

## Household's perceptions on the discoveries of natural gas in Lindi and Mtwara

By Jane Mpapalika

### Key Messages

- Large deposits of natural gas were discovered off the southern coast of Tanzania.
- Almost half of the households in the two regions are aware of the gas discoveries.
- Households had a high expectation of benefiting from the gas discoveries.
- Households have more reliable access to electricity after gas discoveries.

### Introduction

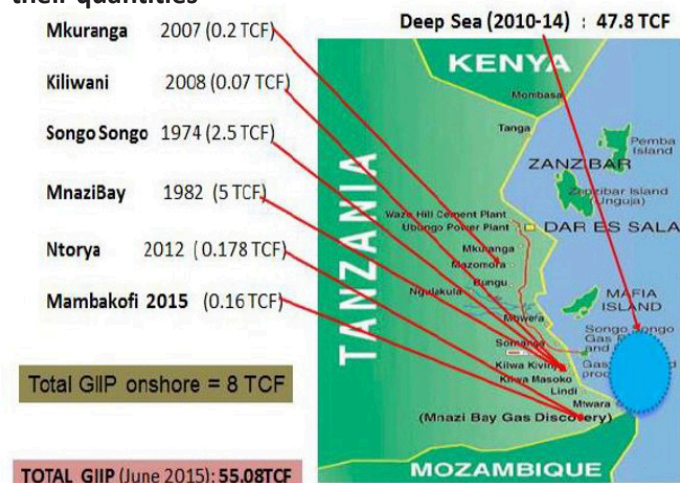
The discovery and exploration of natural gas in Tanzania started in the early 1950s. In 1974, Agip discovered gas deposits in Songo Songo Island, Lindi region, and in 1982 at Mnazi Bay in Mtwara region (Tanzania Petroleum Development Corporation (TPDC) 2022). From 1976 to 1983, TPDC drilled eight appraisal wells at Songo Songo. Despite proving the existence of more gas, the extraction of gas was delayed until the early 1990s because it was previously claimed that the discoveries were not economically viable. TPDC, however, continued to explore gas deposits to establish its economic potential. In 1995, the government-run parastatal TPDC entered into Production Sharing Agreements (PSAs) with oil companies to carry out explorations on the southern coast of Tanzania. As a result, in 2004, the first deep-sea license under the PSA was issued for offshore blocks. Later in 2010, BG/Ophir made a gas discovery of 1.8 Tcf at Block 4. In the following years, ExxonMobil and Statoil (now Equinor) discovered huge gas reserves amounting to 6 Tcf in Block 2. Given these discoveries, Oil International Companies (OICs) were motivated to increase explorations for more gas discoveries. In a nutshell, from 2003 to 2013, a span of 10 years allowed 42 wells to be drilled, (Fjeldstad et al. 2019).

Other areas, which have gas deposits are in Mkuranga, Kiliwani, and Ntorya. According to Electricity and Water Utility Regulatory Authority (EWURA 2022) it is estimated that the country has recoverable reserves of natural gas of over 57.54 Trillion Cubic Feet (Tcf). Blocks 1 and 4 are operated by a Shell-led consortium while Block 2 is led by an Equinor-led consortium. Specifically, gas was discovered in Msimbati village, Madimba ward in Mtwara where TPDC is currently running the gas plant in Mchepu area, Msimbati village.

Apart from Mtwara, some discoveries of natural gas were cited in Mchinga ward, Lindi region, where extraction of gas has started, along with other locations as shown in Figure 1.

In the early 1970s, there were only two gas wells, but, currently, there are multiple gas wells for exploration and further processing activities. There is a gas pipeline built from Msimbati village to Mtwara town a gas-powered power plant operated by TANESCO that distributes electricity for domestic and industrial purposes. A large gas processing plant was built in Madimba ward, operated by GASCO, a subsidiary of a national oil company, TPDC. The plant receives raw gas from Msimbati village and then processes and transports it to the Kinyerezi area in Dar es Salaam via a 542-Kilometer pipeline built at a cost of \$1.225 billion.

**Figure 1: A map detailing the areas with deposits and their quantities**



Source: Lukonge (2019), Prospect of Natural Gas Distribution Pipelines and Safety in Tanzania- A case study

Following these natural gas discoveries and production activities, a study was carried out to assess perceptions of citizens in Lindi and Mtwara regions towards the natural gas industry. A mixed research approach was used. In total, 13 Councils were sampled where seven Councils are from the Mtwara region and six Councils are from the Lindi region. A random sample of 780 households was interviewed. Within each district, two wards were randomly selected representing sixty households to capture demographic differences. Thus, sixty interviews per district were administered to households.

### Key study findings



Awareness on natural gas differs in different districts among different age groups and gender. Respondents in districts that are near the discovered gas fields are more aware of the discoveries than districts that are far away, such as Ruangwa DC. Moreover, respondents in districts that are far away from the gas fields including Tandahimba, Masasi, and Namichinga, heard the news only through the radio and television. On the other hand, female respondents from Mtwara Municipal Council are aware of the discoveries and the ongoing initiatives in all phases of natural gas developments as one was quoted stating that: "I have heard and I'm aware that gas was discovered in Msimbati village, Madimba ward".

*Youths, women, and men in Mtwara and Lindi urban councils are aware of the discoveries and the ongoing initiatives in all phases of natural gas developments as highlighted by FGD participants in Mtwara Municipal Council: "...We have heard that gas was discovered in Madimba ward, Msimbati village and we saw gas pipelines crossing our villages to Kinyerezi in Dar es Salaam. We also got notified that there was gas finds in Mtwara and Lindi regions."*

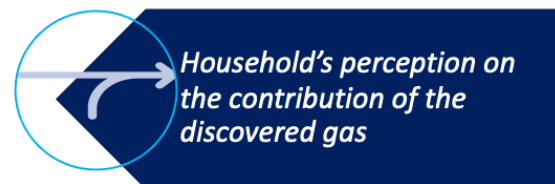
In recent years, awareness on the discovery of gas increased across the country after the outbreak of public protests given the unmet expectations on improving the welfare of the locals that would in turn eradicate poverty. The local community protested in Mtwara in 2012/13 with the aim of blocking any attempts to transport gas through pipes from Mtwara region to Kinyerezi area in Dar es Salaam. The protests had a slogan as saying: "Inatoka au haitoki" says an adult male, Mtwara MC. Moreover, most of the exasperated respondents were less than impressed with the social services provided by the Government. As highlighted by different participants in Mtwara DC:

*"It was like empty promises. Despite having gas in our regions, the two regions are still in poverty since we are not given any priority in terms of employment opportunities that are offered by gas companies. That would result to improving our welfare and eradicate poverty."*

Women in Mkuti and Namatutwe wards are more aware of the situation than women in Luchelegwa ward in Ruangwa district council. On the contrary, women from Nanyumbu ward have limited information on the discovered gas while men are fully aware of the discoveries in Lukuledi and Nyasa wards in Masasi DC/TC. As noted by a woman participant in the Nanyumbu ward:

*"As women, we don't have time to watch television like men, so it is challenging for us to know about gas"*

However, youths, and adults from Madimba, Kilwa Masoko, Ngongowele, Songosongo, Mnekachi and Kisungule wards are well-aware of gas discoveries while adults and youths from Mtama, Mchinga, and Mbanja wards have limited information about the gas discoveries.



Since the gas discoveries, the initial perception of the locals was that their socio-economic welfare would improve. In this case, they perceived that they would benefit from the discovered gas in terms of having a reliable supply of power; direct, indirect, and induced employment opportunities; the establishment of new industries; and improved roads, housing facilities, schools and hospitals. Moreover, the local community heard from their leaders that once gas is processed, the earned revenues will be allocated to finance development in the region.

The discoveries, however, stimulated access to reliable power supply sourced from natural gas, which has led to increased economic activities. Some of the local industries that came into being after the discovery of gas include Dangote Cement industry, Yaling cashew nuts industry, Micronic company limited for processing cashew nuts, Mtwara cement company, Lulu Cement and Kioo Company Limited, etc. These industries use natural gas to manufacture cement and glass as well as to operate their machinery in factories, and others use in gas in their lorries/trucks/vehicles.

*"At the district level, gas has been distributed in various parts of Mtwara such as Mtwara Teacher's College (TCC), Gereza la Lilungu (Lilungu prison centre) and Chuo cha Elimu (Teacher's Training College, TCC)," explained the District Commissioner of Mtwara DC.*

*For households, gas for domestic use has already reached 300 houses around Reli and Changani streets and is currently in phase 3,” explained further the District Commissioner of Mtwara DC.*

However, households complained that the cost of paying for electricity was increased such that at TZS 1,000, they only get 2 units to be used in a day. They opined that electricity should be sold at a lower price especially in Mtwara region where gas was discovered. Some respondents do not only consider power to be expensive, but also regard its distribution to be cumbersome. They note numerous bureaucracies under TANESCO (the national utility firm) making it a complicated process for all households to easily access electricity. Some male participants in Masasi TC, however, shared their positive views that the only benefit of gas is the availability of electricity; they further noted that electricity has been distributed to many villages and the connection costs have significantly declined from TZS 400,000 to TZS 27,000.

## **Conclusions and Policy Recommendations**

Over the years, Tanzania has been regarded as a resource-rich country with wide-ranging natural resources including minerals and precious metals. After decades-long exploration activities, significant deposits of offshore natural gas were discovered in the southern parts of Tanzania. Given these natural gas discoveries, more than half of the respondents are aware of the discoveries. As a result, expectations from individual households were high. Initially, households perceived that their welfare would improve in terms of accessing reliable power supply, improved roads, schools, hospitals, and employment opportunities etc. In essence, they assumed that revenues from the discovered gas will be used to finance socio-economic development in the region. It is worth mentioning that some Government officials went further to promise the local community that they will gain from the discoveries and the region will be like a little “Dubai”. But these expectations were not met, as the below response suggests:

“It has been common for youth from Mtwara to be excluded from employment opportunities within the region, or with the lucky ones being employed in casual jobs such as cleaners and gardeners. People’s expectations on employment opportunities were very high which didn’t happen and has only led to some ill feelings when talking about gas. The establishment of the industries should provide employment to the people of Mtwara and Lindi,” said Male and Female FGD participants in Masasi TC and Masasi DC).

In this context, these findings echo the same sentiments of Kamat et al. (2015) that unrealistic promises of improving the livelihood of the locals offered by politicians are yet to materialize. In effect, it leaves the local communities with low morale to embrace any future gas prospects.

This policy brief recommends the following measures to leverage the discovered natural gas:

### **Raise awareness on gas discoveries**

The Government should raise awareness about natural gas discoveries. Awareness-raising activities should be bolstered to keep the local populace in the loop, which will create a sense of ownership to the country’s resources for locals. In other words, the whole process of extracting, processing, and transporting gas should be transparent to meet the local’s expectations. From these responses, it suffices to say that more awareness should be raised in districts that are far from the gas fields so that they can all access the resulting opportunities without leaving anyone behind.

### **Strengthening natural resource governance institutions**

Experience shows that poor governance institutions are often the root cause of minimal benefits arising from the exploitation of natural resources and citizens’ unmet expectations. According to the Extractive Industries Transparency Initiative (EITI), Tanzania is currently not an active member of the initiative for strengthening governance systems along the value chain of extractive industries (ECA, Economic Governance Report 2021). Thus, the Government should strengthen its resource governance institutions to efficiently manage resources in a sustainable way for the future generation.

### **Establish training institutions**

Government should establish training institutions to add value to the local communities’ skills and capabilities for semi-skilled and unskilled jobs. The industry could stimulate additional indirect jobs, mainly in local suppliers of goods and services in labor-intensive supporting services that include catering and cleaning services, temporary employment agencies, and security services. Indirect jobs comprise of enterprises offering support services to the gas industry, e.g., office attendants, gardeners, boda-bodas, taxis, catering and logistics, carpentry, welding, etc. Importantly, councils and IOCs should consider offering training on other related skills such as hospitality and managerial skills, culinary skills, etc. to empower locals so that in turn, they participate indirectly in future gas projects.

### **Effective communication with grassroots**

One of the important issues that emerged from the study was the lack of effective communication from the Government to the grassroots on the gas discoveries and the resulting impact of natural gas at the micro level. To enhance effective communication up to the grassroots, the Government should use a bottom-up approach. This is a participatory decision-making process starting from the bottom of the hierarchy or the grassroots level, rather than from the top. This will be useful in managing people’s expectations.

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157 Migombani/REPOA streets, Regent Estate,  
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Fax +255 22 2705738  
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Email: [repoa@repoa.or.tz](mailto:repoa@repoa.or.tz)

Branch Office  
2nd Floor Kilimo Kwanza Building 41105 Makole  
East, Kisasa, Dodoma, Tanzania