communities in Rajasthan. https://shorturl.at/exv0w

UNICEF. (n.d.). COVAX: ensuring global equitable access to COVID-19 vaccines. https://www.unicef.org/supply/covax-ensuring-global-equitable-access-covid-19-vaccines

USAID. (2023a). Infectious Disease Detection and Surveillance Project. https://shorturl.at/yTTr5

USAID. (2023b). Press Release - US and India promote health collaboration in the Indo-Pacific region. Retrieved from https://www.usaid.gov/india/press-releases/may-05-2023-us-and-india-promote-health-collaboration-indo-pacific-region#:~:text=Under%20the%20India%2DU.S.%20Triangular,is%20visiting%20India%20to%20explore

US Department of State. (n.d.). The United States President's Emergency Plan for AIDS Relief. https://www.state.gov/pepfar/

Watts, N., Adger, W. N., Agnolucci, P., Blackstock, J., Byass, P., Cai, W., Chaytor, S., Colbourn, T., Collins, M., Cooper, A., Cox, P. M., Depledge, J., Drummond, P., Ekins, P., Galaz, V., Grace, D., Graham, H., Grubb, M., Haines, A., . . . Costello, A. (2015). Health and climate change: policy responses to protect public health. *The Lancet*, *386*(10006), 1861–1914. https://doi.org/10.1016/s0140-6736(15)60854-6

Wellcome. (2023). Julia Gillard's speech on climate and health at COP28. https://tinyurl.com/56njvn4y

World Bank (n.d.). Nagaland Health Project. https://shorturl.at/I8C64

World Health Organization (WHO). (2015). COP21 Climate Agreement - Moving towards healthier people and a healthier planet. WHO.

WHO. (2015). *Operational framework for building climate resilient health systems*. World Health Organization. Available at https://iris.who.int/bitstream/handle/10665/189951/?sequence=1

WHO. (2018). COP24 special report: health and climate change.

WHO. (2023 a). Retrieved from https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health

WHO. (2023 b). *41 funders, partners endorse new guiding principles for financing climate and health solutions to protect health.* Retrieved from WHO: https://www.who.int/news/item/02-12-2023-41-funders--partners-endorse-new-guiding-principles-for-financing-climate-and-health-solutions-to-protect-health

WHO. (2023 c). WHO and UNDP launch US$17.85 million Global Environment Facility-funded project supporting climate resilient health systems in Kiribati, Solomon Islands, Tuvalu, and Vanuatu. https://shorturl.at/afWLq

WHO. (2023 d). Launch of consultative process towards REACH 2035 Agenda: Research for Action on Climate Change and Health. https://shorturl.at/cMaOa

WHO. (2024 a). Agenda item 15.4. Climate Change and Health. Seventy Seventh World Health Assembly. https://apps.who.int/gb/ebwha/pdf_files/WHA77/A77_R14-en.pdf

WHO. (2024 b). WHO and multilateral development banks kick off €1.5 billion primary health financing platform with new funds and launch of first investment plans in 15 countries. https://www.who.int/news/item/23-09-2024-who-and-multilateral-development-banks-kick-off-primary-health-financing-platform-with-new-funds-and-launch-of-first-investment-plans-in-15-countries

WHO. (n.d.). *Strategic Action in Small Island Developing States*. Retrieved from https://www.who.int/initiatives/strategic-actions-in-small-island-developing-states

Woodward, A., Smith, K. R., Campbell-Lendrum, D., Chadee, D. D., Honda, Y., Liu, Q., Olwoch, J., Revich, B., Sauerborn, R., Chafe, Z., Confalonieri, U., & Haines, A. (2014). Climate change and health: on the latest IPCC report. The Lancet, 383(9924), 1185–1189. https://doi.org/10.1016/s0140-6736(14)60576-6

World Bank. (2023). World Bank Approves $82 Million for Prevention of Zoonotic, Endemic Diseases in India. https://shorturl.at/D5yVM

World Bank. (2024a, June). *Development Banks' Joint Roadmap for Climate-Health Finance and Action*. Retrieved from https://thedocs.worldbank.org/en/doc/164f0203d738919baef24f0a1a2fb788-0140022024/original/Development-Bank-Working-Group-Joint-Roadmap-JUNE-12-2024-FINAL.pdf

World Bank. (2024b). Health and Climate Change. https://shorturl.at/Dbmi2

About the authors

Neethi V Rao has joined as Fellow in Health and Human Development team on 18th March 2024. She is a health policy and systems researcher with interests in health systems governance and intersectoral public policy at the intersections of environment and health. Her research and practice have involved providing technical support in strategic planning, policy design, implementation, and evaluation including impact assessments for governments and international development agencies. She also develops and delivers online and in-person training programs on participatory governance, good health research practice and promoting evidence-informed policy. She worked with the health systems governance team at the World Health Organization, supporting research and advocacy towards a World Health Assembly Resolution proposal on social participation for 2024. She is also Adjunct Faculty at the Institute of Public Health.

Priyanka Tomar is a Research Associate working in the Human Development vertical. Prior to joining CSEP, she has worked as an Assistant Professor of Economics at Hidayatullah National Law University, Raipur for about two years. She has over five years of research experience in Public policy domain and also worked in health vertical at the Indian Council for Research on International Economic Relations (ICRIER), New Delhi as a Research Associate. She has co-authored several publications on core development issues, particularly public health in the context of India and G20.

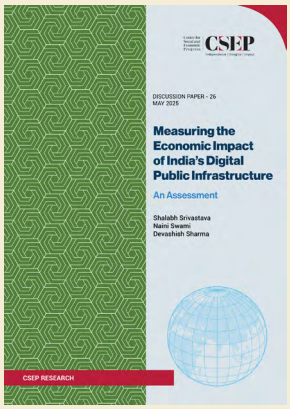
Priyanka has done Masters in Economics from Gokhale Institute of Politics and Economics, Pune and Bachelors in Economics from University of Delhi.

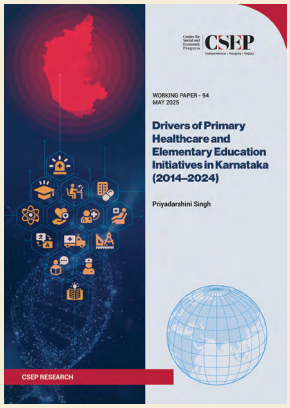
Pooja Vijay Ramamurthi is a Fellow in CSEP. She has a PhD in Science, Technology and Environmental Policy at the School of Public and international Affairs (STEP) at Princeton University. She studies climate and energy transition policy, particularly focusing on the role that India can play in accelerating domestic and international action towards decarbonisation.

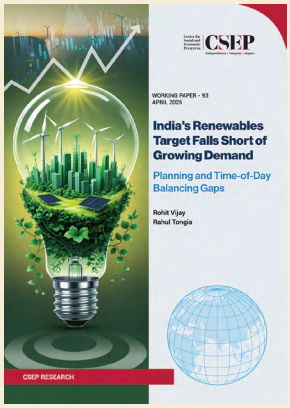
Her work has always been multidisciplinary, where she looks at techno-economic, social and political dimensions of sustainability. She has worked at premier think tanks in India, including the Energy Policy Institute at the University of Chicago and the Center for Study of Science, Technology and Policy. She has also worked on projects in Ghana and Cambodia. Her work has resulted in her being invited to international level conferences and publications in peer reviewed journals and leading newspapers.

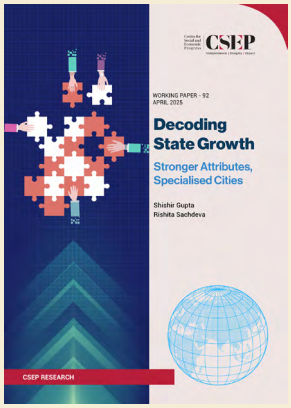
She is recipient of the Prize Fellowship for Social Sciences at Princeton University. She has also received her double Master's degree in Sustainable Energy from the Royal institute of Technology, Sweden and Instituto Superior Tecnico, Portugal via the Innoenergy scholarship granted by the European Union.

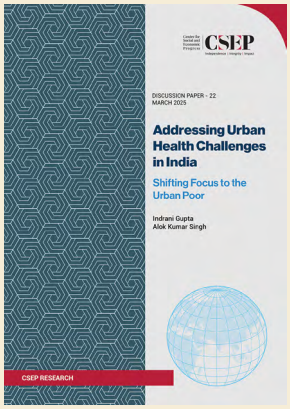
Other publications

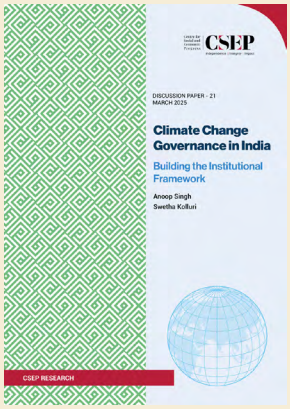


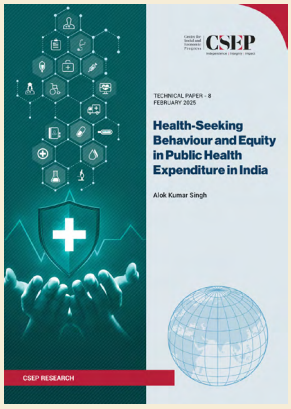


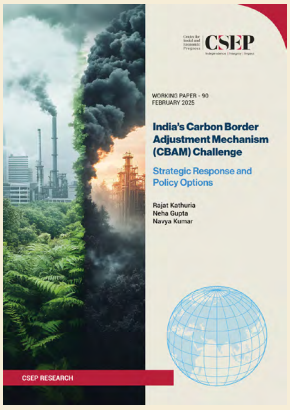


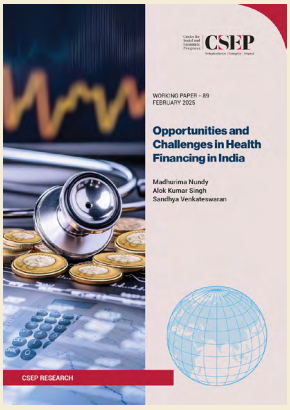


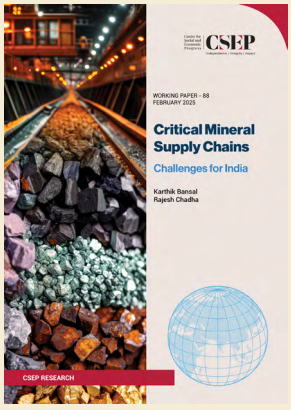












All CSEP publications are available at www.csep.org

Independence | Integrity | Impact

Centre for Social and Economic Progress

6, Dr Jose P. Rizal Marg, Chanakyapuri, New Delhi- 110021, India

Centre for Social and Economic Progress

@CSEP_Org

www.csep.org