UNITED NATIONS DEVELOPMENT PROGRAMME

Promoting financing approaches for mitigation action:

Lessons learned from the NDC Support Programme (2017-2025)

2025

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Acronyms

CBT	Climate Budget Tagging
CCFF	Climate Change Fiscal Framework
ESG	Environmental, Social and Governance
GHG	Greenhouse gas
I&FF	Investment and Financial Flows
LGIF	Lebanon Green Investment Facility
LTS	Long-Term Strategy
MRV	Measurement, reporting and verification
NAMA	Nationally Appropriate Mitigation Action
NDC	Nationally Determined Contribution
NDC SP	NDC Support Programme
NGO	Non-governmental organization
OECD	Organisation for Economic Co-operation and Development
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

Executive summary

The Paris Agreement emphasizes aligning financial flows with low-carbon, climate-resilient development pathways. However, current financial commitments fall short of what is required to limit global temperature increases to 1.5°C above pre-industrial levels. Encouraging innovative climate solutions to mobilize resources and attract private sector investments is particularly relevant for developing countries that face systemic challenges, such as high investment risks and limited institutional capacity.

Nationally Determined Contributions (NDCs), as blueprints for countries' climate pledges, play a vital role in aligning countries' climate and growth goals to ensure they support low-carbon development pathways. This document examines the critical role of innovative financial strategies in advancing mitigation actions under NDCs, particularly relevant in the context of heightened ambition required under the next round of updated NDCs.[1] Due in 2025, this next round of NDCs is expected to build upon previous commitments, incorporating lessons from the first Global Stocktake and addressing gaps in climate ambition, implementation and finance. The next NDC cycle represents a crucial opportunity for countries to demonstrate the highest possible ambition in alignment with national circumstances while accelerating mitigation, adaptation, and financial mobilization to meet the objectives of the Paris Agreement. **Finance is cross-sectoral, with critical aspects linked to governance, inclusivity and systemic planning.** With a focus on systemic approaches to mobilizing and managing climate finance, the study highlights lessons learned from countries under the United Nations Development Programme's (UNDP) NDC Support Programme (NDC SP). These insights offer guidance on overcoming financial and institutional barriers to achieve transformative climate action.

The analysis draws on NDC SP case studies from seven countries—**Bhutan, Chile, Côte d'Ivoire, Ghana, Indonesia, Lebanon** and **Tunisia**—each of which adopted tailored financial approaches to address their unique national challenges and priorities. Bhutan focused on gender-responsive climate finance, particularly in waste management. Chile advanced its climate goals by developing a Climate Fiscal Framework. Côte d'Ivoire emphasized private sector engagement to support energy initiatives. Ghana developed financial frameworks for energy and forestry, while Indonesia created blended finance mechanisms to support renewable energy projects. Lebanon launched the Green Investment Facility to attract private investment for climate resilience, and Tunisia established governance frameworks for energy-related mitigation actions. These examples provide a rich foundation for understanding the diverse strategies employed to mobilize resources and implement NDCs.

Lessons learned emphasize the importance of **integrating climate finance into national development plans** to align financial flows with broader socio-economic priorities. Equally crucial is **fostering interministerial coordination** to establish coherent governance frameworks and avoid fragmentation. **Strengthening institutional capacity,** particularly through targeted training and technical assistance, is essential for accessing international funding and managing resources effectively. Robust measurement, reporting and verification (MRV) systems play a pivotal role in ensuring transparency, tracking progress and building investor confidence. The **strategic use of blended finance models** has emerged as a powerful approach to mobilize private capital and mitigate financial risks in climate projects. **Inclusive financial strategies** that incorporate gender-responsive and equity considerations enhance the social sustainability of mitigation actions, addressing the needs of marginalized groups while fostering public and political support. **Scaling up innovative financial instruments,** such as green bonds and climate linked funds, enables countries to attract diverse investors and drive transformative climate action. Finally, **engaging stakeholders early and consistently** ensures local ownership, relevance and the long-term sustainability of climate finance strategies. Overall, the document provides actionable insights that underline the interconnectedness of governance, finance and development in achieving low-carbon transitions.

1 The next iteration of NDCs are due in 2025 under the Paris Agreement's five-year update cycle. These contributions will form the basis of climate commitments up to 2035, requiring nations to demonstrate increased ambition in emissions reductions, climate adaptation and financial mechanisms. Informed by the outcomes of the first Global Stocktake, the next NDC cycle aims to close the gap between existing commitments and the necessary action to limit global warming to 1.5°C. It also emphasizes the integration of finance and governance structures to support accelerated implementation and equitable climate action. See NDC Partnership: Delivering on Ambitious NDCs 3.0.

1. Introduction

The NDC Support Programme (NDC SP) represents a significant initiative in the global effort to enhance and support climate action. As part of this programme, a series of lesson-learned reports have been developed to capture insights across various programme outcomes. This report focuses specifically on how the NDC SP facilitated financing approaches for mitigation action. The findings presented here are derived from a comprehensive review of activities and outcomes related to NDC SP result areas (see Box 1 for NDC SP background). The purpose of this report is to provide a detailed summary of the lessons learned from the NDC SP's efforts in promoting climate finance for mitigation action to support implementation of Nationally Determined Contributions (NDCs). The insights presented here are designed to guide United Nations Development Programme (UNDP) staff and climate practitioners in refining future strategies and programmes that aim to mobilize the private sector more effectively in national and global climate agendas.

Box 1

Background to UNDP's NDC Support Programme

The NDC SP, launched in 2017, supported developing countries in implementing their NDCs under the Paris Agreement. The NDC SP sought to drive transformational change by scaling up climate investments. The programme's resources exceeded US$74.7 million, with contributions aimed at enhancing the capacity of governments to deliver on their climate commitments. The programme focuses on six result areas that are further underpinned by peer-to-peer knowledge sharing and advocacy efforts:

1. Leadership strengthened and championed to promote ambitious climate change vision;
2. Integrated governance enhanced to deliver NDC outcomes;
3. Evidence-based design and planning of mitigation actions delivered;
4. Capacities developed to design climate-friendly investment opportunities, address investor risk, and blend and catalyze climate finance;
5. Enabling environment enhanced for private sector engagement;
6. Alignment between COVID-19 recovery efforts and NDC enhancement and implementation processes strengthened.

Notably, the NDC SP built on earlier UNDP initiatives, such as the Low Emission Capacity-Building Programme, and continues to support countries in fulfilling their Paris Agreement commitments. The results achieved under the NDC SP are part of an ongoing effort that integrates previous and current initiatives, demonstrating the continuity and evolution of UNDP's support for climate action. Further, NDC SP's results in many cases are being sustained and scaled up through the Climate Promise portfolio, as well as other joint funding arrangements and complementary UNDP programming.

Within the NDC SP's result areas, Result 4 and its corresponding activities focused on the development of capacities to design climate-friendly investment opportunities to support NDC implementation. Result 4 encompassed sectoral risk assessments, the mapping of climate finance flows, design of financial mechanisms, development of portfolios of projects and carbon market readiness activities.

Additionally, under Result 3, prioritized NDC actions were strengthened through targeted assessments and stakeholder engagement, including the private sector, to address systemic barriers and mobilize resources for climate action.

Under the NDC SP, 22 countries undertook activities under Result 4 and 18 countries advanced mitigation actions under Result 3.

2. Context and relevance

Financing mitigation action is increasingly recognized as a cornerstone of achieving the ambitious goals outlined in the Paris Agreement and operationalizing NDCs (see Box 2). The financial sector, including public funding mechanisms, private investments and innovative financial instruments such as green bonds and blended finance models, plays a transformative role in supporting the transition to low carbon pathways. This is particularly critical for developing countries, where systemic barriers, such as limited financial resources, high investment risks and insufficient institutional capacity, often hinder progress. Mobilizing financial flows aligned with climate goals not only facilitates the implementation of mitigation actions but also enhances national development by addressing broader objectives, such as poverty alleviation, renewable energy expansion and social resilience (UNDP, 2023; GIZ, 2017). In this context, the alignment of financial systems with NDC priorities is essential for fostering ambitious climate action and delivering on the targets of the Paris Agreement (Overholt et al., 2024).

Box 2

Background to the Paris Agreement, NDCs and financing climate action

The Paris Agreement, adopted in 2015, is a legally binding international treaty that seeks to limit global warming to well below 2°C, with efforts to restrict it to 1.5°C above pre-industrial levels. Central to the Agreement are NDCs, which represent countries' voluntary climate pledges detailing how they plan to reduce greenhouse gas (GHG) emissions and adapt to climate impacts. NDCs are essential tools for aligning climate goals with national development priorities and serve as strategic roadmaps for countries' low-carbon transitions (Overholt et al., 2024).

Financing plays a pivotal role in enabling countries to implement their NDCs. Article 2.1(c) of the Paris Agreement emphasizes the alignment of financial flows with pathways toward low-emission and climate resilient development. Despite efforts, substantial barriers to mobilizing private finance remain, particularly in developing countries, where systemic issues, such as investment risks and limited capacity, hinder progress (OECD, 2023). The use of innovative mechanisms such as blended finance, green bonds, and carbon pricing has been effective in addressing some of these challenges and catalyzing private sector investment (GIZ, 2017).

A critical component of the Paris Agreement is its emphasis on scaling up financial flows to enable climate action, particularly in developing countries. Article 9 of the Agreement highlights the responsibility of developed countries to provide financial resources to assist developing nations in mitigation and adaptation efforts. This financial support is supplemented by innovative mechanisms, such as the Green Climate Fund and carbon markets under article 6, which aim to mobilize both public and private sector contributions. By aligning these financial instruments with NDCs, countries can address systemic barriers to investment, such as high perceived risks and limited institutional capacity. This integrated approach underscores the importance of finance as a key enabler for achieving the transformative goals of the Paris Agreement (UNFCCC, 2015; OECD, 2023).

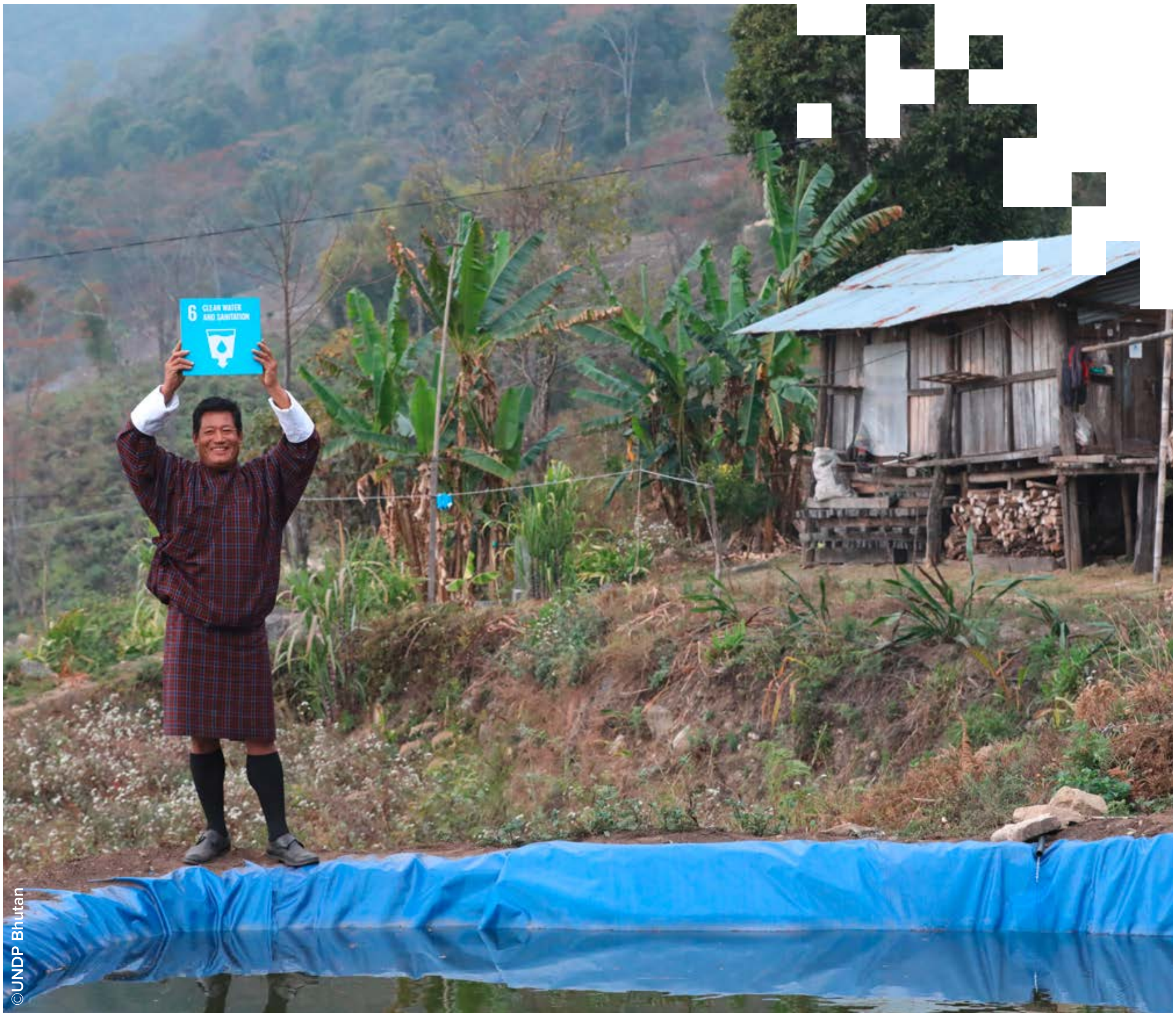
The importance of inclusive approaches in financing climate action cannot be overstated. Gender responsive and equity-focused financial strategies help ensure that the benefits of climate initiatives reach marginalized populations, thereby addressing both social and environmental goals. By incorporating these considerations into NDC investment plans, countries can achieve broader acceptance and support for their climate agendas while improving social resilience (UNDP, 2023). Lessons from the NDC SP demonstrate that robust governance frameworks and transparent systems for measurement, reporting, and verification (MRV) are essential for securing investments and fostering stakeholder confidence (OECD, 2023).

The periodic revision of NDCs, as mandated by the Agreement, provides opportunities for countries to enhance their ambitions and update their strategies. The 2025 round of NDCs represents a pivotal moment for countries to demonstrate the highest possible ambition by addressing gaps in mitigation, adaptation, and financing. The outcomes of the first Global Stocktake highlight the urgency of these updates, emphasizing the need for stronger private sector engagement, systemic governance improvements, and financial mobilization strategies. While many countries have already identified private sector entry points, there remains significant potential to further leverage this partnership in the next generation of NDCs.

Examples of references for designing climate-friendly investment in NDCs

Bhutan's NDC implementation integrates gender-responsive approaches to reduce methane emissions through improved waste management practices. The initiative emphasized training women in composting and waste segregation, fostering both climate action and social equity. By aligning its NDC goals with inclusive strategies, Bhutan demonstrates how integrating equity into climate finance can address environmental and development priorities.

Chile has aligned fiscal strategies with its NDC goals through the development of a Climate Fiscal Framework. This framework institutionalizes climate expenditure tracking and budget tagging, enabling the government to prioritize investments in renewable energy and sustainable transport. By embedding climate considerations into its fiscal systems, Chile ensures transparency and progress toward its carbon neutrality targets by 2050.



3. Good practices and case studies

The identification of good practices for financing approaches to support mitigation actions under NDCs was conducted through a systematic process that combined desk reviews and stakeholder consultations. This effort focused on seven countries supported by the NDC SP, selected for their successful achievements, lessons learned and the potential for replicability across diverse geographical and sectoral contexts. The countries were: Bhutan, Chile, Côte d'Ivoire, Ghana, Indonesia, Lebanon and Tunisia. Interviews were held with UNDP in-country coordinators or representatives from country offices identified by UNDP. These discussions provided valuable insights into the successes, challenges and innovative practices employed in each context.

The interviews served as a primary source of information, supplemented by UNDP country briefs, annual reports and other relevant documentation. While the focus was on capturing practices that demonstrated tangible outcomes, the process also highlighted the importance of context-specific approaches, stakeholder engagement and adaptability in addressing the financial challenges associated with climate action. The following sections outline the main thematic focus of each country, summarize the trends observed across the seven cases, and provide detailed examples from selected countries to illustrate good practices.

3.1 General trends and good practices in financing approaches for mitigation actions

The analysis of country case studies under the NDC SP revealed a series of **key trends** that have proven effective in mobilizing resources for climate mitigation. By examining real-world experiences across diverse national contexts, these case studies highlighted innovative solutions, practical approaches and critical lessons that can inform scalable and replicable climate finance strategies. The trends reflect how countries are addressing barriers to implementation, strengthening institutional systems and unlocking financial flows to meet their NDCs.

The case studies provide valuable insights into the unique pathways countries have pursued. For instance, **Indonesia** demonstrated leadership through the issuance of its Green Sukuk, an innovative financial instrument that mobilized significant funding for climate action while aligning with cultural financial practices. In **Tunisia**, targeted governance reforms and capacity-building initiatives enhanced institutional readiness and engagement with the private sector. **Bhutan** focused on community-driven solutions, emphasizing gender-responsive waste management to deliver both social and climate benefits, while in **Ghana**, energy efficiency interventions in artisanal oil milling showcased how localized actions can reduce emissions and empower vulnerable groups. **Chile** advanced its climate goals by developing a Climate Fiscal Framework, which institutionalized climate-related expenditure tracking and integrated climate considerations into public financial management. **Lebanon** and **Côte d'Ivoire** explored blended finance approaches and risk mitigation tools to attract private sector investments, particularly in renewable energy and agriculture.

These experiences collectively illustrate how countries are advancing innovative financing mechanisms, improving governance and strengthening institutional capacity to achieve their climate mitigation goals. The following trends represent the core structural elements and good practices identified across these case studies, providing a practical framework for countries seeking to scale up climate finance and deliver on their NDC commitments.

1 **Establishing collaborative and accountable governance frameworks.** UNDP, through the NDC SP, identified the importance of developing collaborative governance systems that ensure coordination across sectors, clearly define institutional roles and create mechanisms for accountability in climate finance management. Multilevel governance structures—such as interministerial committees or technical working groups—help bridge gaps among ministries, stakeholders and sectors, fostering alignment of financial strategies with national climate priorities. Embedding governance frameworks into existing institutional structures, rather than creating parallel systems, further enhances their long-term sustainability and trust.

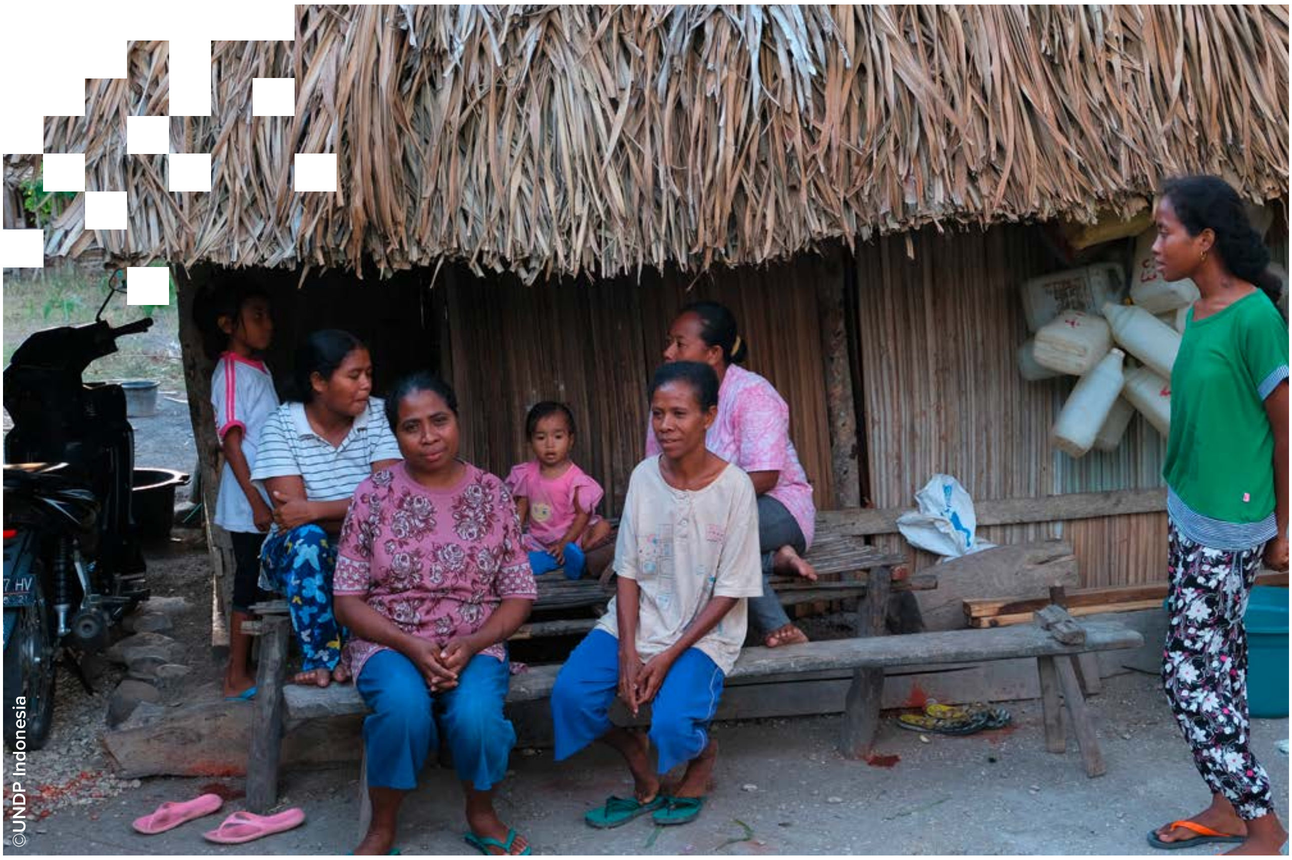
For example, in **Tunisia,** a clear governance roadmap was developed to overcome institutional fragmentation. The introduction of a climate finance taxonomy provided financial institutions with a common framework to identify, evaluate and prioritize climate-friendly projects. Building on these efforts, in 2024, consultations were initiated to further refine and implement a sustainable taxonomy for climate action, aimed at creating a unified classification for mitigation and adaptation projects that align with the country's NDC objectives. This reform was accompanied by extensive consultations involving the Central Bank, private sector actors, and commercial banks, creating a shared understanding of Tunisia's adaptation and mitigation priorities.

Similarly, **Côte d'Ivoire** addressed governance challenges in the renewable energy sector by analysing barriers to private investment. Institutional weaknesses and unclear regulatory frameworks were identified as critical obstacles. Through targeted risk mitigation strategies, Côte d'Ivoire took steps towards addressing these gaps, laying the groundwork for private sector participation and improving engagement with policymakers. **Chile's** approach highlights the power of interministerial collaboration in embedding climate objectives into national fiscal processes. The Ministry of Finance and Ministry of Environment worked together to implement a Climate Fiscal Framework that ensured climate-related spending was institutionalized, transparent and aligned with broader economic goals. This collaborative governance enabled Chile to mainstream climate finance within its national development agenda, even reaching the national congress's ex-ante approval of climate public budget of different sectoral proposals that are aligned to the 2050 neutrality pathway.

These examples underscore that governance reforms are not about creating parallel systems but rather strengthening coordination and building institutions capable of managing climate finance effectively.

2 **Embedding climate finance into public financial systems.** The integration of climate finance into public budgeting systems is a critical practice for ensuring that mitigation actions are systematically prioritized and adequately funded. Tools such as climate budget tagging (CBT), expenditure tracking and cost-benefit analysis allow governments to align financial flows with NDC objectives. This approach increases transparency, identifies funding gaps and secures long term political commitment to climate goals.

Chile provides a clear model of success. Its Climate Fiscal Framework institutionalized climate-related spending, requiring ministries to report on expenditures tied to climate actions. By embedding climate considerations into its national budget, Chile ensured transparency, optimized resource allocation and created a robust system for monitoring progress towards its carbon neutrality goals. In **Indonesia,** CBT was implemented as part of a broader climate fiscal framework. CBT enabled systematic tracking of mitigation and adaptation investments across sectors, ensuring that public resources flow to priority projects, such as renewable energy and waste management. The framework provided policymakers with the tools to assess funding gaps and improve decision-making.



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These experiences demonstrate that integrating climate finance into public budgets ensures long-term financial commitments to climate action, improving transparency and accountability and facilitating the alignment of fiscal policies with national and global climate goals.

3 **Leveraging blended finance models to mobilize private capital.** Blended finance has emerged as a powerful tool for addressing financial risks and unlocking private capital for climate action. By combining public, concessional and private funding, blended finance makes climate projects in high-risk sectors, such as renewable energy and sustainable agriculture, more attractive to investors. Public funds act as "de-risking" instruments, creating confidence among private investors and enabling public-private partnerships.

In **Lebanon,** the establishment of the Lebanon Green Investment Facility (LGIF) showcased how blended finance can be tailored to challenging economic contexts. By basing the facility in Luxembourg, Lebanon bypassed domestic financial instability while leveraging international markets. The facility creates partnerships among financial institutions, delivering bankable climate solutions. It provides financial instruments such as concessional loans, guarantees, and equity to de-risk investments in renewable energy and climate-smart infrastructure, increasing investor confidence and capital inflows.

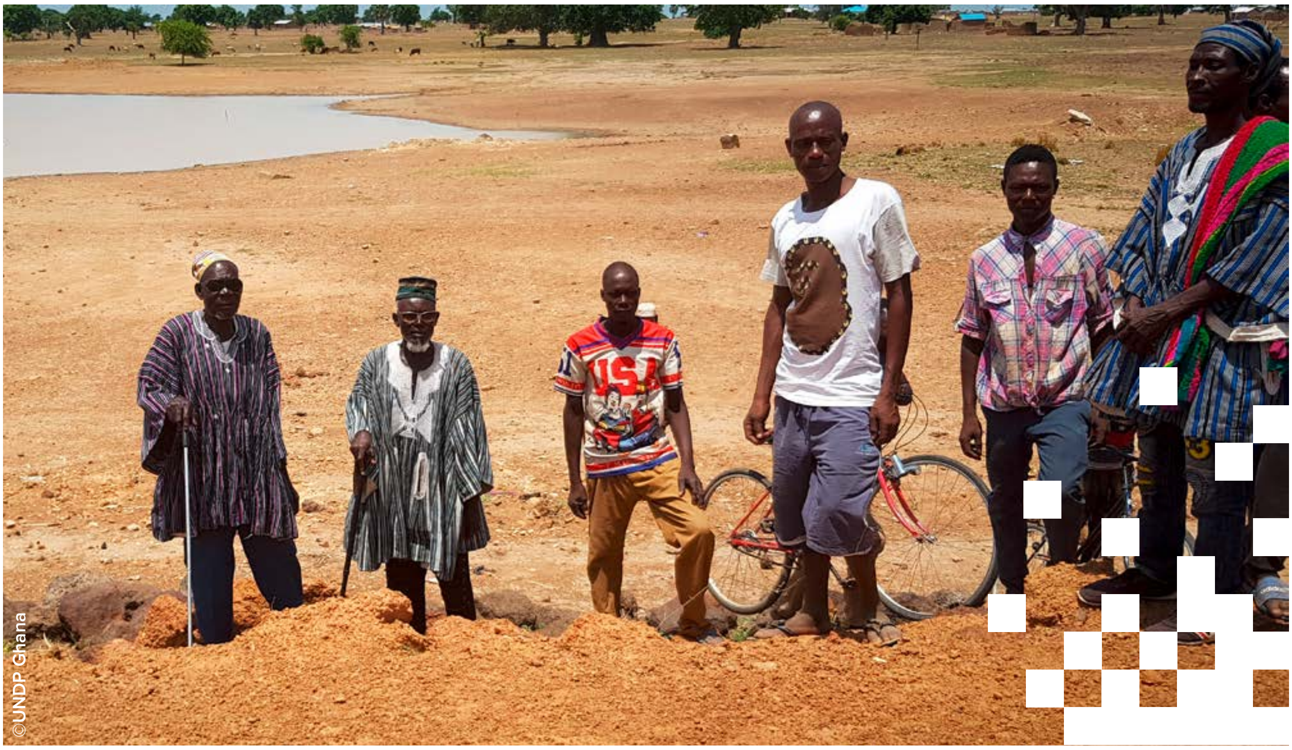
Indonesia pioneered the use of the Green Sukuk, a sharia compliant financial instrument that mobilized significant resources for climate projects. This initiative forms part of Indonesia's broader blended finance framework, which combines public and private capital to reduce investment risks and attract diverse investors. Supported by UNDP through studies on Islamic finance, the Green Sukuk channeled funds towards renewable energy, sustainable transportation and disaster resilience projects, aligning financial instruments with cultural norms and financial practices to maximize impact.

In **Côte d'Ivoire,** blended finance approaches have been explored to address barriers to renewable energy investments. A de-risking study identified financial and regulatory challenges, leading to recommendations for risk mitigation measures. Efforts to develop financial tools, including an environmental, social and governance (ESG) bond and market-based mechanisms, continue to create opportunities for private sector participation. While full implementation of blended finance instruments is still in progress, ongoing initiatives highlight the country's commitment to leveraging innovative financial solutions for mobilizing private capital in climate mitigation actions.

4 **Building institutional capacity to access international climate finance.** Institutional capacity is a cornerstone of accessing and effectively deploying international climate finance. Countries that invest in capacity-building initiatives can develop high-quality funding proposals, align national frameworks with donor requirements and maximize the impact of available resources.

In **Tunisia,** a comprehensive capacity-building initiative targeted financial institutions and public agencies. Over 60 stakeholders received training on climate risk assessments, portfolio transparency systems and methodologies for achieving carbon neutrality. These programmes strengthened institutional abilities to access international funds and align investments with Tunisia's NDC goals. In **Indonesia,** capacity-building efforts were central to the successful issuance of the Green Sukuk. Technical assistance helped the Ministry of Finance comply with international reporting standards, ensuring transparency and building trust among global investors. This institutional strengthening enabled Indonesia to manage large-scale climate investments effectively.

In **Ghana,** the cleaner production initiative in artisanal oil palm milling involved significant stakeholder engagement and technical training. By working with local non governmental organizations (NGOs) and government partners, the project built the capacity among millers and producers to adopt energy-efficient technologies, improving both environmental and economic outcomes. These efforts showcased how technical expertise at the community level can amplify climate finance impacts.



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These cases emphasize that building institutional capacity—whether at the national, sectoral or community level—enhances a country's ability to secure and manage climate finance, ultimately driving progress towards NDC implementation.

5 **Designing equitable and inclusive financial strategies.** Through the NDC SP, UNDP ensured that financial strategies are gender-responsive and inclusive, addressing the needs of marginalized groups and promoting equity in climate action. Equitable financing strategies ensure that the benefits of climate mitigation actions are widely shared, particularly among vulnerable populations. Good practices include embedding gender considerations into financial planning and tailoring mechanisms to benefit communities disproportionately affected by climate change. Diverse stakeholders—including women, youth, Indigenous Peoples and local communities—bring unique technical expertise and contextual knowledge that can enhance the implementation and efficiency of NDC measures. Recognizing and integrating this expertise ensures that support is directed to where it is most needed, improving the effectiveness and impact of financial strategies. These approaches align with broader development goals, such as poverty reduction and social inclusion, enhancing the social sustainability of mitigation actions. Inclusive practices also strengthen public support for climate initiatives by demonstrating that

climate finance contributes to both environmental and social objectives. Governments that actively involve local communities and civil society in financial planning processes foster greater transparency and accountability while ensuring that mitigation measures address local needs.

For instance, in **Bhutan,** gender-responsive strategies were embedded into waste management initiatives. Women were actively trained and empowered to lead composting and waste segregation efforts, which created new economic opportunities and strengthened their role in local decision-making. These efforts not only reduced methane emissions but also demonstrated how inclusive approaches can deliver co-benefits for gender equity and poverty alleviation. In **Ghana,** the artisanal oil palm milling sector, dominated by women producers, was targeted for cleaner production improvements. The introduction of energy-efficient technologies reduced emissions, lowered costs and improved workplace safety, directly addressing both environmental and gender challenges. The participatory nature of the intervention—where women were central to the planning and implementation—underscored the importance of engaging local communities to ensure that climate finance delivers tangible benefits to those most affected.

Similarly, in **Lebanon,** the Green Investment Facility (LGIF) embedded gender- responsive criteria into its project selection processes. By tracking social impacts and ensuring that projects prioritized benefits for women, refugees and marginalized communities, Lebanon demonstrated how equity considerations can be systematically integrated into financial mechanisms. Partnerships with civil society organizations further strengthened this inclusiveness, ensuring that mitigation actions addressed local needs and fostered broad public support.

These examples collectively highlight that equitable and inclusive financial strategies not only enhance the social sustainability of mitigation actions but also align climate finance with broader development objectives. By embedding gender and equity considerations into financial planning, governments can build trust, foster accountability and ensure that climate investments deliver meaningful and lasting benefits for all segments of society.

6 **Scaling up the use of innovative financial instruments.** UNDP's NDC SP highlighted the use of innovative financial instruments to mobilize resources for climate mitigation and attract private sector participation. Financial instruments such as climate-linked bonds, Islamic finance products and blended finance mechanisms offer structured, scalable solutions to address climate financing gaps. By reducing investment risks, aligning with investor priorities and creating clear pathways for resource mobilization, these tools enable countries to expand investments in climate action.

In **Indonesia,** the issuance of the Green Sukuk highlights the transformative potential of Islamic financial instruments in mobilizing resources for climate mitigation. As the world's first sovereign sharia-compliant green bond, the Green Sukuk raised US$2.75 billion to finance projects in renewable energy, sustainable transportation and waste-to-energy infrastructure. The Sukuk's success reflects its alignment with local cultural and financial contexts, which enables Indonesia to attract a diverse range of investors, including those from Islamic markets. This approach demonstrates how tailored financial instruments can address national priorities while unlocking new sources of capital. In **Lebanon,** the Green Investment Facility (LGIF) combined concessional financing with private sector participation to de-risk climate-related projects. By strategically blending public and private resources, the facility attracted funding for renewable energy despite Lebanon's challenging economic environment. This model highlights the effectiveness of blended finance in reducing perceived risks and creating opportunities for investment in sectors critical to achieving NDC goals.

The experiences of Indonesia and Lebanon illustrate that innovative financial instruments—when designed to address national contexts and financing gaps—can mobilize significant resources for climate action. By combining creativity, risk mitigation mechanisms and clear alignment with climate priorities, countries can unlock new financial flows, attract private capital and accelerate progress towards their NDC commitments.

7 **Developing comprehensive measurement, reporting and verification (MRV) systems.** UNDP, through the NDC SP, identified as good practice the establishment of robust MRV systems to ensure transparency, track the allocation of resources, and measure the effectiveness of climate finance. They also facilitate the collection of reliable, transparent and comprehensive information on emissions, actions and support, which is essential for ascertaining the level of ambition and identifying areas for improvement. MRV systems provide a structured approach to monitoring progress towards NDC goals, ensuring accountability to stakeholders and building trust among investors.

Indonesia exemplifies this through its Green Sukuk Allocation and Impact Reports, which are published annually by the Ministry of Finance. These reports provide detailed insights into how Green Sukuk proceeds are allocated to eligible projects, such as renewable energy, sustainable transportation and waste-to-energy initiatives. The reports also include clear indicators of environmental and socio-economic benefits, such as reduced GHG emissions, increased renewable energy capacity and improved community resilience. By providing measurable outcomes and enhancing transparency, Indonesia's reporting framework has built confidence among investors and strengthened its leadership in green finance. Complementing this, Indonesia's CBT system systematically tracks public expenditures on climate-related actions across government programmes. CBT allows policymakers to identify climate investments, monitor their alignment with NDC priorities, and optimize resource allocation. The system serves as a critical MRV tool for ensuring that public funds effectively support climate goals while maintaining transparency and accountability.


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The examples from Indonesia demonstrate how MRV systems can strengthen governance, enhance transparency and provide valuable data to measure the impacts of climate finance. By implementing robust MRV frameworks, countries can ensure that climate investments deliver measurable outcomes, build trust among stakeholders and attract further financial support for mitigation and adaptation efforts.

8 **Investing in knowledge and capacity-building for sustainable climate action.** UNDP's support under the NDC SP showed that investing in knowledge and capacity-building to strengthen institutional readiness, technical expertise and stakeholder engagement is vital. Robust capacity-building efforts equip governments, financial institutions and communities to design, implement and monitor climate finance strategies effectively, ensuring alignment with national priorities and access to international funding.

In **Tunisia,** targeted programmes trained over 60 stakeholders from public and private sectors on climate risk assessments, carbon neutrality planning and portfolio transparency tools. These efforts enhanced Tunisia's ability to access and deploy international climate finance efficiently. In **Bhutan,** knowledge-building focused on empowering local communities, particularly women, to lead waste management projects. Technical training and public awareness campaigns enabled participants to implement composting and recycling measures, reducing emissions and creating economic opportunities. In **Indonesia,** capacity-building supported the success of the Green Sukuk. Technical assistance ensured compliance with international standards, strengthening the Ministry of Finance's ability to mobilize global investments for climate projects.

Capacity-building also fosters knowledge-sharing and peer learning across countries, enabling stakeholders to adapt best practices and innovative solutions. These examples demonstrate that sustained investments in capacity-building improve institutional readiness, enhance access to climate finance and ensure the successful implementation of climate action.

3.2 Selected case studies

This document focuses on the experiences of seven countries—Bhutan, Chile, Côte d'Ivoire, Ghana, Indonesia, Lebanon and Tunisia—that provide valuable insights into the diverse strategies employed to advance climate finance systems in support of NDCs. Out of these seven countries, the experiences of **Chile, Indonesia, Lebanon, Ghana** and **Bhutan** are explored in greater detail in this section to highlight their thematic and geographical diversity. These five countries were chosen for their distinctive approaches, such as gender-responsive climate finance, innovative financial instruments, sustainable governance reforms and community-driven solutions. Together, they offer lessons applicable across other national and regional contexts while demonstrating pathways to overcome unique national challenges. These examples illustrate how innovative financial mechanisms, inclusive governance and targeted capacity-building can address unique national challenges while contributing to global climate goals.

Chile: Developing a Climate Fiscal Framework to support carbon neutrality

Chile has emerged as a leader in aligning fiscal strategies with climate goals to achieve carbon neutrality by 2050. Under the NDC SP, the Ministry of Finance, in collaboration with the Ministry of Environment and key stakeholders, started the development of a robust Climate Fiscal Framework to institutionalize the tracking of climate related public expenditures and integrate climate considerations into national budgeting processes. This effort reflects Chile's commitment to strengthening transparency, building technical capacity, creating a governance structure to support sustainable financial flows aligned with its NDC, and ensuring efficient spending towards climate long-term strategy (LTS) objectives.

The initiative began by identifying the challenges within Chile's existing public financial management system. Climate-related investments were scattered across sectors, with limited coordination and no clear methodology to measure and track expenditures. To address this, the Ministry of Finance first developed a benchmark based on methodological approaches and experiences used at the time by the Coalition of Finance Ministers for Climate Action. Methodologies such as Investment and Financial Flow (I&FF) analysis, climate budget tagging (CBT), and a climate public expenditure and institutional review for both public and private sectors were selected for implementation. This was followed by raising awareness about the role of the financial sector and public finance in achieving the NDC and 2050 LTS targets. Stakeholders, including ministries, banks and private sector actors, were engaged to understand their roles in financing carbon neutrality.

Second, a framework for climate fiscal governance was developed, specifying roles for the Ministry of Finance, the Budget Office, and other key institutions. This governance framework included a taxonomy to identify climate-related mitigation and adaptation expenditures, ensuring consistent reporting and understanding across public and private sectors. Costing of 2050 LTS targets and an analysis of the financing gap was developed. The next step focused on capacity-building and integration. Training programmes were delivered to public officials to build technical knowledge on tools and methodologies for climate finance. These sessions introduced techniques for tracking climate expenditures (CBT), applying I&FF analysis, and integrating climate considerations into budgetary planning. The project also emphasized transparency systems for fiscal policies, ensuring clear reporting on yearly public climate expenditures. This process culminated in the inclusion of climate expenditure reporting in the 2021 budget law, which requires the government to submit detailed reports to the national congress for ex-ante sectoral approval.

The initiative was conducted with strong collaboration among key actors. The Ministry of Finance led the effort, with technical support from the Budget Office, the Ministry of Energy and the Ministry of Environment. International partners, including UNDP, provided technical expertise and facilitated the transfer of global best practices. Coordination with private sector actors also ensured that financing mechanisms aligned with the needs of key sectors, such as energy, forestry and agriculture.

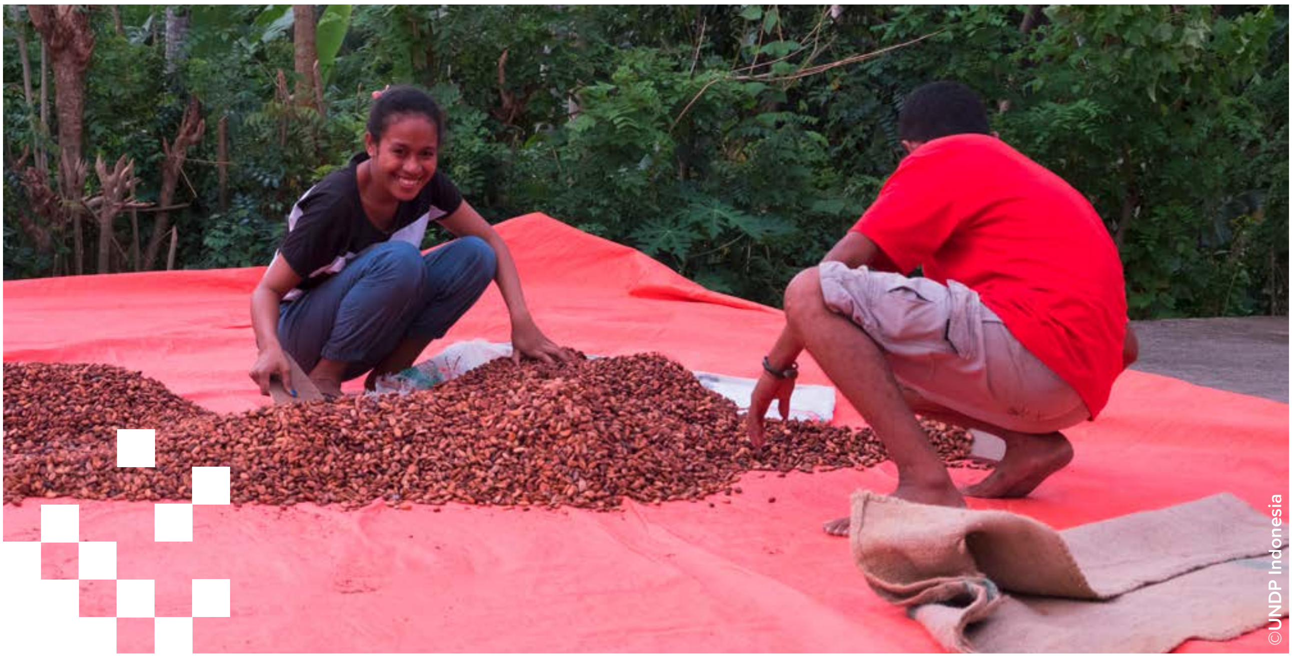
Significant outputs and results were achieved. A climate public expenditure and institutional review was developed to track public climate-related investments between 2016 and 2020, providing critical data for decision makers. This process was complemented by the application of an I&FF analysis to identify financing gaps and prioritize investments needed for carbon neutrality in key sectors. Over 60 public officials were trained in methodologies, including tools like GAMS software and the ECOGEM model, to assess and integrate climate risks into national budgeting. Research notes and policy briefs were published, documenting the lessons learned and methodologies applied, and serving as tools for replication.

However, the initiative faced some challenges along the way. Changes in government leadership and shifting political priorities caused delays in implementation. The tight deadlines imposed by the 2021 budget law added further pressure to deliver outputs quickly. These challenges were overcome through strong adaptive management and continuous engagement with stakeholders to maintain momentum and secure buy-in from new government actors. Collaboration across ministries and agencies was key to overcoming institutional barriers and ensuring progress despite disruptions.

The 2024 National Climate Finance Strategy was validated in public consultations and is guiding the roadmap for the 2050 climate neutrality and NDC revisions. The impact of the Climate Fiscal Framework has been far-reaching. It has provided Chile with a clear methodology to measure and report on climate-related expenditures, fostering greater transparency and accountability. The inclusion of climate expenditure reporting in the national budget marked a milestone in embedding climate considerations into fiscal policies. By strengthening institutional capacity and creating an enabling environment for climate finance, the initiative has laid the foundation for mobilizing sustainable financial flows to support mitigation and adaptation goals.

Indonesia: Green Sukuk and climate fiscal innovations

Indonesia has pioneered innovative climate financing tools to meet its NDC targets, mobilizing significant resources for mitigation and adaptation efforts. The Ministry of Finance and the Ministry of Environment and Forestry, with the support of UNDP's regional hub, country office and the NDC SP, developed a Green Sukuk instrument and strengthened its Climate Change Fiscal Framework (CCFF). These mechanisms demonstrate Indonesia's leadership in mobilizing international and domestic finance while promoting transparent and inclusive climate investments.



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The Green Sukuk, a sharia-compliant bond, was first issued in 2018, marking Indonesia as the world's first sovereign issuer of such an instrument. The Green Sukuk channels financing exclusively to projects that deliver measurable climate benefits, including renewable energy, sustainable transportation, waste to-energy initiatives and disaster resilience. With successive issuances, including the retail Green Sukuk launched to encourage domestic financial participation, Indonesia has mobilized over $2.75 billion to finance climate-smart projects. Key results include the construction of 727 kilometres of double-track railway, increased renewable energy capacity through solar power installations, and improved solid waste management for over five million households.

To ensure accountability and build investor confidence, the Ministry of Finance prepares annual Green Sukuk Allocation and Impact Reports. These reports detail the allocation of funds to eligible projects and provide measurable indicators of their environmental and socio-economic impacts. This robust monitoring system not only enhances transparency but also demonstrates the tangible benefits of green investments, such as reduced GHG emissions, improved energy efficiency and strengthened community resilience. The reporting process has established a model for other countries seeking to attract climate finance through innovative instruments.

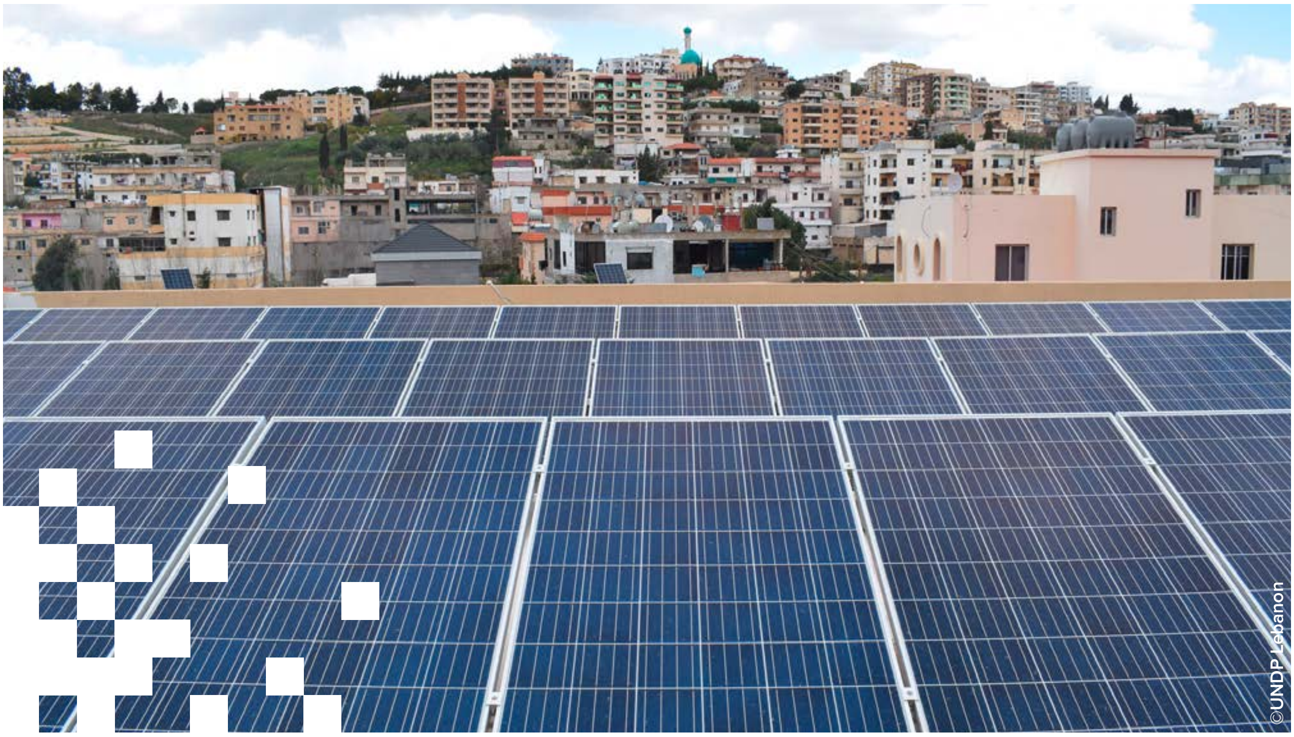
Complementing these efforts, Indonesia developed the CCFF, a strategic roadmap aligning fiscal policy with climate goals. The CCFF incorporates CBT, which enables the systematic tracking of climate-related expenditures. This approach has enhanced the efficiency of resource allocation, improved transparency and identified priority investments across key sectors. By linking budgetary processes with climate objectives, the CCFF has created pathways to attract private investments and demonstrate the economic value of green projects, particularly in renewable energy and climate-resilient infrastructure.

The NDC SP also focused on institutional strengthening within the Ministry of Finance. Capacity-building efforts included designing and monitoring green investments, developing impact measurement frameworks and creating post-issuance reporting tools to ensure the effective use of proceeds. Workshops and technical assistance enabled stakeholders, including local governments, to integrate climate considerations into fiscal planning and project implementation. These efforts have been critical in overcoming challenges, such as interministerial coordination and delays caused by the COVID-19 pandemic.

Indonesia's experience highlights the transformative potential of innovative financing instruments to drive climate action. The Green Sukuk demonstrates how sharia-compliant finance can attract diverse investors, mobilize substantial funding and deliver measurable environmental impacts. Meanwhile, the CCFF and CBT offer replicable frameworks for other countries to integrate climate priorities into fiscal systems, ensuring accountability and optimized resource allocation.

Lebanon: Catalysing climate action through the Lebanon Green Investment Facility

The Lebanon Green Investment Facility (LGIF) is an innovative financial mechanism designed to mobilize private sector investment and address critical climate finance gaps, supporting the country's NDC. Led by the Ministry of Environment, with initial support from NDC SP and partners, and then the Climate Promise, LGIF focuses on financing climate positive projects including renewable energy, energy efficiency, low-emission transportation, climate-smart infrastructure, water conservation and sustainable agriculture. The initiative comes at a time when Lebanon faces significant economic and institutional challenges, including a financial crisis, limited capital access and absence of risk mitigation tools, and a lack of investor confidence.



To overcome these barriers, the LGIF adopted a blended finance approach, combining concessional and private capital to de-risk climate investments and make them more attractive to the private sector. Extensive market needs assessments and technical consultations identified financing gaps and opportunities for collaboration with development finance institutions and investors. Recognizing Lebanon's fragile financial system and high-risk perception, the decision was made to base the facility in Luxembourg, leveraging its globally recognized financial governance and stability to attract international funding and ensuring compliance with article 8 of the European Union's Sustainable Finance Disclosure Regulation.

A key feature of the LGIF is its use of a combination of financial instruments to address project risks and enhance bankability. These instruments include the possibility of blending subsidized loans to reduce interest burdens, performance-based grants to bridge viability gaps, first-loss protection to provide credit enhancement, and portfolio guarantees to lower perceived risks for investors. By tailoring its approach to Lebanon's economic challenges, the LGIF provides the necessary tools to unlock private capital while managing financial uncertainties.

The LGIF also integrates gender-responsive finance strategies to ensure that projects deliver measurable social benefits. With support from the National Commission for Lebanese Women, the facility embeds gender equity criteria, such as achieving 30 percent female participation in project governance and implementation. By prioritizing women as well as marginalized groups, the LGIF contributes to Lebanon's broader goals of social inclusion and gender equality while advancing its climate objectives.

Capacity-building efforts have been central to the LGIF's design, focusing on strengthening local financial institutions' ability to assess climate risks, develop green financial products and align operations with international climate finance standards. These initiatives have equipped decision makers with the tools and expertise needed to implement climate-smart investments, fostering trust among stakeholders and enabling long-term engagement in climate finance.

The LGIF has laid the groundwork for significant results by developing a pipeline of bankable climate projects in priority sectors and enhancing Lebanon's capacity to mobilize climate finance. While Lebanon's political and economic instability posed significant challenges, the LGIF's rigorous design, international partnerships and stakeholder engagement have demonstrated how adaptive financing mechanisms and risk management strategies can enable transformative climate action. By providing a replicable model, Lebanon's experience highlights the role of innovative solutions, strong governance and inclusive approaches in aligning financial flows with NDC goals while prioritizing equity and resilience.

The LGIF's implementation is now being further advanced with the support of UNDP's Climate Promise: Pledge to Impact programme and Cedar Oxygen SAS, which will initially fund a $50 million portfolio. UNDP will provide technical support and advisory services to the LGIF that will consist of assessing the climate impact and progress on achieving sustainable development goals.

Bhutan: Advancing sustainable waste management with an inclusive approach

Bhutan has been proactive in addressing growing waste management challenges as part of its climate commitments under its NDCs, given rising GHG emissions from this sector and pollution concerns for a country that prides itself as a green tourism destination. The national waste management strategy 2019 set a goal of zero waste by 2030.

A national waste NDC mitigation action was designed with the support of UNDP to reduce methane emissions from solid waste. The initiative engaged a wide range of key government stakeholders and proposed significant co-financing. Specifically, the waste NDC mitigation action sought to mitigate emissions from unmanaged organic waste—a significant contributor to methane emissions in Bhutan—by establishing waste segregation and composting systems and promoting recycling. A critical innovation was the initiative's emphasis on gender inclusion, providing women with training in composting and waste processing and involving them in leadership roles within waste management systems. This approach not only addressed climate goals but also contributed to improving women's livelihoods and social equity.

However, the waste NDC mitigation action faced challenges in securing grant financing given the relatively small volume of Bhutan's waste and the low mitigation potential. Nonetheless, Bhutan continued to advance different elements of the waste management initiative under the NDC SP. With a focus on circular economy approaches and gender-responsive strategies, these initiatives reflect Bhutan's dedication to achieving sustainable waste management and addressing both environmental and social priorities.

Advancing the initiative followed a structured methodology to address food waste, which makes up 60 percent of Bhutan's waste stream. First, stakeholder engagement was prioritized, involving the National Environment

Commission, local governments and community representatives to align national and local objectives. Second, technical training programmes and behavioural change campaigns were conducted to build local capacity in waste management practices and encourage household waste sorting. Private sector funding was attracted to pilot seven waste sorting and collection facilities, improving the infrastructure needed for effective waste management in Thimphu and surrounding areas. Beyond preventing food waste from ending up in landfills, livelihoods were also supported.

There were some challenges in implementation. Behavioural resistance to waste segregation at the household level slowed progress, necessitating sustained public awareness efforts. Limited financial resources required Bhutan to focus on incremental progress to implement key aspects of the project.

This initiative also reflects Bhutan's broader efforts under the NDC SP to systematically integrate gender responsive climate finance strategies across its NDC implementation. By incorporating women's roles into the design and delivery of waste management systems, the project created economic opportunities and improved representation in decision-making processes. In-depth gender analyses and a training manual were developed for three key NDC sectors, including waste, energy and agriculture. To do so, a national survey was conducted covering 600 households in 10 districts and 3 agrological regions. It also involved extensive consultations with diverse stakeholders from government, the private sector, civil society, NGOs and academia.

Bhutan's approach aligns with its national gender equality strategies, where climate finance mechanisms prioritize women as key agents of change. This linkage not only amplifies the effectiveness of climate actions but also ensures that mitigation and adaptation measures contribute to the empowerment of marginalized groups.

Ghana: Promoting energy efficiency in artisanal oil palm milling through cleaner production

Ghana's commitment to achieving its NDC goals includes reducing GHG emissions in the artisanal milling sector, which relies heavily on inefficient and environmentally harmful practices. The NDC SP launched an intervention to enhance energy efficiency and cleaner production in artisanal oil palm milling. This initiative involved the design and deployment of energy-efficient boilers, reducing wood fuel consumption and emissions while improving safety and productivity. The intervention primarily benefited women producers, who constitute most workers in artisanal milling, and addressed broader environmental, social and economic challenges.

The intervention began with initial discussions to gather insights and structured consultations involving local NGOs, the Ministry of Energy, and the Energy Commission to understand the specific needs of artisanal millers. Solidaridad West Africa, a key implementing partner, led efforts to design and deploy boilers tailored to local contexts. The methodology followed a structured approach, beginning with a needs assessment and site selection. This was followed by the development and testing of new boiler designs, which were locally produced to ensure affordability and sustainability. Once the designs were finalized, new sites were constructed, including changing rooms and improved waste management systems, to create a safer and more organized working environment.

One of the key innovations was the use of waste biomass, such as chopped farm residue, as fuel for the boilers. This reduced reliance on wood fuel, improved air quality and cut processing times from between 12 and 14 hours to just 6 hours. Additionally, contaminated water—a significant by-product of oil palm processing—was treated to reduce environmental impacts. The intervention also integrated new infrastructure, such as dressing rooms, child-friendly spaces and toilet facilities, improving working conditions for women.

The participatory nature of the project was instrumental to its success. Local NGOs competed for grants to design and implement the boilers, ensuring a competitive and context-specific approach. Five NGOs benefited from the initiative, and the direct involvement of women producers ensured the solutions were responsive to their needs. Community engagement extended to training programmes that built the capacity of beneficiaries to maintain and operate the new systems. By involving women throughout the value chain, the project fostered social inclusion and equity.

The impacts of this intervention were wide-ranging. Economically, it reduced fuel costs for millers and increased productivity by halving processing times. Environmentally, it lowered emissions and reduced deforestation through decreased wood fuel consumption. Socially, the improved infrastructure enhanced safety and hygiene standards, providing facilities such as dressing rooms and child-friendly spaces, which were particularly beneficial for women. These outcomes were monitored and evaluated through knowledge assessments and technical audits.

Nonetheless, the initiative faced several challenges. Many of the existing boilers had been in operation for over 30 years, making them inefficient and prone to breakdowns. Access to spare parts and suitable repair services was limited, complicating efforts to transition to more efficient systems. The project overcame these issues by involving local manufacturing expertise in the design and production of the boilers, ensuring that spare parts and maintenance services were readily available.

4. Lessons learned

The lessons learned from the seven countries analysed under the NDC SP—Bhutan, Chile, Côte d'Ivoire, Ghana, Indonesia, Lebanon and Tunisia—provide valuable insights into overcoming challenges in financing mitigation actions. These lessons, derived from interviews, country briefs and supplementary documentation, highlight effective strategies with practical examples.

- **Inclusive stakeholder participation ensures local relevance and ownership.** Engaging diverse stakeholders strengthens the design and implementation of climate finance strategies. **Bhutan's** waste NDC mitigation action successfully involved local governments and community leaders in shaping waste management projects, fostering local ownership. Similarly, **Ghana's** renewable energy projects relied on public-private consultations, ensuring alignment with community needs and private sector expectations. While initial consultations faced challenges due to limited follow-up mechanisms, improved stakeholder mapping later streamlined coordination and strengthened implementation. In **Indonesia,** the issuance of Green Sukuk demonstrated how engaging different investor groups, including Islamic finance stakeholders, could open new avenues for sustainable financing. By leveraging its sharia-compliant framework and conducting targeted outreach, Indonesia was able to attract a diverse investor base and mobilize over $2.75 billion for renewable energy, sustainable transportation and climate resilience projects. This participatory process not only expanded funding access but also ensured alignment with societal and cultural priorities, creating a replicable model for innovative financing.

- **Effective institutional coordination requires clear roles and sustained collaboration.** Fragmented institutional structures can hinder the implementation of climate finance strategies. Countries like **Tunisia** and **Indonesia** demonstrated that establishing governance frameworks with clear roles and sustained collaboration across ministries enhances efficiency. In **Tunisia,** the development of a climate finance taxonomy clarified institutional responsibilities, enabling alignment between financial institutions and national climate priorities. Similarly, Indonesia's CCFF integrated climate budgeting processes across sectors, avoiding duplication and ensuring coherence. What worked in these cases was the early engagement of key ministries, particularly Ministries of Finance and Environment, and the creation of formal governance tools, such as taxonomies and budget tagging. Tunisia's success was also supported by stakeholder consultations to define institutional roles, while Indonesia's framework benefited from sustained technical assistance to build internal capacity. What didn't work initially in Tunisia was the lack of clear private sector engagement, which was later addressed through targeted reforms to include financial institutions in the process. These experiences demonstrate the importance of long-term institutional collaboration and clear governance structures to achieve efficiency and alignment with national climate goals.

- **Stakeholder engagement enhances ownership and sustainability.** Countries learned that meaningful engagement with stakeholders ensures that climate finance strategies align with local needs and build broad support. In **Bhutan,** involving local governments and communities in shaping the waste NDC mitigation action created local ownership of waste management solutions, increasing the likelihood of sustained success. The process benefited from consistent dialogue with local leaders, ensuring solutions were practical and tailored to on-the-ground realities. Challenges arose initially due to limited technical capacity at the local level, which was addressed through targeted training and knowledge-sharing programmes.

  In **Lebanon,** engaging private sector actors and civil society in the design of the LGIF fostered alignment with market needs, ensuring buy-in from key partners. A critical factor in Lebanon's success was the inclusion of development finance institutions early in the process, which helped identify financing gaps and tailor instruments to address investor concerns. However, initial hesitations from private stakeholders, stemming from Lebanon's economic instability, were mitigated through transparency in the facility's design and its incorporation in Luxembourg, which increased investor confidence. These examples underline that participatory processes help address context-specific challenges and increase the durability of climate finance efforts. By building trust through early and consistent engagement, and addressing capacity or confidence gaps with targeted solutions, stakeholder participation becomes a cornerstone for creating climate strategies that are both effective and sustainable.

- **Financial innovation unlocks investment but requires strong institutional capacity.** Innovative financial mechanisms, while transformative, require robust institutional frameworks to function effectively. In **Indonesia,** the issuance of the Green Sukuk demonstrated how culturally tailored financial instruments can unlock significant investment by engaging non traditional investor groups. By leveraging sharia-compliant principles and targeting Islamic finance markets, Indonesia successfully raised $2.75 billion to fund projects in renewable energy, sustainable transportation and climate resilience. This success was underpinned by a strong regulatory framework, clear project eligibility criteria and annual reporting on fund allocation and impacts, which built investor confidence and ensured transparency.

  Tunisia provides another example of financial innovation through the development of a climate finance taxonomy, which enabled financial institutions to classify and prioritize climate-aligned investments. This structured approach helped to direct resources towards low-carbon projects and facilitated greater engagement from the private sector. However, Tunisia's early efforts revealed challenges, including limited technical capacity among financial stakeholders. This was addressed through targeted capacity-building programmes that strengthened institutional understanding of climate finance tools and improved alignment with national climate priorities. Both cases highlight that, while financial innovations such as Green Sukuk and taxonomies offer transformative opportunities to mobilize resources, their success depends on strong technical expertise, regulatory clarity and institutional readiness. Building investor trust through transparency, robust monitoring and reporting frameworks is equally critical to manage risks and scale up investments effectively.

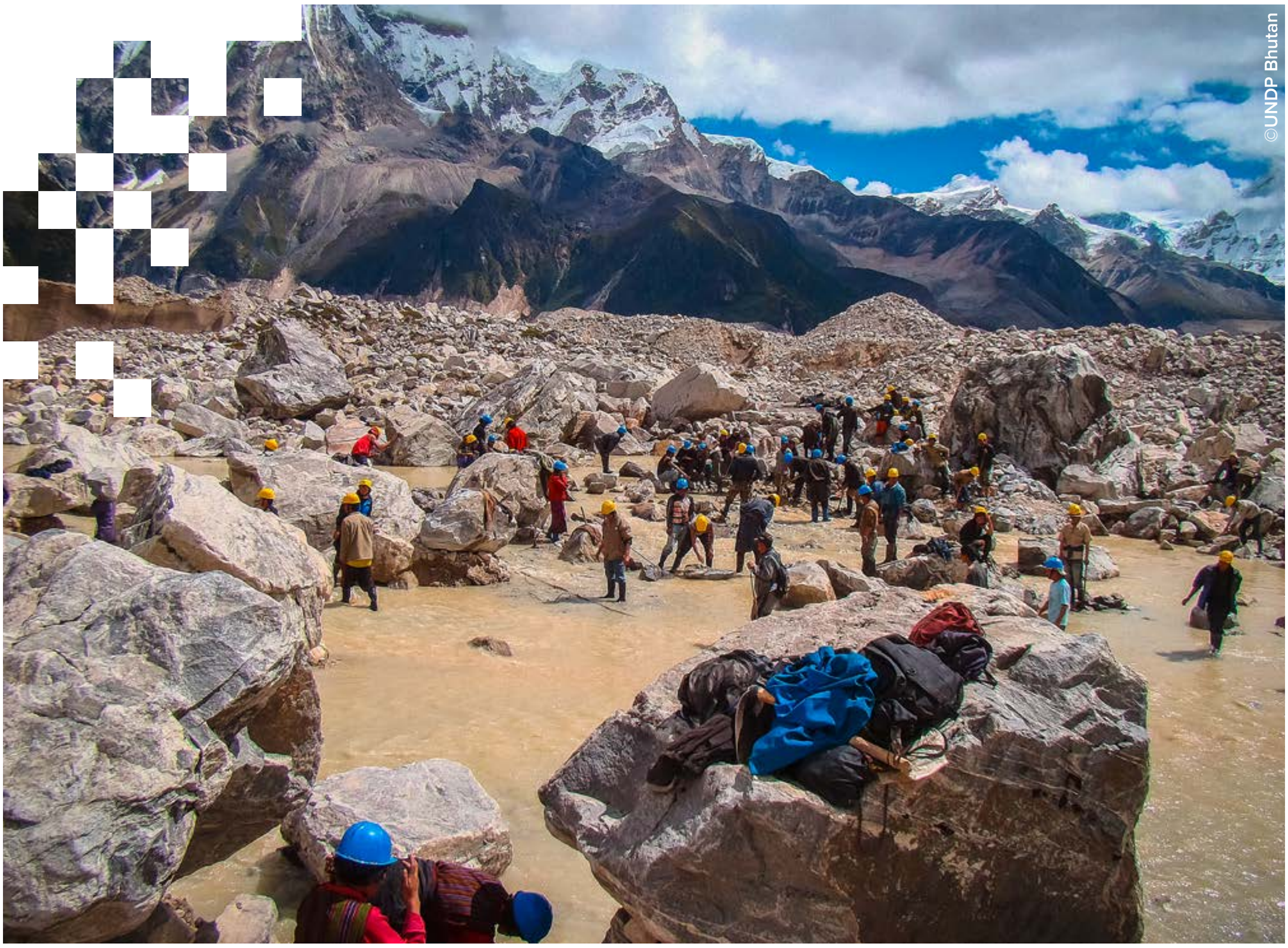
- **Comprehensive MRV systems are essential for transparency and resource mobilization.** Effective MRV systems are a cornerstone of accountable and transparent climate tracking. Financial flows and measuring the impact of climate actions are critical to maintaining stakeholder trust and attracting investment. In **Indonesia,** the implementation of robust MRV systems was integral to the success of the Green Sukuk. Annual Allocation and Impact Reports detailed how proceeds were used and measured outcomes such as GHG reductions, renewable energy capacity increases and enhanced climate resilience. These reports not only ensured transparency but also built confidence among investors, positioning Indonesia as a leader in innovative climate finance.

  These experiences underscore that robust MRV systems are not only accountability tools but also key to securing additional financing. Success depends on the strong institutional capacity to design, implement and manage MRV frameworks, as well as ongoing stakeholder collaboration to ensure data accuracy and alignment with international standards.

- **Integrating gender and equity considerations strengthens climate finance strategies.** Lessons from countries like **Bhutan** and **Lebanon** highlight the importance of embedding equity considerations into climate finance strategies. Bhutan's waste NDC mitigation action empowered women to lead community-based waste management initiatives, providing both environmental and economic benefits. While the original waste NDC mitigation action proposal was not approved by the Nationally Appropriate Mitigation Action (NAMA) Facility, its objectives remained integral to Bhutan's NDC commitments, targeting methane emissions reduction through waste segregation, composting and recycling. Supported by the NDC SP, key elements of the initiative were implemented as part of Bhutan's broader efforts to achieve climate goals while prioritizing social inclusion. What worked was the strong engagement of local governments and communities, which ensured ownership of waste management solutions. The inclusion of gender-responsive components, such as training programmes that empowered women to lead composting and waste segregation, enhanced both social and climate benefits. However, the initiative initially faced challenges in securing international funding due to stringent NAMA Facility requirements and limited capacity to develop fully bankable proposals. These challenges underscored the need for stronger technical support during project preparation to align with donor expectations and secure financing. In Lebanon, the LGIF included metrics to ensure that projects benefited women and marginalized groups, enhancing social equity alongside climate outcomes. This participatory approach also emphasized collaboration with civil society and the private sector to address financing gaps and ensure alignment with market needs.

  These examples illustrate that addressing gender and equity considerations ensures that climate finance strategies deliver inclusive benefits, strengthening public and political support. They also demonstrate the importance of combining strong stakeholder engagement with technical assistance to overcome challenges in accessing funding and implementation.

- **Tailored approaches maximize the impact of sectoral mitigation efforts.** Applying context specific solutions ensures that climate finance mechanisms are effective and relevant. **Bhutan's** waste NDC mitigation action targeted methane emissions through composting and methane-capture technologies, tailored to its demographic and geographic realities. What worked was the careful alignment of technologies with Bhutan's local context, ensuring feasibility and community acceptance. However, initial implementation faced challenges due to limited technical capacity and financing, highlighting the need for stronger preparatory support to overcome these barriers.



  Ghana's renewable energy efforts focused on off-grid solutions for underserved areas, improving energy access while reducing emissions. The success of Ghana's approach lay in its focus on decentralized energy systems, which effectively addressed the needs of rural and underserved communities. Nevertheless, scaling up these solutions required overcoming financial constraints and improving collaboration with private sector stakeholders to ensure sustainability. These experiences show the importance of customizing strategies to address the specific challenges of priority sectors. By combining localized solutions with targeted capacity-building and enhanced financial planning, countries can maximize the effectiveness of sectoral mitigation efforts.

- **Capacity-building drives access to finance and project success.** Accessing international finance mechanisms requires technical expertise and readiness. **Tunisia** invested in training programmes for government officials, improving their ability to prepare funding proposals and meet donor requirements. What worked in Tunisia was the targeted nature of the training, which focused on aligning proposals with international standards and building confidence among government agencies. However, initial challenges arose due to limited institutional coordination, which required additional efforts to streamline processes across ministries. **Lebanon** focused on capacity-building for financial institutions, equipping them to design green financial products and assess climate risks. This approach successfully enabled financial institutions to respond to market needs and develop innovative financial solutions. A key challenge, however, was overcoming early reluctance from institutions unfamiliar with climate finance principles, which was addressed through tailored workshops and continuous technical support.

Indonesia used capacity-building to manage the deployment of its Green Sukuk effectively, ensuring alignment with domestic policies and international standards. Indonesia's success lay in its ability to combine capacity-building efforts with transparent reporting systems, which built investor confidence and ensured compliance with global benchmarks. Nevertheless, scaling up the Green Sukuk required addressing knowledge gaps across local implementing agencies, which was tackled through sustained technical assistance. These cases highlight the importance of sustained investment in capacity-building to enable effective implementation of climate finance strategies. By addressing technical knowledge gaps, fostering institutional coordination and providing tailored support to key stakeholders, countries can strengthen their readiness to access and deploy climate finance successfully.

- **Aligning climate finance with development goals secures co-benefits and political support.** Countries found that linking climate finance with development goals amplified socio-economic impacts and fostered political buy-in. **Tunisia's** energy-related strategies integrated poverty reduction and economic development into project plans, ensuring alignment with broader national objectives. What worked in Tunisia was the deliberate integration of energy strategies into national development frameworks, which strengthened political support and ensured that projects addressed pressing socio-economic challenges. However, initial efforts faced challenges in mobilizing sufficient private sector interest, requiring additional incentives and policy reforms to attract investments.

  Similarly, **Indonesia's** solar energy projects, funded through Green Sukuk, improved rural energy access while achieving emissions reductions. The success of Indonesia's approach stemmed from its ability to align renewable energy projects with community-development priorities, such as improving rural livelihoods and energy equity. At the same time, Indonesia faced challenges in scaling these projects due to logistical barriers in remote areas, which were addressed through targeted capacity-building and stakeholder coordination. These examples demonstrate the value of integrating climate finance with development priorities to achieve multidimensional impacts. By aligning climate initiatives with poverty reduction, energy access and economic development goals, countries can maximize co-benefits, enhance political buy-in and ensure long-term project sustainability.

- **Embedding climate finance into public financial systems supports long-term sustainability.** Public financial systems play a crucial role in aligning financial flows with national climate priorities. Integrating climate finance into budgeting processes strengthens governance, improves transparency and ensures that resources are systematically prioritized for mitigation and adaptation actions. **Chile's** Climate Fiscal Framework institutionalized CBT and expenditure tracking, enabling the government to identify and align climate-related investments with its carbon neutrality targets. This approach enhanced transparency and strengthened long-term political commitment. Similarly, **Indonesia** leveraged CBT to systematically track public expenditures for mitigation and adaptation projects, ensuring alignment with its NDC goals. By embedding climate finance into public systems, both countries improved resource allocation and built trust with external financiers, showcasing the importance of institutionalizing these practices to achieve sustainable outcomes.

- **Blended finance models are essential for mobilizing private investments in sectors that face high financial risks.** These models combine public and private funding to reduce investment barriers and attract diverse capital for climate initiatives. In **Lebanon,** the structure of the LGIF allows the use of concessional loans, guarantees and equity to de-risk climate positive projects. By basing the facility in Luxembourg, Lebanon was able to bypass domestic financial instability and leverage international markets to attract private sector participation. In **Côte d'Ivoire,** blended finance approaches were explored to reduce investment risks in the renewable energy sector. A de-risking study identified financial barriers and led to the development of an ESG bond and market-based mechanisms to attract private sector investment. Both cases highlight that blended finance mechanisms can unlock private sector funding, foster innovation and support the achievement of NDC targets.

5. Conclusions

The analysis presented in this document underscores the critical role of innovative financial strategies in advancing mitigation actions under NDCs to meet the objectives of the Paris Agreement. **Finance is cross-sectoral, with critical aspects linked to governance, inclusivity and systemic planning.** By exploring diverse strategies across multiple countries, the study demonstrates how tailored financial solutions can drive progress towards low-carbon development pathways. These approaches not only bridge gaps in financial resources but also enhance the integration of climate goals into broader national development agendas.

The document highlights recurring themes such as the importance of aligning climate finance with national development priorities, fostering institutional capacity and leveraging blended finance models to mobilize private sector investment. Additionally, it emphasizes the need for inclusive strategies that integrate gender-responsive and equity considerations to ensure the broad social sustainability of mitigation actions. These insights collectively underline the necessity of comprehensive planning that harmonizes technical, financial and governance dimensions.

In summary, the scope of the analysis covered by the document reinforces the complexity and interconnectedness of climate finance, governance and implementation. While methodological constraints limit the depth of specific insights, the broader findings contribute significantly to the knowledge base on how systemic and innovative approaches can support countries in advancing their climate ambitions. These lessons provide a foundation for scaling up climate finance strategies that are adaptive, inclusive and aligned with the global objectives of the Paris Agreement.

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