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# POLICY BRIEF

## UNLOCKING CLIMATE-RESILIENT INFRASTRUCTURE IN NAMIBIA THROUGH ADAPTATION FINANCING

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## EXECUTIVE SUMMARY

Namibia has grappled with challenging climate conditions for years, with the recent unprecedented drought exacerbating these challenges and highlighting the urgent need for effective adaptation strategies. Climate change poses severe threats to human life and security, impacting both urban and rural areas. Informal areas are particularly vulnerable to resource depletion, environmental stress, and urban poverty. Namibia requires substantial investment in climate action, climate finance alone is insufficient. Adaptation financing is crucial but falls short, disproportionately affecting vulnerable communities such as women, young people, and rural communities. This policy brief highlights a gap between Namibia's climate policy and its practical implementation of resilient infrastructure. It advocates for closing this gap through increased adaptation financing.

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## 1. INTRODUCTION

Namibia is on a quest to achieve climate resilience by 2030 through enhanced adaptation planning, strengthened resilience, and addressing gaps in reliable climate information.[1] This is due to its vulnerability to episodic climate shocks such as droughts, urban heat, and flooding. Research has shown that the built environment is critical to human development outcomes and achieving the Sustainable Development Goals (SDGs) in urban areas.[2] Namibia has strong prospects of achieving climate resilient infrastructure. However, challenges such as uncontrolled urban planning, fragile data systems, and ineffective financing frameworks present obstacles to achieving these goals.[3] Despite these obstacles, Namibia has strong prospects for advancing climate-resilient infrastructure, which is essential for fulfilling its Vision 2030 objective. Namibia's young population, with a median age of 21.3 years and a predominance of women (51.2%), faces significant challenges.[4] This demographic profile also presents distinct opportunities and challenges for advancing climate resilience. Leveraging adaptation financing is one of the most feasible ways to address climate resilient infrastructure challenges. Adaptation and resilience are similar concepts – but not exact substitutes for each other – that, when taken together, aim to manage and minimise risk, reduce vulnerability, and enhance the capacity of systems (whether social, economic, or environmental) to deal with the impacts of natural hazards and climate change.[5]

This policy brief examines the current state of Namibia's climate resilient infrastructure and its challenges and explores the prospects of using adaptation financing as a catalyst for its enhancement.

Advocating for adaptation financing in infrastructure investment yields numerous benefits. This brief puts forth recommendations to promote the well-being and sustainable development of communities, focusing on young children and women in vulnerable areas.

### Overview of the current state of climate resilient infrastructure in Namibia and associated challenges

Climate change is an existential threat that affects every corner of our planet, but its impacts are particularly acute in Namibia's informal areas. Namibia's infrastructure system comprises housing, energy, water, and urban green infrastructure. This brief will specifically focus on these areas.

Infrastructure in Namibia is crucial as it serves as the cornerstone of daily life, providing shelter and supporting economic activities. The quality, affordability, and accessibility of infrastructure, including how

1 United Nations Development Programme Namibia. (2023, November 6). Namibia takes steps to strengthen climate information and early warning systems for enhanced adaptation planning and resilience. Retrieved July 25, 2024, from https://www.undp.org/namibia/stories/namibia-takes-steps-strengthen-climate-information-and-early-warning-systems-enhanced-adaptation-planning-and-resilience

2 British Academy. (n.d.). *DD and JG (JT) cities* (Working paper No. Just Transitions- Cities). David Dodman/ International Institute for Environment and Development, Jaideep Gupte/ Institute of Development Studies. Retrieved July 25, 2024, from https://www.thebritishacademy.ac.uk/documents/4391/DD_and_JG_JT_cities.pdf

3 United Nations Inter-Agency Task Force on Climate Change. (n.d.). Ukraine-Namibia Project Launch. Retrieved July 25, 2024, from https://unitac.un.org/ukraine-namibia-project-launch

4 National Statistics Agency (NSA), 'Media Statement: 2023 Population and Housing Census Preliminary Results,' Official Document, March 2024. (Online).

5 United Nations Office for Disaster Risk Reduction. (2024, April). Guide for Adaptation and Resilience Finance. Retrieved July 25, 2024, from https://www.undrr.org/publication/guide-adaptation-and-resilience-finance

it is modified in response to climate change, can have either just or unjust outcomes for urban residents. Furthermore, the country faces constraints due to rapid urbanisation. A study of flood impacts in the Cuvelai River Basin of Namibia's Oshana Region revealed significant damage to infrastructure, including the destruction of houses, roads, and other vital infrastructure.[6]

Factors contributing to vulnerability in Namibia's urban and rural areas include limited resources, poor infrastructure, ineffective disaster management, and early warning systems.

## 1.1 Housing infrastructure

Deficiencies in the built environment significantly impact low-income urban residents in Namibia. Access to affordable and safe housing in well-connected areas is a primary challenge. This encompasses various sustainability issues, including location (affecting energy use and vulnerability to climate hazards), building materials (influencing carbon footprint and resilience to shocks), and affordability (impacting accessibility and inclusivity).[7]

Housing plays a crucial role in the lives of low-income urban residents, particularly women engaged in informal economic activities at home. However, much of this housing is constructed from substandard materials and in hazardous areas, exposing residents to climate risks such as infectious diseases, fires, extreme weather, and pollution. Poorly planned housing developments can worsen these risks, such as housing built on unstable slopes leading to landslides and increased health impacts from exposure to severe weather conditions.[8]

## 1.2 Energy infrastructure

Energy infrastructure is critical for enhancing residents' health, well-being, and livelihoods.[9] However, the impacts of climate change are posing significant challenges, particularly in Namibia. The country is experiencing increased climate variability and extreme weather events, such as droughts, heat waves, floods, and bushfires. [10]

These changes create a non-stationary environment that puts substantial pressure on Namibia's energy infrastructure, especially its reliance on hydropower.[11] As climate change intensifies, existing and future hydropower projects may face disruptions due to altered rainfall patterns and extreme weather conditions.[12] This unpredictability threatens the stability and reliability of energy supply, underscoring the urgent need to address the vulnerabilities of current energy systems in the face of an increasingly erratic climate.[13]

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6 Niipare, A.-M., Jordaan, A., & Siyambango, N. (2020). Flood impacts in Oshana Region, Namibia: A case study of Cuvelai River Basin. Journal of Geography and Geology, 12(1), 8-15. https://doi.org/10.5539/jgg.v12n1p8
7 British Academy. (n.d.). *DD and JG (JT) cities* (Working paper No. Just Transitions- Cities). David Dodman/ International Institute for Environment and Development, Jaideep Gupte/ Institute of Development Studies. Retrieved July 25, 2024, from https://www.thebritishacademy.ac.uk/documents/4391/DD_and_JG_JT_cities.pdf
8 Ibid.
9 Ibid.
10 Ministry of Mines and Energy. (2017). *National renewable energy policy*. Republic of Namibia. https://www.mme.gov.na/files/publications/03f_National%20Renewable%20Energy%20Policy%20-%20July%202017.pdf
11 Ibid.
12 Ibid.
13 Ibid.

### 1.3 Water infrastructure

Water infrastructure in Namibia is crucial for social well-being and economic development but faces significant challenges due to climate change. Increasingly severe floods and droughts threaten water supply and management, impacting human health and economic growth.[14]

Despite advancements like the Goreangab Water Reclamation Plant and recent policy reforms under the Integrated Water Resources Management (IWRM) Plan, Namibia faces growing challenges in ensuring safe water and sanitation.[15] Over the next 30 years, the anticipated rapid increase in water demand will place significant pressure on existing infrastructure and pose challenges for future infrastructure development and water distribution.[16]

Adequate financing is crucial for developing water infrastructure and sanitation across Namibia. Over the next five years, the country needs approximately N$ 11 billion for bulk and rural water supply projects but has only secured around N$ 3 billion from loans and budget allocations.[17] At the continental level, the African Investment Programme aims to help leverage additional funds for water infrastructure development.

### 1.4 Urban green infrastructure

Urban green infrastructure (UGI) has become an essential tool in spatial planning for creating effective networks of natural and semi-natural areas.[18] It highlights the crucial role of ecological systems within the infrastructure that supports and sustains society while enhancing resilience.[19] Urban green infrastructure offers several advantages, including extending the lifespan of existing built infrastructure, making areas more attractive for investment, and requiring minimal maintenance.[20]

However, challenges persist, such as informal urbanisation encroaching on and degrading ecological spaces through practices like illegal dumping and open defecation.[21] Additionally, the encroachment on formal green spaces, such as urban parks, remains a common issue. Moreover, while UGI research has predominantly focused on formal settlements in the Global North, Sub-Saharan Africa's unique sociocultural and spatial contexts indicate that Western models of green infrastructure planning may not be directly applicable.[22]

## 2. CHALLENGES

Namibia faces significant challenges due to climate change, which has increasingly influenced the country's approach to infrastructure planning and development.

14 Climate Technology Centre & Network. (2022, October 25). *Namibia technical assistance policy review.* United Nations. https://www.ctc-n.org/system/files/dossier/3b/namibia_technical_assistance_policy_review_1.pdf
15 Ibid.
16 Ibid.
17 United Nations. (2022, November). *Namibia inputs.* Retrieved July 29, 2024, from https://sdgs.un.org/sites/default/files/2022-11/NAMIBIA%20inputs.pdf
18 University of Cape Town. (n.d.). *Green infrastructure for climate adaptation in peri-urban areas.* African Centre for Cities. Retrieved July 29, 2024, from https://acdi.uct.ac.za/acdi-research/green-infrastructure-climate-adaptation-peri-urban-areas
19 Ibid.
20 Ibid.
21 Ibid.
22 Ibid.

Initially included in the Green Plan, Namibia has advanced by ratifying key international agreements like the United Nations Framework Convention on Climate Change (UNFCCC).[23]

Despite these efforts, the country's vulnerability to climate impacts - such as extreme weather events and shifting climatic patterns - poses severe risks to its infrastructure. The primary focus remains on adaptation measures to protect and enhance infrastructure resilience. Although mitigation and a transition to a low-carbon economy are on the agenda, sustainable land management efforts are essential to support this transition.[24]

Climate change in Namibia is recognised as a cross-sectoral issue,[25] significantly affecting formal development planning and infrastructure development, underscoring the need for robust strategies to manage its impacts effectively.

## 3. THE ENVIRONMENTAL IMPACT OF INFRASTRUCTURE DECLINE AND RESILIENCE IN NAMIBIA

As Namibia faces the growing impacts of climate change, developing climate-resilient infrastructure has become increasingly crucial. This infrastructure is essential for withstanding and adapting to climate conditions while supporting economic growth and protecting communities. The environmental impacts of infrastructure decline and resilience are discussed below.

a) **Natural resource management:** Rapid urbanisation in Namibia, reflective of broader trends across Africa, has intensified challenges related to natural resource management. According to the Environmental Investment Fund of Namibia (EIF), over 70% of Namibians rely directly or indirectly on natural resources for their livelihoods.[26] This heavy dependence makes communities highly vulnerable to climate change, exacerbating the strain on already over-exploited resources.

b) **Rapid urbanisation:** The increasing strain on infrastructure due to rapid urbanisation further compounds these challenges. Namibia's urban growth outpaces infrastructure development, leading to more significant environmental hazards and persistent urban poverty. With the Institute for Security Studies (ISS) projecting that by 2043, 66.3% of the Namibian population will reside in urban areas, compared to 50.3% in 2019[27] - there is an urgent need to address these issues comprehensively.

c) **Urban climate governance:** Infrastructure development requires not only technological innovation but also political will, institutional capacity, and effective urban governance. Weak urban planning institutions and inadequate infrastructure exacerbate environmental challenges, including those related to climate change. As our understanding of climate change evolves - from a global issue to one

23 Zeidler, J., Kandjinga, L., David, A., Turpie, J. & Malema, D., 'Climate Governance & Development Case Study,' Heinrich Böll Foundation, Accessed 22 March 2024. Available at http://the-eis.com/elibrary/sites/default/files/downloads/literature/Climate%20Governance%20and%20Development%20Case%20Study.pdf
24 Ibid.
25 Ibid.
26 Browne, L., Benedict, L., Aribeb, K. & April, S. K. (2022). The Environmental Investment Fund of Namibia's Journey with the Green Climate Fund. Environment Investment Fund.
27 Aikins, Enoch Randy (2024) "Namibia," ISS Futures, Retrieved from https://futures.issafrica.org/geographic/countries/namibia/ (Online Resource) Updated 12 February 2024.

impacting transnational, regional, urban, and personal scales - there is an urgent need for a corresponding shift in climate politics and governance practices to address these environmental impacts effectively.[28]

d) **Inherited spatial legacies affecting climate progress:** In cities like Windhoek, Johannesburg, and Cape Town, the remnants of apartheid-era spatial planning continue to affect urban development. Public spaces designed to control and segregate populations still influence how cities are organised, contributing to persistent inequalities.[29] In Namibia, spatial exclusion has resulted in over 40% of the population living in the informal economy within environmentally sensitive areas, such as floodplains and steep slopes.[30] Understanding the historical legacies and their implications for urban development and the environment is a topic that requires further study.

## 4. UTILISING ADAPTATION FINANCING TO BRIDGE THE GAP FOR CLIMATE RESILIENT INFRASTRUCTURE IN NAMIBIA

Addressing the financial challenges of climate-resilient infrastructure is crucial for effective climate adaptation, especially in Namibia. The Stockholm Environment Institute (SEI) (2021) highlights several key issues that exacerbate these challenges at the continental level.[31] Adaptation funding in Africa is significantly lower than mitigation funding, with only 33% allocated to adaptation versus 66% for mitigation. This starkly contrasts with Namibia, where adaptation funding was evenly split between the two categories from 2014 to 2018.[32]

Moreover, adaptation funds often fail to reach the most vulnerable communities and sectors, with half concentrated in agriculture and water, while critical areas like biodiversity and health receive minimal support.[33] There are also significant inefficiencies in spending: between 2014 and 2018, African states committed $10.1 billion in adaptation funds but only spent $4.7 billion, reflecting governance and institutional capacity issues.[34] The financial landscape is further complicated by the mix of loans and grants, with loans making up 57% of the funding and grants 42%, creating challenges for financial planning and accessibility.[35]

Additionally, discrepancies arise from economic classifications; for example, Namibia struggles to access adequate climate finance due to its upper-middle income status, despite facing significant urban poverty.[36] This disconnect results in financial support that fails to address

28 British Academy. (n.d.). *DD and JG (JT) cities* (Working paper No. Just Transitions- Cities). David Dodman/ International Institute for Environment and Development, Jaideep Gupte/ Institute of Development Studies. Retrieved July 25, 2024, from https://www.thebritishacademy.ac.uk/documents/4391/DD_and_JG_JT_cities.pdf
29 Roland, S., Stevens, Q. & Simon, K. (2023). "The Uncanny Capital: Mapping the Historical Spatial Evolution of Windhoek." Urban Forum. Published online at https://doi.org/10.1007/s12132-023-09484-0.
30 Van der Berg, A. & Verschuuren, J. (eds.) (2022). "Urban Climate Resilience: The Role of Law." Elgar Studies in Climate Law. Edward Elgar Publishing Ltd. Published online at https://doi.org/10.4337/9781803922508.
31 Stockholm Environment Institute. (2021). Five ways climate adaptation finance falls short in Africa (Fact sheet). Retrieved from https://www.sei.org/wp-content/uploads/2021/10/five-shortfalls-climate-adaptation-finance-seifactsheet.pdf
32 Ibid.
33 Ibid.
34 Ibid.
35 Ibid.
36 UN Women (2023, June). Namibia National Gender Statistics Assessment. Retrieved from https://africa.unwomen.org/sites/default/files/2023-06/Namibia%20National%20%20Gender%20Statistics%20Assessment%20final%20web%5B84%5D.pdf

Namibia's unique needs. The rigid income-based categorisation within climate finance frameworks exacerbates this issue, creating a gap between available funding and the country's requirements. This misalignment underscores a critical flaw in climate finance allocation, highlighting the challenge of addressing complex socio-economic and environmental factors through overly simplistic financial classifications.

The misalignment between economic classifications and actual financial needs underscores the broader challenge of effectively addressing climate risks. This issue becomes particularly critical when considering adaptation financing, essential for developing climate-resilient infrastructure. Adaptation financing refers to financial solutions designed to enhance the effectiveness of infrastructure by adjusting practices, systems, and structures to mitigate potential damage and manage the impacts of climate-related hazards.[37] This type of financing comes from various sources, including public funds, private capital, and alternative investments, with public finance being the most significant contributor.

Private investment in climate adaptation is currently minimal, contributing only 2% of the tracked finance. Historically, barriers have hindered private sector involvement, making it less attractive. Increasing private investment is crucial to addressing the financial gap and improving resilience against natural hazards. Financial institutions and investors increasingly acknowledge their role in supporting vulnerable areas, particularly in emerging markets and developing economies.[38]

Adaptation financing is critical for developing climate-resilient infrastructure, as it funds necessary upgrades to handle climate-related risks. According to the 'State and Trends in Climate Adaptation Finance 2023' report, such financing offers significant benefits, including avoided losses and positive economic and social impacts.[39] The report notes that current funding levels must be revised despite rising adaptation finance needs - estimated at $130-415 billion annually by 2030 for developing countries. Effective adaptation financing enhances communities' ability to recover from and adapt to climate conditions, supporting more sustainable and secure urban environments.

Adaptation financing offers substantial benefits for climate-resilient infrastructure. Innovative models, such as the African Adaptation Acceleration Program (AAAP), developed jointly by the Global Centre for Adaptation (GCA) and the African Development Bank (AfDB), are now being implemented. These models aim to address the financing gap for adaptation projects by providing initial capital and modifying the risk-return profile to attract private investors.[40] Between 2019 and 2020, adaptation finance flows from grants and concessional debt in Africa rose by $2.9 billion, demonstrating the potential to leverage additional commercial capital in the future.[41] Several case studies on

37 United Nations Office for Disaster Risk Reduction. (2024). *Guide for adaptation and resilience finance*. United Nations Office for Disaster Risk Reduction. https://www.undrr.org/publication/guide-adaptation-and-resilience-finance
38 Ibid.
39 Global Commission on Adaptation. (2023). State and trends in climate adaptation finance 2023. Global Commission on Adaptation. https://gca.org/wp-content/uploads/2023/12/State-and-Trends-in-Climate-Adaptation-Finance-2023_WEB.pdf
40 Global Center on Adaptation. (2023). *State and trends in adaptation 2022: Adaptation finance flows in Africa*. Global Center on Adaptation. https://gca.org/wp-content/uploads/2023/01/GCA_State-and-Trends-in-Adaptation-2022_Adaptation-Finance-Flows-in-Africa.pdf
41 Ibid.

adaptation and funding strategies in Rwanda, Ghana, Kenya, and Egypt provide valuable insights into effective practices that could serve as models for other African countries, given the appropriate context.[42]

It is essential to tap into a diverse range of financial sources to mobilise additional adaptation investment and enhance the impact of resilience-building efforts. More than public spending is needed to bridge the adaptation finance gap; therefore, scaling up private sector investment is crucial to complement limited public resources.[43] An essential initiative in this regard is the African Financial Alliance on Climate Change (AFAC), which aims to unite vital financial institutions across Africa to mobilise private capital for climate objectives. The African Financial Alliance on Climate Change brings together multilateral, national, and regional development banks, central banks, commercial banks, institutional investors, stock exchanges, insurance companies, and finance ministries to foster alignment and encourage private investment in climate action. By leveraging such partnerships, including the Africa Adaptation Acceleration Program and the Africa Adaptation Initiative, AFAC helps to share risks and amplify the mobilisation of diverse financial sources.[44] These collaborative efforts are vital for increasing both the volume and effectiveness of adaptation finance.

Adaptation financing has significantly contributed to the development of housing, energy, water, and urban green infrastructure in other regions. Ghana is advancing adaptation financing through the Green Infrastructure Investment Fund (GIIF), which is seeking Green Climate Fund (GCF) accreditation to enhance resilience infrastructure. In 2021, Ghana launched the Green Climate Fund Readiness Program to strengthen national capacities for managing climate finance and boost private sector involvement.[45] Additionally, the country has issued sovereign bonds with adaptation components to support climate resilience projects.

Similarly, Rwanda utilises the Rwanda Green Fund (FONERWA) as its primary adaptation financing vehicle. Initially funded by international donors, FONERWA now attracts public and private funding domestically and internationally. The fund operates under the Ministry of Natural Resources but maintains independent administration.[46] Rwanda is also developing the Rwanda Catalytic Green Investment Facility (RCGIF) with the African Development Bank to support projects with blended financing structures.

While Kenya has integrated climate adaptation into its policies through the Climate Change Act of 2016 and the National Climate Change Action Plan (NCCAP), the country invested approximately $2.4 billion in climate projects between public and private sources.[47] Kenya's Tracking Adaptation and Measuring Development (TAMD) framework aids in evaluating and managing adaptation efforts, aiming to align climate finance with national and sectoral priorities.

42 Ibid.
43 Ibid.
44 Ibid.
45 Ibid.
46 Ibid.
47 Ibid.

Egypt faces significant climate risks in the Nile Delta regarding water infrastructure and has launched Vision 2030 to address these challenges. As part of this strategy, Egypt's Ministry of Finance introduced the region's first sovereign green bond to fund environmentally beneficial projects.[48] This initiative complements similar financing tools like the Seychelles' sovereign blue bond, supporting sustainable marine and fisheries projects.

Adaptation financing offers substantial benefits by facilitating investments in infrastructure designed to withstand climate impacts. It helps bridge crucial funding gaps and enables the deployment of innovative financial mechanisms. Adaptation financing enhances overall preparedness and sustainability by channelling resources into resilient projects, ensuring that systems and economies are more robust in the face of climate change.

## 5. CONCLUSION

This policy brief has explored the multifaceted challenges Namibia faces in achieving climate resilience, particularly in the context of its urgent need for robust adaptation financing. With Namibia experiencing increasing climate stressors, including severe droughts, the vulnerability of both urban and rural communities has been starkly highlighted. The brief has detailed the substantial investment required - USD 5.3 billion by 2030 - to address these climate impacts effectively. Despite advancements in policy, there remains a significant gap between the intended goals and practical implementation, particularly in areas critical to adaptation, such as housing, energy, water, and urban green infrastructure.

Adaptation financing is central to closing this gap. It provides crucial support for infrastructure projects designed to withstand and mitigate the effects of climate change. By bridging financial shortfalls and attracting private capital, adaptation financing facilitates the development of infrastructure that enhances resilience, reduces vulnerability, and supports sustainable economic growth. The innovative models emerging from initiatives like the African Adaptation Acceleration Program (AAAP) and the African Financial Alliance on Climate Change (AFAC) are pivotal in this regard, offering new ways to mobilise and deploy resources effectively.

For Namibia, focusing on adaptation financing is not only a matter of addressing immediate climate impacts but also a strategic component of achieving Vision 2030. This vision encompasses goals such as sustainable urban development, resilient infrastructure, and effective climate action. To align with these objectives, Namibia must prioritise comprehensive frameworks that integrate climate resilience into all infrastructure planning and development aspects. This includes leveraging adaptation financing to support robust risk mitigation strategies, enhance institutional capacities, and ensure financial resources are directed towards the most vulnerable communities and critical sectors.

## 6. RECOMMENDATIONS

### 6.1 Investment in climate-smart data technologies

Investing in climate-smart technologies, such as Artificial Intelligence (AI), big data, and machine learning, should be a central focus of adaptation financing. These technologies enhance urban data

48 Ibid.

generation and analysis, enabling sub-national and local governments to make evidence-based and participatory decisions. By incorporating climate-smart technologies into adaptation projects, Namibia can better align with the 2030 Sustainable Development Agenda and the New Urban Agenda.

### 6.2 Increase adaptation financing for nature-based solutions

The National Government should significantly increase adaptation funding for nature-based solutions, as highlighted by the Green Climate Fund and the Intergovernmental Panel on Climate Change's special report on global warming. Effective strategies such as ecosystem protection, restoration, and improved farmland management are crucial for mitigating climate impacts. Despite their proven effectiveness, nature-based solutions remain chronically underfunded.

### 6.3 Prioritise women and children in adaptation financing

Policymakers should prioritise women and children in adaptation financing to ensure inclusive and sustainable climate resilience. Gender-specific roles in climate adaptation, particularly for marginalised women, are often overlooked, impeding the creation of resilient urban communities. Aligning with the National Gender Policy (2010-2020) and National Development Plan (NDP), adaptation finance should integrate gender equity indicators to address disparities.

### 6.4 Integrate capacity building and maintenance funding

Infrastructure projects should include dedicated funds for capacity development, operation, and maintenance. This ensures that infrastructure not only gets built but also remains functional and sustainable over time. By embedding these aspects into funding plans, Namibia can better manage and maintain its infrastructure, preventing rapid deterioration and extending the lifecycle of projects.

### 6.5 Promote innovation in the infrastructure sector

There is a need to support the adoption of innovative technologies and practices across all infrastructure sectors. This includes improving quality standards and robust monitoring systems to ensure these innovations are effectively integrated and maintained.

### 6.6 Strengthen government capacity

A Special Envoy for Water, Housing, Energy, and Urban Green Infrastructure, supported by relevant ministries, will significantly enhance government capacity to address climate challenges. This role should focus on elevating the importance of water management, housing development, energy sustainability, and urban green infrastructure across various levels of government and stakeholder platforms. By coordinating efforts and streamlining policies, the Special Envoy can ensure that these critical areas receive the needed attention and resources.

### 6.7 Leverage public-private partnerships (PPPs) and blended finance

By integrating private sector skills and capital with public oversight and funding, Namibia can accelerate climate-resilient infrastructure development. Blended finance allows for the allocation of risk, attracting private investors by mitigating potential losses through public guarantees or co-investments. This collaborative model not only enhances financial sustainability but also fosters more effective project execution and management. Implementing PPPs and

blended finance will enable Namibia to achieve its adaptation goals more efficiently.

### 6.8 Improve spending efficiency

Addressing governance and institutional capacity issues is critical to improving the efficiency of adaptation spending. Strengthening transparency, accountability, and administrative capabilities will help ensure that committed funds are effectively utilised. Implementing robust monitoring and evaluation systems can further track fund allocation and impact, ensuring resources are used efficiently.

### 6.9 Strengthen coordination and collaboration

Strengthening coordination among governments, international organisations, private sector entities, and civil society is crucial for aligning funding priorities and ensuring comprehensive support. Promoting regional cooperation can also address common challenges and facilitate sharing best practices in adaptation financing.

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