Shared Energy Futures:

Namibia Civil Society & Community Voices on Green Hydrogen

Report from the CSO & Affected Communities Green Hydrogen Workshop, 28-30 August 2024, Windhoek, Namibia

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Forward

The green hydrogen (GH2) sector represents a transformative opportunity for Namibia, one that has the potential to drive economic development and foster sustainable energy solutions. However, as we stand on the cusp of this new frontier, it is imperative that the voices of Civil Society Organizations (CSOs) and affected communities are not only heard but actively shape the trajectory of this emerging industry.

The recent workshop convened to facilitate dialogue among diverse stakeholders marks a significant step toward fostering a participative atmosphere where multiple perspectives on green hydrogen can converge. By addressing the complexities of GH2, from foundational concepts to the intricacies of local resources, the workshop aimed to empower participants and equip them with the knowledge and tools necessary to navigate the challenges and opportunities presented by this burgeoning sector.

Throughout the event, we recognized the necessity of good governance and the vital role of civil society in advocating for an equitable and inclusive transition to green hydrogen. The insights shared by participants illuminated the hopes, concerns, and aspirations of communities that stand to be impacted by these developments, particularly with respect to vital resources such as land, water, and energy.

This report encapsulates the key discussions, recommendations, and insights generated during the workshop, building on previous gatherings organized by ESJT, Civic +264, and other stakeholders. As we move forward, it is essential to cultivate a collaborative approach that aligns the ambitions of the green hydrogen sector with the needs and aspirations of all Namibians.

Together, let us champion a vision of a just and sustainable transition to green hydrogen—one that not only addresses our energy needs but also enhances the resilience and empowerment of our communities for generations to come. The collective journey towards this vision begins here, and it is one that requires our unwavering commitment and collaborative action.

Appreciation

We extend our heartfelt appreciation to all participants and contributors who made the workshop on green hydrogen a resounding success. Your dedication, insights, and passion for the issues surrounding the emerging green hydrogen sector in Namibia enriched our discussions and helped foster a collaborative environment.

We are especially grateful to the Civil Society Organizations, affected community representatives, and experts who shared their diverse perspectives and expertise, enabling us to collectively address the hopes and concerns of those most impacted by these developments. Your active engagement not only underscored the importance of inclusivity in this critical dialogue but also laid the groundwork for future collaborations aimed at ensuring a sustainable and equitable transition to green hydrogen for all Namibians. Thank you for your invaluable contributions and your commitment to shaping a brighter, more just future.

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Introduction

This report encapsulates the insights and perspectives shared during a recent workshop convened by Namibia Civil Society Organizations (CSOs) and affected communities, aimed at addressing the prospective impacts and opportunities presented by the burgeoning green hydrogen (GH2) sector in Namibia. In anticipation of the forthcoming Global Africa Green Hydrogen Summit, participants engaged in critical discussions that spanned the multifaceted dimensions of GH2—ranging from its foundational principles and national strategies to the significant rights and governance challenges faced by local communities.

Through collaborative dialogue, attendees articulated their aspirations and concerns regarding green hydrogen, focusing on issues such as land access, water management, energy rights, and the need for a just transition that benefits all stakeholders. The workshop served as a vital platform for amplifying community voices and fostering a shared understanding of what a green hydrogen economy in Namibia could mean for local populations. As we delve into the findings presented in this report, we aim to highlight the essential role of civil society in shaping sustainable energy futures and ensuring that the transition to green hydrogen aligns with principles of equity, justice, and inclusivity.

Workshop Overview

The workshop aimed to create a platform for meaningful dialogue among Namibia Civil Society Organizations (CSOs) and affected communities concerning the emerging green hydrogen (GH2) sector in the country. Its primary objective was to facilitate the sharing of diverse perspectives, hopes, and fears regarding the development and implementation of GH2 projects, particularly in light of the upcoming Global Africa Green Hydrogen Summit.

The workshop sought to break down complex issues surrounding green hydrogen, such as the foundational concepts of GH2, the realities and potential of local resources ("GH2 from Below"), and the alignment between national plans and strategic initiatives ("GH2 from Above"). Additionally, it aimed to empower participants to articulate their rights, propose remedies, and develop tactics to address the challenges posed by green hydrogen projects, focusing on land, water, and energy concerns.

By fostering a participatory environment, the workshop intended to promote a collective understanding of the need for good governance and the importance of civil society involvement in ensuring that the transition to green hydrogen is equitable, sustainable, and aligned with the vision of a just transition that benefits all Namibians.

Ultimately, the workshop aimed to lay the groundwork and update (from last year's CSO gathering organized by ESJT, Civic +264 and others) for a collaborative approach to shaping Namibia's green hydrogen future, rooted in shared energy futures, community voices, and inclusive decision-making processes.

Pre-Workshop Concerns & Burning Questions on GH2

Concerns:

As Namibia navigates the emerging landscape of green hydrogen (GH2) within the context of its status as a carbon-sink country, several critical concerns arise. Firstly, the concept of a "Green Transition," as outlined in the Paris Agreement, highlights the importance of reducing carbon emissions globally; however, how will this transition align with Namibia's economic realities, especially in terms of job creation and poverty alleviation? There is a palpable tension between the ambitious environmental goals espoused by international agreements and the immediate employment and economic needs of local communities. Participants expressed skepticism about whether the green hydrogen initiatives are genuinely designed to benefit Namibians or if they serve merely as an election gimmick, with politicians leveraging the promise of a green economy without providing substantive plans for community development.

Additionally, the PHAKISA pipeline feasibility study raises questions about whether the proposed infrastructure will genuinely meet local needs or prioritize export to Northern countries seeking marketable green hydrogen products. The dynamics of global interest in GH2 may foster an extractive approach, potentially sidelining local voices and diminishing the economic returns to Namibian communities. Stakeholders expressed concern that while GH2 could offer financial influx from foreign markets, it may not translate into sustainable development or resilient job creation at home.

Moreover, with such significant investments at stake, there is unease regarding the potential environmental impacts of large-scale GH2 projects on Namibia's unique ecosystems and resources. How the country will balance its role as a global player in renewable energy with the responsibility of maintaining its ecological integrity and ensuring community rights will be pivotal topics for discussion.

Burning Questions:

Socio-economic

1. Good Cop/Bad Cop Situation: Is the involvement of German investors creating a "good cop/bad cop" dynamic in negotiations around green hydrogen, and if so, how does this affect local stakeholders?

2. Conflicting Agendas: Why are German investors presenting opposing agendas when the development of GH2 is ultimately in their financial interest? What are their goals, and how do they align or conflict with local needs?
3. Beneficiaries of GH2: Who truly benefits from the green hydrogen initiatives? Is it the foreign investors, the Namibian government, local communities, or some other entities?
4. Ownership of Hydrogen: Whose hydrogen is it, and who stands to reap the economic rewards from its production and exportation? How will revenue be distributed?
5. Economic Growth Stabilization: How is green hydrogen expected to stabilize and sustain economic growth in Namibia? What metrics or indicators will be used to measure this success?
6. Government Shares in Projects: Why is the Government of the Republic of Namibia (GRN) only receiving 24% shares in the Hyphen project? What implications does this have for national sovereignty and economic independence
7. Knowledge Gap on GH2: Why do we know so little about the implications and complexities of GH2 despite the significant discourse surrounding it? What information is lacking for informed community engagement and decision-making?
8. Delayed Recognition of Potential: If hydrogen has been known as a potential energy source for many years, why are we only now realizing its potential? What has shifted in the global landscape to precipitate this focus?
9. Future of GH2 in Namibia: What happens to Namibia's economy and energy landscape when the global demand for green hydrogen diminishes? How can we future-proof our economy against such fluctuations?
10. Community Engagement: How are local communities being integrated into the planning and implementation of GH2 projects? What role do they play in the decision-making process?
11. Simplification for Local Communities: Is the concept of GH2 being oversimplified for local communities? If so, what are the potential risks of this oversimplification?
12. Cost to Namibia: Why does Namibia have to bear potential environmental and social costs for the development of green hydrogen projects that are primarily aimed at benefiting foreign investors?
13. Synergies with Other Projects: What synergies exist between green hydrogen initiatives and other local development projects? How can these be leveraged for mutual benefit?
14. Lessons from Colonial History: In what ways does the current situation reflect lessons learned from Namibia's colonial history? Is this a new form of exploitation, or can it be seen as a different type of development partnership?

15. China's Role: Where does China fit into the green hydrogen narrative in Namibia? Are they competitors, partners, or silent observers in this space?

Economic & Energy

1. Financial Motivations: Is the green hydrogen initiative primarily driven by profit? Who stands to gain the most financially from these projects?
2. Funding Sources: Who is funding the development of green hydrogen in Namibia? Are these funds coming from foreign investors, government initiatives, or other sources?
3. Economic Implications for Namibia: Is Namibia being positioned merely as a commodity in the global green hydrogen market? What are the implications of this for local communities and the economy?
4. Efficiency and Cos: If green hydrogen production is viewed as inefficient and expensive, what are the incentives for pursuing this method over renewable energy electrification?
5. Local Benefits: Who benefits from green hydrogen projects? Are local communities seeing any tangible benefits, or are profits primarily flowing to external stakeholders?
6. Domestic Energy Needs: Shouldn't the focus be on leveraging renewable energy (RE) to meet the energy needs of Namibians rather than prioritizing export? What are the arguments for the current priority?
7. Export Strategy: How might countries strategize to produce and export green hydrogen? What factors must be considered to make such ventures viable?
8. Energy Output Comparison: What is the energy output of green hydrogen, particularly in relation to powering vehicles like cars? How effective is GH2 as a sustainable fuel source compared to existing alternatives?
9. Affordability for Ordinary Namibians: With the current state of energy infrastructure and widespread poverty levels in Namibia, will ordinary citizens be able to afford the switch to hydrogen energy?
10. Future Applications: Will the future use of green hydrogen be limited to applications such as ammonia production, or are there broader potential applications that should be considered?

Biodiversity

1. Protection of Flora and Fauna: How will green hydrogen projects ensure the protection of native flora and fauna? What conservation measures will be implemented to prevent the displacement of plants and animals due to land conversion for GH2 production?
2. Land Displacement: What strategies are in place to mitigate the displacement of natural habitats and biodiversity that may result from utilizing 'cheap land' for green hydrogen development?
3. Byproducts and Waste Management: What are the byproducts of the green hydrogen production process, and how does the project intend to dispose of or manage these byproducts, particularly concerning potential environmental impacts?
4. Climate Change Contributions: In what ways does green hydrogen production contribute positively or negatively to climate change? If negative impacts are identified, what specific measures will be taken to mitigate these effects on the environment?
5. Brine and Salt Concentrate Management: What will happen to the salt concentrate generated in the brine during the hydrogen production process? How will the project deal with potential saline effluent to prevent environmental degradation?
6. Water Resource Availability: Do we have sufficient water resources to support the hydrogen production process given the existing pressures on freshwater supplies?
7. Water Source and Cycle: Where will the water for hydrogen production come from, and what will be the water's fate after it has been utilized in the extraction process? How will we handle wastewater and return it sustainably to ecosystems?
8. Land and Water Procurement: Where will the land and water required for green hydrogen production be sourced from, and what processes are in place to ensure that this does not infringe on local communities' rights or existing land uses?
9. Sustainability of the Hydrogen Extraction Process: Is the hydrogen extraction process being proposed truly green? What criteria and technologies will be employed to verify its sustainability and minimal environmental impact?
10. Community Engagement and Rights: How are local communities being engaged in decision-making processes, particularly regarding land and water use for GH2 projects? What mechanisms are in place to address their concerns and rights?

Human Capital, Health, Safety & Job Security

1. Skilled Labor Source: Where will the skilled labor required for the green hydrogen sector come from? Will there be sufficient training programs developed to prepare local workers for these specialized roles?
2. Job Accessibility: Jobs for who? How can we ensure that local communities, particularly marginalized groups, have access to the opportunities created by the green hydrogen initiatives?
3. Impact on the Labor Pool: How will the emergence of the green hydrogen sector impact the existing labor pool? Will the introduction of GH2 technologies lead to retrenchments for unskilled workers in traditional sectors?
4. Skill Requirements: What specific types of skills are needed for employment in the GH2 sector? What technical, vocational, and educational training programs will be implemented to equip workers with these skills?
5. Types of Jobs: What types of skilled jobs will the GH2 industry require (e.g., engineers, technicians, project managers), and what types of unskilled or semi-skilled jobs might be available (e.g., construction labor, maintenance)?
6. Job Stability and Quality: How stable and sustainable will the jobs created by the GH2 sector be in the long term? Will these jobs provide adequate wages and benefits to support livelihoods?
7. Environmental and Safety Concerns: How safe is green hydrogen gas in terms of production, storage, and transportation? What safety protocols will be put in place to minimize risks to workers and communities?
8. Equity and Inclusion: What measures will be taken to ensure that the benefits of the green hydrogen sector are equitably distributed, particularly to disadvantaged groups within Namibian society?
9. Retrenchment Support: If retrenchments occur in existing industries due to the rise of green hydrogen, what support systems will be established to assist displaced workers in transitioning to new employment opportunities?

The ABCs of Green Hydrogen

By Keren Ben-Zeev

The presentation titled "ABSs of gH2," provides a comprehensive analysis of hydrogen as a pivotal component of the global energy landscape. It elucidates the current applications of hydrogen, the methods of its production, and its potential as a clean energy source for the future. This report distills the major points and themes outlined in the presentation, offering insights into the role of hydrogen in various sectors as well as the challenges and opportunities ahead.

Understanding Green Hydrogen

The presentation begins with a succinct definition of hydrogen, describing it as the most abundant and lightest element in the universe, typically found in its gaseous state as H_2. Its significance is underscored by its integral function across multiple industries, where hydrogen plays a critical role in the production of numerous everyday products. The audience is introduced to the diverse industrial applications of hydrogen, which encompass sectors such as fertilizers, food products including emulsified and shelf-stable varieties, electronics, glass manufacturing, petrol refining, and cleaning products. Although hydrogen functions as an energy carrier, the presentation stresses that its predominant utility remains within industrial processes.

Production Methods

In discussing hydrogen production, the presentation highlights the extraction process necessary for hydrogen generation, which involves separating hydrogen from other compounds such as water (H_2O) and methane (CH_4). A notable feature of the presentation is the introduction of a color-coding system used to categorize different hydrogen production methods based on their environmental impact. The majority of hydrogen produced today—approximately 78%—is derived from fossil fuels, raising significant environmental concerns due to associated carbon emissions.

Future Potential and Challenges

The presentation shifts focus to the concept of green hydrogen, exploring its potential applications and the transformative effect it could have on the energy landscape. However, it also presents a cautionary view regarding an over-reliance on hydrogen, primarily due to its inherent inefficiencies. Hydrogen is characterized as an ineffective energy source for certain applications where electrification may offer more

efficient solutions. The presentation advocates for prioritizing demand reduction and harnessing renewable energy sources before turning to hydrogen as a viable alternative.

Environmental Considerations

Several key environmental concerns related to hydrogen production are examined in detail. The electrolysis process employed in producing green hydrogen necessitates considerable amounts of freshwater—estimated at approximately 9-11 liters per kilogram of green hydrogen—raising important questions about sustainability and water resource management. Additionally, the presentation brings to light the issue of hydrogen leaks. While hydrogen itself does not directly contribute to greenhouse gas emissions, leaks could have indirect effects by prolonging the atmospheric presence of other greenhouse gases. Early findings suggest that effectively managing hydrogen leaks will be essential to mitigating environmental impacts.

Industry Dynamics and Policy Implications

The interplay between the fossil fuel industry and the burgeoning green hydrogen sector is also scrutinized within the presentation. There is a critical examination of whether the promotion of green hydrogen might inadvertently extend reliance on fossil fuels, particularly when fossil fuel companies advocate for hydrogen solutions. This prompts the need for a careful evaluation of the motivations behind these endorsements and for policies that prioritize genuine sustainability.

In summary, the presentation and group interactions by participants emphasized the pressing need for informed policy-making and sustainable practices regarding hydrogen production and usage. It highlighted the necessity of engaging with various research papers and resources related to green hydrogen, which call for a balanced approach that considers both the potential benefits and the significant challenges posed by hydrogen as a clean energy alternative. As Namibia seeks to navigate its energy future, the insights from the presentation will be integral in guiding sustainable energy policies and practices.

Green Hydrogen from Below: Realities, Hopes & Fears

This specific session, "Green Hydrogen from Below: Realities, Hopes, and Fears," concentrated on understanding the ground realities in communities impacted by GH2 projects, especially in light of the Global Africa Green Hydrogen Summit.

In regards to the views from the communities, the workshop participants were divided into regional groups, to zoom in on Green Hydrogen developments in the regions and how these projects are being perceived. Guiding questions/answers to report back on, where focused on What? (what will they build? What infrastructure will be built?), When? Why? What will they produce? Hopes and Fears and try to consider the initially established Burning Questions.

Green Hydrogen Projects

Project 1: Lüderitz/Southern Namibia (GH2 Producers) – Valley 1

Project 1 is the Green Hydrogen Valley in Lüderitz, Namibia. This initiative has garnered considerable attention, especially following its public launch at COP 26 in 2021. In the region, notable progress is underway. Wind speed towers have been erected, which will facilitate wind energy utilization essential for hydrogen production. An Environmental Impact Assessment (EIA) is currently in progress, aimed at thoroughly evaluating the potential effects of these developments on the environment and local communities.

What is happening & When developments will take place

Investment pledges by various stakeholders have also emerged, alongside the establishment of a local office in Lüderitz. This office is expected to enhance engagement and support for further initiatives, with workshops and consultations planned for 2024. However, there are significant inquiries surrounding these investments, particularly regarding transparency, profit sharing, and the potential benefits for Namibia as a whole. Concerns have arisen about the scholarships provided—specifically, the requirements for these scholarships and how they will contribute to the local economy.

Hopes & Fears

The region faces several hopes and fears related to the GH2 project. On the optimistic side, there is a strong desire for employment opportunities, sustainable development, and increased transparency in communications and project implementations. Communities hope for inclusive participation in decision-making processes, which is crucial for ensuring that local voices are heard and prioritized. Conversely,

there are notable fears that stem from perceived shortcomings in community engagement. Many resident's express concerns that they feel overlooked in consultations and decision-making, raising alarms about the potential loss of tourism due to development impacts.

There is anxiety over the effects on local flora and fauna, alongside worries about the project not genuinely representing community ownership. Furthermore, the lack of clear information about the investments and legislative frameworks governing GH2 development adds to the uncertainty. Many community members fear rising crime rates and health issues in light of the projected influx of workers and the pressure on essential resources. These collective hopes and fears reflect a community grappling with the complexities of rapid development while seeking assurance that their needs and interests will be adequately addressed.

Project 2: Daures, Erongo (GH2 Exporters) – Valley 2

In Daures, part of the Erongo region, notable developments are taking shape as part of the Green Hydrogen Valley initiative, particularly focusing on the establishment of infrastructure for hydrogen production. This project involves constructing facilities on ancestral land, a sensitive and complex issue that has generated significant concern among local residents and leaders.

What will happen & When

The plan includes the establishment of six gigawatts (GW) of renewable energy facilities, alongside an electrolyzer facility aimed at producing hydrogen on a large scale. At full capacity, these developments are projected to yield approximately 180,000 tons of hydrogen and one million tons of ammonia.

Hopes and Fears

However, the path to these developments is fraught with challenges and anxieties. Local communities heavily rely on groundwater provided via boreholes, and there are growing concerns about water shortages as these large-scale projects are set to occupy vital resources. The division between local leaders, developers, and the community has become increasingly pronounced, leading to tensions over control and benefits. A significant gap exists between traditional leadership and the community, intensifying feelings of disenfranchisement among residents who feel excluded from discussions that directly affect their land and livelihood.

Another critical issue is the lack of capacity building and awareness-raising initiatives aimed at informing the impacted and interested parties (I&AP) about the projects. The absence of clear and transparent

information sharing has exacerbated frustrations, particularly regarding Free, Prior, and Informed Consent (FPIC) protocols. Local communities have expressed the necessity for the hydrogen technocrats to allocate substantial budgets for awareness campaigns before any investments are made. It is essential that communities be recognized as primary beneficiaries of the hydrogen projects, ensuring their needs and ancestral knowledge are at the forefront of development considerations.

The community's hopes for the Green Hydrogen project are tempered by fears of unrealized promises. Many residents worry that the proposed benefits may amount to "selling impossible dreams" without comprehensive feasibility studies to back them. There is apprehension about potential increases in poaching as the dynamics in the area shift, and concerns over health risks associated with ammonia-based products further complicate the picture. Additionally, the fear of debt repayments resulting from loans taken on by the Government of Namibia (GRN) looms large, casting doubt on the financial sustainability of the projects.

Ultimately, while there are significant aspirations for economic development and energy production in Daures, these ambitions must be balanced with a commitment to genuine community engagement, equitable benefits for local residents, and respect for ancestral lands and indigenous practices.

Project 3: Kunene Region – Valley 3

The 3rd regional focus in Namibia (Green Hydrogen Valley No. 3) was not covered, as participants did not have enough information about the planned projects and activities undertaken so far. This was later on confirmed also by the Green Hydrogen Commissioner, James Mnyupe, that information is not available, as much of the projects are just intended ideas and so far no concrete activities are taking place.

South Africa

As plans for a hydrogen production plant intensify, with aspirations for construction to commence by 2023, the focus has shifted towards the geopolitical dimensions of the initiative, particularly the growing interest from the Global North in decarbonizing their economies using resources from countries like South Africa and Namibia. This scenario raises pressing concerns regarding the adherence to existing legal frameworks, as stakeholders stress the importance of aligning developments with regulatory requirements.

Furthermore, there is a pressing need to strengthen and expedite Environmental Impact Assessments (EIA) to ensure that all potential implications of these large-scale projects are thoroughly evaluated.

However, despite these calls for enhanced diligence, many local voices express feelings of being unheard. Hopes and fears from the communities, particularly those from marginalized groups, are not being adequately considered.

There is a palpable tension between the preservation of cultural heritage and the economic interests tied to industrial profit, especially as lands rich in historical significance are threatened by development activities. The struggle to balance these competing interests underscores the need for a more inclusive dialogue that respects both the cultural heritage of the communities and the potential economic benefits of renewable energy projects.

GH2 2050: The Global North & Namibia (Sustainability)

The vision to develop a green hydrogen (GH2) economy by 2050 represents an ambitious goal that aligns with global initiatives to transition towards sustainable energy sources. The push for such a transition stems from the urgency to create short-term employment opportunities within the local communities and to support the decarburization efforts of countries in the Global North. By establishing a GH2 economy, Namibia can position itself as a key player in the burgeoning green energy market, providing essential resources that support international commitments to reduce carbon emissions.

The driving forces behind this initiative are primarily two European companies, one from the UK and the other from Germany, who are keen to leverage Namibia's abundant renewable resources for hydrogen production. However, this partnership raises critical questions about resource allocation and infrastructural readiness. In particular, there are growing concerns about water availability, as the local communities heavily depend on groundwater sources that are already under stress. The phrase "cart before the horse" aptly captures the apprehension felt by many stakeholders; there is a pressing need to prioritize water resource management before embarking on large-scale hydrogen production. Without careful planning and consideration of local environmental constraints, the development risks exacerbating existing water shortages, which could have dire consequences for local populations.

Additionally, a comprehensive skills audit is essential to understand the workforce capabilities necessary for effectively operating and maintaining the facilities associated with the GH2 economy. This assessment will help identify gaps in skills and training that need to be addressed to ensure that local communities are adequately prepared to engage with and benefit from this new industry. By investing in skills development, not only can the potential economic benefits of the GH2 economy be maximized, but there will also be opportunities for meaningful community engagement and empowerment. Ensuring that local populations are equipped with the right skills will promote sustainable development, leading to a more equitable distribution of the economic gains that arise from this green energy initiative.

Green Hydrogen from Above - Understanding National Plans & Strategic Projects.

Overview: Namibia – Green Industrialization Blueprint

Part A: Where We Stand

This part outlines the current socioeconomic landscape of Namibia, highlighting both achievements and challenges that shape the country's growth trajectory.

Significant Socioeconomic Progress'

Since gaining independence, Namibia has made significant strides in socioeconomic development, marked by robust economic growth that has consistently outpaced many of its regional neighbors. Key indicators underscore this progress, with an average GDP growth rate of 3.5% from 1990 to 2023 and a doubling of per capita income in constant USD terms. The country's literacy rate has seen remarkable improvement, now standing at 92%, reflecting enhanced educational access for its population. Additionally, Namibia has effectively halved the percentage of individuals living below the poverty line, indicative of successful poverty alleviation efforts. The nation has also experienced improvements in public health, evidenced by a decline in infant mortality rates. Furthermore, access to electricity has expanded significantly, with 55% of the population enjoying regular electricity supply, enhancing overall quality of life and fostering further economic opportunities.

Economic Growth and Challenges

Despite 25 years of sustained economic growth, Namibia faces a "middle-income trap," struggling to compete in higher value-added and labor-intensive sectors. The growth model, primarily driven by public infrastructure and mining investment, is showing signs of fatigue, with productivity and human capital playing minimal roles in driving growth.

Binding Growth Constraints

The blueprint highlights several critical challenges that impede Namibia's economic growth, revealing a complex landscape of binding constraints. A polarized labor market presents a significant issue, characterized by a pronounced divide between high-paying, productive jobs and low-paying, unproductive ones, which hampers overall employment growth. Additionally, the nation faces a shortage of skills in competitive industries, resulting in a heavy reliance on imported expertise that stifles local

development. Since 2015, productivity levels have declined, largely due to an overreliance on public investment and a persistent skills gap. The dominance of state-owned enterprises further complicates the situation, as they often limit private sector opportunities and innovation. Water scarcity emerges as a strategic challenge, threatening to undermine economic sustainability, particularly in the context of rapid urbanization. Moreover, Namibia's economy remains vulnerable to external market fluctuations and global commodity price volatility, which poses ongoing risks to its growth trajectory and stability.

Future Outlook

To address these challenges, Namibia must adopt a new growth agenda that focuses on enhancing productivity, building domestic skills, opening new markets, attracting private investment, and improving climate resilience. This involves embracing technology and innovation, upskilling the workforce, diversifying market opportunities, and pioneering low-carbon industries.

Part B: A New Growth Agenda

This part outlines a transformative vision for Namibia's economic future, emphasizing the need for a new growth agenda that addresses existing challenges and leverages opportunities for sustainable development. This section focuses on the strategic initiatives required to enhance productivity, build domestic capabilities, and foster a resilient economy.

Vision for Economic Modernization

Namibia aims to embrace economic modernization by adding value throughout its economy. This involves shifting from traditional sectors to more competitive and innovative industries that can drive growth and create high-skill jobs.

Key Components of the New Growth Agenda

The new growth agenda for Namibia is structured around several critical pillars aimed at revitalizing the economy and promoting sustainable development. One of the central components is productivity enhancement, which focuses on overcoming current inefficiencies by investing in technology and innovation across various sectors. Complementing this is a robust skills development initiative that aims to create a skilled workforce tailored to meet the demands of high-productivity industries, thereby boosting overall income levels. Market diversification is another key element, encouraging Namibia to expand its reach beyond domestic limitations and leverage its competitive advantages to access global markets and regional economies of scale. To stimulate economic dynamism, the agenda emphasizes the

revitalization of the private sector by uncovering untapped business opportunities and attracting private capital and expertise. Finally, the agenda aims to position Namibia as a pioneer in low-carbon industries, aligning with the global shift towards sustainability and climate-friendly practices, thus ensuring long-term economic resilience and environmental sustainability.

Strategic Initiatives

The blueprint delineates several strategic initiatives aimed at realizing key economic growth objectives while promoting sustainability. A significant focus is placed on infrastructure development, with efforts to mobilize resources for building critical systems that support the green agenda, particularly in transport, logistics, and energy. Additionally, there is an emphasis on investing in green industries, where the blueprint seeks to identify and promote sectors that align with global trends in sustainable development, including renewable energy, green manufacturing, and sustainable agriculture. To facilitate these initiatives, the blueprint advocates for the establishment of public-private partnerships (PPPs), encouraging collaboration between the public and private sectors to co-finance and implement large-scale projects that drive both economic growth and environmental sustainability. This multifaceted approach aims to create a resilient and sustainable economic framework for Namibia's future.

Addressing Growth Constraints

The new growth agenda acknowledges the binding constraints identified in Part A and proposes targeted strategies to overcome them. This includes addressing the skills mismatch, enhancing productivity, and reducing reliance on state-owned enterprises by fostering a more competitive private sector.

Long-term vision

The overarching goal of the new growth agenda is to position Namibia as a leader in green industrialization, creating a sustainable and inclusive economy that benefits all citizens. By aligning with global trends and priorities, Namibia can attract foreign direct investment (FDI), create jobs, and enhance its resilience to climate change.

Part C: Delivering the Blueprint

This last part focuses on the practical steps and strategies required to implement the ambitious vision outlined in the previous sections. It emphasizes the importance of coordinated efforts across various sectors and stakeholders to ensure the successful delivery of the blueprint.

Implementation Framework

The implementation framework for the blueprint is organized into three distinct work streams designed to facilitate effective delivery of its initiatives. The first work stream focuses on infrastructure development, prioritizing the establishment of vital infrastructure that fosters green industrialization, which encompasses transport networks, energy systems, and industrial zones. The second work stream is centered on investment mobilization, aiming to attract both domestic and foreign investments to fund the blueprint's initiatives, particularly in high-value and sustainable industries. The final work stream addresses policy and institutional support, emphasizing the need to streamline policies and institutional frameworks to create an enabling environment conducive to investment and economic growth. Together, these work streams provide a comprehensive roadmap for executing the blueprint and achieving its overarching goals.

Infrastructure Enablers

The infrastructure enablers outlined in the blueprint emphasize the necessity of a modern and competitive infrastructure network to facilitate trade and logistics effectively. Key projects include the development of railways, ports, and trade hubs aimed at enhancing connectivity and lowering transportation costs, thereby improving trade efficiency. Additionally, significant investments in renewable energy generation and transmission are prioritized to meet the increasing demand for sustainable energy sources, reinforcing the shift towards greener practices. Furthermore, the establishment of industrial zones is highlighted, providing essential facilities tailored for green manufacturing and other investable industries, which collectively serve to bolster economic growth and sustainability within the framework of the green agenda.

Investable Industries

The blueprint outlines a range of investable industries that offer substantial opportunities for economic growth and development, positioning Namibia as a leader in the green economy. Key sectors identified include renewable energy hardware manufacturing, which encompasses the production of solar panels and wind turbines, crucial for advancing sustainable energy solutions. It also highlights mineral refining, particularly focusing on critical minerals like lithium and rare earth elements, which are essential for technology and energy transitions. Additionally, the blueprint emphasizes the potential of low-carbon industries such as synthetic fuel production and hot briquetted iron manufacturing, both of which

contribute to reducing carbon emissions. By investing in these industries, Namibia aims to stimulate economic growth, create jobs, and enhance its competitiveness in the burgeoning green market.

Public-Private Partnerships

The blueprint highlights the critical importance of Public-Private Partnerships (PPPs) in fostering collaborative efforts between the public and private sectors to effectively mobilize resources and expertise for large-scale infrastructure projects. By establishing these partnerships, the framework aims to facilitate the financing and implementation of essential infrastructure initiatives that drive economic development. Additionally, the creation of consortiums is encouraged, bringing together diverse stakeholders to share both the risks and benefits associated with investments. This collaborative approach not only enhances project viability but also promotes innovation and efficiency, ultimately contributing to the successful realization of infrastructure goals and strengthening the overall economic landscape.

Roadmap for Action

The detailed roadmap for action sets forth a structured timeline and key milestones for the effective implementation of the blueprint. It begins with immediate steps aimed at streamlining policies to create a more favorable environment for attracting investors. Alongside these short-term initiatives, the roadmap also outlines long-term strategies focused on building capacity and enhancing skills development to meet the demands of emerging industries, ensuring that the workforce is adequately prepared for future opportunities. Furthermore, the roadmap emphasizes the importance of continuous monitoring and evaluation to assess progress, allowing for necessary adjustments to be made in the implementation strategy. This comprehensive approach aims to ensure that the blueprint's objectives are met effectively and sustainably over time.

Alignment with Regional and Global Goals

The blueprint aligns Namibia's growth agenda with regional and global sustainability goals, ensuring that the country can effectively participate in the global green economy. This includes fostering regional cooperation and integration to enhance competitiveness and shared benefits.

Concerns from Session with Commissioner James Mnyupe

After the presentation of the Green Hydrogen blueprint, participants from Civil Society Organizations (CSOs) and affected communities engaged in a dialogue with Green Hydrogen Commissioner James Mnyupe. This interaction provided a platform for stakeholders to raise pertinent questions and express concerns about the implementation of green hydrogen projects in Namibia. This session highlighted key issues discussed during the session, highlighting concerns related to the Commissioner's appointment, community consultations, and the legal framework surrounding the green hydrogen initiative.

Questions Regarding Appointment of the Commissioner

The first significant point of contention raised during the session was the legitimacy of Commissioner James Mnyupe's appointment. Concerned participants questioned the constitutional basis for his role, pointing out that no specific act in the Namibian Constitution clearly delineates the appointment of a Commissioner for Green Hydrogen. This inquiry reflects broader concerns about governance and accountability in the context of the green hydrogen initiative, underscoring the need for clarity and transparency in leadership positions critical to such transformative projects.

Lack of Consultations with Affected Communities

Another pressing issue highlighted by participants was the apparent lack of consultations with affected communities in regions slated for green hydrogen development. Stakeholders emphasized the importance of engaging local populations to ensure their voices are heard in decisions that impact their livelihoods and environments. A representative from the Nama Traditional Leaders Association specifically pointed out that their previous invitations for a meeting on green hydrogen with the Commission had gone unanswered, raising concerns about the inclusivity of the decision-making process. This lack of engagement risks alienating communities and undermining the potential social acceptance and success of the projects.

Absence of a Legal Framework

A major concern that emerged during the dialogue was the absence of a comprehensive legal framework governing the green hydrogen sector, particularly in light of the 40-year contract signed with Hyphen. Participants expressed trepidation regarding potential long-term impacts resulting from the lack of established regulations and guidelines. Without a robust legal framework, stakeholders fear that environmental protections, community rights, and investment security could be compromised. This uncertainty necessitates urgent attention to developing clear policies that outline the responsibilities and

rights of all parties involved in order to promote sustainable and responsible development in the green hydrogen sector.

The Right and the Real: Land, Water and Energy

The session "The Right and the Real" explored Namibia's legal frameworks governing access to land, energy, and water, focusing on the implications of the emerging green hydrogen sector. Participants discussed how these frameworks might protect or enhance rights related to these resources. The conversation highlighted the concepts of 'the right,' concerning legal and ethical resource access, and 'the real,' focusing on the implementation and enforcement of these rights. This dialogue emphasized the relationship between legal structures and community experiences, prompting considerations on how Namibia can strategically navigate the opportunities and challenges of green hydrogen development while ensuring equitable access to critical resources for all citizens.

Legal Framework for Green Hydrogen Production in Namibia

By Eliz Shakela

The emerging green hydrogen (GH2) industry in Namibia presents significant economic and environmental opportunities, but it currently operates without a comprehensive legal framework to guide its production, operation, and development. This report aims to identify key legal considerations, examine existing legislation, and propose a legislative pathway to establish an effective and suitable framework for governing GH2 production in the country.

Current Legislation Governing Green Hydrogen

As it stands, Namibia does not have specific laws regulating green hydrogen production. While there are existing legal frameworks focused on environmental management and natural resource utilization, such as the Environmental Management Act (EMA) of 2007—which mandates environmental impact assessments for certain activities—these laws do not adequately address the unique requirements associated with green hydrogen. Additionally, legal frameworks governing extractive industries, including the Minerals (Prospecting and Mining) Act of 1992 and the Petroleum (Exploration and Production) Act of 1991, pertain primarily to oil and gas sectors and are not specifically tailored to the needs of green hydrogen production. Although Namibia has developed a Green Hydrogen Strategy and a Green Hydrogen Blueprint, these documents serve as guiding frameworks rather than legally binding instruments, lacking the enforceable regulatory measures necessary for effective governance.

Constitutional Considerations

Several provisions within the Namibian Constitution are relevant to the development of the green hydrogen sector. Article 1(6) establishes the supremacy of the Constitution, indicating that any new laws, including those pertaining to green hydrogen, must align with constitutional principles. Article 95(l) outlines the government's responsibility to promote sustainable resource use for the benefit of current and future generations, while Article 100 asserts that Namibia's natural resources are the collective property of its people, thereby demanding clear legislation concerning resource ownership and management. Furthermore, Article 144 recognizes international law as part of Namibia's legal landscape, which could influence the country's international commitments concerning green energy.

The Need for Legislation

The establishment of a legal framework for green hydrogen is imperative for several critical reasons. First and foremost, effective regulation of the industry is essential to set clear operational standards for GH2 production, ensuring sustainability and adherence to environmental and safety protocols. Additionally, legislation is necessary to define the roles of local communities, ensuring they can participate in and benefit from the industry while safeguarding their rights. Moreover, legal certainty is crucial for attracting investment, as it establishes transparent guidelines on intellectual property, licensing, and environmental protection.

Proposed Way Forward

To position Namibia for success in the green hydrogen sector, the country must develop a fit-for-purpose legislative framework. This initiative includes the introduction of a Synthetic Fuels Bill, which is essential for regulating the production of fuels derived from renewable energy sources, as existing laws do not currently accommodate such activities. This bill should undergo consultations and constitutional reviews prior to its submission to Parliament. Additionally, the development of a Gas Draft Bill is underway, which will govern the production, transportation, and storage of gas, an important element in the green hydrogen production process. Furthermore, comprehensive regulations must be established to oversee the entire production value chain, including aspects such as material handling, land use, intellectual property, transportation, site rehabilitation, ammonia by-products, and licensing, with clearly defined requirements for Environmental Impact Assessments (EIA).

Fit-for-Purpose Legislation

An effective legal framework for GH2 production would encompass critical regulations in related sectors. In the water sector, legislation is needed to address desalination technologies, infrastructure, water abstraction, storage, and wastewater management, complying with the National Water Conservation Act (NWCA). In the electricity sector, laws governing the development, operation, and maintenance of renewable energy assets are essential to ensure sustainable energy usage while protecting natural resources from pollution.

For Namibia's green hydrogen industry to thrive, it is essential to establish clear and enforceable legislation. The proposed Synthetic Fuels Bill, along with the accompanying regulations, will lay a solid legal foundation to regulate the production of green hydrogen effectively. This framework should ensure the sustainable use of natural resources while safeguarding the rights and participation of local communities. By addressing environmental, social, and economic factors, Namibia can support the long-term growth and sustainability of its green hydrogen industry, ultimately benefiting its citizens and the environment.

Just Energy Transition: Green Hydrogen?

By David Jarrett

The Just Energy Transition, an integral component of the Empower Southern Africa (ESA) Program, outlines a strategic framework designed to enhance access to renewable energy, address energy poverty, and stimulate innovation within the Southern African energy sector. This initiative places significant emphasis on the principles of inclusivity and sustainability, which are crucial as the region moves toward a carbon-free future. By focusing on transforming the energy landscape, the ESA program aims to uplift communities and promote sustainable economic growth while tackling the urgent challenge of climate change.

Program Background

The ESA program is a five-year initiative dedicated to fostering a range of critical energy objectives aimed at benefiting the Southern African region. One of its primary goals is to increase access to electricity, striving to provide affordable and reliable energy that enhances living standards for all citizens. In parallel, the program is committed to accelerating decarburization efforts across Southern Africa, assisting countries in their shift toward carbon-free energy sources. Furthermore, the initiative seeks to foster innovation by encouraging investment within the energy sector, thereby stimulating economic growth

and building resilience against future energy crises. This holistic approach not only addresses pressing energy needs but also propels the region into a forward-thinking economic framework.

Key Objectives

The ESA program is a five-year initiative dedicated to fostering a range of critical energy objectives aimed at benefiting the Southern African region. One of its primary goals is to increase access to electricity, striving to provide affordable and reliable energy that enhances living standards for all citizens. In parallel, the program is committed to accelerating decarburization efforts across Southern Africa, assisting countries in their shift toward carbon-free energy sources. Furthermore, the initiative seeks to foster innovation by encouraging investment within the energy sector, thereby stimulating economic growth and building resilience against future energy crises. This holistic approach not only addresses pressing energy needs but also propels the region into a forward-thinking economic framework.

Regional Significance

The ESA program is particularly significant in addressing critical regional issues in Southern Africa. It strives for sustainable growth by navigating economic challenges that have been exacerbated by the COVID-19 pandemic while simultaneously promoting sustainable energy demand. The initiative also seeks to reduce greenhouse gas emissions through a planned shift away from fossil fuels. Additionally, it outlines energy access strategies aimed at expanding both on-grid and off-grid access to energy, with a strong emphasis on gender equality and social inclusion, ensuring that all community members can contribute to and benefit from energy developments.

Major Initiatives

Key initiatives within the ESA program include the development of renewable energy resources, notably through the implementation of large-scale solar projects and rooftop solar initiatives that provide communities with clean energy options. The program also emphasizes capacity building by offering technical support and training for various stakeholders in the energy sector to enhance their capabilities and integration into a renewable energy framework. Furthermore, the Just Energy Transition Partnership (JETP) is a notable collaborative effort that involves working with communities and municipal stakeholders to advance South Africa's energy transition goals. The ESA program also encourages private sector engagement by facilitating public-private partnerships that aim to attract investment in both on-grid and off-grid energy solutions, and it seeks to improve infrastructure within transmission, generation, and distribution networks to enhance regional integration and energy security.

Gender Equality and Social Inclusion (GESI)

A critical aspect of the ESA program is its recognition of the vital role of women in the energy sector. The initiative promotes access to energy services designed especially for women, youth, and underrepresented communities, ensuring that these groups are not sidelined in the energy transition. It supports female entrepreneurship and the active participation of women in the energy workforce, enhancing diversity and opportunity. Additionally, the program works to build government capacity to collect sex-disaggregated data, fostering evidence-based policymaking that responds to the unique needs of different community members.

Namibia's Electricity Sector Context

In the context of Namibia, which primarily relies on hydropower for electricity generation (accounting for about 93% of its energy mix) and imports 60-70% of its energy needs, there is a distinct opportunity to develop green hydrogen capacity using the country's abundant solar and wind resources. However, challenges persist, including low electrification rates, which currently stand at 56% nationally, and the need to strengthen regulatory frameworks for the effective management of communal lands. The potential for green hydrogen production in Namibia is promising; therefore, establishing robust regulatory oversight for onsite production schemes and creating equitable land-use policies that recognize the rights of indigenous communities are crucial steps in this process.

Recommendations

To support the successful transition to a Just Energy Transition, several recommendations are proposed. First, it is essential to strengthen regulatory frameworks that govern land use and energy production, ensuring the protection of local communities' rights while fostering sustainable practices. Second, promoting inclusivity is paramount; efforts must be made to ensure that marginalized groups are actively involved in decision-making processes related to energy projects. Lastly, investing in capacity building by providing training and resources to empower local communities will enable them to manage their energy needs sustainably.

Access to Land

By Corrina van Wyk

The land access struggles in Namibia have deep historical roots that continue to influence the contemporary landscape, particularly affecting indigenous populations and shaping the implications of foreign investments in the nation's natural resources, including emerging green hydrogen projects. This

presentation explores the historical context of land dispossession, the ongoing challenges faced by indigenous communities, and the regulatory frameworks governing land access, highlighting the urgent need for inclusive practices that recognize the rights of local populations.

Historical Context

The presentation begins with a historical overview of land dispossession during the colonial era, marking a pivotal moment that has repercussions to this day. In 1884, the German colonial administration first negotiated land purchases with local leaders, a process that led to widespread dispossession of indigenous peoples. By the year 1902, only 6% of Namibia's land was designated as freehold farmland, while approximately 30% was recognized as communal land, primarily utilized by the indigenous population. This systematic dispossession was further exacerbated during the NAMA and HERERO genocide from 1904 to 1907, when indigenous resistors faced brutal reprisals, leading to considerable loss of life and further confiscation of land even after military conflict ceased. Following World War, I, Namibia became a British protectorate, administered by South Africa under a mandate. During this time, policies were skewed in favor of white settlers, establishing 'native reserves' that marginalized black populations and perpetuated inequalities in land access and ownership.

Current Land Distribution

At the time of Namibia's independence, the land distribution landscape was starkly divided, reflecting the colonial legacies of dispossession. Approximately 38% of the land was designated as communal land, utilized by over 1.1 million people, while 44% constituted freehold farmland, which was owned by a mere 132,000 individuals. The remaining land included 17% allocated to national parks and a scant 1% designated for urban areas, occupied by around 900,000 people. This uneven distribution speaks to regulatory disparities, particularly highlighting the contrasting realities faced in the well-regulated commercial land sector versus the ambiguous legal frameworks governing communal lands. Such disparity has led to inequitable access to and management of land resources, which perpetuates socioeconomic inequalities among Namibia's population.

Land Reform Efforts

In response to these historical injustices, Namibia has undertaken several land reform efforts aimed at promoting equitable access to land. The first significant step took place during the land conference of 1991, which proposed a unitary land system intended to guarantee equal rights for all citizens. Following this initial conference, key reforms were introduced, including the 1996 Community-Based Natural

Resource Management (CBNRM) legislation, which promoted the community-based management of wildlife resources, thereby fostering local stewardship over natural resources. Additionally, the 2002 Communal Land Reform Act aimed to enhance communal land tenure systems and delineate the roles of traditional authorities in managing these lands. While these reforms laid a foundation for change, their effects and implementation remain fraught with challenges that hinder genuine progress toward equitable land access.

Current Challenges

Amid these reform efforts, contemporary issues persist, particularly regarding foreign investments related to green hydrogen projects. The presentation raises concern about foreign entities that seek to exploit communal lands without adequately recognizing the rights of indigenous populations or involving them in crucial decision-making processes. This lack of involvement poses significant risks, leading to inequitable development characterized by outcomes that disproportionately benefit corporate interests and elites while simultaneously exacerbating poverty among local communities. This development model threatens the integrity of traditional lands and risks marginalizing indigenous voices in resource management.

Recommendations for Future Actions

To address these ongoing challenges, several recommendations for future actions have been proposed. First, it is imperative to emphasize inclusive decision-making processes that ensure the proper involvement of indigenous peoples in discussions regarding land use and resource management. Empowering local communities with a stake in these decisions is essential for fostering sustainable practices and promoting social equity. Second, strengthening legal frameworks is necessary to ensure the equitable regulation of communal lands and to safeguard the rights of local communities against external exploitation. Improved legal protections can help establish clear guidelines for land use that respect indigenous rights. Lastly, advocating for sustainable resource management practices that prioritize the needs of local communities while effectively managing natural resources will be crucial in creating a more just and equitable future for all Namibians. By implementing these recommendations, stakeholders can work towards correcting historical injustices and paving the way for inclusive and sustainable development in Namibia's evolving energy landscape.

Access to Water

By Piet Heyns

Namibia is a country characterized by its arid and semi-arid climate, making water a critical and often scarce resource. The country's annual rainfall averages around 300 mm, and much of the rainfall occurs in a short rainy season, leading to significant variability in water availability. Water scarcity has long been a challenge for Namibia, impacting agriculture, drinking water supply, and overall economic development. The government and various stakeholders have implemented policies and strategies to manage and conserve water resources, but the ongoing challenges of climate change and increasing demand continue to exacerbate the situation.

Current Water Sources and Use

Namibia relies on various sources for its water supply, including surface water from rivers, groundwater from aquifers, and rainfall. The Zambezi, Kunene, and Okavango rivers are significant in terms of surface water resources. However, these sources are limited and subject to seasonal fluctuations. Groundwater is often extracted from underground aquifers, but over-extraction poses a risk to the sustainability of these sources. Urban areas like Windhoek have adopted innovative water reuse and desalination programs to mitigate supply issues.

Water is allocated across different sectors, with agriculture being the largest consumer, followed by domestic and industrial uses. The country has implemented Integrated Water Resource Management (IWRM) strategies, which emphasize the need for a balanced approach to managing water resources to meet the conflicting demands of various sectors while ensuring sustainability and conservation.

Water Demands for Green Hydrogen

Green hydrogen production is typically achieved through the process of electrolysis, wherein water is split into hydrogen and oxygen using electricity derived from renewable energy sources. As Namibia explores the potential for green hydrogen production using its abundant solar and wind resources, the availability of water becomes a critical consideration. Electrolysis requires significant amounts of water; thus, the sustainability of water resources must be integrated into any large-scale green hydrogen projects.

Environmental Concerns

The potential environmental impacts of increased water extraction for green hydrogen production must also be taken into account. Over-extraction of water can lead to ecological degradation, impacting local wildlife and disrupting natural ecosystems that rely on consistent water levels. A holistic approach to developing green hydrogen facilities must consider the long-term sustainability of water sources and the ecological implications of their use.

Namibia's water supply poses both challenges and opportunities in the context of developing a green hydrogen economy. While Namibia's push towards green hydrogen production aligns with global renewable energy trends, its success hinges on careful consideration of water resource management. By addressing the implications of water scarcity, promoting sustainable use practices, and ensuring inclusive decision-making, Namibia can work towards a more sustainable and equitable resource management framework that supports both its energy transition and the well-being of its communities. As the country moves forward, it is crucial to balance the potential benefits of green hydrogen with the pressing needs for water conservation and equitable access to resources.

Rights, Remedies and Tactics (Group Work)

Green hydrogen (GH2) is emerging as a crucial component of the global transition towards renewable energy. Produced through the electrolysis of water using renewable energy sources like solar and wind, GH2 offers a clean alternative to fossil fuels, particularly in hard-to-abate sectors. Namibia's potential to become a global GH2 production powerhouse hinges on its abundant renewable resources, but the intersection of this ambition with critical sectors such as water, electricity, and land raises multifaceted implications that need careful management. Presentations on these topics elucidate the opportunities and challenges that lie ahead.

Water Group: Existing Remedies to Protect/Advance Access to Water

The Water Group discussed existing remedies to safeguard and advance water access in Namibia, highlighting the importance of a robust legislative and institutional framework. Key legal instruments include the Water Management Act and the Environmental Management Act, which set the legal foundation for water governance. The Integrated Water Management Plan ensures that water resources are allocated and managed sustainably across sectors, while Transboundary Water Management Plans facilitate cooperation with neighboring countries, recognizing the interconnected nature of water resources.

Indigenous Knowledge Systems and Government Interventions

Community-driven approaches, such as indigenous knowledge systems and community water point committees, play a vital role in managing local water resources effectively. Governmental interventions, including oversight by the Department of Water and Sanitation (DWS) and the Ministry of Agriculture, Water and Land Reform (MAWLR), further reinforce water governance. The Namibia Water Cooperation Act sets the framework for partnerships aimed at improving water access, complemented by policies like the Water Supply & Sanitation Policy.

Alternative Tactics/Solutions to Expand/Safeguard Access to Water

The group also explored alternative tactics, such as desalination plants, which could meet the anticipated demand for water in GH2 production. Other suggestions included borehole rehabilitation, enhanced capacity building by local authorities, and innovative methods like fog harvesting for augmenting water supply. These approaches emphasize the need for a multi-faceted strategy to ensure both adequate supply and sustainable management of water resources.

Weaknesses of Existing Remedies

Despite the legal frameworks in place, participants noted several weaknesses, including outdated policies and the lack of resources for implementation. The poor coordination and enforcement of existing policies hinder progress, while climate change poses further risks to the already vulnerable water supply. The greed of companies seeking water resources raises concerns about equitable access, necessitating urgent reform and innovation in water management practices.

Energy Group: Existing Remedies to Safeguard/Expand Access to Energy

In addressing energy access, the Energy Group identified key legal instruments such as the Energy Policy, Minerals Act, and Petroleum Act. The Environmental Management Act, particularly its provision for Environmental Impact Assessments (EIA), establishes a framework for assessing the environmental consequences of energy projects, ensuring a degree of accountability in project approval processes. Furthermore, international commitments like the Paris Agreement affirm Namibia's commitment to sustainable energy development.

Tactics/Solutions to Expand/Safeguard Access to Energy

Participants emphasized the importance of community engagement and advocacy in energy dialogues, calling for greater transparency and public access to information. The establishment of a new ombudsman under the Information Act was proposed to demand accountability and enhance the participation of local communities in decision-making processes.

Weaknesses of Existing Remedies

However, several weaknesses were identified, including limited legislative frameworks for GH2 and large industrial projects. The need for a Strategic Environmental Assessment (SEA) was highlighted to ensure that all energy alternatives and their impacts are thoroughly understood. The group also raised concerns about the lack of transparency in energy contracts and the restrictive nature of legal standing to challenge energy projects, suggesting a need for urgent reform in both the Water Act and energy sector policies.

Land Group: Existing Remedies to Expand/Safeguard Access to Land

The Land Group focused on existing remedies for land access, highlighting the potential for constitutional amendments that would eradicate political influences and improve the legal standing of land ownership. Participants discussed the importance of ensuring that individuals have clear title deeds and that land can be owned collectively by communities, thus promoting equitable land distribution.

Weaknesses of Existing Remedies

Despite these avenues, significant challenges remain, such as unresolved land conflicts, particularly in relation to communal land issues. The current constitutional framework does not adequately recognize the concept of ancestral land, complicating claims to ownership and use. Moreover, unresolved political and economic interests often impede genuine reform efforts.

Alternative Tactics/Solutions to Expand/Safeguard Access to Land

To address these challenges, the group proposed mobilizing community capacity to influence legislation, as well as enhancing awareness of community rights regarding land. Leveraging initiatives such as the Traditional Authority Act and Conservancies can aid in better managing communal land rights. Additionally, enhancing the Resettlement Programmed by the Ministry of Land Reform could provide opportunities for disadvantaged communities to gain access to land.

The discussions across the water, energy, and land groups highlight the complex interplay between Namibia's ambitions for GH2 production and the fundamental resources of water, electricity, and land. Each sector faces its own set of remedies, tactics, and weaknesses, which must be addressed collectively to ensure that Namibia can transition into a global green hydrogen powerhouse sustainably and equitably. Enhancing community engagement, creating comprehensive legal frameworks, and ensuring equitable resource access are essential steps in achieving this vision while protecting the rights and needs of local populations. As Namibia moves forward, a coordinated approach that integrates these discussions will be crucial for sustainable development in the context of GH2 ambitions.

Could There Be Conditions for a 'Win-Win'? What Would Those Be?

In the pursuit of sustainable socio-economic development and energy security in Namibia and South Africa, it is crucial to create a framework that benefits all stakeholders: markets/investors, the government, and citizens. This can be achieved through the thoughtful integration of natural resources such as land and water, while ensuring critical needs are met without compromising future potential.

Lessons from Conservancies

Insights from existing conservancies can guide our approach to fostering a win-win scenario. For instance, synergies between diverse development projects—such as the Oyster Farm at the coast and the Green Hydrogen (GH2) project in Daures, which utilizes a desalination plant for fresh water—should be leveraged. However, attention must be paid to the environmental impact, particularly concerning brine and salt disposal.

Additionally, deliberate strategies to unlock opportunities for small industry players can significantly boost local economies. These strategies should be grounded in a robust policy framework that prioritizes the protection of local Small and Medium Enterprises (SMEs). This includes the strengthening of labor union laws, practices, and vigilant monitoring and enforcement to ensure fair labor conditions and equitable economic participation.

Ensuring Economic Win-Win Solutions

To facilitate an economic win-win scenario for Namibia, South Africa, and consumers, both rural and urban several critical components must be addressed:

1. Mandatory Corporate Social Responsibility (CSR): This ensures that businesses contribute to the communities they operate in, fostering goodwill and promoting sustainable development.
2. Policy Framework to Protect Local SMEs: Legislating support for local enterprises is vital to create a level playing field and prevent monopolistic practices that could stifle small businesses.
3. Local Content Policy: This policy should mandate that a certain percentage of project resources—whether labor, materials, or services—are sourced locally, enhancing local economic growth and job creation.
4. Establishment of Relevant Legislation: Prior to any new industry development, it is essential to lay down the necessary legal structures that encapsulate environmental protection, labor rights, and community engagement.

5. Fit-for-Purpose Expertise: Engaging local experts and stakeholders will ensure that development initiatives are relevant to local contexts and effectively address regional challenges.
6. Improved Solidarity Among Regional Civil Society Organizations (CSOs): Strengthening cooperation and understanding among CSOs can amplify advocacy efforts regarding the economics of GH2 and other projects, ensuring that community voices are heard.
7. Exploring Alternative Markets: Diversifying markets can increase resilience against economic fluctuations and provide new opportunities for local industries.

Creating a win-win scenario for socio-economic development and energy security in Namibia and South Africa requires a systematic approach that harmonizes the interests of all stakeholders. By learning from previous experiences, establishing a comprehensive policy framework, and committing to local engagement and development, we can build a sustainable future that benefits investors, governments, citizens, and the environment alike. The collaboration across sectors will be crucial to turning these aspirations into reality, ensuring that both economic and social needs are met in balance.

"Mapping for Justice - customary rights battle within South Africa's first UNESCO World Heritage Site"

https://www.youtube.com/watch?v=lTr0ARgZfqs

The video explores the conflict between customary land rights and conservation practices in KwaZulu-Natal, South Africa. The specific focus is on the iSimangaliso Wetland Park, South Africa's first UNESCO World Heritage Site. The central issue highlighted in the video is the lack of recognition of customary land rights and practices in current conservation efforts. This has led to the exclusion of local communities from decision-making processes affecting their land and resources.

The video showcases an initiative by researchers and academics to address this issue through community-based mapping. This process involved working with local communities to document their land rights and cultural practices, and to identify discrepancies between these and existing official maps. The goal was to create a more accurate and inclusive representation of land use and rights in the region.

GH2 Potential Land Use: Shark Island

https://forensic-architecture.org/investigation/shark-island

This is a video about the German colonial genocide in Namibia. It discusses Shark Island, the site of a concentration camp established by the Germans. The video details how the camp was used to exterminate prisoners. It also discusses the ongoing efforts to preserve Shark Island as a place of commemoration. Some important points are that the camp was built on an island exposed to the elements, which the Germans weaponized against the prisoners. Many of the prisoners died from disease, starvation, and exposure. There is little evidence left of the atrocities committed on Shark Island. In relation to green hydrogen, there are strong assumptions that there will be an expansion of the port on Shark Island and this will be used for the transport of green hydrogen or green hydrogen equipment.

Setting Standards: Global Initiatives to Encourage Good Governance

The Extractive Industries Transparency Initiative (EITI): Promoting Transparency and Accountability in Natural Resource Governance

By Graham Hopwood

The Extractive Industries Transparency Initiative (EITI) is a global standard aimed at enhancing transparency and accountability in the management of oil, gas, and mineral resources. Established in 2003, EITI emerged from growing concerns regarding opaque practices in the extractive industries, notably highlighted by the "publish what you pay" campaign launched by Global Witness in 1999. Over the years, EITI has transformed into a powerful platform for dialogue among governments, companies, and civil society to improve the governance of natural resources while benefiting the broader public.

Historical Context

EITI was founded to combat the pervasive lack of transparency regarding payments made by extractive companies to governments. Initially focused on reconciling the revenue figures presented by companies against those reported by government entities, EITI's scope has since broadened to encompass a comprehensive approach to disclosing the entire value chain of the extractive sector. This includes not just extraction but also how the revenues from these industries are utilized to benefit society.

The EITI Standard

The EITI Standard outlines the requirements that countries participating in the initiative must adhere to. These requirements span critical stages of the extractive value chain, such as contracts and licenses, production, revenue collection and allocation, and social and economic spending. While the standard applies uniformly across all implementing countries, its implementation can be tailored to suit local contexts, guided by national multi-stakeholder groups (MSGs) that bring together various stakeholders, including government representatives, civil society, and industry players.

Global Reach

EITI has expanded significantly since its inception, now encompassing 57 implementing countries that adhere to its transparency guidelines. Additionally, 65 supporting companies actively participate in the initiative, furthering commitments to transparency within the extractive sectors. Over the past years, EITI has disclosed approximately $3 trillion in cumulative revenues, with an impressive 90% of this data readily available in open formats. This accessibility empowers stakeholders, including governments, companies, investors, and civil society, to engage meaningfully with the data.

Stakeholder Engagement

EITI strategically engages a diverse range of stakeholders, ensuring that transparency in the extractive sector benefits all parties involved. For governments, enhanced transparency fosters correct revenue payments and attracts investment. Companies benefit from a clearer, more predictable business environment, while investors gain access to imperative information for making informed decisions. Importantly, civil society plays a crucial role in holding both companies and governments accountable, thereby promoting public debate and mitigating the risks of corruption.

Benefits and Impact

Participating countries experience significant advantages by adhering to EITI principles. The initiative helps to reduce corruption risks, as it improves oversight and transparency in revenue management. Enhanced tracking of revenues also leads to better tax collection and resource management, ultimately fostering legal and fiscal reforms based on reliable data. Furthermore, EITI promotes public awareness and informed debate, equipping citizens with the knowledge needed to comprehend the contribution of the extractive sectors to their economies and societies.

How EITI Achieves Impact

Implementation of EITI occurs at the national level, where local multi-stakeholder groups oversee the process. These groups are tasked with ensuring that published data is relevant to national priorities and is aligned with the interests of the diverse stakeholders involved. The data produced through EITI reporting serves as a foundation for enhancing public discourse, improving governance practices, and supporting inclusive development across various nations.

Future Focus

EITI is poised to continue enhancing governance in the extractive industries by urging countries to strengthen their transparency frameworks, implement Access to Information Acts, and create legislation for sovereign wealth funds. Additionally, the initiative is committed to preventing corruption by promoting transparency concerning local content and taking lessons from past scandals, such as the Fishrot case.

Key Recommendations

To deepen public trust and strengthen governance in resource management, EITI encourages countries to enhance their transparency frameworks and continue subscribing to the initiative's fundamental principles. Implementation of robust legal frameworks, such as the Access to Information Act, is vital for ensuring ongoing accountability and transparency. Finally, promoting sustainable investment becomes imperative as enhanced transparency regarding contracts, licenses, and revenues creates a conducive environment for responsible investment and economic development.

The Extractive Industries Transparency Initiative serves as a robust model for fostering good governance within the extractive sector, ensuring that national resources effectively contribute to development while minimizing corruption risks and promoting societal well-being. Through multi-stakeholder dialogue and adherence to high standards of disclosure, EITI enhances transparency, accountability, and global trust in the governance of natural resources.

GH2: Is It Economically Viable?

In 2021, Namibia's late President Hage Geingob unveiled an ambitious green hydrogen project led by Hyphen Hydrogen Energy, with the objective of positioning the country as a leader in global green energy production. The project, valued at USD 10 billion, is situated in Lüderitz, a region ideally suited for sustainable energy production due to its abundant solar and wind resources. Initially aiming for a 10 GW electrolyzer deployment by 2030, the project's scope has been adjusted to 3 GW, targeting an annual production of 300 kilotons (Kt) of green hydrogen. This hydrogen will be utilized domestically and export primarily as ammonia, catering to high-demand sectors such as shipping and fertilizers.

Economic Overview of Green Hydrogen

Green hydrogen, produced from renewable energy sources, presents a significant cost challenge, priced between USD 5 – 9 per kilogram. This starkly contrasts with grey or black hydrogen, generated from fossil fuels, which costs around USD 1 – 2.7 per kilogram. Despite its environmentally friendly profile, the higher cost of green hydrogen hampers its commercial viability. Nevertheless, government incentives, including the Biden Administration’s USD 3/kg subsidy aimed at green hydrogen producers, indicate a willingness to address this economic disparity and promote cleaner energy alternatives.

Namibia’s Strategic Location and Renewable Potential

The choice of Lüderitz as the project site is primarily due to its rich wind and solar energy resources, positioning Namibia as a hotspot for renewable energy generation. However, the project's feasibility is under scrutiny, particularly with the planned downsizing of the electrolyzer capacity from 10 GW to 3 GW. Achieving the original capacity would necessitate the installation of around 40 electrolyzers, the largest of which (at 260 MW) is currently operational in China, highlighting the significant technical challenges in deploying such advanced technology in Namibia.

Technical and Commercial Risks

The Lüderitz green hydrogen project faces considerable technical and commercial risks. As of 2022, most electrolyzers had capacities of only up to 10 MW, making the ambitious scaling of the project a formidable challenge. A major hurdle is the requirement for a credible feasibility study alongside long-term off-take agreements to secure financing from private investors and financial institutions. The global green hydrogen market is still developing, leading to uncertain demand. Moreover, the cost of transporting green hydrogen poses additional challenges to Namibia’s competitiveness, especially as proposals for pipelines running from North Africa to Spain may complicate its export strategies.

Economic and Governmental Risk

To attract substantial investment, government loan guarantees are crucial. However, senior officials in Namibia have not provided clear indications regarding such guarantees. If needed, these guarantees may rely on future oil and gas revenues, similarly to Mozambique's strategy of using anticipated fisheries revenues to back foreign loans. This introduces notable economic risks, as the Namibian government would be leveraging future income to secure current investments, creating potential long-term fiscal uncertainties.

Efficiency of Green Hydrogen vs. Direct Electricity

Green hydrogen is faced with significant efficiency challenges, with estimates suggesting that up to 80% of the energy utilized in its production is lost before it reaches final consumption. This inefficiency renders direct electricity use a more favorable option for many applications, such as transportation and residential heating. Nonetheless, certain industries, such as long-haul shipping, aviation, green steel production, and fertilizer manufacturing, may benefit significantly from hydrogen use, as they require energy solutions that cannot be met directly through electric means.

Global Threats to Green Hydrogen

The increasing discoveries of naturally occurring "white hydrogen" further complicate the outlook for green hydrogen. Geological hydrogen, found in regions such as Mali, Australia, and Albania, offers a potentially cheaper alternative, with costs around USD 1 per kilogram. For instance, in South Australia, approximately 1.3 million tons of white hydrogen were discovered. If this extraction proves commercially viable, it poses a significant threat to green hydrogen projects like Namibia's, potentially undermining the economic incentives for investing in green hydrogen when ample geological reserves exist.

Namibia's green hydrogen project embodies a significant effort to confront global energy challenges through renewable sources. However, it grapples with substantial technical, commercial, and economic risks, including high production costs, logistical transportation challenges, and competitive pressures from emerging alternatives like white hydrogen. The project’s success will largely hinge upon the Namibian government's ability to navigate these risks effectively, secure meaningful investment, and establish a competitive foothold in the burgeoning green hydrogen market.

While certain sectors may find hydrogen advantageous, the overall energy landscape suggests that direct electricity usage might remain a more efficient solution in many applications. Thus, the future of green

hydrogen is likely to rely on its targeted deployment in niche industries where direct electricity cannot sufficiently meet operational demands.

Way Forward: What Can Do Differently?

Group Discussions: Recommendations for the Green Hydrogen (GH2) Commission and Civil Society Organizations (CSOs)

Recommendations for the GH2 Commission

The discussions around the Green Hydrogen (GH2) Commission highlighted several areas for improvement to ensure the effective and responsible advancement of green hydrogen projects. A primary recommendation is to slow down the project development process to avoid premature actions in the absence of necessary information and legislative frameworks. It is essential for the Commission to refrain from moving forward until the requisite local skills and technical capabilities are established.

Research and Feasibility Studies

The GH2 Commission should prioritize comprehensive research, including feasibility studies that assess the economic viability of green hydrogen initiatives. This research should encompass labor studies to identify potential job opportunities and facilitate a skills audit to determine local workforce needs.

Transparency and Data Sharing

The Commission must actively publish data, research findings, agreements, contracts, and financial information to ensure transparency. Joining or adopting the principles of the Extractive Industries Transparency Initiative (EITI) would be a constructive step toward fostering accountability.

Clarification of Institutional Arrangements

It is imperative to clarify the institutional frameworks associated with green hydrogen projects and ensure that they are codified in law. The process of vetting office bearers should be revisited to promote an understanding of best practices in project execution.

Focus on Local Capacity Building and Community Involvement

A significant emphasis should be placed on local skills development and empowering small and medium-sized enterprises (SMEs). Organizing community-based institutions to actively participate in decision-making processes and negotiations is crucial for fostering inclusive project development.

Consultation Processes

The consultations led by the GH2 Commissioner need to be revitalized to ensure they occur on an equitable basis. It is essential to consult a minimum of 50% of interested and affected parties, especially as current discussions lack specific percentages outlined in the Environmental Management Act (EMA). The underlying principle of Free, Prior, and Informed Consent (FPIC) should be integral to the consultation process, requiring careful attention to language, the timing of meetings, and meaningful engagement with the communities.

Meaningful Consultations

A clear definition of "meaningful consultations" should be established, ensuring that consultations are not merely formalities involving governmental staff but genuine dialogues with community members. Additionally, the Government of Namibia (GRN) should refrain from signing agreements until it has thoroughly consulted affected communities.

Transparency and Procurement

Background checks on bidders for green hydrogen projects are needed to ensure integrity in the procurement process. Following established procurement procedures rather than relying on less relevant frameworks, such as the Nature Conservation Ordinance, is essential for promoting accountability.

Recommendations for Civil Society Organizations (CSOs)

The discussions also highlighted several strategies that Civil Society Organizations (CSOs) can adopt to enhance their effectiveness within the green hydrogen discourse and advocate for community interests.

Unity and Representation

CSOs should reflect on their unity and collective voice, assessing whether they are speaking with one accord and identifying actions to take following workshops and discussions. It is vital for CSOs to clarify whom they represent and ensure their actions resonate with community needs and perspectives.

Community Engagement and Respect

At the grassroots level, it is crucial to form umbrella organizations that consist of both existing and new groups. CSOs must work to build trust within communities, as perceptions suggest a lack of respect for CSOs due to inadequate resources for follow-ups. Fostering mechanisms for effective information dissemination across organizations is essential to strengthen their collective impact.

Information Sharing and Networking

To amplify their voices, CSOs should identify allies and networks to tap into for information gathering and support. This includes leveraging social media and hashtag movements to raise awareness regarding GH2 issues in Namibia. Creating platforms where CSOs can share insights and be heard will help facilitate dialogue and collaboration among various stakeholders.

Corporate Social Responsibility (CSR) Monitoring

An effective CSR monitoring mechanism should be established to ensure transparency and accountability in corporate practices. This includes strengthening audit processes for CSOs to better observe and engage with tendering processes and ensure that they are conducted ethically.

Capacity Building and Youth Engagement

Investing in capacity building initiatives, such as training in investigative and forensic research, is vital for empowering CSOs. Greater access to information and the sharing of findings with communities will enhance their ability to engage effectively in advocacy.

Additionally, addressing the lack of connection among youth is imperative. CSOs should incentivize youth involvement and increase communication to ensure the younger generation is engaged in discussions around green hydrogen and sustainable development.

Conveners

1. Frack Free Namibia
2. Economic & Social Justice Trust
3. Namibia Development Trust
4. Henrich Boll Stiftung (Cape Town)
5. Natural Justice