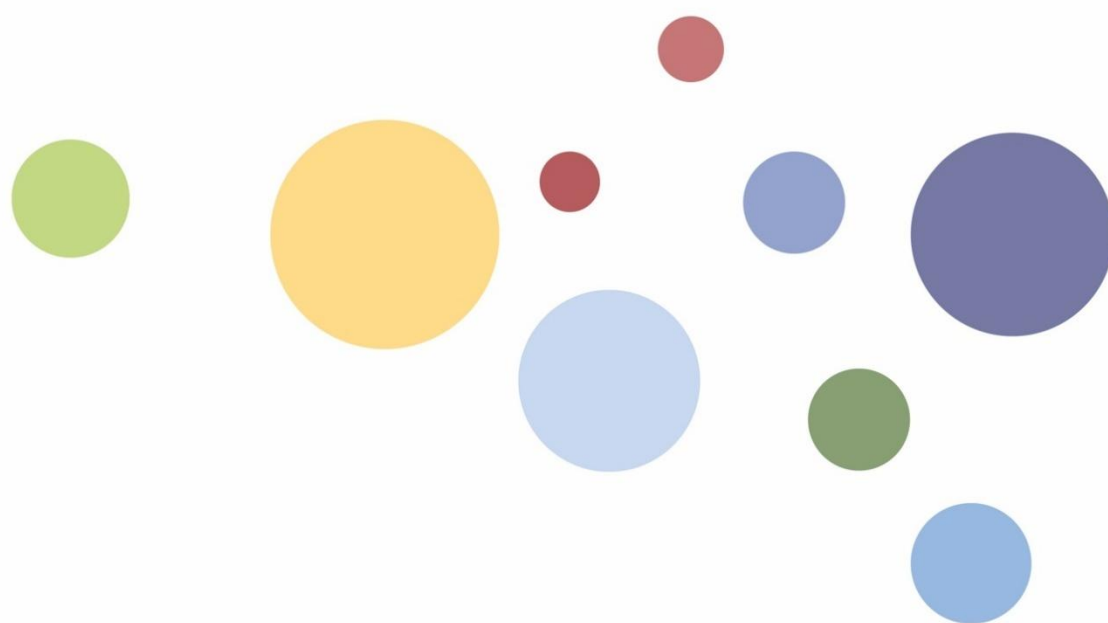# Strengthening Mozambique's Resilience:

A Transformative Approach to Multi-Hazard Vulnerabilities
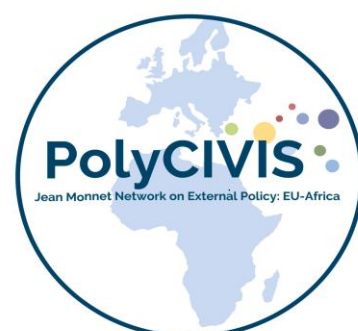
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Executive Summary

Mozambique is among the most vulnerable countries in Africa, facing multiple risks, both climatic (cyclones, floods, and droughts) and non-climatic threats (armed conflicts, economic crises, pandemics, and political and social instability). Although resilience for sustainable development is a strategic imperative, fragmented and policy responses persist, ignoring the interconnections and feedback loops between interlinked and mutually reinforcing crises. This limited approach undermines a holistic understanding and effective management of systemic vulnerabilities, severely impacting national resilience.

Mozambique's development trajectory is undermined by systemic feedback loops, characterised by persistent social inequalities, environmental degradation, limited institutional capacity, and corruption. These factors, exacerbated by recent events such as the tropical cyclones Idai, Kenneth, and Freddy, the COVID-19 pandemic, the insurgency in Cabo Delgado, global economic crises, and post-election unrest, reinforce the country's vulnerability, with significant impacts on infrastructure, livelihoods, and social cohesion.

Addressing this gap requires a multiscalar, integrated approach to risk and vulnerability assessment, capable of reflecting the complexity of the Mozambican context and guiding transformative public policies. The Roots of African Resilience (RoAR) framework offers a means for assessing and building multisectoral resilience, premised on multi-risk analyses across economic, environmental, institutional, infrastructural, political, and social domains, attuned to Africa's historical and socio-economic vulnerabilities.

Using Mozambique as a case study, this brief explores how African countries can build genuine resilience, drawing of the RoAR conceptualisation of resilience a system's capacity to anticipate risks, absorb shocks, adapt to change, and transform when structures perpetuate vulnerability. The analysis aims to enhance multi-sectoral policy coherence, exploring resilience through a systems-level, practical and process-driven approach that can be operationalized in the African context.

Key messages

❖ Polycrisis requires integrated transformation, not isolated responses: The convergences and complex interactions of hazards and risks across systems in Mozambique demonstrates that genuine resilience demands structural transformation, addressing root causes across social, governance, economic, infrastructure, and environmental systems simultaneously.

❖ The Roots of African Resilience (RoAR) framework provides actionable architecture for systemic change: this framework represents a tree of resilience composed of structural drivers of resilience and desirable systems (*roots)*, resilience enablers and capacities (*trunk*), along with that represent policy entry points and indicators (*crown and branches*).

❖ Participatory, context-specific approaches are at the core of transformative resilience: Policy makers should elevate traditional knowledge alongside scientific data, recognising richness of lived experiences and multi-stakeholder perspectives in co-creating solutions that translate across the local, sub-national, national and regional scales.

(1) Introduction

Mozambique is faced with structural vulnerabilities and interconnected risks that threaten its sustainable development. Highly exposed to extreme climate events, including cyclones, floods, and recurrent drought[1], it also contends with non-climate threats such as socioeconomic inequalities, institutional fragility, political and social instability, environmental degradation, and poor infrastructure.[2] These often interdependent factors create a feedback loop that exacerbates both social and ecological vulnerability, limiting communities' adaptive capacity and hindering effective state responses.[3]

Furthermore, analysis of Mozambique's resilience profile has demonstrated that traditional approaches, focused on ad hoc and sectoral disaster responses, have been insufficient to address the significant challenges affecting national resilience. The persistence of institutional fragility, combined with social exclusion and ecosystem degradation, underscore the need for a paradigmatic shift in resilience strategies, one that goes beyond disaster management to address the structural causes of vulnerability and promote more comprehensive and transformative strategies.[4]

Acknowledging the imperative of a systems approach to resilience, the RoAR analytical framework, developed in collaboration with the African Union, the United Nations Development Programme (UNDP), and the United Nations Research Institute for Social Development (UNRISD), provides an **integrated and systemic perspective for understanding resilience**. This framework examines resilience across social, political, economic, ecological, institutional, infrastructural, and structural domains. It proposes a participatory, development-oriented approach to resilience, anchored on contextually relevant indicators, adaptable implementation and dynamic policy-entry points.[5]

> ✳ **The Roots of African Resilience (RoAR)** framework examines resilience across social, political, economic, ecological, institutional, infrastructural, and structural domains. It proposes a participatory, development-oriented approach to resilience, anchored on contextually relevant indicators, adaptable implementation and dynamic policy-entry points.

Other global resilience frameworks, including the Sendai Framework[6], UNFCCC, and the Global Climate Risk Index 2020[7], tend to focus predominantly on climate risks or isolated sectoral components. Regional and national frameworks in Mozambique follow similar patterns, including the Climate Risk Assessment Report[8], the National Strategy for Adaptation and Mitigation of Climate Change – ENAMMC[9], the Master Plan for the Prevention and Mitigation of Natural Disasters

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[1] Irish Aid, 2018; Sitoe 2024
[2] Sitoe 2024
[3] *Ibid.*
[4] ibid
[5] Roots of African Resilience. A Transformative Approach, 2024
[6] UNDRR, 2015),
[7] Eckstein et al., 2021
[8] Irish Aid
[9] Government of Mozambique, 2012

– PDPMCN[10], and the National Adaptation Plan – NAP.[11]

Distinctly, RoAR emphasises a multi-hazard systems approach, specifically adapted to the African context.[12] This framework is particularly relevant to Mozambique, where climate, economic, and socio-political crises intertwine in a typical polycrisis scenario. Furthermore, RoAR reinforces the principles of the Africa Climate Change Resilience Alliance[13], which promotes holistic understanding of risks, vulnerabilities, and opportunities across social, environmental, economic, and political dimensions.[14] In addition, the RoAR analytical framework explores the interconnections between resilience and sustainable development, allowing for the integration of a strong resilience lens into development plans and strategies such as the African Union's Agenda 2063 and the UN Sustainable Development Goals.

Using Mozambique as a case study, this analysis of the RoAR framework, seeks to answer the following questions: *(i) What are the main sources of vulnerability and resilience in Mozambique? (ii) How do current systems reproduce or mitigate these vulnerabilities? (iii) What transformative changes are needed to promote sustainable and inclusive resilience, aligned with national development objectives and the goals of the African Union's Agenda 2063?*

By identifying systemic vulnerabilities and assessing existing institutional and community capacities, this analysis aims to contribute to policy coherence, promote flexible implementation and multi-stakeholder engagement. The central hypothesis underpinning this analysis is: *"The adoption of effective resilience strategies in*

Mozambique requires integrated, participatory approaches geared towards profound change, as isolated responses to multiple hazard factors tend to prove ineffective".

(2) Background and Analysis : Understanding Mozambique's Resilience Challenges

As a starting point, the RoAR defines resilience as 'a system's ability to anticipate, absorb and recover, adapt, and transform when faced with a wide range of evolving risks and uncertainties',[15] affirming resilience as a multifaceted quality rooted in systemic capacities.[16] Evidence obtained through consultations with multiple stakeholders, complemented by a review of relevant literature and documentation, shows that Mozambique exemplifies the complex interaction of vulnerabilities faced by developing countries, especially in an era marked by unprecedented risks driven by natural and anthropogenic factors.[17] The country's fragility stems from a confluence of historical, socio-economic, political, ecological, and infrastructural deficiencies. From this perspective, Mozambique remains trapped in a continuous cycle of vulnerabilities that undermines the social fabric, economic stability, ecological integrity, and institutional capacity.

(i)   Historical and Political Fragility
Mozambique's history of armed conflict, including civil war and recent insurgencies in Cabo Delgado, have fractured institutions, deepened social divisions and eroded trust in governance authorities. Political instability, coupled with persistent inequality and governance deficits have , stalled development and amplified vulnerabilities.

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[10] Council of Ministers, 2017
[11] MITADER, 2023
[12] The RoAR presents a tree of resilience that is composed of structural drivers of resilience and desirable systems (roots), resilience enablers and capacities (trunk), along with that represent policy entry points and indicators (crown and branches), see Roots of African Resilience. A Transformative Approach, 2024, Figure 1.
[13] Africa Climate Change Resilience Alliance (ACCRA)
[14] Mukute et al., 2017
[15] Roots of African Resilience. A Transformative Approach, 2024
[16] United Nations Office for Disaster Risk Reduction (UNDRR); Brown, 2021
[17]Sitoe 2024

Additionally, electoral-related social unrest, often expressed through violent demonstrations, has exposed latent political tensions and democratic fragility, further weakening the state's resilience capacity.[18]

(ii) Socioeconomic Vulnerabilities

From a socio-economic perspective, Mozambique's Human Development Index (HDI) score of 0.493 positions it as one of the least developed countries in the world.[19] Although poverty rates declined between 1996 and 2015, recent setbacks compounded by climate disasters, internal conflicts, and global economic crises have reversed these gains, pushing more than 60% of the population into poverty by 2022.[20] Low levels of education, limited access to quality health services, and high unemployment rates, especially among women and youth, compound these systemic vulnerabilities, severely constraining societal adaptive capacities when faced with shocks and evolving risks.

(iii) Climate and Ecological Risks

Mozambique's exposure to climate-related risks, notably tropical cyclones such as Idai, Kenneth, Chalane, and Freddy, has caused widespread destruction and massive population displacement.[21] Climate change increases both the frequency and intensity of these events, intensifying ecological degradation, deforestation, and soil and coastal erosion.[22] This growing ecological fragility compromises natural protection areas, including wetlands and mangroves, further increasing the country's susceptibility to floods and storms.[23]

The degradation of ecosystems in Mozambique not only increases environmental vulnerability, but also undermines livelihoods dependent on natural resources, such as fishing and agriculture. This fragility is worsened by unsustainable resource management, weak enforcement of environmental and natural resource regulations, and limited access to resilient infrastructure that could mitigate the impacts of environmental risks.

(iv) Infrastructural weakness and Economic exposure

Politically-driven social unrest in Mozambique, often following electoral processes, leads to violence, mass demonstrations, disruptions to public services, and internal displacement, compounding country's social and economic vulnerabilities.[24] These crises impede recovery and reconstruction efforts, and obstruct the implementation of resilience strategies in already fragile communities.[25]

Systemic weaknesses are also evident in water management infrastructure, including dams, reservoirs, and drainage systems, which are crucial for mitigating flood risks and ensuring water security. Insufficient investment in resilient infrastructure compromises the country's ability to adapt to climate shocks and maintain essential services, hindering the development of resilient communities.

A major driver of Mozambique's economic vulnerability is the country's heavy dependence on a limited natural resource base, exposure to external shocks such as fluctuations in commodity prices, alongside corruption in public institutions and predatory political patronage. Relatedly, persistent governance challenges and the state's limited financial capacity constrain investment in productive sectors, infrastructure, and social services. This also extends to high public debt levels and

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[18] Sayed, 2022
[19] UNDP, 2025
[20] Salvucci & Tarp, 2023; Ecker et al., 2024
[21] Sitoe, 2024.
[22] Singh 2023; Corcheş 2023; Mandal & Roy 2024
[23] Gijsman et al., 2021
[24] Mananze, 2025; Guerra & Bunguene, 2025
[25] Sayed, 2022

limited fiscal space, which severely compromise risk management and progress in sustainable development initiatives.

The country's limited institutional capacity undermines its ability to anticipate, prepare for, respond to, and recover from multiple hazards. Coordination, implementation, and innovation functions remain fragile, restricting integrated resilience strategies. As a result, the RoAR framework emphasises the need for capable institutions, multi-sectoral coordination, and inclusive decision-making processes as essential pillars for building resilience.

(3) RoAR: a systems approach to resilience

The RoAR analytical framework builds on a systems understanding of resilience, recognizing the interconnectedness of risks and solutions across different sectors and scales.

It also highlights the presence of feedback loops between different system components, which are crucial in identifying leverage points where small interventions can lead to significant improvements. For example, environmental degradation negatively impacts the livelihood base and intensifies the impacts of disasters, straining economic resources and weakening institutions. Institutional weakness undermines environmental management, which accelerates degradation – a self-reinforcing dynamic. Similarly, social inequalities and discrimination limit access to education, employment, and health services, reducing adaptive capacities and increasing social exclusion, which in turn reinforces inequalities and vulnerabilities. These feedback mechanisms create systemic traps in which fragmented and isolated responses are rendered ineffective.

Although climate risks have received greater attention in recent years, the RoAR framework highlights that non-climate factors – violent conflicts, political instability, corruption, and socioeconomic inequalities – are the structural causes that transform adverse events into disasters. Recognising hazards merely trigger crises while vulnerabilities determine, RoAR advocates a paradigm shift from the traditional hazard-centred approach to one focused on the root causes of vulnerability and integrated management of multiple crises. This reorientation, grounded in a systems approach, recognises the complexity and dynamics interacting that create and sustain vulnerability.

Overall, the RoAR framework advocates adaptive and transformative resilience strategies. These strategies must address the structural causes of risk, such as persistent inequalities, institutional mismanagement, and ecosystem degradation, promoting systemic change rather than *ad hoc* responses. The framework also proposes replacing reactive, hazard-centred approaches with proactive, integrated, and systemic transformations. Building resilience in this context requires a comprehensive approach that addresses structural vulnerabilities while developing anticipatory, absorptive, adaptive, and transformative capacities.

(4) An African-centred approach towards resilience-building

At its core, the RoAR is geared towards an **understanding of resilience that is attuned to African contextual realities**, including identifying dimensions of resilience across the continent and how it can be assessed and measured across various levels. Rather than duplicating existing resilience frameworks, it presents an African-centred approach that is focused on continental specificities, drawing on historical experience, multi-stakeholder engagement

and indigenous knowledge systems.[26] In addition to identifying entry points for resilience building efforts, a focus on African particularities in the RoAR also takes into account the structural conditions, power dynamics, and historical trajectories that fundamentally shape vulnerability and adaptive capacity across the continent.[27]

> ' ✧ A key strength of the RoAR is its foregrounding of the notion of transformability in resilience thinking. Transformability refers to a system's capacity to promote intentional and profound change when incremental adaptations prove insufficient.

Another key strength of the RoAR is its **foregrounding of the notion of transformability in resilience thinking**. Transformability refers to a system's capacity to promote intentional and profound change when incremental adaptations prove insufficient.[28] This concept distinguishes RoAR from frameworks emphasising resilience as "bouncing back" to pre-shock conditions. Instead, transformability deliberately aims to create a new and more desirable system, including by altering fundamental attributes like institutional arrangements, resource flows, value systems, and regulatory, legislative or bureaucratic regimes.[29] For Mozambique and similar African contexts, this means acknowledging the undesirability of the status quo in light of evolving risks and hazards, hence the need for profound change to current response mechanisms.

Transformability comprises three interdependent attributes. First, **recognition of transformation necessity** –

acknowledging that current trajectories prove fundamentally unsustainable rather than requiring minor adjustments. This demands honest reckoning with how existing systems, policies, and power relations actively reproduce vulnerability. Second, **development of diversified and innovative strategies** – encouraging experimentation, investment in new technologies, sustainable livelihoods, and adaptable infrastructure, especially targeting the most vulnerable groups and regions often excluded from conventional development. Third, **provision of political support, financial resources, and various types of capital** – including natural, human, social, built, and economic resources—through institutional strengthening, efficient resource mobilisation, and promotion of inclusive and participatory governance.

Strengthening transformative capacity as a pillar of resilience-building requires an in-depth analysis of the existing structures and modalities that shape patterns of risk and vulnerability, along with tackling issues of injustice and power distributions. This means that transformability demands more than technical capacity – it requires social and political courage to confront powerful actors, redistribute resources and decision-making authority, and accept uncertainty inherent in fundamental change.[30]

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[26] Roots of African Resilience: A Transformative Approach, 2024
[27] *Ibid.*
[28] Walker et al. 2004
[29] Olsson et al. 2017
[30] Lerch 2017

(5) Policy Recommendations

Mozambique's RoAR assessment highlights deep-rooted systemic vulnerabilities that continue to reinforce cycles of risk and inequality. To break these patterns and foster transformative resilience, core recommendations include:

Policy recommendations: A Transformative Resilience Agenda

(i) Strengthen Institutional Capacity: prioritise enhanced coordination, transparency, and accountability. This should be accompanied by capacity-building for local authorities through comprehensive training in multi-hazard risk assessment, participatory planning, and adaptive management.

(ii) Diversify the Economic Base Through Strategic Industrial Policy : promote development of value chains for non-traditional sectors through targeted industrial policy, skills development, and market access support. Investing in sustainable fisheries, renewable energy, and eco-tourism can also support livelihoods while protecting ecosystems. Additionally, instruments such as climate risk insurance and measures to facilitate the transition from the informal to the formal economy are essential to reducing structural vulnerabilities.

(iii) *Integrate principles of gender equity and social inclusion into all policies, programmes, and planning instruments*. Policies must guarantee women's access to education, healthcare, employment, land, and leadership opportunities. These initiatives should be backed by gender-responsive budgeting across all resilience investments with mandatory equity outcomes and dedicated funds for women-led initiatives.

(iv) *Adopt an integrated approach to building resilience*, ensuring coherent articulation of intersectoral policies, encompassing quality education, social protection, economic development, environmental management, and resilient infrastructure. A multi-risk, multi-sectoral perspective enables synergistic actions, promotes a development-oriented approach to resilience and multiple resilience pathways.

(v) *Invest in climate-resilient infrastructure*, based on infrastructure planning that integrates climate projections and multi-hazard risk assessments. Roads must be built above projected flood levels, buildings designed to withstand intensifying cyclones, water systems designed to accommodate drought redundancy. Resilient infrastructure also encompasses transportation networks, schools, healthcare facilities, and emergency shelters, all equipped with decentralised energy and communication systems.

(vi) *Promote participatory and inclusive processes* that involve a diversity of actors, including historically marginalised groups, in the co-creation of local solutions, reinforcing the sense of belonging, legitimacy, and sustainability of resilience actions. Resilience must be rooted within communities, including promoting community platforms for dialogue and lesson-sharing.

Overall, advancing resilience in Mozambique demands coordinated, inclusive, and transformative actions that tackle the structural drivers of vulnerability while enhancing adaptive capacity and long-term sustainability. The proposed recommendations align with the Sustainable Development Goals (SDGs), the African Union's Agenda 2063, and Mozambique's National Development Strategy (ENDE), offering a pathway toward a more resilient and equitable society.

(6) Conclusion

Mozambique is at a critical point in its development, facing vulnerabilities stemming from historical inequalities, weak institutions, environmental degradation, and increasing exposure to various risks. Despite efforts through national policies and strategies, systemic analysis shows that current development paths tend to reproduce patterns of fragility, making the country increasingly susceptible to multidimensional crises.

The RoAR framework fundamentally reframes resilience – not as bouncing back from shocks, but as a transformative process reconfiguring the structures and systems sustaining society. Such transformation requires the ability to anticipate risks, absorb impacts, adapt to change, and evolve sustainably. *Ad hoc* interventions, however well-intentioned, such as infrastructure projects, social protection programmes, or isolated economic initiatives, remain insufficient if they are not part of a coordinated, inclusive, and systemic response.

Building a resilient society requires developing this capacity with and for communities, valuing their knowledge, aspirations, and potential for action. Resilience cannot remain an external imposition but must permeate institutions, daily decisions, and governance systems shaping the country's future. In this context, the RoAR analytical framework provides robust, whole of systems approach to operationalise transformation, while emphasising multisectoral integration, inter-institutional cooperation, and structural change guided by social justice and sustainability principles.

The successful implementation of these recommendations demands strong and sustained political commitment, adequate allocation of resources, and the creation of enabling environments for change. Decision-makers should embrace strategic collaborations and establish dynamic monitoring mechanisms to track progress and adapt strategies accordingly, ensuring a rapid response to emerging changes and challenges.

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