

THE MISSING REACTOR

Why Weak Stakeholder Engagement Could Break Africa's Nuclear Ambitions



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Executive Summary

As African countries explore and develop nuclear energy programs, public engagement is often reduced to basic public awareness, focusing primarily on improving technical knowledge and countering misinformation. Evidence from wePlanet Africa's engagement initiatives in Kenya, Uganda, Nigeria, and Zimbabwe demonstrates that while public awareness is necessary, it is insufficient.

In Kenya and Uganda, community concerns extended far beyond safety and radiation to land acquisition, compensation, livelihoods, environmental protection and institutional transparency.

In Nigeria and Zimbabwe, structured programs demonstrated how targeted interventions can build advocacy networks and track measurable gains in technical literacy.

stakeholder engagement is infrastructure

Just as physical energy infrastructure requires capital investment, deliberate architecture, long-term maintenance, and multi-agency coordination, engagement infrastructure requires permanent feedback mechanisms, referral systems for non-technical grievances, localized communication channels, and better performance metrics beyond simple reach and social media likes.



Scope and Limitations

This policy brief analyzes practice-based evidence from WePlanet Africa's engagement activities across Kenya, Uganda, Nigeria, and Zimbabwe.



Analytical Boundaries

The underlying project reports from our engagement activities in Uganda, Kenya, Zimbabwe and Nigeria evaluate specific interventions. They do not constitute nationally representative public opinion polling, nor do they establish direct causality between engagement activities and project cost reductions or guaranteed social license.

Scope of Findings

The evidence demonstrates that nuclear energy deployment faces critical non-technical challenges that traditional public relations and awareness campaigns cannot resolve. It confirms that structured, well-designed and long-term engagement interventions can deliver measurable improvements in public knowledge and trust, intermediary (champions) capacity, and improve social acceptance of projects.



Strategic Recommendations

1

EMBED ENGAGEMENT IN EARLY PLANNING

Stakeholder engagement must be designed alongside technical feasibility studies before finalizing site selection or making public announcements. Engagement plans should map:

- Institutional roles, establish referral channels for land and economic grievances
- Allocate dedicated funding, and define clear success metrics.

2

FORM MULTI-AGENCY RESPONSE AND REFERRAL PIPELINES

No agency can independently resolve land disputes, determine compensation rates, or address plant safety. Governments should establish formal inter-institutional task forces linking the nuclear development authority with land ministries, environmental agencies, regional government offices, and community leadership to receive, route, and resolve non-technical grievances.



Strategic Recommendations

3 LOCALIZE STRATEGY BASED ON FIELD EVIDENCE

Engagement models must be flexible enough to adapt to feedback. As demonstrated in Kenya, when the community requested more direct engagement from their elected leaders, we changed our strategy to accommodate these requests.

4 INVEST IN LOCAL ADVOCATE AND INTERMEDIARY CAPACITY

Build capacity across civil society, academia, media, and traditional leadership, following models established in Nigeria and Zimbabwe. Training informed intermediaries creates decentralized channels for credible, long-term dialogue within host communities.

5) Measure Impact not Reach

Replace vanity* metrics (such as headcount at public events or number of brochures distributed) with structural key performance indicators (KPIs):

- Changes in technical understanding;
- Demographic diversity of stakeholders
- Total volume of community grievances logged versus percentage formally resolved by responsible state institutions;
- Retention and engagement levels of trained intermediary champions.

*A non-vanity metric is a structural KPI, an impact metric, or an outcome-based metric.

**Unlike vanity metrics, which track superficial volume, structural KPIs capture behavioral shifts, institutional accountability, capacity retention, and systemic change.



Public Awareness Is Not Enough



Across all documented engagements, stakeholders raised concerns regarding accidents, radiation, radioactive waste management, environmental contamination, and emergency response. However, technical questions represented only a fraction of public concerns.



KENYA:

Technical risks sit alongside governance and economic concerns. In Siaya County, Kenya, participants framed nuclear development through the lens of daily economic realities: frequent electricity outages, high energy tariffs, and the resulting damage to local businesses and agricultural cold chains.

While participants recognized the potential macroeconomic benefits of large-scale power generation, **they questioned whether locally generated electricity would benefit Siaya directly or be routed entirely to the national grid.**

When discussing nuclear risks, stakeholder concerns included

- Nuclear safety, emergency preparedness, and technical capacity;
- Regulatory credibility, government transparency, and genuine community consent;
- Misinformation and the absence of trusted, local information channels and leaders.
- Radioactive waste disposal and potential impacts on Lake Victoria;
- Land acquisition, displacement, and the sensitive handling of ancestral graves and remains;



Correcting misconceptions about nuclear physics addresses only a fraction of these issues.

Questions regarding land rights, cultural heritage, regulatory enforcement, and economic distribution require institutional responses from government authorities outside the nuclear agency itself.

Uganda: Information Gaps Intersect with Material Concerns

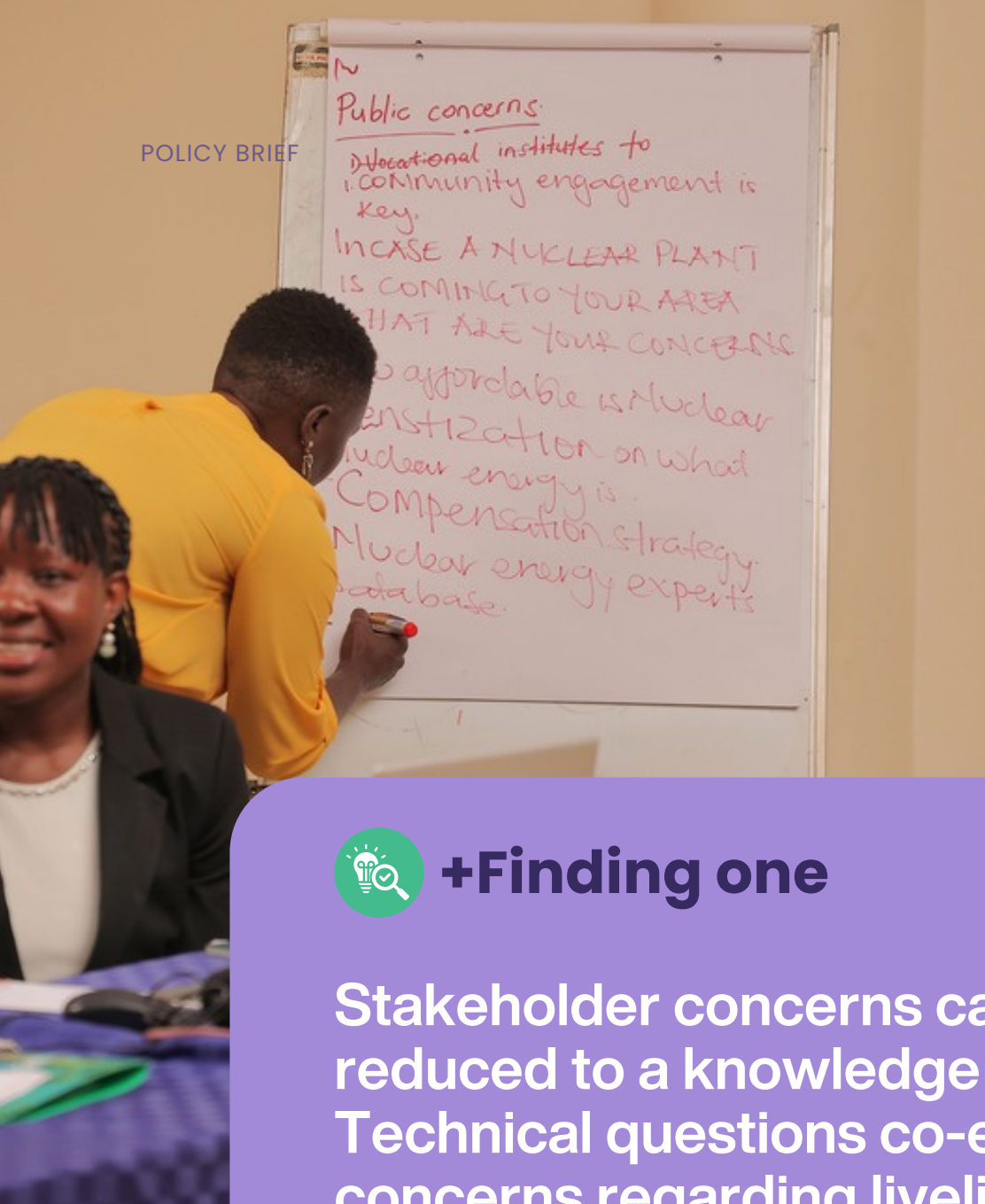
A similar pattern like in Kenya emerged in Uganda. Community questions about safety and radiation coexisted with urgent material concerns about displacement, loss of livelihoods, land valuation, electricity costs, and environmental protection.

Unclear valuation methods and severe delays in land compensation were identified as primary drivers of institutional mistrust.

Furthermore, stakeholders expected tangible local returns from host-community status, including employment opportunities, vocational training, and scholarships to develop local technical expertise.

The Ugandan evidence highlights two distinct challenges: a technical knowledge gap and a systemic institutional failure. Engagement was consistently characterized as top-down and lacking feedback mechanisms, compounded by fragmented information flows between government ministries and inadequate public participation in project planning.





+Finding one

Stakeholder concerns cannot be reduced to a knowledge deficit. Technical questions co-exist with concerns regarding livelihoods, land rights, governance, and institutional performance. Nuclear energy institutions require systems to capture, route, and resolve non-technical grievances that public awareness campaigns cannot address.

Communities define engagement

Communities do not merely list grievances; they articulate specific process requirements for public participation. Stakeholders demanded:

- County-wide consultation rather than engagement restricted to immediate host sites;
- Continuous, iterative dialogue rather than one-off public forums;
- Communication in local languages (Luo) using trusted community channels (churches, barazas, chamas, and local radio);
- Transparent project timelines and honest disclosures;
- Specialized education for political, traditional, and opinion leaders;
- Explicit training and employment pathways for local youth;
- Transparent land acquisition and culturally sensitive compensation practices, including ceremonial protocol for relocating ancestral graves;
- Baseline environmental data collection prior to construction, paired with continuous, public monitoring and independent inspection regimes.

Uganda's recommendations closely mirrored these demands, emphasizing local-language communication, involvement of traditional leaders, transparent compensation frameworks, structured feedback mechanisms, and localized community infrastructure investments.



Targeted elite capacity building is not stakeholder engagement

To design effective engagement infrastructure, practitioners must distinguish between **bottom-up community** consultation and targeted **capacity building**. Conflating these distinct models risks treating elite advocacy as broad public consent.



Targeted Capacity Building and Advocacy (Nigeria)

Nigeria's 2025 Nuclear Advocacy Bootcamp illustrated a model for developing intermediary capacity. The program selected 26 young leaders from 180 applicants (average age 23.5) across professional and academic disciplines; 57.7% came from non-nuclear backgrounds.

Combining nuclear energy science with leadership, communication, and policy training yielded significant results:

95% of participants reported an increase in technical knowledge;

- Participants demonstrated functional literacy in nuclear systems, safety protocols, and climate integration;
- A dedicated network of young advocates was formed to engage peers, civil society, and policymakers.



Measurable public and multi-stakeholder outreach (Zimbabwe)

Zimbabwe's initiative combined structured multi-stakeholder workshops with broader public engagement, reaching traditional leaders, educators, civil society, media, and technical experts.

Using formal monitoring tools including pre- and post-activity assessments, perception polling, and registration tracking across 75+ documented stakeholder submissions, the activity measured an average knowledge improvement of 38–45% among participants.





+Finding two

Effective engagement requires structural mechanisms for participation and response, not merely information dissemination.

Engagement design must incorporate trusted local leaders, channels, local languages, continuous feedback loops, and institutional accountability.



+Finding three

Engagement should be measured

While targeted capacity building (Nigeria) builds qualified advocate networks, broad multi-stakeholder outreach (Zimbabwe, Kenya, Uganda) addresses community consent and local governance. Both functions are necessary, but they perform different roles within a national nuclear energy engagement framework.

Building 'Engagement Infrastructure'



Nuclear energy programs risk failure when they treat engagement as periodic public relations rather than essential infrastructure.

If stakeholder engagement is treated as a superficial awareness campaign, nuclear energy institutions will remain equipped to explain reactor physics, yet unable to address land acquisition, ancestral burial grounds, local hiring targets, or inter-agency delays. Conversely, consultation without baseline technical information leaves communities vulnerable to misinformation.

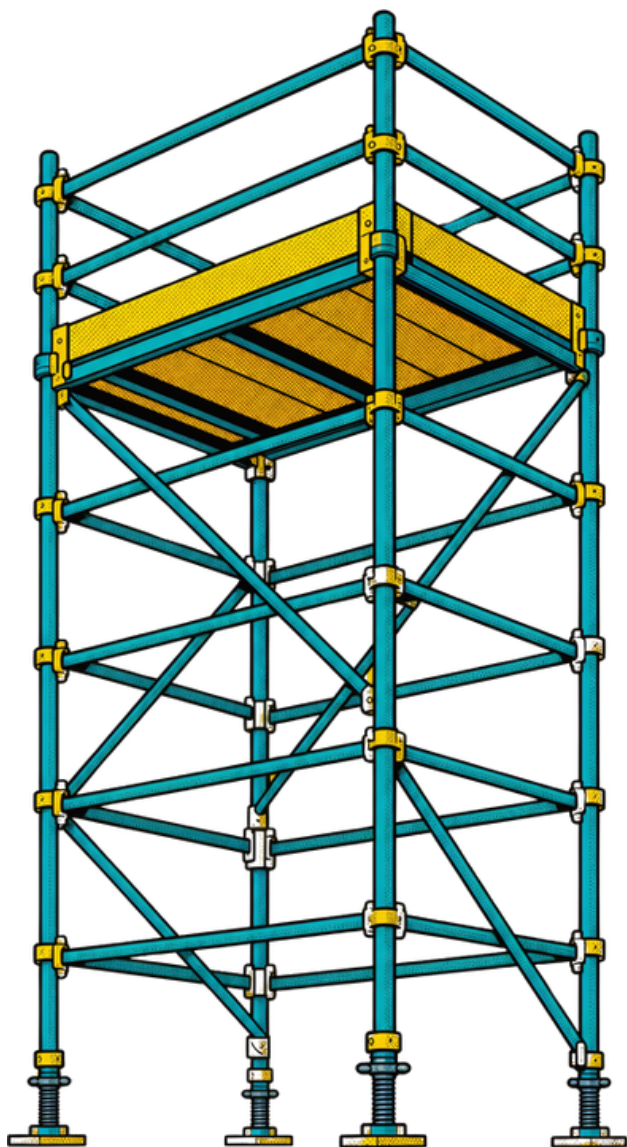
ENGAGEMENT REQUIRES FOUR STRUCTURAL COMPONENTS:

1. Technical Communication

Clear, localized science information on nuclear energy technology, safety mechanisms, and waste management.

2. Multi-Agency Networks

Formal legal and administrative mechanisms connecting communities and stakeholder groups with land boards, environmental authorities, municipal planners, and compensation tribunals to address non-technical concerns.





Structural components of engagement

3. **Local champions**

Trained local leaders, youth advocates, civil society groups, and traditional authorities who act as bi-directional conduits for information.

4. **Monitoring and Evaluation Frameworks**

Systematically tracking public sentiment, knowledge shifts, logged concerns, and institutional resolution rates over time.



+Finding four

Unaddressed community concerns introduce administrative friction, land disputes, and political hesitation that can delay or stall nuclear programs.

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