United Nations
Convention to Combat Desertification

PHOTO CREDIT © Prashanth Vishwanathan

POLICY BRIEF

August 2023

Investing in Resilience:

Innovative Finance for Drought Preparedness

"We are only as resilient to climate change as our land is. Building resilience to drought disasters is the way to secure the gains we make on each sustainable development goal, particularly for the most vulnerable people." – Pedro Sánchez, President of the Spanish Council of Ministers and Macky Sall of Senegal at the launch of the International Drought Resilience Alliance[1]

This policy brief highlights the critical role of innovative and sustained financing for building lasting drought resilience. It makes the case for investing in drought preparedness, demonstrating that the returns extend beyond mere risk reduction; they also deliver social and economic benefits that help safeguard communities and promote sustainable development.

Droughts have become increasingly frequent and severe, posing a significant threat to food security, economic stability, and the well-being of communities around the world. Drought currently accounts for 15 per cent of natural hazard-related disasters, with over 1.4 billion people affected by drought in the period from 2000 to 2019.[2] It is estimated that drought is one of the world's most costly and deadly natural disasters.[3]

Investments in resilience-building before drought occurs are among the most cost-effective actions that can be taken and are typically far less expensive than interventions focused on impact mitigation and recovery. The overall economic rate of return on enhancing resilience can be significant, with benefit-cost ratios ranging from 2:1 to 10:1.[4]

There is growing consensus that vulnerable countries and communities need new ways to finance drought preparedness, response, and recovery. Over the last two decades, financial markets, governments, and development partners have introduced innovations in drought management and disaster risk finance, giving rise to an array of funding sources that help build resilience before disasters occur and allow for better response and recovery in their aftermath.

The newly established International Drought Resilience Alliance (IDRA) is taking the lead in shifting the paradigm on drought management from a reactive to a proactive approach that better prepares countries and communities for future drought. Indeed, the global community recognises that failing to lead and act on building resilience will have a significant human and economic toll, increasing poverty, forced migration, and inequalities.

1. The Triple Dividend from Investing in Drought Resilience

Drought resilience strategies, already being implemented in drought-prone countries and communities, can provide economic, environmental, and public health co-benefits.

As with climate change mitigation and adaptation, proactively addressing drought will require more substantial long-term investments. Despite the high costs of drought to our societies and economies, investment in drought resilience has been largely neglected. Decision makers in governments, communities, businesses, and development agencies are often unaware of related investment dividends and how innovative financing options could both enhance resilience and deliver new economic opportunities.

Investing in drought resilience can yield triple dividends, helping to:

(i) avoid future losses;

(ii) reduce risk, increase productivity, and drive innovation; and

(iii) foster multiple social and environmental co-benefits, such as improvements in rural livelihoods and human health, soil and water quality, and enhanced adaptation to climate change.[6]

PHOTO CREDIT © FAO / Matina Romano

The Drought Resilience, Adaptation and Management Policy Framework[5] supports a proactive approach to drought management and is intended to provide countries with practical actions to address drought by:

- implementing drought monitoring and early warning systems;
- assessing and addressing drought vulnerability and risk; and
- enacting measures to limit the impacts of, and respond better to, drought.

Examples of the Triple Dividend

AVOIDED LOSSES

In developing countries, an estimated 23,000 lives could be saved, with up to USD 2 billion in avoided asset losses annually, by improving weather forecasts, early warning systems, and climate information.[7]

ECONOMIC BENEFITS

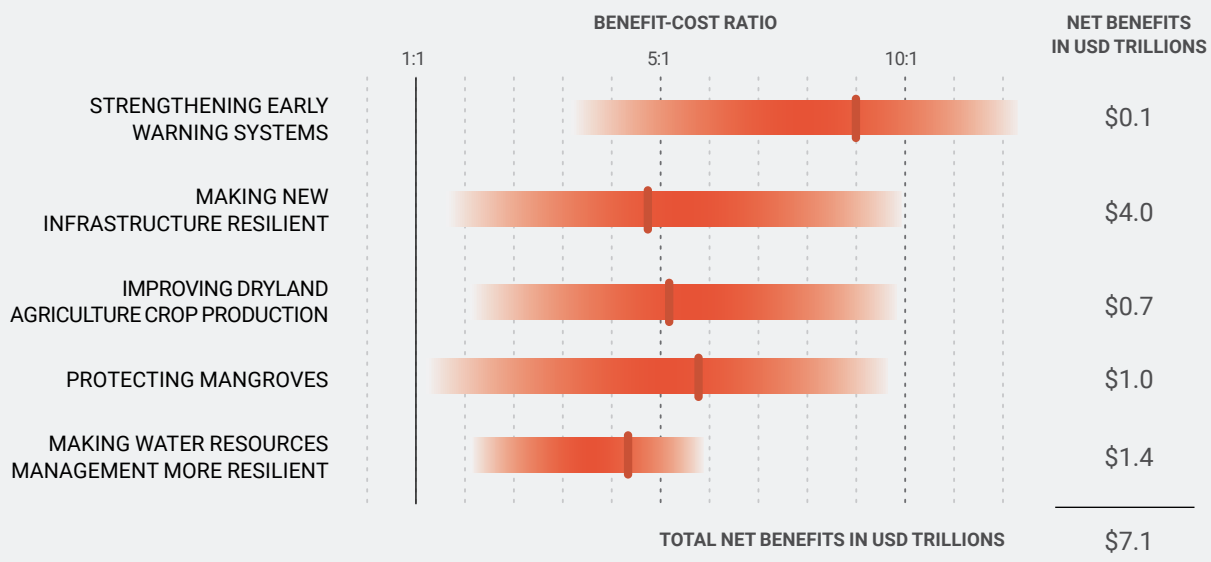
Weather-indexed insurance programmes in Ethiopia and Mexico helped farmers recover from drought while enabling them to increase savings, overcome credit constraints, and invest in tools and fertilisers that boost productivity.[8]

SOCIAL AND ENVIRONMENTAL BENEFITS

In Sub-Saharan Africa, the introduction of improved drought tolerant crop varieties to better manage risk can contribute to GDP growth,[9] while nature-based solutions, such as sustainable land management, green infrastructure, and ecosystem restoration, have been proven effective in mitigating drought risks and protecting communities.[10]

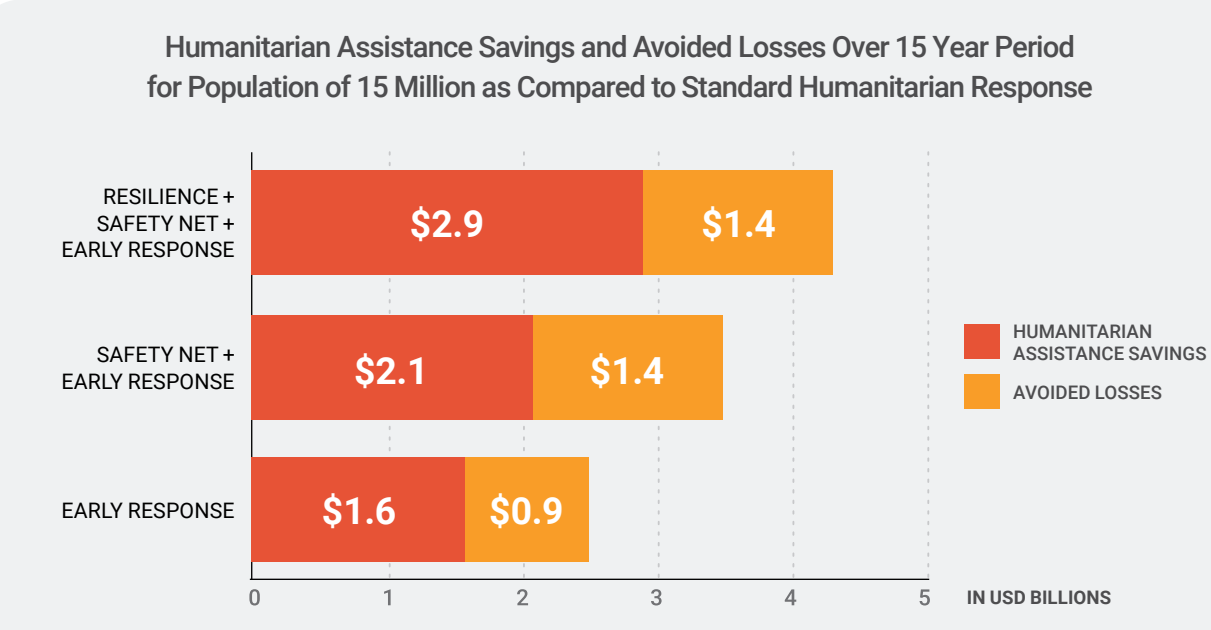
It is estimated that an investment of USD 1.8 trillion in resilience and adaptation, focused on five priority areas from 2020 to 2030, could generate USD 7.1 trillion in total net benefits. This level of investment is less than 1 per cent of projected total gross fixed capital formation over the same period.[11]

Figure 1 Benefits and costs of investments in resilience in five areas[12]



At the national level, a study on the economics of drought resilience in Ethiopia, Kenya, and Somalia compared a range of scenarios and found that early humanitarian response, safety nets, and investments in resilience were far more cost-effective than spending on crisis response. A proactive approach to drought helps protect people's incomes, assets, and livelihoods. For every USD 1 spent in building resilience there could be up to USD 3 in benefits from reduced humanitarian aid and avoided losses.[13]

Figure 2 The Economics of Drought Resilience[14]



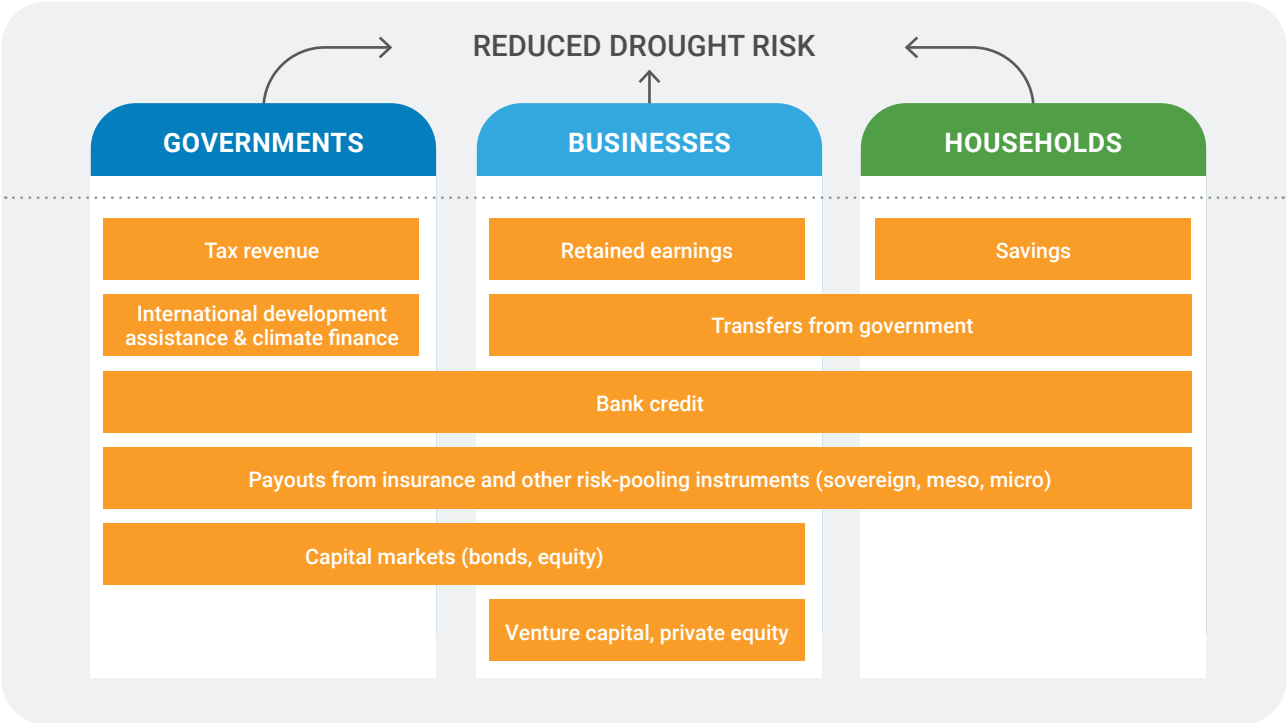
2. Innovative Finance for Drought Resilience

Resilience is the ability to cope with shock, adapt to stress, and ultimately transform through crisis. Greater resilience also gives confidence to businesses and communities by lowering risk, thereby stimulating innovation and economic growth.

Despite the multiple benefits and a strong economic case for investing in drought resilience, finance remains largely inadequate.[15] The benefits associated with enhanced resilience are often undervalued and there is a common perception that investing in disaster resilience will only provide returns once disaster strikes. Furthermore, of the USD 141 billion in official development assistance devoted to disaster-related purposes from 2011 to 2022, just 5 per cent was allocated to disaster preparation while the remainder was for post-disaster relief and reconstruction.[16]

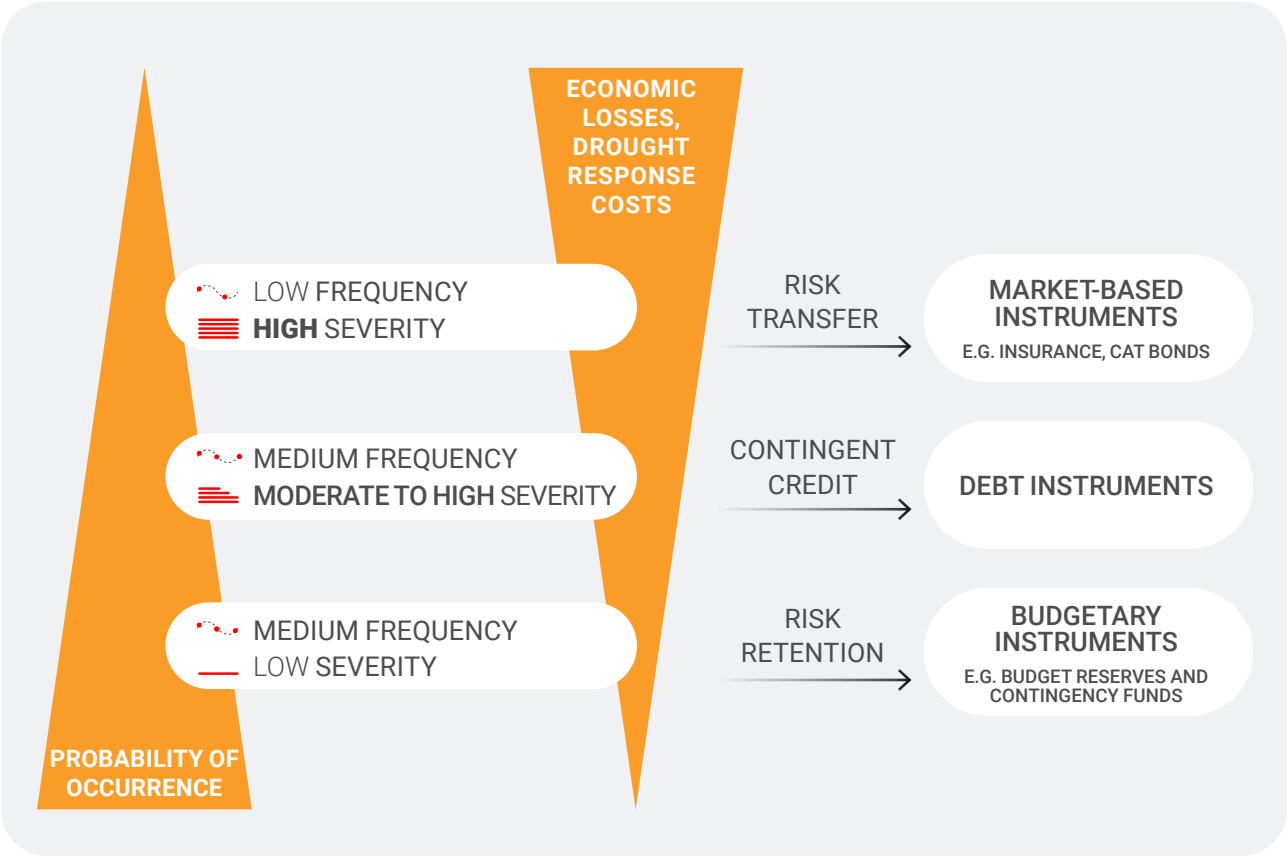
Drought finance spans multiple types of instruments and mechanisms which determine how governments, businesses, and households acquire and use financial resources to invest in assets and transfer risk while preparing for, mitigating the impacts of, and responding to drought. The public sector will continue to be a major source of finance for drought resilience in the foreseeable future. This indicates the need for significant innovation to make more effective use of existing resources and explore ways to increase the amount of funding for drought resilience.

Figure 3 Overview of key sources and users of resilience/adaptation finance[17]



Strategic planning, management, and sectoral coordination are essential to manage drought risks at the national level. This means working across government ministries and agencies to identify opportunities to incorporate drought preparedness into existing financing strategies, establish green budgeting,[18] and reform capital budgeting and debt issuance so that public finance can be scaled up and deployed more efficiently. To facilitate the more efficient use of limited resources, governments can develop layered financing strategies which leverage a variety of funding mechanisms. In doing so, different financial instruments, such as national disaster funds, social protection programmes, contingent credit lines, and sovereign and sub-sovereign insurance, can be aligned to address the corresponding layers of risk.[19]

Figure 4 Risk Layering for Drought Finance[20]



Governments can also introduce or revise drought management legislation and regulations to create a more favourable enabling environment for drought risk financing, especially forecasting, early warning systems, and the pricing of climate risks. The public sector can help generate greater investment by establishing the right market signals and by providing incentives and other inducements that attract private capital and advance the drought resilience agenda.

Policies, regulations, and environmental, social and governance (ESG) standards can also drive market shifts and empower private actors to invest in adaptation and resilience without compromising competitiveness. National governments can leverage drought resilience finance for projects and programmes funded by multilateral funding mechanisms as well as bilateral donors and development agencies to create a more conducive investment environment for the private sector.[21]

De-risking private investment for public goods[22]

Another way to address private sector hesitancy to invest in drought resilience is to use public resources to de-risk investment opportunities. For example, blended finance aims to improve an investment's risk-return characteristics by pooling capital with different return expectations, both financial and non-financial. In this way, concerns about financial uncertainty and other information gaps can be lessened, resulting in a greater amount of private capital being mobilised.

As part of the World Bank Group, the Multilateral Investment Guarantee Agency (MIGA) provides guarantees covering both country and contract risks to encourage investment in developing countries. In Jordan, MIGA's guarantee of USD 13 million protected equity investments by private investors, covering them for a period of up to 20 years against the risk of breach of contract. This allowed private investors to finance the expansion of an existing water treatment plant to address more frequent and intense storms and drought, sea-level rise, saltwater intrusion, and the needs of a growing population.

3. Recommendations for a Drought Resilient Future

"Drought is a natural hazard but does not have to lead to human disaster. The solutions are available, and we can create a drought resilient world by increasing our ambition, harnessing the political will, and joining forces to act together." – Ibrahim Thiaw, UNCCD Executive Secretary.

Drought risk reduction still receives limited policy and financial support. Investing in drought resilience yields co-benefits that need to be better identified and quantified to demonstrate the profitability of proactive measures. Financing needs to make people and ecosystems more resilient to drought remain high in many countries. These needs can be met if outlays are seen as investments rather than expenditures. Strategic investment planning, including holistic feasibility studies and blended finance for the sustainable management of land and water resources to improve environmental resilience, could be embedded in all aspects of development finance.[23]

In the transition towards sustainable or green financing systems, transparency, accountability, and accessibility will be essential to realise the full spectrum of potential resilience benefits. This includes promoting financial inclusion, improving risk assessment frameworks, and enhancing the capacity of financial institutions to support resilience-building efforts. To address the multidimensional and transdisciplinary challenges associated with drought risks, a whole-of-government and whole-of-society approach is needed where all stakeholders have clear roles and responsibilities.[24]

PHOTO CREDIT © EU ECHO / Pierre Prakash

Governments can:

- Align or integrate their strategies and action plans on climate change adaptation, mitigation, and drought risk management.
- Develop investment-ready national drought and/or adaptation plans by incorporating innovative financing strategies at the earliest stages.
- Incorporate drought management as a complementary objective in national planning and investment processes across all relevant sectors.
- Explore the creation of innovative financial instruments, such as risk pools, contingent budgets, and revolving funds.
- Enact policy measures that encourage financial institutions to provide savings, credit, and insurance products that promote investments by businesses and households.

Development partners can:

- Increase funding for proactive drought management, including investments in early warning systems, infrastructure investments, and social programmes.
- Ensure drought preparedness and management is included as a complementary objective in projects and programmes whenever relevant.
- Support the creation of innovative financial instruments for proactive drought management.
- Leverage blended finance to de-risk investment by commercial financial institutions.

Financial institutions, impact investors, and insurance companies can:

- Include a focus on drought risk reduction when assessing their portfolio of infrastructure investments.
- Explore investments in risk pools, climate bonds, resilience bonds, and other financial instruments.
- Collaborate with governments, donors, and development partners on blended finance initiatives.
- Identify opportunities to pilot and scale innovative financial instruments, such as insurance products that reach the last mile.

Businesses and individuals can:

- Better understand their exposure to drought risk and vulnerability.
- Invest in assets and land management practices that promote drought resilience.
- Seek out appropriate insurance products.
- Maintain a savings account for self-insurance.

Endnotes

1. UNCCD. 2022. International Drought Resilience Alliance. https://www.unccd.int/news-stories/press-releases/initiative-senegal-and-spain-leaders-cop27-launch-alliance-get-ahead
2. UNDRR. 2022. The invisible toll of disasters. https://www.undrr.org/explainer/the-invisible-toll-of-disasters-2022
3. WMO. 2021. Atlas of Mortality and Economic Losses from Weather, Climate and Water Extremes 1970–2019. https://library.wmo.int/index.php?lvl=notice_display&id=21930
4. Global Commission on Adaptation. 2019. Adapt now: a global call for leadership on climate resilience. https://gca.org/reports/adapt-now-a-global-call-for-leadership-on-climate-resilience/
5. Crossman, N.D. 2018. Drought resilience, adaptation, and management policy (DRAMP) framework. UNCCD, Bonn. https://knowledge.unccd.int/sites/default/files/2019-04/DRAMP_Policy_Framework.pdf
6. Tanner, T., et al. 2015. The triple dividend of resilience: realizing development goals through the multiple benefits of disaster risk management. https://eprints.soas.ac.uk/31372/1/The_Triple_Dividend_of_Resilience.pdf
7. Hallegatte, S. 2012. A Cost Effective Solution to Reduce Disaster Losses in Developing Countries: Hydro-Meteorological Services, Early Warning, and Evacuation. Policy Research Working Paper No. 6058. World Bank, Washington, DC. http://hdl.handle.net/10986/9359
8. Tanner, T. et al. 2015. The triple dividend of resilience: realizing development goals through the multiple benefits of disaster risk management. https://eprints.soas.ac.uk/31372/1/The_Triple_Dividend_of_Resilience.pdf
9. UNDRR. 2020. Multiple benefits of DRR investment Reducing risk and building resilience against floods and droughts in Sub-Saharan Africa. https://www.undrr.org/publication/multiple-benefits-drr-investment?quickUrl=true
10. Reichhuber, A. et al. 2019. The Land-Drought Nexus: Enhancing the Role of Land-Based Interventions in Drought Mitigation and Risk Management. A Report of the UNCCD Science-Policy Interface. http://catalogue.unccd.int/1211_03EP_UNCCD_SPI_2019_Report_2.pdf
11. Global Commission on Adaptation. 2019. Adapt now: a global call for leadership on climate resilience. https://gca.org/reports/adapt-now-a-global-call-for-leadership-on-climate-resilience/
12. Adapted from the Global Commission on Adaptation. 2019. Adapt now: a global call for leadership on climate resilience. https://gca.org/reports/adapt-now-a-global-call-for-leadership-on-climate-resilience/
13. USAID. 2018.The Economics of Resilience to Drought. https://2017-2020.usaid.gov/resilience/economics-resilience-drought
14. Adapted from USAID. (n.d.). The economics of resilience to drought in Kenya, Ethiopia, and Somalia. https://2017-2020.usaid.gov/sites/default/files/documents/1867/V4_Infographic.pdf
15. UNDRR. 2023. Report for the Mid-Term Review of the Sendai Framework for Disaster Risk Reduction. https://sendaiframework-mtr.undrr.org/publication/report-midterm-review-implementation-sendai-framework-disaster-risk-reduction-2015-2030
16. Benson, C. 2023. Underinvestment in disaster risk reduction comes at cost to us all. International Science Council, Paris. https://council.science/current/blog/underinvestment-in-disaster-risk-reduction-comes-at-cost-to-us-all/
17. Adapted from Global Commission on Adaptation. 2019. Adapt now: a global call for leadership on climate resilience. https://gca.org/wp-content/uploads/2019/09/GlobalCommission_Report_FINAL.pdf
18. OECD. (n.d.). Paris Collaborative on Green Budgeting. https://www.oecd.org/environment/green-budgeting/
19. Global Commission on Adaptation. 2019. Adapt now: a global call for leadership on climate resilience. https://gca.org/wp-content/uploads/2019/09/GlobalCommission_Report_FINAL.pdf
20. Adapted from InsuResilience Global Partnership (n.d.) Risk layering https://www.insuresilience.org/knowledge/instruments/#risk-layering
21. Tall, A. et al. 2021. Enabling Private Investment in Climate Adaptation and Resilience: Current Status, Barriers to Investment and Blueprint for Action. World Bank, Washington, DC. https://openknowledge.worldbank.org/entities/publication/6219bf23-87e1-5f30-aaf9-30e0cd793ce3
22. Choi, E.S., Jang, E. and Laxton, V. 2023. What It Takes to Attract Private Investment to Climate Adaptation. WRI, Washington, DC. https://www.wri.org/insights/private-sector-climate-adaptation-finance
23. UNDRR. 2021. GAR Special Report on Drought. https://www.undrr.org/publication/gar-special-report-drought-2021
24. UNCCD. 2021. Guidance note on drought finance. https://www.unccd.int/sites/default/files/2022-09/IWG%20task%20group%20report%203%20Drought%20finance%20.pdf

UNCCD POLICY BRIEF

Investing in Resilience:

Innovative Finance for Drought Preparedness

Protecting communities against disasters, particularly climate-related disasters such as drought, is more urgent than ever. Drought events have increased in frequency and severity, while climate change is expected to intensify drought impacts and losses, putting lives and livelihoods at risk and threatening sustainable development around the world.

There is an immediate need to invest in drought resilience to support individuals and communities at risk. To mobilise the levels of investment needed and to increase their impact, a variety of funding sources must be utilized, requiring countries and communities to spur innovations that reorient existing funds and leverage new resources for drought resilience.

Addressing the multidimensional and transdisciplinary challenges associated with drought risks demands a whole-of-government and whole-of-society approach. This includes:

- mainstreaming drought resilience and adaptation in public sector investment decision-making,
- building the enabling environment for private sector investment, and
- deploying innovative financial instruments that are accessible to individuals, businesses, and communities.

The objective of the United Nations Convention to Combat Desertification (UNCCD) is to support countries and communities with the rehabilitation, conservation and sustainable management of land and water resources, leading to improved living conditions. With 197 Parties, the UNCCD unites decision makers, scientists, civil society and the private sector around a shared vision and framework for action to transform how land resources are used and managed to ensure healthy lives and sustainable livelihoods. It is critical that these efforts continue to promote drought resilience to safeguard human health and promote rural development and environmental sustainability.

United Nations
Convention to Combat
Desertification

United Nations Convention to Combat Desertification (UNCCD)

Platz der Vereinten Nationen 1
D-53113 Bonn, Germany
Tel: +49 (0) 228 815 2873

www.unccd.int