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COP30 and Global Climate Action

Sustainability Research Paper

The Al-Attiyah Foundation

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The 2025 United Nations Climate Change Conference (COP30) in Belém concluded with outcomes that underscored a structural shift in climate governance: non-state actors such as cities, businesses, and civil society brought forward implementation pipelines while national government commitments lagged. The conference pledged a tripling of adaptation finance by 2035, the Belém Mechanism for Just Global Transition and the Global Implementation Accelerator targeting methane reduction, nature-based solutions and renewable energy acceleration. Yet only 64 of 195 parties submitted updated Nationally Determined Contributions (NDCs) by October 2025, leaving current pledges on a trajectory toward 2.3–2.8°C warming by 2100—far above the 1.5°C Paris threshold. Finance mobilisation targets of USD 1.3 trillion annually by 2035 require de-risking instruments to convert pledges into bankable projects that address extreme heat and urban resilience.

SUSTAINABILITY RESEARCH PAPER

This research paper is part of a 12-month series published by the Al-Attiyah Foundation every year. Each in-depth research paper focuses on a current sustainability topic that is of interest to the Foundation's members and partners. The 12 technical papers are distributed to members, partners, and universities, as well as made available on the Foundation's website.

- Non-state actors—cities, businesses and civil society—emerged as the primary delivery force at COP30 as national government ambition stalled, with the Coalition for High Ambition Multilevel Partnerships (CHAMP) demonstrating impact through significantly higher city-specific content in revised NDCs.
- Climate finance commitments reached USD 1.3 trillion annually by 2035, yet less than 20% of the 500 largest developing-country cities possess sufficient creditworthiness to access commercial finance independently, making project preparation capacity and municipal readiness a binding constraint.
- Adaptation finance for urban projects requires de-risking through guarantees, insurance products and blended finance structures that deploy concessional public finance as catalytic first-loss layers, mobilising private institutional investment rather than public capital alone.
- Extreme heat adaptation will become a key post-COP30 policy priority through the United Nations Environment Programme's (UNEP) Beat the Heat initiative, which translates previous pledges into city-level action across 180 municipalities. Adaptation measures include cooling demand management, building efficiency codes and urban greening to reduce peak electricity loads.
- The COP30 final text referenced carbon markets under Article 6, with parties confirming the Clean Development Mechanism (CDM) closure by end-2026 and rejecting proposals to reopen Article 6.4 negotiations. Fossil fuel transition roadmap language was omitted despite support from over 80 countries. Voluntary initiatives will drive sectoral decarbonisation outside the formal UN process.
- COP30's Enhanced Transparency Framework exposed capacity gaps, with 60–70% of developing countries lacking reporting infrastructure. Country platforms like Egypt's Country Platform for the Nexus of Water, Food and Energy (NWFE) and Morocco's country platform for climate finance and implementation demonstrate how aggregating municipal projects addresses creditworthiness constraints.
- Post-COP30, Middle East and North Africa (MENA) hydrocarbon producers must balance oil and gas revenues, which represent 40–90% of government budgets, with domestic decarbonisation. At the same time, carbon border adjustment mechanisms will require product-level carbon accounting across export value chains.

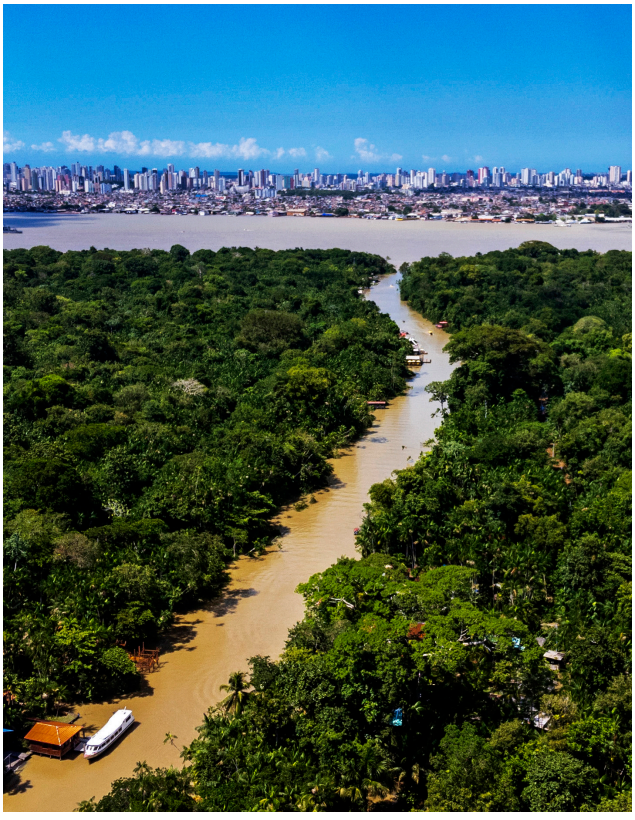


Table 1: Post COP30 Submissions

POST-COP30 SUBMISSIONS

Surge in submissions demonstrates engagement, yet collective ambition gap persists

	Details
NDCs submitted (December 2025)	129 countries (71% of global emissions)
Reduction required by 2030	43% below 2019 levels
Reduction required by 2035	60% below 2019 levels
Ambition gap (shortfall to 1.5°C)	~28 $GtCO_2$-equivalent

Data reflects December 2025 submissions; UNEP synthesis based on 64 NDCs as of 30 September 2025.

COP30 concluded on 21 November 2025 with the "Global Mutirão" package—a collective mobilisation framework that signals that, while the Paris Agreement mechanism remains intact, accelerated implementation across all sectors is now critical. Brazil's presidency delivered tangible outcomes despite geopolitical tensions, with 194 nations reaffirming multilateral commitment even as the US withdrawal took effect. The package introduced two major instruments: the Belém Mission to 1.5°C and the Global Implementation Accelerator. These mechanisms mark a structural shift in international climate governance from aspirational target-setting toward practical execution, establishing accountability frameworks and progress-tracking systems that will shape corporate compliance requirements and capital allocation decisions through 2035.[1]

Despite the advances, ambition gaps remain acute. By December 2025, 129 countries (representing approximately 71% of global emissions) had submitted updated NDCs. Yet, these commitments still place the world on a 2.3–2.8°C warming trajectory by 2100 rather than the Paris-aligned 1.5°C threshold. The UNEP synthesis report analysed the initial 64 NDCs submitted by 30 September 2025, confirming that whilst temperature projections have improved from 3.0–3.5°C since 2015—evidence that climate policy has positively influenced the trajectory—the expanded set of 129 NDCs is projected to deliver approximately 12% emissions reductions below 2019 levels by 2035. This remains well below the 43% reduction by 2030 and 60% by 2035 that is necessary to limit warming to 1.5°C.

The surge in submissions between October and December 2025 demonstrates accelerated engagement. However, the collective ambition gap persists, with an estimated 28 gigatonnes CO_2-equivalent shortfall to 1.5°C pathways, creating material financial risk for corporates and asset managers whose transition strategies assume policy alignment with Paris targets, requiring scenario analysis that incorporates higher warming pathways and a greater emphasis on physical risk assessment across portfolios and supply chains[2,3].

For the first time, the United Nations Framework Convention on Climate Change (UNFCCC) negotiated text explicitly acknowledged that a 1.5°C overshoot is now likely, emphasising the need to limit both its extent and duration. The decision warns that "the carbon budget for limiting warming to 1.5°C is small and rapidly depleting," underscoring implications for adaptation finance allocation, loss and damage liability frameworks and shorter transition timelines. Temporary overshoots will intensify physical impacts even if temperatures decline later in the century through carbon removal deployment and sustained emissions reductions. This recognition introduces new complexity for policymakers and businesses, as overshoot scenarios accelerate adaptation needs and litigation risks while increasing pressure for breakthrough technologies[1].

A backdrop of geopolitical fragmentation was evident throughout COP30, despite broad multilateral participation. Although the EU confirmed a 66.25–72.5% emissions reduction target by 2035 to underpin its 90% by 2040 goal, major emitters such as Russia and China continue to pursue divergent policy pathways. Critically, the absence of a fossil fuel transition roadmap from the COP30 final text—despite support from over 80 countries—signals that voluntary initiatives rather than binding multilateral commitments will drive sectoral decarbonisation through 2030. This shifts attention to agendas and coalitions that can mobilise city and corporate pipelines faster than official policy progress. The context creates regulatory arbitrage opportunities and compliance complexity for multinational energy companies and financial institutions operating across jurisdictions with materially different climate policies. Enhanced scenario planning, jurisdiction-specific risk assessment and dynamic capital allocation strategies will be essential for navigating this fragmented landscape[3].

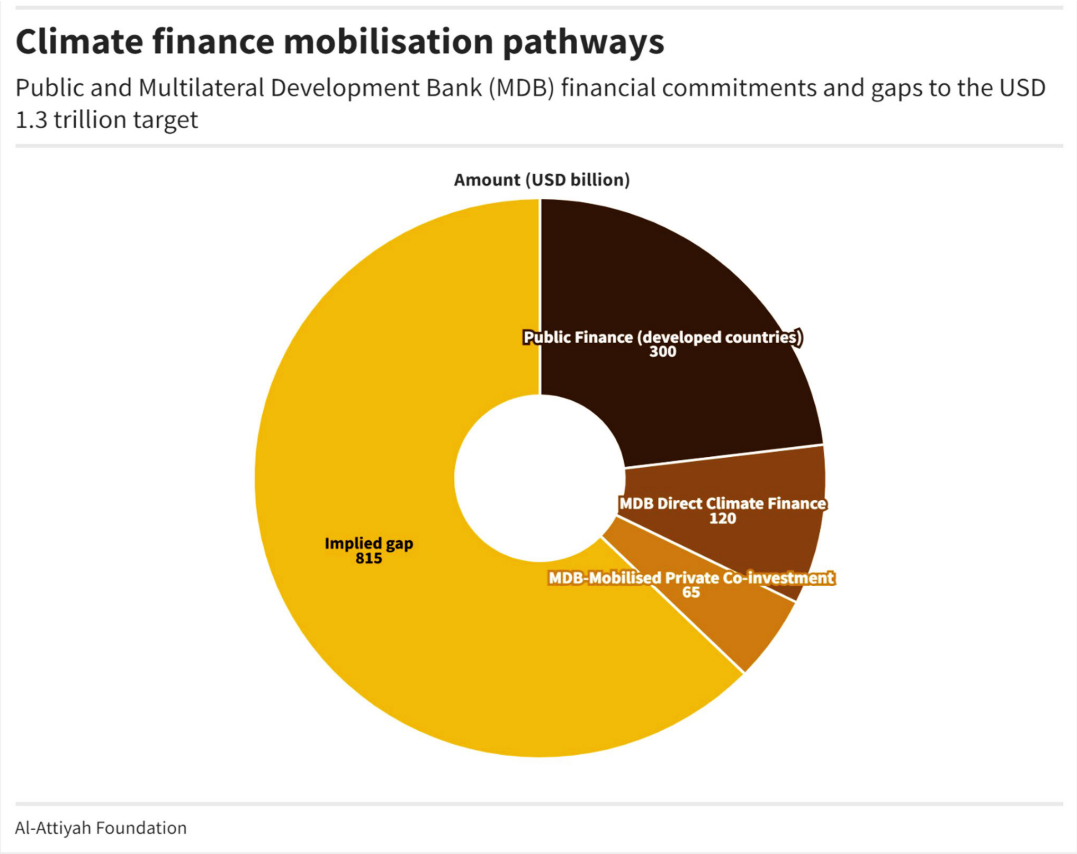
COP30 confirmed the USD 1.3 trillion annual climate finance mobilisation target by 2035, anchored in the Baku-to-Belém Roadmap developed through 227 submissions from governments and multilateral institutions. The roadmap operationalises the New Collective Quantified Goal (NCQG) agreed at COP29, translating an aspiration into an actionable strategy through five fronts (the so-called "5Rs"):

1. Replenishing grants, concessional finance and low-cost capital
2. Rebalancing fiscal space and debt sustainability
3. Rechannelling transformative private finance
4. Redirecting climate portfolios strategically
5. Resourcing by improving transparency and access

Delivering on these priorities will likely depend less on capital availability and more on project preparation, procurement and delivery capacity, especially in cities where readiness and municipal balance sheets have constrained investment pipelines1. A post-COP30 upside is a sharper focus on bankable urban adaptation projects, with Multilateral Development Banks (MDBs) and city networks increasingly treating pipeline development as the binding constraint.

The decision also called for a tripling of adaptation finance by 2035, though without specifying a baseline year—likely 2025, given the COP26 pledge to double adaptation finance by then. The Green Climate Fund (GCF) positioned itself as a key source of finance, building on record programming volumes in 2025.

Figure 1: Climate Finance Mobilisation Pathways



However, the absence of grant-specific language marks a retreat from the goal of developing country proposals for USD 120 billion annually in grant-based adaptation finance by 2030. Developed countries resisted binding grant proportions, opting for a broader "tripling" pledge. This ambiguity over the type of finance—whether concessional loans, market-rate lending or grants—complicates corporate investment planning and requires clarity before baseline measurement and progress tracking become viable[5].

The activities of the Fund for Responding to Loss and Damage (FRLD) have been supported through World Bank-hosted arrangements and replenishment cycles. Still, the Fund remains severely undercapitalised, with USD 814 million in pledges against annual needs exceeding USD 400 billion.

Without substantial new pledges, FRLD risks depleting resources by 2027. At the same time, the absence of direct community access modalities limits the fund's ability to reach frontline populations facing irreversible impacts, such as sea-level rise and desertification, in small island and least developed states[6].

COP30 launched a two-year work programme on Article 9.1 obligations to clarify the responsibilities of developed countries under the Paris Agreement. Whereas two key negotiating blocs, the Like-Minded Developing Countries and the Arab Group, sought a three-year programme, a compromise was reached to deliver a binding action plan by 2027. Its outcome will shape the post-2035 climate finance architecture and sovereign fiscal planning, with implications for MENA economies as both recipients of adaptation finance and potential contributors[8].

Carbon Markets and Mitigation

COP30 advanced Article 6.2 implementation by clarifying reporting guidance and review processes for cooperative approaches involving internationally transferred mitigation outcomes (ITMOs). Parties must submit biennial transparency reports detailing authorised transactions, corresponding adjustments and integrity safeguards. The Centralized Accounting and Reporting Platform (CARP), established at COP29, provides infrastructure for ITMO transfers via the Agreement Electronic Format (AEF), though harmonised monitoring, reporting and verification (MRV) guidelines remain absent. Bilateral agreements—such as Singapore's deals with nine host countries, including Bhutan, Chile and Ghana—create precedents for baseline assessments and co-benefit documentation. However, Article 6.2's decentralised nature allows flexibility but risks regulatory fragmentation as parties adopt divergent authorisation and adjustment procedures without interoperability standards[9].

The Paris Agreement Crediting Mechanism (PACM) under Article 6.4 became operational through COP30's endorsement of new standards covering baselines, additionality, leakage and non-permanence. The Supervisory Body approved its first methodology—A6.4-AMM-001 for landfill gas—at its October 2025 meeting, marking the first Paris-aligned crediting application. The methodology includes an investment analysis tool that requires developers to demonstrate financial non-viability in the absence of credit revenue, addressing additionality concerns that plagued the CDM. Renewable energy and "cookstove" methodologies are expected in 2026, enabling registration of activities representing 70% of historical CDM project types under stricter standards and enhanced transparency.

COP30 confirmed the closure of the CDM by end-2026, with the disconnection of the associated registry by July 2027. The CDM Trust Fund will transfer USD 27 million to PACM as a loan to support initial operations, which will be repaid and redirected to the Adaptation Fund. The transition deadline for converting CDM projects and credits to PACM was extended to June 2026.

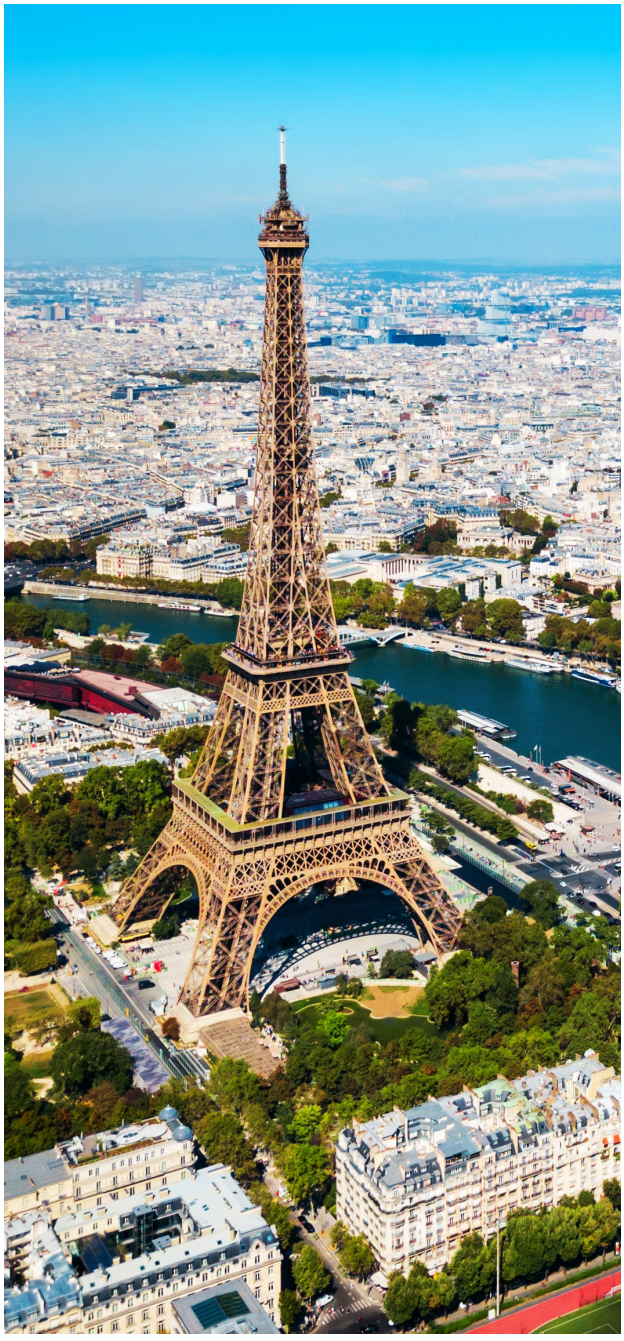


Table 2: Roadmap for Transition of Credits

Roadmap for transition of credits

Key milestones over the next two years

Date	Milestone	Status	Details
October 2025	Paris Agreement Crediting Mechanism (PACM) first methodology approved	Completed	A6.4-AMM-001 for landfill gas
November 2025	Fossil fuel roadmap omitted from COP30	Policy gap	Despite 80+ countries support (Germany, United Kingdom, Kenya)
June 2026	Clean Development Mechanism (CDM) conversion deadline	Critical	Convert projects/credits to PACM standards
End 2026	CDM closure	Phase-out	CDM ends operations
July 2027	CDM registry disconnection	Completion	Complete separation from United Nations Framework Convention on Climate Change (UNFCCC) infrastructure

CDM deadlines matter because they require all remaining projects and credits to either transition quickly into the more stringent PACM or lose their eligibility. This enables policymakers to implement Article 6.4 governance in support of Nationally Determined Contribution (NDC) targets while compelling corporates to convert legacy credit portfolios or accept stranded assets.

Still, conversion parameters remain undefined; quality thresholds and PACM eligibility create uncertainty for developers holding large CDM inventories. The phased closure strategy balances continuity with an accelerated transition to higher-integrity mechanisms that address CDM criticisms of weak additionality and limited sustainable development benefits.

COP30's final text omitted a fossil fuel transition roadmap despite support from over 80 countries, including Germany, the UK and Kenya. Earlier drafts referenced the UAE Consensus from COP28, which called for "transitioning away from fossil fuels," but opposition from major hydrocarbon producers led to its removal. In response, Brazil announced voluntary presidency-led roadmaps on fossil fuel transition and deforestation for COP32 in Ethiopia, creating a non-binding process outside UNFCCC negotiations.

This signals that mandatory sectoral decarbonisation remains politically unattainable. Therefore, corporations and financial institutions will need to navigate divergent national fossil fuel policies in the absence of multilateral coordination on phase-down timelines or subsidy elimination[10].

The Global Implementation Accelerator, launched under the Global Mutirão package, seeks to close the NDC ambition gap and implement the UAE Consensus through thematic working groups that mobilise governments, corporations and civil society. Its architecture coordinates 30 "Activation Groups" across sectors, aligning 300 initiatives from previous COPs with dedicated secretariats for progress tracking. While addressing criticism of weak delivery infrastructure, questions persist about accountability and enforcement and whether the accelerator drives measurable emissions reductions or remains aspirational.

Sectoral Pathways and Implementation

The energy transition is now irreversible, with global investment in clean energy technologies—renewables, electric vehicles, nuclear power and grid infrastructure—reaching USD 2.2 trillion in 2025, double that of fossil fuels. IRENA reports that 91% of new renewable projects commissioned in 2024 delivered electricity at lower cost than fossil alternatives, led by solar PV additions of 452 GW, followed by wind (113 GW) and hydropower. Yet grid constraints hinder the absorption of variable renewables, with connection delays of 2-3 years in major markets, including the US, the EU and India. Transmission bottlenecks, transformer shortages and permitting backlogs cause losses, requiring regulatory reforms to accelerate interconnector approvals, deploy battery storage and smart grids and enable demand-side flexibility to meet the UAE Consensus target of tripling renewable capacity to 11,000 GW by 2030[11].

Methane reduction remains a priority under the Global Implementation Accelerator, despite slow progress on the COP26 Global Methane Pledge. Over 150 signatories committed to 30% cuts by 2030, yet atmospheric methane hit 1,923 ppb in 2023—the highest in 800,000 years. Anthropogenic emissions rose 20% over two decades, driven by fossil fuel venting, agriculture and waste decomposition. Municipal leadership has offered practical pathways as non-state actors have filled gaps in national delivery. Still, scaling has required investable pipelines, project preparation facilities, standardised procurement and credit enhancement that allows institutional investors to price revenues and risks.

The "Belém 4x pledge", to quadruple sustainable fuel production and use by 2035, has backing from 27 countries, including Brazil, Japan and the US and targets aviation's 2–3% share of global CO_2 emissions.

Table 3: Sectoral Pathways and Implementation

Sectoral pathways and implementation

Energy transition, grid modernisation and technology transfer priorities (MENA focus)

Aspect	Significance for policymakers	Significance for corporates
Energy transition scale	USD 2.2 trn clean energy investment; solar >2,000 kWh/m²/year potential	Renewable cost competitiveness could drive diversification from hydrocarbon revenues
Grid infrastructure constraints	2-3 year connection delays likelly to require regulatory reforms, grid upgrades	Battery storage and smart grids could enable peak cooling demand
Methane reduction priority	Oil/gas venting contributes up to 20% of anthropogenic methane emissions rise	Upstream emissions monitoring critical for export market access
Sustainable Aviation Fuel (SAF)	SAF scale-up to 20-25 bn litres will require feedstock diversification	Regional refinery conversion opportunities could align with decarbonisation pathways
Technology transfer gaps	Technology Implementation Program (TIP), with USD 50-100M budget, is insufficient for regional capacity building	South-South cooperation could overcome North-South dependency, enabling green hydrogen

Source: COP30 and Al-Attiyah Foundation.

Sustainable aviation fuel (SAF) accounts for less than 1% of jet fuel, at 0.5 billion litres annually and will need to scale up to 20–25 billion litres by 2035. Production costs of USD 2–4 per litre must approach jet fuel prices (USD 0.60–0.80). The EU's ReFuelEU Aviation regulation mandates 6% SAF blending by 2030, rising to 70% by 2050, supported by EUR 2.9 billion in STIP funding, including EUR 153 million for synthetic SAF projects12.

The Tropical Forests Forever Facility (TFFF), endorsed by 53 countries, pledges USD 5.5 billion over a decade to fund verified reductions in deforestation, complementing emerging common principles for tracking nature finance across MDBs.

Priority geographies include Brazil, Indonesia and the DRC, protecting 40% of remaining tropical forests across 70+ nations[13].

Finally, COP30 introduced the Technology Implementation Program (TIP) to strengthen technology transfer under Article 10, with funding from the Global Environment Facility (GEF) and Green Climate Fund (GCF). TIP aims to integrate technology priorities into national policies and build capacity for project preparation, though current budgets of USD 50–100 million annually remain far below needs[14].

In the MENA region, hydrocarbon producers face a challenge to sustain oil and gas export revenues for fiscal stability. About 83% of MENA populations experience extreme water stress, with freshwater supplies—over 80% of which are consumed by irrigation—vulnerable to droughts that can deplete reserves and force service suspensions. Rising temperatures have amplified cooling loads and peak electricity stress, making efficiency, building standards, district cooling optimisation and grid investment priorities and worker protection. Gulf Cooperation Council (GCC) states, however, possess exceptional solar resources, enabling diversification strategies balancing energy security for importers with just transition planning for hydrocarbon workforces and NDC-compliant domestic emissions reductions. Country- and sector-level platforms that aggregate projects into investable pipelines have become a practical bridge between national ambition and city-level delivery, including examples in Egypt and Morocco.

Qatar's integrated climate governance offers a model for hydrocarbon economies reconciling development and climate goals. Its 2024–2030 strategy targets a 25% emission cut by 2030, the restoration of 30% of impacted natural resources and the protection of 30% of coastal areas. Climate considerations span major infrastructure planning, economic diversification under Qatar National Vision 2030 and projects under the sovereign wealth fund. Sectoral roadmaps include carbon capture and storage (CCS) pilots at the North Field LNG field, renewable energy targets of 5 GW by 2030, supplying 20% of electricity and green building codes—while maintaining hydrocarbon export commitments to Asian and European markets[15].

Table 4: Carbon Border Adjustment Mechanism (CBAM) Exposure in the MENA region

Carbon Border Adjustment Mechanism (CBAM) exposure in the MENA region

Trade links to the EU, covered sectors and transition pressures for MENA exporters

Country / group	EU trade exposure (directional)	CBAM-relevant sectors	Climate / transition feature
Egypt	Significant exports to EU	Cement, fertilisers, steel	Country platform aggregates green pipelines
Morocco	Significant exports to EU	Cement, fertilisers, steel	Country platform bridges NDCs and projects
Gulf Cooperation Council (GCC)	EU is major trade partner	Aluminium, steel, fertilisers, hydrogen	Exceptional solar; diversification and hydrogen exports
Hydrocarbon MENA producers	High fossil exports, indirect CBAM risk	Fuel, basic metals, chemicals	Fiscal dependence; need low-carbon value chains
MENA region overall	EU main trading partner for many	Cement, iron/steel, aluminium, fertilisers, electricity, hydrogen	83% face water stress; high cooling and grid needs

Source: Al-Attiyah Foundation and EU Carbon Border Adjustment Mechanism documentation.

Small island developing states (SIDS) and the least developed countries (LDCs) face disproportionate climate risks despite contributing less than 1% of cumulative emissions. Sea-level rise threatens the territorial integrity of low-lying nations such as Tuvalu (max elevation 4.6 m) and the Maldives (2.4 m), while Kiribati's atolls average just 2 m elevation. LDCs in sub-Saharan Africa endure droughts that affect 500 million people reliant on rain-fed agriculture, cyclone losses of USD 10–20 billion annually in Bangladesh and Mozambique and severe fiscal constraints. Ethiopia's selection as COP32 host elevates African priorities: adaptation finance beyond the incomplete USD 100 billion pledge; loss and damage fund capitalisation beyond USD 814 million; technology transfer for climate-resilient agriculture; and debt sustainability mechanisms that enable climate investment without default risk.

The EU submitted its updated NDC ahead of COP30, building toward climate neutrality by 2050—the most ambitious binding target for a major economy. The achievement of this goal requires near-complete decarbonisation of the power sector by 2035, internal combustion engine (ICE)-vehicle phase-out by 2035, renovation of 35 million buildings by 2030 and industry transformation through the Carbon Border Adjustment Mechanism (CBAM). This has intensified a trade–climate collision for exporters, including those from the MENA region, pushing product-level carbon accounting concerns to the fore of corporate planning[16].

Board-level climate focus and competency are now baseline expectationS for investors post-COP30. Institutional investors, including the Investor Group on Climate Change (IGCC), stress that strong climate governance is a strategic imperative for managing transition risks and maintaining confidence. IGCC's 2025 Climate Capability Principles outline four pillars: board composition that ensures climate expertise through recruitment or training; committee structures with delegated authority over climate strategy; succession planning that embeds climate skills; and the integration of climate considerations into enterprise risk management. A 2025 study found 49% of EU companies rank climate risk among their top 10 concerns, while shareholder resolutions increasingly demand board-level expertise. Leading practice links executive pay to science-based targets verified by third-party assurance, embeds TCFD-aligned scenario analysis into planning and capital allocation and addresses litigation risks[18].

The Coalition to Grow Carbon Markets, launched at COP30 and co-chaired by Kenya, Singapore and the UK, signals a preference for high-integrity credits that address residual emissions. Yet reputational risks from low-quality credits have increased, requiring procurement frameworks that prioritise Article 6.4 Paris Agreement Crediting Mechanism (PACM) credits, Integrity Council for the Voluntary Carbon Market (ICVCM) Core Carbon Principles, and programmes based on the principles of Reducing Emissions from Deforestation and Forest Degradation (REDD+). Enforcement is tightening: the UK Advertising Standards Authority (ASA) bans unqualified "carbon neutral" claims and the EU Green Claims Directive prohibits terms like "net zero" unless substantiated. Corporate claims must disclose full-value-chain decarbonisation and time-bound net-zero commitments validated by the Science Based Targets initiative (SBTi). Parallel advertising standards in Australia, the UK and the EU create global compliance requirements.[21].

Figure 2: Disinformation action at COP30

Risk Scenarios and Accountability

Physical climate risks intensify under the 2.3–2.8°C warming trajectory projected under current NDCs. The UNEP's November 2025 report warns that current policies put the world on track for 2.8°C warming, while full implementation of NDCs would limit warming to 2.3–2.5°C. Chronic stresses include sea-level rise of 0.3–0.6 m by 2100, water stress affecting up to 5 billion people by 2050 and declines in agricultural yields of 10–25%. Acute shocks encompass stronger tropical cyclones with 10–15% more precipitation, compound drought-heatwave events and are projected to cause between USD 1–2 trillion in infrastructure damage annually by 2050.

Extreme heat has become a priority adaptation theme because it can be packaged into bankable infrastructure—cooling demand management, building retrofits and codes, shading and urban greening and grid resilience.

Transition risks accelerate as policies target 43% emissions cuts by 2030 for 1.5°C pathways, creating stranded asset exposures. The Massachusetts Institute of Technology (MIT) estimates the net present value of untapped fossil fuel output through 2050 at USD 22–31 trillion, while stranded coal assets could reach USD 1.3–2.3 trillion. A 2024 study warns that continued carbon-intensive investment could strand USD 557 trillion in produced and human capital by 2050.

Nevertheless, renewable energy cost competitiveness—solar and wind are now 30–50% cheaper than new fossil-based sources—is improving despite policy backtracking. ICE vehicle bans across more than 20 jurisdictions by 2035 are likely to require a massive global redeployment of capital.

Climate stress tests by central banks identify utilities, oil and gas and financial institutions as systemically exposed, requiring enhanced capital buffers22. TCFD-aligned scenario analysis frameworks adopted by the ISSB and the CSRD standardise risk assessment across Paris-aligned (1.5–2°C) and higher-warming (3°C+) pathways over short, medium and long-term horizons. Yet adoption remains limited: only 44% of companies disclose against five of 11 TCFD recommendations and only 2–3% meet all of them[23].

To prevent climate disinformation from undermining its policy ambitions, COP30 adopted a declaration on information integrity, championed by UN Secretary-General António Guterres. Commitments include safeguarding environmental journalists, funding research on disinformation and promoting evidence-based access. Modern tactics shift from denial to delay strategies, lobbying against regulation while publicly endorsing climate goals. Regulatory responses include the EU Green Claims Directive, which bans unsubstantiated terms such as "net zero," and parallel enforcement in Australia, the UK and Canada. Investors increasingly assess corporate political spending transparency to mitigate reputational and regulatory risks[24].

17 IMPLEMENTATION AND COOPERATION

The 2025 cycle for third generation nationally determined contributions (NDC 3.0) faced major delays, with only 13 of 195 Paris Agreement parties submitting updates by the original February 2025 deadline, prompting the UNFCCC Secretariat to extend the window to September. This slow pace reflects implementation fatigue despite current pledges placing the world on a 2.5–2.8°C trajectory—far above the 1.5°C Paris Agreement limit. NDC 3.0 submissions require greater granularity than previous cycles including economy-wide absolute emissions targets for 2035, sectoral pathways for power, transport, buildings, industry and agriculture aligned with 1.5°C scenarios, interim milestones at five-year intervals, quantified adaptation components and implementation roadmaps detailing policy instruments such as carbon pricing, regulatory standards and subsidy reform.

NDCs must include clear implementation plans to transform political promises into measurable progress, addressing critiques that NDC 2.0 lacked methodological detail for verification and comparability[25].

Adaptation moved to the core of development planning under COP30's Mission Adaptation agenda, with the Belém Package committing to triple adaptation finance by 2035 and integrating resilience into national adaptation plans (NAPs), development strategies and infrastructure pipelines. Between January 2023 and November 2024, 20 countries—including Argentina, Bangladesh, Canada and Morocco—submitted NAPs, though most remain in early implementation stages with weak monitoring and evaluation systems due to resource gaps. The Global Center on Adaptation calls for NAPs to become operational blueprints with full costing and tracking, while UNFCCC guidance highlights enabling conditions: political commitment, institutional frameworks, climate impact knowledge and finance mobilisation.

Furthermore, the Coalition of High Ambition Multilevel Partnerships (CHAMP) has strengthened national–subnational coordination. It is increasingly being treated as a pipeline signal, reflected in deeper city-level content in some updated NDCs.

South-South cooperation is gaining traction as an alternative to North-South models, enabling technology transfer and capacity building among developing countries. The International Solar Alliance's "Towards 1000" strategy aims to mobilise USD 1 trillion by 2030 to achieve 1,000 GW of solar capacity, providing energy access to 1 billion people across more than 120 member states. Additional partnerships include Brazil-Africa agricultural technology transfer, China's renewable manufacturing collaborations with Southeast Asia and Africa and triangular arrangements in which developed countries provide finance while emerging economies supply technical expertise. These models overcome intellectual property barriers and high costs of patented technologies, fostering regional hubs that support neighbouring countries through shared language and development contexts [26].

The Enhanced Transparency Framework (ETF) under Article 13 mandates biennial transparency reports (BTRs) that detail emissions inventories, progress toward NDC targets, climate finance flows and adaptation actions. The first BTRs were due by 31 December 2024, though delays stemmed from the delayed release of reporting tools and capacity constraints. The Capacity-building Initiative for Transparency (CBIT) has programmed USD 168 million across 100 projects to support MRV systems and staff training, but 60–70% of developing countries still lack institutional infrastructure and technical expertise.

Scaling CBIT to USD 500 million annually is essential to meet transparency obligations underpinning trust and accountability in the multilateral climate regime[27].

Priorities for Action

MENA hydrocarbon producers face unique challenges reconciling energy transition imperatives with sovereign interests. Gulf Cooperation Council (GCC) states derive 40–90% of government revenues from oil and gas, with hydrocarbons contributing around 40% of GDP and half of recent growth. At the same time, Algeria, Libya and Iraq maintain similar fiscal dependencies. These nations must balance energy security for Asia-Pacific importers sourcing 60–70% of oil from MENA, just transition planning for 2–5 million direct hydrocarbon jobs and 20–30 million indirect roles and diversification strategies leveraging existing infrastructure for renewables. IRENA highlights MENA's world-class solar resources, enabling green hydrogen exports valued at USD 200–300 billion annually by 2050 and regional grid interconnections supplying Europe. [28,29]

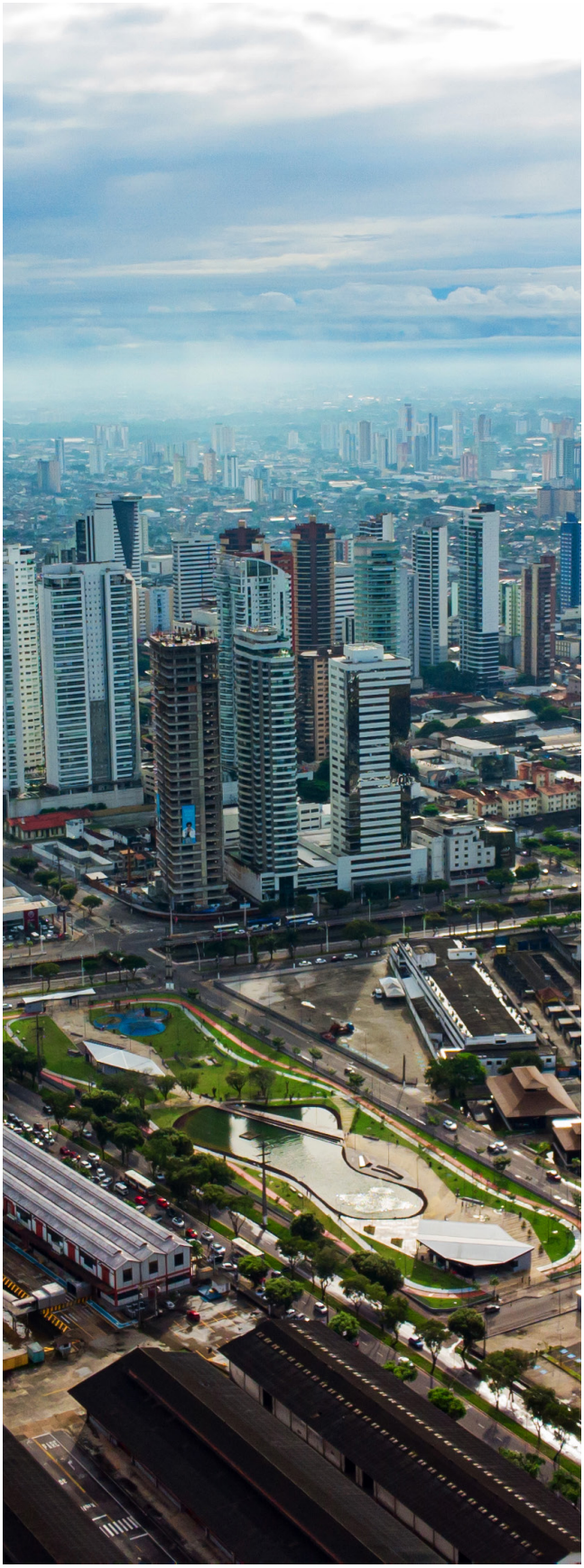
Closing the climate finance gap—estimated at USD 1+ trillion annually with total needs reaching USD 1.3 trillion by 2035 under the new collective quantified goal agreed at COP30—requires shifting from predominantly public sources (which accounted for a majority of climate finance, according to a 2019-20 stocktake) toward private institutional capital from pension funds, insurance companies and sovereign wealth funds managing over USD 100 trillion in assets globally. MDBs pledged USD 170 billion annually by 2030, plus USD 65 billion in private co-investment. Structures that blend public and private capital have increasingly been framed as de-risking layers—guarantees, insurance products, senior/subordinated capital and performance-based disbursement—designed to crowd-in private finance where project risks, not capital scarcity, have blocked execution.

Achieving 1.5°C pathways requires NDC 3.0 submissions to close the 43% emissions gap by 2030, whereas current policies deliver only 2–3% reductions. Enhanced ambition demands absolute economy-wide targets, sectoral roadmaps with binding milestones, quantified adaptation finance (USD 140–300 billion annually by 2030) and policy instruments, including carbon pricing at USD 75/tCO_2 by 2030, ICE and coal phase-out schedules and subsidy reform redirecting USD 7 trillion in fossil fuel subsidies toward clean energy. Accountability through the Enhanced Transparency Framework and climate litigation—now approaching 3,000 cases globally—creates legal pressure for greater ambition, as courts mandate stronger government action and civil society tracks real-world progress30. MENA-linked country platforms such as Egypt's Country Platform for the Nexus of Water, Food and Energy (NWFE) and Morocco's country platform for climate finance and implementation can also serve as delivery mechanisms that aggregate projects into investable pipelines, strengthening measurement, reporting and verification capacity and improving transparency readiness.

21 CONCLUSION

COP30 delivered landmark commitments despite geopolitical tensions, yet the ambition-to-implementation gap has widened, with only one-third of countries providing updated NDCs. The Belém Package strengthened multilateralism by tripling adaptation finance by 2035, launching the Belém Mechanism for Just Global Transition to support fossil fuel-dependent communities and creating the Global Implementation Accelerator to target methane reduction and renewable tipping points. However, consensus on fossil fuel phase-out language collapsed, with over 80 countries supporting explicit commitments and 84 opposing, underscoring persistent divides. The UNFCCC reaffirmed multilateralism as essential for collective climate action, with nearly 200 parties representing divergent interests and responsibilities.

The next five years are decisive: the IPCC warns that 1.5°C pathways require a 43% emissions cut by 2030 relative to 2019—far beyond current trajectories. Energy-producing nations need tailored transition strategies that balance fiscal dependence with renewable deployment; investors require policy certainty through carbon pricing and disclosure standards; and corporations must address Scope 3 emissions, which dominate supply chain footprints. Delivering on NDC 3.0, implementing adaptation finance projects, and ensuring carbon market integrity under Article 6.4 will determine whether the impact reaches vulnerable nations and high-impact sectors. Sectoral transformations must advance rapidly: near-complete power decarbonisation by 2035, ICE phase-outs across many jurisdictions, industry compliance with carbon border adjustments and agricultural emissions cuts through regenerative practices.



Governance integrity and trust underpin ambitious collective action. COP30's Global Initiative for Information Integrity targets climate disinformation undermining policy ambition, while ISSB and CSRD disclosure frameworks mandate transparent emissions reporting, transition plans and scenario analysis. UN climate leadership stresses that the Paris Agreement has shown multilateralism can deliver transformational outcomes, with over 90% of global GDP now covered by net-zero targets. Yet closing the gap between pledges and real-world emissions requires going "further, faster, fairer," fulfilling finance commitments, enabling technology transfer and recognising differentiated responsibilities.

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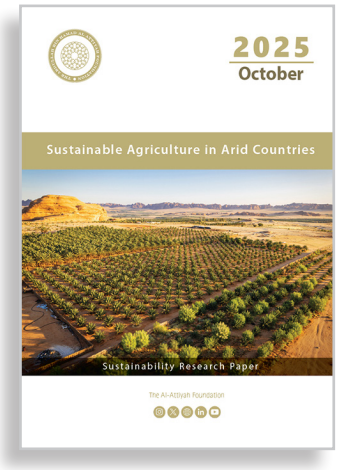

October – 2025

Sustainable agriculture in arid countries

MENA holds 1% of global freshwater yet sustains 6% of the global population, with most of the world's water-stressed countries located in the region.

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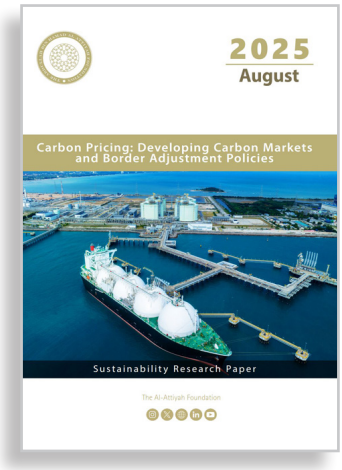

August – 2025

Carbon Pricing: Developing Carbon Markets and Border Adjustment Policies

Carbon pricing through taxes, cap-and-trade or crediting, attaches a cost to greenhouse-gas emissions and rewards low-carbon choices.

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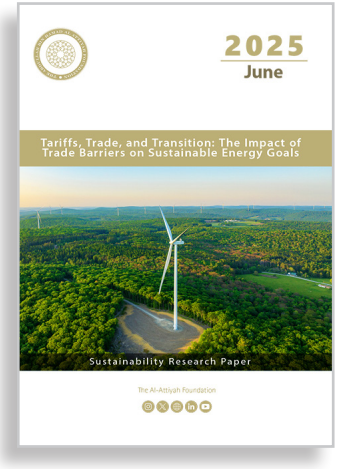

June – 2025

Tariffs, Trade, and Transition: Impact of Trade Barriers on Sustainable Energy Goals

The global clean energy transition stands at a critical juncture, with trade policy set to determine whether renewable capacity targets are achieved or systematically undermined over the next decade.

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