Baastel

OUTCOME ASSESSMENT OF THE EDUCATIONAL PARTNERSHIPS FOR INNOVATION IN COMMUNITIES NETWORK (EPIC-N)

Final adaptation outcome assessment report

Prepared for

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Table of contents

List of tables & figures

Figures

Tables

List of acronyms

APAN	**Asia Pacific Adaptation Network**
APN	Asia-Pacific Network
AUN	ASEAN University Network
CEO	Chief Executive Officer
COP	Conference of the Parties
EbA	Ecosystem based Adaptation
EPA	Environmental Protection Agency
EPIC-N	Educational Partnerships for Innovation in Communities Network
FGD	Focus Group Discussions
FRACTAL	Future Resilience for African Cities and Lands
GAN	Global Adaptation Network
GCF	Green Climate Fund
GEF	Global Environment Facility
GIS	Geographic Information System
IAI	Inter-American Institute for Global Change Research
ICLEI	Local Governments for Sustainability
ITB	Bandung Institute of Technology
KII	key Informant Interviews
LAC	Latin America and the Caribbean
LAKI	Lima Adaptation Knowledge Initiative
LDC	Least Developed Country
LUCCC	Least Developed Countries Universities Consortium on Climate Change
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding
NDC	Nationally Determined Contributions
NRF	National Research Fund

NSF	National Science Foundation
PES	Payment for Ecosystems Services
SDG	UN Sustainable Development Goals
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TRMP	Transformative River Management Program
UABC	Universidad Autónoma de Baja California
UAM	Universidad Autónoma Metropolitana
UdG	Universidad de Guadalajara
UKZN	University of KwaZulu-Natal
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
UPLB	University of the Philippines Los Baños
UV	Universidad Veracruzana

Executive summary

This Outcome Assessment was commissioned by the United Nations Environment Programme (UNEP) to examine the extent to which adaptation outcomes have been achieved through its support to the Educational Partnerships for Innovation in Communities Network (EPIC-N), focusing on UNEP-supported EPIC initiatives across Africa, Asia, and Latin America and the Caribbean (LAC).

The methodology combined qualitative and quantitative data collection across multiple levels. In total, over 100 stakeholders were consulted during three regional visits in four countries (Vietnam, Thailand, Mexico, and South Africa), as well as interviews with EPIC-N leadership, regional coordinators, students, faculty, and local government representatives; some of these were through focus group discussions (FGDs) while others were through group or individual interviews. A stakeholder survey was also administered to city–university pairs, and relevant documentation, including project reports, training materials, and strategic guidance, was reviewed. The assessment additionally compiled and analysed a provisional database of UNEP-supported EPIC projects in the three regions to classify their adaptation relevance and implementation status.

The assessment is not an evaluation in the strict sense. Rather, it synthesizes evidence and perspectives gathered through field missions, interviews, and desk reviews to offer indicative findings on the model's relevance, contributions, and potential to support adaptation. It is structured around five overarching questions agreed in consultation with UNEP and is intended to support UNEP's internal reflection and strategic decision-making regarding future engagement with the EPIC model.

What key adaptation outcomes have resulted from EPIC-N implementation?

The EPIC model has facilitated the emergence of city-level adaptation outcomes across Asia, Africa, and the Latin American and Caribbean (LAC) region, leveraging university–municipality partnerships to address localized climate impacts and risks. While the model was originally designed to address a broad range of sustainability challenges and did not have a specific climate adaptation focus, it has demonstrated potential to deliver adaptation outcomes. Across the three regions where UNEP has supported EPIC programmes, 26 active or completed projects were found to be directly related to climate change; of which 14 focused explicitly on adaptation and 4 addressed both adaptation and mitigation. The Asia programme has nine adaptation-focused initiatives, Africa four, and LAC has one adaptation and one combined adaptation-mitigation project.

At the city-level, these adaptation projects addressed a range of climate-related challenges, including flood early warning systems, water-sensitive urban planning, climate-smart agriculture, and urban heat mitigation. For example, in Durban, South Africa, students co-developed a WhatsApp-based flood alert system for informal settlements, while in Long Xuyen, Vietnam, student-led mapping helped inform the city's urban inundation management. In Mexico, ecosystem restoration and forest governance projects were supported through academic research

and policy advice. In each of these cases, academic contributions helped inform municipal planning or community preparedness, with results tailored to local climate vulnerabilities.

Academic institutions involved in the projects also became more actively involved in adaptation and contributed to local adaptation planning. Through the EPIC model, universities integrated climate change content into coursework, research, and community engagement, thereby enhancing institutional knowledge on adaptation. Students gained practical experience applying technical tools (e.g., Geographic Information System [GIS], remote sensing, participatory surveys), while municipal actors increasingly recognized the value of these collaborations. In several cases, EPIC projects supported the design or evaluation of local policies and programs addressing flood risk, sanitation, and environmental restoration—sectors where adaptation and development challenges intersect.

Adaptation outcomes and co-benefits were also observed at the community level. Some EPIC initiatives involved vulnerable populations in participatory assessments or pilot projects, improving awareness of climate risks and fostering locally driven solutions. Examples include the adoption of biofertilizers by farmers in Vietnam helping enhance soil resilience and reduce dependence on chemical inputs, waste reduction campaigns in Malaysian high-rise buildings, contributing to better urban sanitation and decreased greenhouse gas emissions from landfills, or urban greening initiatives in Indonesia helping reduce heat island effects and improving local microclimates, offering tangible buffers against rising temperatures. While limited by short academic timelines and resource constraints, these projects helped communities strengthen their preparedness to climate change and environmental stewardship. In sum, EPIC's adaptation outcomes are rooted in its ability to match municipal needs with academic resources and to deliver low-cost, context-specific solutions through inclusive partnerships.

How has the EPIC model strengthened adaptation knowledge and capacity among municipalities, universities, and students?

The EPIC model has contributed to strengthening adaptation-related knowledge and capacity by facilitating collaboration between universities and local governments around context-specific challenges. Students gained practical experience through projects embedded in their coursework, using tools such as GIS, surveys, and policy analysis. These engagements helped students gain a deeper understanding of the practical dimensions of climate risks and adaptation strategies; even in academic programs where climate change is not the primary focus. In some cases, students also developed communication skills through public outreach or engagement with local communities, though the degree of this exposure varied by institution and project.

At the university level, EPIC has provided an entry point for integrating adaptation themes into research and teaching. Faculty reported that participation in EPIC supported interdisciplinary collaboration and encouraged the development of new courses or research initiatives. Some universities adapted the model to align with their existing sustainability or community engagement programs, although this depended heavily on the commitment of individual faculty and institutional flexibility.

Municipalities, in turn, gained access to applied research and technical analysis that could inform planning or service delivery. The model introduced municipal staff to new methods for stakeholder engagement and spatial planning, and in a few cases, cities reported incorporating student-generated outputs into their policies or operational work. However, the extent to which this occurred varied, and some city departments faced challenges in aligning academic timelines or outputs with their planning cycles. Overall, the model has supported incremental improvements in awareness, knowledge, and collaboration around adaptation, particularly where partnerships were sustained over time.

What financial mechanisms and strategies are required to ensure EPIC's long-term sustainability for adaptation?

The EPIC model operates on a relatively low-cost basis by integrating municipal challenges into university coursework, thereby reducing the need for large-scale external funding. Nevertheless, its financial sustainability, particularly in low-resource settings, remains a challenge. While some support has come from UNEP, the U.S. National Science Foundation (NSF), philanthropic donors, and local co-financing, the network does not currently have a formalized long-term financial strategy. The current annual global budget for the EPIC-N secretariat is approximately USD 300,000, which is sufficient for core coordination and implementation of the model (seed grants and incubating trainings), but not for scaling or maintaining sustained engagement across multiple regions.

UNEP's seed funding and training support have been crucial in launching adaptation-related projects, particularly in Asia, where assistance to the regional coordinator also played a significant role. When examining the support across the three regions, the funding for Asia, which included launch workshop funding, seed funding, and funding for part-time coordination, may have played a significant role in enhancing project outcomes in the region compared to Africa and LAC, where financing for UNEP only covered the launch workshops. Small grants, typically ranging from USD 2,000 to USD 4,000, enabled universities and municipalities to collaborate on activities such as flood risk mapping, public awareness campaigns, or ecosystem-based initiatives. Sometimes, these funds helped attract additional in-kind or institutional support. However, many projects faced challenges in sustaining implementation and momentum beyond their initial phases due to no follow-up funding.

Looking ahead, stronger financial planning will be necessary to maintain and expand the model's contribution to adaptation – especially considering the current volatile funding environment within which EPIC-N operates, namely the reduction in US funding for international development work. There is a growing need to diversify funding sources, reduce reliance on short-term grants, and establish more predictable, multi-year support to ensure continuity and maintain regional coordination efforts.

What best practices and lessons have emerged from UNEP's support to EPIC? How could these be replicated or scaled up?

Several lessons have emerged from UNEP's support to EPIC that offer insights into how the model can be more effectively applied and scaled. One key finding is that partnerships between

universities and municipalities are most effective when they are based on clearly defined roles, shared expectations, and long-term engagement. In cases where city officials and faculty jointly planned the project scope and timelines, outputs were more likely to inform municipal priorities or planning processes. Conversely, where coordination was limited or short-term, student contributions were sometimes seen as too limited in scope or poorly timed to be useful to city departments.

Another lesson relates to the importance of local coordination and continuity. Projects with a dedicated coordinator—either within the university or municipality—were generally more stable and better integrated into institutional processes. This was evident in cities like Durban and Lusaka, where local governments co-financed EPIC activities and helped align them with existing initiatives. However, the model remains highly dependent on individual champions, especially faculty members, and partnerships often lose momentum when these individuals move on. Limited institutionalization within universities or municipal structures has made it difficult to maintain continuity or scale projects beyond their initial phases.

Several practical barriers have also impacted the pace and depth of implementation. Short academic timelines constrained student engagement, and municipal planning cycles were not always aligned with university calendars. Administrative procedures—such as delays in receiving international seed funds or institutional constraints on financial management—also limited implementation in some settings. Despite these challenges, small seed grants proved useful for launching local collaborations and raising awareness. Opportunities for scaling exist, especially where projects have already generated tools or models that can be adapted elsewhere. Examples include disaster preparedness initiatives in South Africa, composting pilots in Vietnam, and watershed co-management efforts in Mexico, all of which have shown potential for broader application with additional support.

How can UNEP enhance its support to expand the EPIC model for broader adaptation impact?

UNEP can strengthen its role in scaling the EPIC model by providing more structured technical and institutional support. This could include assisting with the development of basic monitoring tools and a typology to track adaptation outcomes, which would help the network better document results and align with adaptation planning processes. UNEP might also consider supporting the articulation of a clear theory of change to guide EPIC's strategic direction and improve coherence across regions.

To support long-term continuity, UNEP could help facilitate more formal institutional arrangements—such as city–university MOUs or frameworks for regional coordination—that reduce dependence on individual actors. Supporting coordinator roles or integrating EPIC within existing adaptation programs could improve project uptake and consistency over time. UNEP could also explore ways to link EPIC activities with national adaptation processes or subnational initiatives it already supports, particularly where alignment with NAPs, NDCs, or ecosystem-based adaptation strategies is possible.

Finally, UNEP can play a role in improving access to resources by helping identify funding opportunities, supporting proposal development, and facilitating connections with climate finance or philanthropic partners. Rather than direct implementation, UNEP's comparative advantage may lie in enabling systems-level support and helping position EPIC within broader adaptation efforts, including those focused on education, youth engagement, and locally led action.

1. Introduction to the Educational Partnerships for Innovation in Communities Network (EPIC-N)

1.1 Context and Background of EPIC-N

The Educational Partnerships for Innovation in Communities Network (EPIC-N) is a U.S.-based, independent membership organization and nonprofit network that promotes and supports the adoption of the EPIC model in various institutional settings. Its operations have been funded through a blend of voluntary contributions, memberships, grants, such as those from the U.S. National Science Foundation (NSF) or the United Nations Environment Program (UNEP) through the Global Adaptation Network (GAN), and service-based revenues.

Since its introduction in the United States in 2010, the EPIC model has experienced significant growth. Regional networks have emerged to further tailor and embed the model in different contexts: EPIC-Africa was launched in 2017, followed by EPIC-Asia in 2021 and EPIC-Latin America and the Caribbean (LAC) in 2022. Each regional network focuses on specific themes aligned with local priorities. The initiative is bolstered by strategic partnerships with organizations like START International,[1] the Inter-American Institute for Global Change Research (IAI),[2] Future Resilience for African Cities and Lands (FRACTAL), and Local Governments for Sustainability (ICLEI).[3]

The EPIC-N model offers a flexible and scalable framework that fosters long-term, structured partnerships between universities and local governments to collaborate on urban sustainability, climate change, and development issues at the community level. It offers a dynamic and cost-effective approach to aligning academic knowledge with real-world community needs, particularly in areas such as sustainability, resilience, and climate change adaptation. By embedding projects within existing university coursework and municipal planning processes, the model enables students, under faculty supervision and in collaboration with local governments, to deliver high-impact initiatives that directly address local priorities.

Functioning within the administrative structures of both universities and municipalities, EPIC-N facilitates a structured exchange that helps overcome gaps between academic expertise and

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[1] START International has played a key role in launching and supporting EPIC in Africa and Asia, primarily through small-scale funding agreement and capacity-building workshops.
[2] IAI supported EPIC's expansion in LAC.
[3] FRACTAL and ICLEI have been involved in EPIC-Africa and LAC, notably in pre-identifying potential EPIC members as well as in coordination roles.

community action. This integration aims to enhance local capacities to address pressing climate, environmental, and development challenges, while providing students with hands-on experience and the practical skills necessary to thrive in the emerging green economy.

1.2 EPIC-N Governance

As presented in **Error! Reference source not found.**, implementation and governance of the EPIC model are overseen by EPIC-N. It is governed by a Board of Directors comprising representatives from universities, NGOs, the private sector, and public institutions, who are elected for a term of three years. The Board's responsibility is to set the general strategy for the organisation, develop and approve its budget, and choose and oversee the performance of its Chief Executive Officer (CEO).

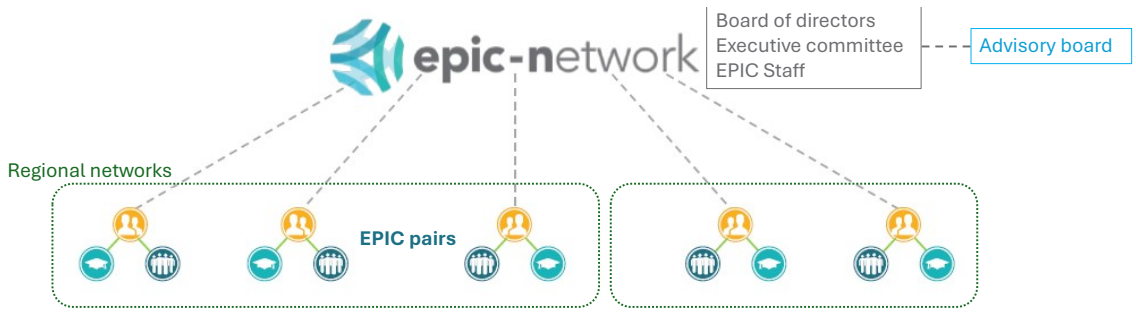
An Executive Committee, comprising officers from the EPIC-N Board, oversees day-to-day operations. At the same time, an Advisory Board, including a UNEP representative and strategic partners, helps shape strategy, raise the network's profile, and provides non-binding guidance.

The EPIC-N staff includes five permanent employees: a managing director, a program manager, and three regional coordinators, each supporting a regional program: EPIC-N USA, EPIC-N Africa, EPIC-N Asia, and EPIC-N LAC. Led by the CEO, the EPIC staff is responsible for delivering on the network's strategic objectives, fundraising, and operational management.

While the the CEO works probono for the Communications & Program Manager is paid through EPIC-N. The CEO's position is part-time, while the program manager works full-time for the project. Until April 2025, the program also had a managing director which have later resigned, with this position remainining unfullfilled.

Each regional EPIC-N includes multiple country-level communities, and within each country, municipalities and universities engage in various projects. These country-level communities are linked and supported through the part-time regional coordinator positions. In the beginning the Asia and Africa coordinators where funded by START International, but EPIC-N has since taken over the obligation of paying their salaries. In LAC the coordination position has always been paid by EPIC-N. Furthermore, the Durban city–university partnership in South Africa has a full-time coordinator based at the university and funded by the municipality, while in Asia, the Regional Coordinator also manages the Thai partnerships. In most other countries, coordination is undertaken by faculty members as part of their academic duties, without dedicated funding, which can affect continuity when key individuals leave.

Figure 1: EPIC governance and implementation structure (source: adapted from EPIC strategic plan, 2017)



1.3 Implementation of the EPIC Model

At its core, the model fosters partnerships between municipalities and universities, forming what are known as EPIC pairs. These local partnerships co-develop a scope of work that addresses the city's development priorities while integrating the projects into students' academic curricula. This dual alignment aims to ensure that municipal needs are met with research-based, context-specific support and that students earn academic credit while engaging in real-world problem-solving.

1. The process begins when EPIC staff contact municipalities and universities to identify pressing challenges or opportunities for which local governments lack the necessary technical, research or design expertise or capacity, which universities could provide. Both institutions are introduced to the model through training and network events.
2. The municipalities are then asked to identify and assess the community priorities, relying on the UN Sustainable Development Goals (SDGs) to ensure alignment with broader global targets. The refined list is then matched to faculty-led university courses or student research projects that can offer solutions or insights into the identified problems.
3. Faculty members (mostly lecturers) are asked whether they are willing to supervise student work on the identified issues as part of their coursework and to guarantee a minimum deliverable, typically a report, dataset, plan, or set of recommendations.
4. Once a university course has been aligned with a municipal challenge and both the faculty and the city have agreed on the value and feasibility of the output, a formal contract is signed. When feasible, a dedicated coordinator is appointed to act as a liaison between the faculty, students, and city officials. This agreement outlines timelines, responsibilities, and any cost-sharing arrangements, including data access or in-kind contributions from the municipality.
5. The students then proceed with the project as part of their formal studies, delivering outputs directly to city departments.

1.4 Portfolio overview

Since its inception in 2010, the EPIC model has been implemented by more than 70 university-community partnerships globally. Collectively, these partnerships have supported over 1,700 to 1,800 locally driven projects, many of which address climate adaptation, urban resilience, sustainability, and natural resource management.

While EPIC model is deployed globally—i.e., in the US and through regional networks in Africa, Asia, and LAC—there appears to be no unified or up-to-date global database consolidating all project-level data.[4] Instead, information is distributed across various platforms, including EPIC-N's website and EPIC internal documents, regional coordinators' inputs, EPA's adaptation site (Environmental Protection Agency), and UNEP internal documents, each reporting slightly different figures depending on the year, scope, and method of counting (e.g., whether inactive projects or initial workshops are included).[5]

Despite these variations, the most commonly cited approximations indicate the following:

- At least 350 city or community partnerships have been formed.
- Over 1 million student hours have been mobilized toward addressing local sustainability and adaptation challenges.

The EPIC model has progressively expanded to different regions through the creation of dedicated regional networks, each supported to varying degrees by UNEP and other partners. The EPIC Africa network was launched in 2017, with support from UNEP and START International. It was followed by the launch of EPIC Asia in 2020–2021, which included seed grant funding from UNEP and coordination through START. The most recent network, EPIC LAC, was launched in 2022 with UNEP backing and implemented in collaboration with the Inter-American Institute for Global Change Research (IAI).[6]

The variation in regional maturity and institutional coordination is reflected in the number and status of projects currently implemented, as shown in Table 1 below. Overall, projects across the three regions amount to 72. Notably, while it looks like the Africa portfolio is the largest portfolio with 37 projects, only 7 are actual projects. This is because in Africa, the EPIC-N network also tracks all city-pairs where contact has been initiated or if they have attended training, even if they have not defined a project. As such, it can be seen that the Africa network has prioritized capacity building and initial engagement

[4] There is no centralized, up-to-date database covering all EPIC partnerships and activities. Information for this assessment was triangulated using the EPIC-N website, UNEP GAN reports, EPA ARC-X site, and field mission data. Due to this fragmentation, project counts presented here should be treated as well-grounded approximations rather than definitive totals.

[5] Estimates of project numbers and university-community partnerships vary depending on source and timing. For instance, the UNEP Global Adaptation Network and EPA's adaptation page each report totals ranging from 1,700 to over 1,800 projects, while the EPIC-N website cites slightly lower figures but includes fewer recent programs in LAC and Africa.

[6] Information received through consultations for the outcome Assessment, 2025.

with universities and municipalities (e.g., through training workshops partially funded by UNEP), but with fewer projects having been launched.

The Asia and LAC networks have more recently benefited, in Asia from both UNEP seed funding (10 projects) and program launch workshop funding, and in LAC from workshop funding (UNEP did not fund for LAC's seed grants). However, across all regions, project tracking remains decentralized and fragmented, making it difficult to maintain an up-to-date central database of EPIC projects. The figures presented below are based on the most recent information available through UNEP's internal project spreadsheets provided to the consultants, regional coordinators, and the EPIC-N public platform.[5]

Table 1: EPIC Africa, Asia, and LAC portfolio reach

Region	# of projects	# of countries involved	# of universities / institutions involved	# of cities involved	Project Status	Climate related projects
Asia	19	6 countries[7]	17	16	16 active 2 Finished 1 inactive 0 trained/contacted	11 yes 6 partially 2 No
Africa	37	18 countries[8]	37	21	5 active 1 inactive 1 finished 30 entities trained/contacted*	7 yes 30 No
LAC	16	5 countries[9]	11	11	16 active 0 inactive 0 trained/contacted	2 Yes 11 partially 3 No
Total	72	29	65	48	37 active 1 inactive 3 finished 30 entities trained/contacted*	20 yes 17 partially 35 No

** [entities are considered as 'trained/contacted' when they participated to the EPIC incubating training presenting the model]; projects that have status of trained/contacted have not defined topics yet.*

[7] Indonesia, Malaysia, Nepal, Philippines, Thailand, Vietnam

[8] Kenya, Zambia, South Africa, Zimbabwe, Liberia, Uganda, Botswana, Namibia, Mozambique, Tanzania, Ghana, Malawi, Democratic Republic of Congo, Nigeria, Senegal, Ethiopia, Morocco, Gambia

[9] Mexico, Chile, Peru, Ecuador, Brazil

1.5 Adaptation projects and adaptation co-benefits

Within this portfolio, the EPIC model offers a practical framework for addressing climate change adaptation challenges by connecting local governments with universities to co-develop and implement local solutions. This model has therefore already been applied to a range of adaptation-focused projects across Asia, Africa, and LAC, demonstrating its versatility. Given the lack of a specific database that tags the projects according to their focus, determining exactly which projects are indeed adaptation-focused can be difficult. However, this consultancy created a database and categorized the projects according to their relevance to climate change adaptation, mitigation, or no relation to climate change in the three regions.

Box 1. Definition of Adaptation Outcomes.

In this assessment, the term 'adaptation outcome' refers to tangible results or measurable progress toward climate change adaptation achieved through EPIC-supported projects and partnerships. This includes outcomes such as improved disaster preparedness, enhanced local resilience, strengthened institutional capacities, or the implementation of nature-based solutions for adaptation. To further exemplify potential adaptation outcomes, the assessors have developed and proposed a typology of relevant climate change adaptation actions in the Annex D.

Across the three regions, a total of 26 active or completed projects are directly related to climate change, with a predominant focus on adaptation (14 projects) as well as four being related to both adaptation and mitigation. Asia leads in the number of direct adaptation projects, with nine such initiatives addressing themes like flood resilience, urban heat reduction, water management, and climate-smart agriculture. Africa follows with four projects with direct adaptation benefits, focusing on flood early warning systems, resilient sanitation, and upgrading informal settlements. LAC has two projects with direct climate change objectives (1 adaptation, 1 both adaptation and mitigation), including forest law and urban ecosystem restoration (see Table 2 and 7.5 Annex E. Database of Projects in Asia, Africa and LAC).

Table 2: Number of Projects with Adaptation Outcomes or Adaptation Co-Benefits

Region	Total Projects with co-benefits (in region)	Adaptation (direct)	Adaptation co-benefits	Adaptation/Mitigation
Asia	14	9	4	1
Africa	6	4	0	2
LAC	13	1	11	1
Total	33	14	15	4

* The total number of projects is high given the 30 counted projects in Africa that has been contacted or trained.

The portfolio also includes 15 projects that, while not designed exclusively as adaptation interventions, offer clear adaptation co-benefits, such as improved waste management, urban greening, or enhanced ecosystem services. These are most numerous in LAC (11 projects), where urban sustainability, public space improvements, and climate-sensitive infrastructure feature prominently. Asia accounts for four co-benefit projects, many of which emphasize circular economy approaches, green infrastructure, and biodiversity. Africa does not report any projects with adaptation co-benefits, as the last of the 7 projects implemented in Africa are mitigation projects, and the rest are not projects, but rather cities and universities that have been contacted or trained; but no project has been defined yet.

While further defined in the assessment key findings (Section 4), below are more illustrative examples of what EPIC climate change adaptation projects look like:

- In Calamba City, Philippines, the EPIC model was utilized to enhance disaster preparedness in flood-prone lakefront communities. Through a partnership between students and city officials, the project worked on two fronts: promoting health and sanitation measures to enhance community well-being and training local leaders to improve their disaster response plans.
- In response to the devastating April 2022 floods in Durban, the EPIC model helped unite the University of KwaZulu-Natal, eThekwini Municipality, and local communities to improve disaster preparedness in Quarry Road West Informal Settlement. A student-developed disaster management plan and a WhatsApp-based early warning system, linked to the city's flood forecasting service, helped reduce risks and inform residents.
- In Manado, Indonesia, students and faculty collaborated with city authorities to install a network of real-time sensors designed to monitor rainfall and river discharge. The data collected feeds into a command center to enable early warnings and better decision-making during flood events, helping to prevent damage from increasingly frequent and intense storms.
- In Long Xuyen City, Vietnam, an EPIC-supported project focused on water resilience through urban inundation mapping. By integrating GIS and remote sensing technologies with local knowledge, the project identified vulnerable areas and proposed strategies for sustainable drainage and waterlogging management. These insights inform city planning processes, including the development of a "Smart Water City" master plan designed to enhance infrastructure in the face of climate change.

These examples demonstrate how the EPIC model enables universities and cities to collaborate in addressing complex, localized climate risks—whether through infrastructure innovation, environmental education, data-driven planning, or community empowerment. It bridges the gap between academic expertise and municipal action, helping cities build adaptive capacity in ways that are participatory, cost-effective, and grounded in real-world challenges.

1.6 EPIC-N Funding and support to the EPIC programme

UNEP recognized that the EPIC model's alignment with adaptation priorities, such as building resilience or implementing nature-based solutions for adaptation (or ecosystem-based adaptation, [EbA]), had strong potential for local impact. As a result, UNEP provided core funding, technical support, and leadership to establish and expand regional EPIC networks. In this framework, UNEP designated EPIC as an implementing partner for the second output of its Climate Change Adaptation Strategy and Implementation Plan for 2020–2023: 'Global and regional stakeholder dialogues supported to improve global governance on ecosystem-based adaptation and catalyse further action.'

As summarized in Table 3, UNEP supported the regional EPIC networks in various ways. EPIC Africa and LAC received financial support to establish their regional networks but did not receive direct funding for their projects from UNEP; which was provided in Asia for 10 countries. Of these, 6 had direct adaptation benefits, 3 had adaptation co-benefits, and one was not related to adaptation. Projects in Asia have also received seed grants from the National Science Foundation (NSF) to supplement and to launch additional projects. Both LAC and Africa have also received seed grants, though not from UNEP. In LAC during 2023, 10 seed grants were provided from EPIC-N with four going to Mexico, three to Brazil, one in Chile, one in Peru, and one in Ecuador. Furthermore, EPIC-N LAC received a grant in 2024 from the IUCN Global EbA Fund in partnership with the Inter-Ameircan Institute for Global Change Research (IAI) in the amount of USD249,512 for the Project "Catalyzing Unconventional Partnerships in the Global South for Urban Ecosystem-based Adaptation." EPIC Africa received its seed funding from the NSF. In contrast, additional funding for training, administration, and communication support has come from the Environmental Protection Agency (EPA, EPIC-N, START International, and, as mentioned above, UNEP for launch preparation and support. In Africa, it is also reported that the individual cities, universities, and NGOs in the network provide technical and human resources and some financial support for the program.

Given this funding structure, the adaptation outcomes and benefits identified later in this report for Asia have, in many cases, either received direct contributions from UNEP or been supported indirectly through the overall program presence. Meanwhile, those observed in Africa and LAC have been supported indirectly by UNEP, mainly through the establishment of the network.

Table 3: Summary of UNEP's support to the EPIC-N

EPIC network	Type of support	Amount provided by UNEP (USD)
EPIC Africa	Training in the EPIC model at the Cape Town EPIC Africa workshop (2017) Funding of travel expenses of UNEP staff and EPIC Board of directors for their attendance at the EPIC Africa training workshop in Durban (2020)	30,000

	Incubating trainings in Banjul, Lusaka, Mombasa, and Monrovia (2024)	
EPIC Asia	Launch of the network (2020, 2021) 3-day EPIC model training 10 seed funding in six countries (2021) EPIC Asia part time coordinator	100,000 including 11*2,000 seed grants
EPIC LAC	Launch of the network (2022)	50,000

EPIC Africa received funding for seed grants from the NSF, with the rest of the funding for training, administration and communication support coming from the US Environmental Protection Agency (EPA), EPIC, START International and UNEP-GAN (for workshops), as well as technical support, human and financial resources to support the programs and administration from local governments, universities and NGOs.

During 2023, due to the expansion of the EPIC-N, EPIC LAC received ten seed grants, from which four of the grants were directed to Mexico, three to Brazil, one to Chile, one to Peru, and one to Ecuador. However, the exact source of these grants is unknown.

2. The adaptation outcome assessment

2.1 Objective and Purpose

This outcome assessment, commissioned by UNEP and led by the Baastel team, examines adaptation outcomes, best practices, and lessons learned from UNEP's support to the three regional EPIC networks in Africa, Asia, and LAC since 2017. It evaluates EPIC both as a global model for implementing university–city partnerships for climate resilience and as a decentralized system of regionally adapted initiatives.

The assessment focuses on how EPIC has contributed to climate change adaptation by strengthening local knowledge, policy, and practice through partnership-based engagement. At the program level, it examines strategic and financial issues, including funding mechanisms, partnerships, and the role of UNEP within the global network. At the project or city level, it analyses field-level outcomes, including tangible adaptation benefits, capacity-building results, and local innovations. The assessment also considered adaptation co-benefits from projects primarily targeting mitigation or sustainability.

The main goal of this assessment is to identify adaptation outcomes and provide recommendations for expanding and enhancing EPIC's integration into UNEP's adaptation agenda. This involves analysing contributions to UNEP's Medium-Term Strategy (2022–2025), especially regarding nature-based solutions and climate-resilient communities.

The assessment was guided by five overarching questions:

1. What key adaptation outcomes have resulted from EPIC-N implementation?
2. How has the EPIC model strengthened adaptation knowledge and capacity among municipalities, universities, and students?
3. What financial mechanisms and strategies are required to ensure EPIC's long-term sustainability for adaptation?
4. What best practices and lessons have emerged from UNEP's support to EPIC? How could these be replicated or scaled up?
5. How can UNEP enhance its support to expand the EPIC model for broader adaptation impact?

2.2 Methodology and Approach

The assessment was carried out from February to June 2025. It used a mixed-methods approach combining qualitative and exploratory analysis at both program and project levels. Data collection drew on document review, interviews, field visits, focus group discussions (FGDs), and an online survey.

The Baastel team reviewed core programme documentation, regional reports, training materials, seed grant outputs, the EPIC-N website, and project documents across the three regions. The desk review also included external evaluations of comparable initiatives and UNEP policy documents to provide strategic context. A portfolio analysis of all known projects helped identify climate relevance and geographical distribution.

A diverse range of stakeholders were consulted through Key Informant Interviews (KIIs), which included EPIC-N staff, UNEP personnel, technical partners (e.g., START International), financial partners (e.g., US EPA), university lecturers, students, and municipal representatives. A total of 9 people were interviewed at the program level (virtually and during the EPIC-Africa Learning Event in Pretoria), in addition to 119 people consulted either through interviews or FGDs during field missions. The interviews aimed to gather relevant information about the program's interventions to date and specific data regarding UNEP's support to the EPIC-N network. Semi-structured interview guides were used to facilitate comparability while allowing for flexibility to probe emerging themes and context-specific issues. Two types of FGDs were organized:

- The first was held with city–university pairs during the Pretoria workshop, centered on a SWOT analysis of EPIC's strengths, weaknesses, opportunities, and threats in achieving adaptation outcomes.
- The second type took place during country visits, bringing together students and community beneficiaries to reflect on the project's relevance and the impacts of adaptation through facilitated, open-ended discussions.

In addition, three in-depth country missions were conducted:

- **South Africa (Feb 2025):** Combined attendance at the EPIC-Africa Learning Event and a site visit to the Durban EPIC partnership. Included interviews with municipal and university representatives and community members from Quarry Road informal settlement (43 people consulted).
- **Mexico (April 2025):** Visits to La Piedad Lagoon (Universidad Autónoma Metropolitana, UAM) and FIDECOAGUA (Universidad Veracruzana, UV), with additional remote interviews covering three other Mexican EPIC universities (43 people consulted in total).
- **Vietnam and Thailand (May 2025):** Site visits to three EPIC pairs and interviews with government, faculty, students, and communities. (33 people consulted in total).

A targeted online survey was conducted to complement the qualitative data collected through interviews and field visits. The survey was designed to capture stakeholder perspectives on EPIC-supported adaptation efforts across Africa, Asia, and LAC. Distributed via email to university staff, students (where possible), and city officials, the survey was available in English and Spanish and included both closed- and open-ended questions.

A total of 31 responses were received.

- Gender distribution: Women represented 64% of respondents; men 36%.
- Stakeholder roles: 62% of respondents were university staff, followed by students (27%) and municipality representatives (12%).
- Regional representation: A majority were based in LAC (64%), followed by Asia (28%) and Africa (8%).
- Sectoral focus: The top sectors targeted by projects were agriculture and food resilience (35%), natural ecosystem protection/restoration (35%), and green spaces in urban areas (23%). Other areas mentioned included grey/green infrastructure, disaster risk management, and waste management.

The survey results were cleaned, disaggregated, and analyzed to generate quantitative insights that could triangulate and enrich the qualitative findings (Annex 6.6).

Findings were triangulated across all data sources using a structured matrix aligned with the assessment questions. The analysis integrated both deductive insights and inductive themes emerging from interviews and field observations. The resulting recommendations reflect both cross-regional patterns and context-specific dynamics.

2.3 Limitations of the Assessment

The outcome assessment encountered several important limitations that shaped the scope and depth of its findings:

1. **Limited Direct Access to Municipalities and Students:** Although the online survey targeted city-university pairs—namely, faculty, students, and municipal staff—gaining access to

municipal officials and students proved challenging. The EPIC-N network and regional coordinators primarily maintain contact with university faculty, rather than with municipalities or student bodies. As a result, the assessment team lacked direct email access to many of these stakeholders and had to, e.g., rely on faculty members to disseminate the survey via informal channels such as WhatsApp. In many cases, students had already graduated, further limiting reach. This contributed to a respondent sample skewed toward faculty, and municipal perspectives were underrepresented.

2. **Survey Participation and Response Rate:** The initial response rate to the survey was low, reflecting the challenges in outreach described above. However, persistent follow-up efforts by regional coordinators, UNEP and the assessment team helped increase participation to a level sufficient for meaningful analysis. Still, the dataset cannot be considered representative of the full EPIC stakeholder base, particularly at the municipal level.
3. **Uneven Stakeholder Engagement in Interviews:** A similar dynamic was observed during the interview phase. While universities were consistently responsive and accessible—reflecting their strong ownership of EPIC implementation—municipalities were more difficult to reach, and information and knowledge of the EPIC-N program were significantly less. This limited the assessment team's ability to capture perspectives from the government side of the partnerships, particularly outside of the country visits.
4. **Absence of a Centralized Project Database:** A major limitation was the absence of a centralized EPIC project database, which categorizes initiatives by thematic focus or climate relevance. No standard typology exists within EPIC-N for identifying or tagging climate change adaptation projects or other themes in the program. This made it difficult to determine how many EPIC-N projects addressed adaptation directly or indirectly. To address this gap, the assessment team developed a provisional classification and project inventory using inputs from UNEP, regional coordinators, and project information gathered from the EPIC-N website.
5. **Limitations in Disaggregating Adaptation and Resilience Outcomes:** Another key limitation of this assessment was the difficulty in isolating climate adaptation and resilience outcomes from the broader results of EPIC-supported projects. The EPIC Program is intentionally designed to align with a wide range of Sustainable Development Goals (SDGs), and its activities span multiple thematic areas—such as infrastructure, public health, urban planning, and education—many of which generate indirect or cross-cutting benefits. However, there is currently no standardized typology within the EPIC framework to categorize projects systematically by their thematic focus or climate relevance. As a result, projects are not explicitly tagged as adaptation or resilience interventions or as having any adaptation co-benefits, which complicates efforts to quantify EPIC's contribution in these areas. To address this, the assessment team developed a provisional database of EPIC projects across the three UNEP-supported regions and tagged projects for adaptation, mitigation, both, and co-benefits. This database was validated by the regional coordinators to ensure contextual accuracy.

3. Key findings

3.1 EPIC key adaptation outcomes

3.1.1.1 At the programme level

EPIC-N'S CONTRIBUTIONS TO ADVANCING CITY NETWORKING ON ADAPTATION

The EPIC Program has contributed to the emergence of city-to-city networking on adaptation through regional coordination and learning events, primarily among faculty, and to a lesser extent among city officials. Although the model is designed mainly to support university–local government collaboration, UNEP-supported regional activities and the efforts of EPIC regional coordinators have created entry points for city-city learning. Through seed funding, shared training experiences, and participation in regional and global events, city representatives have had opportunities to exchange practices and discuss challenges related to climate resilience. Importantly, however, given the broad scope of EPIC-N, the events and learning are not solely focused on adaptation and resilience, but more so on implementing the EPIC-N model.

At the program level, EPIC's regional learning events in Africa, Asia, and LAC have helped build informal networks among participating cities and universities. These gatherings serve not only as training spaces but also as forums for cross-city reflection on the implementation of EPIC projects. The Pretoria Learning Event (February 2025) brought together participants from across Africa for structured discussion, which included both faculty and some city officials from Pretoria, Durban, and Harare. In Asia, regional workshops and exchanges have also strengthened cross-border collaboration. For example, Thai university staff noted that their participation in EPIC events in Vietnam enabled them to connect with counterparts in other Asian countries, which helped inform the design and expansion of projects. However, this was also mostly faculty-to-faculty connections. Findings from the online survey support these observations as several respondents highlighted the value of regional and global events as an opportunity for cross-territorial knowledge exchange, while being relevant to EPIC's multi-sectoral, evidence-based approach to adaptation planning.

Regional coordinators have played a central role in linking academic institutions and facilitating cross-city and cross-country learning. In Asia, the coordinator actively supported the adaptation of the EPIC model across universities and extended outreach to institutions in other countries such as Malaysia and Uzbekistan.

At the national level, some examples have emerged. In Mexico, university coordinators have begun informal coordination across EPIC institutions. Universidad Autónoma Metropolitana (UAM) has sought funding alongside EPIC partners in Colombia and Ecuador to pursue joint projects on forest management and climate resilience. These collaborations remain largely mediated by academic actors, but they illustrate growing interest in coordinated approaches to adaptation among EPIC stakeholders. In Vietnam, collaboration between An Giang and Soc

Trang—enabled by UNEP seed funding—demonstrated how cross-municipal academic exchange contributed to knowledge transfer on flood risk management and adaptation techniques. However, this did not lead to learning between city officials, as these exchanges (either regional or bilateral) were largely attended and driven by academic counterparts, with municipal representatives often under-represented in regional learning events and rarely initiating bilateral collaborations.

Inspiring wider city action on adaptation

The EPIC-N Programme has inspired several cities to address climate change adaptation by demonstrating how university-city partnerships can tackle local sustainability and adaptation challenges. In Vietnam and Thailand, initial pilot projects funded by UNEP have catalysed replication efforts, even without additional external funding. For instance, An Giang's collaboration in Vietnam motivated Soc Trang Community College, a subunit of An Giang University, to adopt the EPIC model, reflecting a ripple effect from early success. Similarly, in Thailand, although explicit climate framing was less emphasized, city actors have begun experimenting with adaptation co-benefit initiatives, such as smart-transportation and green infrastructure, following exposure to the EPIC approach.

However, the extent to which the programme has inspired sustained and widespread climate adaptation action varies between regions. In Africa, for instance, the number of active cities participating in the EPIC programme increased from three to ten between 2017 and 2025. The rate of growth has thus been relatively modest, suggesting that scaling up requires strategic outreach, regular refresher training sessions, and a long-term commitment from all partners.

In Mexico, although five EPIC universities have worked with nine local governments, only one project, UAM's La Piedad Lagoon restoration, was explicitly linked to climate change. In this context, attempts to scale EPIC to other campuses or municipalities faced barriers, including limited municipal engagement, communication gaps, and insufficient academic capacity.

These experiences highlight that, although the EPIC model has the potential to inspire city-level action on adaptation, its success depends heavily on strong institutional commitment, primarily driven by motivated and capacitated academic actors who require the long-term support of local governments.

Enhancing visibility of municipal adaptation efforts

The EPIC Programme has enhanced the global visibility and credibility of cities' climate adaptation actions globally by providing platforms for academic and municipal actors to showcase local initiatives at international events and through publications. For example, faculty and students from participating institutions have presented their EPIC-supported projects at forums such as the Sustainability Research and Innovation Congress, the UNFCCC Asia Climate Week, and even at the UNFCCC COP in 2022. This was made possible in part through UNEP's seed funding and UNEP's support in facilitating participation in international forums and events which provided legitimacy and visibility to these small-scale adaptation initiatives. Furthermore, Students and faculty involved in EPIC projects in Asia (Thailand, Vietnam) received international presentation opportunities, broadening exposure to global adaptation dialogues and increasing

recognition of city-level work on climate issues; particularly through virtual presentations during the EPIC-N conference in Illinois, USA, and the Science, Research and Innovation Conference in Finland. These engagements have allowed small-scale, locally driven adaptation efforts to gain recognition beyond their immediate contexts.

In LAC, several publications and case studies are underway, including a regional student testimony compendium led by the University of Chile, as well as publications on lessons learned from EPIC, which further contribute to knowledge sharing and visibility. Notably, individual achievements like the nomination of the UAM EPIC coordinator in Mexico for the international Frontiers Planet Prize have also brought attention to EPIC's role in supporting impactful, locally grounded adaptation research. Through these collective efforts, EPIC contributes to bridging the gap between local action and global discourse on climate resilience.

CITIES LEVERAGING ACADEMIC EXPERTISE ON ADAPTATION

While there has been a noticeable increase in the number of cities engaging with academic institutions through EPIC, the initial initiative to establish these partnerships has typically come from universities rather than municipalities. Across the three UNEP-supported regions, EPIC has created structured opportunities—through funding, training, and learning events—that have helped municipalities begin to recognize universities as valuable partners for technical analysis, community engagement, and planning support. While universities remain the primary initiators of partnerships, there is evidence that municipalities are increasingly responsive to and dependent on these collaborations.

In Asia this shift is most visible given the larger number of city pairs. For example, in Vietnam, where city-university collaboration was previously rare, EPIC has catalyzed local governments to view academic institutions as vital partners in data collection, analysis, and climate-informed urban flood planning. Similarly, in Thailand, municipalities such as Rangsit reported that student-generated tools enabled service delivery improvements they could not have achieved alone. In Bandung, Indonesia, students from the Bandung Institute of Technology (ITB) collaborated with municipal planning bodies – Bappeda and the Environmental Funds Management Agency (BPDLH, Badan Pengelola Dana Lingkungan Hidup) – on urban greening and policy planning, aligning directly with city adaptation strategies and policy implementation.

In Africa the pattern is similar. In Durban, for example, the eThekwini Municipality partnered with the University of KwaZulu-Natal to expand a community-based flood early warning system into adjacent informal settlements, scaling city adaptation capacity using university-generated tools and training for students. Overall, the programme has helped to reshape the relationship between the city and academia. Initial unfamiliarity between municipalities and universities, working in isolation, as seen in the early Durban engagements, has given way to strong, long-term, co-owned initiatives.

In Latin America, particularly Mexico, EPIC has contributed to the early stages of municipal mobilization of academic expertise. However, the programme's reach remains concentrated within a small network of participating universities. Indeed, all the academics mobilised so far are colleagues from the same universities, which highlights the current difficulty of broadening the EPIC model's outreach beyond the current pool of EPIC-LAC members.

3.1.1.2 At city pair level

INSTITUTIONAL SUPPORT ENABLING TANGIBLE ADAPTATION OUTCOMES

The EPIC programme has provided municipalities and universities with a wide range of support to municipalities and universities, directly contributing to tangible outcomes in climate adaptation. While many outcomes are presented in the paragraphs below, the assessors wish to highlight that adaptation outcomes are not systematically and consistently tracked across EPIC projects, which restricts the programme's ability to report on them easily.

That said, according to the assessment data collection, at the city level, municipalities have benefited from:

- **Hands-on technical expertise and planning support**: Municipalities benefited from access to academic insights for identifying and prioritizing local climate action and urban planning.
- **Knowledge products and tools:** EPIC projects generated research and knowledge products, such as flood risk maps, early warning systems, public information tools, analysis, and lessons learned reports.
- **Policy design and evaluation**: In several cities, students and faculty input contributed policy input and added content to administrative manuals and evaluation.
- **Community engagement tools:** projects supported the development of accessible public communication and awareness-raising tools to inform urban populations about climate change and available adaptation solutions or contact information during emergency situations.
- **Affordable, context-specific adaptation strategies**: Cities implemented practical measures to ensure disaster and climate change preparedness and management.
- **Strengthening community trust and engagement**: Municipalities benefited from the ability of students to establish more open and trusting relationships with vulnerable populations, groups that may be less likely to engage directly with city officials due to perceived authority or past experiences.

For example, in Durban, collaboration between the UKZN and the Durban Municipality enabled the development of a community-based flood early warning system supported by real-time alerts via WhatsApp. Alerts are based on the city's weather forecast, which is managed by the city's Coastal and Stormwater Management department. The EPIC programme also supported the development of a disaster risk management plan and the mapping of ecosystem services in Quarry Road West Informal Settlement. Broader initiatives were also launched, such as a community garden, to strengthen food security, or an indigenous tree nursery. These actions have helped to restore ecological infrastructure, reduce flood risks, and strengthen community resilience.

In Mexico, EPIC projects have supported municipalities through policy advice, technical design, and programme evaluation. At UAM, student research informed a lagoon restoration project and state-led infrastructure plans. Universidad Autónoma de Baja California (UABC) produced two

architectural designs selected for municipal offices, and Universidad de Guadalajara's (UdG) evaluations led to adjustments in local social programmes.

In Seberang Perai, Malaysia, Students from Universiti Sains Malaysia and local municipal partners implemented waste sorting and composting programs, improving community recycling behavior and embedding sustainable practices in informal settlements, which strengthens environmental preparedness. In Calamba, Philippines, the partnership with the University of the Philippines Los Baños (UPLB) produced climate-informed communications—tarpaulins, radio scripts, videos—distributed to farmers and integrated into the city's food security plan, enhancing agricultural resilience and community preparedness to weather disruptions.

INTEGRATING ADAPTATION IN POLICIES, RESEARCH, AND COMMUNITIES

There are specific examples of increased consideration of climate change adaptation in city priorities and plans, in academic programs and research, and within communities aiming to build climate change resilience. There is evidence that EPIC outputs have been incorporated into local government priorities and plans. According to the survey, approximately half of the respondents (53%) indicated that the EPIC city-university partnership has increased consideration of climate change adaptation in the city's priorities and plans. For example, one respondent suggested that EPIC-N outputs had been incorporated into the work of the City Agricultural Services Department (country/city unknown), with communication materials distributed during farmers' meetings, training sessions, and seminars to disseminate and reinforce relevant information on climate change. In another example, unrelated to adaptation, new environmental regulations (country/city unknown) were reportedly introduced to address pollution, demonstrating how EPIC collaborations can contribute to concrete regulatory changes. Other respondents also noted that academic partners provided recommendations that informed municipal policies and planning priorities. While these statements are not fully illustrative, more concrete examples also include:

- The flood risk mapping conducted by UKZN students in Durban, mentioned earlier, supported the development of the city's flood risk management plan and a WhatsApp flood early warning system, which proved highly effective during significant flooding in 2022. The partnership has become so important to the municipality that, since a few years, it is financing a full-time EPIC coordinator at the university.
- In Lusaka, Zambia, while driven by COVID-19 interventions, EPIC helped develop five Local Area Plans that included integrated strategies for climate resilience, urban flooding, and water security, laying the groundwork for broader urban adaptation through formal planning processes.
- In An Giang, Vietnam, student GIS mapping was used to validate existing flood risk maps and challenge national projections, prompting municipal interest in more locally grounded adaptation data. While no new public adaptation initiative followed immediately, the municipality considered the EPIC-supported mapping exercise to improve future planning and policy development.
- In Rangsit, Thailand, students utilized informed municipal tools, such as the *Smart City App* and a homelessness pamphlet. However, neither of these was directly climate change-focused; they indirectly addressed the issue through assistance to vulnerable communities.

Within academic institutions, the EPIC partnership has led to the integration of climate change adaptation into teaching and research activities. According to the survey, 47% responded that the EPIC city-university partnership 'has greatly increased consideration of climate change adaptation in the university's academic programmes, research, and curricula.' Further assessment data from the field and document review support this. For example, the entire UTransforma division of the Universidad Autónoma de Bucaramanga in Colombia, which focuses on community projects, has implemented a multi-year plan to address environmental changes in its research grant applications.

Furthermore, universities have gained experience in designing interdisciplinary and multi-stakeholder projects, strengthened their engagement with local stakeholders, adapted their research findings into an accessible and operational format, and incorporated climate adaptation into their teaching. For instance, the EPIC model underpins the implementation of the Special Studies B Honours module within the Development Studies programme at the School of Built Environment and Development Studies at UKZN. Collaborating with local government also provided researchers with real-life contexts in which their hypothesis and findings could be challenged and applied to benefit a broad audience. In Vietnam, the Soc Trang Community College had no prior focus on environmental or climate-related educational lines, but the EPIC partnership has enabled the university to diversify its academic scope and integrate real-world climate adaptation content for the first time.

Beyond the core program, EPIC has encouraged broader application of its model and methods. Interviews with faculty in Thailand revealed that several instructors have begun using the EPIC approach in courses unrelated to EPIC funding—applying student engagement models to projects on green space preservation, water access, and participatory governance. These findings are echoed in the online survey, where one respondent noted that EPIC participation helped students and faculty from different disciplines understand how their professional expertise could contribute to biodiversity conservation, water resource management, and climate adaptation.

At the community level, 47% of respondents also noted that the EPIC city-university partnership 'has greatly increased consideration of climate change adaptation in communities.' For example, one respondent stated that EPIC course outputs (e.g., study reports) had provided community leaders with a clearer understanding of the social, economic, and cultural factors underlying forest and watershed conservation in relation to climate change adaptation. Actual community impact is further discussed below.

Outcomes for income, safety, and environmental quality

Based on the assessment, consultations, and data collection, the EPIC model has yielded a range of positive outcomes for local communities, particularly in terms of environmental quality, safety, and well-being, but to a lesser extent, income levels. Quantitative survey responses show that a significant proportion of participants reported limited or considerable benefits in these areas. Indeed, 64% of respondents indicated that EPIC implementation had 'greatly increased beneficiaries' knowledge and awareness of climate impacts and adaptation; 55% declared that they benefited to a great extent from increased environmental resilience; and 45%

from improved well-being.' Notably these results are based on respondents consisting of faculty, students and some city officials, and therefore not reported directly by beneficiaries.

Field-based testimonies and survey responses emphasize that environmental restoration projects have led to cleaner and safer surroundings, as well as improved food security. Examples include preserving forested areas for beekeeping, establishing community gardens in informal settlements, improving waste management in flood-prone areas, or implementing a flood early-warning system, which provides communities with advance alerts and mitigates the risk of environmental hazards. In Bandung (Indonesia), in Durban (South Africa), or in An Giang (Viet Nam), strengthened horizontal collaboration between communities and universities has fostered greater inclusion of local knowledge, improved policy dialogue and decision-making processes, and elevated civic awareness and stewardship in the face of climate change and sustainability. In sum, these developments have contributed to a deeper sense of well-being among participants.

From the economic perspective, although the long-term effects on income remain inconclusive, which was regretted by some communities, short-term financial benefits have been observed through participation in project activities and training sessions. In Vietnam, for example, farmers who adopted composting practices reported a reduction in their reliance on chemical fertilisers, as well as an improvement in crop quality and sale prices. According to interviews, green onions, for instance, became more fragrant and marketable, fetching almost double the previous price. Similarly, in Penang, Malaysia, farmers mentioned that training gave them the tools needed to not only protect their land, but also "make more money".[10] While some observations pointed out that academic research on environmental challenges may not directly improve livelihoods or employment in the short term, the applied knowledge generated through EPIC and the hands-on activities has helped to some degree influence behaviour change and sustainable practices on the ground.

Importantly, there were no documented or perceived negative environmental, social or economic side effects associated with the EPIC partnership across all reported cases. Instead, the model has consistently been viewed as a constructive force that has also, in some cases, reinforced existing initiatives.

3.1.1.3 Other outcomes

The EPIC model is notable for its versatility in achieving a wide range of development outcomes. As indicated in the portfolio overview and 7.5 Annex E. Database of Projects in Asia, Africa and LAC, while these are not always labelled as climate adaptation, they can generate significant co-benefits for adaptation and mitigation.

By engaging students, universities, and municipal actors in community-centered problem-solving, the EPIC-N model helps foster interventions in areas such as waste management, public health, infrastructure, green space, smart transport, safe water and sanitation, as well as urban planning—

[10] EPIC-N website. 2021. Combating Agricultural Waste and Boosting Farmer: Sustainable Smart Farming in Permatang Pauh. https://www.epicn.org/stories/empowering-community-income-diversification-through-sustainable-smart-farming-by-academia-resources/

sectors where climate risks intersect with broader development challenges. For example, improving waste management in informal settlements reduces pollution and protects local ecosystems, while also alleviating flood risks by preventing blockages in drainage systems. Similarly, infrastructure improvements in flood-prone areas, categorised as urban development, deliver dual benefits by protecting communities against extreme weather events while supporting long-term urban sustainability. While these initiatives are not explicitly framed as climate adaptation, they directly contribute to enhanced climate resilience.

Furthermore, the EPIC-N model emphasizes building trust among local governments, academic institutions, and communities, which helps create more inclusive and effective interventions that consider local context. As an example, in Durban, the first time the municipality and the academics went to the informal settlement they wanted to work with, they were accompanied by bodyguards. There was a lot of mistrust on both sides. After years of working together through the implementation of EPIC, the relationship is at peace. The communities and the municipality are able to address urban issues side by side.

In this framework, local government and university representatives gain skills in community engagement, facilitation, and collaboration. These relationships have led to new partnerships across sectors, such as providing trauma counseling to populations affected by disasters and coordinating responses among different stakeholders. Such collaborations help address interconnected issues, from pandemic recovery to supporting the informal economy, while building social capital and encouraging community members to take an active role in their own well-being.

Furthermore, the model helps promote student-led research and practical engagement, which often provides city officials with critical insights that would otherwise be inaccessible due to community mistrust of the authorities. In this context, the model also encourages students to view themselves as agents of change in their communities. For example, one of the students involved in an EPIC project in Vietnam was attracted to the topic because he came from a farming family and thought the EPIC work could benefit his community.

By incorporating sustainability, equity, and community empowerment into its methodology, EPIC becomes a powerful tool for addressing immediate local priorities and unlocking co-benefits that often align with climate mitigation and adaptation goals.

3.2 Knowledge and capacity building

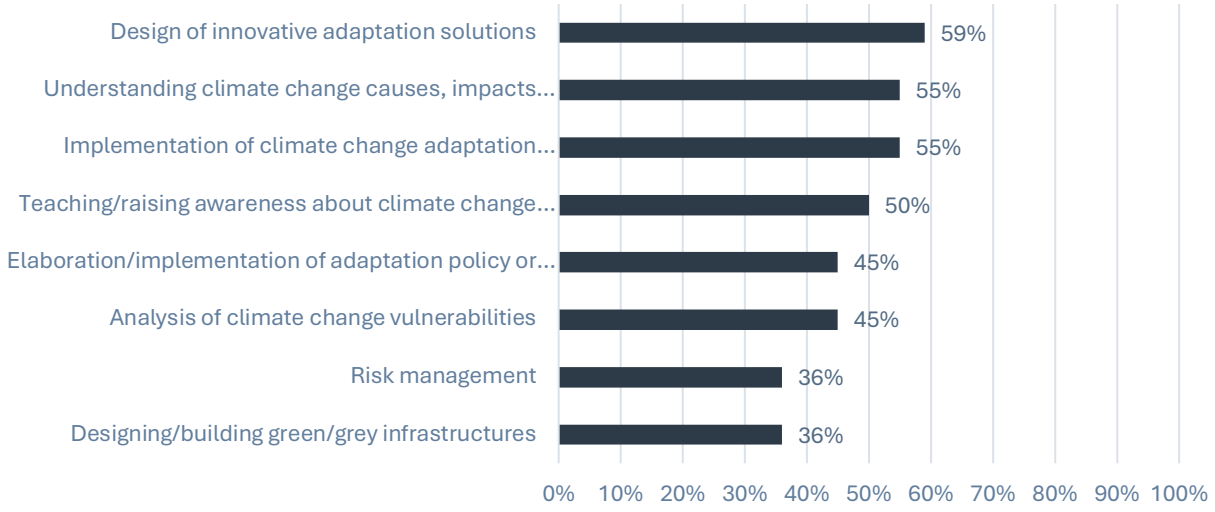
3.2.1.1 At the city-pair level

ADAPTATION KNOWLEDGE UPTAKE ACROSS STAKEHOLDER GROUPS

The EPIC programme has substantially enhanced the capacity for climate change adaptation across local governments, universities, students, and communities by fostering context-specific knowledge, skills, and partnerships. The survey found that 100% of respondents indicated that the programme had built their capacity for climate change adaptation in some way.

Among respondents, 11.5 percent come from municipalities, 61.5 percent are university professors or staff, and 26.9 percent are students. More specifically, the survey found that the following capacities for climate change adaptation have been developed:

Figure 2. Percentage of respondents that answered 'to a great extent'



Through its transdisciplinary and community-centred approach, the programme has introduced local government officials — many of whom had little to no prior exposure to such frameworks — to participatory research and planning processes that prioritise real-world climate challenges.

Consultation evidence indicates that trainings supported by UNEP across Africa and Asia empowered academics and municipal staff to identify and address urgent urban development issues, such as flooding, coastal erosion, saline intrusion in coastal areas, and waste management. The training also equipped participants with practical skills in planning, implementing, and evaluating transdisciplinary projects. Researchers and city officials gained a clearer understanding of localised climate risks and the tools to translate this knowledge into action, such as student-led initiatives like early warning systems, flood risk mapping, and policy planning.

At an academic level, EPIC has transformed the concept of climate change into a tangible challenge by immersing students in fieldwork and applied research, adding to direct capacity building. In other words, the hands-on experience has allowed for more in-depth learning. Students gained firsthand experience in assessing and addressing climate vulnerabilities by engaging with community members through a bottom-up approach and proposing actionable (and generally cost-effective) adaptation strategies. This has improved their technical skills, such as GIS mapping and data collection through surveys and interviews and deepened their understanding of the political and social dimensions of adaptation. For example, in Lusaka and Durban, students mapped informal settlements for local plans, gaining practical experience in GIS and planning. The case in An Giang, Vietnam, was similar, where students also gained practical experience in mapping flooding and integrating findings into policies and plans. In Mombasa, students used visual arts, such as producing short films and exhibitions, to raise public awareness of solid waste issues. In Vietnam, students in Soc Trang gained a clearer understanding of farmers'

realities in the context of climate change through data collection and surveys. Even in curricula not directly related to climate work—such as early childhood education—students in Vietnam reported gaining confidence in communication, digital literacy, and community engagement. This model of hands-on experience provided students with a better understanding of the potential contribution of their disciplines to environmental and social sustainability.

In turn, according to the consultations, through the EPIC model, local communities began to see adaptation as something they could actively shape, not merely the responsibility of governments. For instance, farmers in Vietnam adopted new agricultural practices such as composting and using biofertilizers, while communities in South Africa and Thailand engaged in flood preparedness and preserving green infrastructure.

EPIC-N'S ROLE IN ACADEMIC EMPOWERMENT FOR ADAPTATION

The EPIC programme has helped to empower and support academics to contribute to urban adaptation by expanding their agency, credibility, and institutional standing in local adaptation efforts. Faculty across regions reported that participation in EPIC enabled them to move beyond traditional academic roles and engage directly in problem-solving. With municipal partners and communities. This included leading transdisciplinary research, co-producing adaptation solutions, and translating theory into action. For instance, the number of faculty members involved in the project from the Universidad Autonoma Metropolitana (UAM) for the restoration of la Laguna La Piedad has grown from 30 to 150 since it joined EPIC-- illustrating how the model enabled broader academic mobilization and leadership around a shared urban challenge.

Academics have found new opportunities to act as conveners and knowledge brokers, designing solution-oriented, field-based courses (such as the Special Module of the School of Built Environment and Development Studies in Durban) and engaging directly with local governments and communities. This engagement has elevated their institutional credibility through awards, public recognition, and invitations to national dialogues, as experienced in Soc Trang, where a faculty member was invited to present her work in other provinces. Similarly, also in Soc Trang, it was noted that for small community colleges, this offering to students gives much higher credibility in the academic program overall.

The survey responses further indicate that EPIC participants have also built their teaching skills while strengthening their personal confidence in leading adaptation projects and advising on local needs. Within this framework, academics have been encouraged to collaborate with other universities and cities (for example, during EPIC regional learning events but also through bilateral collaborations) and to share their research findings at an international level (at COPs or Climate Weeks), which provides them with global visibility and channels for disseminating their research work on adaptation beyond their immediate sphere.

Student empowerment has been achieved through the development of confidence and enhanced communication skills. Within this framework, most students officially presented their findings orally to local governments, civil society organizations, and community members, thereby building their communication skills. For many, the hands-on engagement, combined with the need for

awareness raising in the communities, boosted their self-confidence, reinforcing their sense of agency and accountability, and making them agents of change within their communities.

However, some EPIC members, particularly in LAC and Africa, have expressed reservations, explaining that additional support was needed for this empowerment to become more widespread and sustainable. This support would be required to i) adapt the EPIC model to the varied existing university models and local contexts; ii) ensure formal coordination and proactivity between stakeholders involved at both the pair and network levels (meaning having dedicated and paid staff); and iii) provide regular capacity building to maintain the EPIC pairs over time.

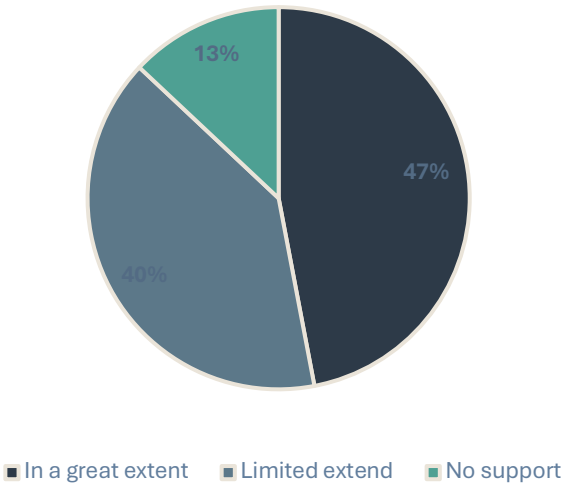
FROM CLASSROOM TO PRACTICE: STUDENT CAPACITY AND CAREERS

The EPIC programme has contributed some to expanding students' access to professional opportunities and networks, though the impact varies across contexts. At the Universidad Autónoma Metropolitana (UAM) in Mexico, one sociology student secured a position at the municipal environment department. Other students leveraged the EPIC certificate to obtain short-term surveyor roles or were hired as research assistants to support ongoing projects, as observed in Durban. At the Universidad de Guadalajara (UdG,) two PhD students evaluating municipal social programs were later employed by the municipality of Zapopan. However, it is essential to note that EPIC's contribution to students' access to professional opportunities and networks remains highly dependent on how each university adapts the EPIC model, the types of projects undertaken, and their alignment with students' career plans. As an example in UV, students reported that their participation in EPIC has not resulted in professional opportunities, and they do not see this type of work as a viable career path.

The EPIC-N has also enabled students to expand their professional networks through participation in the network at large; i.e., through events associated with the EPIC-N work. At the EPIC Africa Network Learning Event in Pretoria, a student from Durban presented his project to a wide international audience of academics and practitioners and had the opportunity to network with the faculty and municipalities present. Others met with municipal officers during field missions, building relationships that, for some, led to job offers and research collaborations.

The survey shows that 86% of respondents considers that the project increased their access to professional opportunities. Nevertheless, regarding the contribution and empowerment from students to climate change adaptation 13% consider that the model does not support students to contribute to climate change adaptation, and 40% to a limited extent. This vision could be because the specific project or contribution to the project was not directly linked to climate change adaptation, but perhaps on social issues (i.e., social public politics).

Figure 3. Level at which the EPIC-Model empowered stakeholders



STUDENT-LED PROMOTION OF THE EPIC-N MODEL

There is evidence from across all three regions that students have actively recommended the EPIC Programme to their peers, and that these recommendations have led to increased interest and participation from new students. Many of the students interviewed expressed strong appreciation for the opportunity to engage in hands-on, socially relevant work and indicated they had shared their experiences with classmates and friends. In several cases, this informal promotion occurred through word of mouth or social media, as in Thailand, where a Thammasat University student used Instagram to share her experience and encourage others to join. In South Africa, students involved in the Durban projects described EPIC as a "must-do" opportunity and reported recommending it to their peers within and outside their academic departments.

These peer recommendations have, sometimes, led to increased student participation; however, access to the opportunity depends on funding and the availability of courses that integrate the EPIC-N model. At UAM and UV in Mexico, new students joined EPIC activities after hearing about them from earlier participants. Similarly, in Vietnam, student interest grew as word spread about the opportunity to engage in real-world adaptation projects, even drawing in students from non-environmental fields such as early childhood education. While such peer-to-peer recruitment has been effective, participation has also been influenced by practical factors, including project funding, course alignment, and institutional support.

3.3 Financial strategy

To secure sources of funding and resource mobilization, and given that membership to be part of the network are free, the EPIC-N's financial sustainability currently rests on a mix of public grants, university contributions, municipal co-financing, voluntary contributions, and support from philanthropic foundations. Existing sources include:

At programme level

- A $500,000 grant from the U.S. NSF and a $5 million allocation by the U.S. government to support EPIC-N's work. Notably this is for the total EPIC-N programme and not focused on the three regions alone but also covers all of EPIC-N work in the US.[11]
- Contributions from UNEP, the Ford Foundation, HP Foundation, Global EbA Fund (LAC), and anonymous donors, as well as a growing pipeline of potential donors, including APN (Asia-Pacific Network for Global Change Research), MacArthur Foundation, and UN Habitat.[12]
- In the 2020-2021 annual report, income reached 532,000 USD, 78.9 percent which came from grants, 20.7 percent from donations, and less than 0.4 percent from Technical Assistance[13].

At the city-pair level

- Municipal contributions in Africa and LAC, including commitments from Lusaka City Council ($5,000/year for 5 years), Harare City Council ($20,000 for EPIC projects), and the sponsor commitment made by C40, eThekwini Municipality, and UKZN/NRF.[14]
- University-level support, such as the UKZN internship program funded through National Research Foundation (NRF) funding in South Africa and co-financing by Mexican universities administrations (i.e. the Universidad Autónoma Metropolitana administration, UAM) in response to initial seed grants provided to EPIC projects[15]
- In LAC, a USD 249,512 grant from the Global EbA Fund in partnership with the IAI enabled the addition of four new programs.

The program is cost-efficient by design, leveraging existing university structures and academic credit systems to deliver adaptation outcomes at low direct cost[16], creating win-win scenarios that support the financial sustainability of the model by enriching learning structures and experiences, directly creating impact, and supporting partnerships with communities without exploiting any participant or changing the existing structures.

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[11] Inception Report
[12] Information received through consultation
[13] EPIC-N Annual Report FY 20-21
[14] Information gathered through consultations.
[15] Information gathered through consultations.
[16] EPIC-N Intro 2025

LEVERAGING UNEP SUPPORT FOR ADAPTATION PROGRESS

UNEP's financial contributions have been leveraged to catalyse adaptation-focused outcomes across the EPIC-N, particularly by enabling institutional partnerships, launching local projects, and initiating multi-stakeholder collaboration. The model of UNEP's support (Section 2.2 EPIC-N Funding and support to the EPIC programme), is built around network launch events, regional workshops, training sessions, and small seed grants and has proved cost-effective and catalytic, especially in resource-constrained university and municipal contexts. While UNEP's funding was limited in scale (and partly to mitigate the challenges of COVID-19 to help projects get off the ground), it facilitated meaningful and sometimes sustained engagement between cities and academic institutions, supporting knowledge generation, applied adaptation action, and capacity-building.

- In Asia, the effectiveness of UNEP's financial support is most visible, as seed grants enabled city-university pairs to pilot locally grounded adaptation activities, as exemplified in earlier sections. Across six countries, ten city pairs implemented projects, with several yielding visibility and tangible outcomes. In Vietnam, for instance, a US$2,000 UNEP EPIC seed grant, complemented by another US$2,000 from EPIC-N, enabled tangible adaptation actions such as biofertilizer production and farmer training aligned with national agricultural policy. In Thailand, students collaborated with municipalities on flood planning and public awareness initiatives, producing outputs that were later referenced in local policy dialogues. The expansion in Thailand from ten projects funded through UNEP seed grants to 19 projects overall indicates how small grants can help trigger institutional momentum, leading to project continuity or replication. The support to a part-time regional coordinator has also played an important role in ensuring continuity and expansion.
- In LAC, the model's expansion was supported through the 2022 launch of the regional network in collaboration with IAI. Although no seed grants were provided, UNEP's support helped create the enabling conditions for universities to mobilize their internal funds or secure co-financing. In Mexico, for example, universities used this momentum to support student fieldwork, equipment purchases, and community engagement. At UAM, institutional buy-in enabled the expansion of EPIC-N activities to additional faculties and attracted co-financing from the university's budget.
- In Africa, while there was no direct seed funding for projects, UNEP's support enabled the training of over 100 stakeholders in cities such as Banjul, Lusaka, Mombasa, and Monrovia through regional workshops. These sessions contributed to the development of new city–university partnerships and raised awareness about the EPIC-N model. UNEP's collaboration on a joint fundraising proposal (though unsuccessful) also highlights efforts to position the network for further scale-up. According to EPIC-N staff, these trainings played a decisive role in moving cities toward implementation; some of these cities, such as Lusaka and Durban, have since committed municipal funds to continue EPIC-related work. For instance, Lusaka pledged $25,000 annually and Durban allocated approximately

$350,000, showing that UNEP's catalytic funding helped unlock long-term local investment. However, it is also notable that multiple cities, though contacted and trained (30 in all), have not progressed further, keeping the overall project portfolio in Africa relatively low.

Across all three regions, stakeholders noted the effectiveness of small-scale funding, particularly when utilized for direct student support, travel, equipment, or coordination. EPIC-N staff emphasized that "a little goes a long way," with even $2,000–$ 8,000 seed grants enabling students and faculty to develop adaptation tools and action plans that cities would otherwise need to contract externally. Because the EPIC model does not pay professors, students, or communities, funding is focused on enabling coordination, logistics, and outputs, resulting in significant value per dollar spent.

It is essential to note, however, that while EPIC-N projects often yield practical outputs, as explained in earlier sections, not all student-generated work is directly usable by municipal partners. In some cases, projects may fall short of local technical standards or require further refinement. For example, Durban's experience highlighted challenges in matching student capacity with departmental needs and a lack of formal mechanisms to embed student outputs into municipal workflows. Nonetheless, stakeholders consistently reported that even these less immediately applicable contributions had value: they raised awareness, introduced new ways of thinking, and helped build institutional relationships. As a result, the process itself (especially student engagement, site visits, and final presentations) is often viewed as a meaningful form of capacity building, even when the technical product was not adopted directly.

Furthermore, as can be seen from the database constructed for this outcome assessment, it is important to note that not all UNEP funding supports adaptation outcomes; however, the majority does (see Table 2). For example, in the seed funding provided in Asia, only one project out of the 10 cannot be considered an adaptation with co-benefits. In Africa, all city pairs formed after the launch workshop focus on adaptation in some way or another, while in LAC, this may be less so.

As such, across all three regions, UNEP's financial contribution, although modest in size, has played an important role in establishing and expanding EPIC's adaptation programs. The funding model, focused on regional launches, targeted training, and small seed grants, has proven particularly effective in mobilizing universities, engaging students, and producing context-specific adaptation tools and actions. Its strongest and most consistent impact has been on student learning, capacity building, and applied research. While the benefits to municipalities are evident in some cases, mainly where project outputs directly addressed city priorities, the limited scale of funding and the absence of follow-up mechanisms often restricted the depth of municipal adoption. Still, even when student work was not directly utilized, it helped raise awareness, strengthen relationships, and lay the groundwork for longer-term collaboration. The ongoing challenge is how to sustain and expand these initial impacts, a topic discussed in the following sections.

Despite the existing efficiencies of the network, financial sustainability remains fragile. The network operates on a lean global budget of approximately USD 300,000 annually,[17] sufficient to maintain essential functions but inadequate to support the network's growth, coordination, and long-term stability. According to consultations with EPIC-N staff, an annual budget of USD 2–2.5 million is considered necessary to support a fully scaled global model, including coordination across all projects and programmes, delivery of training and quality assurance services, and network-wide communication and technical support. According to consultations, in 2021, the network aimed to grow by 30% annually through inbound interest and 'opportunistic' partnerships.

Currently, EPIC-N lacks a formal long-term financial strategy or sustainability plan and primarily depends on elements outlined in the overarching Network Strategy. This strategy aims to ensure long-term sustainability and practical growth through services that support the Network's schools. Although the USD 2-2.5 million target has not been met, the strategy identifies several grant categories and funding partners, including international and national foundations, regional philanthropic organizations, and grants such as equity capital grants, operating grants, and program-specific grants. Additionally, the network generates revenue from annual memberships, registration fees for non-member attendees and events, along with training programs and speaking engagements; however, these earnings are not quantified and are rather ad-hoc. Notably, UNEP is considered a potential strategic partner in both funding and capacities, and discussions are ongoing to formalize this relationship.

At the regional level, efforts are underway to formalize and empower EPIC networks, especially in Africa, Latin America, and Southeast Asia. These networks are beginning to take on a greater role in resource mobilization and program development, formalize service-based agreements with municipalities, and build portfolios of past success stories to attract future sponsors. However, the no-overhead policy, while maximizing programmatic spending, was cited as a constraint on university engagement, as it left coordination staff un- or under-funded. EPIC staff flagged the need to decentralize more support to regional trainers and coordinators; particularly in Africa, where peer-to-peer capacity building (e.g., African experts training African cities) has been highly effective.

With no formal and structured long-term strategy, efforts often rely on the individual initiative of faculty and local leaders, which can make continuity fragile. Therefore, EPIC-N recognizes the need to formalize its financial strategy, clarify roles and responsibilities within its governance structure, and strengthen its visibility within the global funding ecosystem. The aim is not only to attract more donors but to help regional and local programs stand on their own, supported by lasting partnerships and institutional buy-in. Survey findings suggest uneven financial planning at the city–university level. Only one-third of respondents report having a formal sustainability or financial strategy in place to sustain activities over time, while 40% indicate having informal or planned efforts. These figures underscore the need for greater institutional support to ensure that projects, particularly those producing promising adaptation tools, can be maintained and scaled.

[17] Information gathered through consultations.

One emerging risk to EPIC-N's long-term sustainability is the growing uncertainty surrounding U.S. development finance, which has historically played a central role in supporting the global dimensions of the program. Although EPIC-N is a U.S.-based initiative, its international expansion, including UNEP-supported regional networks in Africa, Asia, and LAC, has been underpinned in part by catalytic U.S. funding and institutional backing. With recent shifts in U.S. domestic priorities and a volatile federal funding environment, future access to multi-year grants from agencies such as the U.S. NSF and EPA is becoming increasingly uncertain. This creates a potential financing gap for non-U.S. EPIC programs, many of which rely on modest but strategic seed funding and coordination support to remain active. Without a diversified and predictable donor base, these regional networks may face limitations in scaling, institutionalizing, or sustaining gains beyond initial launch periods.

3.4 Barriers and challenges

CHALLENGES, BARRIERS AND MITIGATION STRATEGIES

The implementation of the EPIC model across regions encountered several operational, institutional, and contextual challenges that impacted its efficiency and potential for scale-up.

3.4.1.1 At programme level

At a broader programmatic level, challenges included the absence of a formal long-term and financial strategy as discussed above, limited funding for project execution phases after diagnosis of solutions and implementation plans, and slow or reluctant engagement from local governments. Coordination capacity was constrained, particularly due to the use of part-time regional coordinators and an overreliance on local champions at both the municipal and university levels, making the programme highly vulnerable to staff turnover. Without institutionalization, such as formal agreements or embedded coordination roles, many partnerships lost momentum when key individuals left. This was observed in several cities, including those revisited for multiple trainings (e.g., Lusaka), suggesting that continuity was not guaranteed. Investment in the regional coordination structures and peer-to-peer support networks have particularly helped address this barrier, particularly in Africa and Asia. In some cases, local actors also moved to institutionalize EPIC roles within universities or municipalities to reduce dependence on individual champions and improve continuity.

There were also cultural and institutional barriers to facilitate collaboration among participants and trust issues at the community level, political instability, and environmental unpredictability (e.g., floods) further complicated the implementation of the projects. For example, in both Asia and Africa, stakeholders noted that while communities were often supportive, trust-building was a time-intensive process. In some informal settlements, prior negative experiences with government or researchers made communities hesitant to engage. In Durban, university mediators played a crucial role in bridging these gaps, and in Thailand, with time, students became very trusted stakeholders with whom communities felt more comfortable.

3.4.1.2 At the city-pair level

While the EPIC model has shown strong potential for bridging academic and municipal priorities, its implementation has encountered practical barriers that sometimes limit deeper institutional uptake. In Durban, the pilot in eThekwini Municipality revealed difficulties in aligning student work with municipal priorities, limited time for student engagement, and a lack of clarity regarding expected outcomes. Similarly, in Vietnam, it was challenging to incentivize students to join and understand the added value of the program. To mitigate participation constraints, some projects began offering internships, academic credits, or certificates to students for their work. This was particularly important where students faced competing demands or lacked the financial means to engage voluntarily. In the Vietnam case, it was also noted the importance of linking the target educational line with the EPIC-N project; for example, the focus was climate change adaptation in the EPIC-N project, but the departments in which it was implemented were in teaching and economics. Students had to understand how the program, despite its climate focus, linked and could advance their educational goals before joining.

The model's expansion was also hindered by limited involvement of university and municipal departments, as well as challenges in coordinating placements within the city departments. For example, in Thailand, universities noted that although municipalities valued the collaboration, the limited timeframe of student availability and the lack of formal internship structures made it difficult to sustain meaningful engagement. Faculty reported that integrating EPIC work into the academic calendar required significant adjustments, and some city officials expressed uncertainty about how to utilize student contributions effectively.

A similar barrier to institutional uptake and acceptance of universities is the issue of receiving international funds. In Thailand and Vietnam, some universities were difficult to convince because of the funding model. That is, they cannot accept international funds, even in small amounts like those provided through EPIC-N. These challenges stemmed from:

- Taxation rules or government regulations that restrict direct foreign transfers to public institutions.
- Centralized control over university budgets or accounting systems made it difficult for departments or faculty to access and manage incoming funds independently.
- Delays in disbursement often caused by the need for multiple internal approvals, banking documentation, or compliance procedures, which resulted in postponed or incomplete project implementation.

In some cases, faculty had to rely on personal funds or informal workarounds to advance project activities while waiting for institutional approval, increasing the risk of burnout or project discontinuity.

In Latin America and Africa, universities noted barriers such as misaligned academic calendars (school semester durations) and reduced time for implementation, isolated efforts, limited

interaction with communities, changing municipal leadership, and slow administrative responses. The participatory methods, while innovative, proved to be resource-intensive, and interdisciplinary integration was challenging due to varying schedules and institutional silos. Measures such as working in groups, nominating student spokespeople, and strengthening communication protocols were implemented to improve the process. Also, where municipalities or universities created formal coordinator positions, implementation was notably more stable. These roles helped bridge the academic and municipal planning cycles, enabling better integration of student work. However, this configuration remains rare, with only one full-time coordinator position funded by the municipality having been set up in the African network so far, in Durban.

4. Lessons learned, recommendations and perspectives

The EPIC programme has generated a wide range of meaningful adaptation outcomes. It has supported improved urban planning processes and contributed to the mainstreaming of climate adaptation into academic curricula and research. Importantly, it has fostered behavioural shifts among students and local stakeholders, while substantially strengthening adaptation capacities at the municipal level. The programme has also helped build trust between local governments and communities, enabling more inclusive and responsive climate action. Pilot projects have served as catalysts for replication in other contexts, demonstrating the scalability of EPIC's locally grounded model. Beyond adaptation, the programme has generated valuable co-benefits, including professional opportunities for students, greater interdisciplinary collaboration in universities, and enhanced visibility of student contributions in international arenas.

4.1 Lessons learned

Key benefits of participating in EPIC-N

Participation in the EPIC programme has been valued by stakeholders, with 91% of survey respondents rating it as "very useful" and 9% as moderately useful. Meaning that no-one taking the survey rated it not useful. This is significant and was also echoed through consultations during the site visits. The most important benefits, as also discussed in the analysis above, include:

At programme level

- **Institutional transformation and visibility**: EPIC has elevated the role of universities in local sustainability and social impact work. It has supported the growth of interdisciplinary collaboration within universities and improved their visibility and legitimacy in community engagement. Moreover, it has helped strengthen the role of preexisting sustainability and social impact departments at universities.

At the city-pair level

- **Capacity support for municipalities:** Municipalities benefit from the added technical and human resources that students and faculty bring, particularly in areas such as data collection, community outreach, and implementing climate adaptation initiatives; tasks often constrained by local staff shortages.
- **Community empowerment and climate awareness:** The programme has contributed to raising awareness of climate issues among urban communities and strengthening connections between municipalities, academia, and vulnerable populations. Creating impact, solving real-life challenges is also relevant to the program.

- **Strengthened city-university partnerships:** EPIC provides a straightforward and structured model of engagement that enables universities to collaborate more effectively with local governments and communities, aligning academic resources with real-world municipal challenges.
- **Practical and experiential learning:** The programme bridges theory and practice by engaging students in fieldwork and problem-solving activities directly relevant to community needs. This hands-on experience enhances student learning and contributes to local development, especially in areas with limited technical or human capacity.

Additional adaptation-related outcomes to consider

One notable adaptation-related outcome identified is the recognition and integration of traditional knowledge systems into climate adaptation efforts. An example of this is the work carried out at the Universidad Veracruzana (UV), where knowledge exchange sessions were held with the local communities (the "Guardians of the forest"), who have practices of forest management preserved for generations, aiming to identify their perspectives to implement the project and support the strengthening of the environmental services management. The programme has highlighted that the responsiveness of urban communities to external innovation is influenced and hampered by the fact that urban communities themselves often rely on or develop their own adaptation solutions. This underscores the importance of co-producing knowledge and solutions that are culturally grounded and contextually appropriate. To enhance adaptation outcomes, the EPIC model is encouraged to support research initiatives that integrate traditional knowledge with scientific approaches, ensuring innovations are both effective and locally accepted.

Core strengths of the EPIC-N programme

The EPIC programme has several key strengths that contribute to its effectiveness and appeal across diverse institutional and geographic contexts:

1. **Inclusive and multi-stakeholder approach**. The EPIC-N model is advanced through an inclusive, multi-stakeholder collaborative approach, creating a space that fosters synergies among universities, municipalities, and communities by bringing all stakeholders to co-develop locally grounded, science-based solutions to specific needs. This inclusive approach strengthens relationships and ensures that community voices and knowledge are integral to the process.
2. **Solutions grounded on community needs**. The programme promotes solutions that are rooted in community needs, combining questionnaires that determine need with scientific evidence and local and Indigenous knowledge. This fosters community-led actions that are tailored to local needs. This participatory model can help enhance the relevance, ownership, and sustainability of outcomes.
3. **Hands-on capacity building**. EPIC provides students with practical, hands-on experience in addressing real societal challenges, significantly enhancing their skills, autonomy, transdisciplinarity, and professional development through real-world learning. This experiential education model is widely appreciated and contributes to a stronger

institutional reputation and increased student approval. Some skills EPIC provides to students are more difficult to develop through traditional education methods.

4. **Efficient use of resources**. The model leverages existing university infrastructure, i.e. faculty time, student coursework, and municipal partnerships. This makes it highly cost-efficient. Municipalities benefit from additional technical capacity without the costs of external consultants, although not yet widely seen, except in Africa (e.g., Lusaka). The projects create opportunities for scalability and replication.
5. **Interdisciplinary collaboration**. EPIC promotes interdisciplinary teamwork and helps participants develop adaptive project management skills, which are essential for addressing complex urban sustainability issues.
6. **Networking opportunities and global visibility**. Being part of a global network gives participating institutions increased visibility, facilitating partnerships, funding opportunities, and policy influence. This is particularly important for universities, which rarely have the chance to network and learn from other regions and countries on a global scale. Thus far, it is mostly faculty and staff that has been engaged globally, and less so the municipalities; however, there is scope for advanced engagement in global networking for city officials.
7. **Builds institutional capacity**. The model strengthens pre-existing institutional structures and has shown potential for replication across departments and universities, particularly when paired with public or international funding.

KEY LESSONS LEARNED FROM EPIC-N

The implementation of the EPIC-N programme has yielded the following set of lessons learned:

Lesson	Description	Examples
1. EPIC-N is an effective model for locally led adaptation, but sustainability depends on academic continuity and stronger municipal engagement	EPIC-N has demonstrated its capacity to deliver concrete, community-based adaptation outcomes, largely driven by motivated faculty staff and executed by students. University lecturers often institutionalize the model, sustain relationships, and generate continuity. However, reliance on individuals creates a risk of discontinuity over time. Municipal engagement, while present, tends to be more variable and vulnerable to political or staffing changes. In some regions, partnerships faded after municipal leadership turnover or absence of formal agreements.	• In Durban, students from UKZN conducted fieldwork on flood risk in informal settlements, culminating in a city-wide symposium where they presented their findings to local authorities and community members. • In Mexico, UAM students contributed to the analysis and planning of lagoon restoration and water management efforts, while others evaluated social programs and supported public policy refinement at the municipal level. • Regional coordinators noted that the most active university–city pairs were often those with long-standing, highly motivated individuals, underscoring the need for broader institutional engagement.
2. Sustaining and scaling EPIC-N requires investment in coordination and regional learning infrastructure	The success and expansion of EPIC-N depend heavily on the presence of active coordination functions. regional and local coordinators have been essential in providing training, supporting outreach, and fostering peer-to-peer learning. When these roles are missing or underfunded, many promising partnerships stall. Institutionalizing and financing coordination roles is essential to secure long-term sustainability and avoid over-reliance on individual champions at city-level.	• At Universidad Veracruzana (UV) in Mexico, the dedication of EPIC coordinators and teachers helped maintain long-term collaboration with FIDECOAGUA and student groups. • In Córdoba, Mexico, a promising project stalled when municipal interest faded and no local coordinator stepped in to lead, showing how fragile these partnerships can be without a strong anchor. • In Lusaka and other African cities, projects lost momentum after trained focal points moved or changed roles. • In Asia, the regional coordinator has been a particularly catalytic force in increasing the number of projects throughout the region.

3. UNEP's support has been small but catalytic despite relying on limited visibility, and a weak M&E system	UNEP's financial and technical support has played a strategic role in launching regional networks, enabling seed projects, and raising international visibility for adaptation action. UNEP's support has been particularly effective in Asia where seed grants allowed projects to deliver tangible adaptation outcomes. In Africa, despite the absence of seed grants from UNEP, peer learning, cofinancing and regional coordination enabled project emergence. Across regions, stakeholders value UNEP's convening role and seek further support for scaling and formalizing the EPIC-N model. However, at programme level, the lack of a clear strategy for monitoring and evaluation (M&E) makes it hard to document the programme's and projects' outcomes and long-term impact. There is no shared system across the network to track results, and many universities or municipalities do not have the resources or tools to follow up after a project ends. This limits learning, visibility, and the ability to show donors or decision-makers what the program has achieved over time.	• In Vietnam and Thailand, modest seed funding allowed for flood risk mapping, composting pilots, and engagement with vulnerable communities—but most efforts paused once the funding ended. • In Lusaka, Zambia, EPIC training and initial support generated interest and commitments, but local actors reported difficulty maintaining momentum without additional funding or staff time. • During interviews, several regional coordinators and faculty members noted the absence of structured reporting tools or shared metrics, making it hard to assess what "success" looks like across different projects. • In Asia, project leads highlighted that they lacked guidance on how to frame or evaluate adaptation outcomes, especially for projects with co-benefits. • In LAC, survey respondents emphasized the need for a central platform to document lessons learned and help universities replicate each other's approaches.
4. Regional dynamics influence the effectiveness of different support strategies	The experience across regions suggests that there is no one-size-fits-all approach. In Asia, UNEP's seed funding was critical to launch projects. In Africa, where no seed grants were provided by UNEP, coordination and training proved effective for initiating action in combination with cofinancing. These variations suggest that EPIC-N's success depends more on tailored support—especially coordination and training—than on funding alone.	• Asia: 10 city pairs launched projects using UNEP-funded seed grants. • Africa: 30 cities trained; projects emerged where university coordination was strongest, boosted by cofinancing provided by EPIC-N partners.

5. Formalizing EPIC roles in academic and municipal systems is essential to reduce dependency on individuals	While individual champions have driven implementation, their departure often results in a loss of momentum. Embedding EPIC into university curricula, staffing plans, and municipal procedures helps safeguard institutional memory and promote program continuity.	• In Mexico, some universities have integrated EPIC into internal planning and budget lines. • In Durban, the establishment of a funded EPIC coordinator position ensured sustained collaboration. • In other cities, projects stalled once faculty or city staff moved on.
6. Co-designing and implementing projects involving academics, students and communities strengthens the collective capacity to address complex challenges, including climate change adaptation, and generating sustainable impacts in education, research, and community engagement	Structured collaboration between students, faculty and local communities not only ensures that projects respond to real needs, but also increases their legitimacy, sustainability, acceptability and replicability in communities. This participatory approach leverages local knowledge as a strategic resource, fosters trusting relationships in the communities and promotes contextualized and culturally relevant solutions to climate challenges. In addition, such projects act as experiential training platforms for students, expand their professional networks and position faculty as articulators of applied knowledge. At a systemic level, they contribute to the visibility of locally led adaptation initiatives, facilitating their connection with global sustainability agendas, climate finance and public policies.	• In Mexico, early engagement with forest guardians and local organizations led to strong community support and long-term commitment. • In Peru and the Philippines, co-design helped align projects with public needs and made implementation smoother. • In UAM, Mexico, student participation led to internships and job offers in municipal planning. • In Vietnam and Thailand, students gained confidence and technical skills through hands-on adaptation projects. • EPIC faculty and students presented at international events (e.g. COP, Asia Climate Week), raising the profile of city-led initiatives.
7. A transdisciplinary and systems-thinking approach strengthens the effectiveness and sustainability of responses to complex challenges	The EPIC model showed that the integration of multiple academic disciplines with the knowledge and capacities of local institutions allows the development of more robust, contextualized and practical solutions. This convergence of knowledge not only enriches project design and implementation, but also facilitates the construction of a shared vision and adaptive strategies with greater legitimacy and viability.	• At the 2024 EPIC training, participants reported that working across disciplines helped them better link research with local policy and made their projects more relevant to city needs. • In Mexico, collaboration between psychology, economics, and environmental studies departments at UV helped students and faculty develop more holistic and effective solutions.

	Furthermore, by inserting teaching and learning processes in real decision-making contexts, this approach strengthens students' and teachers' understanding of interconnected social, ecological and economic systems. Thus, students are trained with a critical, integrative and action-oriented perspective, prepared to lead sustainable transformations in highly complex and uncertain scenarios in their professional careers.	• In Vietnam, students from fields like early childhood education gained insight into climate adaptation while also improving skills related to communication, teaching, and community outreach—key to their own professional development.
8. Lack of alignment between academic calendars and municipal-level planning timelines limit the impact and utility of EPIC projects, underscoring the need for more sustainable and long-term collaborative structures.	The limited length of university semesters restricts the depth of analysis students can conduct, as well as the immediate applicability of their deliverables for local governments. This time lag also makes it difficult to effectively integrate projects into municipal budgetary and strategic cycles, which typically operate on annual budgets and long-term strategies, reducing opportunities for academic work to directly influence decision making. To maximize the value of the EPIC model, institutional mechanisms that transcend academic semesters are required, such as multi-year planning, the participation of continuous teaching teams, and the implementation of long-term plans with municipal actors. These actions can strengthen continuity, increase the relevance of the results for the cities and consolidate the model as a reliable partner in local development processes in the medium and long term.	• In Mexico, faculty noted that student work was often limited by the short academic term, leaving little time for deeper analysis or follow-up. • In Durban, South Africa, city officials found it challenging to match student contributions with departmental schedules and planning needs. • In An Giang, Vietnam, students lacked time to fully implement activities limiting the scope of engagement with local partners.
9. Institutional silos hinder interdisciplinary collaboration in universities, weakening the	Although the EPIC model promotes the integration of diverse disciplines to address complex challenges, many universities still operate under fragmented structures/departments that hinder interaction and joint work. The lack of interdepartmental coordination mechanisms, shared budgets, and curricular flexibility	• At UV in Mexico, the EPIC coordinator made extra efforts to bring together faculty from psychology, economics, and environmental studies—but said this required strong personal commitment and was not yet institutionalized.

transformative potential of interdisciplinary models such as EPIC.	and university schedules have the capacity to hinder the faculty from being able to collaborate effectively on projects that require integrated approaches, such as those that combine engineering, social sciences, and environmental studies. Overcoming these silos is not just an operational issue, but a strategic one. It involves redesigning academic structures to foster collaborative ecosystems, establishing institutional incentives for interdisciplinary work, and strengthening internal governance capabilities that prioritize impact-oriented innovation.	• In Thailand, faculty described the challenge of integrating student work across departments, especially when EPIC themes did not directly match their standard course content, noting sometimes it takes a lot of adjusting to make it fit the curricular.
10. Formalizing municipal engagement is essential to ensure continuity, institutional memory, and sustained impact beyond political or administrative turnover.	City participation in EPIC projects often depends on the interest and availability of specific staff or departments in local institutes. However, this engagement is highly vulnerable to political transitions, staff turnover, and shifting local priorities. When support is not anchored in municipal structures, even high-potential collaborations risk fragmentation or abandonment. Long-term commitment from municipalities requires interinstitutional anchoring of the EPIC model within planning structures to ensure strategic alignment and sustained impact systematically linked to city development goals.	• In Córdoba, Mexico, municipal staff initially supported EPIC activities, but after a change in leadership, the partnership faded, and the project stalled. • In several African cities, coordinators reported that even after training events, cities sometimes lost momentum due to changes in staffing or a lack of follow-up from the municipal side.
11. Student engagement strengthens social capital and community trust—laying the groundwork for long-term climate action, even when	In EPIC projects, student participation plays a critical role beyond technical deliverables. Through direct interaction with local communities students help surface under-recognized environmental challenges that may otherwise be overlooked and catalyze dialogue around climate resilience and sustainability. This visibility can trigger local conversations, build awareness, and create the social conditions necessary for future change.	• In Mexico, faculty and students noted that even when municipal offices did not adopt student recommendations, the process improved community engagement and raised awareness of local environmental issues. • In Thailand, students who worked on public outreach materials helped build trust with homeless people who were otherwise hesitant to engage with government.

immediate outputs are not adopted.	Moreover, working effectively in complex social environments demands trust-building, cultural sensitivity, and mutual respect as essential components of meaningful engagement. These skills not only enrich student learning, but also help establish legitimacy for university-led initiatives, fostering relationships that outlast individual projects and can serve as foundations for deeper collaboration in the future.	• In Vietnam, students reported that trust was built through repeated visits and respectful dialogue, which encouraged farmers to take part in composting and adaptation activities. • In South Africa, community members were more responsive to students than to city officials, partly because students approached them in a more open and non-authoritative way.
12. Adapting training and support to local contexts is key to effective capacity-building and the sustainable scaling of the EPIC model.	In regions like Africa and Asia, the most effective capacity-building efforts were those led by regional coordinators or local experts who understood the specific challenges faced by universities and municipalities. Experience in regions such as Africa and Asia shows that capacity-building efforts are most successful when designed and delivered by regional coordinators or local experts who understand the institutional, cultural, and operational challenges on the ground faced by universities and municipalities.	• In Africa (including, Banjul, Lusaka, Mombasa, or Monrovia early 2025), training events led by experienced regional coordinators were especially effective in helping cities and universities adapt the EPIC model to local needs. • In Vietnam, university faculty noted that tailored support from the community helped them better understand how to integrate EPIC into their institutional structure.

4.2 Potential for replication and scaling-up

Public climate initiatives enabled by EPIC-N

There is limited evidence of direct climate-related initiatives being funded by municipalities or public actors after the implementation of the EPIC model in cities, except for those examples also noted earlier. That is, in Lusaka, Zambia, after participating in EPIC Africa workshops and pilot trainings, city authorities took the initiative to incorporate climate resilience into their urban development plans. While the original EPIC activities were small and focused on introductory capacity-building, they helped city officials recognize the potential of university partnerships. In Durban, South Africa, the collaboration between the University of KwaZulu-Natal and the eThekwini Municipality around flood early warning and ecosystem mapping contributed to the municipality scaling up similar tools in nearby informal settlements. This was not necessarily formalized through new funding streams. Still, city officials recognized the usefulness of the pilot and began adapting some of the student-generated tools into their broader disaster risk management framework. In Vietnam, although no significant post-project municipal funding was reported, notable follow-up actions were observed, reflecting the influence of EPIC-supported work; i.e. flood mapping data developed during the EPIC project informed discussions on the Smart Water City Master Plan, although it was not formally adopted.

Leveraging existing initiatives through EPIC-N

The EPIC model could create significant synergies with initiatives and networks to enhance its impact, reach, and sustainability. For example, regionally, EPIC should continues collaborating with organizations such as START, FRACTAL, ICLEI, the Inter-American Institute for Global Change Research, and the Global EbA Fund. These entities have existing experience in climate adaptation and funding mechanisms, and some have already engaged with EPIC, for example, through joint proposals to the National Science Foundation (NSF).

In Durban, the EPIC model aligns with several ongoing initiatives, including the Transformative River Management Program (TRMP), EnviroChamps, and the Africa Zero Waste Hub. These initiatives focus on ecosystem-based adaptation, community engagement, and circular economy principles, being areas where the EPIC approach can add value and youth engagement while benefiting from existing infrastructure and local networks.

- Particularly, in Durban, the TRMP, a long-standing eThekwini-led programme launched pre-EPIC, aims to expand existing river management in the city, including initiatives like the *Sihlanzimvelo* Stream Cleaning Programme, which has demonstrated to be a high-potential model of ecosystem-based adaptation that combines climate resilience with socio-economic improvement aligned to a transition to a green economy.
- Another scalable innovation mentioned in interviews is Durban's Flood Early Warning System, which targets informal settlements in the city of eThekwini to increase their resilience to natural flood disasters while the city continues with the implementation of its relocation program. This community-driven approach equips residents to develop hazard maps, install local rain and stream gauges, and implement automated, real-time warning systems. The

project enhances community decision-making capacity in response to climate-related disasters.

In Southeast Asia, EPIC activities in Thailand and Vietnam align with national and municipal priorities but remain largely informalized. For instance, EPIC projects in Bangkok are directly linked to national low-carbon urban strategies and efforts to reduce urban heat islands. In Vietnam, EPIC's experiential learning methods could enhance the national farmer training program, focusing on climate-smart agriculture.

Academic and multilateral networks can serve as entry points. Many universities engaged in EPIC are members of the ASEAN University Network (AUN) and the UNESCO Creative Cities Network, both of which can serve as platforms for sharing EPIC lessons regionally. Likewise, UNEP's own initiatives offer relevant tools, training modules, and funding pathways that could be strategically coordinated with EPIC activities. For example, UNEP projects focusing on adaptation or Ecosystem-based Adaptation often. Involves academia; these projects could benefit from EPIC-N's model, while EPIC-N would benefit from the additional support.

In addition to UNEP's catalytic role in launching and supporting regional EPIC networks, there are opportunities to further embed and scale the EPIC model through synergies with UNEP's broader adaptation programming and with global climate-education partnerships. While GAN already has been a key mechanism for UNEP's engagement with EPIC-N to date, other initiatives offer potential for strategic alignment. These initiatives can serve as programmatic vehicles for UNEP to mainstream EPIC-N as a locally grounded, education-driven model for adaptation action. Based on the assessment's findings and alignment with UNEP's mandate, the following entry points are proposed:

1. **Potential for integrating EPIC Outputs into the Lima Adaptation Knowledge Initiative (LAKI's) Knowledge Brokering Architecture**

The Lima Adaptation Knowledge Initiative (LAKI), jointly implemented by UNEP and the UNFCCC, identifies and addresses knowledge gaps that hinder effective adaptation in vulnerable regions. EPIC-N projects—particularly those that have produced locally developed adaptation tools (e.g., flood maps, waste management strategies, ecosystem restoration models)—can directly contribute to LAKI's objective of closing context-specific knowledge gaps. However, it is important that the products are validated by UN staff prior to inclusion to ensure quality. Entry points for UNEP could be:

- Establish a formal channel for feeding EPIC-N outputs (reports, tools, datasets) into LAKI's regional knowledge broker networks.
- Facilitate peer learning events that connect EPIC universities with LAKI knowledge users in the same regions (e.g., cities, NGOs, or policymakers).
- Use LAKI platforms to disseminate adaptation case studies from EPIC city–university partnerships.

This would give visibility to EPIC-N results, strengthen the science-policy interface, and help scale successful solutions beyond their pilot context.

2. **Positioning EPIC as a Delivery Mechanism under the UN Climate Change and Universities Partnership Programme.**

This UNFCCC-coordinated initiative encourages partnerships between universities and governments to generate research that supports national adaptation and mitigation priorities (including NDCs and NAPs). EPIC's operational model—wherein student research is embedded in real-world municipal priorities—aligns with the objectives of this program. Entry point for UNEP includes:

- Support the formal recognition of EPIC-N city-university pairs as official contributors under the Universities Partnership Programme.
- Facilitate alignment of EPIC-supported coursework and student research with countries' NAPs/NDCs to enhance relevance and policy uptake.
- Offer targeted support to pilot this integration in selected countries where UNEP already has a strong presence (e.g., Thailand, Zambia, Colombia).

This would help institutionalize EPIC-N's contribution to climate policy implementation while strengthening the academic relevance of adaptation planning processes.

3. **Strengthening Capacity through Collaboration with Least Developed Countries Universities Consortium on Climate Change (LUCCC) in LDCs**

The LUCCC is established to conduct research and strengthen teaching capacity in LDC universities specifically on climate change. EPIC's model—particularly when applied in places like Liberia, Zambia, and Uganda—can be a valuable complement to LUCCC's focus on curriculum development and applied climate research. By linking EPIC and LUCCC, UNEP can deepen the long-term institutional capacity of LDC academic systems while localizing adaptation innovation. Entry point for UNEP could be:

- Facilitate formal partnerships between EPIC university nodes and LUCCC member institutions for curriculum co-design, joint adaptation research, or faculty training.
- Support the co-hosting of regional workshops on participatory adaptation planning using the EPIC model.
- Encourage cross-institutional mentorship, where EPIC-experienced faculty support LUCCC members in implementing community-based adaptation projects.

PROMISING LOCAL ADAPTATION INNOVATIONS TO SCALE

Within the EPIC-N programme, multiple innovations have been identified that could be supported or scaled with UNEP assistance. These are illustrated in Table 4.

Table 4: Potential EPIC Adaptation Outcomes for upscaling

Project (country/city)	Outcome	Upscaling Potential
Sustainable Farming in Soc Trang Community College (Soc Trang, Vietnam)	Smallholder farmers adopted composting and biofertilizer techniques, improving soil health and resilience to drought and salinity. Students gained practical agro-ecological and communication skills.	The success of farmer engagement combined with farmer interest in scaling, indicates strong potential for scaling across the area and into neighbouring districts.
EPIC–FIDECOAGUA Payment for Ecosystem Services (Mexico, Coatepec, Veracruz)	University support improved Payments for Ecosystem System (PES) processes—enhanced technical capacity of community forest owners and better watershed outcomes.	Integration with municipal PES offers a replicable model for nature-based watershed resilience across LAC.
Rescuing La Piedad Lagoon (UAM) (Cuautitlán Izcalli, State of Mexico)	Over 300 students across multiple courses contributed to water quality analysis, wetland restoration designs, and public awareness media. These efforts are now informing municipal planning for lagoon regeneration.	Reflects strong institutional partnerships and student mobilization—offering a blueprint for urban water resilience in other Mexican cities.
Lusaka Sustainability Programme (UNZA)	University–municipality partnership produced hazard mapping, water and sanitation planning, informal settlement strategies, and local area plans. A formal MoU was signed and city departments began embedding climate resilience into planning.	Expanding city-wide: training now extends to 20+ departments and over 500 students. Demonstrates how EPIC can scale through formal institutional arrangements and integration into municipal systems.
Creating sustainable solutions to waste management, invasive species, early warning (Durban, Ethekwini Municipality)	EPIC students collaborated with municipal staff and community "Enviro Champs" to remove invasive plants, install waste bins, support ecosystem-based adaptation and use WhatsApp for flood warning.	A replicable model for informal settlements—integrating community co-management and early warning systems. Strong municipal interest suggests scope for expansion across the metro.
Building Climate Resilience in Bandung (Indonesia, Bandung)	Students collaborated with city agencies and communities to design and implement climate-resilient measures, installing water pumps, expanding green space, and improving urban flood responses.	Embedded in ITB's curriculum, this initiative establishes a long-term institutional mechanism for ongoing city resilience work. It can be extended to other Indonesian cities facing urban flooding and heat challenges.

From Trash to Transformation (Seberang Perai, Malaysia)	Introduction of composting initiatives in high rises and Waste Warrior Days in rural areas.	Waste management can often be added as a component to most projects focused on e.g. EbA.
Combating Agricultural Waste and Boosting Farmer Income (Penang, Malaysia)	Training on organic composting to reduce use of pesticides.	High farmer interest in continuing and potential expansion to more farmers through the university.
Enhancing disaster Preparedness of Lakeshore Communities in Calamba City, (Philippines)	Promoted health and sanitation measures and capacitated officials to improve disaster plans to combat climate change	Multi-stakeholder collaboration that involved multiple departments focused on agriculture, environment, planning, and disaster risk sets the stage for upscaling on the disaster risk management plans.

In addition, several adaptation-related topics were mentioned during consultations as opportunities that could be developed as viable projects through EPIC and could benefit from UNEP support:

- During the field trip, local stakeholders in Vietnam highlighted waste management as a critical yet often overlooked adaptation issue. Poor solid waste disposal, particularly in canal systems around Long Xuyên City, increases urban flooding and sanitation risks. Projects that raise awareness, promote behavior change, and establish proper waste infrastructure are considered highly impactful and necessary. These approaches align well with ecosystem-based adaptation and could be replicated in similarly affected regions.
- In Latin America, work between environmental legal clinics and local governments has emerged as a novel mechanism for climate adaptation. These clinics engage students, communities, and municipalities in reviewing legal frameworks, drafting ordinances, and embedding climate justice in local planning. This approach strengthens local legal capacity and promotes participatory governance.

4.3 Leveraging EPIC through UNEP

UNEP ENTRY POINTS TO SUPPORT AND EXPAND EPIC-N

UNEP has an opportunity to deepen its support for the EPIC program by leveraging its institutional strengths, convening power, and cross-sectoral mandates. As a model for university-cities collaboration on climate adaptation and sustainable development, EPIC aligns closely with UNEP's mission and offers entry points for engagement. As earlier noted, consultations for the assessment generally emphasized that UNEP indeed plays a catalytic and legitimizing role in the EPIC model, particularly the seed funding, which enabled the launch of regional networks and the mobilization of new city-university partnerships. Interviews across the regions reported that UNEP's early involvement was often a key reason why universities or local governments.

However, to fully leverage and scale the EPIC model globally, it is noted that UNEP's role must evolve from a project-based supporter to a more strategic enabler of long-term systems integration. This would enable UNEP to position EPIC-N not only as a stand-alone model but also as a delivery mechanism aligned with its broader adaptation and resilience-building agenda.

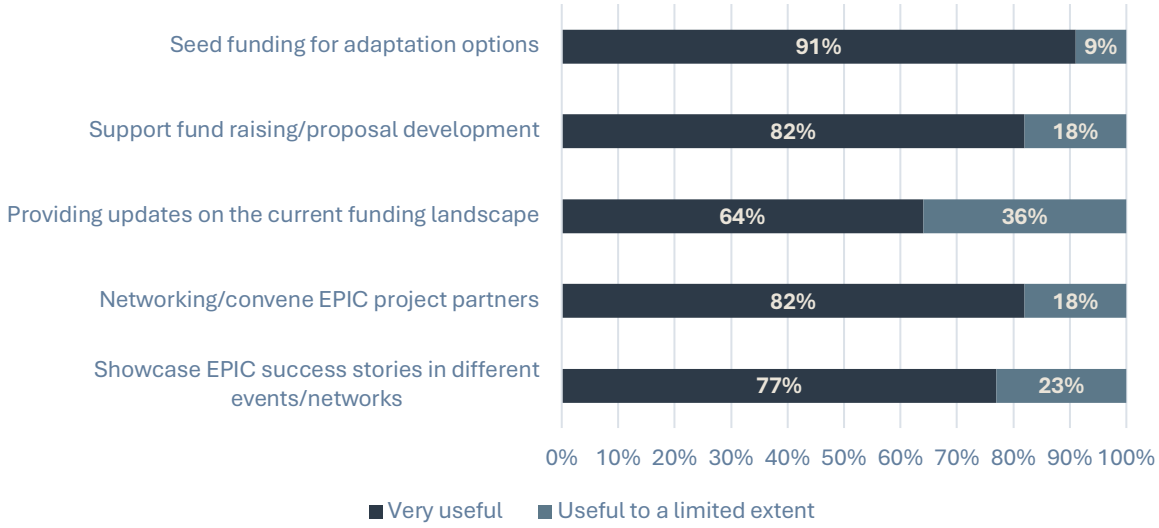
Stakeholders identified several potential entry points. UNEP could integrate EPIC more formally into its national and regional climate adaptation frameworks, positioning it as a delivery mechanism for locally led, education-centered adaptation. Stakeholders suggested that to enhance implementation and sustainability, UNEP can establish a decentralized architecture (such as regional support hubs) to support EPIC and reduce administrative burdens and improve project continuity, as well as to offer technical assistance, fiscal hosting, and grant management support, especially for smaller institutions. Interviewees stressed that, in the current global funding climate, particularly following shifts in U.S. development finance, such decentralization and coordination are even more crucial to maintaining program continuity.

Stakeholders also highlighted UNEP's unique value in facilitating structured knowledge exchanges across EPIC-N partners globally. UNEP's role in organizing regional and global learning events (e.g., through GAN or APAN) was cited as instrumental in building communities of practice, fostering peer learning, and enabling South-South learning exchanges that connect EPIC partners globally. EPIC-N partners recognized the value of UNEP's convening power. They recommended that it be utilized more deliberately to host exchanges, showcase university-developed tools, and facilitate the translation of research outputs, such as flood maps, risk assessments, or agroecological studies, into policy-relevant formats.

Interviewees and survey respondents further emphasized the need for UNEP to help raise the visibility of EPIC in global climate finance and adaptation forums. This includes supporting EPIC's fundraising and outreach to private sector partners, national climate funds, and philanthropic organizations. As one interviewee described, UNEP's reputation helps "open doors" to donors and lends credibility to fundraising pitches.

Survey responses and mission findings highlight that UNEP could provide additional support by offering research assistant scholarships, fostering accreditation mechanisms for EPIC institutions, creating a public database of lessons learned, and amplifying the voices of students and communities at international events. Moreover, when asked if an agency like UNEP could support the EPIC program, respondents showed clear preference for additional seed funding (91%), fundraising (82%), and networking (82%) (Figure 4).

Figure 4: Potential UNEP entry points for EPIC Support



UNEP'S ROLE IN EPIC-N SUSTAINABILITY

Interviewees emphasized that while UNEP's financial contributions have been modest in absolute terms, they have often had an outsized impact—unlocking national co-financing, enabling institutional buy-in, and catalysing long-term partnerships. However, as the EPIC program enters a new phase of consolidation and growth, UNEP's support must evolve to ensure alignment with a forward-looking sustainability strategy.

One of the most immediate and strategic steps recommended during interviews was the formalization of the UNEP-EPIC Partnership through a Memorandum of Understanding (MoU). Such an MoU could help institutionalize the collaboration, clarify expectations, and create a more structured framework for joint programming. It would also support cross-divisional visibility of EPIC within UNEP, enabling greater synergies with other UNEP initiatives, particularly those focused on EbA, locally led adaptation, youth engagement, and education for sustainable development.

In terms of financing, interviews suggested the potential for an annual commitment (estimated by interviewees to be around USD$200,000–300,000 to support a series of in-depth trainings across Africa, Asia, and Latin America. These trainings not only catalyze new partnerships and support the expansion of regional networks but could also create a pipeline for scaling successful EPIC-N approaches.

UNEP's forward role could also entail strategic technical assistance. According to stakeholders, UNEP could support the development of a refined Theory of Change, a monitoring and evaluation (M&E) framework, and a more structured financial roadmap for EPIC-N, all of which are currently missing. Currently, the lack of such frameworks limits the program's ability to demonstrate its long-term results. UNEP's technical support in these areas would thus directly strengthen EPIC-

N's organizational sustainability. Notably, this may need to extend beyond a focus on adaptation, given EPIC-N's broader alignment with all the SDGs.

Additionally, UNEP's participation in EPIC's regional advisory structures (particularly in Africa and LAC) was viewed by interviewees as a promising way to strengthen governance and unlock local-level resources. Such engagement could help shape proposal pipelines, broker partnerships, and ensure EPIC's regional implementation aligns with UNEP's evolving adaptation strategy.

Stakeholders recommended UNEP provide more direct programmatic support, such as offering research assistant scholarships for students, supporting accreditation pathways for EPIC institutions, creating a shared lessons-learned repository, and facilitating student and community participation in international policy dialogues.

Several stakeholders also emphasized the importance of UNEP continuing to raise EPIC's profile. This includes showcasing EPIC success stories on UNEP platforms, helping to publish and disseminate tools or guidance documents produced by university teams, and facilitating access to global events. UNEP's participation in this area reinforces its own leadership in locally led adaptation and education-driven climate action, while also attracting further attention to EPIC's contribution to the Sustainable Development Goals.

5. Summarized Assessment Recommendations

This outcome assessment was designed to identify adaptation results, lessons learned, and potential opportunities for scale-up, rather than to serve as a formal evaluation. As such, the recommendations presented below are not prescriptive. Instead, they are suggestive in nature and intended to inform UNEP's strategic thinking based on the evidence and insights gathered throughout the assessment. They are drawn from the findings presented in Section 3 (Key findings covering program- and project-level outcomes, and Section 4 (Lessons learned, recommendations and perspectives), which covers lessons learned, potential for scaling, as well as UNEP's possible role as suggested from consultations. These suggestions reflect what UNEP might consider as it reflects on the future role it could play in supporting or leveraging the EPIC model in line with its climate adaptation and capacity-building mandates. Table 5 below outlines suggested recommendations.

Table 5. Summary of Suggested Recommendations and Roadmap

Recommendation	Description	Potential Priority Activities with Regional Considerations
Strategic: Programme Level		
Consider formalizing UNEP's role as a strategic funding partner	Stakeholder consultations highlighted that UNEP's catalytic support has lent visibility and legitimacy to the EPIC model in several regions. Given the current finance landscape, which may jeopardize further finance in those regions, UNEP's role is increasingly important for EPIC-N potential sustainability outside the US. Going forward, UNEP could consider formalizing its collaboration with EPIC-N, e.g., an MoU outlining UNEP's exact support (technical and financial), to strengthen alignment, increase visibility within the UNEP system, and facilitate cross-program collaboration.	• Fund drafting and negotiation of a UNEP–EPIC-N Memorandum of Understanding, including legal and programmatic scoping of collaboration on adaptation. • Ensure the UNEP focal point coordinate internal alignment across UNEP divisions (e.g., GAN, LAKI, NAPs, youth, EbA projects). • Allocate funds to develop a short UNEP-EPIC-N positioning paper or joint strategy note to identify where EPIC can deliver on UNEP MTS outcomes (esp. locally led adaptation and capacity-building), based on the present Outcome Assessment. • This would be global in scope, but implementation should draw on recent success stories from Asia (where pilot funding was effective) and Africa (where formal municipal partnerships are emerging and could be built into UNEP country programming).
Explore opportunities to sustain and expand regional support	UNEP's role in launching and supporting regional EPIC networks has been widely valued. Continued engagement, through periodic	• Support periodic regional training events (e.g., every 12–18 months) that reinforce implementation skills and reconnect universities with municipal partners, as was recently done in Durban. These should

	training workshops, technical guidance, and modest seed funding, could help consolidate progress, support institutional uptake, and introduce the model in new locations.	prioritize Africa, where most cities remain at the "trained/contacted" stage, and where refresher engagement is needed to sustain interest and re-activate dormant partnerships. • Provide light-touch regional coordination grants or secondments, especially in LAC, where uptake is strong at the university level but weaker on the municipal side. A coordinator with municipal outreach capacity could help balance partnerships. • In Asia, where initial seed funding led to replication, UNEP could support a regional learning exchange or scaling lab to document and expand on successful models (e.g., Vietnam and Thailand city pairs). • Support the institutionalization of EPIC-N roles (e.g., EPIC coordinators or liaison officers) at selected universities and/or municipalities, particularly in cities showing strong potential for long-term adoption (e.g., Durban, Lusaka, Calamba).
Support strategic planning and systems development including improved definition of a Theory of Change and potential M&E system that helps track results.	EPIC-N is evolving its internal systems, but interviews and survey responses pointed to gaps in strategic planning, monitoring, and financial sustainability. UNEP could contribute its experience in these areas by supporting the development of a results framework, a theory of change, and a basic adaptation typology for EPIC projects. This	• Support the co-development of a light Theory of Change and M&E framework, focused on tracking adaptation outcomes, knowledge transfer, and capacity building. This could be led by EPIC-N with UNEP technical guidance and validated through regional inputs. • Pilot the application of the new framework in Asia, where more adaptation-relevant projects are active and there is an emerging track record to draw from. This could include testing how to classify projects using a shared adaptation typology (e.g., disaster risk, ecosystem-based, governance-focused).

	could help position EPIC more strongly within national adaptation and education agendas. Given that EPIC projects are not always labelled or structured as adaptation initiatives, tracking adaptation outcomes remains challenging. UNEP could support the development of a basic typology and lessons-learned database, perhaps co-developed with EPIC regional networks, to help improve documentation and learning around adaptation and climate co-benefits.	• In LAC, use the framework to clarify the adaptation co-benefits of projects that are currently labelled as "sustainability" initiatives, strengthening the case for municipal investment and replication. • Allocate funding to develop a simple digital reporting tool or dashboard to allow EPIC-N regional coordinators and partners to track project types, outcomes, and follow-up actions across regions.
Use UNEP channels to raise visibility of the model and its contributions	• Many interviewees noted that visibility, particularly for students and communities, has been a strong outcome of UNEP's engagement. UNEP might consider further supporting communications and visibility efforts, such as: • Featuring EPIC results through its digital platforms. • Facilitating participation in international forums (e.g.,	• Curate and repurpose selected stories from the EPIC-N website into policy- and donor-facing case briefs, highlighting adaptation outcomes, co-benefits, and alignment with UNEP's strategic themes (e.g., EbA, youth engagement, locally led adaptation). • Sponsor student or faculty participation in global events, such as the UNFCCC Climate COP, Regional Climate Weeks, or UNEP-organized South–South exchanges. Ensure at least one representative from each region is selected based on projects with adaptation relevance. • In Africa, support the creation of a "Voices from the Field" video series co-produced by

	Climate Weeks, COP side events). • Supporting simplified case studies for use by local governments.	students and municipal partners to document how EPIC-M is applied in informal settlements, rural agricultural areas, or urban flood zones — highlighting locally led innovation. • In Asia co-host thematic sessions e.g. with APAN featuring EPIC-N projects on e.g. EbA or community resilience, building visibility through regional knowledge platforms. • Develop a dedicated EPIC-N adaptation story hub.

Further Leverage synergies with UNEP and UN-affiliated adaptation and academic initiatives	EPIC-N is well positioned to collaborate with initiatives such as LAKI, LUCCC, and the UN Climate Change and Universities Partnership Programme. These platforms can help scale EPIC outputs, formalize its academic-policy interface, and strengthen adaptation knowledge systems.	• A, ensure the EPIC-N UNEP focal points coordinates with UNEP a and UN-Affliated academic programs to:
		  ○ Work with LAKI regional knowledge brokers to incorporate EPIC outputs into knowledge-sharing platforms, especially in Africa and Asia where adaptation tools are already being used.
		  ○ Facilitate connections between EPIC city–university pairs and LUCCC members in LDCs (e.g., Liberia, Zambia, Uganda) for joint research and curriculum development. - Pilot integration of EPIC-N partnerships into the UN Climate Change and Universities Partnership Programme in select countries (e.g., Vietnam, Mexico) to support alignment with NDC/NAP implementation.
		• UNEP could support these linkages through technical facilitation, joint workshops, or

		guidance notes tailored to each initiative's mechanisms.
Lead on EPIC-N learning and South-South exchange	UNEP's convening power could support EPIC-N's ambition to strengthen its global learning platform. Continued facilitation of regional knowledge exchange events, building on experiences from Pretoria, 7th APAN Forum[18], and Latin America, could deepen peer learning, surface best practices, and promote south-south collaboration. UNEP's involvement could also help bring greater visibility to local innovations through global policy platforms.	• Host a virtual or hybrid South–South learning series in partnership with EPIC-N, focused on cross-regional themes (e.g., community-based flood management, participatory urban planning, nature-based adaptation). Ensure participation from EPIC city-university pairs in all three regions, including Africa, where city-to-city learning is still limited. Involvement of municipality for learning purposes is really important. • Integrate EPIC-N examples into UNEP-led knowledge exchanges using student- and city-led sessions to spotlight local adaptation innovation. • In Asia, support a regional peer-learning retreat focused on scaling successful pilots (e.g., Vietnam's flood mapping, Thailand's smart infrastructure), potentially co-hosted with national adaptation platforms or NAP teams. • In Africa, fund travel or coordination costs for city-level participation in EPIC events, to counter the current imbalance where faculty are overrepresented in regional gatherings. • Document and disseminate peer learning outcomes via UNEP's climate adaptation channels, helping local voices influence policy dialogue

[18] Launching of EPIC-Asia in conjunction with the 2021 Asia Pacific Adaptation Network (APAN) Conference with a two-day EPIC-Model training workshop

		while ensuring lessons are captured and shared
Operational: Project Level		
Help position EPIC-N as a complementary mechanism for locally led adaptation	The EPIC model's emphasis on municipal engagement and locally contextualized solutions aligns well with UNEP's support for community-based and ecosystem-based adaptation. In contexts where UNEP works with subnational actors or education systems, EPIC could serve as a practical delivery mechanism for small-scale, knowledge-driven adaptation initiatives. There may also be scope to align the EPIC approach with NAP processes or NDC implementation in select countries.	• Integrate EPIC-N city–university pairs into UNEP-supported NAP or EbA implementation processes, particularly in Asia, where universities are already supporting municipal flood risk management, smart urban planning, and ecosystem mapping (e.g., Vietnam, Thailand, Indonesia). • In Africa, UNEP could identify 1-2 cities (e.g., Lusaka, Durban) where student-generated tools (e.g., hazard maps, local area plans, flood early warning systems) already exist and work with municipal authorities to validate and incorporate these outputs into ongoing or planned adaptation initiatives, such as NAP implementation, GCF pipeline development, or local resilience planning supported by UNEP. This may involve small grants or technical assistance to enhance data quality, align formats with municipal standards, or support stakeholder consultations for formal adoption. • Facilitate dialogue between EPIC-N partners and UNEP country teams, especially where UNEP supports LDCs with adaptation planning or GCF readiness (e.g., Liberia, Zambia, Uganda). This can help formalize EPIC-N's role as a delivery partner in ongoing UNEP adaptation work. • As suggested above, development a UNEP–EPIC positioning note to articulate how the model aligns with key programming areas

		(e.g., LLA, EbA, youth) and can be embedded in future project designs or proposal pipelines would also support this recommendation. • In LAC, where municipal involvement is relatively weaker, support universities to co-develop local adaptation concepts with municipal actors and use these to access national or regional adaptation funding calls.
Consider ways to reinforce local continuity and ownership	The long-term viability of EPIC partnerships often depends on local champions. UNEP could consider supporting measures to promote continuity, such as support for regional or university-based coordination roles, or incentives for institutional integration (e.g., curriculum alignment, MOUs between universities and cities). These steps could reduce the risk of partnerships dissolving after pilot activities end.	• Support the formalization of EPIC-N roles within university structures (e.g., by funding part-time coordinator positions as done in Asia already or course-based integration of EPIC work). This is especially relevant in Africa, where reliance on individual champions has led to stalled partnerships (e.g., Lusaka, Harare) when key faculty or municipal contacts leave. • In Asia, consider supporting the development of university-level EPIC-N implementation hubs, where experienced faculty mentors new adopters and create institutional memory as was somewhat done in e.g., An Giang in Vietnam, Thammasat in Thailand; this could be further expanded but require resources to support the mentors' time. • Help broker national/local support for grants to cover coordination, student transport, or public engagement — especially during transitions between academic semesters or municipal leadership changes — to minimize momentum loss. UNEP could even help broker this support from the participating the universities.

		• Promote institutional embedding of EPIC-N in municipal planning departments through long-term partnerships, such as Durban's city-funded EPIC coordinator, which could serve as a model for replication.
Identify options for scaling promising results	Some EPIC-N pilots, such as the community-based flood warning system in Durban or the agroecological adaptation work in Soc Trang, have generated tangible outcomes and stakeholder interest. Where appropriate, UNEP could explore how such initiatives might be scaled or mainstreamed into municipal planning or adaptation programming, particularly in countries where UNEP already has an operational footprint.	• Support technical refinement and documentation of promising EPIC-N project outputs (e.g., disaster early warning tools in Durban, composting/agroecology in Soc Trang, PES innovations in Veracruz) so they can be integrated into formal municipal strategies, grant proposals, or maybe even UNEP programming pipelines (e.g., GEF/GCF concept notes, EbA investments). • In Asia, collaborate with local authorities and national adaptation bodies to help embed scaled EPIC-N outputs into broader sectoral programs. • In Africa, UNEP could facilitate replication by supporting cities like Lusaka or Durban to train peer municipalities using their EPIC-derived planning tools (e.g., community hazard maps, local adaptation plans), potentially through EPIC-hosted regional exchanges or GAN platforms. • In LAC, where several projects with adaptation co-benefits have already demonstrated scale potential (e.g., PES in Veracruz, lagoon restoration in Mexico City or in Soc Trang, Vietnam), UNEP could help identify complementary funding sources or municipal development plans where these innovations could be expanded.

		• Create a scaling readiness assessment framework (adapted from existing tools UNEP uses) to identify which EPIC projects are ready for scale-up, what barriers exist (e.g., technical validation, funding, policy alignment), and what UNEP support is needed to advance.

Annexes

Annex A. Assessment matrix

Questions	Stakeholder group								
	Interviews						Survey question*	Desk review	FGD
	EPIC management	Donor	Partner	Municipality/ university	Students	Final beneficiaries			
A. Program level Assessment									
A1. How has the EPIC Program facilitated networking and collaboration between cities on climate change adaptation? What has been the key outcomes of partnerships formed through EPIC-N, and how have they contributed to adaptation and resilience-building (UNEP role)?	x			x			x	x	
A2. Has the programme been able to inspire a greater number of cities to act on climate change adaptation? If so, how?	x			x				x	
A3. How has the EPIC programme advanced or enhanced the visibility of cities' climate adaptation actions/activities/programmes globally?	x	x	x					x	
A4. Has there been an overall increase in the number of cities mobilising academics to address urban climate issues, specifically adaptation, because of the programme? How has the programme contributed to this?	x	x	x	x				x	
A5. How many adaptation-relevant city-university pairs has UNEP sponsored to date? How effectively have UNEP's financial support been utilized to advance adaptation goals within EPIC-N? What improvement could be made?	x								
A6. What are the existing sources for EPIC-N, and how financially sustainable is the program in its current state?	x	x							
A7. What is the financial strategy for EPIC so that the initiative becomes financially sustainable? Is there any EPIC-N financial plan going forwards? If so, how UNEP support fits into that forward plan?	x	x							
A8. How could the EPIC model be leveraged through UNEP? Or other initiatives? What is UNEP's role in strengthening the EPIC-N model at the global level, and how can that role be enhanced?	x	x	x				x		
A9. Are there any complementary initiatives that EPIC could benefit from or create synergies with?	x	x	x	x					
B. Project/City level Assessment									

B1. What has been the most useful aspect of participating in the EPIC programme? What advantages has the city-university partnership provided?				x	x	x	x		x
B2. How and what kind of capacity has the program built on climate change adaptation? Has the programme contributed to a better understanding and perception of climate change adaptation amongst city officials? universities? students? local communities? How have they used the knowledge and learning shared through EPIC?				x	x	x	x		x
B3. What other kind of support has the program delivered to the municipality (policy support, guidance, knowledge products or tools) or to the university (capacity building)? What are the key adaptation outcomes that have been achieved? Are there specific examples of increased consideration of climate change adaptation in city priorities and plans? Or in academic programs/research? Were there any climate related-initiatives funded by the municipality/or any public actor after the EPIC-model was implemented? How did the EPIC programme support this engagement? Can you give examples?				x			x		x
B4. How has the EPIC programme helped to empower and support academics to contribute to urban adaptation? What does this empowerment look like?				x	x		x		
B5. Have students recommended the EPIC programme to other students? Did new students follow the recommendation?					x				x
B6. Has the programme built capacity or increased students' access to professional opportunities and networks? If so, how or what kind of opportunities and networks?					x				x
B7. To what extent has the project had an impact on: beneficiaries' income? safety? well-being? environment? Has the project had any unforeseen negative environmental, social or economic effects?						x	x		
B8. Does the project have a sustainability strategy? Has it been able to secure financing or other resources?				x			x		
C. Lessons Learned and best practices									
C1. Are there any other specific adaptation outcomes of the programme that should be considered?	x		x	x	x	x			
C2. Are there any promising local adaptation innovations that UNEP should support to scale up?	x			x			x		
C3. What are UNEP's potential entry points to further support the EPIC program?	x		x	x	x	x			
C4. What are the main strengths of this programme?	x	x	x	x	x	x	x		x
C5. What were some of the barriers and challenges that affected the implementation of the programme? How did they affect the programme? What measures were taken (if any) to mitigate/overcome these challenges?	x	x	x	x	x	x			x

C6. What are the main lessons learned from the programme? Are there specific examples?	x	x	x	x	x	x			
C7. What would be your recommendations for UNEP's future engagement in the program?	x	x	x	x	x	x			

Annex B. List of interviews and focus group conducted

Name	Contact	Organization	Position
South Africa Field Mission			
Catherine Sutherland	sutherlandc@ukzn.ac.za	UKZN	Lecturer
Russel Stow	russell.stow@durban.gov.za	eThekwini Municipal	Member of the city strategic council - Project executive Transformative Riverine Management Programme
Mr. Sean Odonghue	sean.odonoghue@durban.gov.za	eThekwini Municipal	Municipality official - Senior Manager Climate Change Department
Smiso Bhengu	smiso.bhengu@durban.gov.za	eThekwini Municipal	Senior Climate Change Specialist - Climate change Department
Buthelezi Bashintshie	ND	UKZN	Research assistant
Eduan Coetzee	ND	UKZN	Current student
Dr Anthony	ND	UKZN	PhD student
Mr. Msimelelo Gqaleni	ND	UKZN	Research assistant
Xolani	ND	UKZN	Current student
Joel Rogers	jrogers60@gmail.com	EPIC	CEO
• Gavin Luther • Ada Inman	• gavin@epicn.org • ada@epicn.org	EPIC staff	• Managing Director • Program manager & communication officer
• Andrea Chavez • Kay Nuttavikhom Phanthuwongpakdee • Mzime Regina Ndebele-Murisa	• andrea@epicn.org • kaynp@epicn.org • mzime@epicn.org	EPIC	Regional coordinators
Mexico Field Mission			
Lily Chávez	ND	Ayuntamiento de Cuautitlán Izcalli	Sustainability and Environment Director
Fabiola Sosa	fssosa@gmail.com	Autonomous Metropolitan University (UAM)	Professor
• Aidee Yeraldy Cruz • Ana Karen Rodríguez • Angel Deni Vertiz	ND	Autonomous Metropolitan University (UAM)	Students: • Environmental Engineering

• Carolina Ivonne Hernández • Hugo Erick Sánchez • Mariana Denisse Ruiz • Mariana Manterola • Yocsan Torres			• Environmental Engineering • Graphic Communication Design • Economy • Economy • Graphic Communication Design • Sociology • Sociology
• Selena • Andrea • Samantha • Josefina	ND	University of Veracruz (UV)	Students: • Psychology • Psychology • Business • Pedagogy • Economy
Ana Karen Novoa Rodríguez	ND	FIDECOAGUA	General Manager of FIDECOAGUA
• Araceli • María Alejandra • Ana Laura • Víctor • Marco Alberto	ND	FIDECOAGUA ben eficiares	Guardianes del bosque - beneficiares
• José Antonio Pensado • Eduardo Hernández • Fabián López	• apensado@uv.mx	University of Veracruz (UV)	Coordinators EPIC UV: • Coordinator Cosustenta y EPIC from Universidad Veracruzana • Assistant to the EPIC coordinating team at the UV • Fellow of the EPIC coordinating team at the UV
• Fabiola Hernández • Katya Romero • Ariadna Pérez • Aurora Mejía • Francisco Javier Segura • María de los Ángeles Chamorro • Héctor Narave • Elena	ND	University of Veracruz (UV)	Teachers: • Faculty of Psychology • Faculty of Economics • Teacher at the Faculty of Pedagogy • Faculty of Psychology • Lecturer in the Faculty of Administrative and Social Sciences • Coordinator of sustainability and Biology faculty member • Teacher of the Master's degree in sustainability management

			• Teacher of the Faculty of Pedagogy
Beatriz Adriana Venegas Sahagún	• beatriz.adriana@cucea.udg.mx	University of Guadalajara, CUCEA	Research Professor and Coordinator of the Bachelor's Program in Environmental Management
• Norma Candolfi Arballo • Bernabé Rodríguez • Eduardo Montoya • Juan Antonio Pitones Rubio	ND	Autonomous University of Baja California	• Extension and Liaison Coordination • Responsible for faculty training. • Professor of architecture at the faculty and EPIC project leader. • EPIC-N Coordinator, Faculty of Engineering Sciences and Technology.
• Yadira Sigler Chavez • Christian Carolina Gallegos Magaña	• yadsigler@ucol.mx	Colima University	• General Directorate of Liaison, Sustainable Development Area • Sustainable Development Area Staff
Andrea Chavez (scoping meeting)	• andrea@epicn.org	EPIC	Regional coordinator
Thailand-Vietnam Field Mission			
• Naim Laeni	naimnl@tu.ac.th	Thammasat University	Lecturer in Political Science
• Mr. Jirapong Plaengdaeng • Miss Panadda Tookjaerk • Mr. Sarawut Thapsongkhorh • Miss Siriphin Thanaarkaraphong • Mrs Jesalan Tosu • Miss Waraporn Namthai	rangsitcity@gmail.com	Rangsit Municipality Thaklong Municipality	• Deputy Municipal Clerk • Director of Scial Wellfare Division • Professional teacher • Community Development Specialist • Community Development Officer • General employee
Kanyaath Nimtrakool	Nimtrakool.k@gmail.com Kanyarat.pr@chula.ac.th	Rajaman University of Technology	Lecturer
Boonanan Natukan	boonanan@ap.tu.ac.th	Faculty of Architecture and urban planning, Thammasat University	Assistant Professor
Wijitbusaba Marome	wijitbusaba@ap.tu.ac.th wijitbusaba@yahoo.com	Thammasat University -	Associate Professor

		school of architecture and planning	
• Dien • Nhu	Cannot be disclosed	Soc Trang	Students
Xa Le	Lethixa1982@gmail.com	Soc Trang University	Lecturer
• Ms. Huyen • Mr. Huan	Cannot be disclosed	Soc Trang municipality	• From plantation department in the District • Peoples committee
Phuong Pham	ptlphuong@gmail.com	Vietnam National University HCMC An Gian University	Researcher
Thi Thao Phung	That.tnmtangiang@gmail.com	Department of Natural Resources and Environment, long Xuyen City	Civil Servant
3 farmers from community	Cannot be disclosed	Farmers	Community final beneficiaries
• Woonsen • Owen	Cannot be disclosed	Thammasat University Thailand	• Sr. Student • Freshman
	Additional virtual calls		
Anthony Socci	socci.anthony@epa.gov		

Annex C. List of documents reviewed

- Andrea Chavez Michaelsen. EPIC-LAC First Year Evaluation Presentation
- Andrea Chavez Michaelsen. EPIC LAC Regional Coordinator for Latin America and the Caribbean. EPIC LAC SINCE 2022
- C40 Cities Finance Facility. Transforming River Management and Shifting Mindsets in South Africa and Beyond
- Clínica Jurídica Ambiental de la Facultad de Derecho de la Pontificia Universidad Católica del Perú, 2023. Estudiantes Dejando Huella. Boletín Anual 2023.
- Educational Partnerships for Innovation in Communities (EPIC), 2020. Africa Training Workshop Report. Durban Botanic Gardens, Durban, South Africa 3 – 6th February 2020.
- EPIC A Annual report 2020-2021
- EPIC Africa Network Learning Event 2025.
- EPIC Africa, 2020. The case of eThekwini Municipality Report on EPIC A Pilot Project 2018 -2019
- EPIC DURBAN, University of KwaZulu Natal Presentation
- EPIC-ASIA PACIFIC Seed Grant Project Proposal, 2021. Development of an Environmental Awareness Program on Climate Change and Biodiversity Conservation for Lapus-Lapus Integrated Marine Protected Area, Municipality of Dumangas, Iloilo Province, Western Visayas Philippines
- EPIC-LAC. Evaluation based on: Challenges and Impacts and Benefits. Presentation
- EPIC-N Strategic Plan 2017.
- eThekwini Municipality. Community Based Early Warning System: Every Life Matters
- GAN and DAC, 2016. Global Adaptation Network (GAN) and Durban Adaptation Charter (DAC) Regional Knowledge Sharing Exchange Visit, 23rd – 25th November 2016. Pemba, Mozambique
- Hat Yai Municipality, Thammasat University (TU). EPIC-N proposal.
- Launching EPIC-Asia at the 7th APAN Forum 2021
- Politeknik Negeri Manado and Brury, 2021. Proposal for Seed Grant Funding. Development of Flood Early Warning Systems for the City of Manado, North Sulawesi, Indonesia.
- Proposal to apply for EPIC Asia-Pacific seed grants, 2021. Mapping inundation areas for sustainable drainage and waterlogging management in the context of climate change. A case study in urban areas of Long Xuyen city, An Giang province, Vietnam's Mekong Delta, Vietnam

- START International for UNEP GAN, 2024. Report on 2024 EPIC training April to December 2024.
- Thammasat University. Thammasat University Research Unit in Urban Futures and Policy
- UN Environment Programme, 2022. Mid Term Review of the Project 111.2: Climate Change Adaptation Strategy and Implementation Plan (CCASIP) (PIMS ID: 02085)
- Universidad Veracruzana. Alianza UV-Fidecoagua. Source: https://www.uv.mx/cosustenta/vinculacion/epic/alianzas/fidecoagua/
- University of the Philippines Los Baños, 2021. Proposal to apply for EPIC Asia-Pacific seed grants. Enhancing Disaster Preparedness of Lakeshore Communities in Calamba City, Laguna, Philippines
- Using Community Based Adaptation approaches to climate change: the case of Palmiet catchment
- UV-FIDECOAGUA Partnership. Summary Report 2023-2025

Annex D. Typology of climate change adaptation relevant actions

Policy and governance	**Development and enactment of national laws, policies, regulations and plans, including action plans**	
	Development and enactment of laws, policies, regulations and plans, including action plans, at the sectoral.	
	Development of laws, policies, regulations and plans for specific areas	
	Development of disaster risk preparedness, response and recovery plans	
	Establishment of incentives	
	Review institutional framework and systems	
	Management and monitoring of implementation legal and policy frameworks	
	International cooperation, integration and diversification and strengthening of climate change investment effectiveness	
Scientific, Technical and Societal Capacity	Develop science and technology as a foundation for formulating policies, assessing impacts and identifying measure on climate change adaptation	Acquisition of equipment that is relevant to monitor the weather and forecast climate related variables, as well as its impacts
		Better climate change-related medium and long-term projections (including SLR) (data management and modelling capacities)
		Better early warning systems
		Better risk, vulnerability and impact studies overall and on specific sites and key infrastructure
	Awareness raising and capacity building	Integration of environmental/climate education into primary and secondary school curricula
		Establishing university education programmes on climate change-related fields
		Encouraging youth to seek careers in climate change-related fields
		Training and raising awareness of practitioners and the broader society (e.g. communities, private sector) on climate change adaptation and mitigation
Climate change delivery	Ecosystem-based Adaptation (EbA)/Nature-based solutions: protection, restoration and sustainable use of terrestrial, aquatic and marine ecosystems	
	Development of sea defences	
	Retrofitting existing infrastructure	
	Relocating of communities in high risk-prone areas	
	Ensuring new infrastructure is climate-proof	

Source: Baastel Internal Adaptation typology

7.5 Annex E. Database of Projects in Asia, Africa and LAC

Since there is no EPIC-N database of projects, the consultants have constructed a basis database of projects in Asia, Africa and Latin America. This database is constructed based on multiple sources included the EPIC website, excel sheets received from stakeholders, and should therefore be viewed with caution, as it may not be comprehensive. It has been validated by each of the regional coordinators.

Database key:

*Highlighted cells indicate projects that have received seed funding from UNEP

Status:

- Active: projects have ongoing activities
- Finished: All activities related to the project is final
- Inactive: the project has no activities, but has also not been finished

Direct Climate Change Projects

Project	Country	University	City	Adaptation / Mitigation	Thematic Focus	Status
Asia						
Flood resilience for community preparedness	Indonesia	Politeknik Negeri Manado	Manado	Adaptation	Flood early warning system	Active
Building climate resilience	Indonesia	Bandung Institute of Technology	Bandung	Adaptation	Urban resilience, heat island, urban agriculture,	Active

					water management	
Youth-led community supported agriculture	Indonesia	University of Indonesia	Bandung	Adaptation	Urban planning & livability	Active
Agroecological farming systems resilience	Philippines	UPLB	Calamba	Adaptation	Climate-resilient agri-food systems	Active
Curriculum integration for climate education	Philippines	UPLB	Calamba (2nd proj)	Adaptation	Climate education curriculum	Active
Water-sensitive rural development	Vietnam	An Giang University	Long Xuyen	Adaptation	Climate-sensitive water management	Active
Livelihood resilience in rural commune	Vietnam	An Giang Climate Change Inst.	Soc Trang	Adaptation	Resilient rural livelihoods and water mgmt	Active
Youth climate advocacy initiative	Malaysia	University of Kuala Lumpur	Alor Gajah	Adaptation	Youth-led climate resilience awareness	Finished
Canal Water Treatment	Thailand	Chiang Mai Rajabhat Univ.	Chiang Mai	Adaptation	Urban safety & public engagement	Active
Local disaster risk preparedness	Thailand	Thammasat University	Hat Yai	Both	Disaster risk preparedness	Active

Wet market waste management	Malaysia	University of Kuala Lumpur	Alor Gajah (2nd project)	Mitigation	Wet market waste diversion (GHG-focused)	Active
Africa						
Flood resilience in informal settlements	South Africa	University of KwaZulu-Natal	Durban	Adaptation	Flood early warning and relocation planning	Active
Climate-resilient urban planning	Zambia	University of Zambia	Lusaka	Adaptation	Urban spatial planning for flood resilience	Active
Water and sanitation safety planning	Liberia	University of Liberia	Monrovia	Adaptation	Climate-resilient water and sanitation systems	Finished
Climate vulnerability mapping	Makerere University	Uganda	Mbale	Adaptation	Settlement upgrading & drainage planning	Active
Wastewater and sanitation innovation	Zimbabwe	Chinhoyi Univ.. of Tech.	Harare	Both	Solid waste & water mgmt planning	Active
Solid waste resilience response	Kenya	Technical University of Mombasa	Mombasa	Both	Solid waste management in climate-sensitive areas	Active
Urban walkability and mobility planning	Kenya	University of Nairobi	Nairobi	Mitigation	Non-motorized transport and air quality	Inactive
Latin America						

Amazon Environmental Law Clinic	Peru	PUCP	Lima	Adaptation	Legal tools for protecting forest and indigenous communities	Active
La Piedad Lagoon Restoration	Mexico	UAM	Mexico City	Both	Urban lagoon restoration and green infrastructure	Active

Projects with Climate Co-benefits

Project	Country	University	City	Adaptation / Mitigation	Thematic Focus	Status
Asia						
Urban consolidation Centers	Thailand	Rajamangala University of Technology Tawan-ok	Bangkok	Mitigation	Transport modeling	Active
Marine biodiversity and coastal protection	Philippines	Iloilo Science and Tech. University	Dumangas City	Adaptation	Marine conservation, ecosystem resilience	Finished
Urban composting and waste recovery	Thailand	Kasetsart University	Chatuchak, Bangkok	Both	Composting & urban greening	Active
Circular economy innovation	Malaysia	University Sains Malaysia	Balik Pulau	Mitigation	Zero waste and circular economy	Active
From Trash to Transformation	Malaysia	University Sains Malaysia	Seberang Perai Utara	Both	Circular economy	Active

Smart farming and resource resilience	Malaysia	Sultan Idris Education Univ.	Penang	Both	Smart farming, soil & emission resilience	Active
Latin America						
Sustainability Partnerships in Rural Areas	Mexico	Universidad Veracruzana	Veracruz & Xalapa	Adaptation	Community-led sustainable development	Active
Community Sustainability Innovation	Mexico	Universidad de Guadalajara (CUCEA)	Guadalajara	Adaptation	Community co-creation on urban sustainability	Active
Regional Sustainability Capacity-Building	Mexico	Universidad de Colima	Colima	Adaptation	University-led planning with municipalities	Active
Water Ecosystem Services Planning	Mexico	UAM (Azcapotzalco)	Mexico City	Adaptation	Water-sensitive green infrastructure	Active
Rainwater and Eco-Design Toolkit	Mexico	UAM & partners	Mexico City Basin	Adaptation	Urban greening and flood mitigation	Active
Environmental Education Incubator	Chile	Universidad de Chile	Santiago	Adaptation	Youth and public awareness on environmental issues	Active
Thermal Resilience in Informal Housing	Brazil	UFMG	Belo Horizonte & Contagem	Adaptation	Passive cooling for heat resilience	Active

Circular Waste Reduction Program	Brazil	UNEMAT	Nova Xavantina	Adaptation	Local circular economy and waste planning	Active
Climate Action Toolkit for Urban Parks	Mexico	SDSU–Tijuana	Tijuana	Adaptation	Urban green spaces for cooling and biodiversity	Active
Climate Risk Mapping for Vulnerable Communities	Ecuador	University (unnamed)	Ecuadorian city TBD	Adaptation	Community-based risk mapping	Active
Circular Waste and Water Management	Mexico	Universidad Veracruzana	Córdoba	Both	Circular economy and municipal services	Active

Projects/contacted cities with no climate change components

Project	Country	University	City	Adaptation/ mitigation	Thematic Focus	Status
Asia						
Creating an ecosystem of support for the unhoused in Rangsit City Municipality	Thailand	Puey Ungphakorn School	Rangsit	-	Homelessness policy	Active
Urban Expansion	Nepal	Kathmandu University	Kathmandu	Undefined project	Heritage & tourism development	Finished
Africa						
EPIC training workshop participant	Botswana	University of Botswana	Gaborone	—	Initial engagement, no climate focus identified	Active
Urban design methods orientation	Zambia	Copperbelt University	Kitwe	—	Contacted/trained only	Contacted/Trained
Public health and sanitation workshop	Malawi	University of Malawi	Lilongwe	—	Workshop held, no implementation documented	Contacted/Trained
Urban composting & food waste valorization	Senegal	University of Dakar (UCAD	Dakar	—	Contacted but no more engagement	Contacted/Trained
Coastal ecosystem restoration	Ghana	University of Cape Coast	Cape Coast	—	Contacted but no more engagement	Contacted/Trained

Flood-sensitive transport corridors	Tanzania	University of Dar es Salaam	Dar es Salaam	—	Contacted but no more engagement	Contacted/Trained
Sustainable development training	Nigeria	University of Lagos	Lagos	—	Trained university-city pair	Contacted/Trained
Governance and engagement methods	Nigeria	Ahmadu Bello University	Zaria	—	EPIC awareness training	Contacted/Trained
Municipal planning introduction	Rwanda	University of Rwanda	Kigali	—	Introductory training session	Contacted/Trained
Initial scoping engagement	Sierra Leone	University of Sierra Leone	Freetown	—	Contacted/trained	Contacted/Trained
Early training on EPIC model	Ghana	University of Ghana	Accra	—	Initial contact for planning	Contacted/Trained
EPIC model exposure workshop	Nigeria	Obafemi Awolowo University	Ile-Ife	—	Training event held	Contacted/Trained
Initial contact for project ideas	Kenya	Moi University	Eldoret	—	Exploratory engagement	Contacted/Trained
City planning coordination intro	The Gambia	University of The Gambia	Banjul	—	Training participant	Contacted/Trained
Policy and climate alignment training	Namibia	University of Namibia	Windhoek	—	Preliminary training	Contacted/Trained
Land use planning introduction	Zimbabwe	University of Zimbabwe	Mutare	—	Early EPIC introduction	Contacted/Trained
Workshop on sustainability co-benefits	Eswatini	University of Swaziland	Mbabane	—	Training only	Contacted/Trained
EPIC methods in urban environments	Ethiopia	University of Addis Ababa	Addis Ababa	—	Contacted for training	Contacted/Trained

Introductory university–city dialogue	Mauritius	University of Mauritius	Port Louis	—	Training workshop	Contacted/Trained
Climate risks workshop	Seychelles	University of Seychelles	Victoria	—	Training engagement	Contacted/Trained
Training on student–city engagement	Lesotho	University of Lesotho	Maseru	—	EPIC exposure workshop	Contacted/Trained
Joint EPIC model introduction	South Sudan	University of South Sudan	Juba	—	Training activity only	Contacted/Trained
Water sector EPIC model exposure	Burundi	University of Burundi	Bujumbura	—		Contacted/Trained
Training on participatory governance	Chad	University of Chad	N'Djamena	—	Contacted for EPIC training	Contacted/Trained
Urban planning co-learning	Somalia	University of Somalia	Mogadishu	—	Training participant	Contacted/Trained
University–municipality engagement	Comoros	University of Comoros	Moroni	—	Preliminary EPIC session	Contacted/Trained
EPIC training pilot engagement	Djibouti	University of Djibouti	Djibouti	—	Contacted/trained	Contacted/Trained
Sustainable urban development overview	Togo	University of Togo	Lomé	—	Training only	Contacted/Trained
Infrastructure and adaptation concepts	Benin	University of Benin	Cotonou	—	Engaged through workshop	Contacted/Trained
City–campus collaboration training	Guinea	University of Guinea	Conakry	—	Training and awareness	Contacted/Trained
Latin America						

Participatory Governance Community Tables	Mexico	UABC	Mexicali	—	Civic participation and local engagement	Active
Honey Value Chain Characterization	Mexico	Universidad de Colima	Colima	—	Bee product development and local economy	Active
Socioeconomic Impact of Urban Markets	Brazil	Univ. of Mato Grosso (UNEMAT)	Cuiabá	—	Market mapping and community economies	Active

Annex E. Database of Projects in Asia, Africa

Annex F. Country Visits

Three country visits were conducted as part of the EPIC outcome assessment to gather in-depth insights into city-university partnerships and their adaptation outcomes.

South Africa

The first mission took place in South Africa and coincided with the EPIC-Africa Learning Event, which was held in Pretoria on February 13–14, 2025. By attending all sessions of the conference, the assessor had the opportunity to understand the main activities underway in the African network, the dynamics between members and the main challenges and opportunities facing the organisation. Alongside the learning sessions, she organised focus group discussions with EPIC-N members, where the group collectively identified the network's key strengths, weaknesses, opportunities and threats through a SWOT exercise. She also conducted interviews with EPIC staff who attended the event.

Field visits were then conducted in Durban from February 17–19, 2025. Following the workshop, the assessor, accompanied by a national consultant, visited the Durban EPIC partnership, conducting interviews and FGDs with city officials, university faculty, students, and community members in Quarry Road informal settlement.

Main stakeholders met during Durban field visit
- Durban municipality representatives - Durban University of KwaZulu-Natal (UKZN) academics and students - Quarry Road Informal Settlement community members

In total, 26 people participated in FGDs, 5 in group interviews, and 12 in individual interviews.

Mexico

The second visit was conducted in Mexico from April 7–11, 2025, by Baastel consultants. Two EPIC projects were visited: Universidad Autónoma Metropolitana and communities around La Piedad lagoon in Cuautitlán Izcalli;, and Universidad Veracruzana with the FIDECOAGUA program in Coatepec. The team conducted 4 interviews with EPIC pairs, 4 FGDs (with students, faculty, and beneficiaries), and 2 site visits. Additionally, 3 remote interviews were held with coordinators and faculty from EPIC universities in Baja California, Colima, and Guadalajara.

Main stakeholders met/interviewed within the framework of Mexico field visit
- Municipality of Cuautitlán Izcalli representatives - Universidad Autónoma Metropolitana (UAM) academics and students
- Municipality of Coatepec's Payment for Environmental Services Program Program (known as FIDECOAGUA) representatives - Universidad Veracruzana (UV) academics and students

- Beneficiaries
- Universidad de Colima (UdeC) academics
- Universidad Autónoma de Baja California (UABC) academics
- Universidad de Guadalajara (UdG) academics

A total of 43 people were consulted (35 in person and 8 remotely).

Vietnam and Thailand

The third field mission took place in Thailand and Vietnam from May 12–15, 2025. The assessment team visited three EPIC pairs in Long Xuyen City (Vietnam), Soc Trang Community College and Vien An Village (Vietnam), and Thammasat University (Thailand).

Data collection encompassed 13 interviews with EPIC pairs and students in Thailand and Vietnam, as well as 1 focus group discussion with farmers in Long Xuyen City An Giang Province in Vietnam and 1 focus group discussion with local community in Rangsit City in Thailand. The mission also included 2 site visits. In addition, 2 remote interviews were conducted with EPIC coordinators.

Main stakeholders met/interviewed within the framework of Vietnam/Thailand field visits	
Vietnam	- An Giang University – National University of HCMC academics - An Giang Province representatives
	- Soc Trang Province representatives - Soc Trang Community College academics and students
Thailand	- Thammasat University academics and students - Rangsit City Municipality representatives - Tha Klong Town Municipality representatives - Community representatives
	- University of Technology Thanyaburi academics - Department of Public Works and Town & Country Planning, Ministry of Interior

In total, 33 people were consulted (31 in person and 2 remotely).

Annex G. Online survey

A targeted online survey was conducted to complement qualitative data collected through interviews and field visits as part of the EPIC outcome assessment. Designed to capture perspectives from a broad range of stakeholders, the survey aimed to quantify key insights related to EPIC-supported adaptation efforts across Africa, Asia, and LAC.

The survey was administered using Qualtrics and distributed individually by email to university staff, students (where possible), and city officials involved in EPIC partnerships. The UNEP Task Manager and the EPIC Regional Coordinators compiled the contact list. It included city officials and academics, who were then asked to share the survey with their students. The survey remained open for one month, with the possibility of a two-week extension. Reminders were sent to maximize the response rate.

The questionnaire was available in both English and Spanish and consisted of three segments: identification questions, core evaluation questions, and forward-looking questions. The identification section gathered basic information about the respondent's profile (gender, stakeholder type, name of the project, thematic area and geographic region). The main section covered the core assessment criteria through multiple-choice, rating, and ranking questions, with some open-ended response options. Certain questions were tailored to specific stakeholder groups only. The final segment invited participants to reflect on the lessons learned, barriers encountered, and future opportunities for scaling up the EPIC model.

The collected responses were cleaned and analysed to inform the outcome assessment, providing quantitative evidence to complement the findings from document reviews, interviews, and field visits. Of the 53 response requests sent to city officials and academics, 31 responses were received. However, given that the number of requests sent to students was unknown, it was not possible to calculate the response rate.

The majority of respondents were women (64%) while men represented 36%. Most respondents were from universities (62%), followed by students (27%), and municipality representatives (12%). In terms of geographical distribution, the majority of respondents were based in LAC (64%) followed by Asia (28%) and Africa (8%). The majority of projects targeted Agriculture and food resilience (35%) and Natural ecosystem protection/restoration (35%) as a primary sector while 23% targeted Green spaces in urban areas. Other targeted sectors included Grey/green infrastructure, Disaster risk management or Waste Management.

All results from the survey can be found in the file embedded below:

EPIC_survey_compiled_results.xlsx

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