



HakiRasilimali

Enhancing Transparency & Accountability
of the Extractive Industry in Tanzania



**A SUMMARY REPORT
NAVIGATING TANZANIA'S LNG
LANDSCAPE: TOWARDS
RESPONSIBLE ENERGY
TRANSITION AND
SUSTAINABLE
ALTERNATIVES**

A SUMMARY REPORT **NAVIGATING TANZANIA'S LNG LANDSCAPE:** TOWARDS RESPONSIBLE ENERGY TRANSITION AND SUSTAINABLE ALTERNATIVES

Authors:

Francis Mkasiwa, Mniama Rajabu and Dr. Rukonge Sospeter

Edited by:

Adam Anthony: HakiRasilimali

Dr. Godwin Lema: University of Dar es Salaam

Published by HakiRasilimali

Published June 2024

1.0. Introduction

In an era marked by escalating concerns over climate change, environmental degradation, and the imperative to transition towards sustainable energy sources, the global energy landscape is undergoing a profound transformation (Hussain, 2023). One of the pivotal regions at the forefront of this transition is Tanzania, a nation endowed with abundant natural gas resources that have the potential to reshape not only its domestic energy sector but also contribute significantly to the global energy equation (Nkechiwetalu Nwankwo, 2023). As the world grapples with the challenge of reducing greenhouse gas emissions and mitigating the impacts of climate change, the responsible development and utilization of Tanzania's Liquefied Natural Gas (LNG) reserves have emerged as a critical focal point in the quest for a sustainable and environmentally conscious energy future (Nakanwagi, 2021).

Tanzania's LNG reserves represent a vast reservoir of clean-burning natural gas, providing an invaluable opportunity to diversify its energy mix, reduce its reliance on fossil fuels, and accelerate its journey towards responsible energy transition (Stanbic, 2022). The development of LNG infrastructure, both upstream and downstream, holds immense promise for enhancing energy access, bolstering economic growth, and fostering energy security within the country (Chuwu, 2023). Moreover, as an emerging player in the global LNG market, Tanzania stands poised to contribute positively to the broader international effort to curb carbon emissions. LNG is often touted as a transitional fuel with a lower carbon footprint than conventional hydrocarbon sources (Stanbic, 2022).

However, the path to realizing the full potential of Tanzania's LNG reserves is not without its challenges and complexities. The responsible development of this resource necessitates meticulous planning, robust regulatory frameworks, and a commitment to environmental and social sustainability (Eberhard, 2018). Managing LNG projects demands careful consideration of ecological impacts, community engagement, and the preservation of delicate ecosystems, such as the coastal regions, which are ecologically sensitive and rich in biodiversity (Bunse, 2021).

Furthermore, in the context of a rapidly evolving global energy landscape, Tanzania's decision-makers face critical choices regarding the long-term viability of LNG as an energy source (Hansson, 2019). While LNG offers immediate economic benefits and potential emissions reductions, it also raises questions about the nation's commitment to sustainable alternatives, renewable energy sources, and the fulfilment of international climate agreements (Bos, 2019). Balancing these considerations is essential for Tanzania's sustainable development and its role as a responsible global energy actor.

Therefore, this study aimed to comprehensively explore Tanzania's LNG landscape, across environmental, social, economic, and policy dimensions. By assessing opportunities and challenges, it seeks to provide valuable insights and recommendations to guide Tanzania's responsible energy transition in line with global commitments. Amid the pressing need to combat climate change and transition to cleaner energy sources, Tanzania's LNG industry presents an informative case study. Through rigorous research and policy evaluation, this study aims to contribute to the broader discourse on sustainable energy transitions, offering lessons applicable to Tanzania and other nations navigating similar energy landscapes toward a more sustainable and environmentally conscious future.

2.0. Why this Study?

The existing literature and research on oil and gas management in Tanzania have primarily focused on economic aspects, such as revenue generation and job creation, while environmental and social impacts, along with alternatives to fossil fuels, have received limited attention (Jeuland, 2021). Furthermore, there is a gap in empowering Tanzanian civil society with the knowledge and capacity to advocate for responsible oil and gas management, particularly concerning liquefied natural gas (LNG) projects (Arregui, 2016). As Tanzania pursues an ambitious energy transition, there is a need for comprehensive research that integrates environmental, social, economic, and policy perspectives while actively involving civil society in shaping the transition (Cantarero, 2020).

This knowledge gap risks responsible oil and gas management and just energy transition. LNG projects' potential environmental and social impacts, including risks to ecosystems, water resources, and local communities, have not been thoroughly examined. Additionally, local civil society and key stakeholders have limited understanding regarding the evidence and advocacy capabilities to actively participate in shaping energy transition pathways and advocating for responsible oil and gas management, especially concerning LNG projects (Shelton, 2022).

The absence of a comprehensive research initiative that addresses these issues hinders informed decision-making, impedes social accountability, and may result in unsustainable energy practices. This research aims to bridge these gaps by empowering Tanzanian civil society with the necessary tools to engage effectively in advocating for responsible oil and gas management and a just transition towards sustainable energy sources, with a specific focus on LNG projects.

3.0. What the Study Seeks to Achieve

This research aims to empower Tanzanian civil society with knowledge, evidence, and advocacy capabilities, enabling them to actively advocate for responsible oil and gas management and a just transition towards sustainable energy sources, with a specific focus on LNG projects. Specifically, this study intends to.

- a) To explore the environmental, social, and economic aspects of LNG project in Tanzania, focusing on collecting data and evidence that can be used to advocate for responsible oil and gas management.
- b) Foster stakeholder engagement by facilitating dialogues between civil society, government agencies, industry stakeholders, and local communities to ensure that diverse perspectives are considered in decision-making processes related to LNG and broader energy transition efforts.

- c) Develop and implement training programs and workshops to enhance the knowledge and skills of Tanzanian civil society organizations in understanding the complexities of oil and gas management, including the specific challenges and opportunities associated with LNG projects. This objective seeks to empower civil society to actively engage in informed advocacy.

4.0. How the Study was Done

The study was undertaken through a meticulous blend of intensive desk review and comprehensive primary data collection methods. Initially, an extensive literature review was conducted, encompassing reports, data, and existing literature pertinent to LNG projects, their environmental and social implications, economic ramifications, policy frameworks, and Equinor's role in global oil and gas development. This thorough desk review laid a robust foundation for the subsequent research, ensuring a nuanced understanding of the subject matter's breadth and depth.

In parallel, primary data collection methods were employed to delve deeper into the complexities surrounding LNG projects and the energy transition. Key informant interviews were conducted with a diverse array of stakeholders, including policymakers, industry experts, and representatives from civil society organizations. These interviews facilitated in-depth discussions, yielding qualitative insights and expert perspectives crucial for grasping the intricacies of the LNG project from the vantage point of those intimately involved or well-versed in the field. Additionally, focus group discussions provided a platform for community stakeholders, affected populations, and civil society organizations to collectively share their views, concerns, and perceptions regarding the LNG project and the broader energy transition agenda.

5.0. Energy Transition in Tanzania

Tanzania's commitment to transitioning towards renewable energy sources marks a significant step in combating climate change and ensuring sustainable economic growth. However, the journey towards achieving energy sustainability by 2030 faces challenges, including

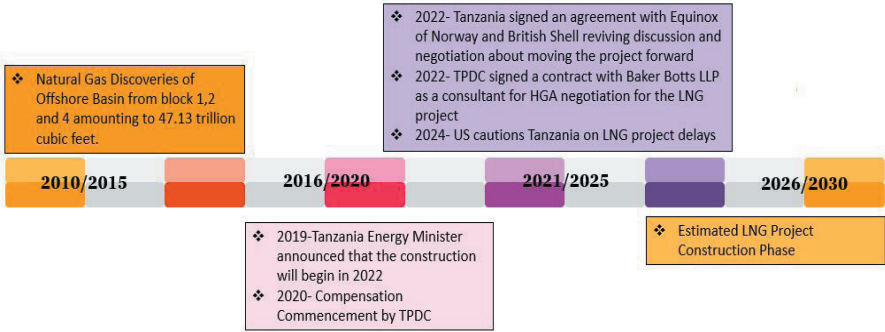
the intermittency and unreliability of renewable energy sources like hydropower, exacerbated by climate change impacts on rainfall and water availability. Despite this, the National Power System Master Plan (PSMP) outlines ambitious goals to diversify Tanzania's energy mix by 2044, emphasizing the importance of foreign investment in renewables.

A SWOT analysis comparing LNG and renewable energy systems in Tanzania reveals various strengths, weaknesses, opportunities, and threats. While LNG offers optimal geographical location and acts as a transitional fuel, it is marred by methane emissions and high costs. In contrast, renewable energy systems (RES) are clean and sustainable, albeit intermittent and expensive to install. Opportunities for LNG include attracting foreign investments and enhancing local industrial linkages, while RES offer low energy costs and increased conservation benefits. However, LNG faces threats such as geopolitical tensions and unexpected shipping regulations, while RES encounter challenges like raw material shortages and price volatility.

Tanzania's energy dilemma, highlighted by its reliance on fossil fuels despite commitments to reducing them under the Paris Agreement, underscores the need for a coherent national strategy to transition towards cleaner energy sources. Despite exporting fossil fuels like coal to global markets, there's recognition of the imperative to minimize reliance on fossil fuels and prioritize renewable energy development. Developing such a strategy, as emphasized by experts like Mr. Silas Olan'g, is crucial for Tanzania to navigate its energy transition journey effectively and ensure sustainable development in the face of global climate challenges.

6.0. LNG Investment Decision Journey

LNG PROJECT OBSERVATION SCENARIOS



The journey towards the investment decision for the LNG project in southern Tanzania has traversed distinct phases, each marked by significant milestones and hurdles. Phase I, spanning from 2010 to 2015, witnessed the discovery of substantial natural gas reserves, setting the stage for subsequent developments. Phase II, spanning from 2016 to 2020, saw initial steps towards project realization, including the announcement of construction plans and the commencement of compensation efforts. However, Phase III, covering 2021 to 2025, encountered setbacks such as delays and cautionary warnings, underscoring the project's intricacies and external pressures.

Throughout this journey, stakeholders grappled with challenges arising from the project's complexity, financial demands, and the need for stakeholder collaboration. Delays in reaching the final investment decision underscored the project's multifaceted nature, exacerbated by infrastructural deficits and equity concerns. Tanzania's socio-political context further complicated matters, adding layers of complexity to project initiation efforts. However, amidst these challenges, the anticipated benefits, including economic growth and enhanced social welfare, underscored the project's significance.

The pivotal role of the final investment decision (FID) in project progression cannot be overstated, hinging on economic viability assessments and meticulous planning during pre-FEED and FEED phases. Stakeholders, including industry giants like Equinor, ExxonMobil, TPDC, and Shell, engaged in rigorous risk assessment and design refinement, essential for project success. Despite hurdles, Tanzania's commitment to LNG development remains steadfast, driven by aspirations for economic prosperity, energy diversification, and alignment with global decarbonization goals.

The LNG decision journey reflects a dynamic interplay of challenges and opportunities, highlighting the complexities inherent in large-scale energy projects. Despite setbacks, Tanzania's resolve to navigate these challenges underscores the project's strategic importance for national development and energy transition aspirations. Balancing economic imperatives with environmental and social considerations remains paramount, emphasizing the need for robust planning, stakeholder engagement, and adaptive management strategies moving forward.

7.0. Key Results

7.1. Lindi Voices: Anticipation and Concerns Surrounding the LNG Project

In the Lindi region, the anticipation and concerns surrounding the LNG project are deeply rooted in the perspectives of the host community, particularly those residing in Likongo village, who have been resettled to make way for the project's development. Comprising mainly fishermen, subsistence farmers, and small business owners, this community's sentiments reflect a mix of hope and frustration. While the government and foreign investors have facilitated their relocation through free prior informed consent mechanisms to mitigate potential conflicts, there's a palpable sense of discontent among some members.

One community member expressed disappointment over the perceived lack of acknowledgment of the LNG project by the President during a

public event, highlighting a sense of neglect or unmet expectations. The prolonged negotiations and delays in the investment decision have fueled feelings of being overlooked or disregarded, leading to a sense of disenfranchisement within the host community. Another member, directly impacted by the project, articulated a desire to witness its fruition within their lifetime, underscoring the personal stakes and aspirations tied to the project's realization.

These voices from the host community illuminate the complex dynamics at play, where anticipation for economic opportunities coexists with concerns over delays and perceived neglect. As the project's timeline unfolds, addressing these sentiments and ensuring meaningful engagement with the host community will be crucial for fostering trust, social cohesion, and ultimately, the project's long-term success.

The prolonged wait for the LNG project in Likong'o village has led to a sense of disillusionment among the host community members, who feel that over a decade of promises has yielded little tangible benefit apart from compensation for relocation. One community member poignantly remarked that the only visible change has been the replacement of traditional dried leaf rooftops with iron sheets, symbolizing a shift in their way of life without the promised economic transformation.

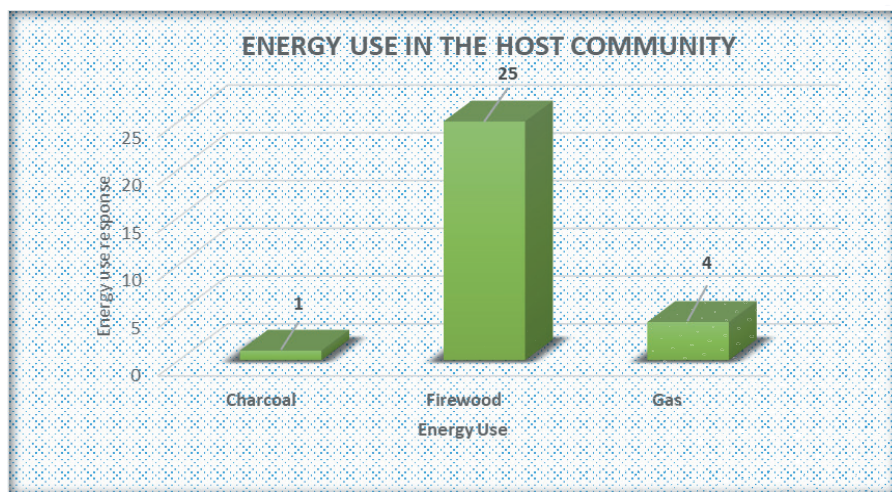
Despite the frustrations, some Civil Society Organizations (CSOs) in Lindi maintain optimism about the LNG project's potential benefits. They view LNG as a transitional fuel that could facilitate Tanzania's journey towards cleaner energy sources, albeit acknowledging its environmental drawbacks. CSOs advocate for a gradual energy transition towards a carbon-free economy, envisioning industrial linkages between the LNG and agriculture sectors that could benefit the local community. However, the ongoing export of coal from the Ports of Mtwara highlights the existing tensions between energy needs and environmental sustainability.

The impact of the anticipated LNG project on subsistence farming has been profound, with farmers facing challenges due to the relocation and the loss of fertile agricultural and fishing grounds. The shift from

coconut-based agriculture to less suitable crops like sesame and corn has exacerbated socio-economic hardships, especially for the elderly who may not live to see new coconut trees bear fruit. Despite hopes for economic revitalization, the community faces significant hurdles in adapting to the changing landscape, with doubts lingering about the project's ability to fulfill its promises of prosperity for the local population.

7.2. Local Energy Use: A Key insight on the Energy Transition

The reliance on firewood as the primary energy source in Likong'o village highlights the pressing need for a shift towards cleaner and more sustainable alternatives. While LNG may offer a temporary reduction in carbon emissions compared to other fossil fuels, it is imperative for Tanzania to transition towards a decarbonized economy beyond LNG. However, the host community's energy usage patterns have yet to align with this transition, with firewood remaining prevalent due to economic constraints.



A survey conducted among members of the host community underscores the widespread use of firewood for daily energy needs, with many

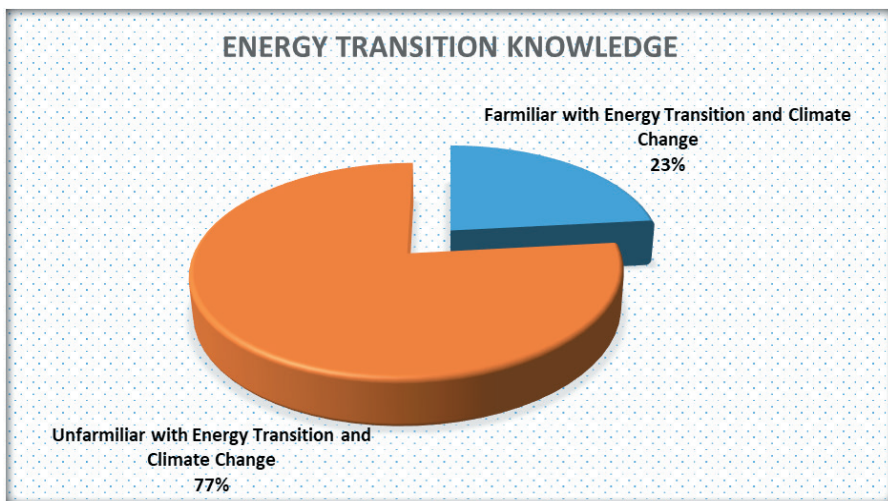
unable to afford alternatives like LPG and charcoal. Efforts to promote clean cooking solutions, such as the "Anzia Jikoni" campaign, aim to address this challenge by raising awareness and incentivizing the adoption of cleaner fuels. However, the campaign faces significant hurdles in remote areas like Likong'o village, where access to clean cooking technologies remains limited.

Despite ambitious targets set by initiatives like the "Anzia Jikoni" campaign to increase clean cooking fuel usage to 80% by 2033, achieving these goals in remote communities like Likong'o poses considerable challenges. The limited uptake of clean cooking technologies underscores the need for targeted interventions and increased accessibility and affordability of cleaner energy options in rural areas. As Tanzania navigates its energy transition, ensuring the active participation and inclusion of communities like Likong'o will be crucial for driving meaningful change towards a more sustainable future.

7.3. Host Community Knowledge of the Energy Transition

The knowledge gap within the Likong'o host community regarding climate change and energy transition is a significant barrier to Tanzania's development of a decarbonized economy. According to an assessment conducted by HakiRasilimali in 2024, only 23% of respondents in Likong'o were familiar with these critical issues, highlighting a pervasive lack of awareness. This gap in understanding has wide-ranging impacts, spanning social, economic, and political spheres.

Socially, the community's lack of knowledge on energy transition deprives them of opportunities to adopt sustainable living practices that could enhance their health and well-being. Additionally, the absence of awareness hampers their access to new clean technologies, which could improve production and consumption strategies, benefiting both individuals and the community at large.



Economically, the host community's limited understanding of renewable energy systems prevents them from leveraging potential opportunities for industrial linkages and economic development. Without proper education on the benefits of transitioning to cleaner energy sources, the community remains reliant on fossil fuels, hindering the overall energy transition process and potentially limiting job creation opportunities.

Politically, the lack of awareness can lead to public outcry and unrest towards clean investments in the host community, including projects like the LNG project. Without understanding the broader implications of energy transition initiatives, community members may resist or oppose efforts to implement clean technologies, inadvertently impeding progress towards a more sustainable future.

Addressing this knowledge gap is crucial for fostering community engagement and ensuring the successful implementation of clean energy initiatives in Tanzania. Efforts to educate and empower communities like Likong'o with information about climate change, energy transition, and the benefits of sustainable living practices are essential for building a more resilient and environmentally conscious society.

7.4. LNG Project Social License to Operate

The social license to operate (SLO) of LNG projects in Likong'o village is heavily influenced by factors such as the community's understanding of energy transition and climate change impacts. While there may be a lack of awareness among community members regarding these critical issues, the perceived economic opportunities presented by LNG projects often overshadow concerns about long-term sustainability.

According to a survey conducted by Haki Rasilimali in 2024, all respondents (30 individuals) expressed support for the operationalization of the LNG project in Likong'o. This overwhelming endorsement suggests a high level of social acceptability within the host community. The positive outlook is further reinforced by various initiatives undertaken by the government and foreign investors to address community needs and concerns.

Resettled households have received substantial compensation, totalling over TZS 5 billion, alleviating some of the socio-economic burdens associated with relocation. Additionally, foreign investors have contributed to the community's well-being by funding surgical procedures for individuals suffering from orchitis and investing in infrastructure development. Shell's construction of a modern school, costing TZS 1 billion, exemplifies the tangible benefits accruing to the host community from the LNG project.

Considering these efforts and the community's overwhelming support, the LNG project has been granted a social license to operate, facilitated by collaboration between the government, foreign investors, and local stakeholders. However, it is essential to recognize that while economic benefits may be immediate and tangible, the long-term sustainability and environmental implications of LNG projects must also be carefully considered to ensure the well-being of both current and future generations. Continued dialogue, transparency, and community engagement will be vital for maintaining social license and fostering sustainable development in the region.

7.5. The LNG Outlook from Central and Local Government

The outlook of the Tanzanian government, both at the central and local levels, towards the LNG project in Lindi reflects a strong commitment to its development and perceived economic benefits. At the central government level, the Tanzania Petroleum Development Corporation (TPDC) plays a pivotal role in overseeing the project, with foreign investors such as Equinor, Shell, and ExxonMobil holding significant stakes. The signing of a host government agreement in 2023 underscores the government's commitment to facilitating the project's realization. Politically, there is a clear determination to cooperate with foreign investors to harness the economic potential of the LNG project, with the aim of industrializing Tanzania and increasing energy access.

Meanwhile, the local government, represented by the District Commissioner of Lindi, views the LNG project as a catalyst for economic growth and revenue generation. Positive impacts cited include reimbursement for resettlement, investments in health, infrastructure, and education sectors by foreign investors, and an increase in land value. The local government actively collaborates with investors to manage public expectations and raise awareness about the project's benefits, despite challenges posed by climate change affecting small-scale farmers' revenues.

However, debates surrounding the project's viability persist, particularly concerning environmental and social considerations. Environmental concerns include noise and air pollution, land degradation, and carbon emissions exacerbating climate change impacts. While some argue that LNG emits less carbon compared to coal, environmentalists raise alarms about the project's overall sustainability and its potential negative impacts on future generations. Similarly, social viability is questioned due to the project's potential to exacerbate rent-seeking behavior, divert attention from other sectors like agriculture and fishing, and increase corruption and social unrest.

Overall, while the government is keen on promoting the economic benefits of the LNG project, concerns about its environmental and social impacts highlight the need for comprehensive assessments and robust mitigation measures to ensure sustainable development in the region. Balancing economic development with environmental and social sustainability remains a complex challenge requiring careful consideration of all stakeholders' perspectives.

8.0. Conclusion and Recommendations

The study's conclusion on the LNG project in Likongó village highlights crucial insights into economic aspirations, environmental concerns, and community welfare. Despite the community's hopeful anticipation of positive impacts, a passive concern exists regarding the project's environmental effects, coupled with a sense of disillusionment stemming from unmet promises over the years. Civil Society Organizations (CSOs) project potential benefits but emphasize the need for a sustainable and inclusive LNG economy. The government views the project as for catalyzing industrialization and delivering social services, prioritizing economic prospects and revenue generation.



Advocating for responsible oil and gas management requires considering several procedural aspects. Recognition, distributive, and resolute justice are pillars of just energy transition. The diagram below shows the transition pillars for responsible oil and gas governance.

The recognition aspect implies that the local communities residing in Likong'o deserve global recognition for contributing to the LNG project. While investors and the Government of Tanzania have compensated the host communities, establishing policies and regulations is essential to safeguard their benefits. The host community must be defined by its proximity to the project and not by the citizenship of individuals seeking to benefit. Furthermore, any transplantation or rent-seeking from other parts of the population should be avoided to ensure that the actual beneficiaries of the LNG project are the local communities of Likong'o.

The resolute aspect necessitates the investors and the Government of Tanzania (GoT) to restore the community to its previous status before the LNG project. To facilitate sustainable development in the host communities, a focus should be on building local capacity, increasing awareness, and creating linkages in domestic industries.

The distributive aspect calls for the equal distribution of the LNG project's ills and benefits. Ills also represent costs or negative impacts of the LNG project. Thus, Tanzania must promptly complete the LNG negotiations to distribute the benefits of sustainable development equally.

The procedural aspect is explained in terms of contracts entered for the project implementations. It is closely linked to oil prices, which can fluctuate globally and cause instability. Consideration must be taken regarding short- and long-term contracts for LNG at reduced prices, especially in East Asian markets. Long-term contracts should also include clauses for price review to protect against significant changes in market conditions. A hybrid pricing arrangement that involves a portion of the price being linked to oil and another to a gas or LNG benchmark should be established. This will help ensure equitable distribution of economic benefits to the people of Tanzania.

Conclusively, the study recommends the following action approach for ensuring responsible oil and gas governance amid the energy transition and climate change global agendas.

1. Establishing educational programs for the community on the importance of transitioning to clean and sustainable energy sources, as well as the impacts of climate change. This can be achieved through meetings, seminars, and educational materials.
2. Providing knowledge and understanding of how the use of clean energy contributes to reducing the impacts of climate change.
3. Developing a collaborative process and involving the community in all decisions related to the LNG project, from planning to implementation.
4. Implementing strategies for environmental conservation and managing potential environmental impacts resulting from the construction and operation of the LNG project.
5. Conducting comprehensive research on the impacts of climate change and how the LNG project contributes, and then developing strategies to reduce greenhouse gas emissions.
6. Promoting transparency and accountability in the operation of the LNG project, ensuring that the public's interests are considered.
7. Providing training and job opportunities for the local community to benefit from the project in meaningful ways.

NOTES

NOTES

✉ P.O.Box 38486,
📍 Dar es Salaam, Tanzania.
✉ info@hakirasilimali.or.tz
📞 Office: +255 (0)745 655 655

🐦 HakiRasilimali
📘 HakiRasilimali
📷 HakiRasilimalitz
🌐 hakirasilimali.or.tz

