

An aerial photograph of a city at sunrise. The sun is low on the horizon, creating a warm, golden glow over the city. The buildings are densely packed, and the sky is hazy. The text is overlaid on the left side of the image.

Collective Action on Dengue

# From Diagnosis to Coordinated Action

Harnessing climate-smart, cross-sector  
collaboration to fight dengue

October 2025

## Acknowledgments

The authors thank the members of the Collective Action on Dengue (CAD), members of its working groups on Innovation, Urbanization, and Financing, and all contributing partners for their valuable insights and collaboration in preparing this report. We also acknowledge the dedication of researchers, public health practitioners, city leaders, and innovators who are working tirelessly to advance dengue prevention and strengthen climate–health resilience worldwide. Finally, we recognize the resilience of the communities most affected by dengue, whose experiences and leadership inspire this collective effort.

## Authors

This report was prepared on behalf of CAD with support from its Secretariat, Steering Committee, and collaborating organizations. The findings and conclusions contained within do not necessarily reflect the views of all CAD members or participating institutions.

## About the Collective Action on Dengue

The Collective Action on Dengue (CAD) is a neutral, multi-sector platform that unites innovators, policymakers, funders, and implementers in an otherwise fragmented environment, under one integrated mandate: *to align dengue strategies with climate and urban health agendas to inform policies*. The CAD is funded by donor organisations including the private sector.

If you are interested in joining or supporting the Collective Action on Dengue, please reach out to the Secretariat: [pn-cad.secretariat@pasteur.fr](mailto:pn-cad.secretariat@pasteur.fr)

Collective  
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DENGUE



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**DENGUE**

# Executive Summary

Dengue is the world's fastest-growing mosquito-borne viral disease, now endemic in over 120 countries and placing nearly half the global population at risk<sup>1</sup>. Climate change and rapid urbanization are accelerating its spread, driving record outbreaks and rising economic costs.

While tools exist — including vaccines, diagnostics, surveillance, and vector control — responses remain fragmented, financing is reactive, and dengue risk is rarely integrated into city or climate- resilience planning. The Collective Action on Dengue (CAD) addresses this gap by uniting policymakers, innovators, funders, and local leaders to align dengue prevention with climate and urban health agendas.

CAD's work centers on three priorities:



## INNOVATION

integrating fragmented tools into scalable, climate-smart solutions.



## URBANIZATION

embedding dengue prevention and climate-health planning in the design of rapidly expanding cities.



## FINANCING

Mobilizing sustainable investment and unlocking new financing pathways by positioning dengue as a climate-health priority.

Through the proposed flagship outputs including an innovation landscape, regional dengue dialogues, and a global investment case, CAD transforms isolated efforts into durable global goods, collaborative action platforms, and locally informed strategies.

The call to action is urgent. Dengue's burden is rising faster than responses. CAD offers the platform to coordinate cross-sectoral action toward a wider impact. Governments, funders, experts, and implementers are invited to join in turning fragmented initiatives into integrated, climate-smart solutions that protect health and resilience worldwide.

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**DENGUE**

# Introduction

## Dengue is the most rapidly spreading mosquito-borne viral disease in the world.

Once confined to a handful of tropical countries, it is now endemic in more than 120 nations, placing nearly half of the world's population at risk and causing an estimated 390 million infections every year. <sup>2,3</sup> The global economic burden is close to \$9 billion annually<sup>3</sup>, much of it borne by households and already overstretched health systems. In 2024, the Americas experienced their highest number of dengue cases ever recorded — more than 13 million and growing exponentially<sup>4</sup>. Africa, still under-researched, is seeing more frequent outbreaks, while Europe is now witnessing locally transmitted cases in France, Spain, and Italy<sup>5</sup>.

Climate change and rapid urbanization are accelerating this threat. Rising temperatures, extreme rainfall, or drought together with intensifying mosquito breeding cycles, expand dengue's geographical reach and drive more frequent and severe outbreaks<sup>6-8</sup>. In tandem, the world is quickly urbanizing with new and growing cities and informal settlements coming with infrastructure, environmental, social, and governance challenges that make mosquito-borne disease more likely<sup>9</sup>. Without urgent adaptation, by 2080 up to 60% of the global population could be at risk<sup>6</sup>.

**Health is the human face of climate change, and dengue is one of its clearest signals.**

Yet dengue often competes with other pressing priorities. Urban planners are rightly focused on challenges such as air pollution, heat stress, and wildfire risk. Health policymakers must balance pandemic preparedness, non-communicable diseases, and multiple urgent demands on limited resources. Meanwhile, climate adaptation financing is growing, yet less than 0.3% currently supports health<sup>11</sup> - a gap that represents a major opportunity. By positioning dengue within broader climate–health strategies, we can unlock new streams of investment and deliver solutions that strengthen both health systems and climate resilience<sup>9,11</sup>.

The tools and opportunities are here — but they remain fragmented and continue advancing too often in silos. Financing is often mobilized reactively after outbreaks, rather than strategically to prevent them. Urban systems rarely integrate dengue risk into planning for water, waste, and housing. As a result, proven interventions are not adequately scaled, costs rise, and communities remain vulnerable<sup>9</sup>.



## Integration is the missing piece.

- **Innovation** needs to be connected across the pipeline (e.g. diagnostics with surveillance, vaccines (and other new innovations) with delivery, therapeutics with financing) so that promising tools translate into real-world impact.
- **Urbanization** must embed dengue prevention into the design of cities, where half of the buildings and urban areas where people will live in 2060 are not yet built<sup>12</sup>. The window to shape healthier, climate-smart cities is now.
- **Financing** must shift from reactive, siloed flows to integrated investment that links health, climate, and urban agendas — unlocking efficiency, reducing duplication, and delivering more value for money<sup>10,11</sup>.

If we connect these strands, the impact could be transformative. Integrated strategies can reduce disease and unlock wider ecosystem benefits — from strengthened climate resilience to more sustainable urban development<sup>9,10</sup>.

By 2050, almost 60 percent of the urban areas where people are expected to live will be newly built, while an additional one billion people will face the risk of dengue and other mosquito-borne diseases<sup>6(p2023),8,10,12</sup>, creating an opportunity to integrate health, innovation, and urban planning from the start. The combination of increased risks with advances in the research and development of dengue interventions introduces an unprecedented opportunity to address dengue prevention proactively rather than reactively.

**This is where CAD comes in. The Collective Action on Dengue (CAD) is a neutral, multisector platform that unites innovators, policymakers, funders, and implementers in an otherwise fragmented environment, under one integrated mandate: to align dengue strategies with climate and urban health agendas.**

The CAD drives field level impact by amplifying proven solutions and consolidating evidence into durable, investment-ready goods. The CAD takes us from diagnosis to coordinated action. Dengue is accelerating in its spread and severity, driven by climate change, rapid urbanisation, and global interconnection. The growing evidence underscores the urgent, climate-driven rise of dengue and the need for integrated, cross-sector responses.

This piece builds on that recognition — shifting from problem definition to orchestrated, climate-smart, coordinated action. It highlights existing opportunities that form the foundational building blocks for CAD's collaborative work, which, in partnership with others, will be developed and integrated through a climate-smart lens to create durable goods for the dengue field.

**By centring country and regional voices, CAD ensures local realities inform global policy, and integrated approaches to dengue mitigation become part of broader climate-health strategies**

# CAD's Value Proposition

**CAD aims to deliver collective outputs that no single actor could achieve alone, across four distinct pillars:**

## **1. Strengthened Leadership in Climate x Health**

While climate health discussions have gained momentum, there remains a critical shortage of concrete, actionable examples that demonstrate the real-world implications of environmental change on disease patterns. Dengue serves as the perfect case study; a disease whose geographic expansion directly correlates with changing climate conditions and increasing urbanization, providing a clear illustration of the climate-health nexus.

CAD is solidifying the link between dengue and climate change by equipping members with the skills and information to articulate dengue as a front line climate-health issue and connect it to their work. By demonstrating the connection between expanding mosquito habitats, increasing population vulnerability, and the growth of urban areas at risk for arbovirus exposure, CAD mobilizes stakeholders to consider climate health implications and pioneer effective strategies to mitigate the impact of climate-exacerbated diseases.

## **2. Partnerships to Drive Integrated Solutions**

Through rapid connections, CAD breaks down traditional silos by creating collaboration opportunities between diverse professionals, including vector control specialists, urban planners, biomedical innovators, and policy makers. CAD addresses the age-old challenge of fragmented approaches to dengue control through interdisciplinary collaboration and introducing cognitive and experiential diversity to design solutions that are both visionary and technically robust for implementation.

## **3. Shared Intelligence for Impactful Policy Outcomes**

CAD serves as a platform for accelerating the identification, evaluation, and scaling of local best practices and cross-sector insights. The initiative facilitates knowledge transfer from successful programs between cities, urbanizing environments, and densely populated areas. By connecting policy development and public health professionals with decades of dengue management experience to those in emerging frontiers and newly exposed areas, CAD equips members with decision-ready intelligence. This helps them identify barriers, share policy change strategies, unlock political will, and mobilize resources for cost-effective dengue solutions.

## **4. Unified Coalition Voice for Visibility and Research**

CAD strategically positions dengue as a critical disease requiring national and international attention. Through an equitable, coalition-wide communication strategy, CAD amplifies members' evidence and tools as part of a strong, credible, unified voice. The initiative leverages a joint opportunity to drive broader awareness among philanthropy, non-profits, academia, pharmaceutical companies, and international organizations about the intersection of environmental change and infectious disease patterns. This cohesion drives visibility and recognition for partners in a global coalition, providing them a stronger advocacy voice to influence the field, and create systemic change.



CAD's Flagship Projects: High-profile, strategically chosen initiatives that fill systemic gaps and deliver integrated, climate-smart impact

## To put these pillars into practice, CAD delivers collaborative outputs through three levers:

Durable Goods	Collaborative Action Platforms	Investment-Ready Evidence
<i>CAD identifies and fills critical gaps, providing lasting resources for the field</i>	<i>CAD drives visibility, collaboration, and systemic change; demonstrating what collective action can achieve</i>	<i>CAD consolidates data, evidence and local best practices to demonstrate value to funders</i>

Together, these levers underpin CAD's Flagship Projects — high-profile, strategically chosen initiatives that fill systemic gaps and deliver integrated, climate-smart impact. These Flagship Projects in addition to CAD's role as a cross-sectoral convener and amplifier, represent CAD's contribution and leadership in evolving the field towards integrated climate health strategy and coordinated action.

# Turning Ideas into Integrated, Climate-Adapted Action

**Without stronger connections across the pipeline, dengue innovations risk remaining pilots rather than becoming scalable, climate-resilient solutions.**

Innovation in dengue control – spanning diagnostics<sup>13</sup>, therapeutics<sup>14</sup>, vaccines<sup>15</sup>, surveillance<sup>16</sup>, mosquito technologies<sup>17</sup> and antivirals<sup>18</sup> – has advanced significantly. Yet efforts remain disconnected: diagnostic tools aren't consistently aligned with treatment strategies; vaccines deployment isn't tied to surveillance systems; climate data rarely informs intervention design. This disconnection hampers scalability and impact<sup>9,19,20</sup>.

In addition to the fragmented innovation landscape, there is a critical gap between the development of new tools and the enabling environment in which they can take hold. Successful innovations often scale slowly and unevenly as evidence and comparable ROI narratives are rarely packaged in ways that policymakers can readily use and integration of climate and epidemiological data is limited. This lack of integration weakens cost-effectiveness and slows progress in reducing disease burden<sup>19,20</sup>.

Analyses show that public health interventions using the *Wolbachia* bacteria to reduce the ability of mosquitoes to transmit diseases, for instance, can avert over 1.29 million dengue cases with greater cost-effectiveness than traditional vector control<sup>13</sup>. Without stronger connections across the innovation pipeline, dengue innovation risks remaining pilots, rather than becoming scalable, climate-resilient solutions.

**While scientific breakthroughs are essential, they are insufficient without mechanisms that ensure fair distribution.**

**The effectiveness of innovation depends on pairing it with access strategies that reach the people who need them the most.**

There is a need for a comprehensive evaluation of existing and new tools for tackling dengue, including data-driven interventions, pivotal for planning and budgeting. Existing approaches must be vigorously applied while galvanizing innovation, technology, and research in a way that is informed by local realities and propels change to protect communities.

The dengue innovation landscape is rich in ideas, yet no single technology is a silver bullet. These tools must be combined into context-specific packages that are climate-informed, locally relevant, cost-effective, and equitably accessible to those who need them most.

Sources exist for some innovation domains with strong, established information platforms showing how well-structured information can guide investment and policy decisions— for example:

- **Diagnostic Test Directory (FIND):** Provides a reliable view of available diagnostics and their performance. Further efforts are underway to assess diagnostic biomarkers and analyse how climate change will reshape diagnostic needs<sup>21</sup>
- **Global dengue surveillance dashboard (WHO):** Part of a global dengue surveillance system established by WHO to track dengue incidence, severity, and mortality across WHO regions with monthly reporting<sup>22</sup>
- **DEN-CORE:** An international consensus study to develop a standardised set of outcomes – a ‘core outcome set’ (COS) – to be used by all future dengue treatment trials<sup>23</sup>
- **The Foz do Iguaçu:** An entomological surveillance network model developed to improve dengue prevention in Brazil using a dense network of mosquito monitoring sites to project risk 3–6-12 months in advance, showing how dengue risk skill plays out differently with and without climate information in temperate regions and informing tailored intervention packages for these higher-risk demographics<sup>24,25</sup>

The existing tools help show that when vector biology and climate data are combined, public health officials gain the lead time they need to target interventions, optimise resources, and engage communities before outbreaks peak. These initiatives demonstrate both the richness of the innovation landscape and the opportunity for greater integration.

Policymakers lack a consolidated, cross-domain view. CAD can fill that gap by organizing evidence to help policymakers and funders assess and select the best combination of interventions in their contexts.

**CAD connects innovators, policymakers, and funders around four building blocks that amplify existing initiatives and turn fragmented evidence into decision-ready solutions:**



Building Block	Objectives
<b>Facilitating cross-sectoral linkages</b>	Creating spaces where innovation developers engage with urban planners, health systems, and funders to ensure, for example, that climate data informs diagnostic design, or that surveillance outputs link directly to financing decisions.
<b>Packaging innovation into adaptable templates</b>	Developing generic but flexible frameworks that countries and cities can adapt to their own context, ensuring tools are locally relevant, climate-informed, and cost-effective.
<b>Consolidating fragmented evidence across domains</b>	Bringing together innovations into a single knowledge base, so decision-makers can compare options and plan integrated packages
<b>Catalyzing knowledge transfer and partnerships</b>	Leveraging CAD’s diverse membership to identify gaps, brainstorm solutions, and spread lessons quickly across geographies and sectors, acting as a “hub” for innovation exchange.

By organising and connecting what already exists, CAD helps transform promising but siloed innovations into investment-ready, scalable, and context-specific solutions that reduce disease burden while strengthening climate–health resilience.

CAD will further serve to fill existing gaps through the development of durable goods in the form of flagship outputs that helps to consolidate cross-sectoral insights to guide decision making.

Despite strong initiatives, systemic gaps remain in fragmented pipelines, underutilized climate data, insufficient decision-ready evidence for policymakers, and inefficient scaling of interventions.

**CAD’s flagship outputs aim to fill these gaps through these proposed projects:**

 <p><b>The Global Dengue Innovation Landscape</b></p>	<p><b>Objective:</b> To provide policymakers a comparable, decision-ready snapshot of all dengue interventions to guide integrated public health and urban planning strategies.</p> <p>This would help governments and funders rapidly identify tools with relevance and scalability to their settings.</p>
 <p><b>Innovation decision-making toolkit</b></p>	<p><b>Objective:</b> A dynamic resource designed to guide evidence-based intervention planning and adoption.</p> <p>This would support governments in knowing what is available, which tools are best used in their context, and how to plan for uptake. The toolkit would highlight use cases that are climate-smart, interoperable, and investment-ready.</p>

# Embedding Dengue in Climate-Smart City Resilience

**Climate change and urban expansion are intensifying dengue risk, especially in underserved settlements with weak infrastructure, while fragmented policy and competing urban health priorities further hinder coordinated response.**

Urbanization is accelerating at an unprecedented pace- from 55% of the world's population living in cities today to nearly 70% by 2050<sup>5</sup>. More than half of the urban areas projected for 2060 have not yet been built – the majority in Asia and Africa<sup>6,12</sup>. The way these cities are designed will directly shape dengue risk for decades to come.

Rapid, often unplanned growth places pressure on basic services such as water, drainage, and waste management, forming ideal breeding conditions for *Aedes aegypti* mosquitos that transmit dengue. Studies show that dengue incidence is consistently higher in dense, unplanned neighbourhoods and informal settlements, where infrastructure gaps are greatest and populations are least able to protect themselves<sup>9,26</sup>.

Climate change compounds these urban vulnerabilities. Flooding, heatwaves, and rainfall variability destabilise infrastructure and services, and multiply breeding sites, while urban heat islands accelerate mosquito development cycles<sup>7,10</sup>. Recent analyses suggest that in cities such as Rio de Janeiro and Ho Chi Minh City, dengue incidence is rising in parallel with extreme-heat and flood risk, but health is rarely integrated into climate-urban planning agendas<sup>27,28</sup>.

Despite this evidence, dengue remains marginal in urban climate and health priorities. Municipal leaders are more likely to focus on air pollution, heat stress, or wildfire risk, while health policymakers address dengue in isolation from city planning. This disconnect leaves rapidly urbanizing cities – especially in South America, Southeast Asia and across Africa – vulnerable to recurrent outbreaks, particularly in low-services zones and informal settlements where equity gaps are greatest.

Without deliberate integration, dengue control will remain fragmented, costly, and reactive – missing the opportunity to embed evidence-based, cost-effective, and environmentally sustainable interventions into the design of future cities<sup>9</sup>.

There is a need for tools and forums that allow municipal leaders to evaluate interventions, quantify co-benefits (such as reduced flooding or improved waste management), and mobilise multi-sector partnerships.

**By 2050, 70% of people will live in cities, and while clean water will be essential, it will also create ideal breeding grounds for mosquitoes.**

Promising efforts already exist, providing valuable starting points that should be further amplified and synthesized:

- **ARBOTHAI** (*ISGlobal, Wellcome Trust*) Combines climatic, environmental, demographic, and mobility data to predict outbreaks at the province scale for the 76 provinces in Thailand and at the sub-district level in Bangkok - enabling local authorities to target pre-emptive interventions in high-risk zones before outbreaks peak<sup>29</sup>
- **Reimagining Health partnership** (*Resilient Cities Network, Sustainable Markets Initiative, Reckitt, Bupa*) is working with 22 cities in 15 countries to address climate-related health risks. It provides a Practical Guide for Cities and an Urban Health Resilience Screening Tool to identify interventions with both health and climate co-benefits, enabling integrated planning across climate, urban systems, and health co-benefits and demonstrating why a focus on prevention and equity is essential<sup>31</sup>

Many lessons learned from dengue mitigation remain localized and are rarely standardized for scale. What’s missing is the bridge between city priorities (infrastructure, heat, air pollution, informal settlement services), health system needs (surveillance, integrated vector management, vaccine/diagnostic uptake) and financing (moving from reactive, post-outbreak funds to integrated climate–health investment cases).

*This represents both a vulnerability and an opportunity: linking dengue prevention to urban climate priorities can unlock new financing while improving equity and resilience.*

CAD’s objective is to bridge these silos and ensure that local successes translate into scalable, integrated solutions. By convening city leaders, health policymakers, and technical experts, CAD can amplify existing projects, connect them with innovation pipelines, and provide leaders with the resources they need to make impactful decisions.

**By linking innovation, urban planning, and financing, CAD provides the scaffolding for cities to act, attract resources, and deliver impact.**


**CAD can connect city, health, and climate actors around three practical building blocks:**

Building Block	Objectives
<b>Standardize and package evidence-based interventions that cities can use</b>	Standardize interventions from urban drainage upgrades to screening and container management – into accessible tools, including cost-effectiveness and cost-benefits maps that highlight co-benefits for health, flood control, heat reduction, and community equity.
<b>Embed equity-first design</b>	Ensure informal settlements and underserved peripheries are prioritized to the center of design – targeting the communities where data show most higher dengue burden and service gaps – so urban resilience efforts reduce, not widen, inequities.
<b>Provide city-level decision support system</b>	Pair surveillance and climate data with geospatial urban asset maps (drains, water points, solid waste routes) enabling real-time risk mapping and targeted spending optimization for municipalities to target investments. Municipal examples from Brazil and elsewhere show this is feasible now with open data and lightweight models.

There is an opportunity to advance the existing toolkit of interventions and to mobilize climate-health funding towards dengue mitigation. CAD also helps demonstrate that dengue interventions can be investment-worthy, climate–health strategies, quantifying not only health outcomes but also economic savings and co-benefits for climate resilience<sup>9–11</sup>.

Where gaps persist, CAD supports the ecosystem by developing collaborative action platforms and durable global goods designed to fill critical systemic gaps in the dengue ecosystem, especially around integration to embed dengue into city agendas.

**CAD’s proposed response to these challenges is anchored in these outputs:**

 <p><b>Policy Dialogues</b></p>	<p><b>Objective:</b> The CAD plans to host regional exchanges to provide structured spaces for leaders across dengue-endemic and at-risk cities and regions to share lessons, highlight cost-effective approaches and surface policy and financing barriers to integration – ensuring that city perspectives shape global policy debates.</p>
 <p><b>Urban Resilience Toolkit</b></p>	<p><b>Objective:</b> A practical resource that integrates climate, health, and economic data into single practical package for cities.</p> <p>This would equip cities with the evidence they need to prioritize dengue and attract investment.</p>

Together, these outputs ensure dengue is no longer treated as a marginal issue, but recognised as a visible, investment-worthy component of climate-smart urban development.

These outputs are the products of the coalition as a whole – filling the gaps that no single organisation can bridge alone and ensuring that the fight against dengue is anchored in durable, systemic solutions. By connecting fragmented efforts and amplifying local innovations, CAD helps cities move from fragmented responses to integrated, scalable resilience.

# Catalysing Strategic, Scalable Investment for Dengue

**Dengue prevention suffers from chronic underfunding and fragmented resource flows across donors, countries, and intervention types.**

**Many financing decisions are reactive, following outbreaks, rather than proactive and strategic investments in prevention. This results in missed opportunities to reduce burden, strengthen health systems, and integrate dengue into broader resilience planning<sup>9-11</sup>.**

Unless dengue is positioned as a core climate-health priority with a compelling return-on-investment (ROI) narrative, innovations and city resilience measures will not scale. Experience from other disease areas such as malaria shows that sustained financing, unified investment strategies, strong economic cases, along with political will and leadership can transform the trajectory of an epidemic<sup>32,33</sup>. Learning from these examples, dengue requires its own financing architecture – one that accounts for the complexities of multiple interventions, climate linkages, and urban dynamics.

## **The cost of inaction is high.**

Dengue imposes an estimated US \$94.7 billion in cumulative economic costs across 166 countries over 45 years<sup>3</sup>

Interventions such as Wolbachia releases have been shown to avert over 1.29 million cases cost-effectively<sup>19,20</sup> yet they remain underfunded. Even where innovations or interventions are proven effective, the absence of compelling, quantified investment cases and coordinated financing pathways means they remain underutilised— and cities remain vulnerable as climate and urbanisation intensity risk.

Several existing and upcoming initiatives are already advancing innovative financing models for dengue:

- **ExCITD:** Ending Complex and Challenging Infectious and Tropical Diseases (*Asian Development Bank (ADB)*): An initiative to be launched by the end of 2025 to accelerate progress against priority communicable diseases in Asia and the Pacific, including malaria, TB, and dengue. As part of its dengue focus, ADB is discussing, with a consortium of stakeholders, the development of a regional investment case on *Wolbachia* Replacement for effective dengue control. The investment case would aim to equip governments and partners with actionable evidence to guide adoption and scaling of *Wolbachia* Replacement as a sustainable dengue control strategy<sup>34</sup>
- **Regional Malaria–Dengue Elimination Initiative** (*The Inter-American Development Bank*): The Inter-American Development Bank (IDB) is expanding its Regional Malaria Elimination Initiative model—which has successfully mobilized blended finance and country co-investment for malaria elimination—to include other vector-borne diseases. The IDB is now exploring the adoption of this model to fund and scale novel intervention approaches for additional disease areas, beginning with dengue, aligning regional health priorities with climate adaptation and resilience financing.<sup>35,36</sup>
- **State Transition Model to simulate Wolbachia-based population replacement strategy** (*World Mosquito Program*): Covers seven cities in Brazil and analysing the potential cost-effectiveness of the implementation<sup>20</sup>

- **Best Buys for Climate and Health (ATACH):** Identifies high-value, cross-cutting interventions that deliver both health and climate benefits; an opportunity to frame dengue interventions as part of broader climate–health portfolios <sup>36,37</sup>
- **Pacific SIDS (Green Climate Fund (GCF)):** an example of GCF’s financing climate-health adaptations that cover dengue as a climate-sensitive risk. In this project GCF is funding climate-induced disease prevention and early-warning interventions in the Federated States of Micronesia, as vector-borne diseases are identified as a top climate-health challenge<sup>38</sup>
- **Wolbachia and Indonesia’s 100/100 Plan (Ministry of Health, Indonesia):** A first-of-its-kind national scale-up of mosquito-based solutions (*Wolbachia*) to protect 100 cities and more than 100 million people from dengue within six years, anchored in a blended finance approach, is underway. The Ministry estimates roughly US\$400 million in total program costs with about US\$40 million in catalytic grants to unlock multi-year public budgets and concessional financing from development banks, alongside domestic and private or philanthropic contributions.

These initiatives are important demonstrations of what is possible. They show that dengue financing can be structured, that multi-stakeholder partnerships can be sustained, and that regional platforms can provide a strong foundation.

Despite these initiatives, funding for dengue remains insufficient. The lack of consolidated and standardized data on health, economic, and climate co-benefits makes it difficult for existing initiatives to build compelling, funder-ready cases. Current tools are often too generalized or insufficiently tailored to diverse implementation environments.



CAD catalyses innovative financing pathways by linking local and regional initiatives with standardized evidence and global adaptation finance; turning fragmented efforts into scalable, investable opportunities.

### The CAD drives financing for dengue mitigation forward, anchoring in these three building blocks:

Building Block	Objectives
<b>Convene cross-stakeholders at the nexus of climate and health</b>	Drive coordinated action on arboviruses, increase the proportion of climate financing that goes to health, and unite experts across fields towards this shared agenda.
<b>Serve as a bridge between evidence, partners, and capital</b>	Generate catalytic financing, unlock new financing pathways, and innovative financing models. By helping to organize and connect what already exists, CAD anchors local and regional financing models in standardized evidence and links them to global adaptation finance – ensuring promising initiatives are not isolated, but amplified and scaled through more visible, more coherent, and more attractive investment pathways.
<b>Expand the tools and knowledge for municipal and regional decision makers</b>	Provide context to best practices including ROI narratives that are globally informed and contextually adapted for maximum, local impact.

To address persistent gaps, CAD contributes to consolidating evidence, generating investment narratives, and creating compelling contextually informed solutions to inform budget allocation. CAD drives this effort through creation of durable global goods that tackle systemic challenges.

To fill critical systemic gaps in the dengue financing architecture, the CAD Financing working group proposes developing two flagship outputs:

 <p><b>The Global Dengue Investment Case</b></p>	<p><b>Objective:</b> A comprehensive, durable resource that quantifies the return on investment for integrated dengue strategies.</p> <p>By linking health outcomes with economic savings and climate co-benefits, it would provide a unified narrative that would enable governments, funders, and cities to position dengue as a credible component of climate and infrastructure finance.</p>
 <p><b>The Financing Pathways Navigator</b></p>	<p><b>Objective:</b> A practical guide that would map major funding sources, eligibility criteria, and application steps for dengue relevant financing.</p> <p>This would allow users to match specific interventions with suitable funding streams in real time, helping governments, implementers, and partners to identify opportunities, adapt models to their contexts, and unlock capital through existing global and regional frameworks.</p>

These outputs are intentionally interconnected with the Innovation and Urbanization Working Groups' flagships (Annex 2). The flagship outputs form a reinforcing loop. The Innovation landscape consolidates the evidence and what we know from researchers at the forefront of dengue innovation. The Investment Case makes it bankable by providing ROI and financing data and narratives to inform decision making. Finally, the Dengue Dialogues ensure that the innovation and financing information is contextually informed, locally owned, and acted upon through local engagement, generation of political will, policy change, and uptake.

The Flagship Outputs propel the CAD towards the goal of elevating dengue as a climate-health priority, mobilizing financing, and strengthening coordination across levels. Together, these flagship outputs form part of an integrated architecture that ensures dengue prevention is no longer an afterthought but a visible, investment-ready priority within climate and health agendas.

# Scaling Together - From Shared Understanding to Shared Results

## CAD aims at strengthening the dengue ecosystem in two complementary ways.

First, CAD acts as a convener, catalyst, and global connector. By bringing together a diverse network of partners, CAD helps organizations position dengue as a climate–health priority, accelerate cross-sectoral collaboration, and co-design technically sound solutions. As a unified coalition, members benefit from one stronger voice to shape policies, influence funders, and achieve greater impact together than they could alone.

Second, it delivers durable goods that remain in the field as shared resources. Through its three Working Groups on Innovation, Urbanization, and Financing, CAD develops high-profile, interconnected flagship outputs such as investment cases, policy dialogues, dashboards, and decision-making toolkits. These goods reduce duplication, accelerate adoption, and ensure dengue solutions are embedded in climate–health strategies at scale.

## Call to Action Join Us in Scaling Impact

The burden of dengue is rising faster than our collective response. Climate change and rapid urbanization are accelerating its spread, while health systems already face competing priorities and stretched resources. We cannot afford to wait until the next record outbreak.

**What is missing is not ideas or tools, but coordinated platforms that align efforts, amplify solutions, and embed dengue into the climate–health agenda.**

**CAD is that platform.** Created to turn this urgency into coordinated impact, its success depends on collective commitment. CAD does not replace or duplicate what others do — it makes individual efforts stronger, more connected, and more impactful.

**Together, we are not just envisioning a shared future; we are actively shaping it.**

CAD contributes to a new era of collaboration by fostering a collective forum where experts across sectors can amplify their impact beyond what might be achieved in isolation.

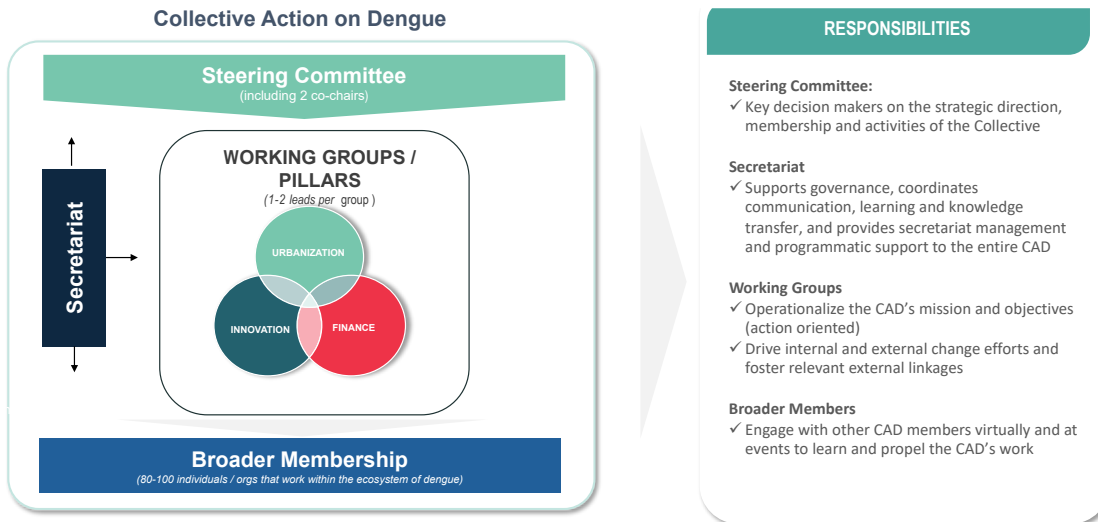
# The time to act is now.

 <p><b>Funders</b></p>	 <p><b>Technical Agencies &amp; Experts</b></p>	 <p><b>Governments &amp; Municipal Leaders</b></p>	 <p><b>Private Sector Innovators</b></p>
<p><b>Co-invest</b> in durable goods, shape the investment case, and deploy catalytic resources to unlock long-term solutions.</p> <hr/>	<p><b>Join</b> CAD's Working Groups, share tools and expertise to inform solutions that integrate innovation, urban systems, and financing.</p> <hr/>	<p><b>Partner</b> with CAD to embed dengue into urban planning, strengthen surveillance, and advance climate-health priorities.</p> <hr/>	<p><b>Bring forward</b> solutions and join CAD's pipeline to scale climate-smart interventions.</p> <hr/>

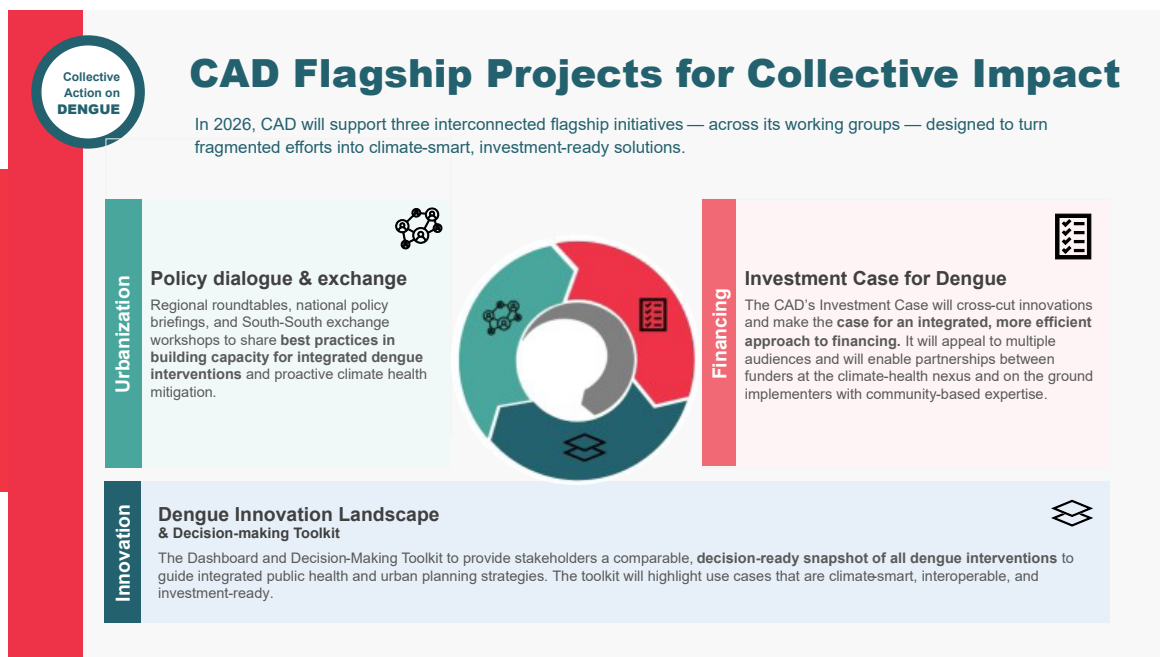
Dengue is a test case for climate–health resilience. By acting together — urgently, decisively, and across sectors — we can turn fragmented efforts into durable solutions, elevate dengue as a climate–health priority, and deliver results that no single actor could achieve alone.

# Annexes

## Annex 1: CAD governance diagram



## Annex 2: CAD Flagship Projects for Collective Impact



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