POLICY BRIEF

Accelerating Adaptation to Deepening Drought Risks by Scaling Adaptation Finance

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Accelerating Climate Action and the Just Energy Transition

Abstract

In drought-affected and fragile areas, the scale of resilience-building investments needed across public and private sectors justifies mutual assistance. The returns for collective global, regional, and national economic stability and wellbeing outweigh the costs of investing in solidarity. The G20 could accelerate resilience to drought risks by better evaluating adaptation investments.

In this brief, results emerging from climate finance for nature- and land-based solutions to droughts are highlighted. Objectives for adaptation to be transformative call into question the distribution of benefits and costs, institution-building, and other capacity needs. The G20 platform should broaden consideration of macroeconomic benefits, promote local access to funds, and connect information systems across scales for more sustainable private sector engagement.

Introduction

Droughts depress economic growth,[1,2] driving inequality, poverty, hunger, unemployment, and instability.[3] All GDP-related sectors require water. The G20 recognises[4] that adaptive nature-based solutions (NbS)[5] buffer deepening drought effects on growth and stability, globally.[6] Advocates argue that nature-smart policies could boost global GDP by up to $150 billion in 2030[7] and avert a potential $2.7 trillion GDP loss. To scale adaptation investments, economic decision makers need reassurance of results.[8]

Background

This brief reviews documentation from a decade of investments by the Green Climate Fund (GCF).[9] This offers insights for sustainability[10,11] and disaster risk reduction[12] to reduce the direct, indirect, and ill-distributed social costs of

[1] Esha D. Zaveri, Richard Damania, and Nathan Engle, *Droughts and Deficits: The Global Impact of Droughts on Economic Growth* (World Bank, Washington, DC, 2023), https://doi.org/10.1596/1813-9450-10453 .
[2] Kalin I. Tintchev and Laura Jaramillo, 'Hanging Out to Dry? Long-Term Macroeconomic Effects of Drought in Fragile and Conflict-Affected States', *IMF Working Papers* 2024, no. 106 (24 May 2024), https://doi.org/10.5089/9798400277221.001.A001 .
[3] WEF, 'Here Are 5 Ways We Can Build Global Water Systems Resilience', World Economic Forum, 21 March 2025, https://www.weforum.org/stories/2025/03/5-changes-for-global-water-resilience/ ; UNESCO, 'The United Nations World Water Development Report 2024: Water for Prosperity and Peace - UNESCO Digital Library', 2024, https://unesdoc.unesco.org/ark:/48223/pf0000388948 .
[4] G20, 'Sherpa Track Issue Note Disaster Risk Reduction Working Group (DDR WG)' (Think 20, 2025), https://g20drrwg.preventionweb.net/media/104101/download?startDownload=20250406 .
[5] G20, 'G20 Disaster Risk Reduction Working Group PRIORITY 6: Ecosystems-Based Approaches for DRR and Nature-Based Solutions DELIVERABLE 6 Compendium of Case Studies and Analysis of Policies That Incentivize Investment in NbS, Such as Subsidies, Tax Benefits, and Climate Finance Integration, Which Encourage Both Public and Private Sector Engagement', 2025, https://g20drrwg.preventionweb.net/media/105541/download?startDownload=20250406.
[6] see: https://g20drrwg.preventionweb.net/2025/g20-documents
[7] 'WWF Living Planet Report 2024 A System in Peril' (Berlin: WWF Deutschland, 2024).
[8] In contrast, across a wider range of hazards, GST, IPCC, UNDRR, and AGR observe proliferating adaptation actions, but resilience gains become too multifaceted and complex to track measurable results across all climate risks and disasters simultaneously. The latest AGR found that: 'almost 3,500 adaptation actions by ca. 500 city governments were reported in 2023, but consistent and robust information on their outcomes is lacking.'
[9] John Ategeka et al., 'Coastal and Terrestrial Water Sector Interventions in Developing Countries', Learning Paper (Songdo, Korea: IEU/GCF, 2024), https://ieu.greenclimate.fund/sites/default/files/document/240405-egm-water-systematic-review-top.pdf .
[10] G20, 'ENVIRONMENT AND CLIMATE SUSTAINABILITY', 2025, https://g20.org/track/environment-and-climate-sustainability-2/.
[11] G20; T20, 'TF5 Accelerating-Climate-Action and the JET Concept-Note', 2025, https://t20southafrica.org/wp-content/uploads/2025/01/TF5-Accelerating-Climate-Action-and-the-JET-Concept-Note.pdf .
[12] G20, 'Sherpa Track Issue Note Disaster Risk Reduction Working Group (DDR WG)'.

droughts[13] and enable socio-economic transformations. Project proposals distinguish between benefits and costs to society (economic appraisal) and to private actors (financial appraisal). Ex-ante assessments are non-exhaustive and narrowly framed. As the first projects conclude this year, ex-post evaluations will begin to re-examine future sustainability, upscaling, replication, and further reinvestment to accelerate adaptation.

Previous reviews[14,15] identify barriers in drought-affected areas, fragile states, and least developed countries.[16,17,18] High transaction costs and risk perceptions still deter private and public investment. Systems tracking economic activity and changes in exposure to water stress are generally less available.[19] Competition for resources during droughts, elite capture, and other market failures require regulatory attention.[20]

Diagnosis

Multilateral funds provide support for catalytic public investments intended to transform economies and ecosystems by supporting policy interventions to achieve systemic effects. This involves adapting the behavioural patterns, social

[13] See e.g. 2nd Kenyan NDC
[14] IEU/GCF, 'Independent Evaluation of the GCF's "Health and Well-Being, and Food and Water Security" Result Area', Text (Independent Evaluation Unit | Green Climate Fund, 17 March 2025), https://ieu.greenclimate.fund/evaluation/HWFW2024 .
[15] IEO, 'Evaluation of GEF's Approach to Interventions in Water Security | GEF Independent Evaluation Office', 2024, https://www.gefieo.org/evaluations/water-security .
[16] Mali, 'Contribution of Mali to the CPF Forum', 2025, https://unfccc.int/sites/default/files/resource/Contribution%20of%20Mali%20to%20the%20CPF%20Forum.pdf .
[17] Chloé Farand, '"Forgotten" Fragile States Unite to End Climate-Finance Blind Spot', Climate Home News, 18 March 2025, https://www.climatechangenews.com/2025/03/18/forgotten-fragile-states-unite-to-end-climate-finance-blind-spot/ .
[18] GEF/STAP, 'EN_GEF.STAP_.C.66.Inf_.03_Environmental_Security_Achieving_Durable_Outcomes_Fragile_Conflict_affected_Situations', 2024, https://www.thegef.org/sites/default/files/documents/2024-01/EN_GEF.STAP_.C.66.Inf_.03_Environmental_Security_Achieving_Durable_Outcomes_Fragile_Conflict_affected_Situations.pdf .
[19] as discussed in UNCCD, 'Multiscale Approaches for the Assessment and Monitoring of Social and Ecological Resilience to Drought', 10 August 2022, https://www.unccd.int/resources/reports/multiscale-approaches-assessment-and-monitoring-social-and-ecological-resilience ; Caroline King-Okumu, *A Rapid Review of Effective Financing for Policy, Implementation and Partnerships Addressing Drought Risks* (FAO, 2022), https://doi.org/10.4060/cb9971en .
[20] Personal communication, 13 May 2025, Willard Mwemba, COMESA Competition Commission

organisation, and investment decisions of large water-dependent populations, including private individuals, businesses, financiers, and other entities that affect ecosystems' functioning to conserve water for resilience to droughts. Investments have included the use of economic instruments (see Box 1), institutional incentives, capacity building, and learning from continuous re-evaluation. In each case, complex political economy dynamics determine investment flows and performance. These have implications for institutional reforms, information systems, and capacity-building measures.

Box 1: Economic policy options incentivising NbS to droughts

Models financing adaptations that work with nature at local, national, and other levels have been tried and tested but are not yet sufficiently scaled. These include market-based measures and measures to alter the economic drivers of drought risks and environmental degradation. In some cases, payments for ecosystem services (PES) should orient self-renewing sustainable value chains. Establishing them requires information on resource conditions and investor demand, among others.[21] Creating or securing market access for sustainable products and services is one way to sustain PES. Water funds or drought funds into which private, public, and external finance sectors pay can also reward sustainable practices. Other financing options frequently recommended to de-risk and scale up adaptation measures and private sector engagement include blended finance and debt-for-nature swaps.[22]

Evaluations shed light on what works under different institutional and governance regimes. Requirements for adaptation to be transformative dictate consideration of the distribution of benefits and costs. Knowledge generation and -sharing build capacities to unblock observation of how economic incentives for ecosystem-based adaptations can build resilience.

[21] For more critical evaluation of experiences from implementation of PES in different countries see: https://www.wri.org/research/climate-finance-access-indigenous-peoples-local-communities-payments-ecosystem-services?apcid=0065832e8241868dfb278b00 and numerous academic papers available, e.g. in Journal of Ecological Economics

[22] Yannick Glemarec et al., 'Making Blended Finance Work for Nature-Based Solutions' (Songdo, Korea: Green Climate Fund, 2023), https://www.greenclimate.fund/sites/default/files/document/making-blended-finance-work-nature-based-solutions.pdf .

Recommendations

1. **Scaling up global financing needs to work with national stakeholders to devolve better systems for accessing, disbursing, and monitoring results at local scales.**[23] The G20 brings together representatives of the world's largest economies. Collectively, it can advocate, enable, and overcome barriers at other levels. Members can share examples from their countries and external cooperation.
2. **The Troika of previous, current, and future G20 presidencies and member countries could launch action on previous recommendations** by a broader-based grouping of regional representatives from South Africa, the US, and others taking part in the International Working Group on Drought under the UNCCD[24] to convene a wider dedicated global forum for all relevant agencies and actors to review effective financing to mitigate the effects of drought.[25]
3. **The G20 global forum should promote economic evaluations of effective, locally led, and financially sustainable resilience to droughts** and pilot the acceleration of multiscale financing where local reinvestment of returns can establish virtuous cycles. Local information systems and access to public and private investment reflect local leadership, agency, knowledge, and capacities to adapt sustainably. Emerging results report more climate-resilient water security and economic activities.[26]
4. **The G20 platform could broaden the evaluation framing to further interrogate contributions to macro-economic growth and transformation** through market

[23] Aryan Bajpai et al., 'Scaling Climate Finance for Locally-Led Adaptation: Lessons from the Global South', Task Force 2 (T20 Brazil, 2024), https://www.t20brasil.org/media/documentos/arquivos/TF02_ST_05_Scaling_Climate_Fin66cde9fe7c278.pdf .
[24] See Recommendation F on p20-21 in UNCCD, 'Final Report of the Intergovernmental Working Group on Effective Policy Implementation Measures for Addressing Drought under the United Nations Convention to Combat Desertification Report by the Intergovernmental Working Group' (UNCCD), accessed 6 April 2025, https://www.unccd.int/sites/default/files/2022-03/ICCD_COP%2815%29_20-2202073E.pdf .
[25] A broader global policy discussion is ongoing under the Saudi Arabian Presidency of UNCCD and a series of pledges have been made that collectively outweigh the investment made so far through the GCF. But as yet no finance-evaluation focused forum was yet launched other than the UNCCDs 2026 national reporting process which would include some voluntary national consideration of financial flows to build resilience to droughts.
[26] This includes evidence from PES schemes implemented in countries including Jordan and others.

and non-market measures, and should also review equity-efficiency trade-offs. This could prioritise more thorough examination of incentive structures facing both private[27] and public actors for achieving and monitoring water security in drought-affected countries and localities.[28]

5. **A global knowledge hub hosted by one or more G20 countries could build capacities and share these with fragile states, to better align climate finance with socio-environmental needs** through tailored readiness programmes. The hub should disseminate information[29,30] and protocols for its use, guiding economic decision makers to strengthen local and national systems and processes. Key processes include engaging land and water users, utilities, industry, other businesses and communities in monitoring their water flow-regulating activities, extractions, discharges,[31] benefit/cost calculations, and individual or collective behavioural choices in the context of drought risks.

Conclusion

Effective use of the G20 platform to drive information review and use in decision making should improve innovation and establish a valuable legacy.

Outcomes addressing drought risks and accelerating effective adaptation globally could be shared and discussed via the G20 platform. This would introduce a more macro-economic orientation to the available evaluations. It could also supplement consideration of market mechanisms, institutional

[27] Whereas GCF projects provide support for institutional reform and capacity building together with the establishment of innovative financing mechanisms (such as water funds, PES or others) business cases for subsequent upscaling and accelerating private investments might not necessarily need to integrate all of the same costs for all of these start-up elements together in the same way.
[28]. GCF, 'Integrated Results Management Framework' (Green Climate Fund, 2021), https://www.greenclimate.fund/sites/default/files/document/irmf-policy.pdf.
[29] Some of which can be drawn from e.g. the global drought Atlas, AI platform https://climateprojectexplorer.org/ and other monitoring already supported by Climate Finance and also some more knowledge that is newly emerging this year
[30] See Also King-Okumu, *A Rapid Review of Effective Financing for Policy, Implementation and Partnerships Addressing Drought Risks*.
[31] Personal communication: Moussa Diarra and Amara Keita

incentives, and efficiency–equity trade-offs. More evidence-based cases for economic decision makers would also better justify accelerating adaptation across other climate extremes and disasters (in addition to droughts). Such insights could be of use for global disaster risk reduction and the UNFCCC's Standing Committee on Finance.[32]

[32] See information on the SCF 2025 Forum: https://unfccc.int/event/2025-forum-of-the-standing-committee-on-finance

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