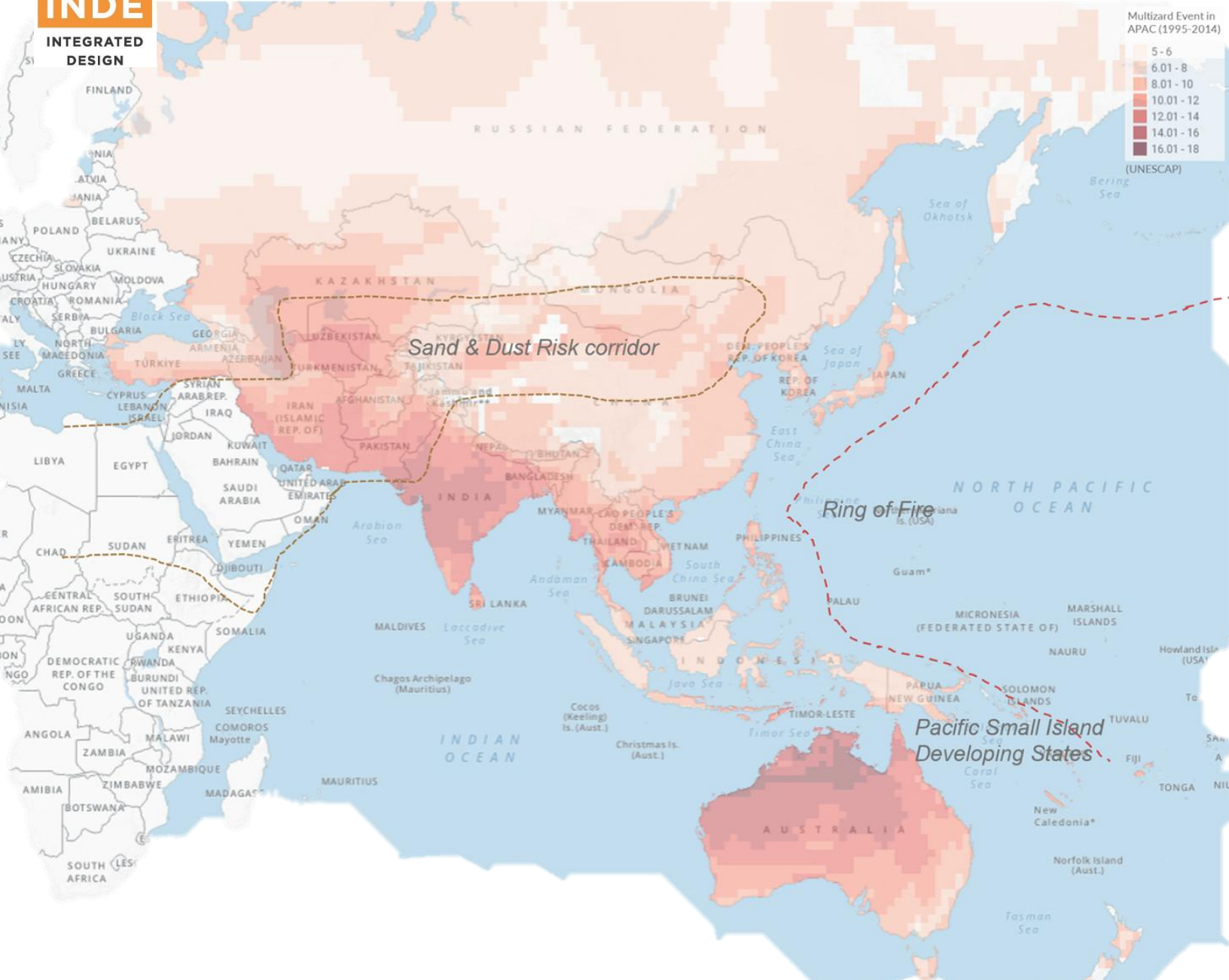




Adaptation Research Alliance

INTEGRATED DESIGN



Regional Advocacy - Global Goal on Adaptation & New Collective Quantified Goal on Climate Finance ASIA PACIFIC

INTEGRATED DESIGN

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1. INTRODUCTION - CONTEXT

Climate change has intensified in recent years, with its impacts expected to become more severe. Climate-related events like extreme heat, droughts, devastating floods, storms, and the spread of infectious diseases are already impacting billions of people worldwide. In response, since the mid-1990s, global summits and agreements, especially the 2015 Paris Agreement on Climate Change, have emphasized the need to decarbonize the world's economies. Despite this emphasis, greenhouse gas (GHG) emissions continue to rise, and global warming is accelerating (Asian Development Bank, 2024).

In other words, climate change is already irreversible, and patterns of warming will take decades to respond to mitigation actions. This makes climate adaptation essential. Changes such as rising average temperatures, shifting rainfall patterns, rising sea levels and salinization (Asian Development Bank, 2024) are referred to as slow onset events -risks and impacts that develop gradually over time. The Asia and the Pacific have witnessed relatively high weather-related disasters than any other region. Rising temperatures have made these events both more frequent and intense. In South and Southeast Asia, shifts in the monsoon have caused heavy rainfall in some areas, while others are facing droughts and lack of rain (Bellon, Chen, Corvino, & Kilpatrick, 2021). The impacts of these changes can be reduced with adaptation. While adaptation has an overall cost—defined as the combined costs of planning, preparing for, facilitating, and implementing adaptation measures—it seeks to reduce the economic and financial costs of climate change (Asian Development Bank, 2024). A focus on adaptation is crucial in the context of the Region, given that it hosts the majority of the world's population - is the main driver of global growth and includes many countries with substantial development needs.

The United Nations Framework Convention on Climate Change (UNFCCC), the main international treaty for addressing climate change and the foundation of the 2015 Paris Agreement, leads global action on climate change. The Paris Agreement aims to limit the rise in global average temperature to well below 2°C, and striving for 1.5°C. As part of this commitment the Global Goal on Adaptation (GGA) was established to enhance adaptive capacity, resilience and reduce vulnerability. Paris Agreement also introduced the New Collective Quantified Goal (NCQG) to set a higher climate finance.

The parties to the Paris Agreement agreed on the overarching framework for the Global Goal on Adaptation (GGA) during the UN's 2023 climate summit (COP28). Additionally, the New Collective Quantified Goal on Climate Finance (NCQG) agreed upon at the COP29 climate conference held in Baku, Azerbaijan, in November 2024, aims at enhancing climate financing. The NCQG replaces the previous 2009 commitment for developed countries to mobilize \$100 billion per year by 2020 and through 2025, with a new agreement setting an upgraded finance goal of at least \$300 billion annually by 2035.

Adaptation planning and implementation have made progress across different sectors and regions, with some clear benefits, though the effectiveness varies. Still, there are significant gaps in adaptation efforts, and these gaps are likely to grow if things continue at the current pace. The global financial support for adaptation is not enough, especially for developing countries. The gap between the costs of adaptation

and the funds available to support it is widening, creating even more challenges. (Lee, Calvin, & Dasgupta, 2023).

By aligning with the regional vulnerabilities and adaptation needs of the Asia Pacific, this report focuses on strengthening the New Collective Quantified Goal on Climate Finance (NCQG) and the two-year Dubai-Belém Work Programme of the Global Goal on Adaptation (GGA).

1.1 EVOLUTION OF GLOBAL GOAL ON ADAPTATION (GGA) AND THE NEW COLLECTIVE QUANTIFIED GOAL (NCQG)

Climate change is already causing significant and escalating impacts worldwide, increasing in frequency and intensity, resulting in substantial loss and damage. Despite ongoing mitigation efforts, progress has been slow. Current scientific projections indicate that, under existing policies, global temperatures could rise by up to 3.1°C by the end of the century compared to pre-industrial levels. Moreover, the consequences of climate change—ranging from extreme events to slow-onset impacts—have the potential to fundamentally alter the course of societies (Lam & Majszak, 2022) negatively. Considering this, adaptation to climate change is no longer a distant concern. It is an emerging priority. Climate adaptation is necessary today, alongside efforts to reduce greenhouse gas emissions.

The United Nations Framework Convention on Climate Change (UNFCCC), the primary international treaty for addressing climate change and the parent agreement to the 2015 Paris Agreement, plays a critical role in supporting the global response to climate change through both mitigation and adaptation efforts. The Paris Agreement aims to “hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change” (Article 2 – page 3). As part of this effort, the Global Goal on Adaptation (GGA) was established in 2015, focusing on enhancing adaptive capacity, strengthening resilience, and reducing vulnerability to climate change. This complements the mitigation efforts outlined in earlier decisions. In addition to the GGA the 2015 Paris Agreement introduced the New Collective Quantified Goal (NCQG), which aimed to replace the \$100 billion goal with a new, increased target for climate finance ¹. The NCQG is adopted at the recent COP 29 (2024) in Azerbaijan.

Thus, the Global Goal on Adaptation (GGA) and the New Collective Quantified Goal (NCQG) are two key developments that are propelling adaptation for the future. The GGA provides a global framework for advancing adaptation efforts but initially lacked specific targets, sectoral focus, and a monitoring framework. The NCQG, adopted at COP 29, aims to increase climate finance from developed countries to developing countries for both adaptation and mitigation.

A significant recent advancement in the GGA is the UAE Framework for Global Climate Resilience (UAE FCGR), developed during the Glasgow-Sharm el-Sheikh (GlaSS) work program and concluded at COP 28. This framework serves as a guiding tool for achieving the GGA and tracking global progress

¹ Prior to the Paris Agreement, climate action in developing countries was mainly financed through the \$100 billion per year funding provision agreed upon at the 15th Conference of the Parties (COP 15) in Copenhagen in 2009

in adapting to climate change. It is the result of two years of extensive workshops and consultations involving government officials, scientists, and advocates. At its core, the framework prioritizes the well-being of people and the planet and emphasizes building resilience in seven key sectors, including food and agriculture, water, cities and infrastructure, ecosystems and nature, health, livelihoods, and cultural heritage. To achieve its adaptation goals, the framework outlines four-dimensional targets, following a structured approach linked to various stages of the country-level policy cycle. This process begins with government-led assessments of climate risks and vulnerabilities unique to each nation, followed by the creation of national adaptation plans, implementation of adaptation actions, and ongoing evaluations to measure progress in reducing climate vulnerability. (UNFCCC, 2022) While the UAE FCGR aims to guide GGA implementation, it lacks key means of implementation, such as finance, capacity building, and technology transfer, which limits countries' ability to track and report adaptation progress (Beauchamp, 2024). This gap will be addressed through the UAE–Belém work program on indicators, a two-year initiative culminating at COP 30 in 2025, which will focus on identifying specific indicators to measure global adaptation progress.

Together, these two developments (GGA & NCQG) signal a shift in climate finance and adaptation frameworks, with a specific focus on improving mechanisms to achieve GGA.

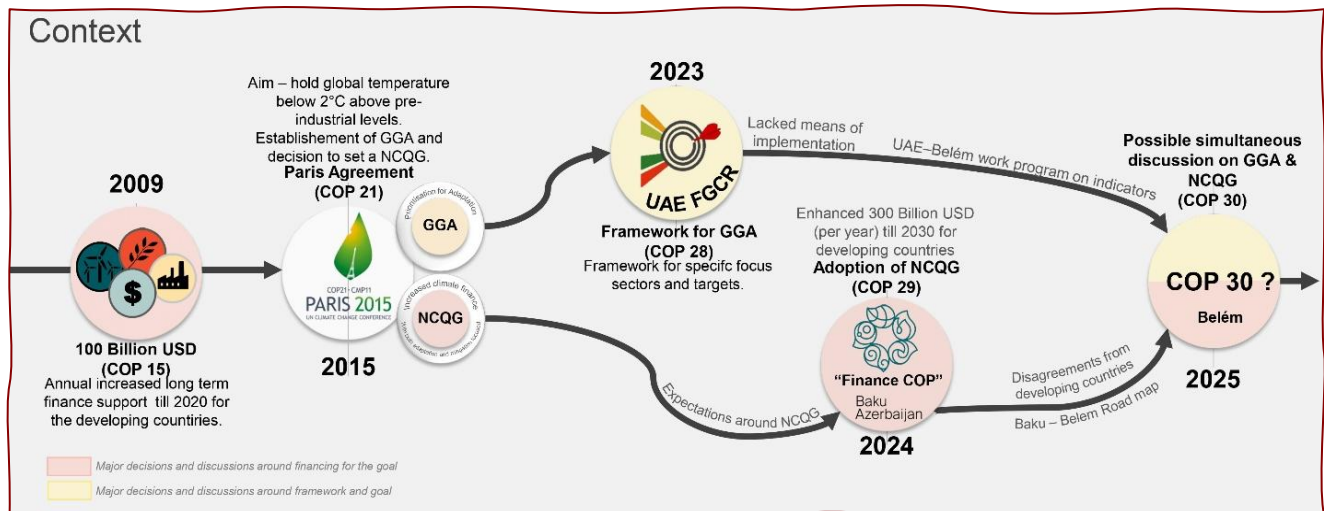


Figure 1 Chronological order of the developments related to COP events in relation to adaptation and climate finance (figure source: Author)

1.2 ENHANCING CLIMATE ADAPTATION FINANCE THROUGH NCQG: THE ROLE OF NDCS, NAPS, AND ADAPTATION COMMUNICATIONS

To address the concerns raised, the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) has developed the New Collective Quantified Goal (NCQG), focusing on increased financing and improved terms, conditions, and frameworks. The NCQG aims to address key gaps left by previous funding provisions under the UNFCCC, specifically in the following areas, as discussed by different groups and decided at COP 29:

a) Setting an Ambitious Target based on Developing Countries' needs

The previous \$100 billion climate finance target was a political commitment rather than a need-based calculation. The NCQG seeks to establish a financing framework based on the actual needs of developing countries. Various estimates highlight significant gaps in climate finance. For example, financing for Nationally Determined Contributions (NDCs) is projected to reach \$5.8 trillion cumulatively by 2030, while the UN Conference on Trade and Development estimates an annual requirement of \$1.55 trillion by 2030.

“At COP 29, it was decided to triple the finance target for developing countries from \$100 billion annually to \$300 billion annually by 2035. Additionally, efforts will be made to mobilize \$1.3 trillion per year by 2035 from both public and private sources to scale up finance for developing countries. However, developing countries expressed disappointment. Probably more clarity and agreement on these layered goals would likely be achieved in future COPs through further discussions.”

b) Addressing All Three Pillars of Climate Action: Adaptation, Mitigation and Loss and Damage

Developing countries have proposed separate subgoals under the NCQG for the three pillars—adaptation, mitigation, and loss and damage—focusing on the most vulnerable nations, including Least Developed Countries (LDCs) and Small Island Developing States (SIDS).

“However, the structure of the NCQG and how it will address these concerns remains unresolved after COP 29. Developed countries argue that calls to include allocations for loss and damage within the NCQG quantum go beyond the Paris Agreement, the objectives of which are limited to mitigation, adaptation, and realigning finance towards consistency with these.”

c) Determining Which Countries Should Contribute to the New Finance Goal

The previous \$100 billion target relied on contributions from 24 developed countries, primarily OECD members. Some developed countries argued that the global landscape has changed and that other nations, based on their greenhouse gas emissions, should also contribute to the global finance goal. Developing

countries opposed this, citing the legal mandate under Article 9 of the Paris Agreement, which specifically requires developed countries to contribute to global climate finance.

“At COP 29, the responsibility for raising \$300 billion annually was assigned to developed countries. The mobilization of the \$1.3 trillion per year target was framed as a collective effort, encouraging all UNFCCC actors (including developed countries) to contribute, including through South-South cooperation on a voluntary basis. This “voluntary” approach was criticized by developing countries, who argued that it undermined the principles of climate justice. Fundamentally the arguments posed by developing countries is that the final decision text appears to be going against the developed country’s obligations outlined in the Article 9 of the Paris Agreement. The developing countries have also raised concerns quoting that the developed are trying to divert their responsibilities.”

d) Designing the NCQG to Support High-quality Climate Finance

Beyond the quantity of finance, the quality of financing is also a critical concern. Only 41% of loans from the Multilateral Climate Funds were concessional, and only 23% of loans from Multilateral Development Banks (MDBs) were concessional (between 2013 and 2022). The High proportions of non-concessional finance², drive up debt burden and risk of economic instability for developing countries (Clynes, Cohen, Hoffmaister, & Labruto, 2024), thus hindering their ability to take effective climate action. Developing countries view this as contrary to the principle of climate justice and the common but differentiated responsibilities outlined in the Paris Agreement.

Further concerns include the accessibility of funds, especially the time-consuming and complex processes involved in accessing finance through multilateral institutions such as international climate funds and multilateral development banks. The lack of clarity on when funds will be available, when they will be disbursed, and which financial instruments can be used complicates planning for climate investments and implementation. Effective use of funds also requires robust monitoring, evaluation, and learning framework, along with global transparency to assess the outcomes and improve future investments.

At COP 29, these concerns were acknowledged, and there was a call for easier access to finance, particularly for LDCs and SIDS in special circumstances. Regarding the quality of finance, COP 29 urged international financial institutions to scale up concessional finance. While it was agreed to enhance grants and concessional instruments as part of the Baku-to-Belém Roadmap to mobilize \$1.3

² [Non concessional finance does not represent a single mechanism or type of financial support but comprises a range of market rate products used to accelerate a climate or development objective.](#) Concessional finance is most prioritized because they come in form of grants, loans with below market interests targeting high-impact projects such as water, sanitation and education etc.

trillion, the lack of concrete actions left developing countries disappointed, as no specific measures were outlined for implementation.”

Box 1. How NDC and NAP are related?

NDCs and NAPs are critical tools for climate adaptation under the UNFCCC. NDCs outline a country’s contribution to achieving the goals of the Paris Agreement (related to climate mitigation and adaptation), while the NAP process helps to identify adaptation goals and translate them into concrete actions. These two processes are complementary and should ideally be aligned to strengthen national climate change adaptation efforts. Countries are also expected to periodically report on their adaptation efforts through adaptation communications, submitted to the UNFCCC secretariat alongside documents like NDCs, NAPs, or national communications. When adaptation is included in the NDC, it should align with the NAP process to ensure coherence and avoid duplication. While the NDC sets out the "what" of adaptation goals, the NAP process details the "how" of their implementation (adaptationcommunity.net, n.d.).

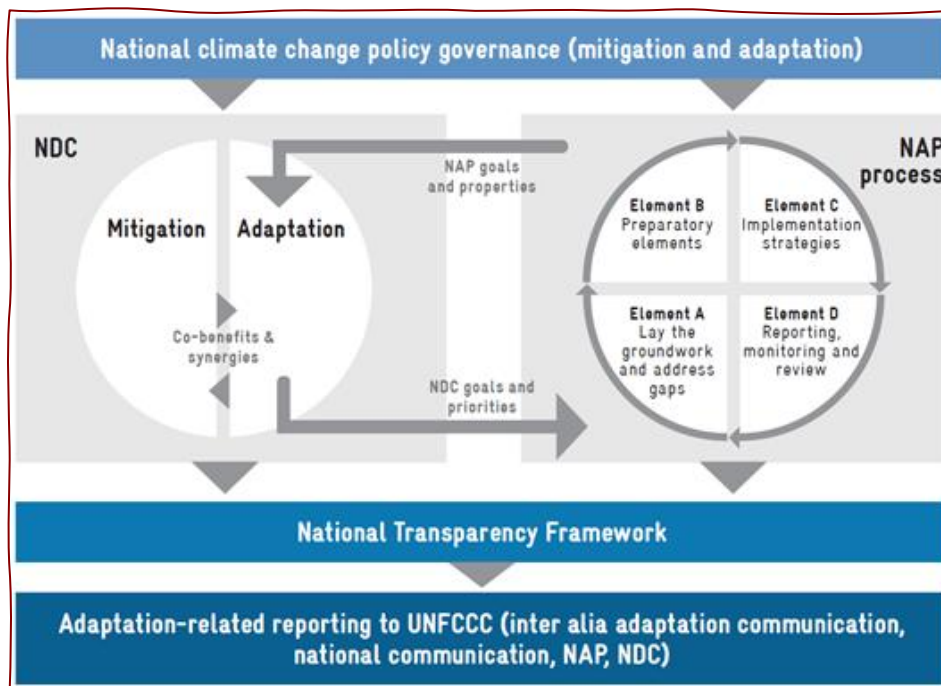


Figure 2 Relationship between different national climate action instruments (Source: adaptationcommunity.net, n.d.)

In addition to the above, COP 29 explicitly decided that a key intention of the NCQG is to support the implementation of developing countries' Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), and Adaptation Communications (ACs), including those integrated into NDCs. This decision underscores the critical role these instruments play in the climate finance agenda.

The Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), and Adaptation Communications (ACs) are critical instruments widely used by UNFCCC parties to drive climate action, specifically in the case of adaptation. NDCs are central to the Paris Agreement and its long-term goals, reflecting each country's targets and contribution to reducing national emissions and adapt to the impacts of climate change (aligning with the Paris Agreement).

The National Adaptation Plan (NAP) is a process tool aimed at identifying medium- and long-term adaptation needs and plans, guided by the latest climate science. The two main objectives of NAPs are to reduce vulnerability to climate change impacts by building adaptive capacity and resilience, and also to integrate climate adaptation into relevant policies, programs, and development strategies across all sectors and levels. The Adaptation Communication (AC) is a reporting framework designed to enhance transparency within the UNFCCC specifically for adaptation. It provides information on a country's adaptation priorities, implementation plans, support needs, and actions. The main objectives of the AC are to increase the visibility of adaptation efforts, highlight its balance with mitigation. In different countries, the Adaptation Communication is submitted in various ways; in some cases, it is integrated into the NAP and NDC, while in others, it is reported along with the national communication, which is the broader reporting mechanism for climate action (for mitigation and adaptation). Refer figure 2 in box 1 to understand the relationship between different instruments. In addition to the NAP, NDC, and AC, two other key instruments for communicating adaptation needs are the National Communications (NC) and National Adaptation Programmes of Action (NAPA).

National Communications (NCs) are periodic reports submitted by countries under the UNFCCC, following guidelines adopted by the Conference of the Parties (COP). These reports provide detailed accounts of national efforts to address climate change, including greenhouse gas inventories, adaptation and mitigation measures, and policy frameworks. All Parties to the Convention are required to submit NCs, though the contents and submission timelines differ for Annex I³ and Non-Annex I⁴ Parties, following the principle of "common but differentiated responsibilities." Annex I Parties, must submit

³ [Annex I](#) Parties include the industrialized countries that were members of the OECD (Organization for Economic Co-operation and Development) in 1992, plus countries with economies in transition (the EIT Parties), including the Russian Federation, the Baltic States, and several Central and Eastern European States. Annex I countries of APAC – Australia, Japan, New Zealand, Russia, Turkey.

⁴ [Non-Annex I](#) Parties are mostly developing countries. Certain groups of developing countries are recognized by the Convention (UNFCCC) as being especially vulnerable to the adverse impacts of climate change, including countries with low-lying coastal areas and those prone to desertification and drought. Others (such as countries that rely heavily on income from fossil fuel production and commerce) feel more vulnerable to the potential economic impacts of climate change response measures.

NCs every four years. Non-Annex I Parties, primarily developing countries, submit their first NC within three years of joining the Convention and subsequently every four years. (UNFCCC)

Meanwhile, the National Adaptation Programmes of Action (NAPA) are specialized plans tailored for Least Developed Countries (LDCs) to address their urgent and immediate adaptation needs. The NAPA framework facilitates the identification of priority activities in sectors such as agriculture, water resources, coastal zones, and disaster management. Each NAPA includes a ranked list of priority adaptation projects, along with concise profiles for each, to streamline the development of implementation proposals. However, with the adoption of the National Adaptation Plan (NAP), the focus has shifted toward medium- and long-term adaptation strategies, effectively superseding the need for new NAPA submissions.⁵

Crucially, the NDCs and NAPs play a key role in the distribution of climate finance, particularly in accessing funds from mechanisms such as the Green Climate Fund (GCF), Adaptation Fund, Global Environment Facility (GEF), Least Developed Countries Fund (LDCF), and Climate Investment Funds (CIF). With the creation of the New Collective Quantified Goal (NCQG) and decisions made regarding its implementation, the adaptation components of the NDCs and NAPs become critically important for securing funding under the NCQG. Understanding the achievements of these primary climate adaptation instruments is key—particularly in enhancing adaptation alongside mitigation across various countries. It's also important to evaluate the challenges faced, such as obstacles hindering success, failures encountered, and whether actions were successful in line with the intended vision of the UNFCCC, especially in terms of adaptation. This understanding will help guide future efforts to enhance adaptation and ensure the effective use of funding under the NCQG.

⁵ There is no formal declaration stating that NAPAs are no longer required, the current UNFCCC framework encourages LDCs to engage in the NAP process to comprehensively address their adaptation needs. The Conference of the Parties (COP) has established the NAP process for least developed country (LDC) Parties. Under it, LDC Parties are invited to identify their medium- and long-term adaptation needs and develop and implement strategies and programmes to address these needs, building upon their experience in preparing and implementing national adaptation programmes of action (NAPAs). <https://unfccc.int/national-adaptation-plans>

2. GLOBAL PROGRESS ON CLIMATE ADAPTATION

The following section explores key aspects related to the identified needs for adaptation and its financing. It synthesizes research findings and reports on the current status of adaptation finance, highlighting existing challenges and identifying critical areas requiring attention. This analysis is primarily based on published reviews (by individuals and organizations) of the two primary instruments of climate adaptation: the NDCs and NAPs. The Adaptation Gap Report (AGR) by UNEP published annually is one critical compilation of insights based on the analysis of the adaptation instruments globally. The current publication AGR 2024 was used primarily for the formulating the discussions below. These areas are crucial for advancing global climate adaptation efforts while ensuring alignment with the UNFCCC's vision for adaptation, particularly in the context of the New Collective Quantified Goal (NCQG) introduced at the recent COP 29.

2.1 Initiating preparation of the Adaptation Planning Instruments

Countries have been focusing on developing national adaptation instruments since 2002, with the rate of involvement accelerating around 2011. According to the AGR 2024, approximately 87% of country parties (171 countries) now have at least one national planning instrument in place. However, progress toward global coverage has slowed in the past four years. There remains a gap of 26 countries without a national planning instrument—16 of which are in the process of developing one, while 10 have not initiated any such efforts. AGR 2024 also examines the economic and development status of these countries. Notably, only two of the 26 countries are categorized as least developed countries (LDCs), and none are classified as Small Island Developing States (SIDS). A key finding in the AGR is that economic or development status is not the primary factor influencing a country's progress toward climate action and adaptation. Instead, the AGR highlights that many of these countries face significant development challenges, such as internal fragility, conflict, and geopolitical tensions, making the Fragility Index a critical factor in determining progress toward climate action. In such conditions, adaptation planning priorities are unlikely to be a political focus. This political instability also impacts financing for adaptation. The World Bank's report *Closing the Gap – Trends in Adaptation Finance for Fragile and Conflict-Affected Settings (2024)* identifies a significant shortfall in adaptation finance for fragile and conflict-affected countries. In addition to political instability, weak institutions in these countries are often cited as a key factor contributing to this issue. As a result, capacity building and institutional strengthening have become crucial components of adaptation strategies in these contexts. The NCQG was expected to address these concerns more clearly, as it emphasizes not only increased financial provisions but also the need to support developing countries in accessing and effectively utilizing resources. In this regard, the capacity of these countries' institutions and stakeholders is crucial. But in COP 29 there were not any concrete discussions and decisions on this.

2.2 Effectiveness of Adaptation Planning

In addition to initiating the development of adaptation planning instruments, it is crucial for countries to periodically update these instruments to foster an iterative adaptation planning process, ensuring their relevance and effectiveness. According to the AGR 2024, currently, 101 countries (51 percent) have developed a second planning instrument, and 29 countries (20 percent) have developed a third. Notably, 22 countries' planning instruments have expired (i.e., not updated as recommended by the UNFCCC), indicating that many countries are struggling to implement, review, and update their adaptation policies and plans.

Beyond the iterative updating of adaptation planning instruments, it is necessary to assess key components of adaptation plans to understand their effectiveness. The AGR 2024 reviewed National Adaptation Plans (NAPs) and identified several areas of concern for effective adaptation. These include:

a) **Robustness of the Evidence Base**

Consideration of climate projections based on current and future impacts, vulnerability and risk (IVR), cascading and compounded risks, transboundary risks, and the quantification of IVR in the NAP.

b) **Sectoral and Thematic Coverage**

Coverage of UAE FGCR thematic target sectors such as water, agriculture and food, health, ecosystems and biodiversity, infrastructure and human settlements, poverty and livelihoods, and cultural heritage. Additionally, it addresses UAE FGCR dimensional targets such as IVR assessment, planning, implementation, and monitoring, evaluation, and learning (MEL), as well as the enabling factors like financing, leadership, institutional arrangements, engagement, data, research, knowledge, communication, and capacity and skill development.

c) **Implementability**

Consideration of the actors responsible for implementation, the inclusion of adaptation action costs, alignment with domestic and global policy agendas, and elements that facilitate MEL.

d) **Inclusiveness**

Consideration of gender inclusivity, the positioning of women in the NAP, the consideration of intersectional factors, and other vulnerable groups.

Some of the reflections highlighted in the AGR 2024, based on the assessment of NAPs concerning the aforementioned areas of concern, reveal varying and mixed results across the four criteria. While the majority of NAPs have addressed key areas such as sectors, dimensional aspects, enabling priorities, and the importance of Gender Equality and Social Inclusion (GESI), the AGR 2024 emphasizes gaps in the evidence base of many NAPs. It calls for dedicated support, particularly for developing countries, to strengthen this aspect.

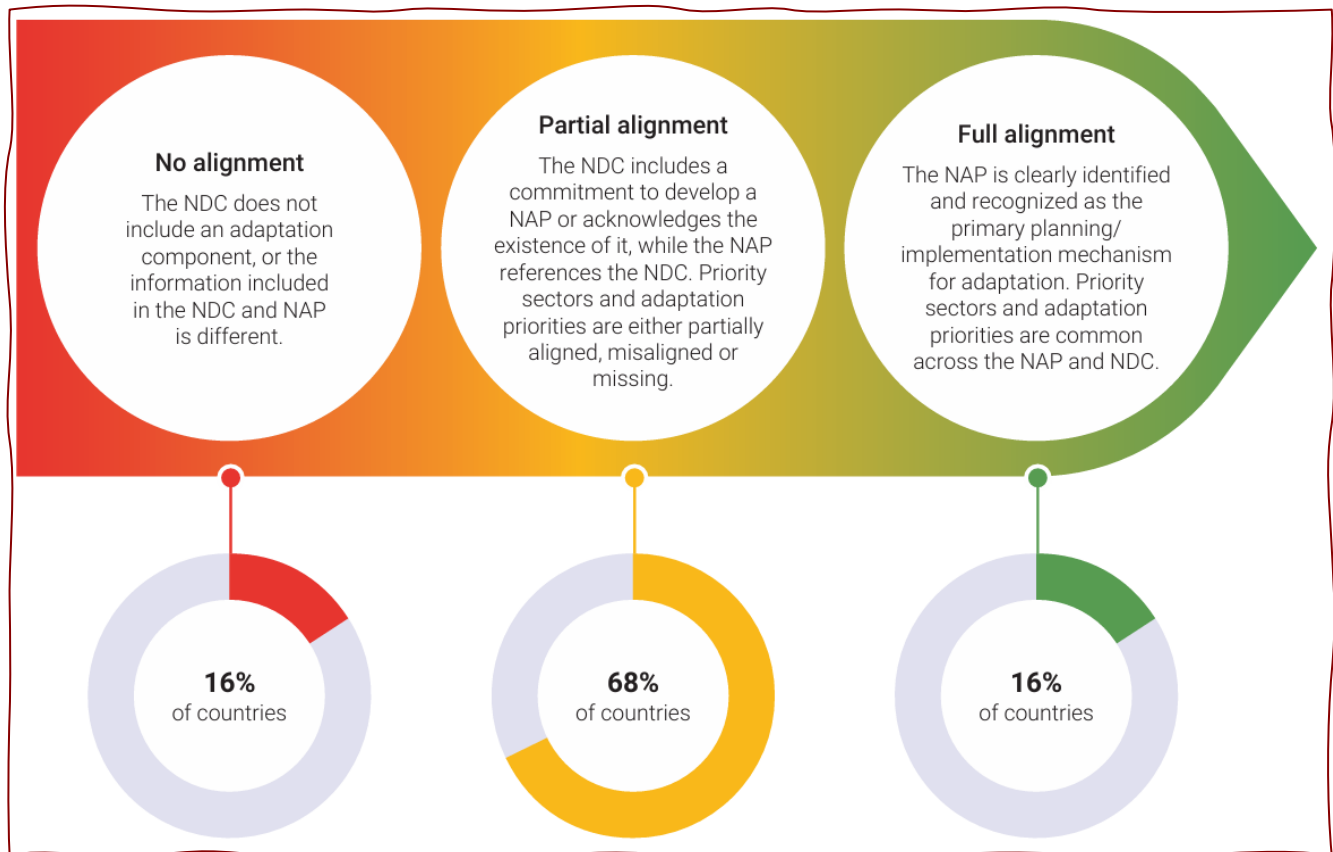


Figure 3 Alignment between NAPs and NDCs across countries (Source: AGR 2024)

The effectiveness of national adaptation planning also depends on the alignment of two critical instruments: the Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs). As previously discussed, these two instruments serve different purposes. NDCs outline the high-level adaptation goals or objectives (the "what") that countries commit to achieving, while NAPs detail the strategies (the "how") to achieve these goals. NDCs and NAPs can be mutually reinforcing, with NDCs setting broad goals and NAPs providing the specific actions to meet them. However, it is important to note that the preparation of NAPs is optional for countries. In cases where NAPs are not developed, it is recommended that countries include their adaptation components within the NDCs. Based on the 56 NAPs submitted so far, the AGR 2024 analysis found that 87% of NAPs are directly linked to their respective NDCs. However, the alignment of adaptation information between the NDCs and NAPs shows that they are not fully aligned, which may lead to suboptimal implementation and result in duplicated efforts. The AGR 2024 recommends leveraging the NAP process when preparing the 2025 NDCs to address this misalignment issue. Refer to the figure 3 below for a better understanding of the alignment between NAPs and NDCs across countries.

A critical point raised in AGR 2024 is that many NAPs, especially in terms of capacity building, have primarily focused on North-South knowledge transfers. The report stresses the need for improvement in South-South knowledge exchange, particularly regarding capacity and other knowledge transfers. Enhancing South-South cooperation would significantly contribute to the better implementation of adaptation actions, as it would be more contextually relevant and effective in addressing local needs.

2.3 Effectiveness of Adaptation Implementation

The AGR 2024 specifically focuses on assessing the progress of NAPs to evaluate the implementation of adaptation actions across different countries, even though adaptation actions are also included in other frameworks like Nationally Determined Contributions (NDCs) and various internal government reports. As of 2024, at least 21 countries have published their NAP progress reports. The evaluation criteria for Adaptation implementation in the AGR 2024 includes several key factors. Outcomes refer to the short- and medium-term effects of an intervention's outputs, indicating whether the intended results were achieved. Effectiveness assesses the extent to which a project meets its objectives, reduces climate vulnerability, enhances adaptive capacity, and contributes to climate-resilient development. Efficiency examines the relationship between the resources used—such as funds, time, and human resources—and the results achieved, evaluating how well resources are converted into outcomes. Relevance measures how well project objectives align with the priorities and needs of target beneficiaries, implementing countries, and the broader policy context. Additionally, Sustainability is evaluated, referring to the likelihood that the project's outcomes will continue after the funding period ends. This is assessed based on factors such as stakeholder engagement, project management, institutional strengthening, capacity building, and the alignment of the project with national strategies and policies.

The evaluation of 166 completed adaptation projects in the AGR 2024 (across the published 21 countries' NAPs) reveals that 41% of the projects were rated 'satisfactory,' and 3.6% were rated 'highly satisfactory.' Nearly 40% were rated 'moderately satisfactory,' while 17% fell into the 'unsatisfactory' category, indicating challenges in achieving desired adaptation results. Looking at the chronological trends, the AGR 2024 identifies a decrease in the number of projects in the unsatisfactory range over time, though a significant proportion remains in the 'moderately satisfactory' category. The report highlights that, there are notable variations in the proportion of priority actions that countries report to have commenced or been completed.

Drawing a comprehensive conclusion from different NAPs, which vary in detail and scope of actions, proved challenging (AGR 2024). However, a synthesis of the available information from five countries reveals a concerning trend in the AGR 2024. All five countries indicate that NAP implementation is insufficient and ineffective in relation to the magnitude of climate risks. This is partly attributed to issues in the design and implementation of adaptation measures (in Albania and Finland), as well as limitations in the scale and pace of adaptation efforts (in New Zealand and the United Kingdom).

The AGR 2024 also highlights key differences in how countries engage with adaptation implementation. While some countries involve non-state actors, such as civil society and the private sector, in assessing adaptation implementation progress, others—like France, Tonga, and Kiribati—limit it to national government entities only. In contrast, countries like Austria provide platforms for broader stakeholder engagement, including surveys and consultation workshops, allowing for a more inclusive approach to assessing adaptation progress. This process helps gather information on the progress of national adaptation plans, facilitating the exchange of lessons and experiences, and aligning with the effectiveness criteria of stakeholder engagement, participation, and capacity building.

In the AGR 2024, the assessment of Gender Equality and Social Inclusion (GESI) in adaptation actions reveals varying levels of progress across countries. Some NAP progress reports include dedicated sections on gender and social inclusion, with a focus on Indigenous knowledge and communities. For example, New Zealand's report places a particular emphasis on Indigenous communities. A few countries have specifically examined how vulnerable populations are affected by climate change and how adaptation projects have reduced their vulnerabilities. However, many reports lack gender-disaggregated data, which complicates assessment. In some cases, such as in the Philippines, although the NAP outlines GESI objectives and themes, these have not been translated into concrete outcomes during implementation.

The AGR 2024 also explored the adaptation actions that have been implemented. Looking at data from urban areas that self-report their adaptation efforts, the report highlights that 32% of the total actions implemented and reported were related to engineering and technological solutions, 20% focused on ecosystem-based adaptation, and 19% on community engagement, awareness creation, and behavioral change for adaptation. However, adaptation actions in the economic sector—such as ecosystem services, index-based weather insurance schemes, and the development of financial instruments to facilitate adaptation—were the least reported. The report emphasizes this as a significant gap, noting that vulnerability to hazards is often rooted in social inequality, urban planning, and resource management. Therefore, a holistic adaptation approach is needed, one that focuses on reducing social vulnerability rather than merely relying on engineering and technological solutions (which continue to dominate the conceptualization of adaptation as primarily physical infrastructure). For example, adaptive social protection can play a crucial role in enhancing resilience (Tenzing, 2019).

2.4 Addressing key Barriers for Progress in Adaptation

The AGR 2024 critically highlights three key enabling areas of NAP implementation that face barriers: 1) Institutional frameworks and capacity, 2) Knowledge and Information, and 3) Financial resources. Refer to figure 4.

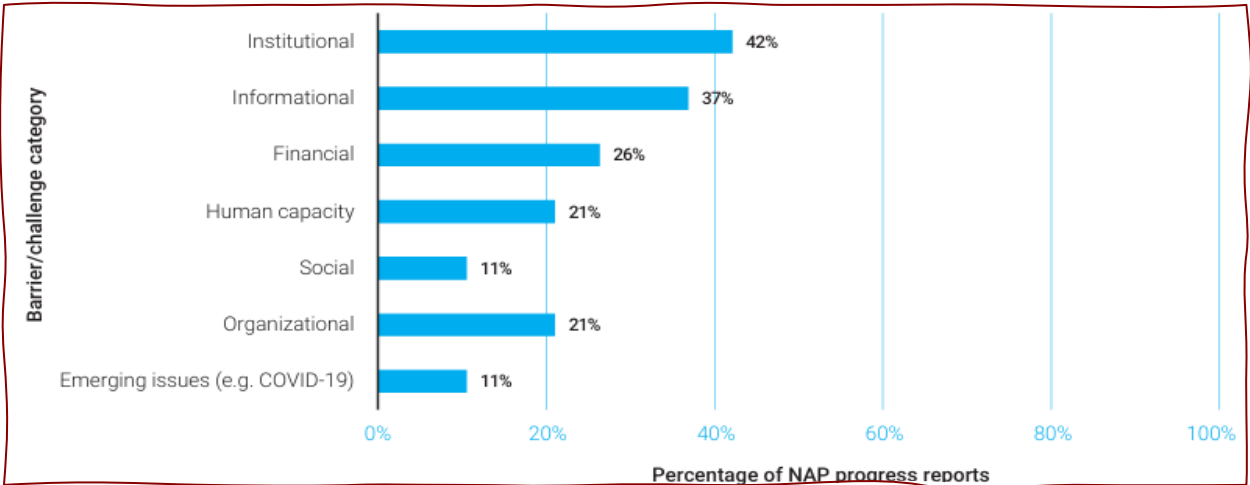


Figure 4 Barriers and Challenges to NAP implementation (Source: AGR 2024)

2.4.1 Financial Resources

Starting with the third enabling area, which is one important area among the three, adaptation finance resources is crucial for developing countries. This is where much of the previous discussions are framed, including the shift from the previous \$100 billion goal to the new NCQG. The AGR 2024 raises several concerns regarding existing financial provisions, with some issues serving as points of contention for different groups concerning the structure, terms, and conditions of the NCQGs (already pointed out in the COP 29, the same articulated in previous section). The insights presented in the AGR 2024 focus on the quantity and quality of finance required to bridge the global adaptation gap. These insights are primarily based on evidence gathered from modelled estimates of adaptation costs for developing countries. The models first estimate the economic impacts of climate change (in US dollars) and then assess the costs of adaptation required to mitigate these impacts. Additionally, the report draws on adaptation needs estimates reported by developing countries in their National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs), which are then extrapolated to include all developing nations. Regarding the quality of finance flows, the analysis examines international public adaptation finance flows to developing countries and presents key findings based on this analysis.

Distribution and Quantity Gap in Adaptation Finance

The modelled cost of adaptation estimates that developing countries will need \$215 billion for the decade between 2020 and 2030, at a rate of \$33 per capita per year. Based on the needs reported in the NAPs and NDCs, it is calculated that the adaptation needs for developing countries for the same period would total \$387 billion.

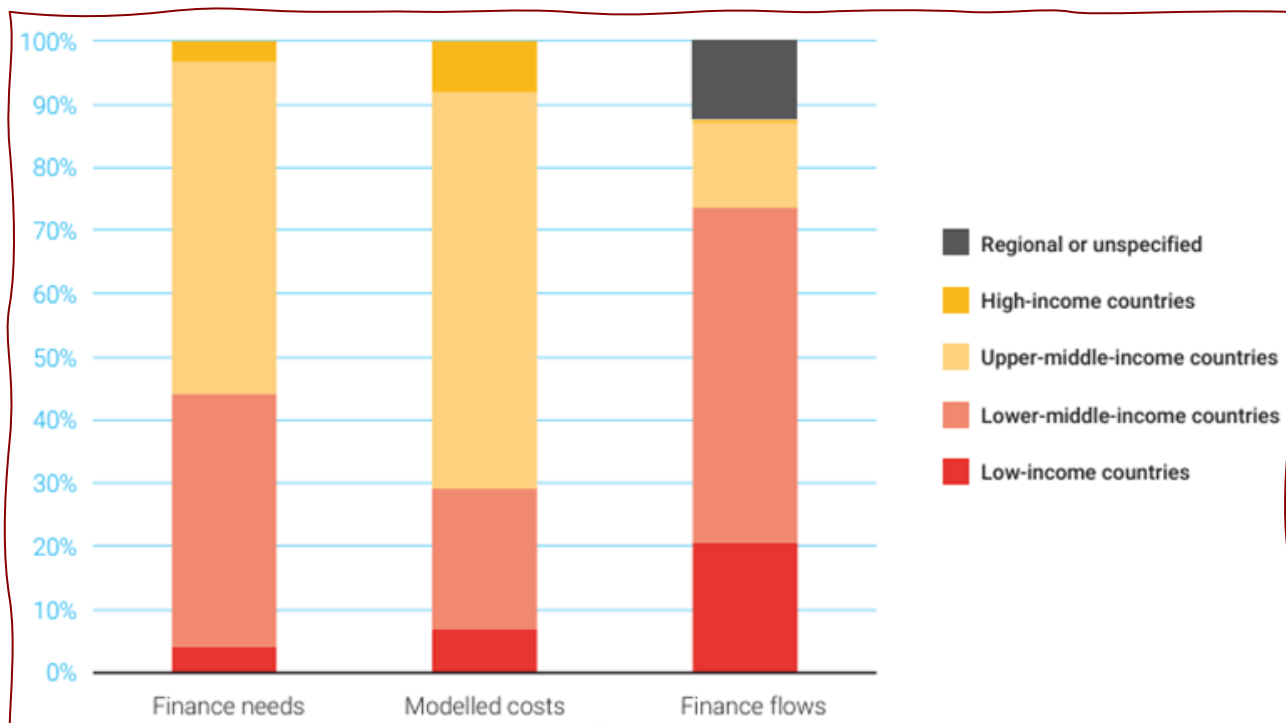


Figure 5 Comparison of adaptation finance needs (extrapolated), modelled costs of adaptation (annual to 2030), and international public adaptation (Source: AGR 2024)

To understand the financing support from developed countries, these needs are compared against the GDP of developing countries. This analysis reveals that Small Island Developing States (SIDS) and Least Developed Countries (LDCs) face a critical challenge, as they need 3.4% and 2.5% of their GDP, respectively, for adaptation finance, compared to 1.4% of GDP for other developing countries. Taking this the AGR 2024, underscores the importance of international adaptation finance for SIDS and LDCs. To address this, a significant portion of international public adaptation finance is being directed to low-income and lower-middle-income countries, which are predominantly the least developed. For a clearer understanding of the distribution of finance flows, finance needs, and modelled costs among different countries, refer to figure 5.

The figure 5 above presents a positive picture of adaptation financing being effectively streamlined to the least developed countries (low-income and lower-middle-income countries) according to their needs. However, it is crucial to note that upper-middle-income countries have significantly larger finance needs (over 50% of total needs among developing countries), yet they receive less than 15% of the finance flow.

Beyond the allocation of available finance, it is essential to compare the total quantity of finance generated with the actual requirements. Looking at the quantity of adaptation finance flows in 2022, which amounted to \$27.5 billion (as shown in the figure below), compared to the needs and modelled costs, the scenario is concerning. The finance flow is insufficient to meet the adaptation needs, which are estimated at \$387 billion per year until 2030. (Refer to figure 6).

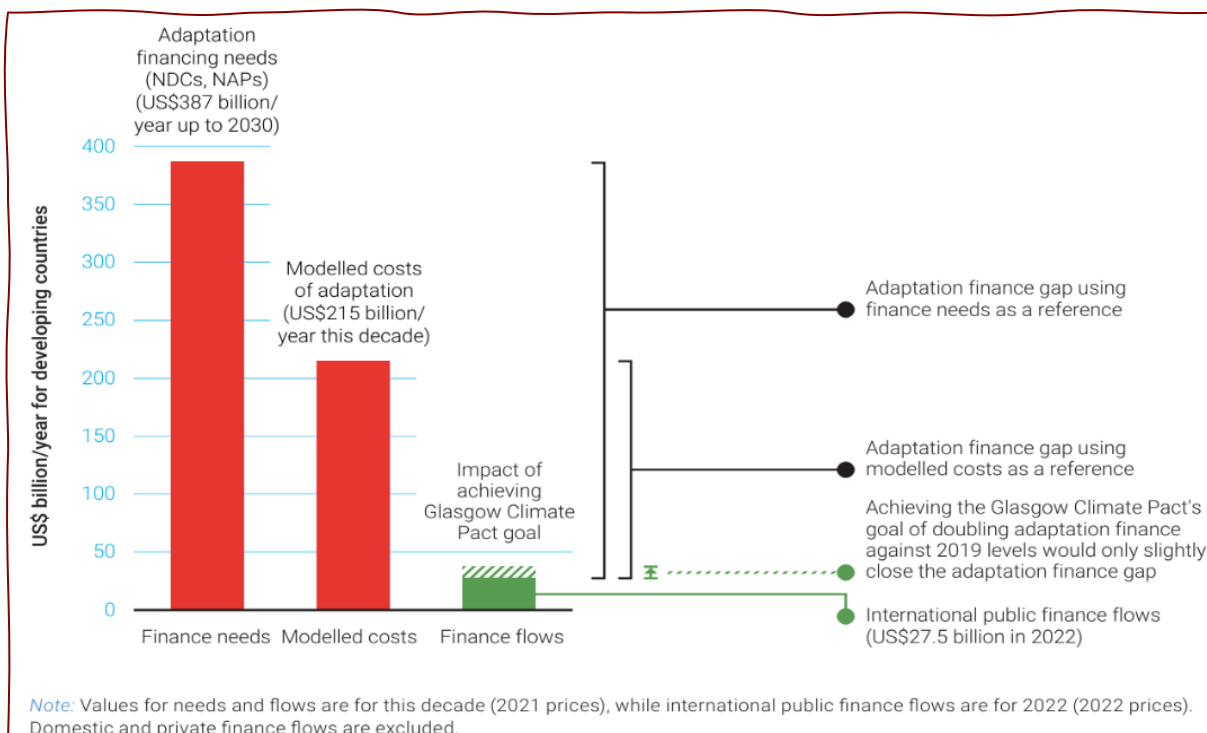


Figure 6 Comparison of adaptation financing needs, modelled costs and international public adaptation finance flows in developing countries (Source: AGR 2024)

A significant insight from the AGR 2024 regarding the flow and need for finance is that, while low-income countries (primarily LDCs and SIDS) receive a substantial share of international public adaptation funds, the total amount of \$27.5 billion would only be enough to only cover the adaptation costs of the SIDS and LDCs. Currently, however, this funding is distributed across all developing countries.

Two key points emerge based on this

Finance Allocation

The current distribution is based on socio – economic vulnerability, with the most vulnerable countries (SIDS and LDCs) receiving a major share. This is a positive signal as the financing framework prioritizes those most at risk. However, there remains a significant gap between the needs and finance flows for upper-middle-income countries, which is needed to be addressed.

Quantity of Finance

While the framework supports the most socio-economically vulnerable countries, the overall amount of funds raised remains insufficient. To translate the framework's positive intentions into real-world impact, it is crucial to significantly increase the quantity of finance. This increase is vital not only for the most vulnerable countries but also for those next in line, such as upper-middle-income countries, which currently receive inadequate funding despite having substantial adaptation needs. A boost in finance would help extend the framework's reach to countries that are socio-economically vulnerable but are not receiving enough support at present.

The above-mentioned insights hold true for the regional socio-economic characteristics as well. The AGR 2024 highlights that the highest finance needs are in East Asia and the Pacific, as well as South Asia, while financial flows (as a percentage) are higher for Sub-Saharan Africa. This reflects the prioritization of the most socio-economically vulnerable countries, a key element of the international adaptation finance framework. However, there is still a need to increase the allocation for East Asia and the Pacific, which has significant finance requirements. (Refer to Figure 7) As previously discussed, since total adaptation finance is a fraction of the overall need, even an equitable distribution based on needs will not achieve substantial adaptation progress in all developing countries (both in the most socio economically vulnerable and the one in the line next to it)

While the international financing framework has been effective in prioritizing socio – economically vulnerable countries such as LDCs, SIDS, and mountainous nation facing higher warming trends (UN General assembly 2022 declared 2025 as the International Year of Glaciers' Preservation), the low level of finance generated by developed countries remains a critical barrier. The \$27.5 billion raised contrasts sharply with the \$387 billion needed for adaptation, revealing a shortfall of over 90% in the required funding. This issue hinders the realization of the adaptation finance framework's potential impact in

developing countries. The need to increase finance was a key concern at COP 29 during the adoption of the NCQG, which called for a climate financing framework that allocates funds based on both the percentage and absolute financial needs of developing countries.

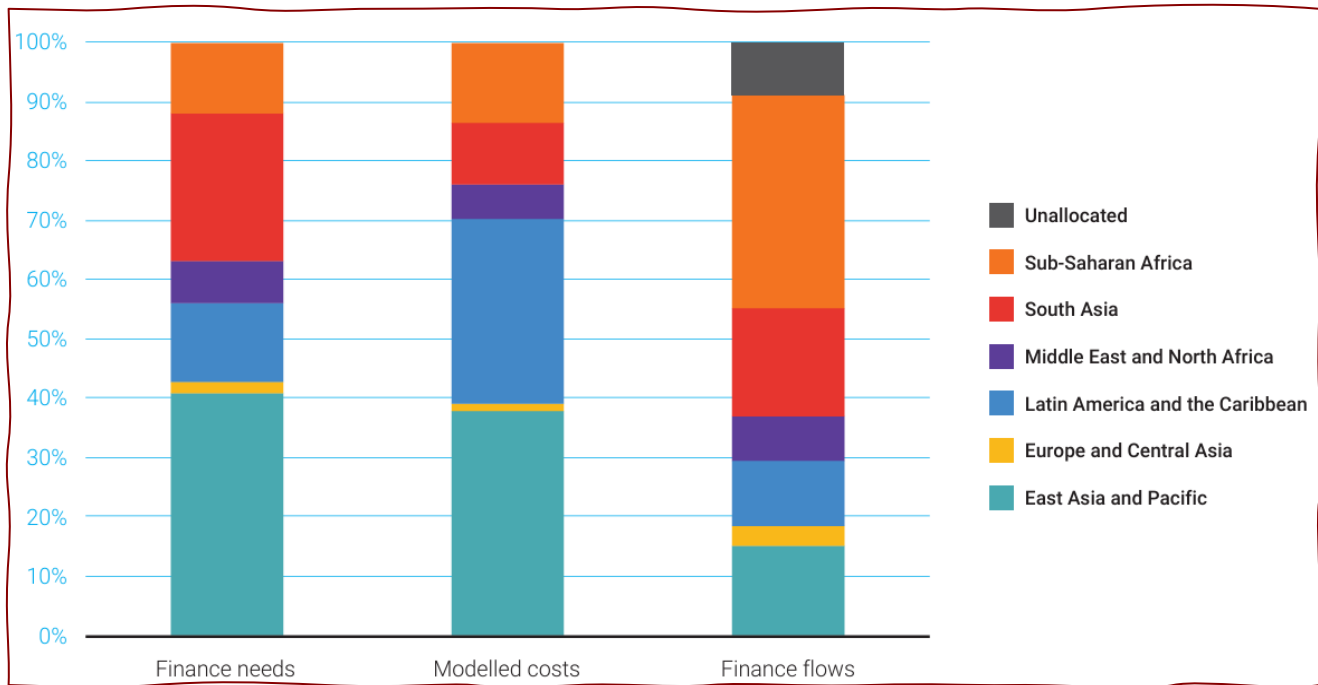


Figure 7 Comparison of adaptation finance needs (extrapolated), modelled costs of adaptation (annual to 2030), and international public adaptation finance flows (2018–2022 average) for developing countries by region. (Source: AGR 2024)

Quality of the adaptation and its finance

The discussion on how effectively available finance is distributed, prioritizing countries with the highest socio – economic vulnerability, presents a positive picture of how well the adaptation financing framework aligns with the climate justice vision of the Paris Agreement. However, a deeper look into the nature of the finance generated raises critical questions about how the adaptation financing agenda must evolve to become more efficient and enhance adaptation in developing countries (many socio-economically vulnerable) as intended, which is discussed below.

The quality of finance flows is closely linked to climate justice concerns highlighted in the IPCC AR6. In this context, concessional public finance has the greatest potential for positive distributional justice, benefiting vulnerable countries and driving meaningful adaptation changes (Patel, Plutshack, Kajumba, Uribe, & Krishnapriya, 2023). The key question is: who ultimately pays for adaptation, and who benefits from it? The AGR 2024 explores these factors and available financing instruments (international and other options), showing that in most cases—except for grants—the costs of adaptation are ultimately borne by developing countries. This raises concerns about common but differentiated responsibilities and the polluter-pays principle, especially given the low GHG contributions of LDCs. Figure 8 illustrates this dynamic.

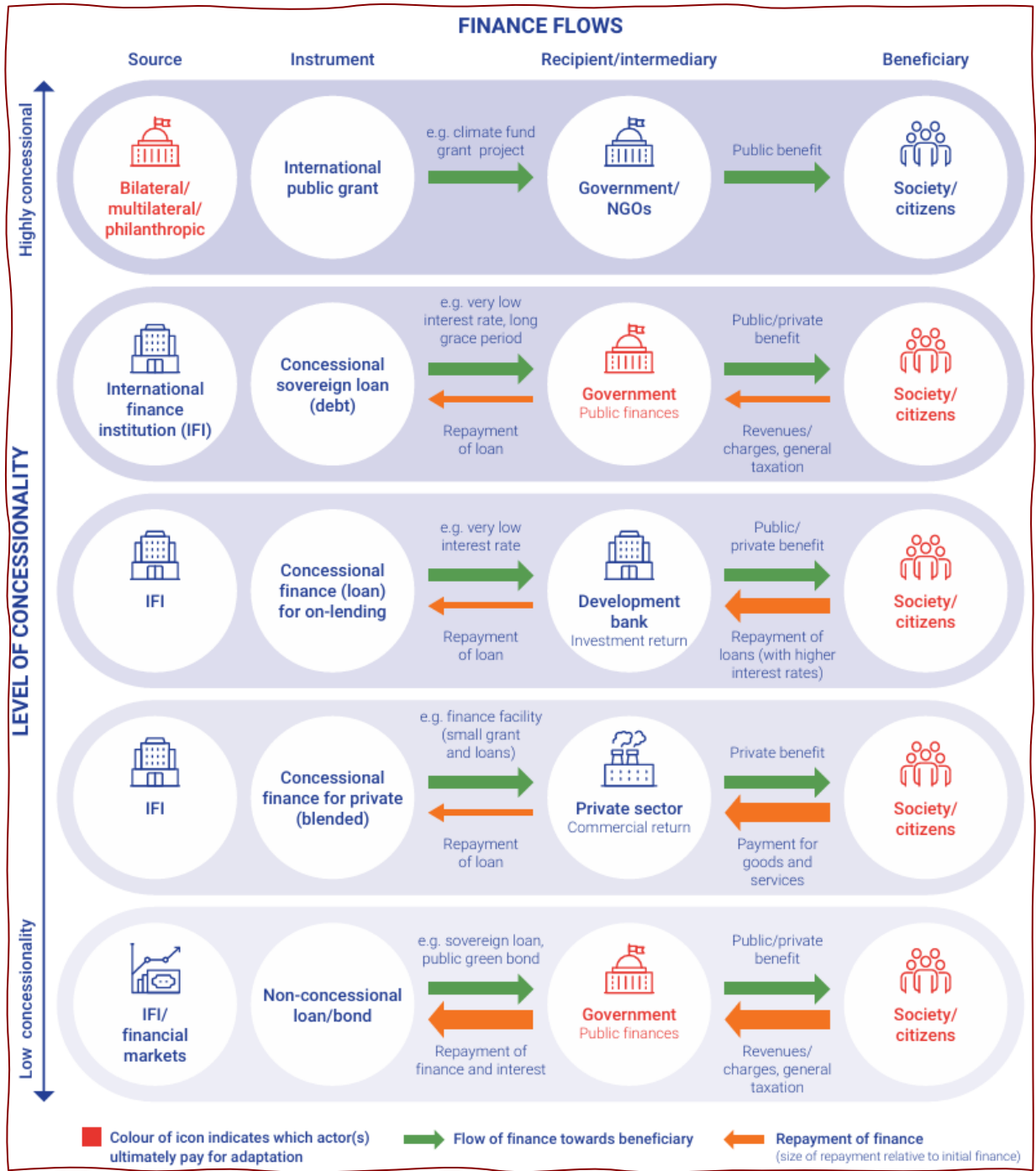


Figure 8 Who ultimately pays? (Source: AGR 2024)

The figure 8 illustrates the flows of finance (green arrows) from different sources and instruments, alongside the repayment process (red arrows) and who ultimately pays for adaptation (red icon) in a hypothetical LDC. At the top, the simple grant model shows that the international funder (developed country) covers all adaptation costs, benefiting the most vulnerable in the LDC. The second model, a concessionary sovereign loan, increases domestic finance but can lead to higher government borrowing or taxation, meaning the LDC government and population ultimately pay. For example, resilient

infrastructure investments funded through loans could be repaid by higher public spending or consumer charges (e.g., increased water bills). The third example involves on-lending through national development banks at lower interest rates, though repayment remains the responsibility of LDC actors. The fourth model focuses on de-risking the private sector to provide new adaptation goods and services, with LDC groups ultimately covering the costs. Finally, in the case of non-concessionary loans or bonds, the LDC bears the full cost of adaptation investments.

To achieve meaningful progress in climate action, it is crucial that international financial mechanisms address these issues, ensuring that those most responsible for climate change contribute their fair share. This was one of the key concerns raised during the adoption of the NCQG at COP 29.

Improving the quality of finance is crucial for enhancing the effectiveness of adaptation actions in developing countries. Concerns remain about how adaptation finance is allocated, which sectors it targets, and the outcomes of the funded actions, with associated risks potentially limiting financing for some. Adaptation actions vary, ranging from incremental to highly transformative, with transformative actions offering the greatest impact. However, these actions also present unique challenges, which can make it more difficult to secure financing for the most transformative adaptation efforts.

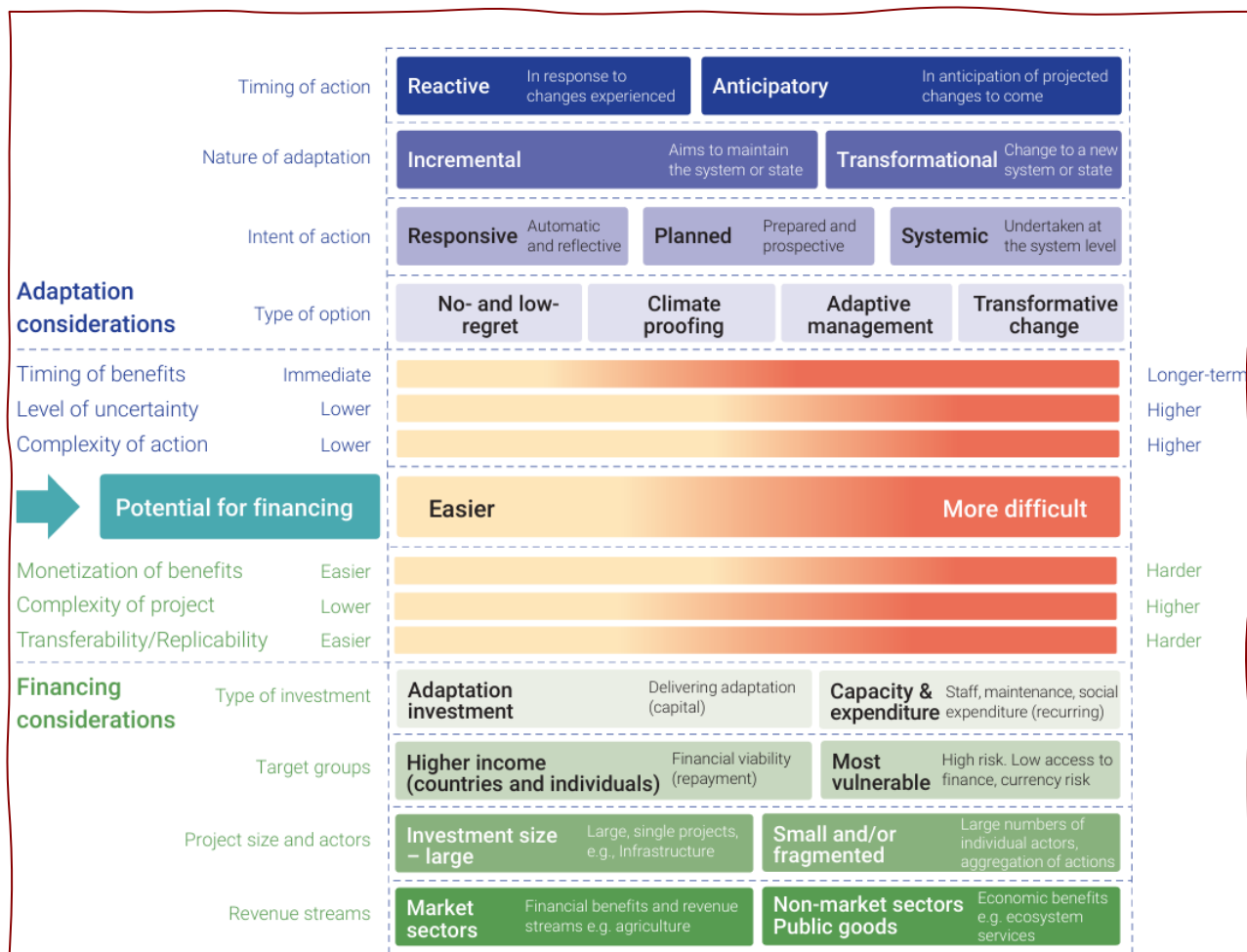


Figure 9 Adaptation types and ease of financing (Source: AGR)

Figure 9 clearly illustrates these concerns. Both adaptation and financing considerations play a critical role in securing finance for adaptation activities. If key components related to transformative adaptation, shown on the right-hand side of the figure, are not properly addressed, securing finance for these actions becomes difficult. Therefore, high-quality, highly concessionary finance is critical, as it can help mitigate the risks associated with transformative adaptation and enable meaningful progress.

2.4.2 Institutional Capacity and Information

The effectiveness of information collection and processing for informed adaptation action relies heavily on the capacity of institutions involved in planning, implementation, monitoring, evaluation, and learning. It is critical for the institutions and stakeholders to undertake discrete adaptation-related tasks (e.g. conducting risk assessments, developing regulatory frameworks and adopting specific technical practices). Strengthening the capacity of key institutions and stakeholders is crucial for addressing barriers to adaptation progress, particularly in streamlining institutional processes and overcoming information gaps. The AGR 2024 emphasizes capacity building as a critical action to enhance adaptation efforts in developing countries, as many institutions face significant gaps in their capacity to act. In some cases, endogenous capacities within these countries are overlooked when designing capacity-building initiatives, leading to deficit models of development. To improve the capacity of institutions to process and implement adaptation actions, a more context-specific approach to capacity building is necessary. For instance, processes of knowledge co-production, which combine both local and external expertise, have shown strong potential for breaking free from deficit models and unlocking new capacities for action (Ziervogel, Enqvist, Metelerkamp, & van Breda, 2022). The AGR 2024 further emphasizes that there is insufficient focus on capacity building for transformative actions and systems. Achieving transformative adaptation requires novel partnerships, interdisciplinary co-creation, and experimentation.

Regarding financing capacity building, the AGR 2024 reports that adaptation plans often overlook the costs associated with capacity-building activities. This presents a challenge, as capacity-building actions typically do not generate direct revenue, making them reliant on grants or public funding. Exploring better financing options for capacity building is critical for achieving more effective adaptation outcomes.

Notably, the AGR 2024 reports that the climate-related disasters in the Asia Pacific are more severe than previously thought. These include extreme weather events like cyclones, floods, and heatwaves, as well as slower-onset changes such as rising sea levels, glacier melt, and ocean acidification. The increasing intensity and frequency of these risks worsen existing vulnerabilities, highlighting the urgent need for tailored solutions. In other words, the East Asia, the Pacific, and South Asia have the highest need for climate adaptation funding.

In this context, understanding disaster risk and vulnerability is crucial for effective designing, implementing and measuring adaptation efforts. The next section focuses on adaptation in the Asia Pacific.

3. ADAPTATION NEEDS IN THE ASIA-PACIFIC REGION

The Asia-Pacific region is a highly diverse geography, encompassing a wide range of socio-economic conditions, key economic sectors, and environmental characteristics across its five sub-regions: Central Asia, Northeast Asia, South Asia, Southeast Asia, and the Pacific.

Excluding Australia, New Zealand, Japan, and South Korea, the region is made up of over 40 developing countries, many of which are classified as Least Developed Countries (LDCs). Together, these countries are home to more than half of the global population and a significant portion of the world's poor. (Mozaharul Alam, 2019)

In total, The Asia-Pacific region includes 58 countries and territories as provided in table 1. This comprises a mix of sovereign nations and associated territories and special administrative region of China. Associated members⁶ listed include territories like American Samoa, French Polynesia, Guam, New Caledonia, Niue, and Northern Mariana Islands. Of the total 46 LDCs, the region is home to 11 (LDCs)⁷, in addition to 12 small island developing states (SIDS)⁸, and 12 landlocked developing countries (LLDCs)⁹. These LDCs, SIDS, and LLDCs are generally recognized as countries with special needs. (UNESCAP, 2023)

⁶ The exact number of associated territories remains uncertain.

⁷ Least Developed Countries (LDCs) are nations identified by the United Nations as facing significant structural challenges to sustainable development. These countries are characterized by low income levels (Measured by Gross National Income (GNI) per capita), limited human assets (Assessed based on indicators such as nutrition, health, education, and adult literacy), and high economic vulnerability (Evaluated through factors like the instability of agricultural production, instability of exports of goods and services, economic importance of non-traditional activities, merchandise export concentration, economic smallness, and the percentage of the population displaced by natural disasters).

Least developed countries: Afghanistan; Bangladesh; Bhutan; Cambodia; Kiribati; Lao People's Democratic Republic; Myanmar; Nepal; Solomon Islands; Timor-Leste and Tuvalu.

⁸ Small Island Developing States (SIDS) are a group of countries and territories that share unique social, economic, and environmental challenges due to their small size, remoteness, and vulnerability to external shocks. These challenges include limited resources, susceptibility to natural disasters, dependence on international trade, and fragile environments.

Small island developing States: Cook Islands; Fiji; Kiribati; Maldives; Marshall Islands; Micronesia (Federated States of); Nauru; Niue; Palau; Papua New Guinea; Samoa; Solomon Islands; Timor-Leste; Tonga; Tuvalu and Vanuatu.

⁹ Landlocked Developing Countries (LLDCs) are nations that lack direct access to the sea, which significantly impacts their economic development.

Landlocked developing countries: Afghanistan; Armenia; Azerbaijan; Bhutan; Kazakhstan; Kyrgyzstan; Lao People's Democratic Republic; Mongolia; Nepal; Tajikistan; Turkmenistan and Uzbekistan.

Table 1 Subregions in Asia Pacific

Subregions	Countries
East and North East Asia (ENEA)	China; Democratic People's Republic of Korea; Hong Kong, China; Japan; Macao, China; Mongolia; Republic of Korea
North and Central Asia (NCA)	Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Russian Federation, Tajikistan, Turkmenistan, Uzbekistan
Pacific (PACIFIC)	American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu
South East Asia (SEA)	Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Viet Nam
South and South West Asia (SSWA)	Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Maldives, Nepal, Pakistan, Sri Lanka, Turkey

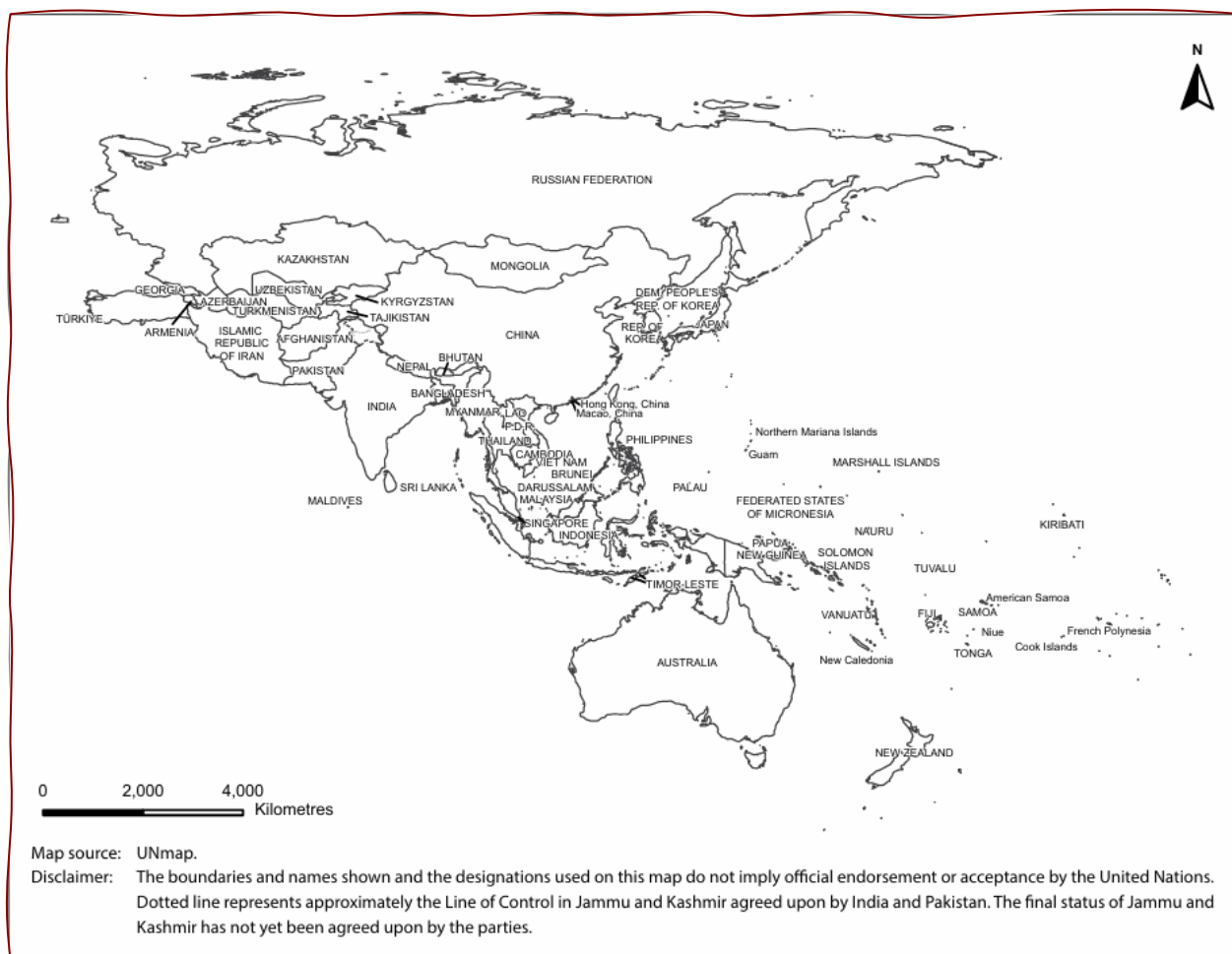


Figure 10 Asia Pacific region and countries (Source: UNESCAP)

The vast territories in the region with diverse and complex risk profiles, where different areas face distinct types of exposures. Despite achieving rapid economic growth and significant poverty reduction over the past two decades, this uncontrolled development has resulted in severe environmental degradation, posing threats to sustainable development. (Mozaharul Alam, 2019)

Recognizing these vulnerabilities, the UN Economic and Social Commission for Asia and the Pacific (UN ESCAP) has identified four critical disaster risk hotspots within the region. These encompass - the Ring of Fire, covering North, East and Southeast Asia, vulnerable to earthquakes, tsunamis, landslides, and typhoons; the Sand and Dust Storm Risk Corridors extend through Central South and Southwest Asia; the Pacific Small Island Developing States, facing risks from cyclones, earthquakes, El Niño events, and landslides and the Transboundary River Basins in South and Southeast Asia, which experience floods and droughts. (UNESCAP, 2019)

Historical disaster statistics highlight the region's extreme vulnerability. Since 1970, disasters in Asia and the Pacific have account for approximately 60 per cent of the global disaster death toll. The region is highly vulnerable, with fatalities from natural hazards primarily attributed to storms and earthquakes, followed by tsunamis and floods. This is different from the rest of the world where drought was the most lethal disaster, followed by floods (UNESCAP, 2023). The impact of these hazards, however, is not uniform across the region. Regional impact assessment indicates that the most impacted sub region is South and South-West Asia (SSWA) with 50 per cent of fatalities reported, followed by East and North East Asia (ENEA), South-East Asia (SEA), North and Central Asia (NCA), the Pacific small island developing States (SIDS), and lastly the Pacific countries of Australia and New Zealand. (UNESCAP, 2023)

Climate change further intensifies these risks, with its impacts evident in temperature fluctuations, shifting rainfall patterns, rising sea levels, and salinity intrusion in low-lying coastal regions. Countries sharing major river basins such as the Ganges-Brahmaputra-Meghna, Mekong, Yangtze River Delta, and Zhujiang River Delta face increasing exposure to climate-induced water-related extreme events. Nations bordering the Indian Ocean and Pacific Ocean frequently encounter typhoons, storm surges, and prolonged inundation, with particular vulnerability in Pacific regions where 70% of the population resides in coastal areas. (Mozaharul Alam, 2019)

In these countries, critical infrastructure, vulnerable urban populations, and those reliant on subsistence agriculture face heightened exposure to natural hazards. Their existing vulnerabilities further hinder their ability to prepare for and respond to such events. This is evident in mortality rates, which are 5 to 8 times higher in LDCs than in other countries. Without stronger resilience measures, these vulnerable nations, particularly LDCs and Small Island Developing States (SIDS) will continue to bear the brunt of climate risks, with devastating social, economic, and environmental consequences. (UNESCAP, 2023)

3.1 HOTSPOTS OF RISK IN ASIA PACIFIC: EXISTING AND EMERGING

The region's vulnerability to climate-related disasters has been analyzed using global climate models such as CMIP¹⁰ by UNESCAP on how the impact of 1.5°C and 2°C warming will change the region's climate hazard risk scape from its current state.

In general, the risks in existing disaster hotspots are forecasted to intensify, and new disaster hotspots will begin to appear: such as, areas vulnerable to transboundary disasters - the Ganges-Brahmaputra-Meghna basin, the Mekong River basin, the Indus basin and the Aral Sea basin - will see an intensification of hazards: heatwaves, floods, drought. Countries situated in the Ring of Fire, a string of volcanoes and sites of seismic activity around the edges of the Pacific Ocean, will experience risks of climate hazards, such as flooding and tropical cyclones under both 1.5°C and 2°C levels of warming, in addition to the existing risk of tectonic shifts and earthquakes. Additionally, large parts of the northern Asia-Pacific region are expected to become major emerging risk areas, primarily due to heatwaves.

3.1.1 Hazard risk across subregions in the Asia-Pacific

ESCAP has analysed the hotspots of existing surface wind, heatwave, flood, and drought risks under a baseline scenario and identified areas where these risks are intensifying and emerging under the 1.5°C and 2°C warming scenarios (Annexure). Below is an overview of these risks by subregion across the Asia-Pacific region:

East and North-East Asia (ESEA)

China faces all four risks—surface wind, heatwaves, floods, and droughts—with existing hotspots intensifying and new ones emerging. Surface wind and flood risks are especially prominent, with Japan, North Korea, and South Korea currently identified as hotspots for these risks, and the situation is expected to get worse. While heatwave risks are presently minimal in these countries, they are projected to emerge as hotspots. Similarly, Russia, not currently vulnerable to surface wind and heatwaves, is expected to develop hotspots for these risks.

North and Central Asia (NCA)

The Aral Sea Basin countries—Kazakhstan, Uzbekistan, and Turkmenistan—are highly vulnerable to surface wind, heatwaves, and droughts, but flood risk is negligible in this subregion. However, Georgia and Tajikistan are expected to become hotspots for flood risks. Kyrgyzstan, currently unaffected by heatwaves and droughts, is projected to emerge as a hotspot for both. Kazakhstan is anticipated to experience intensification across all three risks: surface wind, heatwaves, and droughts.

Pacific

Australia and Papua New Guinea currently face all four risks—surface wind, heatwaves, floods, and droughts. Australia is expected to see both intensification and the emergence of new hotspots across all

¹⁰ CMIP (Coupled Model Intercomparison Project) is an UN-led climate science collaboration that coordinates global climate modeling efforts. Its latest phase, CMIP6, provides validated climate model data that underpins the IPCC's Sixth Assessment Reports.

risks. Among Small Island Developing States (SIDS) including Papua New Guinea, Vanuatu, New Caledonia, Solomon Islands, Samoa, Tonga, Niue, Tuvalu, Cook Islands, Fiji, Palau, Kiribati, and Nauru, surface wind and flood risks dominate. Countries such as Cook Islands, Papua New Guinea, Kiribati, Fiji, and New Caledonia are likely to experience more intense flood risks.

South-East Asia (SEA)

The Mekong River Basin countries—Myanmar, Thailand, Laos, Cambodia, and Vietnam—are particularly vulnerable, with all four risks currently present and intensifying. Heatwaves, floods, and droughts are expected to worsen significantly in these regions. Indonesia, not currently a hotspot for heatwaves, floods, and droughts, is projected to emerge as one. Thailand, similarly, will experience new risk hotspots.

South and South-West Asia (SSWA)

In South and South-West Asia (SSWA), India faces multiple risks, including surface wind, heatwaves, floods, and droughts, with these risks expected to intensify. New hotspots for these risks are also anticipated to emerge. Bangladesh, Pakistan, and Afghanistan also face various risks. Bangladesh, though not an existing hotspot for droughts, is projected to become one, while it already experiences risks from floods, heatwaves, and surface winds. Pakistan, currently not a hotspot for floods, is expected to emerge as one, while also facing the other risks. Afghanistan is currently a hotspot for heatwaves, surface wind, and drought risks. Iran and Turkey are expected to experience the intensification of surface wind, heatwave, and drought risks. Nepal, which is not currently a hotspot for droughts and surface wind, is projected to emerge as a new hotspot for floods, droughts, and surface winds. Sri Lanka, not currently a hotspot for heatwaves and droughts, is expected to emerge as one for these risks. Turkey, not currently prone to floods, is anticipated to become a new hotspot for this risk. The Ganges-Brahmaputra-Meghna (GBM) and Indus basins are critical zones for risk intensification, particularly for floods and heatwaves respectively.

To conclude, East and North-East Asia (ENEA), though less vulnerable compared to other subregions, faces significant challenges with surface wind and flood risks dominating. In North and Central Asia (NCA), the Aral Sea Basin countries are hotspots for multiple risks, with floods being the exception. This makes the subregion highly exposed. In the Pacific, Australia and Papua New Guinea remain hotspots for all risks. SIDS primarily face surface wind and flood risks, with further intensification expected. South-East Asia (SEA) emerges as the most risk-prone subregion in terms of existing hotspots. The Mekong River Basin countries face all four risks, and intensification expected in heatwaves, floods, and droughts. South and South-West Asia (SSWA) remains the most vulnerable subregion, with critical basins like GBM and Indus facing intensified risks. Countries such as India, Bangladesh, Nepal, Turkey, and Sri Lanka are emerging as multi-risk hotspots.

3.1.2 Status of Adaptation Planning Across the Asia-Pacific Region

As outlined in the previous sections, Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), and Adaptation Communications (ACs) are critical instruments widely used by Parties under the United Nations Framework Convention on Climate Change (UNFCCC) to drive climate

action, particularly in the area of adaptation. Each of these instruments serves a distinct purpose: the NDCs set out the "what" of adaptation goals, while the NAP process details the "how" of their implementation.

In addition to these, other key instruments for advancing climate action include National Communications (NCs) and the National Adaptation Programme of Action (NAPA).

Under the UNFCCC, both Annex I and non-Annex I Parties are required to submit NCs. Annex I Parties, which include industrialized nations and economies in transition, are mandated to submit NCs every four years. Non-Annex I Parties, primarily developing countries, must submit their first NC within three years of entering the Convention and every four years thereafter. These communications serve as comprehensive reports prepared periodically by each Party, in accordance with guidelines developed and adopted by the Conference of the Parties (COP). (UNFCCC)

Meanwhile, the NAPA is a specialized plan submitted by Least Developed Countries (LDCs) to the UNFCCC. The NAPA framework provides a process for identifying priority activities that address the urgent and immediate adaptation needs of LDCs in response to climate change.

Furthermore, countries are also expected to periodically report on their adaptation efforts through Adaptation Communications (ACs). These are submitted to the UNFCCC Secretariat, often as part of or alongside other key documents such as NDCs, NAPs, or NCs. This reporting mechanism ensures that adaptation efforts are tracked, communicated, and aligned with global climate goals.

In line with the global calls, countries in the Asia-Pacific region have also submitted their adaptation plans to the UNFCCC via the National Communication (NC), Nationally Determined Contribution (NDC), National Adaptation Plan (NAP), Adaptation Communication (AC), and National Adaptation Programme of Action (NAPA). Based on the factsheet titled "Overview of the Adaptation Plans in the Asia-Pacific" by the Asia-Pacific Climate Change Adaptation Information Platform, the Institute for Global Environmental Strategies (IGES) conducted a study on the adoption and status of adaptation planning mechanisms in the Asia-Pacific region (Akane Matsuo, 2023). In addition to this, the author has sourced relevant information from other United Nations bodies, such as the UNFCCC, to provide a more comprehensive overview of the adoption of global mechanisms. Table 2 provides an overview of the status of documents submitted to the UNFCCC by the subregions of the Asia-Pacific.

Table 2 Status of the submitted documents to the UNFCCC by sub-region. Source: Compiled by the author from the Institute for Global Environmental Strategies (IGES) factsheet

Documents	NC	NDC	NAPA	NAP	AC
East and North East Asia (ENEAA): (5 + 2* countries)¹¹	5	5	0	0	2
North and central Asia (NCA): (9 Countries)	9	9	0	2	0

¹¹ *No details obtained for special administrative region of China; 2 special administrative regions in East and North East Asia (ENEAA) - Hong Kong- China, Macao- China.

Pacific (16 + 5* countries) 12	16	16	5	5	3
South East Asia (SEA): (11 countries)	9	11	4	4	1
South and South-West Asia (SSWA): (10 countries)	7	10	5	5	1

While all countries in the region have submitted their Nationally Determined Contributions (NDCs) at least once in the past decade, Least Developed Countries (LDCs) have consistently submitted their National Adaptation Programmes of Action (NAPA). Similarly, all Small Island Developing States (SIDS) have submitted their National Communications (NCs). However, the progress in submitting adaptation-specific documents like National Adaptation Plans (NAPs) and Adaptation Communications (ACs) has been slow. Among the 46 Non-Annex I countries¹³, only 16 have submitted the crucial NAPs. Notably, Sri Lanka’s NAP, submitted in 2016, is among the oldest, while countries such as Bangladesh, Papua New Guinea, and Bhutan submitted their plans more recently in 2023. In terms of ACs, only 11 out of 58 countries have made submissions, further highlighting the region’s lag in adaptation communications. (Refer annexure)

Using the national instruments as a proxy, the rest of this Section provides a sub-region-wise overview of the status of adaptation progress.

In East and North-East Asia, adaptation planning remains a challenge. None of the five countries in the subregion have submitted NAPs, underscoring a gap in effective planning. However, countries such as Japan and South Korea have advanced significantly in their NC submissions, with Japan submitting its seventh NC in 2019 and South Korea its fourth in the same year. These two nations have also submitted ACs, making them leaders in adaptation progress within the subregion. Meanwhile, China, despite being highly vulnerable to multiple climate risks, has only submitted its NC in 2023. North Korea lags behind with its NC dating back to 2012, leaving the country unprepared for emerging climate challenges.

In North and Central Asia, most countries have submitted NCs, with the notable exceptions of Turkmenistan and Kyrgyzstan. However, only Armenia and Azerbaijan out of the nine countries have prepared NAPs. As landlocked developing countries, nations in this subregion face economic constraints. They also face heightened climate risks. The absence of comprehensive adaptation plans makes this situation even more concerning.

The Pacific sub region presents a mixed picture. Out of 16 countries, five—Kiribati, Papua New Guinea, Marshall Islands, Tonga, and Vanuatu—have submitted NAPs. Papua New Guinea, being highly vulnerable to climate risks, submitted its NAP in 2023, enhancing its preparedness for emerging

¹² *No details obtained for associated territories; 5 associated territories in Pacific - American Samoa, French Polynesia, Guam, New Caledonia, Northern Mariana Islands.

¹³ Submission of NAPs is not mandatory for Annex I countries

challenges. In contrast, countries like the Solomon Islands and Samoa, despite having updated NCs, rely on outdated NAPAs from 2008 and 2005, respectively, and lack NAPs altogether.

Australia and New Zealand, while lacking NAPs, have submitted ACs. The Marshall Islands stand out as the only Pacific nation to have submitted both a NAP and an AC, demonstrating proactive adaptation planning in the subregion.

South-East Asia is a region of contrasts in adaptation readiness. Countries like Cambodia and Thailand have made significant progress by submitting both NAPs and ACs, making these countries better prepared to manage projected risks as explained in the previous section. However, vulnerabilities persist in nations such as Myanmar and Laos, where outdated NAPAs and NCs, coupled with the absence of NAPs, exacerbate their exposure to climate risks.

Indonesia, another highly vulnerable country, has not submitted a NAP and relies on an outdated NC from 2018, though it has made progress by submitting an AC. Other nations, such as Malaysia and Singapore, have also submitted ACs, reflecting their focus on adaptation communication.

In South and South-West Asia, countries like Bangladesh have emerged as leaders in adaptation efforts. Bangladesh's submission of a NAP in 2023 positions it to address intensifying climate risks (as explained in the previous section) effectively. Similarly, Pakistan, Sri Lanka, and Nepal have made significant progress by submitting NAPs, addressing their status as risk hotspots.

India, while highly vulnerable to a range of climate risks, has yet to submit a NAP but has demonstrated commitment through the submission of its third NC in 2023 and an AC. Bhutan, however, stands out in the subregion as the only country to have submitted both a NAP and an AC, showcasing its dedicated approach to adaptation planning.

While the submission status of adaptation documents such as NAPs, NAPAs, and NCs varies widely across the Asia-Pacific region, the content of these plans also reveals critical gaps.¹⁴ Most adaptation plans acknowledge the impacts of climate change, particularly temperature fluctuations, though detailed assessments of current and future changes are often lacking. Other elements, such as rainfall, sea-level rise, and climate-related hazards, receive more comprehensive attention.

However, the social dimensions of climate vulnerability—such as poverty, population dynamics, and agriculture—are frequently underrepresented. Globally, and within the APAC region, priority sectors like agriculture.

and food security are addressed more consistently, followed by health and water resources. Despite these efforts, critical areas such as gender and social inclusion, socio-economic activities, and energy systems remain underexplored, reflecting broader gaps in adaptation planning. (Akane Matsuo, 2023)

¹⁴ Note: The study by IGES, "Status of Adaptation Planning in the Asia-Pacific," focuses on only 39 countries.

3.1.3 Sources of Climate Finance for Adaptation Projects

As outlined earlier, East Asia and Pacific, along with South Asia, demonstrate the highest climate finance needs, accounting for 273.7 billion USD out of a total of 415.6 billion USD per year until 2030 (UNEP, 2024). This region (Asia Pacific) altogether encompasses over 40 developing countries, including 11 of the world's 46 Least Developed Countries (LDCs). These countries articulate their adaptation needs through key instruments such as NAPs, Acs, NAPAs, and NDCs, which were explained earlier. These instruments play a crucial role in accessing climate finance from various mechanisms.

To facilitate the provision of climate finance, the UNFCCC has established finance mechanism¹⁵ operated by two primary entities: the Global Environment Facility (GEF) and Green Climate Fund (GCF). These financial mechanisms operate under the oversight of the Conference of Parties (COP), which determines policies, programme priorities, and funding eligibility criteria. (UNFCCC)

In addition to guiding the GEF, Parties have established three key climate funds:

1. Special Climate Change Fund (SCCF) (Managed by the GEF)
2. Least Developed Countries Fund (LDCF) (Managed by the GEF)
3. Adaptation Fund (AF) (AF operates under the Kyoto Protocol.)

These funds serve as international and multilateral financing mechanisms, offering grants and other resources to help countries implement projects and programs addressing climate change impacts. (UNFCCC, 2023)

As detailed in Annexure, several financial sources are available to support adaptation efforts, focusing on key areas like:

1. Support for concrete adaptation actions through full-size projects
2. Support to countries for project proposal development
3. Support for ongoing process of formulating and implementing NAPs

Sources of finance to support concrete adaptation actions primarily fund the implementation of adaptation projects, the development of NAPs, and, in some cases, pilot feasibility studies. While grants are the primary type of financing offered, mechanisms such as the GCF project window, GCF simplified approval process, GCF Private Sector Facility, and the Ocean Resilience and Coastal Adaptation Financing Partnership Facility (ORCA-FPF) also provide concessional loans, equity, and guarantees.

Eligibility for these funds varies:

¹⁵ A mechanism for the provision of financial resources on a grant or concessional basis, including for the transfer of technology. It functions under the guidance of and is accountable to the COP, which shall decide on its climate change policies, programme priorities and eligibility criteria for funding. The financial mechanism also serves the Kyoto Protocol and the Paris Agreement.

1. Funds like the GCF project window, GCF simplified approval process, GCF Private Sector Facility, Adaptation Fund single-country funding window, and GEF Challenge Program for Adaptation Innovation are accessible to all developing countries, including LDCs.
2. The Least Developed Countries Fund (LDCF) is exclusively available to LDCs.
3. Funds such as the Adaptation Fund's Enhanced Direct Access funding window, Adaptation Fund large innovation grants, Adaptation Fund NIE small grants for innovation, Adaptation Fund Climate Innovation Accelerator (AFCIA), and Global Ecosystem-based Adaptation Fund are specifically designed for developing country parties.

For regional initiatives, specific financing sources such as LDCF/SCCF support for regional and global projects and Initiatives, the Adaptation Fund for regional projects and programmes and the Ocean Resilience and Coastal Adaptation Financing Partnership Facility (ORCA-FPF), all of which target regional climate change challenges.

To facilitate support for project proposal development, several funding mechanisms are available in the form of grants. These include the Green Climate Fund Project Preparation Facility, Support for project development under the GEF Project Preparation Grant, and the Adaptation Fund Project Formulation Grants (PFGs). These funds primarily support the process of developing National Adaptation Plans (NAPs), providing technical assistance for proposal development and feasibility studies. These funding opportunities are accessible to all developing country parties.

To facilitate the ongoing process of formulating and implementing National Adaptation Plans (NAPs), the Green Climate Fund Readiness and Preparatory Support Programme is available in the form of grants and technical assistance. This support is primarily used for project proposal development, capacity building and for adaptation planning and is accessible to all developing country parties, helping them advance their adaptation efforts effectively.

4. MOBILIZATION, OUTREACH AND NETWORKING

South Asian Representation

The initiation of advocacy efforts began through the ARA members. The symposium on Tracking, Learning and Sharing, by Transition Research that mobilized ARA members from South Asian countries was leveraged as the first step in starting advocacy conversations. An in-person one day workshop was conducted in Sri Lanka along with TLS to gain in-depth perspectives from these members. This is detailed out later in this Section.

In preparation for the workshop, key materials summarizing the climate risk status of the Asia-Pacific region (as outlined in the previous Section) were compiled and shared with the members of the ARA. This included a brochure on the evolution of the global climate adaptation agenda and the climate finance journey. In addition, a stakeholder mapping exercise was conducted basis which a visual directory is created. The Directory provided a profile of stakeholders, which was incorporated into an editable web-based mapping platform. These materials served as conversation starters with participants.

Finally, Google Forms were designed and circulated, eliciting information on the participants and their organisations as well as their awareness on the adaptation goals and climate finance. This guided the design of the one-day workshop.

Additionally, organizations were asked to share the names of their collaborating partners working on climate adaptation in the Asia-Pacific region, and their willingness to connect with these organizations was also collected.

Municipalities Representation

Building on the momentum of the Sri Lanka workshop, outreach efforts were expanded to include sector-specific groups across South and Southeast Asia—region not previously engaged in the initial phase. These extended efforts benefited significantly from the networks introduced by participants of the Sri Lanka workshop, including a key connection with the BORDA South Asia team, which works closely with municipalities in the region.

Through collaboration with BORDA South Asia, outreach was directed towards municipalities to explore the intersection of Water, Sanitation, and Hygiene (WaSH) services and the impacts of climate change. This engagement facilitated connections with two municipalities: Leh in India and Sylhet in Bangladesh.

An online engagement webinar was co-organized with BORDA South Asia, featuring presentations and panel discussions involving municipal representatives and experts. The session provided a meaningful platform for sharing local experiences, highlighting challenges, and exchanging insights related to municipal adaptation strategies. The outcomes of the engagement are put as a separate piece of outcome.

4.1 BROCHURE ON THE DEVELOPMENT OF THE GLOBAL ADAPTATION AGENDA

The brochure (figure 11) highlights key discussions from important COP meetings, particularly COP 29, where NCQG discussions gained prominence. It captures the historical context of climate financing and the concept of climate justice in the context of developing and developed countries. Additionally, it outlines key approaches to climate adaptation progress and the essential pillars of climate adaptation finance. Furthermore, the brochure discusses criticisms and debates surrounding recent decisions on climate finance, raising key questions for reflection.

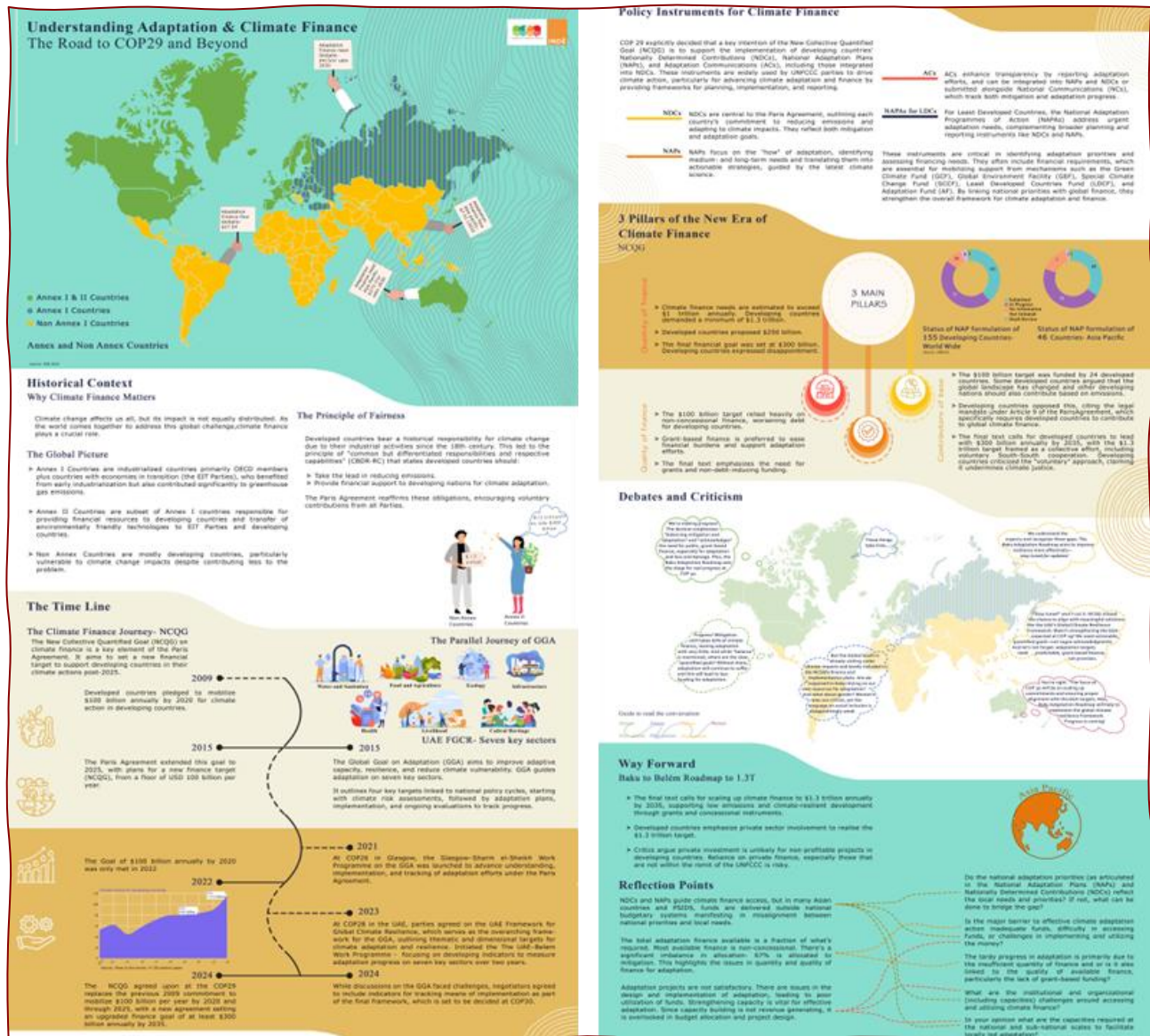


Figure 11 Brochure on Development of the Global Adaptation Agenda (find the digital version [here](#))

4.2 OUTREACH PRESENTATIONS AND PROFILING FORMS

The presentation included information on the vulnerability status of the Asia-Pacific region, the overall objectives of the advocacy effort, and the specific expectations of the one-day convening. These aspects are discussed in detail in individual sections further in this document. Figures 12 and 13 illustrate the climate vulnerability and adaptation progress of these regions, showcasing their advancements through national instruments for climate adaptation presented to the participants.

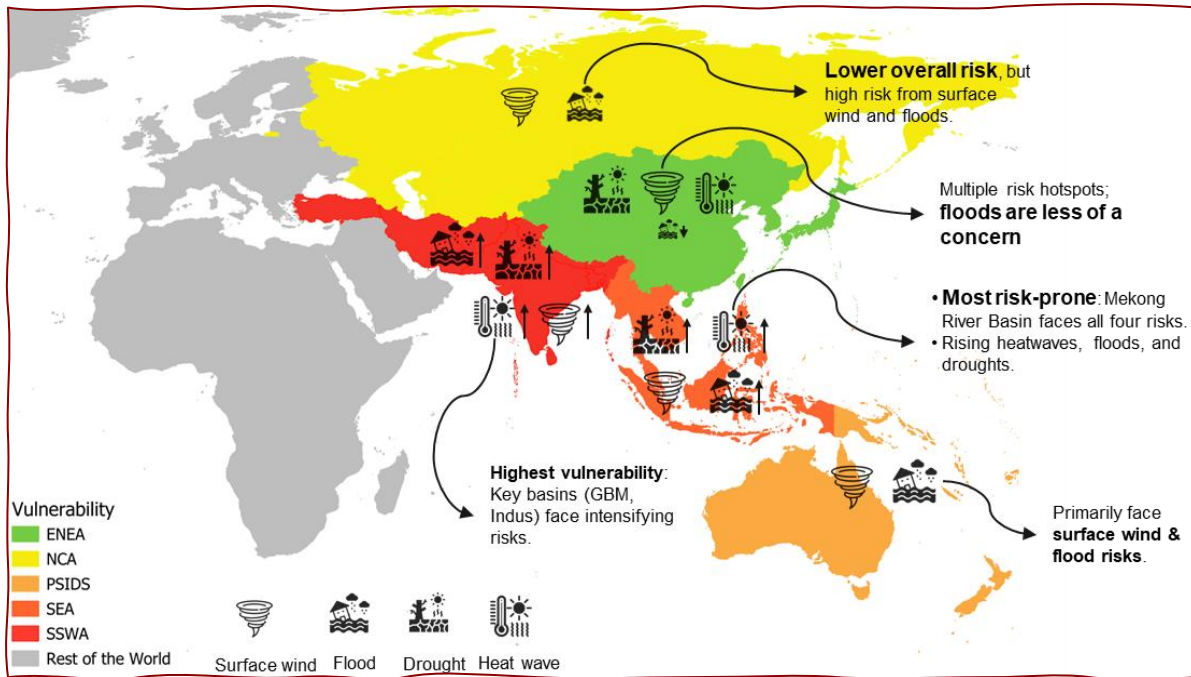


Figure 12 Climate vulnerability status of Asia Pacific region - secondary literature review

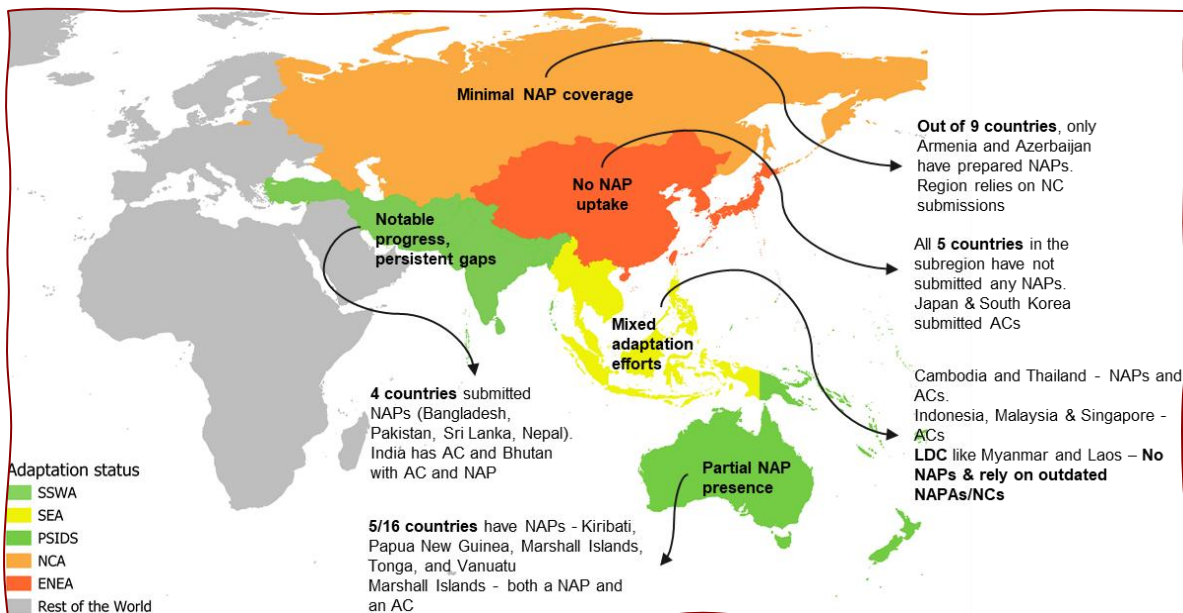


Figure 13 Climate Adaptation status of Asia Pacific region - secondary literature review

4.3 ADAPTATION PRIORITY INVENTORY

The latest country-specific national adaptation instruments were analyzed and simplified into a concise list of priority actions, creating an inventory for all participating countries. This inventory was shared with participants to help them familiarize themselves with their respective national adaptation instruments, such as NDCs, NAPs, ACs, and NCs, and their priorities. The material was instrumental in initiating conversations about the challenges and barriers to adaptation progress, such as the lack of local perspectives in the plans, capacity gaps, insufficient funding for projects, and difficulties in accessing finance. The inventory for several countries compiled so far is included in the here.

The cumulative effort of this networking exercise has been instrumental in identifying the right stakeholders aligned with the objectives of the advocacy efforts in the broader Asia-Pacific region. This approach has provided relevant insights and findings that help paint a picture of the region's climate adaptation progress, needs, and challenges, along with specific insights discussed in the following sections.

5. SOUTH ASIAN REPRESENTATION - WORKSHOP IN COLOMBO, SRI LANKA

The offline engagement saw the participation of ARA members from South Asia. The event co-organised along with the TLS (Tracking Learning and Sharing) Knowledge Synthesis Symposium 2025.¹⁶

The primary goal of the workshop was to raise awareness about the global adaptation agenda, specifically the Global Goal on Adaptation (GGA) and the New Collective Quantified Goal (NCQG), and to create an opportunity for participants from different countries in the APAC region to share their adaptation challenges and strategies. In particular it focused on understanding country-level adaptation, challenges, and financial constraints. Through discussions, participants were able to offer insights into the adaptation strategies implemented in their countries, detailing the problems these strategies aim to address and the barriers they face in achieving these strategies.

The day was organized with group activities, interactive sessions, and short verbal presentations (between groups). Participants were divided into groups of 5-7 members, each consisting of individuals from different countries.

5.1 ACTIVITIES UNDERTAKEN

To begin with, the participants were encouraged to discuss how they would approach adaptation strategy(s) in their respective countries, using case examples from their past experiences or knowledge. This encouraged participants to collaboratively discuss how they would approach adaptation efforts for one or more specific problems. These problems could be taken from real-life cases from various countries or be hypothetical scenarios discussed by the team.

The next interaction was a collaborative exercise focusing on national adaptation plans and strategies. Participants were asked to share their thoughts on how these national strategies align with local adaptation needs. This phase of the workshop was crucial for understanding the gap between national (and, by extension, local) adaptation efforts and their actual implementation or translation at the local level.

A compilation of national adaptation priorities was shared with the respective country participants, who were instructed to review and discuss these priorities with other participants. The aim was to highlight the adaptation focus (as reflected in the NAPs, NDCs, NCs, ACs) of the participants' countries and encourage them to assess the alignment between national priorities, local adaptation requirements, needs and challenges and by extension the gaps between the national adaptation priorities and local needs. Participants also shared their perspectives on the relevance and implementation of national priorities in their local contexts.

¹⁶ The Tracking, Learning, & Sharing (TLS) activity serves as a cornerstone of member learning and engagement within the Adaptation Research Alliance (ARA). This initiative aims to produce visible and impactful knowledge products while providing ARA members with opportunities to actively contribute to their development and dissemination.

In the final session, participants shared their key messages for COP 30, focusing on the critical elements they believe are vital for future global adaptation efforts. The following sections delve into the insights, findings, and perspectives presented by participants from various countries, showcasing their adaptation strategies in response to diverse climate change challenges.

5.2 STAKEHOLDER ENGAGEMENT

A total of 27 participants joined the workshop, along with two facilitators from Integrated Design. The discussions took place among the representatives from countries across South Asia, including Iraq, Pakistan, India, Bangladesh, Nepal, Sri Lanka, Myanmar, Hong Kong, Indonesia, and Japan.

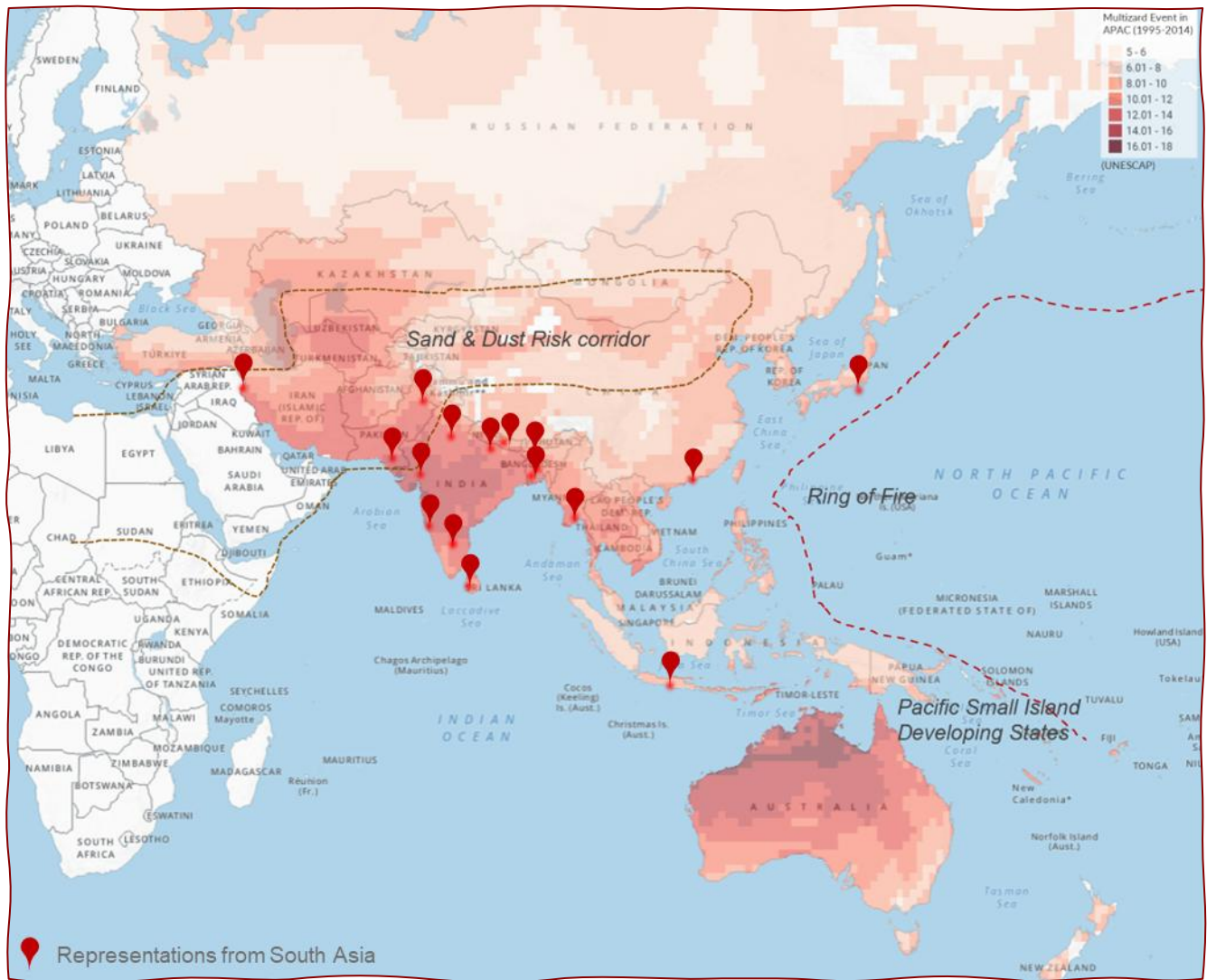


Figure 14 Participants from South Asia Region in the Sri Lanka Workshop

5.2.1 Participants Profile

Scale of work

The participants and their organizations were primarily engaged in a wide range of projects at various scales—global, national, subnational (regions and provinces), and local. However, the majority were involved in subnational-scale projects and local adaptation initiatives. While they may not be fully immersed in the global scale of climate adaptation, these participants play a crucial role in driving adaptation efforts at the local and subnational levels.

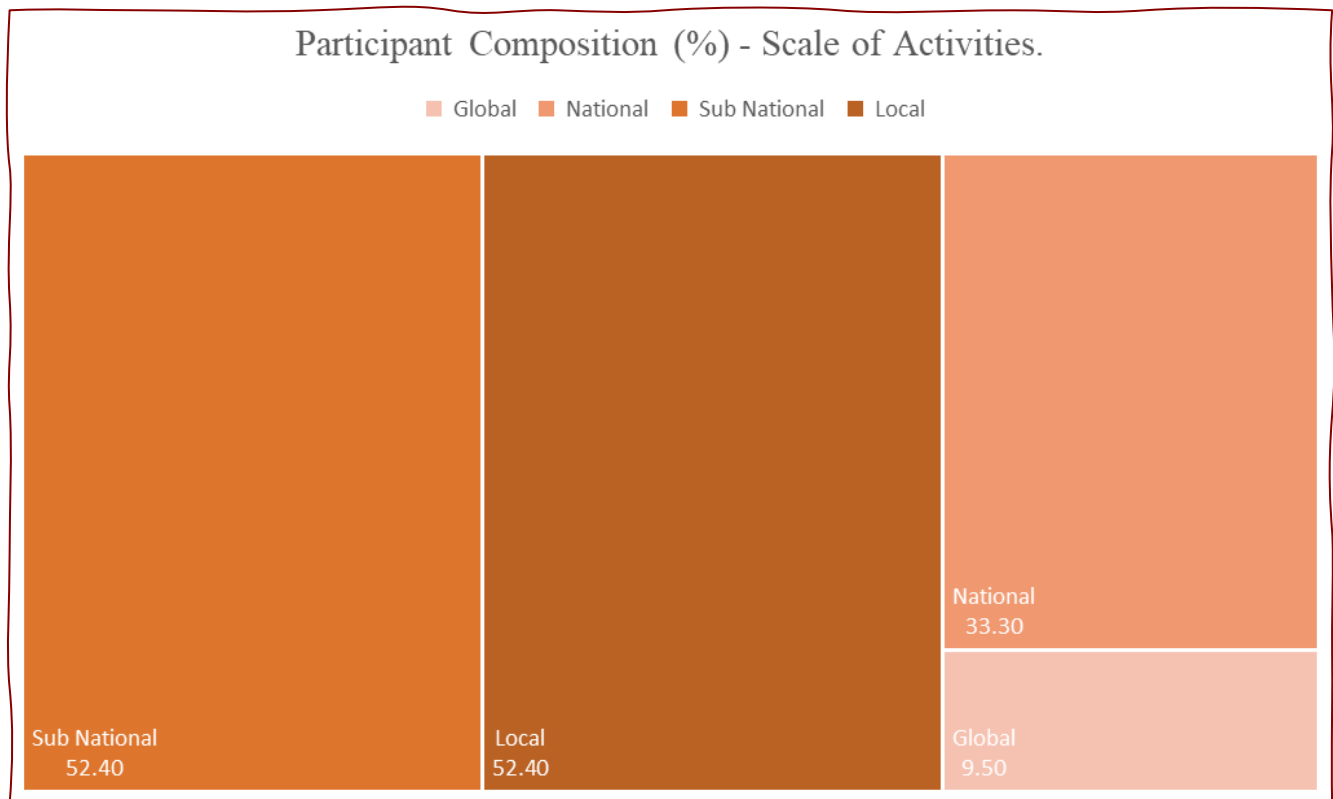


Figure 15 Participants' scale of working (Sri Lanka Workshop)

Familiarity with global climate adaptation agenda

Among the participants, only one had attended COP 29. Most participants were familiar with the concepts of the GGA and NCQG, although a significant portion—70%—needed more information to fully understand them. Similarly, while most participants were aware of the UAE FGCR, (around 95%) and the NCQG (90%), there was an expressed need for additional information.

Familiarity with national instruments for adaptation

Similarly, a majority of participants were familiar with their respective national instruments, such as the Nationally Determined Contributions (NDCs) and the National Adaptation Plans (NAPs). However, familiarity with instruments like Adaptation Communications, National Communications, and the National Adaptation Programme of Action was relatively limited. While the participants may not be deeply familiar with the global climate agendas, they are well-acquainted with the key national instruments that prioritize and shape their adaptation work.

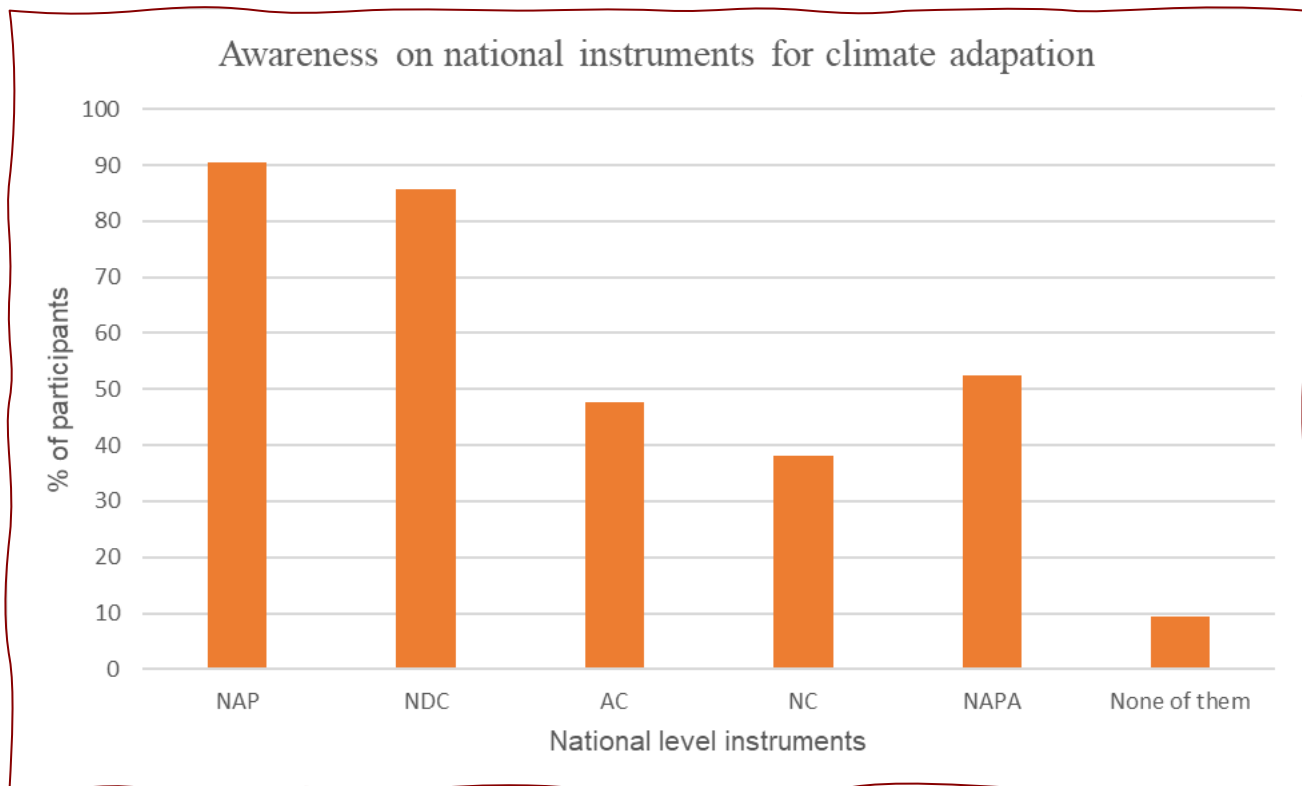


Figure 16 Participants' Awareness on National Instruments for Climate Adaptation

Participants relating to UAE FGCR sectors

Participants were asked to categorize their work based on its alignment with the 7 target areas set under the UAE FGCR. Similar to the mix of scales in their work, there was a variety of focus areas for each participant's organization across these 7 sectors: Water & Sanitation, Ecosystems, Infrastructure, Health, Livelihoods, Cultural Heritage, and Food & Agriculture.

A majority of participants (81%) indicated that their projects align with the Livelihoods target. Following that, 62% of participants reported working in the Water & Sanitation target, and 48% worked on projects related to Food & Agriculture and Ecosystems, respectively. The remaining areas included Infrastructure (42%), Health (33%), and Cultural Heritage (24%).

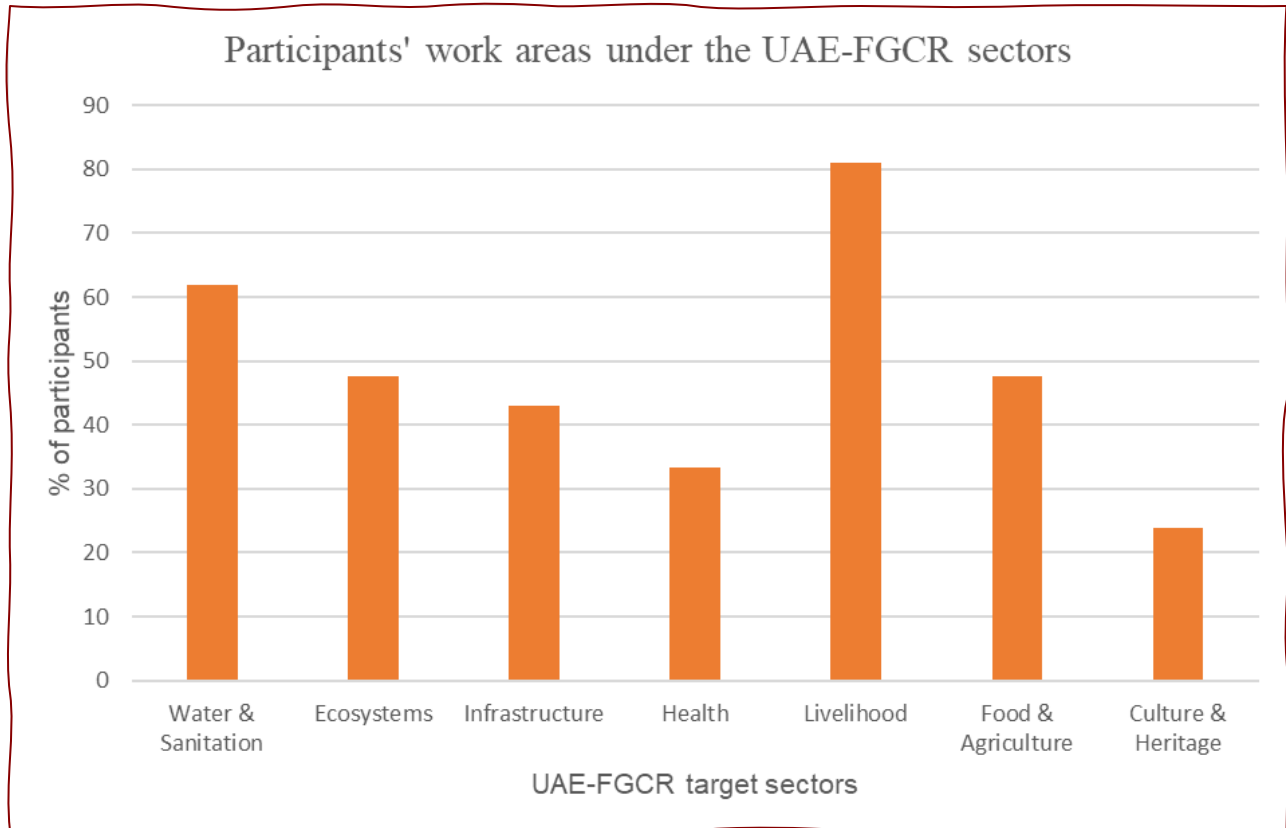


Figure 17 Participants' relating themselves to UAE FGCR sectors

5.2.2 The criticality of these perspectives

Large organizations working in the field of climate adaptation often operate on a global scale, focusing on specific sectors or multiple sectors (annexure). In contrast, this group's strength lies in its ground-level work. While many members may not be deeply familiar with global climate agendas, they play a crucial role in driving adaptation efforts at the local and subnational levels. Their work spans various scales, and the intersectionality of their sectors further enhances their ability to collaborate, creating valuable opportunities to strengthen adaptation initiatives.

However, the intersectional and scale-specific strengths and limitations of adaptation actions in this group may not always be fully reflected in global and national dialogues. Despite this, their pivotal role in localizing adaptation actions in collaboration with communities makes their collective experience invaluable for informing global efforts, such as the development of indicators and methodologies for measuring progress toward the UAE FGCR targets.

Bringing the voices of this critical group to the forefront bolsters advocacy efforts, ensuring that the experiences and perspectives of those working at local and subnational levels are acknowledged in broader climate conversations. This effort not only highlights their contributions but also ensures their needs are addressed in the global dialogue on adaptation. Consequently, strengthening the connections between these ground-level organizations and larger global entities

working on climate adaptation can be leveraged to foster better adaptation strategies in vulnerable regions.

5.3 OUTCOMES - PROBLEMS AND THE SOLUTIONS (ACTIVITY 1)

As outlined in the introduction, in this group activity participants discussed and presented one or more interconnected problems within an identified thematic area. The focus was on drawing from their experiences and knowledge, with reference to the countries represented by the participants. The goal was to identify potential adaptation strategies they had worked on or would consider working on to address the identified problems, and to align these strategies with the UAE FGCR targets. Additionally, participants discussed the barriers they face in implementing these strategies.

The activity was designed to foster collaboration and encourage participants to share their insights and experiences. Working together, the group refined and selected a problem or set of linked problems to present, and then identified three adaptation strategies that they believed could have a rapid, widespread, and profound impact. These strategies were also connected to the priority sector targets outlined in the UAE FGCR.

Each group then presented their identified problems, strategies, and barriers to the facilitators and other groups triggering further discussions sharing additional experiences and providing feedback on strategies by other groups.

The overall aim of this activity was to facilitate a rich, mutual discussion among participants, and to document a broad overview (paint a picture) of the adaptation challenges faced in South Asia.

5.3.1 Group 1: Heat stress and related concerns

The participants in this group came from Iraq, Bangladesh, Pakistan, and Sri Lanka. The discussion focused on the geography of the Korail slum in Dhaka, Bangladesh, and Kalar city in the Kurdistan region of Iraq, where extreme heat is a growing concern. In both locations, temperatures regularly exceed 42°C, with some areas reaching up to 50°C.

The Korail slum is amongst the largest slums in Bangladesh. In this area, livelihoods primarily depend on rickshaw pulling and street vending. Nearly two million people live in this densely packed area, and the heatwave has significantly impacted their livelihoods, causing a ripple effect throughout the local economy. Many heatstroke incidents occurred due to a lack of awareness of coping mechanisms.

A critical concern highlighted was that during the 2024 heatwave, schools across the country were closed due to the extreme heat, leaving children unable to attend school. However, in Korail, where a majority of children are involved in labor and not attending school, this widespread disruption severely hindered even the limited participation of children in education. This raised questions about how children from such slums can overcome these challenges and access their educational

rights. The question also arose whether special attention and care are required to address the impact of heatwaves on education. Such areas, which are already striving to improve their socio-economic conditions through education, now face the additional burden of climate change effects, further deepening the socio-economic divide. According to UNICEF, 33 million children in Bangladesh had their schooling disrupted by the climate crisis in 2024, with some children losing up to eight weeks of learning due to climate hazards like heatwaves, cyclones, and floods.

Another issue raised was the contamination of the nearby Gulshan Lake, a vital water source for the Korail slum. During the summer, residents rely on the lake for domestic purposes, except for drinking water.

Additionally, the group discussed infrastructure challenges, particularly the severe electricity shortages in Bangladesh. The power shortages, which are common in most cities, are exacerbated in Korail, where residents face outages lasting 8-10 hours a day. The primary reason for the prolonged electricity outages is a fuel shortage on a large scale, which affects power generation and distribution. Most of the electrical connections in the slum are illegal, and the tin-shed houses further exacerbate the heat, making the environment unbearable, especially for children and the elderly who are most vulnerable to the heat.

These concerns highlighted the difficulties of implementing adaptation actions in informal settlements, where residents experience the intensified impacts of climate change. The group's focus was on the requirement for special attention in such areas, given the deepening effects of climate change and the urgent need for tailored adaptation solutions.

Strategies identified

UAEFGCR Target sectors selected: Water & Sanitation, Health and Livelihoods

Water purification and recycling | rainwater harvesting | social and behavior change communication strategy | building social partnerships with local institutions and communities | passive cooling methods | heat safety kits such as ice bags and cool clothing | regular health check-up camps | awareness on heatwave diseases | vulnerability assessment for slums | early warning systems for the community | heat adaptation in the work environment | night markets | change in working hours | workspaces with basic cooling facilities | mobile toilets and sanitation facilities in workspaces | alternative job opportunities.

Three highlight strategies

1. Capacity building and community engagement (Profound impact)

Fostering local knowledge and actively involving communities in the design and implementation of adaptation strategies.

2. Heat-adaptive working hours (Widespread impact)

Introducing night working hours and providing support for women to work during these hours, ensuring safety and flexibility for those in heat-affected regions.

3. **Passive cooling techniques (Rapid impact)**

Implementing simple, cost-effective methods such as wet curtains, proper ventilation, and the promotion of suitable clothing to reduce heat stress

Barriers

1. **Funding challenges and investment gaps**

Particularly in informal settlements (e.g., slums), securing adequate funding and investments for adaptation measures is a major hurdle.

2. **Policy gaps and lack of institutional support**

There is a significant gap in policies designed to drive community engagement and insufficient institutional backing to support such initiatives.

3. **Lack of political will**

Political leaders may not prioritize or fully commit to climate adaptation measures, delaying or hindering progress.

4. **Limited land and space for alternative market opportunities**

There is a lack of space for developing alternative market solutions, such as night markets. Additionally, there is limited awareness or acceptance of such opportunities, particularly from consumers. Social, cultural, and religious constraints, especially concerning women's participation in night markets or alternative job options, further complicate the situation.

5.3.2 Group 2: Water and sanitation concerns in the context of climate change

This group, consisting of participants from India and Nepal. Similar to Group 1, this group too focused on the theme of water and sanitation concerns arising from climate change, rather than directly addressing climate hazards. The discussion centered on drinking water, domestic water usage, and the sources of water. Climate change is significantly impacting two primary sources of water—groundwater and surface water—mainly due to changes in precipitation patterns and rising temperatures.

The group also examined anthropogenic factors affecting water sources, such as urbanization, concretization, and upstream dam constructions. A key concern is that the traditional systems that supported groundwater recharge are being disrupted by engineered piping, limiting the natural flow and replenishment of these resources.

There is a need to ensure both the quality and quantity of water in these sources. As water moves through a complex network of natural and man-made systems, many areas are vulnerable to contamination. Furthermore, the discussion covered the current state of water management systems, focusing on the capacity to develop effective infrastructure and addressing governance gaps that hinder the provision of clean and reliable water sources. Additionally, the link between water scarcity and sanitation was discussed. In areas facing water shortages, access to sanitation

becomes a challenge, and a lack of awareness regarding sanitation and the need for behavioral change exacerbates the situation.

In particular, the group focused on the challenges in India's two and three-tier cities, which while having access to non-perennial rivers, face water shortages during the summer due to increased demand and changes in rainfall patterns. Municipalities that source water from these rivers struggle with providing a continuous supply, often supplying water only two or three days a week. As a result, communities unable to afford engineered storage solutions resort to makeshift storage practices, which increases the risk of vector-borne diseases—a clear example of maladaptation that needs urgent attention.

In cities where water is more readily available, a challenge is the rising cost of electricity bills during the summer months, which municipalities cannot afford. This forces them to limit water supply to two or three days a week, further exacerbating water access issues. Some cities also face electricity shortages, further complicating the situation.

Reports from the World Bank show that in countries like India and Bangladesh, the electricity costs for operating water and sanitation infrastructure exceed 40% of the operating costs (Liu, Ouedraogo, Manghee, & Danilenko, 2012). With increasing demand, these costs strain municipal budgets, which lead to increased tariffs for customers and exacerbate the financial difficulties faced by local governments. Another issue is the contamination of water sources due to inadequate sanitation systems. In many two three-tier cities, the lack of sewage treatment plants (STPs) leads to untreated sewage flowing into natural water bodies, further polluting the water.

This group focused on articulating the complex challenges of water and sanitation in the context of urban development, governance, and financial constraints, underscoring the need for a more sustainable approach to addressing these issues in the face of climate change.

Strategies identified

UAEFGCR Target sectors selected: Ecosystem, Infrastructure and Health

Spring restoration | afforestation | rejuvenation of water bodies | payments for ecosystem services for generating funding | sponge city initiatives – recharge wells, tanks, traditional water harvesting system revival | rooftop rainwater harvesting | localized community storage tanks | local filtration techniques | water treatment systems | monitoring water quality | sludge and sewage treatment plants.

Three highlighted strategies

1. Watershed management (Profound)

Managing entire watersheds to improve water availability, quality, and recharge capacity, with significant long-term benefits.

2. **Heat-adaptive working hours (Widespread impact)**

Introducing night working hours and providing support for women to work during these hours, ensuring safety and flexibility for those in heat-affected regions.

3. **Passive cooling techniques (Rapid impact)**

Implementing simple, cost-effective methods such as wet curtains, proper ventilation, and the promotion of suitable clothing to reduce heat stress.

Barriers

1. **Difficulty in engaging community participation for watershed management**

Community involvement is crucial, but it is often hard to engage local populations in long-term watershed management projects.

2. **Coordination among stakeholders for watershed management**

Effective management requires coordination among multiple stakeholders, which is often challenging due to differing interests and priorities.

3. **Land unavailability – need to work with private landowners**

Limited access to land for water-related projects, particularly for purification and storage initiatives, requires collaboration with private landowners.

4. **Lack of land for water purification**

Securing appropriate land for building water purification infrastructure remains a major obstacle in urban and rural areas.

5. **Funding challenges**

There is a need to explore unique financing mechanisms, including internal funding systems, as climate finance from developed countries does not always reach adaptation initiatives at local level.

6. **Training and capacity building**

Many of these strategies are technology-heavy and require specific, context-driven designs, necessitating targeted training and capacity building.

7. **Fragmented government systems**

Governance systems are often fragmented, making it difficult to implement large-scale, coordinated water and sanitation solutions.

5.3.3 Group 3: Flash floods induced by climate change

This group, consisting of participants from Indonesia, Myanmar, Japan, Bangladesh, and Hong Kong, discussed climate-induced flash flooding- with a focus on Bangladesh - and the associated challenges. The conversation centered on disaster management, highlighting the regular

occurrence of flash floods in Bangladesh and the difficulties faced in responding to these events. A key issue is the reluctance of people to evacuate despite emergency warnings, driven by the fear of losing their properties and livestock. This emotional connection to their assets often leads to delays in evacuation, undermining the effectiveness of disaster prevention measures.

The group emphasized the role of socio-economic conditions and psychological factors in evacuation decisions. People's awareness of disaster risks and their perception of those risks are crucial in determining whether they will evacuate. Research indicates that evacuation decisions are influenced by the quality of warnings and an individual's perception of the risks (Gladwin, 2007).

The group also discussed the impact of communication failures, which hinder rescue operations during and after disasters. As a result of these factors, many lives and livelihoods are lost, specifically due to the psychological fear of losing property and a failure to fully understand the scale of the disaster. Despite flash floods being a regular phenomenon in Bangladesh, these challenges remain unaddressed, preventing the effective use of pre-evacuation measures that are essential for reducing disaster impacts.

Strategies identified

UAEFGCR Target sectors selected: Infrastructures, Livelihoods and Ecosystems

Stormwater drainage system | water body management | local livelihood support facilities | insurance for local livelihood loss | behavioral change strategies | Business continuity management | early warning systems | urban forests | mangrove development.

Three highlighted strategies

1. Stormwater drainage and water body management (Profound Impact)

Identifying the existing situation of catchments and flood issues, engaging the community, conducting surveys, and implementing a phased approach.

2. Urban forests (Widespread Impact)

Developing and enhancing urban forests to support environmental resilience and reduce flood risks.

3. Behavioral change strategies (Rapid Impact)

Promoting awareness and changing behaviors related to disaster preparedness and response for quicker adaptation and action.

Barriers

1. **Funding gaps and scalability**

Lack of sufficient funding and challenges in scaling up successful interventions to a broader level.

2. **Political will and unstable government**

The absence of strong political commitment and the instability of government policies hinder effective disaster management and adaptation.

3. **Lack of information on existing natural resources**

Insufficient knowledge and data on available natural resources that could be leveraged for adaptation measures.

4. **Lack of a bottom-up approach**

The local government struggles due to a lack of a participatory, bottom-up approach that includes local communities in decision-making processes.

5.3.4 Group 4: Flash floods in Sri Lanka

This group, consisting of participants from India, Bangladesh, and Sri Lanka, discussed flash floods, focusing on a case in Colombo, Sri Lanka. The group explained the geography of Sri Lanka, highlighting its central highlands from where rainfall flows down to rivers and streams, eventually reaching the sea. Communities are living along these waterways, a common feature in many Asian countries. In this instance, local authorities issued warnings and informed residents about the expected heavy rainfall and potential flooding.

However, similar to previous discussions, the group pointed out the issue of risk perception. Communities in flood-prone areas often underestimate the severity of floods, expecting them to be limited to knee-level waters, a phenomenon they consider common in the region. The group shared a specific case of a shop and house in the affected area. These shops were unprotected, with rice bags left out for sale, and the residents did not evacuate despite warnings.

Unfortunately, in this case, the water level rose much higher than expected, surpassing adult head level. One of the participants, who witnessed the post-flood condition, described the situation as extremely serious. The water was muddy (dark brown), flooding the houses and carrying debris such as tree trunks and bamboo, which eventually became trapped in the fences of homes and shops. In an attempt to block the water's inflow after the water level decreased to a level, the shop owners used rice bags, which they had stacked for selling, as makeshift sandbags. This desperate attempt was the only coping strategy they had, as they had no other resources or support.

This situation highlights the harsh reality faced by individuals during such severe events. The floodwaters caused devastating economic losses, with rice bags—an essential investment—becoming useless. This personal story reflects the widespread experience of many people who face similar challenges during severe floods, raising questions about the long-term psychological and economic recovery after such disasters.

The discussion also expanded to similar issues in the Himalayan region, particularly along the Koshi River, where communities have lived for generations but face annual flooding. Each year, the land erodes, forcing people to migrate to nearby areas. A similar situation occurs in Assam, where flooding is a continuous problem.

Strategies identified

UAEFGCR Target sectors selected: Livelihood, food & agriculture or Ecosystems and infrastructure

Annually updated risk susceptibility mapping | Relocation from high-risk zones | Livelihood diversification | Flood adaptive structures | Improved drainage | Establish River banks | Flood resilient infrastructures | Natural resource rejuvenation.

Three highlighted strategies

1. Rejuvenation of wetlands and natural ecosystems (Profound impact)

Addressing blue infrastructure encroachments in urban areas, focusing on restoring wetlands and other natural ecosystems to mitigate the impact of flooding.

2. Insurance and compensation (Wider impact)

Establishing insurance schemes for flood victims and implementing compensation mechanisms to help communities recover from losses and build resilience.

3. Improving stormwater drainage network (Rapid impact)

With limited resources and community contributions, this can be done through pre-monsoon and post-monsoon cleaning of drainage channels to improve the effectiveness of the stormwater system.

Barriers

1. Lack of strict rules and regulations enforcement

Without proper enforcement of existing regulations, flood risk management measures cannot be effectively implemented.

2. Government focus on large infrastructure projects

The government often prioritizes big infrastructure projects over smaller, community-driven initiatives, which could have significant adaptation benefits.

3. Insurance programs are expensive and people are unaware of them

The high cost of insurance programs and the lack of awareness about them among vulnerable communities hinder their uptake.

4. Complexity in understanding ecosystem-related projects in different contexts

The challenges of implementing ecosystem-based solutions, such as wetland rejuvenation,

vary across rural, urban, and peri-urban settings, making it difficult to tailor solutions appropriately.

5. Government and corporate post-recovery support lacks long-term solutions

The government and corporate sectors often provide only short-term recovery support, which fails to address the long-term resilience needed in flood-prone areas.

6. Lack of recognition and support for informal settlements

Communities, especially in urban slums, face continued displacement due to flooding but have no alternative places to live. These areas are often not recognized by the government, which means no compensation is provided, leaving residents with low agency to act.

7. Land market and unsustainable land management issues

Governance and political issues related to land markets and unsustainable land management further complicate flood management and adaptation efforts, making it difficult to implement long-term, sustainable solutions.

The group exercises and ensuing discussions pointed to similarities in the proposed strategies as well as the barriers that were identified. Yet, for the strategies there was a clear call for contextualisation. For most groups the barriers to operationalising included a lack of access to finance/ funding opportunities; organisational and institutional barriers including fragmented governance, lack of political will; lack of enforcement as well as lack of capacities at the local government level to operationalise adaptation; lack of awareness on adaptation strategies, lack of participation of those most impacted.

5.4 OUTCOMES - NATIONAL AND LOCAL ADAPTATION GAP (ACTIVITY 2)

This activity encouraged the groups to reflect on the identified problems and strategies, including ongoing efforts within their organisations, connect these to the national adaptation priorities listed in the national instruments and identify gaps between the local and the national. The rest of this Section discusses the reflections from this session.

5.4.1 Sri Lanka

Participant 1

“The NAP of Sri Lanka serves as an umbrella document for guiding adaptation, but the country’s geography is diverse, with various factors influencing different regions. It is challenging to create local adaptation strategies using this document as a guide because it lacks a focus on local-level adaptation and has very little emphasis on community-oriented initiatives. The NAPs need to

incorporate participatory climate actions that are undertaken at the local level. The NAP should also include projects that operate on the basis of PPCP – public, private, and civil partnerships.”

Participant 2

“The NAP has covered most of the critical sectors, which makes it a good plan in that regard. However, when looking at the execution of this plan, there are issues with the capabilities of the organizations responsible for implementing it. The plan should also outline the methods or means of execution for the proposed strategies. The actual transformation of the documented priorities appears to be lacking – for example, in the sector of ecosystems and biodiversity, priorities such as conducting research, establishing comprehensive programs, and developing research institutions have been outlined, but these have not yet been translated into action. This document was prepared in 2016, but the listed priorities have not yet been reflected in real-world actions. The preparation of the NAP needs to involve more institutions and academics working on environmental and climate change initiatives. This also includes governments applying for funding provisions – there is a large chunk of funds available, which the government must apply for and leverage for individual project initiatives. However, since the capacity to develop proposals for such large-funded projects is lacking in the government, this is not happening. The plan also needs to have consistency in updates.”

5.4.2 Nepal

Participant 1

“Countries are facing challenges in measuring adaptation progress, and there is a lack of mechanisms for monitoring and evaluation. This makes it difficult to understand whether the national adaptation priorities are transforming or not.

There are significant challenges in cross-sectoral and inter-ministerial coordination and collaboration when it comes to financing adaptation efforts. The working environment is siloed, with different ministries handling separate aspects of climate action. For example, disaster management is overseen by the Ministry of Home Affairs, climate change action falls under the Ministry of Forests and Environment, and many other ministries are involved in different areas. Accessing funds becomes a complex process due to the lack of streamlined guidelines, making it difficult for local actors to access climate finance. Additionally, the time required for these processes is lengthy, which makes it impossible to take timely action before vulnerable populations are affected.

Similarly, for effective implementation of adaptation actions, inter-ministerial and inter-departmental coordination is required to align with the national adaptation priorities. However, a key question remains: do we have the necessary coordination and cross connected thinking in the system to facilitate such actions effectively?”

Participant 2

“Various adaptation initiatives are being carried out by different agencies with the support of the government, especially multinational organizations. However, these agencies are primarily focused on profit generation, taking up to 200% profit from the projects they invest in within the country, which further burdens the government.

In Nepal, several key adaptation plans were developed, including LAPA (Local Adaptation Plans for Action), NAPA (National Adaptation Programmes of Action), CAPA (Community Adaptation Plan of Action), and LDCRP (Local Disaster and Climate Resilient Plan). These documents were created quickly and were viewed as progressive. Eventually, the National Adaptation Plan (NAP) was introduced. However, when assessing the practical implementation of these plans at the local level, progress has been limited. A major challenge is the integration of these plans into annual statutory plans, which are the basis for budget allocation. The issue lies in the fact that these annual plans often fail to consider the existing adaptation plans, and the allocation of funds is largely politically driven.”

5.4.3 Pakistan

Participant 1

The implementation of adaptation plans on the ground is very limited. The main reasons for this are the lack of institutional data and the failure to deliver services at the local level. There is also a weak connection with the local government system, making it challenging to effectively implement adaptation plans, which are highly localized in nature. The issues faced at the local level are not well communicated to the national authorities responsible for preparing these plans. Additionally, the participation of citizen groups is minimal, which is a significant concern when discussing climate adaptation.

5.4.4 Bangladesh

Participant 1

“The situation in Bangladesh mirrors that of Nepal, where numerous plans and policies are developed in a fragmented way, leading to a significant disconnect between policy formulation and on-the-ground implementation. Many of these policies are created hastily and without sufficient coordination. For example, the National Adaptation Programme of Action (NAPA) was published in 2005, followed by the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) in 2009. In the same year, the Climate Change Trust Fund (CCTF) was established under the Climate Change Trust Act to address gaps in international adaptation finance from both multilateral and bilateral sources. The CCTF was a pioneering initiative to establish a national climate fund, making progress in both adaptation and mitigation efforts. However, despite this progress, its input and authority are largely sidelined when it comes to developing climate adaptation policies and plans, primarily due to political barriers.

In 2020, the BCCSAP was updated, and in 2022, the National Adaptation Plan (NAP) was developed. However, there is a lack of transparency regarding the process of how the NAP was created and who was involved in its development. While the NAP identifies key issues for climate adaptation, it remains unclear how these issues were prioritized. Simultaneously, the Mujib Climate Prosperity Plan was created, alongside the 8th Five-Year Plan, and the Nationwide Climate Vulnerability Assessment was published in 2023. However, the relationship between these various plans is weak, and they operate in silos without working in coordination. There is little integration between these plans, resulting in a lack of synergy and an overall disjointed approach to tackling climate adaptation challenges.

Regarding financing, multilateral funds are channeled through the government, but there are conflicts between local and national governments that hinder effective implementation at the local level. NGOs working at the local level often lack the capacity to meet the documentation requirements for accessing climate finance. Although there is a separate climate change trust fund, it supports only government institutions, and the distribution of funds is often biased and politically motivated.”

Participant 2

“There is a lack of transparency regarding the pioneering national climate financing mechanism, the Climate Change Trust Fund (CCTF), particularly in terms of the actual number of projects successfully implemented. The National Adaptation Plan (NAP) highlights Locally Led Adaptation (LLA) as a crucial component for adaptation progress in Bangladesh. However, very few initiatives have been taken to support LLAs, and there is no clear plan for how these initiatives will be effectively implemented. The development process is predominantly top-down, leaving little room for prioritizing LLAs. Furthermore, the CCTF supports only two primary projects: afforestation and drainage upgrades. The afforestation programs have limited applicability in

urban areas, and this narrow focus on specific projects reduces the chances of securing funding for other locally-driven adaptation projects that are unique and contextually relevant. The government needs to prioritize participatory efforts when developing plans and actions. This should start with engaging community members, followed by local NGOs, research think tanks, and local governments. While the national adaptation plans are well-crafted, to create more impactful change, there must be spaces for a bottom-up approach that ensures local perspectives and needs are effectively addressed.”

5.4.5 Kurdistan Region, Iraq

Participant 1

“The region has independent governance, but some decisions are still made by the federal government. There are conflicting policies between the regional KRI government and the federal government of Iraq, which creates challenges in implementing national adaptation strategies. There is no established mechanism to translate national-level plans into local action, and these plans are primarily developed with input from government officials only. This is a significant challenge for local organizations working on adaptation, as their knowledge and understanding of local conditions are not considered in the plans. Civil society organizations, in coordination with international or national organizations and the government, play a crucial role in translating these plans into actionable steps. If even half of what is planned can be successfully implemented with the support of civil society, it would be a significant victory for society as a whole.”

5.4.6 Myanmar

Participant 1

“The National Adaptation Plan (NAP) is comprehensive and addresses most of the priority areas. However, it needs more emphasis on how the participation of local NGOs and other local authorities will be leveraged to achieve the adaptation strategies. In terms of actions taken based on the NAP, it seems that very little has been translated into actual implementation on the ground. The national government allocates separate funds for implementing adaptation priorities in the townships, which are channeled through members of parliament. However, these funds are not effectively utilized for adaptation efforts at the township level. While community-based organizations play a critical role on the ground, their contributions are not adequately integrated into the NAP.”

5.4.7 Japan

Participant 1

“Japan stands out from other countries due to its emphasis on local-level adaptation plans, which were developed even before the national government began working on the National Adaptation Plan (NAP). In fact, there has been criticism that the national government is simply catching up to the efforts of local governments in terms of adaptation planning. Local governments began working on adaptation plans much earlier, largely due to pressure from local communities to address issues like typhoons, floods, and landslides. This created space for a bottom-up approach in the system.

Additionally, the government has established prefecture-level climate change centers, which play a key role in translating insights, modeling outcomes, and climate data generated by the national climate change center. These centers collaborate effectively with top organizations, such as the Japan Aerospace Exploration Agency (JAXA), to monitor and take action on climate change. The prefecture-level centers focus on downscaling climate information and providing sector-specific, solution-oriented guidance. They tailor strategies for individual sectors, ensuring relevance to local needs. These centers evolved organically, learning from each other’s strengths, without any official mandate. Now, the national government is seeking to leverage these centers to enhance their climate adaptation efforts.”

5.4.8 India

Participant 1

“In India, there is a Nationally Determined Contribution (NDC) at the national level and a National Action Plan on Climate Change (NAPCC). At the state level, there are State Action Plans on Climate Change (SAPCC). However, at the sub-state level, there are no mandatory climate action plans that would translate national-level needs into local climate actions. As a result, there is a great deal of ambiguity and vagueness about how to implement climate action at the sub-state level. District-level authorities give very little attention to climate change actions, considering them an additional burden to their existing responsibilities. Clearly, the trickle-down policy is missing.”

Participant 2

“Despite what the plans identify as priority areas, sometimes the wrong priorities are pursued. For example, the government promoted sesame as part of the climate-resilient agriculture

initiative, but farmers continued to grow groundnuts, and the authorities struggled to handle this situation. Additionally, climate-resilient agriculture initiatives mainly target large farm groups and educated farmers, leaving out small landholders, who represent the majority of farmers. These contextual challenges hinder the effective implementation of national adaptation strategies at the local level.

Regarding finance, money in India is not a critical issue, and funding is relatively accessible to states. However, there is a gap in technical support for climate adaptation. Many bureaucrats and higher authorities often claim that while there is no shortage of funding, what's lacking are actionable ideas for solving problems. Looking at Corporate Social Responsibility (CSR) funds, which should also address climate resilience and development goals, there is a significant gap in how these funds are utilized. These funds are often used merely to meet CSR criteria, such as funding small welfare initiatives like installing solar lights, painting schools, or constructing small buildings. There needs to be a conversation about how CSR funds can be more effectively leveraged for climate adaptation in a holistic way, based on actual needs. The strengths of corporations—such as their technology, risk-taking ability, and capital—should be utilized to make a meaningful impact in addressing climate challenges.”

Participant 3

“India has strong traditional indigenous mechanisms that can be leveraged for local adaptation initiatives, but these are not emphasized in the national adaptation strategies. Sometimes, low-cost technologies based on community knowledge work very well, and these traditional methods should be highlighted and integrated into the broader adaptation strategies.”

5.5 MESSAGES TO COP 30 FROM THE PARTICIPANTS

In the final session, participants shared their key messages for COP 30, emphasizing the critical elements necessary for driving future global adaptation efforts. The messages collected from the participants are listed below, and they reflect a collective understanding that effective climate adaptation cannot simply remain on paper; rather, it must be actively implemented and localized to meet the specific needs of communities at the ground level. A recurring theme was the need for contextualized indicators and robust monitoring, evaluation, and learning systems to track progress effectively.

Across the messages shared, there was a common call for deeper community engagement, particularly through bottom-up approaches that integrate traditional knowledge and practices with modern climate action strategies. Several participants highlighted the necessity of fostering capacity building, both in terms of technical expertise and data availability, to ensure that local

governments, organizations, and communities are adequately equipped to lead adaptation efforts. The importance of funding for local adaptation projects, particularly those led by marginalized and vulnerable communities, was emphasized by many, along with a demand for more accessible and flexible climate finance mechanisms.

There was also a strong emphasis on the importance of gender-responsive adaptation efforts, with several contributors noting that women, particularly in rural and agricultural settings, play a central role in climate resilience but often lack the resources and decision-making power needed to lead such efforts effectively. Alongside this, the need for governments to allocate specific funding for climate adaptation initiatives was underscored, particularly for small-scale, community-driven projects that often go unsupported in favor of larger, top-down infrastructure projects.

One critical point raised was the need for stronger inclusion of local voices in national and global adaptation dialogues, ensuring that those directly facing climate risks are involved in decision-making processes. Several participants pointed to the gaps between local, national, and global priorities, calling for more coherence and alignment between different levels of adaptation planning. The importance of integrating climate action with development and sectoral plans, as well as establishing clear distinctions between adaptation, mitigation, and development in policy frameworks, was also noted.

In conclusion, the messages shared by participants reflect the urgent need to prioritize localized, community-driven climate adaptation efforts that are context-specific, well-supported by finance, and inclusive of marginalized voices. These efforts should be integrated into broader national and global frameworks, ensuring that the needs and perspectives of those most affected by climate change are acknowledged and addressed. To achieve meaningful adaptation, collaboration between local organizations and larger global entities is essential, leveraging local knowledge and ground-level experiences to inform and enhance global climate policies and actions.

The messages collected from the participants are listed below

Erica Udas - ICIMOD, Nepal

- *Need to accelerate actions on the ground, not just on paper.*
- *Essential to have contextualized indicators for effective monitoring, evaluation, and learning.*

Rasika Acharya - MHT, India

- *More community engagement and adoption of traditional technology and bottom-up approach is needed.*
- *Integration of developmental plan, climate action plan and other sectoral plan at local state and national level is needed.*
- *Need to monitor implementation every couple of years to ensure successful outcomes.*
- *Need to enhance capacity, technical expertise and data availability among people to progress ahead.*

Bhindiya Patel - MHT, India

- *Identification of technology to address different sectoral needs*
- *Need to prepare Climate action plan in 2 and 3 tiered cities.*
- *National government should provide specific funds for climate adaptation projects and should develop climate cell*
- *Learning, sharing and success documentation of adaptation measures at city, state and country level is needed.*

Imesha Gamage – Earthlanka, Sri Lanka

- *Prioritize urgent needs where it should be addressed before it is too late to address.*
- *Focus on distributing climate finance according to financial need and urgency of the fact to be addressed.*
- *Develop long term attainable strict regulations to prevent exploitation of natural resources.*

Namo Majeed - IRO Organization for Community Development, KRI, Iraq

- *Iraq is one of the five countries most impacted by climate change, and it is our collective responsibility to drive positive change.*

Hazhar Wahhab Othman - Aran for the Development of Civic Culture, Iraq

- *Need for more direct climate finance for small-scale projects and community-level initiatives, as well as support for farmers and farm laborers.*
- *Need stronger climate policies and real action from governments.*
- *Climate actions must prioritize the protection of water and nature—preserving rivers, forests, and ensuring clean air for all.*
- *Including local voices and those facing climate risks in decision-making is essential.*

Cho Cho Shwe - Doh Eain Limited, Myanmar

- *Having the NDC is really good, but there are still many gaps and challenges in aligning local, national, and global priorities. Each country has its own unique context, challenges, and assets.*
- *Many locally-led adaptation initiatives are underway, driven by the private sector, social enterprises, and impact-focused organizations. However, due to political instability, these groups often lose opportunities to access global climate finance. Therefore, there should be greater flexibility in how global climate finance is accessed and made available to them.*
- *The NDC and NAP should take into account locally-led adaptation efforts, as well as local knowledge and learning, during their preparation.*

Chiranjibi Bhattarai - Nepal Water Conservation Foundation for Academic Research (NWCF), Nepal

- *There is a need to mainstream community institutions to support traditional, subsistence-based farmers through tailored programs that enable them to adapt to climate extremes and build resilience to shocks.*

Nupur Khanter – Transition Research, India

- *Need to move beyond financial commitments and lengthy reports filled with jargon, and focus on framing actionable projects. Let's fund initiatives, not just ideas.*

Prarthana – Transition Research, India

- *Need to bring a holistic and specialized focus to marginalized groups, such as indigenous communities, and incorporate their knowledge into climate actions.*
- *Ensure that those in power understand and respect the perspectives and languages of colonized and marginalized people.*

Nayaka Angger - Kota Kita, Indonesia

- *Funding for adaptation and mitigation measures should be accessible to local governments, local organizations, or communities, along with financing facilities to build capacity in managing and implementing projects.*
- *Small-scale, site-specific, and community-led adaptation measures need to be leveraged to prevent maladaptation, rather than relying on top-down, large infrastructure projects that disrupt local livelihoods.*

SVRK Prabhakar - Institute for Global Environmental Strategies, Japan

- *Monitoring, evaluation, and tracking of adaptation from local to global initiatives are needed.*
- *There is a need to incentivize behavioral changes in individuals, corporations, and governments.*
- *Promote win-win adaptation solutions and loss and damage solutions.*
- *Provide mechanisms for countries to address transboundary climate risks.*

Aditi Kapoor – Alternative Futures, India

- *There is a need for women farmers to lead the just transition in climate-resilient agriculture.*
- *While all countries are promoting climate-resilient farming practices, many overlook the fact that in much of the developing and middle-income countries, 60-80% of tasks in more climate-resilient farming practices—such as organic farming, natural climate-smart agriculture, and eco-agriculture—are carried out by women who lack resources and power in decision-making spaces related to climate-resilient agriculture.*

Irshad Ahmed - Sindh Community Foundation, Pakistan

- *Every plan requires financing. Climate financing is very important to transfer the national adaptation plans to actions.*

Rabi Raj – PRIA, India

- *There is a dearth of data on community participation and community-led solutions for climate resilience. The use of community/localized knowledge is essential to address this.*
- *Strengthening local capacities and integrating a participatory approach with community knowledge will be key to building sustainable and inclusive urban climate solutions.*

MD Biozid Jessorey – Biozid Climate Institute, Bangladesh

- *Make it easier and more flexible to access finance for youth-focused adaptation education projects. The GCF or adaptation fund access process is currently too complex.*

Evita Rodrigues – Transition Research, India

- *Climate displacement and migration will be one of the most critical crises of our time. There is an urgent need to address this.*
- *Global, national, and sub-national stakeholders must prioritize funding for adaptation (where possible) and address loss and damage resulting from impacts beyond our adaptive capacity.*

Prerna Singh, Transition Research, India

- *Local adaptation voices (community-based organizations, think tanks, NGOs) need to be involved in creating and validating National Adaptation Plans.*
- *A clear demarcation of "Adaptation," "Mitigation," and "Development," along with their interactions, is needed in both national and global priorities.*
- *More multifunctional plans are required.*

Palinda Perera - Earthlanka Youth Network, Sri Lanka

- *Developing countries in the Global South can have a project pipeline ready when they attend COP. This way, potential funders can easily identify projects they are interested in facilitating and supporting.*

Abdur Rahman - Center for People and Environ, Bangladesh

- *There is a need to focus on climate justice for displaced people.*
- *Loss and damage compensation for farmers is essential.*

Diksha Gupta – Transition Research, India

- *Acceptance of proposals from local organizations that may lack the technical capacity to translate their work into documents but are conducting strong, ground-led research is needed.*
- *A stronger focus on monitoring and evaluation is required.*

Kushani Wathugedara - SEVANATHA Urban Resource Center, Sri Lanka

- *Need for increased financial support from developed countries to developing countries.*

- *Need to establish a robust monitoring and evaluation system for National Adaptation Plans, or else the plan will remain just a document.*

SM Shaikat – SERAC, Bangladesh

- *There is a need for local adaptation plans that align with the National Adaptation Plan (NAP).*
- *National governments must commit to and act on framing a participatory local adaptation plan, embedding urban resilience strategies, and a local climate adaptation fund (with multisectoral investment). Additionally, a monitoring mechanism should be established to measure implementation at the local level through urban and rural government bodies and civil society.*

Nivedita Mani - Gorakhpur Environmental Action Group, India

- *Need for dedicated funding allocation for adaptation actions at the local level.*
- *Adaptation requires more attention than ever before. Local development funds should also prioritize climate-resilient adaptive actions.*

6. ADVOCACY OUTCOMES AND CONCLUSION

The regional advocacy efforts undertaken (largely covering the South Asia region of APAC) under the framework of the Global Goal on Adaptation (GGA) and the New Collective Quantified Goal on Climate Finance (NCQG) have highlighted critical insights and few patterns across national and local contexts. The process brought together a wide spectrum of stakeholders—local practitioners, municipal representatives, civil society organizations, and thematic experts—uncovering the nuances, challenges, and innovative practices shaping climate adaptation across Asia-Pacific countries.

6.1 KEY THEMES AND INSIGHTS

Gap between national plans and local realities

A common pattern across countries such as Bangladesh, Nepal, Pakistan, and India was the disconnect between national adaptation priorities and the lived realities necessitating different needs of local communities. While National Adaptation Plans (NAPs), NDCs, and related instruments provide a foundation, implementation at the local level is hindered by capacity, coordination, and institutional bottlenecks.

Barriers to effective adaptation

Several consistent barriers emerged are limited financial flows to the local level, weak institutional capacity, fragmented governance structures, lack of political will, and limited participation of marginalized communities. These were echoed across contexts—from informal settlements in Bangladesh to flood-prone areas in Sri Lanka and Nepal’s remote regions.

The need for recognizing local and community-led initiatives

Local and subnational actors—despite their limited engagement in global climate negotiations—demonstrated rich, context-specific knowledge and grounded solutions. From passive cooling techniques in slums to community watershed management and bottom-up flood risk mapping, participants highlighted that climate adaptation must be localized and participatory to be truly effective.

Municipalities as critical but undervalued actors

The insights from Leh (India) and Sylhet (Bangladesh) underscored the vulnerability of smaller municipalities that are equally on the frontline of climate impacts. These institutions often lack visibility, funding, and technical capacity despite managing essential infrastructure like water, sanitation, and solid waste systems—key pillars of resilience.

Cross-country patterns in governance and finance

Although national contexts vary, there were shared challenges among the country participants—such as the siloed functioning of ministries, donor-driven planning cycles, limited possibility in accessing climate finance and less transparency in allocation of climate finance, and inadequate support for locally led adaptation. Countries like Japan, with strong local institutions and downscaled climate information systems, stood out as positive examples from which others might learn.

A Strong Call for Equity, Inclusion, and Just Transitions

Messages to COP 30 reflected a united voice for climate justice. Women, indigenous groups, informal settlers, and young people were identified as both vulnerable and powerful change agents whose leadership must be supported through inclusive policy frameworks and targeted finance. The need to prioritize adaptation in small towns, integrate local voices into planning processes, and ensure fair access to funding emerged as central advocacy points.

6.2 REFLECTIONS ON OUTREACH TO DIFFERENT STAKEHOLDERS IN ADVOCACY

The advocacy efforts have achieved several critical milestones that significantly contribute to ongoing climate action. A key success was engaging with a stakeholder group that plays a vital role in shaping the Climate Adaptation agenda—one that often has strong, grounded perspectives. However, the process of gathering diverse voices across regions revealed a major challenge: identifying and mobilizing the right groups for engagement requires substantial resources.

An important lesson emerged from the Sri Lanka workshop. The success of the event—in terms of outcomes and insights—was largely due to the manageable size of the participant group. Most attendees came from action-oriented backgrounds rather than research or policy spaces. This created a more comfortable and inclusive environment, allowing participants to share their perspectives openly and candidly. The fact that they had spent two full days together during the TLS event helped build trust and camaraderie, further enhancing the quality of discussions.

This experience underlines the value of in-person, interactive events over short, one-way webinars. Events designed to encourage two-way conversations yield significantly richer outcomes. However, organizing such engagements—both during the mobilization phase and the actual event—demands considerable resources. Despite this, the investment is undoubtedly worthwhile for the depth and authenticity of stakeholder input it enables.

6.3 LOOKING AHEAD

The evidence, discussions, and experiences gathered through this regional advocacy process have directly contributed to the development of a policy brief (put separately). This brief synthesizes the insights shared by participants and builds recommendations for critical climate change actors - national governments, international donors, and multilateral bodies to shape more inclusive, grounded, and responsive adaptation policies and instruments.

As the global community moves toward COP 30 and beyond, these learnings offer an urgent reminder: adaptation must not only be nationally determined but locally delivered, equitably financed, and contextually grounded. Only by bridging the gap between global ambition and ground realities it's possible to make meaningful progress on the Global Goal on Adaptation (GGA) supported with the New Collective Quantified Goal (NCQG).

While this phase of advocacy primarily focused on South Asia, there were intentional efforts to broaden outreach across Southeast Asia and the Pacific. Due to time constraints, deeper engagement with some of these actors could not be fully realized. However, many showed strong interest in future collaboration, highlighting the potential to scale this effort regionally.

Emerging opportunities include:

- Japan's Local Climate Change Adaptation Centers, coordinated by the National Institute for Environmental Studies (NIES), which oversees a network of 65 centers across city, sub-city, and prefecture levels. Initial outreach has been made to explore their involvement in future regional advocacy.
- International Centre for Integrated Mountain Development (ICIMOD) has expressed interest in collaboration focused on climate adaptation in the mountain regions of South Asia, covering eight countries.
- Slycan Trust (Sri Lanka) interested in a collaboration centered on the ongoing revision of Nationally Determined Contributions (NDCs), as well as topics related to Loss and Damage and NCQG.
- Global Green Growth Institute (GGGI) – Nepal has shown interest in joining future advocacy efforts, particularly with its South and Southeast Asia coverage.
- UNFCCC Regional Collaboration Centre (RCC) – Thailand expressed willingness to support and participate in upcoming engagements.
- Urban Biodiversity Hub (UB-HUB) offered to contribute by hosting a webinar on climate adaptation through the lens of urban biodiversity.

To build on this momentum, the next phase of engagement could include a series of theme-specific offline / online engagements aimed at deepening understanding of adaptation and finance challenges and strengths across different geographies of APAC.

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ANNEXURES

ANNEXURE 1

Table 3 Hotspots of existing, intensifying and emerging surface wind, heat wave, flood and drought risk (Source: UNESCAP)

Subregion	Existing hotspots of risk	Hotspots of intensifying risks	Hotspots of emerging s risk
Surface wind risk			
East and North-East Asia	China, Japan, North Korea, South Korea,	China, Japan, North Korea, South Korea, Russian Federation	China, Russian Federation
North and Central Asia	Aral Sea basin (Kazakhstan, Uzbekistan, Turkmenistan), Mongolia	Aral Sea basin (Kazakhstan, Uzbekistan, Turkmenistan), Mongolia	Kazakhstan, Turkmenistan, Mongolia
Pacific	Australia, Palau, Papua New Guinea, Solomon Islands, New Caledonia, Vanuatu, Fiji, Samoa, Tuvalu, Kiribati, Cook Islands, Tonga, Niue, French Polynesia, Marshall Islands; Medium risk in New Zealand, Nauru	Australia, New Zealand	Australia, Papua New Guinea
South-East Asia	Thailand, Lao, Cambodia Viet Nam, Philippines, Indonesia, Timor-Leste	-	Indonesia, Thailand
South and South-West Asia	Bangladesh, Bhutan, India, Pakistan, Afghanistan, Iran, Türkiye.	India, Pakistan, Afghanistan, Iran, Türkiye	Nepal, Türkiye, North India, Bhutan
Heatwave risk			
East and North-East Asia	China	-	China, Russian Federation, north Korea, South Korea, Japan

North and Central Asia	Aral Sea basin (Kazakhstan, Uzbekistan, Turkmenistan)	Aral Sea basin (Kazakhstan, Uzbekistan, Turkmenistan)	Kazakhstan, Kyrgyzstan, Mongolia
Pacific	Australia, Papua New Guinea,	Australia	Australia, Papua New Guinea
South-East Asia	Myanmar, Thailand, Cambodia, Lao	Myanmar, Thailand, Cambodia	Myanmar, Cambodia, Lao, Vietnam, Indonesia
South and South-West Asia	Bangladesh, India, Pakistan, Afghanistan, Iran, Türkiye.	Indus basin, India, Pakistan, Afghanistan, Iran, Türkiye	Bangladesh, India, Afghanistan, Türkiye, Sri Lanka,
Flood risk			
East and North-East Asia	China, Japan, North Korea, South Korea,	China, Japan, North Korea, South Korea, Mongolia	China
North and Central Asia	Low risk region	-	Georgia, Tajikistan
Pacific	Australia, Papua New Guinea, Vanuatu, New Caledonia, Solomon Island, Samoa, Tonga, Niue, Tuvalu, Cook Island, Fiji, Micronesia, Northern Mariana Island, Palau, Guam, Kiribati, Nauru, New Zealand	Australia, Cook Island, Papua New Guinea, Kiribati, Fiji, New Caledonia	Australia
South-East Asia	Mekong River Basin	Mekong River Basin Mekong Basin (Myanmar, Thailand, Lao, Cambodia, Viet Nam), Indonesia, Malaysia, and Singapore	Indonesia, Thailand
South and South-West Asia	India, Nepal, Bangladesh	GBM Basin, India, Bangladesh, Nepal, Sri Lanka	Indus basin, Pakistan, Turkey, Nepal
Drought risk			
East and North-East Asia	China, Mongolia	-	China

North and Central Asia	Aral Sea - Turkmenistan, Uzbekistan, Kazakhstan, Kazakhstan and Tajikistan	Aral Sea (Kazakhstan, Turkmenistan, Uzbekistan, Kyrgyzstan)	Kyrgyzstan, Kazakhstan
South-East Asia	Mekong River Basin	Mekong River Basin Mekong Basin (Myanmar, Thailand, Lao, Cambodia, Viet Nam), Indonesia, Malaysia, and Singapore	Indonesia, Thailand
South and South-West Asia	GBM Basin, Afghanistan, Pakistan, India, Turkey, Iran	India, Turkey, Iran	India, Bangladesh, Sri Lanka, Turkey, Nepal

ANNEXURE 2

Table 4 Status of the submitted documents to the UNFCCC by countries (Source: UNFCCC)

APAC Countries	Type	LLDC or SIDS	National Adaptation Plans			Nationally determined contributions	National Communication		Adaptation Communication
			Status	Year of NAP submission	NAP	NDCs	Year of NC	NC number	
Afghanistan	LDC	LLDC	No information			YES	2019	NC2	
American Samoa	Other developing country								
Armenia	Other developing country	LLDC	Submitted	2021	YES	YES	2020	NC4	
Australia	Other developing country					YES	2013	NC6	YES

Azerbaijan	Other developing country		Submitted	2024	YES	YES	2021	NC4	
Bangladesh	LDC			2023	YES	YES	2018	NC3	
Bhutan	LDC	LLDC	Submitted	2023	YES	YES	2021	NC4	YES
Brunei Darussalam	Other developing country		Draft review			YES	2017	NC2	
Cambodia	LDC		Submitted	2021	YES	YES	2022	NC3	
China	Other developing country		No information			YES	2023	NC4	
Cook Islands	Other developing country	SIDS	In progress			YES	2020	NC3	
North Korea - Democratic People's Republic of Korea	Other developing country		No information			YES	2012	NC2	
Fiji	Other developing country	SIDS	Submitted	2018	YES	YES	2020	NC3	
French Polynesia	Other developing country								
Georgia	Other developing country		In progress			YES	2021	NC4	
Guam	Other developing country								

Hong Kong, China	Other developing country								
India	Other developing country		No information			YES	2023	NC3	YES
Indonesia	Other developing country		In progress			YES	2017	NC3	YES
Iran (Islamic Republic of)	Other developing country		In progress			YES	2017	NC3	
Japan	Other developing country					YES	2019	NC7	YES
Kazakhstan	Other developing country	LLDC	In progress			YES	2024	NC8	
Kiribati	LDC	SIDS	Submitted	2020	YES	YES	2013	NC2	
Kyrgyzstan	Other developing country	LLDC	In progress			YES	2016	NC3	
Lao People's Democratic Republic	LDC	LLDC	In progress			YES	2024	NC3	
Macao, China	Other developing country								
Malaysia	Other developing country		In progress			YES	2024	NC4	YES
Maldives	Other developing country	SIDS	In progress			YES	2016	NC2	

Marshall Islands	Other developing country	SIDS	Submitted	2023	YES	YES	2015	NC2	YES
Micronesia (Federated States of)	Other developing country	SIDS	In progress			YES	2023	NC3	
Mongolia	Other developing country	LLDC	In progress			YES	2024	NC4	
Myanmar	LDC		In progress			YES	2012	NC1	
Nauru	Other developing country	SIDS	In progress			YES	2014	NC2	
Nepal	LDC	LLDC	Submitted	2021	YES	YES	2021	NC3	
New Caledonia	Other developing country								
New Zealand	Other developing country					YES	2017	NC7	YES
Niue	Other developing country	SIDS	No information			YES	2014	NC2	
Northern Mariana Islands	Other developing country								
Pakistan	Other developing country		Submitted	2023	YES	YES	2019	NC2	
Palau	Other developing country	SIDS	In progress			YES	2019	NC2	

Papua New Guinea	Other developing country	SIDS	Submitted	2023	YES	YES	2014	NC2	
Philippines	Other developing country		Submitted	2024	YES	YES		NC2	
South Korea - Republic of Korea	Other developing country		No information			YES	2019	NC4	YES
Russian Federation	Other developing country					YES	2017	NC7	
Samoa	Other developing country	SIDS	In progress			YES	2021	NC2	
Singapore	Other developing country		No information			YES	2022	NC5	YES
Solomon Islands	LDC	SIDS	Not initiated			YES	2024	NC3	
Sri Lanka	Other developing country		Submitted	2016	YES	YES	2022	NC3	
Tajikistan	Other developing country	LLDC	In progress			YES	2022	NC4	
Thailand	Other developing country		Submitted	2024	YES	YES	2022	NC4	YES
Timor-Leste	LDC	SIDS	Submitted	2021	YES	YES	2020	NC2	
Tonga	Other developing country	SIDS	Submitted	2021	YES	YES	2020	NC3	
Turkey	Other developing country					YES	2024	NC8	

Turkmenistan	Other developing country	LLDC	In progress			YES	2015	NC3	
Tuvalu	LDC	SIDS	In progress			YES	2015	NC2	
Uzbekistan	Other developing country	LLDC	In progress			YES	2024	NC4	
Vanuatu	Other developing country	SIDS	In progress			YES	2021	NC3	
Vietnam	Other developing country		In progress			YES	2019	NC3	

ANNEXURE 3

Table 5 Sources of Adaptation Finance

Sources of adaptation finance - for concrete adaptation actions through full-sized projects				
Funding	Type of finance	Applicable context	Specific need for funding	Eligibility
Green Climate Fund projects window	Grants, concessional loans, equity, and guarantees	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects ■ Supporting the process of the NAP 	<ul style="list-style-type: none"> ■ LDCs ■ All developing country Parties
Green Climate Fund simplified approval process	Grants, concessional loans, equity, and guarantees	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions ■ Policy development/revision ■ Integrating adaptation plans into development plans ■ Adaptation planning cycle ■ Research and systematic observation ■ Capacity building 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects ■ Supporting the process of the NAP ■ Piloting/feasibility studies 	<ul style="list-style-type: none"> ■ LDCs ■ All developing country Parties
GCF's Private Sector Facility	Grants, concessional loans, equity, and guarantees	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions ■ Integrating adaptation plans into development plans ■ Research and systematic observation ■ Capacity building 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects ■ Piloting/feasibility studies 	<ul style="list-style-type: none"> ■ LDCs ■ All developing country Parties
Adaptation Fund single country funding window	Grants	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions ■ Policy development/revision ■ Integrating adaptation plans into development plans ■ Adaptation planning cycle ■ Capacity building 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects ■ Supporting the process of the NAP 	<ul style="list-style-type: none"> ■ LDCs ■ All developing country Parties

<p>The Least Developed Countries Fund</p>	<p>Grants</p>	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions ■ Project proposal development ■ Policy development/revision ■ Integrating adaptation plans into development plans ■ Adaptation planning cycle ■ Research and systematic observation ■ Adaptation practices, tools, and technologies ■ Capacity building 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects ■ Supporting the process of the NAP ■ Piloting/feasibility studies 	<ul style="list-style-type: none"> ■ LDCs
<p>The Special Climate Change Fund</p>	<p>Grants</p>	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions ■ Project proposal development ■ Policy development/revision ■ Integrating adaptation plans into development plans ■ Adaptation planning cycle ■ Research and systematic observation ■ Adaptation practices, tools, and technologies ■ Capacity building 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects ■ Supporting the process of the NAP ■ Piloting/feasibility studies 	<ul style="list-style-type: none"> ■ All developing country Parties ■ Other groups of countries as specified
<p>Global Environment Facility Challenge Program for Adaptation Innovation</p>	<p>Grants</p>	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions ■ Integrating adaptation plans into development plans ■ Adaptation planning cycle ■ Research and systematic observation ■ Capacity building 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects 	<ul style="list-style-type: none"> ■ LDCs ■ All developing country Parties

LDCF/ SCCF support for Regional and Global Projects and Initiatives	Grants	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions ■ Project proposal development ■ Policy development/revision ■ Integrating adaptation plans into development plans ■ Adaptation planning cycle ■ Capacity building 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects ■ Technical assistance for proposal development ■ Technical assistance to access specific technologies ■ Piloting/feasibility studies 	<ul style="list-style-type: none"> ■ Members of a region/continent
Adaptation Fund regional projects and programmes	Grants	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions ■ Adaptation planning cycle ■ Research and systematic observation ■ Capacity building 	<ul style="list-style-type: none"> ■ Piloting/feasibility studies 	<ul style="list-style-type: none"> ■ Members of a region/continent
Adaptation Fund's Enhanced Direct Access funding window	Grants	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions ■ Project proposal development ■ Policy development/revision ■ Integrating adaptation plans into development plans ■ Adaptation planning cycle ■ Capacity building 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects ■ Supporting the process of the NAP 	<ul style="list-style-type: none"> ■ All developing country Parties
Adaptation Fund large (single country or regional) innovation grant	Grants	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions ■ Policy development/revision ■ Capacity building 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects ■ Piloting/feasibility studies 	<ul style="list-style-type: none"> ■ All developing country Parties
Adaptation Fund NIE small grants for innovation	Grants	<ul style="list-style-type: none"> ■ Adaptation practices, tools, and technologies ■ Capacity building 	<ul style="list-style-type: none"> ■ Technical assistance to access specific technologies ■ Piloting/feasibility studies 	<ul style="list-style-type: none"> ■ All developing country Parties
Adaptation Fund Climate Innovation Accelerator (AFCIA)	Grants	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions ■ Adaptation practices, tools, and technologies ■ Capacity building 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects ■ Technical assistance to access specific technologies 	<ul style="list-style-type: none"> ■ All developing country Parties

GEF Small Grants Programme	Grants	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions ■ Capacity building 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects ■ Piloting/feasibility studies 	<ul style="list-style-type: none"> ■ Other groups of countries as specified
Global Ecosystem-based Adaptation Fund	Grants	<ul style="list-style-type: none"> ■ Financing concrete adaptation actions ■ Integrating adaptation plans into development plans ■ Adaptation planning cycle ■ Adaptation practices, tools, and technologies 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects 	<ul style="list-style-type: none"> ■ All developing country Parties
Ocean Resilience and Coastal Adaptation Financing Partnership Facility (ORCA-FPF)	Grant, loan, guarantees, equity, and/or risk transfer	<ul style="list-style-type: none"> ■ Project proposal development ■ Policy development/revision ■ Integrating adaptation plans into development plans ■ Capacity building 	<ul style="list-style-type: none"> ■ Implementation of adaptation projects Adaptation Fund ■ Technical assistance for proposal development ■ Piloting/feasibility studies 	<ul style="list-style-type: none"> ■ Members of a region/continent
Sources of adaptation finance - Support to countries for project proposal development				
Funding	Type of finance	Applicable context	Specific need for funding	Eligibility
The Green Climate Fund Project Preparation Facility	Grants, loans, or equity	<ul style="list-style-type: none"> ■ Project proposal development 	<ul style="list-style-type: none"> ■ Supporting the process of the NAP ■ Technical assistance for proposal development ■ Piloting/feasibility studies 	<ul style="list-style-type: none"> ■ All developing country Parties

Support for project development under the GEF Project Preparation Grant	Grants	<ul style="list-style-type: none"> ■ Project proposal development ■ Capacity building 	<ul style="list-style-type: none"> ■ Supporting the process of the NAP ■ Technical assistance for proposal development 	<ul style="list-style-type: none"> ■ All developing country Parties
Adaptation Fund Project Formulation Grants (PFGs)	Grants	<ul style="list-style-type: none"> ■ Project proposal development ■ Adaptation planning cycle ■ Capacity building 	<ul style="list-style-type: none"> ■ Supporting the process of the NAP ■ Technical assistance for proposal development ■ Piloting/feasibility studies 	<ul style="list-style-type: none"> ■ All developing country Parties
Sources of adaptation finance - Support for ongoing process of formulating and implementing NAPs				
Funding	Type of finance	Applicable context	Specific need for funding	Eligibility
Green Climate Fund Readiness and Preparatory Support Programme	Grants and technical assistance	<ul style="list-style-type: none"> ■ Project proposal development ■ Adaptation planning cycle ■ Capacity building 	<ul style="list-style-type: none"> ■ Supporting the process of the NAP 	<ul style="list-style-type: none"> ■ All developing country Parties

ANNEXURE 4

Established Networks for Climate Change Adaptation

A) Asia Pacific Adaptation Network (APAN)

The Asia Pacific Adaptation Network (APAN) is a knowledge-sharing platform designed to support adaptation practitioners across the region. It provides information, tools, and resources to help design, implement, and monitor climate change adaptation measures. APAN also promotes

access to technology and finance while building capacity to integrate climate adaptation into national development policies, strategies, and plans.

Key Activities

1. Knowledge Sharing and Networking

APAN hosts the APAN Forum, the largest and longest-running gathering of adaptation practitioners in the Asia-Pacific region. This forum serves as a hub for practitioners to connect, exchange experiences, share knowledge, and collaborate on practical solutions to address climate change challenges.

2. Expanding Global Initiatives Regionally

As part of the Global Adaptation Network (GAN), APAN offers technical support for adaptation knowledge initiatives in the region. It identifies knowledge gaps and solutions, including implementing the Local Adaptation Knowledge Initiative (LAKI) in the Hindu Kush Himalaya region, in partnership with the International Centre for Integrated Mountain Development (ICIMOD) and UNEP. These efforts were highlighted at the 8th APAN Forum.

3. Knowledge Dissemination and Capacity Building

APAN leverages its extensive network of organizations to share information and best practices. It hosts technical webinars to deepen understanding of emerging adaptation issues and policy discussions. Additionally, APAN disseminates knowledge through newsletters, the APAN Adaptation Digest, and its electronic direct messaging system, reaching nearly 8,000 subscribers.

B) Institute for Global Environmental Strategies (IGES)

The Institute for Global Environmental Strategies (IGES) focuses on strategic research and policy development to support the transition to sustainable and decarbonized societies, particularly in the Asia-Pacific region.

IGES actively contributes to climate change adaptation through research, policy proposals, and engagement in international negotiations, such as the UN Climate Conference. Its key areas of focus include promoting the Asia-Pacific Climate Change Adaptation Information Platform (AP-PLAT), integrating adaptation with disaster risk reduction, advancing locally-led adaptation (LLA), promoting nature-based solutions (NbS), and addressing transboundary adaptation challenges.

IGES also plays a crucial role in capacity building under the AP-PLAT partnership, supporting the development and implementation of effective adaptation strategies.

C) Center for Climate Change Adaptation (CCCA)

The Center for Climate Change Adaptation (CCCA) is part of the National Institute for Environmental Studies (NIES). It collects, organizes, analyzes, and shares data on climate change impacts and adaptation.

Key Activities

1. Developing Information Platforms

The CCCA manages the A-PLAT website. It provides scientific knowledge, case studies, and essential resources for governments, businesses, and individuals. The center also created a board game based on the traditional Japanese game Sugoroku to teach climate adaptation.

Asia-Pacific Climate Change Adaptation Information Platform (AP-PLAT)

AP-PLAT's activities cover three core areas as described below. In each area, we work hand-in-hand with partners to conduct joint research, co-create knowledge products and engage in collaborative undertakings.

- Scientific Information and Knowledge Creation
- Tool Development
- Capacity Development

2. Supporting Local Governments and Adaptation Centers

The impacts of climate change vary by region. CCCA supports local governments and Local Climate Change Adaptation Centers (LCCACs) with:

- Technical advice for adaptation plans at the prefectural and municipal levels.
- Guidance for LCCACs.
- Materials and feedback for local councils on adaptation efforts.

3. Conducting Climate Adaptation Research

CCCA runs the Climate Change Adaptation Research Program. It includes:

- Monitoring and observing climate change impacts.
- Assessing the effects of climate change.
- Developing strategies for adaptation.

Case Study

A research team of CCCA is studying the effects of climate change on rice farming. Climate change makes producing high-quality rice harder. The research focuses on sustaining rice production in Japan and the Asia-Pacific region.

D) Regional Resource Centre for Asia and the Pacific (RRC.AP)

The Regional Resource Centre for Asia and the Pacific (RRC.AP) at the Asian Institute of Technology (AIT) supports Asia-Pacific nations in environmental and sustainable development.

Key Activities

1. **Regional Training Workshops on Climate Adaptation**

AIT RRC.AP organizes workshops and training sessions to build adaptation capacity for stakeholders, including governments. In 2023, it conducted:

- A workshop on building cities' resilience to climate and disaster risks.
- A session on climate adaptation tools.
- A training on strengthening multi-sectoral involvement in the National Adaptation Plan (NAP) process.
- A workshop on developing Green Climate Fund (GCF) concept notes for urban climate resilience in Indonesia.

2. **Mentoring and Training on Climate Finance**

Since 2018, AIT RRC.AP has mentored stakeholders to access climate finance through GCF. It has helped develop 27 GCF Concept Notes, with one from Bangladesh successfully securing funding. Follow-up surveys since 2022 assess progress on concept ideas.

3. **Developing E-Learning Materials**

The center creates e-learning resources on climate adaptation. Examples include:

- Materials on sustainable waste and resource management (hosted on AP-PLAT).
- Resources on integrating climate adaptation with disaster risk reduction (on AP-PLAT).

4. **Conducting Webinars on Climate Adaptation**

- AIT RRC.AP designs and implements webinars focused on climate adaptation.

5. **Supporting Climate Adaptation Tools**

The center provides tools such as:

- **FloodS:** A flood simulation tool.
- **S8DS:** A tool for designing adaptation solutions based on climate change scenarios.

E) Pacific Adaptation to Climate Change (PACC)

The Pacific Adaptation to Climate Change (PACC) Programme is the first major climate change adaptation initiative in the Pacific region, launched in 2009. Its goal is to build resilient Pacific communities capable of managing current climate variability and preparing for future climate challenges. The Programme takes a dual approach by enhancing adaptive capacity through on-the-ground projects and integrating climate risk considerations into national development planning. Funded by the Global Environment Facility (GEF) and the Australian Government, with support

from the United Nations Development Programme (UNDP), PACC operates across 14 Pacific Island countries. It focuses on three critical areas—coastal zone management, food security and production, and water resources management. Each participating country hosts a pilot project in one of these areas to demonstrate effective climate change adaptation strategies.

F) Global Green Growth Institute (GGGI)

The Global Green Growth Institute (GGGI) focuses on promoting sustainable economic growth in developing and emerging economies.

Key Activities

1. Supporting National Adaptation Policy

GGGI assists countries in developing National Adaptation Plans (NAPs) with support from the Green Climate Fund (GCF). For example, in Sri Lanka, GGGI is helping create the country's NAP. As of 2023, GGGI is supporting 14 NAPs worldwide.

2. Enabling Financing for Adaptation

GGGI helps governments secure financing from bilateral and multilateral donors for climate adaptation projects.

3. Implementing Adaptation Projects

GGGI implements adaptation projects globally, often through its country offices. In Uzbekistan, it is running the Green Rehabilitation Investment Project in the Karakalpakstan Republic to help communities in the Aral Sea region adapt to climate change.