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African Subnational Governments and the Proliferation of Climate Finance Instruments:

A Case Study of the Tanga UWASA Water Infrastructure Green Bond

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African Subnational Governments and the Proliferation of Climate Finance Instruments: A Case Study of the Tanga UWASA Water Infrastructure Green Bond

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Abstract

With African non-central governments (NCGs) (i.e., sub-states, regions, cities, municipalities, local governments, etc.) increasingly vulnerable to climate-induced impacts, there is a pressing need for local adaptation and mitigation financing that aligns with both environmental and socio-economic priorities. This need has precipitated a shift towards climate finance instruments to meet the funding deficit for local adaptation and mitigation projects at the local level. A case in point is the Tanga UWASA bond, East Africa's first subnational water infrastructure green bond. Touted as an important step towards local revenue mobilization for green projects from the domestic debt market, this instrument raises critical questions about debt responsibility, the prioritization of bankable projects over community needs, and the risk of financialization of essential public utilities.

This study explores whether the Tanga UWASA Green Bond represents true domestic capital mobilization or entrenchment of foreign financial dependence, given its recent listing on the Luxembourg Stock Exchange (LuxSE). Additionally, the report addresses the hidden transaction costs, the crowding-out effect on private capital, and the potential for socio-economic displacement tied to investor-driven return imperatives. By evaluating the bond's structure against international green bond standards and Tanzania's Five-Year Development Plan, this report critiques the potential of green finance to balance debt sustainability with meaningful environmental and social outcomes. We argue that the Tanga UWASA bond exemplifies the promise and pitfalls of innovative climate finance in Africa, revealing the complexities facing African subnational governments (SNGs) as they navigate global financial architectures that may serve external interests over and above local development needs.

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Introduction

As the global community grapples with the ever-increasing threat of climate change, the need for effective adaptation and mitigation strategies in Africa, one of the most vulnerable regions in the world, has become paramount.[1] In this context, African non-central governments (NCGs) (i.e., sub-states, regions, cities, municipalities, local governments, etc.) face a unique set of challenges, as they are the sites most directly impacted by climate change.[2]

The vulnerability of African urban centers to the impacts of climate change includes rising sea levels, more frequent and intense weather events, and the strain on already overburdened public infrastructure and services that pose serious threats to millions of residents' livelihoods and well-being.[3] Yet, the capacity of many African NCGs to effectively respond to these challenges is often hindered by limited financial, institutional, and human resources, as well as preexisting socio-economic and environmental issues.[4] To address the financial gaps, there is a growing emphasis on innovative financial products that are being targeted to meet the unique needs of African NCGs.[5] The proliferation of these financial instruments has been greeted with mixed reactions from stakeholders in Africa and beyond. A significant issue raised by scholars like Ayers[6] is the multifaceted constraints that African SNGs have faced in accessing and utilizing climate finance.[7] This leads to a significant shortfall in international funding available to support urban adaptation to the tune of tens of billions of dollars per year.[8]

1. Africa is ranked as one of the most climate-vulnerable continents in the world. See Notre Dame Global Adaptation Initiative, Our Work - Ranking, https://gain.nd.edu/our-work/country-index/rankings/ (last visited Dec. 22, 2024).

2. It is estimated that more than half of the world's population and over 79% of people in developed countries live in cities. See Denyse Dookie & Kate Gannon, Why is Climate Change Adaptation Important for Cities and How are They Adapting?, LSE (Aug. 31, 2022), https://www.lse.ac.uk/granthaminstitute/explainers/why-is-climate-change-adaptation-important-for-cities-and-how-are-they-adapting/.

3. David Dodman et al., Cities, Settlements and Key Infrastructure, inClimate Change 2022 - Impacts, Adaptation And Vulnerability: Working Group II Contribution To The Sixth Assessment Report Of The Intergovernmental Panel On Climate change 907, 921 (Hans-Otto Pörtner et al. eds., 2022).

4. See Geoffrey Adonu, Towards Closing Africa's Climate Financing Gap: Scaling African Governments' Access to the Sustainable Bond Market, in Transforming Climate Finance in an Era of Sovereign Debt Distress 141, 154 (James Thuo Gathii, Adebayo Majekolagbe & Nona Tamale eds., 2023).

5. For a comprehensive overview of the origins and evolution of climate finance mechanisms at the local and municipal levels in Africa, see Climate Bonds Initiative, Data, https://www.climatebonds.net/market/data/#issuer-type-charts (last visited Dec. 22, 2024).

6. Jessica Ayers, International Funding to Support Urban Adaptation to Climate Change, 21 Env't & Urbanization 225, 225 (2009).

7. Id. at 227–36.

8. Id. at 228.

Mbori[9] corroborates this point, stating that "since 2018, the share of financial flows to developing countries for clean energy projects has decreased by approximately 23%."[10] Compounding this challenge, local actors often lack a comprehensive understanding of the climate finance landscape, along with the technical capacity to meet the stringent and sometimes opaque fiduciary requirements associated with many funding mechanisms, as well as the capacity to identify and package projects that are compatible with market standards and large institutional investors' investment requirements.[11] This extends to the crafting of strong eligibility criteria or ambitious sustainability targets that align with the environment, sustainability, and governance (ESG) expectations of global investors while remaining a bankable project.[12]

Furthermore, there is a mismatch between the financing instruments preferred by international donors and the needs of vulnerable communities. This is particularly problematic for African NCGs using these climate-linked instruments because climate finance mechanisms favor loan-based models over grant-based approaches that may be less suitable for resource-constrained municipalities and cities.[13] An immediate concern is the potential for displacement of local residents from communities due to the hike in prices that accompany adaptation projects that prioritize a return on investment for bondholders.[14] In essence, using sustainable-linked bonds for the provision of public utilities poses the danger of prioritizing investor returns over the socio-economic needs of vulnerable populations, which are supposed to benefit from the project linked to a sustainable bond.

To further compound the situation, there is the precarity of green finance mechanisms linked to public-private partnerships (PPPs), frameworks that provide vital public utilities in Africa. According to Mbori, these frameworks often lead to hidden debt accumulation, over indebtedness of state corporations, and contingent liabilities, which can overshadow the equitable provision of vital services since Global North investors' interests dominate, creating a cycle of dependency and financial strain that risks compromising such projects' long-term socio-economic stability and environmental sustainability.[15]

9. See Harrison Mbori, Green Energy Purchasing and the Evolving Sovereign Debt Crisis in Africa, in Transforming Climate Finance in an Era of Sovereign Debt Distress 253 (James Thuo Gathii, Adebayo Majekolagbe & Nona Tamale eds., 2023).

10. Id. at 261.

11. See Jessica Omukuti et al., The Green Climate Fund and Its Shortcomings in Local Delivery of Adaptation Finance, 22 Climate Pol'y 1225, 1225–40 (2022), and Adonu, supra note 4, at 153.

12. Adonu, supra note 4, at 154.

13. Ayers, supra note 6, at 232. See also Marie-Louise F. Aren, Climate Justice and Sovereign Debt: Exploring Regulatory Complexities in the Global Climate Finance Architecture Inhibiting Finance Flows for Africa's Climate Action, inTransforming Climate Finance in an Era of Sovereign Debt Distress 27, 55 (James Thuo Gathii, Adebayo Majekolagbe & Nona Tamale eds., 2023).

14. Jo Walker, Climate Gentrification and Its Effects on Vulnerable Populations, Univ. of Mich. Sch. for Env't. and Sustainability (Jan. 26, 2024), https://seas.umich.edu/news/climate-gentrification-and-its-effects-vulnerable-populations#:~:text=This%20phenomenon%20is%20referred%20to,subsequent%20displacement%20of%20long%2Dterm.

15. Mbori, supra note 9, at 262.

These intersections underscore the importance of tailoring climate finance instruments to the unique socio-economic and environmental contexts of each locality while also emphasizing the need for a more holistic approach to addressing the multidimensional challenges facing African cities.[16] To further understand the foregoing, there is a need for case studies that focus on the proliferation of climate financial instruments for public expenditure across the African continent.[17]

The aforementioned is critical when viewed from the context of SNGs functioning as actors involved in climate finance mobilization. Historically, SNGs have had limited engagement in this regard, especially concerning the design and issuance of green bonds. The Tanga Urban Water Supply and Sanitation Authority (UWASA) Green Bond—East Africa's first SNG water infrastructure green bond valued at approximately US$21 million—is a unique case of SNG revenue mobilization via the capital market. Before this, there had only been two issuances by African SNGs valued at US$0.1 billion and US$0.5 billion in 2014 and 2017, respectively.[18] This uniqueness, and the understanding of the nature and implication of bond issuance for Tanga's and Tanzania's debt profiles, justify this study. To this end, the study raises and addresses four critical questions:

A Is this domestic or international capital resource mobilization?

The initial framing of the bond issuance indicated that this landmark transaction is part of Tanzania's broader Alternative Project Financing (APF) strategy, adopted in 2021, to broaden the domestic revenue base and finance various national development initiatives. While hailed as a significant step for municipalities and cities to raise substantial capital from local markets, the bond's recent listing on the Luxembourg Stock Exchange (LuxSE) raises questions about whether this action truly constitutes domestic or international resource mobilization.

B Whose debt? Tanga's or Tanzania's?

As a debt instrument, the bond introduces new financial obligations that could further exacerbate Tanzania's debt burden. This raises important questions about the entity that ultimately bears this debt burden in case of default—the subnational government of Tanga or the Tanzanian central government?

C What is the business case for the project linked to the bond issue?

With a projected increase in water availability from 96% to 100% in Tanga City, the business case and economic justification for the bond-financed project are questionable. Moreover, concerns arise about the financialization of public utilities, the transfer of risk to the public sector, and the fiscal policy implications.

D Has there been transparency, accountability, and stakeholder participation in the project design?

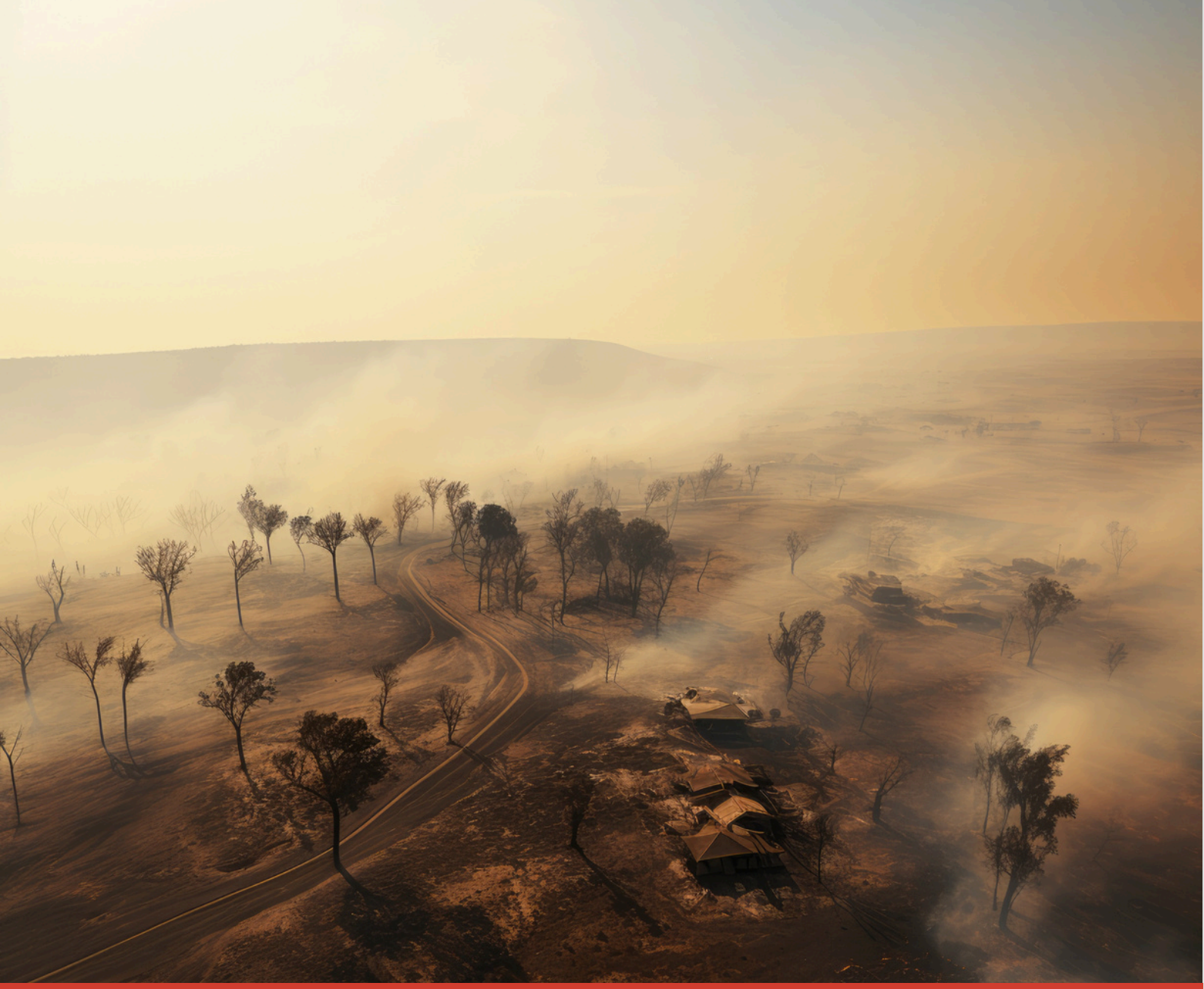
It remains unclear whether meaningful consultations with local municipalities and communities were undertaken in the decision-making process for this project. This raises potential concerns about a disconnect between the project's objectives and the local population's actual needs and priorities.

Through these questions, this study seeks to critically examine the appropriateness of using green bonds as a financing mechanism for public utilities in Tanzania, focusing on the risks of financialization, accountability, and the potential socio-economic impact on vulnerable communities.

16. Ademola Adenle et al., Managing Climate Change Risks in Africa - A Global Perspective, 141 Ecological Econ. 190, 190–201 (2017).

17. Leal Filho et al., Strengthening Climate Change Adaptation Capacity in Africa - Case Studies from Six Major African Cities and Policy Implications, 86 Env't Sci. & Pol'y 29, 29–37 (2018).

18. Climate Bonds Initiative, supra note 5.



Part 1:

Nature and Effect of Green Bonds

Like conventional bonds, green bonds represent a loan from multiple investors simultaneously to the issuer who commits to repaying the principal at the maturity of the bond along with fixed or variable interest (referred to as coupon payments) during the bond's tenure or maturity or at a specified maturity date. Indeed, green bonds are a type of bond and also a type of debt instrument. They are structured similarly in terms of the issuance process, maturity period, interest payments, and principal repayment.[19] 'Greenness' is an indicator that issuers are inclined towards incorporating ESG principles and metrics into their debt management architecture. For nations, this means that the same ESG factors and considerations are incorporated into public debt management and used as a basis for the design of securities issued to raise capital specifically to support projects with definitive environmental goals.[20]

Commencing with the European Investment Bank's issuance of the Climate Awareness Bond in 2007 and the World Bank's issuance of the first labeled green bond in 2008, the use of ESG-based debt instruments for public finance became prominent, with Poland providing precedent for other nations to follow.[21] The presence of green bonds in the global system is a consequence of their utility for the expression of commitment to meeting sustainability targets and investors' demands for them.[22] In the context of Africa, their presence and relevance can be associated with their potential to unlock vast economic opportunities, which can be put in the context of avoiding severe economic losses and minimizing catastrophic social and developmental consequences, such as the failure to meet the United Nations' Sustainable Development Goals (SDGs).[23]

A key feature of green bonds is that they broaden issuers' investor base and provide environmental credentials that make issuers attractive to investors who prioritize environmental, social, and governance factors.[24] As can be gleaned from Table 1 below, another difference is that the capital raised by the purchase or issuance of green bonds is subject to the 'use of proceeds' criterion, which demands that the funds be earmarked exclusively for financing eligible green projects or projects that have environmental benefits, such as renewable energy initiatives, sustainable agriculture, pollution control, and water conservation.[25] This harmonizes with Jones et al.'s assertion that, in addition to reshaping the built environment, green bonds mediate exposure to the environmental risks plaguing the planet and provide a route to achieving the triple bottom line.[26]

19. Kariyawasam Nanayakkara & Sisira Colombage, Does Compliance with Green Bond Principles Bring Any Benefit to Make G20's 'Green Economy Plan' a Reality?, 61 Acct. & Fin. 4257, 4257–85 (2021).

20. Quinn Curtis, Mark Weidemaier & Mitu Gulati, Green Bonds, Empty Promises, 102 N.C. L. Rev. 131, 133–34 (2023).

21. Adonu, supra note 4, at 143.

22. See OECD, OECD Sovereign Borrowing Outlook 2022 (2022). doi: https://doi.org/10.1787/b2d85ea7-en. See also Akinyi Eurallyah, Are Sovereign Sustainability-Linked Bonds Double-Edged Swords? Assessing the Feasibility of Sovereign Sustainability-Linked Bonds for Sustainable Development in Africa,in Transforming Climate Finance in an Era of Sovereign Debt Distress 165, 165 (James Thuo Gathii, Adebayo Majekolagbe & Nona Tamale eds., 2023); and J.L. Smith et al., ESG Factors in Sovereign Debt Investing, in Responsible Investment in Fixed Income Markets 95, 96 (J. Kendall & R. Sullivan eds., 2023).

23. C. Meattle et al., Landscape of Climate Finance in Africa 2024, Climate Pol'y Initiative (2024), https://www.climatepolicyinitiative.org/publication/landscape-of-climate-finance-in-africa-2024/.

24. M.G. Asl et al., Green Bond vs. Islamic Bond: Which One Is More Environmentally Friendly?, 345 J. Env't Mgmt. 1, 1–30 (2023). See also World Bank, What Are Green Bonds? (Dec. 1, 2015), https://documents1.worldbank.org/curated/en/400251468187810398/pdf/99662-REVISED-WB-Green-Bond-Box393208B-PUBLIC.pdf.

25. T. Ehlers & F. Packer, Green Bond Finance and Certification, Bis Q. Rev. 89, 89–104 (2017). See also J. Jelemensky, Quantitative Comparison of the Issue Yield of Green Bonds and Conventional Bonds (2022).

26. R. Jones et al., Treating Ecological Deficit with Debt: The Practical and Political Concerns with Green Bonds, 114 Geoforum 49, 49–58 (2020).

Table 1: Characteristics of Green Bond Certification Schemes

	CBI Climate Bonds Certification	Green bond indices	CICERO Second Opinions	Moody's Green Bond Assessments	Standard & Poor's Green Evaluations
Use of funds must be tied to green investment	Yes	Yes	Yes	Yes	Yes
Eligibility criteria differ by sector	Yes	Yes			Yes
Ex-post monitoring/assessment				Yes	
Granular assessments of greenness			Yes	Yes	Yes
Quantitative weights for specific factors				Yes	Yes

Source: Ehlers & Packer (2017).

In addition to the 'use of proceeds' criterion, some green bond certification schemes mandate reporting standards with which issuers must comply. For example, under the GBP framework, issuers only utilize project funds that include renewable energy, energy efficiency, pollution prevention and control, and clean transportation, and they are also obligated to produce an annual report that details dispersed proceeds and their expected impact until the issuance's full proceeds are dispersed.[27] For its part, the Climate Bonds Initiative, in the context of its climate bonds standard and certification scheme, specifies projects, assets, activities, and expenditures for which the bond's issuance proceeds can be utilized for the bond to be considered green.[28]

As previously stated, green bonds are, for the issuer, a debt that must be repaid later with interest. Generally, on a fundamental level, green bonds do not directly contribute to expanding the revenue base or the issuing state's internal financial resources. This is because the bond's issuance is essentially the internal or external borrowing of capital to be utilized for specific projects, assets, activities, or expenditures. In addition, the bond might have a crowding-out effect, which could further cause economic contraction and prevent the expansion of an issuer's revenue base or internal financial resources. However, on a more nuanced level, the overall effect may be different based on the existence of various factors. For example, a project financed by green bonds (e.g., water infrastructure development and upgrade) could catalyze migration to host communities, industrial activities, etc., which could spur economic expansion and growth. This development has the potential to drive domestic resource mobilization. And because of the subsequent economic expansion, disposable income improves, creating opportunities to generate additional revenue through taxation.

While green bonds present a potential pathway to stimulate domestic resource mobilization in the long term—by driving economic expansion and catalyzing taxable growth—it is crucial to approach their issuance with caution. As debt instruments, they impose repayment obligations that, if poorly managed, can offset their economic benefits and place significant financial burdens on the issuing entity. With this understanding, we now turn to the specific case of the Tanga UWASA Water Project Green Bond to evaluate whether its structure and projected outcomes align with Tanzania's broader development goals.

27. ICMA, Green Bond Principles: Voluntary Process Guidelines for Issuing Green Bonds (June 30, 2021, with June 2022 Appendix 1), https://www.icmagroup.org/assets/documents/Sustainable-finance/2022-updates/Green-Bond-Principles-June-2022-060623.pdf.

28. Climate Bonds Initiative, Climate Bonds Standard, Version 4.1 (updated Feb. 2024), https://www.climatebonds.net/files/files/climate-bonds-standard-v4-1-202403.pdf.

Part 2:

Overview of the Tanga UWASA Water Project Green Bond

The Tanga UWASA Water Project Green Bond is a landmark initiative. The project is a consequence of Tanga UWASA's environmental and social commitments and is aimed at addressing critical water and sanitation challenges facing the Tanga region, which encompasses Tanga City and the Muheza and Pangani townships. Specifically, the bond's purpose is to raise funds for the expansion of the Tanga UWASA water treatment and supply infrastructure and the conservation and protection of natural water sources. The expansion was planned in response to rapid population growth in urban and peri-urban areas, which has strained aging infrastructure initially designed for a smaller population and which has negatively impacted Tanga UWASA's ability to supply water that meets the population's demand. To this end, reliance had previously been on government funding.
However, in light of Tanzania's Five-Year Development Plan (FYDP-III), which outlines Tanzania's national objective for industrialization, infrastructure growth, and sustainable development, and provides a framework for the pursuit and harnessing of innovative financing, Tanga UWASA designed and issued a TZS 53.1 billion (US$21 million) water green bond on the Dar es Salaam Stock Exchange. Thus, the Tanga region's government became the first subnational government in East Africa to issue a green bond.[29]

The Tanga UWASA Green Bond carries a fixed interest rate of 13.50% per annum, payable semiannually in arrears, while the principal amount is redeemable at par upon maturity in 2034. This predictable, periodic interest payment qualifies the Tanga UWASA bond as a coupon bond.[30] The funds raised are earmarked for use in the improvement of water supply infrastructure, wastewater management, and the conservation of water resources. Beyond the revenue that would potentially accrue to the Tanga region, the project is expected to mitigate the risk of acute water shortage envisaged in the next three years if the supply and infrastructure situation remains at the current level.[31] Corollaries of the Tanga UWASA Green Bond and the project include reduced health risks, waterborne diseases associated with the lack of access to clean and adequate water and sanitation facilities, and increased local employment, which in turn would catalyze other economic activities.

Based on its design, the Tanga UWASA bond aligns with the Green Bond Principles (GBP).[32] The GBP are standardized parameters for guidance and the reduction of information asymmetry between issuers and investors regarding how financial assets and the consequential associated economic activities impact climate change and the environment.[33] As such, they are a template for certifying the 'greenness' of a bond. However, they are not normative but voluntary.[34] As such, they vest issuers with the right to label or categorize the bond. This creates less market credibility, as the scope for choice accorded the issuer provides investors with an opportunity to question the bond's certificate of 'greenness' and market integrity.[35]

29. UNCDF, Tanga UWASA Issues Historic Water Infrastructure Green Bond Valued at TZS 53.12 Billion, News (Feb. 22, 2024), https://www.uncdf.org/article/8664/tanga-uwasa-issues-historic-water-infrastructure-green-bond-valued-at-tzs-5312-billion; see also Tanga UWASA, Tanga Water Green Bond Framework, Republic of Tanzania, Ministry of Water (Sept. 2023), https://www.tangauwasa.go.tz/green_bond/Tanga%20UWASA%20Bond%20-%20Green%20Bond%20Framework.pdf; Republic of Tanzania, Ministry of Finance and Planning, The Third National Five Year Development Plan 2021/22 – 2025/29 (Nov. 2, 2021), https://www.mof.go.tz/uploads/documents/en-1636177646-The%20Third%20National%20Five%20Years%20Development%20Plan%20202126%20Final.pdf.

30. O. Blanchard, A. Amighini & F. Giavazzi, Macroeconomics: A European Perspective (2017).

31. Tanga UWASA, Tanga Water Green Bond Information Memorandum 33 (Feb. 22, 2024), https://www.uncdf.org/Download/AdminFileWithFilename?id=20351&cultureId=127&filename=final-prospectus-prospectus-of-tanga-uwasa-bondfinalcompressedpdf.

32. ISS ESG, Second Party Opinion: Sustainability Quality of the Issuer and Green Bond Framework Tanga Urban Water Supply and Sanitation Authority(Oct. 9, 2023), https://www.tangauwasa.go.tz/green_bond/20230919TangaUWASA_SPO_final.pdf.

33. S. Hyun, D. Park & S. Tian, The Price of Going Green: The Role of Greenness in Green Bond Markets, 60 Acct. & Fin. 73, 73–95 (2020).

34. Ehlers & Packer, supra note 25, at 92.

35. Nanayakkara & Colombage, supra note 19.

Box 1:

Facts about the Tanga UWASA Bond

- Ten-year water infrastructure green revenue bond valued at TZS 53.12 billion.
- Built on the Alternative Project Financing Strategy—a national strategy developed to support the implementation of a Five-Year Development Plan (FYDP-III) that focuses on mobilizing domestic resources to finance infrastructure development and public service projects.
- Historic, first-of-its-kind, subnational water green bond in Tanzania's and East Africa's histories.
- Issued twice in one year without sovereign guarantee.
- Not ring-fenced.

A key distinguishing feature of the Tanga UWASA Green Bond is that the proceeds from its issuance are ring-fenced exclusively to financing projects that improve water infrastructure and sanitation services in Tanga, as well as the attainment of an environmental objective. By design, the investor is exposed to the project's risk without the issuer having a legal claim or guarantee to seek repayment directly from the issuer's assets in the case of default, and the investor's return on investment is tied to revenue from UWASA-provided services. This makes it a green project bond.[36] Also, the issuer has the liberty to define the environmental objective that would underpin its issuance, the project to be funded by the proceeds from the issuance, and how the project seeks to align its goal with the environmental objective. By this, the design of the Tanga UWASA Green Bond complied with the GBP's second component that pertains to the process of project evaluation and selection. Furthermore, net proceeds from the bond issuance will be credited into an account dedicated to the management and tracking of the proceeds' disbursements to ensure efficiency and increased investor confidence, while allocation and impact reporting will be made annually after the issuance to foster transparency and accountability. With this, the issuer complied with the GBP's third and fourth principles.[37]

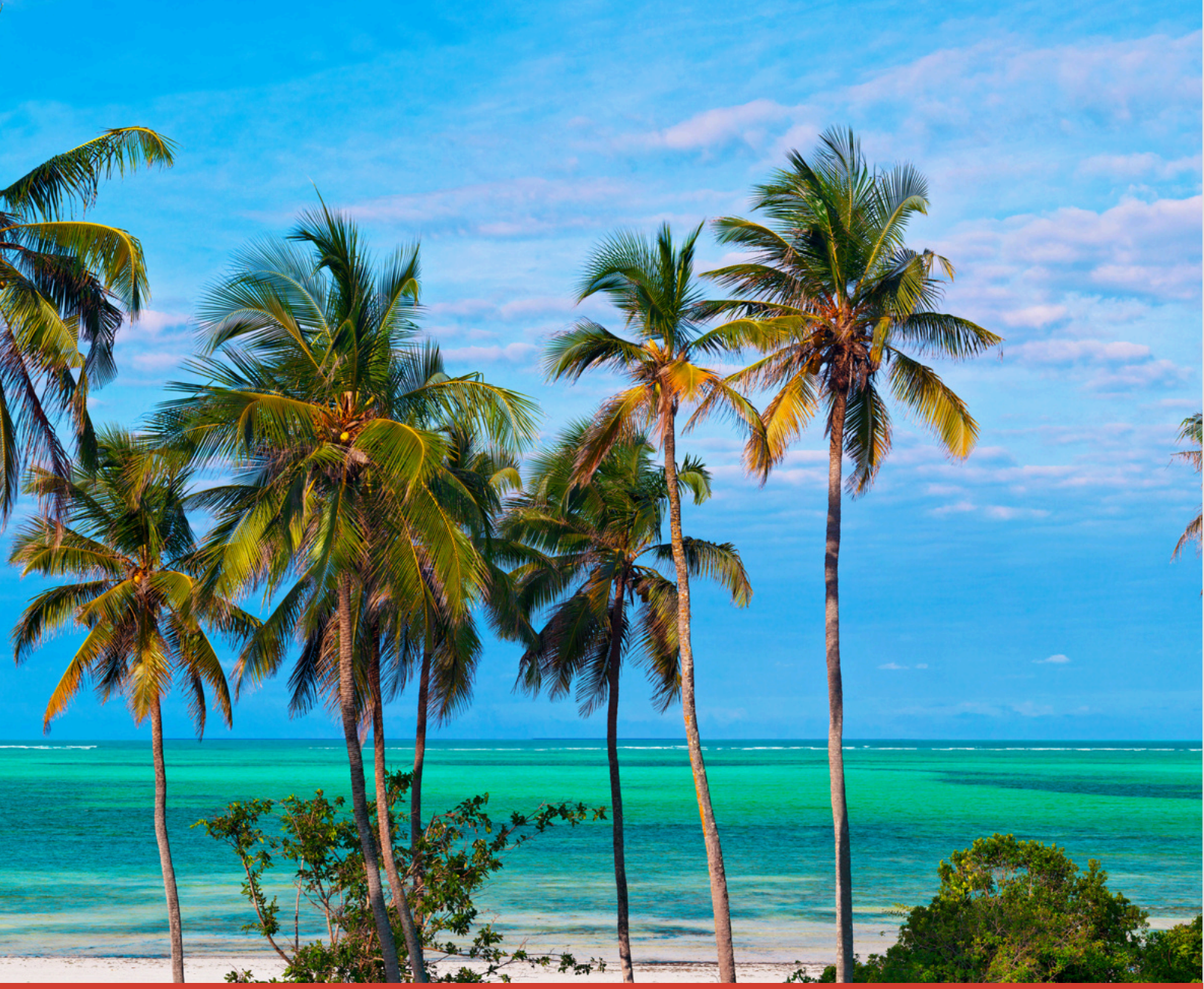
That said, it should be noted that motivation for the project/bond issue can be ascribed to several interconnected social, environmental, and infrastructure needs. At the top of the list is the supply-demand disequilibrium associated with water and sewage services in Tanga City because of population growth and urbanization brought about by increased industrialization and commercial activities. There is also the need to address or ameliorate critical socio-environmental challenges associated with water use and promote the SDGs, especially SDG 6 (Clean Water and Sanitation) and SDG 13 (Climate Action) while ensuring the ecological preservation of critical water sources. Furthermore, the project and bond align with Tanzania's FYDP-III, which is a strategic financing shift from foreign loans and aid to an alternative project-financing framework that would drive domestic resource mobilization.[38] This is because the bond's issuance in the domestic capital market fosters the attainment of the national government's goal of diversifying public finance revenue from traditional or conventional sources to domestically mobilized resources. As such, it attracts private capital to close the infrastructure financing gap in Tanga, which in turn would provide a catalyst for the region's and Tanzania's economic development.

Although the Tanga UWASA Green Bond aligns with the usual dynamics expected of a bond issue of this nature, the potential for high transaction costs, the influence of international investor expectations, and the risk of prioritizing profit over local needs highlight critical areas for scrutiny. The latter concern is raised because the subscription is not ring-fenced to Tanzanians as was initially claimed. The recent listing on the LuxSE, in addition to further exposing the bond to foreign subscription, raises questions about the nature of the instrument (i.e., whether it truly constitutes domestic or international resource mobilization). In addition to answering this question, the following section will highlight some of the socio-economic consequences associated with the bond's issuance.

36. ICMA, supra note 27.

37. UNCDF, Tanga UWASA, supra note 29, at 143.

38. Id. at v.



Part 3

Nature and Consequence of the Tanga UWASA Water Project Green Bond

The bond's structuring and initial issuance situate it within Tanzania's broader alternative project-financing strategy adopted in 2021 to mobilize the TZS 115 trillion (US$45 billion) required over five years to achieve the FYDP-III's goals. However, while it provides a significant opportunity for an SNG to use the national framework and structure to raise substantial capital, the recent listing of the bond on the LuxSE raises questions about whether this truly constitutes domestic or international resource mobilization. The conclusion is that the recent event further complicates the categorization because it takes subscription beyond Tanzania's borders (i.e., domestic institutions or citizens).

Despite its issuance in Tanzanian shillings, the fact that it is not ring-fenced to Tanzanians and the listing on the LuxSE alters the bond's accessibility.[39] Hence, it is more of a hybrid, providing Tanga and Tanzania access to both domestic and international financing to meet the regional and UWASA infrastructure needs and demands. This raises several concerns. First, the structuring of the instrument could potentially lead to a crowding-out effect on Tanzania's private sector. Second, it could lead to foreign investors' domination of the subscriber base, which, when taken into cognizance, dilutes the business case for the bond's issuance. It is to these consequences that we now turn our focus. Flowing from the first two concerns, there is the wider issue of the green criteria's enforceability.

01. Crowding-Out Effect on the Private Sector

Capital mobilization from the domestic capital market for the Tanga UWASA project via the issuance of the green bond is unique[40] and worthy of commendation given the discourse around African states' mounting external debt profile. However, what is glossed over or not considered is that the issuance of bonds on the Dar es Salaam Stock Exchange has the potential to reduce the availability of investment capital to the domestic private sector or increase its cost (i.e., interest), as the government competes with the private sector for the limited capital available in the Tanzanian financial market, which is characterized by limited liquidity and depth.[41] In such a situation, domestic financial institutions prioritize government debt, a development that increases the premium at which private investors can access investment capital and reduces the capital available to them.[42]

The corollaries of this situation are multiple and interconnected. Where sovereign domestic debt constitutes a substantial portion of bank deposits, it has the potential to bring about inflationary pressure, economic contraction, and the slowdown of economic growth. For the government, it brings about a reduction in the taxable base, as the private sector is forced into suboptimal growth because of the stagnation of capital and the revenue available for financing critical infrastructure, services, and development. This is because, at this point, the government most likely prioritizes debt service payments in a bid to salvage its debt profile.

39. UNCDF, Tanga UWASA Brings East Africa's First Subnational Green Bond to LuxSE (Oct. 25, 2024), https://www.uncdf.org/article/8807/tanga-uwasa-brings-east-africas-first-subnational-green-bond-to-luxse; see also Luxembourg Stock Exchange, Fees for Listing Service (Jan. 2024), https://www.luxse.com/-/media/bdl-port-luxse-ssr/Data/Media/Files/fees/LuxSE_Fees_for_Listing_Services.pdf?rev=d07f6f6f69364173b18c75d258a2660f&hash=5AE036301B7B705F70BD5CAA6F7F3F2C.

40. UNCDF, Tanga UWASA, supra note 29.

41. Id.

42. G. Bua, J. Pradelli & A.F. Presbitero, Domestic Public Debt in Low-Income Countries: Trends and Structure, 4 Rev. Dev. Fin. 1, 1–19 (2014).

02. Foreign Investor Domination

The possibility of domination by foreign investors of the subscriber base due to the bond's design and issuance is critical because of the consequential economic sovereignty issues. Such dominance has several negative implications that span across economic, political, and strategic dimensions where foreign nationals or foreign state-backed enterprises become the major bondholders. For example, these bondholders could wield substantial influence over Tanzania's strategic infrastructure because of the size of their portfolios. This could allow the foreign entity to exert indirect control over a vital public service, particularly when Tanga faces financial difficulties and defaults on payments due on the bond, thus providing the foreign state with a base from which to pursue and gain concessions (political or economic) from the regional or central governments.

The same situation perpetuates the outflow of national capital and negative balance of payments, which inhibits development efforts in developing countries like Tanzania and exacerbates their mounting foreign debt. In turn, these countries would require external borrowing to finance public expenditures.[43] In such a situation, the subnational government of Tanga and Tanzania's central government would become susceptible to economic and diplomatic pressures of all kinds. This could manifest in the form of being leveraged into granting preferential access to the foreign state or its agents or a loss of control over this critical and essential public infrastructure. While strictly not related to an inability to make bond payments, Zambia's and Sri Lanka's inability to meet their repayment obligations in connection with received foreign capital for funding critical infrastructure illustrates how creditor states or their agents can gain preferential access or how foreign capital can pose a risk of losing control of strategic infrastructure due to repayment default.

03. The unenforceability of Green Criteria

Curtis, Weidemaier, and Gulati argue that green bonds are not as acclaimed because of structural and legal shortcomings in their designs.[44] They assert that most green bonds are characterized by vague or non-binding language, the absence of monitoring and compliance mechanisms, and the potential to contribute to greenwashing instead of providing substantive environmental gains. These authors' assertions provided us with a lens through which we further examined the Tanga UWASA bond.

The Tanga UWASA Green Bond information memorandum sets out that the bond's proceeds will be used for the (re)financing in whole or in part of new or existing eligible projects per the GBP categories (i.e., sustainable water and wastewater management, renewable energy, energy efficiency, and climate change adaptation) and the risk factors associated with Tanzania, the issuer, the issue, and the market generally, which prospective investors should consider before investing in the bond.[45] There are, however, no explicit or precise legally enforceable covenants obligating the issuer to abide by these standards on which the bond's 'greenness' is based. The effect of the foregoing is to create the impression that the bond's 'greenness' is aspirational. This effectively deprives investors of any recourse or default provision when the commitment is unmet. This and the information memorandum's broad description outlining projects (e.g., 'expanding water services,' 'improving water infrastructure') without specificity or provision of stringent qualifying criteria, could allow for the use of the proceeds to finance projects without any (or marginal) environmental benefits for Tanga or Tanzania. For us, this raises greenwashing concerns, as the bond is intrinsically more like a traditional bond.

43. T.S. Nyoni, Capital Flight from Tanzania, in External Debt and Capital Flight in Sub-Saharan Africa 265, 282 (M.S. Khan & S.I. Ajayi eds., 2000).

44. Curtis, Weidemaier & Gulati, supra note 20, at 146–47.

45. See UNCDF, Tanga UWASA, supra note 29, at 39.

Part 4

The Debt Burden

The Tanga UWASA Green Bond presents a dual reality, as it is both a tool for sustainable development and a debt instrument. The former is because it could provide the government of Tanga with funds for financing public expenditures related to the improvement and management of water resources in a manner that aligns with Tanzania's commitment to the SDGs. The latter is because once the subscription is settled, it becomes a fixed-term instrument that creates a debt obligation (i.e., the coupon payments must be discharged semiannually before maturity in 2034, and the face value or principal of the bond must be paid at maturity).[46]

The manifestation of the bond as an environmentally focused debt instrument warrants a critical assessment. Our point of reference is Curtis, Weidemaier, and Gulati's conclusion that the green bonds' mix of features makes them an 'illusion' of sustainable finance.[47] We agree that the Tanga UWASA bond fits this description. This is because, in addition to lacking precise, legally enforceable covenants obligating the issuer to meet green standards and specificity or stringent criteria regarding what the mobilized funds can be used to finance, it is susceptible (like conventional bonds that African states issue) to the 'African premium.' The latter increases the cost of borrowing for African nation-states, notwithstanding their macroeconomic indices.[48] It is surmised that the Tanga bond suffers this fate because it is deemed to have been issued by a Tanzanian SNG. That said, in this section, we intend to address the nature and incidence of the debt burden in the context of the overall topic of sovereign debt.

01. Who bears the debt burden? Tanga or Tanzania?

Defining 'sovereign debt' is a complex endeavor, complicated by varied perspectives on its origins, scope, and structure. Despite the multiplicity of perspectives, enablers of sovereign debt give its identification and valuation the hue of a slippery slope worthy of avoidance. We venture to define 'sovereign debt' as the totality of the sovereign's debt, including external and domestic debt stocks.[49] While this definition is minimalistic, it again highlights and reflects the complexity and potential ambiguity when defining sovereign debt, along with the fact that it is conceptually challenging to encapsulate comprehensively. Furthermore, we choose this definition to avoid the conjecture associated with the purpose for or rationale behind sovereign indebtedness, the mechanisms for the creation of sovereign debt, and their implications. However, this does not eclipse the definition's utility. This is especially the case when our minimalist definition is viewed through the lens of the Westphalian conceptualization of statehood, the associated principle of sovereignty, and its consequences in international law.

The perspective subsumed in our definition operates in tandem with the notion that a state is sovereign, autonomous, and ultimately responsible for its (in)actions under international law. Thus, the definition emphasizes responsibility and legal accountability, and the perspective aligns with the position in customary international law regarding responsibility for international wrongful acts.

46. Blanchard, Amighini & Giavazzi, supra note 30.

47. Curtis, Weidemaier & Gulati, supra note 20, at 178.

48. See I.A. Aniyie, Beyond Traditional Models: A Focus on Alternate Pathways for Managing Africa's Sovereign Debt, Politikon 1, 1–17 (2024), https://doi.org/10.1080/02589346.2024.2339065; see also Adonu, supra note 4, at 156.

49. Aniyie, supra note 48.

Article 4 of the Responsibility of States for Internationally Wrongful Acts (2001)[50] provides the following:

- *The conduct of any [s]tate organ shall be considered an act of that [s]tate under international law, whether the organ exercises legislative, executive, judicial or any other functions, whatever position it holds in the organization of the [s]tate, and whatever its character as an organ of the central Government or of a territorial unit of the [s]tate.*
- *An organ includes any person or entity which has that status in accordance with the internal law of the [s]tate.*

This provision ensures that all actions or omissions by any state organ, whether of the central or subnational government, irrespective of their nature or function, are attributable to the state under international law. The Westphalian conceptualization of statehood and the associated principle of sovereignty justify this customary international law principle. Meyer corroborates this point by arguing that

> *states vary widely in their structure and distribution of powers, and . . . in most cases the constituent units have no separate international legal personality of their own. Because local governments generally lack legal personality under international law and therefore cannot bear legal responsibility, vicarious liability ensures that all domestic exercises of governmental authority can be reached by international law. In this sense, the rule holding a state accountable for the actions of its constituent parts has similar rationales to vicarious liability in tort law.*[51]

The foregoing means that sovereign debt and associated obligations are those of the state as a unitary sovereign or actor without recourse to the debt's origin, its nature, components, or enablers. Hence, the simplistic definition of sovereign debt serves a functional purpose, as it promotes the view that the duty of states to repay debt is absolute. The implication of this is that Tanzania cannot avoid responsibility when Tanga UWASA is unable to discharge its obligation per the bond terms. This will be further expatiated below.

02. Implication of the Issuance

Having established that Tanga's debt is sovereign debt, attention shifts to the question of the status of the Tanga UWASA Green Bond. In this regard, the focus is on the implication of the bond's issuance for state liability. By design, the bond was structured to be repaid with revenue generated from services rendered by UWASA—a public entity of a subnational government—and without a sovereign guarantee.[52] The latter is critical, as it means that the Tanzanian government offers no safeguard or security regarding the bond; in other words, the Tanzanian government would not intervene or provide a bailout if the Tanga region defaulted. Does this shield or make the Tanzanian government immune from liability if Tanga defaults on its obligation under the bond? Ordinarily, the answer would be in the affirmative. However, under the Westphalian framework of state sovereignty and the customary international law principle on the responsibility of states for wrongful acts (codified in article 4 of the Responsibility of States for Internationally Wrongful Acts [2001]), Tanzania can be deemed and held (vicariously) liable if the Tanga region defaults on its bond obligation.

This position is further strengthened by the connection between the bond and the Tanzanian FYDP-III, which is a five-year plan for the mobilization of funds from non-conventional sources to finance the diversification of the economy with manufacturing and industrialization at its core. The Dar es Salaam Stock Exchange listing projects cooperation and alignment with a national development objective, although the bond and the UWASA project are subnational.

50. Report of the International Law Commission on the work of its sixtieth session, [2008] Y.B. Int'l L. Comm'n, Vol II Part 2, U.N. Doc. A/CN.4/SER.A/2008/Add.l (Part 2), Kim Edwards & Wing Hsieh, Recent Changes in IMF Lending, Bull. (Reserve Bank of Australia) (Dec. 2011).

51. T. Meyer, Local Liability in International Economic Law, 95 N.C. L. Rev. 261, 273 (2017).

52. UNCDF, Tanga UWASA, supra note 29, at 50.

Also, the optics of the second listing on the LuxSE give the same impression of cooperation between the central and regional governments vis-à-vis the mobilization of non-conventional funding for the financing of public expenditures. This impression was achieved when representatives of the central government's ministries visited Luxembourg.[53] Furthermore, the LuxSE listing heightens international investors' awareness of the bond and the basis for the expectation of the central government's support of bond repayment in the event of default albeit in the absence of a guarantee.

Box 2:
Negative consequences of the Tanga UWASA Bond for Tanzania

Despite the positives, the negative consequences for Tanzania once subscribers pay for allotment are the following:

Potential crowding-out of private consumers of the capital market's products and consequential contraction of the economy.	Creation of fiscal risk and contingent liability for Tanzania.	Worsening of sovereign debt profile.
Vulnerability to exchange-rate fluctuations and inflationary risk.	Cost overruns.	

Beyond the bond's capacity to aid in the mobilization of resources for infrastructure development and environmental conservation, the bond itself has other negative consequences for Tanzania's sovereign debt profile and economy. These detrimental results are in addition to the other negative consequences (i.e., the potential for crowding out private investment) previously highlighted. First, the bond issuance creates fiscal risk and contingent liability for Tanzania.[54] Because of its design and source, the Tanga bond looks like a liability that would not be factored into Tanzania's sovereign debt management process. This increases the risk of additional, uncaptured, contingent liability for Tanzania, which ought to be managed by the Ministry of Financing and Planning to improve the sovereign's debt position. Secondly, once allocated, the bond would exacerbate Tanzania's sovereign debt profile, as it would increase the debt-to-GDP and bond financing-to-GDP ratios, which credit rating agencies (CRAs) as 'gatekeepers' to the capital market and private investors/creditors would consider when conducting Tanzania's future sovereign risk profile.[55] Thus, once the bond is allocated and paid, Tanzania's debt stock would increase by the value of the issuance (i.e., TZS 53,120,000,000 or US$21 million). The increase in Tanzania's debt portfolio, with or without a default, could impact the country's rating. This, coupled with Tanga's default on the UWASA bond, would worsen Tanzania's debt profile, especially when CRAs respond with a downgrade.[56] Further down the line, this mix would cause a shrinkage of Tanzania's investor base as would-be investors comply with regulations that stipulate the minimum credit rating of the bonds that can be held.[57] Thirdly, when foreign investors hold a significant portion of the bond, Tanzania becomes vulnerable to exchange-rate and inflationary risks due to capital flow dynamics, or when the central bank crafts policies to manage capital-induced monetary supply fluctuation or when there is a high rate of secondary market activity related to the bond.

53. UNCDF, Tanga UWASA, supra note 29.

54. H. Polackova, Contingent Government Liabilities: A Hidden Fiscal Risk, 36 Fin. & Dev. 46, 46–49 (1999).

55. D. Cash, Sovereign Debt Sustainability: Multilateral Debt Treatment and the Credit Rating Impasse (2023).

56. J. Ams et al., Sovereign Default, in Sovereign Debt: A Guide for Economists and Practitioners 275 (A.S. Abbas, A. Pienkowski & K. Rogoff eds., 2020).

57. For an illustration, see Rule 2a-7, Investment Company Act of 1940, 15 U.S.C. §§ 80a-1–80a-64.

03. Risk of cost overruns.

Another implication of the bond's issuance is the risk of cost overruns, which is associated with the bond's design and issuance as well as the projects that the bond's proceeds will fund. If anything is to be learned from the Grand Ethiopian Renaissance Dam project, it is that major infrastructure projects are susceptible to overruns, especially in situations characterized by poor contract planning and supervision; the introduction of alterations to contract/project terms, specifications, or rubrics; the weak socio-economic environment of projects; and a lack of effective coordination among parties connected to the project.[58] Among other things, this has the effect of preventing the project from being concluded per the final estimate at the time when the project was approved.[59]

In the case of the Tanga UWASA bond project, the above is a potential reality. For example, there could have been inaccurate cost estimates. Exchange rate fluctuations and inflation, as well as the recent listing on the LuxSE, are other events that can cause overruns. The latter is critical because introducing new regulatory complexity cum market pressure brings about alterations to terms contemplated at the bond project's point of approval and introduces sundry costs, which would reduce the net proceeds from the subscription and open the project to exchange-rate fluctuations. Ultimately, the overruns would bring about increased costs, which could strain the project budget as well as compromise the project's objective and timeline

58. R. Matthews & V. Vivoda, 'Water Wars': Strategic Implications of the Grand Ethiopian Renaissance Dam, 23 Conflict, Sec. & Dev. 333, 333–66 (2023); see also R.O. Asiedu & E. Adaku, Cost Overruns of Public Sector Construction Projects: A Developing Country Perspective, 13 Int'l J. Managing Projects in Bus. 66, 66–84 (2020).

59. Matti Siemiatycki, Cost Overruns on Infrastructure Projects: Patterns, Causes and Cures, IMFG Perspectives No. 11, 1–10 (2015).

Part 5

Business Case Analysis

In this section of the report, we critically explore the underlying assumptions and financial implications of the Tanga UWASA Green Bond, questioning the bankability-driven approach and the complex financial structures that may obscure the true costs and long-term impacts on local communities.

01. The Narrow Emphasis on Bankability

The 2024 Information Memorandum for the Tanga/UWASA bond states, "[The] Tanga water bond is backed by a portfolio of bankable project[s] and is poised to demonstrate that Tanzania's domestic capital market is an established source of sustainable development finance."[60] The reference to bankability as the basis for the assessment of bonds with an ESG slant is problematic. Conventionally, bankability as a basis for assessment is based on its reliance on the combination of the return on investment associated with and the adherence to sustainability standards like the GBP. Combined, these make bankability a determinant of whether a green bond can achieve favorable financial outcomes while contributing to the attainment of positive environmental goals.[61] Thus, for a bond to be regarded as bankable, it should have the potential to generate consistent cash flows, either from revenue produced or cost savings from energy efficiency, especially bonds designed to finance projects with ESG. According to Adonu, this is a critical shortcoming associated with bonds issued by African governments.[62] The limited possibility of the development of a secondary market that would provide investors with the opportunity to sell their holdings easily, or at prices that will provide yield comparable to similar investments with a developed secondary, is a basis for doubting the bankability of the Tanga UWASA Green Bond market.[63]

Gabor is also highly critical of the 'bankability' rhetoric in the context of the growing emphasis on the derisking state.[64] According to Gabor, "The derisking state enlists private capital into achieving public policy priorities by tinkering with risk/returns on private investments in sovereign bonds, currency, social infrastructure (schools, roads, hospitals and houses, care homes and prisons, water plants and natural parks) and most recently, green industries."[65] The danger is that the ultimate goal of the derisking state is to enlist private capital to achieve public policy priorities by ensuring that investments are perceived as less risky and more profitable. The danger with this narrow emphasis on bankability risks prioritizing financial returns and risk mitigation for private investors over the long-term developmental and environmental goals that green bonds ostensibly support, potentially undermining the transformative impact these bonds aim to achieve in sustainable development.

60. Tanga UWASA 2024, supra note 31, at v.

61. Cities Climate Finance Leadership Alliance, What is Bankability? (Apr. 28, 2022), https://citiesclimatefinance.org/publications/what-is-bankability.

62. Adonu, supra note 4, at 154.

63. Tanga UWASA 2024, supra note 31, at 51.

64. Daniela Gabor, The (European) Derisking State, 1 Stato e Mercato 53–84 (2023a), https://uwe-repository.worktribe.com/output/11044798; see also Daniela Gabor & Ndongo Samba Sylla, Derisking Developmentalism: A Tale of Green Hydrogen, 54 Dev. & Change 919–1395 (2023b).

65. Gabor 2023a, supra note 64.

02. Hidden Transaction Costs

The Tanga UWASA bond issuance involves significant hidden transaction costs, which include feasibility studies, legal advice, certification, listing fees, and ongoing reporting requirements mandated by international sustainability standards. The issuance of a US$21 million bond on two stock exchanges comes at different costs, so it is tempting to conclude that the Tanga UWASA bond faces disproportionate transaction costs from an economies-of-scale perspective. The indicative expense of the DSE's issuance is TZS 1,057,500,000, while the same set the Tangan and Tanzanian governments back are thousands of euro in the form of listing fees, charged on the aggregate value of the listed security as well as the review and approval of the prospectus.[66] Moreover, there are additional costs for creditworthiness assessments and third-party ESG verifications, which can range from US$10,000 to US$100,000, which are incurred to attract institutional investors in international markets like Luxembourg. These transaction costs risk reducing the net proceeds for the issuance.

These layered transaction costs have the potential to adversely impact the Tanga UWASA bond issuance's financial efficiency. These costs could also undermine the bond's intended impact by diverting significant resources away from the project's core objectives and reducing the return on investment due to diminished net proceeds, longer payback periods, and limited capital availability for income-generating activities.

02. Experimenting with a complex financial mechanism for a future need?

The Tanga UWASA Green Bond, designed to meet future water demand from projected rural-urban migration and foreign investment, exemplifies the dangers of financializing essential public utilities. As Gathii et al. argue, sustainability initiatives within a market-based framework often serve more as tools for 'greenwashing' than as genuine solutions to environmental and social challenges.[67] This financialized approach commodifies essential resources, making climate governance dependent on private capital, which prioritizes profit over community welfare. This model risks transforming areas like Tanga into 'sacrifice zones,' where residents bear the brunt of debt obligations and increased service costs while foreign investors reap the benefits. Adonu further highlights that, while seemingly affordable, sustainable bonds impose new debt burdens on African states, often replicating the flaws of traditional debt instruments.[68]

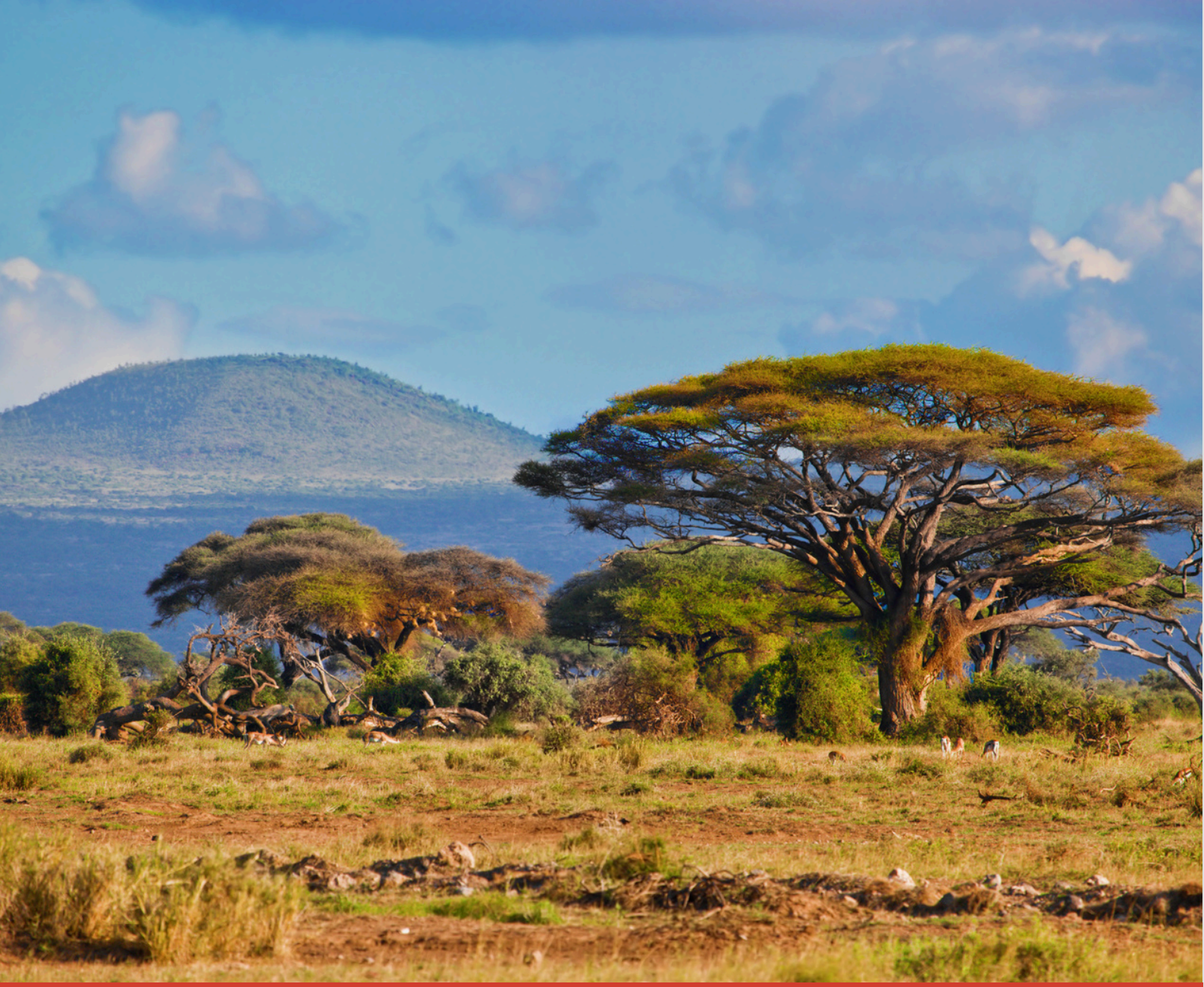
Given the need to attract global investors, African issuances are pressured to meet international standards, which involve high transaction costs and currency risks, ultimately favoring foreign over local stakeholders. Dzah and Mbori underscore the socio-ecological risks inherent in such 'green' financing mechanisms where public services—vital for local communities—are restructured primarily to satisfy private, often foreign, interests.[69] In Tanga's case, the green bond mechanism may offer a short-term solution to financing water infrastructure, but it risks entrenching a system that prioritizes investor returns over long-term sustainability, amplifying Tanzania's debt burden and potentially undermining the socio-economic stability of the very communities the project is intended to serve.

66. Luxembourg Stock Exchange, supra note 39.

67. Adonu, supra note 4, at 141–64.

68. Id. at 156.

69. G.E.K. Dzah, Africa and the (New) Green Finance Rush, in Transforming Climate Finance in an Era of Sovereign Debt Distress 199–216 (James Thuo Gathii, Adebayo Majekolagbe & Nona Tamale eds., 2023).



Part 6

Accountability and stakeholder participation deficiencies in the project design

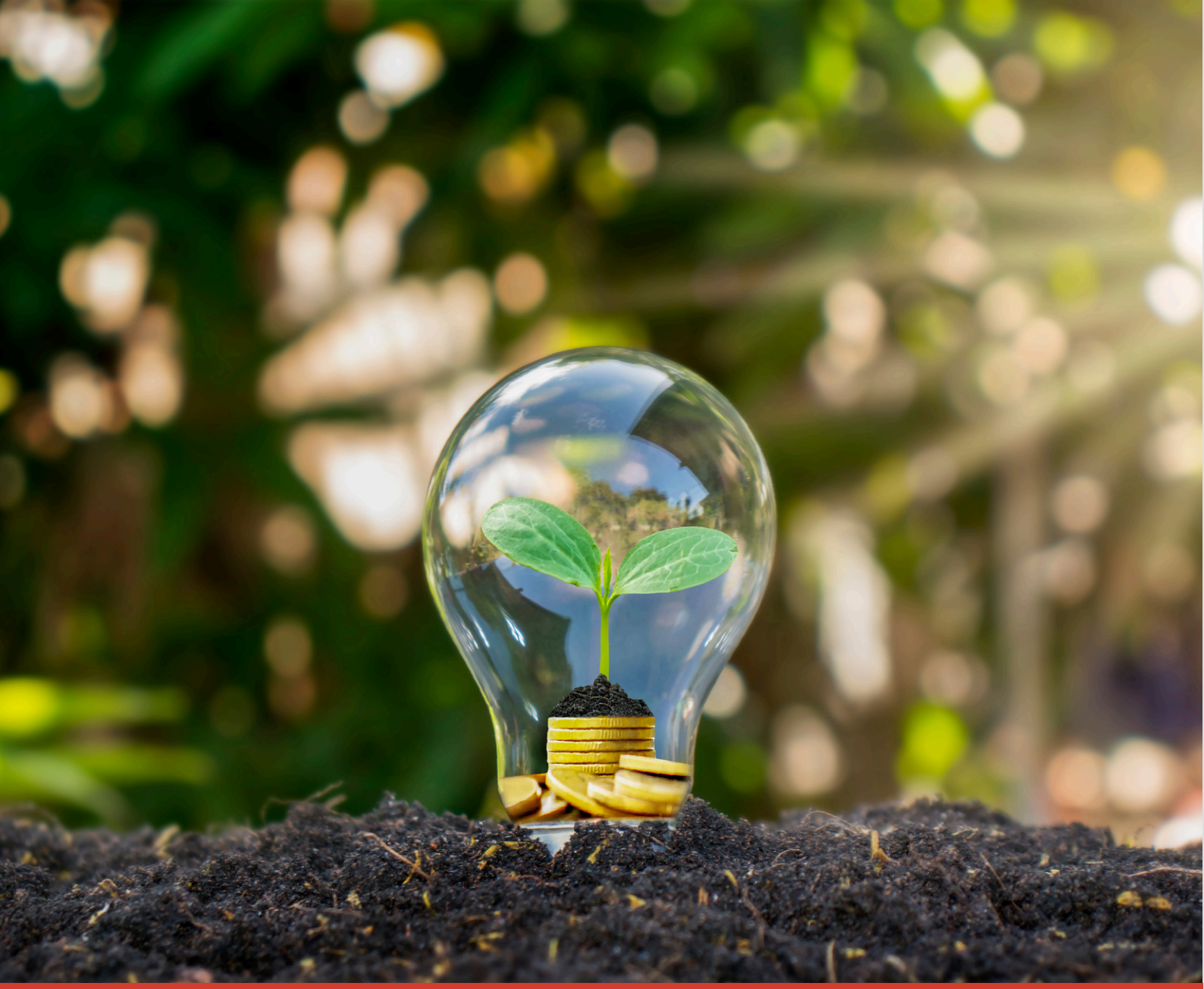
Effective stakeholder engagement and transparency are critical to ensuring that projects financed by green bonds, like the Tanga UWASA Green Bond, address the needs of underserved communities rather than prioritizing investor interests alone. According to the US Environmental Protection Agency's toolkit (US EPA toolkit), one essential step is the early and meaningful participation of marginalized communities in the policymaking process.[70] This approach helps decision-makers understand the unique challenges and priorities of these communities, ensuring that the financing program actively addresses, rather than exacerbates, existing inequalities. For the Tanga UWASA bond issue, there is no evidence from the 2024 Information Memorandum that there was direct consultation with local communities on project goals, anticipated impacts, and affordability measures. Reference to stakeholder engagement is limited to institutional actors, including market actors, regulators, technocrats, and bureaucrats.

The US EPA toolkit also recommends incorporating a clear consumer protection framework, such as assessing the community's ability to afford potential increases in water tariffs, which would further align the project with equity-focused objectives, reducing the risk that low-income residents would bear undue financial burdens. Again, it is unclear from the available documentation on the Tanga UWASA bond issue if consumer rights have been factored into the project design.

Furthermore, the US EPA toolkit emphasizes the need for governments to implement consumer protections to safeguard vulnerable populations from adverse financial impacts associated with financing mechanisms.[71] For green bonds targeting essential utilities, such as water infrastructure, governments can adopt safeguards to prevent economic displacement, including provisions for affordable access and mechanisms to monitor the program's socio-economic outcomes over time. Transparent ESG reporting and regular updates to the public on bond proceeds' allocation and impact are also recommended. For the Tanga UWASA, applying these best practices would not only improve the project's credibility and social impact but also build trust within the local community, helping to ensure that international investor interests do not overshadow the socio-economic needs of Tanga's residents. By embedding these transparency and equity measures into the green bond framework, the project can better fulfill its dual purpose of providing environmental sustainability and social inclusivity.

70. US-EPA, Municipal Bonds and Green Bonds (Apr. 11, 2024), https://www.epa.gov/statelocalenergy/municipal-bonds-and-green-bonds.

71. Id.



Conclusion

Balancing Innovation with Prudence

Undoubtedly, the Tanga UWASA Green Bond represents a landmark initiative for financing sustainable infrastructure at the subnational level in Africa. It also demonstrates Tanzania's commitment to innovative financing mechanisms under its Five-Year Development Plan. However, as this study's analysis reveals, the approach is not without significant concerns that must be addressed in the context of the Tanga UWASA bond issuance and any future instruments of a similar sort that are bound to spring up across the African continent.

Firstly, the reliance on green bonds as a form of debt-financed resource mobilization introduces long-term liabilities that could potentially deepen Tanzania's debt profile, particularly if revenue projections fall short or transaction costs escalate. To put this in context, Tanzania's June 2024 IMF Debt Sustainability Analysis (DSA) indicates that external, non-concessional borrowing now constitutes a large share of Tanzania's total debt (i.e., approximately 63.3% of the stock of external public and publicly guaranteed debt as of the end of FY2022/23).[72] Especially in the context of borrowing to finance its public infrastructure agenda, the IMF reports that Tanzania's "commercial borrowing has increased significantly, reaching 30.5% of total new external disbursement in FY2022/23."[73] Although the IMF still sees fiscal space for Tanzania to absorb more debt, this shift towards domestic resource mobilization in the form of the Tanga UWASA Green Bond must be closely monitored to ensure that it does not become a ticking time bomb. This can easily become the norm with Tanzania's commitment to extensive public infrastructure projects. Indeed, this trend has the potential to increase Tanzania's exposure to debt-servicing challenges, especially if growth projections are unmet or if the project returns fail to materialize at expected rates.

Even without a sovereign guarantee, the project's reliance on forecasted returns from water utility improvements to service bond repayments introduces vulnerabilities that could come back to hurt the Tanzanian government in the medium to long term. Notably, should the Tanga UWASA encounter financial challenges in meeting its obligations under the bond issuance, the broader national debt profile would have to absorb the shock, indirectly risking fiscal stability. In cases where subnational debts become unmanageable, central governments often step in, impacting overall debt sustainability assessments and posing potential implications for Tanzania's sovereign credit.

Secondly, the business case for a subnational government engaging with such a high-risk, complex finance mechanism is at least questionable. Notably, the narrow emphasis on bankability risks elevates the priority given to satisfying investor expectations rather than addressing local priorities.

Thirdly, the project's stakeholder engagement framework lacks the depth needed to meaningfully involve the communities most affected by these infrastructure developments. Limited direct consultations and a lack of consumer protection frameworks mean that vulnerable populations could face undue financial burdens from the bond's repayment structure.

72. IMF, United Republic of Tanzania: Third Review under the Extended Credit Facility Arrangement, Request for Extension of the Extended Credit Facility Arrangement and Rephasing of Access, and Request for an Arrangement under the Resilience and Sustainability Facility-Debt Sustainability Analysis, IMF Staff Country Reps. 1, 3 (June 7, 2024). doi: https://doi.org/10.5089/9798400278273.002.

73. Id.

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