International Journal of Geology, Agriculture and Environmental Sciences
Volume – 6 Issue – 5 October 2018
Website: www.woarjournals.org/IJGAES *ISSN: 2348-0254*

Teasing The Roles Of Leadership Involvement In Water Technology Innovations To Enhance Job Creation In Namibia

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Abstract: ***The objective of this paper was to tease the role of leadership in water technology innovation, and enhancing job creation in the Kavango East Region. The main theoretical framework comes from theories on leadership as a key aspect to socio-economic development. Leadership support such as, resource allocation, effective communication and clear vision as the most important qualities and actions which a leader needs to have in order to use water technology innovation to enhance job creation. A quantitative method was used in a case study design. Data was gathered from 21 villages, concerning the distribution of variables such as the grassroots community's experience and understanding towards the role of leadership in water technology innovations, enhancing job creation. The researcher found out that the Kavango East Regional Leadership is not involved in water technology innovations to enhance job creation. The challenge seems to be that Regional Leaders rarely pay visits to the rural communities to see what the communities are doing and to come up with mechanisms to support them. There is no leader-community relation. Leaders do not allocate resources to be used towards water technology innovation projects by the rural communities. Leadership involvement in water technology innovations is an issue that needs to be resolved. The study recommends that Regional Leaders should live within the constituencies where they are elected to serve. Performance contracts for Regional Leaders should be used as a tool to hold them accountable.***

Keywords: Leadership, Water Technology Innovation, Community, Job creation

1. Introduction

Advanced countries that have adequately grasped the role of water technology innovation in their daily operations have realised enhancement in regional development and better living conditions of their people, [39]. According to [28], the country should develop itself through the use of its natural resources and technology innovation. Namibia has 14 Regions; these Regions are not at the same level when it comes to development or economic growth, delivery and available important infrastructure.

According to [28], Namibia's historic legacy of colonisation under the apartheid regime of South Africa not only resulted in enormous levels of socioeconomic inequalities, primarily along racial lines, but also according to gender and class. The country's negotiated transition to independence ensured that the economic structure remained largely intact after independence. Despite various attempts by the Namibian Government to provide basic services for all (such as education and health) and despite several policy interventions aimed at redressing the apartheid legacy and extending social protection, Namibia still ranks amongst the most unequal societies in the world. Namibia followed a path of market-oriented economic policies, coupled with moderate social reforms but without a systematic program of redistribution of wealth.

As a result, the country's achievements, in terms of overcoming poverty, unemployment and inequality, were limited. The rural population, vulnerable workers and informal sector workers have experienced only limited material improvements since independence. Likewise, the achievements of substantive gender equality are still a long way from being realised. Despite the substantial achievements in terms of legal equality, patriarchal cultures and attitudes are still widespread. Women tend to find themselves in the lowest levels of employment and form the majority of operators in the survivalist informal economy. Gender equality can only be achieved if it addresses the structural impediments that limit the economic independence of self-sufficiency of working women.

Some regions in Namibia are more developed than others. This could be attributed to the colonial leadership of the apartheid South African government which mostly concentrated on

regions with mineral resources such as //Karas, Erongo, Khomas, Otjozondjupa and some parts of the Oshikoto Region. The calling to use natural resources in order to create jobs and improve the living standards of the community came at the right time, as the world is geared for other economic challenges, which can only be overcome when a given community is self-reliant.

1.2 Leadership and Development issues

The main cause of lack of development in Namibia in general and the Kavango East Region in particular lies in the leadership and developmental plans created by Namibia's colonial masters. This does not mean that people are poor because of colonial policies of the past, but because they live in areas that were previously neglected by the colonial governments in terms of investing in using natural resources to develop the lives of people, in order for them to be self-reliant. Based on this background, one major purpose proceeding from this study is to take account the historical events regarding leadership and relate that to the impact on job creation and development in Namibia in general and the Kavango East Region in particular.

Primordial history presents job opportunities for the people of Namibia and the Kavango East Region in particular, as being contract workers in South African mines (Johannesburg) and some central, western and southern parts of Namibia, areas which were promoted by the colonial governments in Namibia. [26] stipulated that while social and economic development in the Kavango was largely neglected by the South African administration because it was a black homeland, some of the transport infrastructure was developed for strategic reasons by the South Africans during the Namibian liberation war. That administration also started several agricultural development projects along the Kavango River, and allocated about 60 large farms to foster commercial farming by Kavango residents. Those first farms probably provided the foundation for the current massive effort to privatise large farms.

In contrast, the newly independent Namibia presented its National Vision 2030, which states that, the country should develop itself through the use of its natural resources and technology innovation. Namibia has 14 Regions which are not at the same level when it comes to development or economic growth, service delivery and available important infrastructure.

Although this vision is realistic, the belief of the inhabitants of Namibia and the Kavango East Region in particular is that job opportunities are not available locally and that the only way to get a job is to migrate to areas where there are mines, sometimes to other places (Aussenkher and Noordoewer) that are using natural resources (such as water) which are also available in abundance locally (Kavango East Region). However, they fail to use them although others use them at other places. Thus, in Namibia and the Kavango East Region in particular, leadership has always regarded existential realities such as poverty, inequality and unemployment as a source of social, political and economic challenges in that region.

One fundamental argument remains that, after Namibia's independence on the 21st of March 1990, the Kavango East Region has been electing political leaders, but the question that needs to be raised is with regards to what impact this leadership has had on developmental issues such as job creation, poverty eradication and inequality in the area. It is a known fact that development of any given region depends largely on the leadership of that particular region. According to [27], the relationship between leadership and sustainable development is very important, because there is no development without leadership, especially in the social, human and cultural dimensions. It is broadly recognised that Africa and Namibia's service delivery in particular is insufficient and will be a major constraint in attaining the Millennium Development Goals (MDGs) and Namibia's well-known vision 2030 [28].

Although Namibia is free from colonialism and apartheid, the consequences of the colonial policies still prevail. However, the proclaimed Vision 2030 needs to be accompanied by a paradigm shift concerning the issues of how leadership should use the available natural resources in their respective areas of jurisdiction to create jobs and foster development for their regions and Namibia in general.

If leadership had shifted its focus into using the Kavango River as a key to develop its people and Namibia in general, the Kavango Region could have been a center of wealth a long time ago. [26], agrees and further states that, in a broader context, it is significant that the Kavango shares the middle section of the whole river system with Angola, and also occupies a central place between the catchment in Angola and the famous Okavango Delta, downstream in Botswana. As public, political and economic interests in the whole Okavango River Basin grows, the Kavango region is likely to assume an increasingly important and strategic role in the management of the River's health and wealth.

According to [26], a second asset is the location of the Kavango and Rundu in particular; the major trade routes between Namibia and Angola, Botswana, Zambia and Botswana. The Region already enjoys a variety of benefits from trade along these routes, especially along the Trans-Caprivi Highway. Indeed, Rundu is the only major economic center within a huge expanse that stretches 900 km west to the east from Ondangwa to Katima Mulilo, and about 1,000 km north to south from Menongue in Angola to Grootfontein and Maun in Botswana. Rundu is thus a major supplier of goods and services to people spread across a very large area.
Finally, the Region and its people are increasingly moving from a traditional, rural economy (based on farming and harvesting natural resources for domestic use) to a cash- and urban-based economy. Rundu is reputedly the fastest growing town in Namibia, and a rapidly escalating proportion of the Kavango residents now live in Rundu and other emerging towns.

Identifying the strength of economic developmental activities for each region in Namibia has been a key aspect on which apartheid and colonial masters used to develop some parts of Namibia, but that was not done for the interest of every person living in that particular area. It was mainly done to benefit the colonial masters. For example, if one considers the reasons why Walvis Bay in the Erongo Region was turned into a harbour by the colonial masters, one can realise that it was mainly to assist them logistically into better trade. The same applies to Luderitz in the //Karas Region. It seems the colonial masters worked hard to fight and allocate resources to be used to develop Walvis Bay and Luderitz [26].

Learning from the strategy used by the colonial masters, the leadership in the Kavango East Region, in the new independent Namibia, are supposed to look into the strengths of economic developmental activities. [26], reported that, results from the 1994 Income & Expenditure survey showed that only 17% of all Kavango farmers relied entirely on food that they produced

themselves. A high degree of reliance on farm cash income is evident from the following table.

Table 1.1

Main source of income	Percentage of households
Farming	63%
Business	11%
Wages and salaries	13%
Pension	5%
Remittances	4%
Other	3%
Total	**100%**

Source: 2001 Population & Housing census data

The above table is also supported by the proportions of people over 14 years employed in different sectors in rural areas of the Kavango region Table 1.2 below. One can see that 44% of the employment sector is in agriculture and other natural resources. If the leadership could only understand this and invest their energy and resources in expanding on the strength of regional developmental activities, the Kavango East Region would contribute more to Namibia's Gross Domestic Product (GDP).

Table 1.2

Employment sector	Percentage of people
Public and private services	48%
Agriculture and other natural resources	44%
Manufacturing, mining, building	6%
Trade	1%
Not stated	1%
Total	**100%**

Source: 2001 Population & Housing Census

The challenging dynamics often experienced by regional leaders is on how to support their inhabitants to use natural resources to create jobs and develop themselves. Another important aspect worth mentioning here is that, the colonial and apartheid governments, used force in their operations. This made the black communities in Namibia fear them and not engage their leaders to discuss developmental issues. The new independent Namibia adopted the policy of decentralisation on which it promotes leader-community interaction concerning development. It promotes open participation in development dialogue between Regional leadership and the communities they serve. [23] maintains that, the Government established thirteen (13) Regional Councils under the Act of 1992. This was a plan to bring the government closer to the people especially the previous disadvantaged black people. The apartheid government operated on the principles of making the black people's living standard worse as compared to whites and the coloured people. This resulted in a widening of the gap between the black people who were seen as poor people and the white people who were seen as the rich people. At present, the majority of black people work for white people, but very few white people work for black people. This is a result of the apartheid system which taught people that black and white people are not equal.

[23], further observed that, after the establishment of Regional Councils in 1992, they were mandated to make sure that the living standards of the people were upgraded in all areas in order to reduce vulnerability and foster self-reliance among the communities of Namibia. This was with the intention of making the Namibian people equal, irrespective of skin colour and previous backgrounds.

Due to the fact that the colonial and apartheid governments were undemocratic, there was no opportunity for black people to ask their leaders to account for lack of development, and poverty became entrenched amongst them. It looks like even after independence, many inhabitants of Namibia and the Kavango East Region in particular are still afraid of confronting their leaders for lack of developmental activities or the provision of resources for development. As a result, they remain poor, unemployed, and live lives characterised by inequality. It seems that there has not been extensive education in the local communities, especially in the Rural Kavango East Region on their rights and powers as community members over their own elected regional leaders. Since the communities do not confront their regional leaders, the leaders choose to remain unsupportive to them.

The use of natural resources can be a key to unlock developmental challenges in the Kavango East Region. There is need for leaders to pay attention to this and provide the needed assistance to the community. [40], agreed and said that the Kavango River flows through south eastern Angola towards Namibia, where there are a number of districts that have a high potential for irrigated and flood-recession agriculture. Initial surveys in this area indicated that the region could provide important agricultural and economic development opportunities in the future. The district administration in the region is in need of assistance, both technical and financial.

1.2.2 Natural resources as a catalyst for development

In recent years, Namibia has been developing new ways of using natural resources commercially in communal areas. Communities in these areas obtained rights in tourism and to manage and benefit from wildlife and plant products by registering conservancies and community forests. These rights are meant to enable communities to establish their own tourism enterprises, to sell trophy animals, game meat, live game, timber products and other woodland resources, and to establish joint ventures with tourism companies. Trophy hunting and tourism joint ventures have brought in substantial revenue in some areas. Several additional benefits stem from community forests and conservancies. For example, residents gain greater security over communal land and its resources, the value of their land increases, and incentives are created for natural resources to be managed effectively and sustainably.

In the case of the Kavango East, the greatest values to be obtained from natural resources are likely to be through tourism along the Okavango River. [26] agreed and stated that, despite earlier criticism of existing perspectives and approaches to farming in the Kavango, there is scope for agriculture that makes efficient use of the River water. This is economically lucrative to the country and that contributes significantly to improving the wealth of residents (as opposed the mere poverty reduction). Irrigation schemes can be used for high-value crops, and the schemes can be economically viable (rather than being dependent on public subsidies). Products such as fresh fish, beef (from cattle in feedlots) avocados, mangoes and paprika should be investigated and developed where possible.

According to the [41], the Kavango is one of the poorest regions in Namibia. This is clearly reflected in a report by the United Nations Development Programme on trends in human development and human poverty [41] which presents data on the Human Development Index (HDI) and the Human Poverty Index (HPI) for Namibia's 13 regions.

The problem identified by [22], is that the communities are not using water technology innovations to create jobs for themselves and to use water effectively, due to lack of leadership involvement in water technology innovations. The Report goes on to state that this has resulted in high unemployment and high poverty levels. According to the report developed by [26], they found that while the focus of Botswana's use of the Kavango has been on its tourism, Namibia viewed the river as a passing resource to be exploited before it leaves at Muhembo. Thus, the river is perceived as a source of water for irrigation and provides water for domestic and industrial needs in the Central Regions. A number of lodges and camp sites have been developed by private individuals and companies, and one conservancy, but the leadership has paid little attention to the creation of wealth and jobs through the use of water in the Kavango River. Traditional Leaders (Headmen) should know about water technology innovations and its importance through awareness and training from the experts through their regional leaders. According to [27], the relationship between leadership and sustainable development is very important, because there is no development without leadership especially in the social, human and cultural dimensions.

In order to examine the role of leadership in water technology innovations in enhancing job creation issues in Namibia and the Kavango East Region this paper used as a case study. The main objective of this study was to investigate the roles of leadership involvement in water technology innovations to enhance job creation.
The sub-objective of this paper was:

- To investigate the role of leadership involvement in water technology innovations contribute to job creation in Kavango East Region.

2. Main theories of leadership

Leadership can best be defined as a process whereby an individual influences a group of people to achieve a common goal [35]. Defining leadership as a process means that it is not treated as a trait or characteristic residing in the leader alone, but as a transactional event that occurs between the leader and his or her followers. It is a process which implies that a leader affects and is also affected by those whom he or she leads. It emphasises that leadership is not a linear, one-way event, but rather an interactive event. However, it is important to note that it is the leader who often initiates the relationship, creates the communication linkages, and carries the burden for maintaining the relationship.

Defining leadership as a process also emphasises the significance of relationships, which are very important in rural areas. The type of leadership effective in rural areas must value relationships, individual differences and the important characteristics of rural communities [2]. Therefore, to be an effective leader in rural areas, a special type of leadership style should be present. Leadership style may be defined as a pattern of specific behaviours or attitudes that a leader places on different leadership functions [17]. Although leadership is viewed as a process, leadership style is the glue that holds the process together.

Approaches to studying leadership have resulted in a focus on leadership styles prevalent in the 1990s and in the first decade of the 21st century. Literature reveals a number of schools of thought about leadership styles. It suggests that leadership styles have developed through at least four main generations of theories namely:

- Traits theories,
- Behavioural theories,
- Situational theories and
- Transformational theories.

The available literature also points out that the four theories are not mutually exclusive or time bound. In other words, although it is true that the progression of thinking tends to follow a sequential path, it is very evident in the literature that elements of the four generations of leadership theories have experienced cross-fertilisation [5];[43].

The first of the four generations of theories are the trait theories, where a universal set of effective characteristics is identified. Some of the earliest studies of leadership in the United States were based on the assumption that good leadership is synonymous with the possession of certain traits [36]. Specifically, some of the traits included such widely diverse attributes as social characteristics, intelligence, and even physical appearance. Other traits highlighted were the ability to supervise, initiative, self-assurance, and individualised approaches to work [13].
The first half of the 20th century was dominated by research that examined leadership traits. In the early 1970's, there was a noted shift from defining leadership traits to an approach that related those traits to leader effectiveness, reflecting a shift from traits research to behavioural research that was in progress.

The second are the behavioural theories, where a universal leadership style was identified. Behavioural theories began to have a major influence on leadership studies during the 1950s and 1960s. The Ohio State University Leadership Studies that began in 1945 are considered to be the origin of the behavioural approach. Those studies established two of the most well-known approaches to understanding leadership styles. For example, the studies resulted in leadership behaviour being charted on two dimensions, namely: initiating structure, wherein the leader acted to further the work

objectives of the group, and consideration, in which the action focused on interpersonal relations and the needs of the workers.

Leaders who were high on the initiating structure concentrated on employees' tasks and procedures. They devoted much of their effort to scheduling work, devising work activities, and communicating information about the work. Leaders high on the consideration structure, focused much on understanding their employees and building productive working relationships. Behavioural theories implied, at least theoretically, that training and education in leadership could create effective leaders [3]; [4]; [44].

At the same time as the Ohio State University's studies, Bales (1950) and his associates concluded from their studies that two categories of leadership behaviour were primary, namely: task-oriented and socio-emotional. Leadership studies at the University of Michigan also identified these two dimensions, calling them job-centred and employee-centred [25]. Other terms for these two dimensions include task behaviour and relationships [19] and concern for production and people [8]. Several researchers saw these dimensions as opposite sides of the same coin. A leader that was high on one dimension was not necessarily low on the other. [8], however, felt that a leader could be either high on both dimensions at the same time, low on both dimensions at the same time, or somewhere in between. This combination was the basis of their managerial grid, where the leader's style was determined by the amount of attention given to both dimensions. This grid has nine levels of concern for people and nine levels of concern for production.

The third are the situational theories, where a combination of leader, subordinate, and situational characteristics were considered [20];[37]. Two well-known researchers on leadership, McGregor (1960) and Fiedler (1967) were very instrumental in the development of situational theories. McGregor theorised that individuals' potential for leadership is greatly influenced by their assumptions about the nature of human beings. Fiedler believed in the contingency theories which stated that leadership is based on situational factors. He saw the leaders' capacity to influence subordinates as largely a matter of the leader's style and personality, the characteristics of the work group, and the needs of the work situation [24]. Similarly, [19] identify four different leadership styles that could be drawn upon to deal with contrasting situations. In their research, they provided an influential discussion of choosing the appropriate style for a particular situation.

The other theory was the transformational theory where the focus of the leader is on the unique connection between the leader and the followers. This form of leadership accounts for performance and accomplishments for the larger group and the organisation [4]. Transformational leadership theories evolve from the transactional theory which focuses on the leader awarding or disciplining followers depending on the adequacy of their performance [5].

Transformational leadership goes beyond the attempts of the leader to satisfy the followers through transactions or exchanges based on contingent rewards. In contrast, transformational leaders typically heighten awareness and interest in the group or organisation, increase confidence, and move followers gradually from concerns for existence to concerns for achievement and growth. Furthermore, transformational leaders develop followers to the point where they are able to take on leadership roles and perform beyond established standards or goals [3]; [4].

Each of the leadership models discussed above offer suggestions of various aspects that might be appropriate for rural leadership. Taken together, these and literally hundreds of other leadership models identify fundamental aspects of leadership that are appropriate for developing a rural leadership model. In summary, some of these aspects include the significance of the work environment and the importance of tasks and relationships. Other attributes of leadership models include trust, integrity, power, influence and finally cultural competence [29]. The authors propose that of all the leadership models discussed, they seem to point to the fact that the transformational leadership is the best model for rural areas. This leadership model is also a good model for this study.

Rural Leadership Model

According to [18], transformational leadership theory is an example of the development of leadership theories that have surpassed the traditional bureaucratic organisational models of leadership. Transformational leadership is a model that includes a structure that stresses leadership styles that allow for flexibility and individualisation. It encourages input in decision-making and stresses the importance of teamwork and social relationships. A transformational leader is very important to the community. This leader has a clear perception of her/his followers and is aware of his/her own values, needs, vision, and acts in a manner that promotes the needs of both. This leadership model recognises the importance of the connectedness of the individual, the work group, and the community. It calls for individual input while working for the overall benefit of the community. This type of leadership is ideal for the situation in the Kavango East Region, since there seems to be a challenge for a leader-community relationship. As a result, individuals feel included and they are prone to want to spend more time and energy to meet the needs of the community. Transformational leadership creates an atmosphere in which all individuals feel included and appreciated, which motivates them to enhance their own satisfaction while working to promote the good of the community [45].

Transformational leadership is empowering and participatory because it promotes decision-making and fosters local leadership. Teamwork is emphasised and the community is viewed as a system of people working together with common dreams. This leadership style creates a culture based on openness, trust, respect, and inspires a team spirit. Transformational leadership has several implications for addressing the problem of leadership in rural areas. It has been well established in extant literature that rural areas are in need of good leadership [45].

Transformational leadership is a model that provides the type of leadership necessary to deal with the complexities that exist in most rural communities. It has the elements of trust and respect that facilitates the cooperation needed for effective teamwork. Furthermore, it emphasises a relational approach in which leaders show interpersonal consideration through relationship building, empathy, and interdependence that is so appropriate for rural areas (Avant, 2006).

Pigg (1999) suggested that community leadership should be based on our knowledge of communities rather than organisations. He supported this claim by stating that

community leaders cannot rely on formal authority or power positions. Leaders should, on the contrary, depend on their ability to build relationships and support from the community itself. This idea of building relationships is not the way organisational leaders conduct business. The authors use this difference between community leaders and business organisations as one way of supporting their rejection of formal leadership theories.

Transformational leadership is a model that goes beyond the traditional approaches to leadership. It approaches the community as an interactional field. The community field is a process of interrelated actions through which residents express their common interest in the local society. Transformational leadership influences relationships among individuals, leaders and collaborators who bring about real change that reflects their mutual purposes [29]. Thinking of leadership as relationships rather than associating the term with position and responsibilities could help overcome many rural community residents' reluctance to "get involved" or "be a leader" [33]. This way of thinking certainly lends credibility to the problems facing rural community leadership development today.

2.1 Regional leadership of the Kavango East Region

The Kavango East region is facing a lack of leadership, which is supposed to bring about water technology innovations at the centre stage to enhance job creation for the local inhabitants. Lack of leadership involvement is a ticket to lack of development. According to [26], "…a number of lodges and camp sites have been developed by private individuals and companies, and one conservancy, but the leadership has paid little attention to the creation of wealth and jobs through the use of water in the Kavango River".

[27] suggested that, the relationship between leadership and sustainable development is very important, because there is no development without leadership, especially in the social, human and cultural dimensions. [29], also agreed and further suggested that leadership's role is of great importance in motivating people and creating an effective working environment in order for the project team to meet greater challenges in today's global economy.

Advanced Countries that have adequately utilised water technology innovation in their daily operations, have realised enhancement in regional development and better living conditions of their people, [39]. According to [28], the country should develop itself through the use of its natural resources and technology innovation. Namibia has 14 regions and these regions are not at the same level when it comes to development or economic growth, service delivery and available important infrastructure. The 14 regions are at different levels, due to the apartheid policies, which turned some regions to be core regions (Khomas, Erongo and Karas Regions) because of their better water technology innovation. On the other hand, many northern and north eastern Regions (Zambezi, Kavango east, Kavango west, Ohangwena, Oshana, Omusati, Kunene and some parts of Oshikoto Region) were not given enough attention in terms of the use of water technology in enhancing development, and are now regarded as Resource Frontier regions. These Resource Frontier regions are characterised by high poverty levels, lack of public infrastructure and a high migration of its population to other regions.

The Government of the Republic of Namibia (GRN) has established fourteen (14) Regional Councils under the Act of 1992; this law was a plan to bring the government closer to the people, especially the previously disadvantaged. According to a Practical Guide of Decentralisation Enabling Act (2008) of Namibia, the main responsibility of regional councils is to draw up regional development plans and administer formal settlements (Regional Council's Act 22, 1992.). Additionally, they should also be responsible for delivering basic services, like rural water supply, primary healthcare and primary education, according to the Decentralisation Policy for Regional Councils.

Many argue that leadership may be the catalyst through which these changes may occur. Communities that are creative, entrepreneurial, and committed to building a shared vision and consensus are found to be better prepared to address community needs [7]. For rural communities to be sustained, there is need for local leadership to take charge and guide the way into the future. A new generation of leaders is needed to build local partnerships for managing change in today's diverse communities [38]. Leadership itself has played a fundamental role in nearly every aspect of society, and is particularly important in developing rural communities.

In 1908, President Theodore Roosevelt initiated the Country Life Commission and charged it to study the major aspects and issues in rural areas in the United States of America. A primary finding of that study was the overriding lack of quality leadership within rural areas. Yet, reflecting on leadership by itself is inappropriate. Leadership (as defined later within this chapter) is the accomplishment of group purpose, which is furthered not only by effective leaders, but several other factors including innovators and entrepreneurs, available resources, and social capital, or contribution to the common good [12]. Therefore, leadership must be considered within a context, regarding a specific purpose, in this case the role it plays in the use of water technology innovations to enhance job creation in the Kavango East Region.

2.2 Leadership and rural development

Rural communities have unique ideals and values, as well as a culture and life of their own. Unfortunately, many of today's rural areas are in trouble. Issues facing rural communities are vast and numerous; more specifically, rural communities in Namibia. Still, many argue that leadership may be the catalyst through which positive changes can take place. Local leaders are concluding that if economic and community development is to take place, it is their responsibility to make it happen. Fortunately, some of today's rural communities are doing exceptionally well, but what makes these communities different? Also, what community aspects come into this equation? Finally, could the presence of effective community leadership be the key to leading troubled communities to a brighter tomorrow?

[31], conducted a study in Nigeria. The overall purpose of the study was to ascertain the role of local leaders in community development programmes in Idea to Local Government Area (LGA) of Imo State. The study aimed to:

1. Ascertain the various roles played by local leaders in community development programmes in the study area;
2. Identify the sources of information on community development;

3. Describe the gender issues in local leadership as it relates to community development;
4. Identify the factors that hinder local leaders from achieving results in community development in the area; and
5. Draw implications for extension policy and practice.

They said that, it is generally accepted that self-sustained rural community development is vital to the economic and social progress of any developing nation like Nigeria. Unless one finds ways and means of massively accelerating development in the rural areas where over 80% of Nigeria's population resides [11] our national goal of self-sufficiency and control over resources may continue to evade us. Interestingly, the resources already exist, but what is missing is the mastery of the practical wisdom and technology to mobilise them for our overall benefit (leadership). The main argument in favour of community-based development is that communities are deemed to have a better knowledge of the prevailing local conditions (such as who is poor and who deserves to be helped, or the characteristics of the local micro-environment), and a better ability to enforce rules, monitor behaviour, and verify actions related to interventions [32].

2.3 The Role of Leadership in water technology innovations

"Consumers today have a better standard of living than those consumers had a decade ago and are much better off than consumers were a hundred years ago. That improvement is due to technological innovation. Thus, technological innovation is a critical driver for improvement in consumers' living standards, survival, growth, success and the wealth of nations. Understanding innovation is of great importance because of its huge impact on these three levels of consumers, and nations" [39].

Accelerating innovation and technology will help address the complex challenges facing America. Technology innovation can be a means to ensure that future actions are more sustainable and be an economic driver, help businesses thrive, create jobs and be a source of U.S. exports [21]. The improvement of water treatment and management systems and technological solutions in recycling and sea water desalination together with other non-technological solutions should be explored. These approaches require the attention and action of governments around the world [34]. This means that leadership involvement is a paramount aspect to any developmental activity. The researchers' opinion is that leadership should be involved in order to see development taking centre stage in the Kavango East Region, in the form of employment creation.

Among the factors that affect water technology innovation in enhancing development as listed by the researchers, are executive management support [7]; [37], willingness to allocate resources [37], clear business plan and vision [48] and effective communication [15].

Leaders should encourage rural territories to explore new ways of becoming or to remain competitive, in order to make the most of their assets and to overcome the challenges they may face, such as an ageing population, poor levels of service provision, or a lack of employment opportunities. In this way, Leaders contribute towards improving the quality of life in both farming and the wider rural population. It uses a holistic approach to address rural problems. It recognises that being competitive in the production of food, having an attractive environment and creating job opportunities for the local population are mutually supportive aspects of rural life, requiring specific skills, appropriate technologies and services that need to be tackled as a coherent package and with tailored policy measures.

2.4 Challenges facing leadership in water technology innovations

One should imagine a holistic and integrated approach to water quality and water quantity management, which maximises ecosystem restoration. It is difficult to envision sustainable solutions to the country's water challenges without technological innovations, such as the distinct opportunities identified above. While these water resource challenges and market opportunities are framed as individual pursuits, ideally, many of these can be achieved in an integrated manner. So, for example, in the case of a traditional municipal wastewater treatment facility, one should imagine a utility that generates energy; captures nutrients for resource recovery; sells their water for reuse; generates half the volume of bio solids; emits substantially less greenhouse gases; uses green and natural infrastructure to manage storm water, mitigate climate impact and provide aesthetic cityscape benefits; and contribute to a comprehensive watershed monitoring program in partnership with a diverse set of partners. Just imagine if the country puts all the pieces together.

2.5 Leader-community relations

According to [46], Leader-community relations can be understood better by using the Social Exchange Theory which is a relationship maintenance theory that examines how people arrive at their decisions in relationships. It is based on a central premise that the exchange of social and material resources is a fundamental form of human interaction. It deals with both the ties that bind people together and the effects of interactions between people [46]. In rural communities, relationships are paramount to accessing resources and meeting basic needs. As researchers have suggested, there exists a limitation on the type and quantity of resources available in rural areas [45]. Consequently, relationships in rural communities are beneficial for sharing resources and accessing services connecting people to family, groups, organisations and communities both within and outside the rural areas.

The idea of using social relationships and exchanges as a central principle for effective leadership in rural social work emphasises the importance of the strength's perspective [46]. The degree of deficits existing in rural communities is due to the nature of their geographical location and access to formal resources [34]. The strengths of social relationships, the cohesion of rural communities, and the exchanges that occur creates opportunities to improving the quality of life in rural communities [46].

By using social relationships and exchanges, rural individuals develop an increased understanding of their roles in the community and environment [2]. This understanding, along with shared experiences, increase their commitment to building a better community. Gemeins chaft, Social Exchange Theory and the Strengths Perspective combined present an organising framework for rural leadership where individuals in rural areas are able to recognise their own capacities and identify with their environments [46].

2.6 Leadership Accountability

Extant and recent literature on the issue of accountability is written by [31], who conducted their study in Nigeria. Just like in any normal setup, [31], found out that leaders' credibility influenced all projects implemented. According to [31], when programmes are poorly executed or implemented, the grassroots get discouraged to participate in other programmes initiated by the leaders. Leaders should therefore ensure that they gain the credibility of their subjects and sponsors and further commit their energy and time in a transparent way towards achieving success in community development programmes. To check this, erring local leaders must be disciplined through appropriate mechanisms. Such mechanisms must involve the possibility of detecting embezzlement and punishing the leader in the event of proven acts of fraud [32].

For example, by requiring the leader to repay the aid money which he or she has misappropriated, other leaders will not repeat the same mistake. Gender bias, especially against women was seriously implicated among the limiting factors to local leadership in their area of study. According to [39], the role of the local leaders in rural and community development is influenced by their gender. Ugboh maintains that women do not play the same level of leadership role as their male counterparts. Respondents noted that in most occasions, women were not involved in decision-making processes because they felt that women had little or nothing to offer. However, many studies have proven the contrary, that women possess the necessary skills and capacity to deliver good programmes in the community[39]. Therefore, both men and women should be involved in leadership roles in community development so that they complement each other's efforts where necessary.

[39, said that, mechanisms to make local leaders account for any act of irregularities and mismanagement added value to the success of the rural development efforts in Nigeria. This system is lacking in the Kavango East Region. Sadly, in most developmental projects and activities, Namibia and the Kavango East Region have been failing to enforce accountability. This has also contributed to poverty and inequalities among the people of the Kavango East Region because, the communities are not benefiting from those funds which are intended to benefit them. Regional leaders have no performance contract; hence it is very difficult for them to be held accountable to the service they render to the community that elected them.

2.7 The History of Water Technology Innovations

Water technology innovation is not a new thing to be associated with mankind. It has been among mankind since the beginning of time. According to [18], the Egyptian water technology commenced with the invention of a device called a shaduf. This is a device that has been used in Egypt since early times to get water for irrigation. This is a machine that draws water from a lower place to a higher place. The shaduf is made up of a large pole that is balanced on a crossbeam with a rope and bucket on one end and a heavy counter weight at the other side. When the shaduf is placed into the water and gets full it is lifted, and then placed into a canal or field to water the crops. The shadufs are still used in most rural parts of Egypt today. These were and continue to be very helpful to Egyptians especially in rural areas close to the river Nile.

3. Methodology

The research design of this paper was a case study. [46]define case studies as "in-depth studies of a specific 'unit', which may be individuals, organisations, events, programmes or communities". Directed by this definition, this research selected a case study to investigate a specific case of the role of leadership in water technology innovations in enhancing job creation.

A case study design was selected for this study because it draws upon a range of methods, such as interviews and questionnaires, focus group interviews by village communities, observation and document artifact collection and analysis. In this regard, the researcher enters the subjects' world or life-setting in the Kavango East Region to understand and interpret the meaning that subjects give to their everyday life in the use of water in their villages. In this case, the experiences of the people living in the Kavango East Region in terms of economic, social and cultural ties as well as water usage, were a major denominator of the results of this study.

The study utilised an applied research aimed at solving both policy and real problems regarding regional leadership involvement in water technology innovations to enhance job creation in the Kavango East Region and Namibia in particular. As stated in the statement of the problem above, this study was geared towards exploring answers to the research question, 'To what degree may the full regional leadership involvement in water technology innovations enhance job creation in the communities of the Kavango East Region?"

The objective of the methodology used in this study was to come up with an amalgam of exploratory and descriptive approaches. The researcher selected this method because this study arose out of a lack of basic information concerning perspectives and understanding by the communities at grassroots level in the Kavango East Region on the role of regional leadership in water technology innovations to enhance the job creation phenomena. [6], indicated that exploratory research is conducted to gain insight into a situation, phenomenon, community and/or individuals.

In qualitative studies such as this one, [5], suggested that description is more likely to refer to a more intensive examination of phenomena and their dear meanings, thus leading to thicker description, hence a research strategy such as a case study can be used.

Furthermore, the purpose of this study was to provide qualitative and quantitative information on various factors, which the researchers hypothesised as being related to leadership involvement in water technology innovations to enhance job creation in the Kavango East Region.

This mixed method of study made use of the case study design to assess the role of Regional Leadership involvement in water technology innovations in enhancing development in the Kavango East Region. The study showed a detailed and intensive analysis of a single case. It was a single location (one Region) study. A case study research involves the study of a case within a real-life contemporary context or setting [42].

Since the study involved both exploratory and descriptive approaches it used both qualitative and quantitative data presentation and interpretation as in section 6 of this study. As stated above, this study was delimited to the Kavango East

Region of Namibia. Interviews with the communities were conducted in the villages of the Kavango East Region.

Twenty-one villages were randomly selected, for the purpose of the focus group interviews conducted among the communities in that area. At this phase, the researcher only presented a primary indication of the design and methodology of the research.

This study was analytically descriptive, using a mixed-method approach. It exploited inductive generalised reasoning, since it used statistical inferences in which the researcher generalised from a non-probability sample to the research population of the Kavango East Region. Some of the data was collected by means of observations, while the primary data of the study was obtained through focus group interviews. This means that the focus group interviews constituted support for the non-probability results. Focus group interviews were used for this purpose. Observations, interviews and non-structured questionnaires are qualitative methods of collecting data.

The researcher prepared a focus group interview schedule in the form of meetings organised amongst the grassroots community villages of the Kavango East Region as discussed above. The structured research questions were prepared in English, but could be administered in vernacular such as RuSambyu, Rumanyo and Thimbukushu where necessary. To contextualise this research into the Kavango East Region, the researcher included current information / secondary data regarding leadership involvement in water technology innovations to enhance job creation. The information covering the issues was in reports, books, journals and periodicals. This section on methodology consists of the following concepts: data collection procedures and techniques; the team of researchers, study area, population, sampling methods and strategy.

3.1 Population

According to [24], 'population' is the aggregate of all the cases that conform to some designated set of specifications. Hence, by the specifications of people residing in the villages of the Kavango East Region, this sub-section defines a population consisting of all the people residing in the villages of the Kavango East Region. As alluded to above, the sampling selection for research was rooted in the 2011 Population and Housing Census conducted by the National Planning Commission (NPC). However, there were strong assumptions that uncontrollable movements of people within the Constituencies and villages of the Kavango East Region, as well as to other Regions would affect the population for th chosen area. Therefore, this research included a probability technique to obtain more information from people living in the grassroots villages of the Kavango East Region.

This was done because, it is not always easy to obtain statistics of people moving from one village to another, or from one constituency to another on a daily basis by means of probability techniques. The problem is based on the complexity of recording the movement of people daily.

According to [28], supported by the delimitation commission report of 2013, the Kavango East Region had a total population of 115 447 people, with 343 villages (excluding Rundu town and Divundu Village Council), with an average household size of 6.7 and an area of 25 576 square Kilometres. Based on this, for the sake of this study, the unit of analysis was a village. A sample of 21 villages were identified within a radius of 15-222 kilometres along the Kavango River, eastern side of Rundu town.

3.2 Sample

Kidder and Judd (1986: 145), maintained that, sampling refers to the group of elements selected with the aim of investigating something about the population from which they are taken. Two sampling techniques were used in this study. The probability sampling in the way of random sampling technique was used to select representative villages from the total of 343 villages in the Kavango East Region. The non-probability sampling technique was used by way of a purposive sampling to select the headmen/headwomen of the village and their community representatives to elicit both qualitative and quantitative data on the role of leadership in water technology innovations to enhance job creation in the Kavango East Region. This was done based on the experience of the grassroots communities in the villages. Below is how the number of villages was calculated:

The sample of this study consisted of 19 randomly selected villages out of 343 villages. For each village there were 8 members (1 headman and 7 advisors) x 19 villages = 152 members, which were interviewed in focus groups. Each village had 1 headman who was automatically part of the 8 members. The 19 villages were randomly selected by using a research randomizer, a computer program.

The sample size was calculated using Slovin's formula at a 95% confidence interval. The formula is shown below:

$$n = \frac{N}{1 + N(e)2}$$

Where:
N= Population
n= Sample size
e= $(0.05)^2$

$$n = \frac{343}{1 + 343(0.0025)}$$

n= 343/1+0.8575 =1.8575
Sample Size= 21 Villages

In this regard, twenty-one (21) villages, with a total of 777 grassroots community members were interviewed at their villages where the headmen/headwomen helped to facilitate this research project in order to obtain information without any restrictions on people. All people who came to the headmen/headwomen tree were interviewed, since turning some away could cause embarrassment, which could cause the remaining respondents to avoid giving information to the researcher.

In addition, six hundred and eight (608) females and one hundred and sixty-nine (169) males participated in the focus group interviews; three hundred and seventy-four (374) were between twenty-three (23) and thirty-five (35) years of age, while the rest were above thirty-five (35) years of age. Forty-six (46) participants were disabled from albinism and dwarfism.

3.3 Sampling strategy

The Kavango East Region is a region that shares a border with the Kavango West to the western side, to the northern side

along the Kavango River it shares a border with Angola, to the eastern side it shares the border with the Zambezi Region, and to the southern side, it shares the border with Otjizondjupa Region. The Kavango East Region has a history of using water to produce food for domestic consumption. Given this very short background, the questionnaire was structured with a view to reflect demographic patterns in the Kavango East Region. The questionnaire was also based on the assumption that the grassroots community in the villages of Kavango East Region use water for various purposes such as domestic household use as well as the production of food such as vegetables. One type of questionnaire was prepared for all focus group interviews in the villages of the Kavango East Region. The questionnaire in Appendix B reflects the probability side of the purposive sampling technique since the researcher selected villages randomly and purposively selected the respondents who participated in the focus group interviews.

However, this technique used a random probability in the selection of villages to be interviewed combined with purposive selection of the respondents. The purpose of the questionnaire was to probe the respondents' experience and understanding regarding leadership involvement in water technology innovations to enhance job creation in the grassroots rural community of the Kavango East Region.

3.4 Research Instruments

The study used focus group discussions for collecting data. During the focus group interviews structured and non-structured questionnaires were administered to the village participants.

3.5 Procedure for data collection: Focus Group Interviews

The researcher sought approval from the Kavango Regional Governor, informing Regional Leaders that he would be in the Region to conduct research. After that, the researcher met with the village headmen/headwomen to explain to them about the research and its processes, and then made appointments with randomly selected villagers on different dates and times. Twenty-one (21) villages (the headmen and senior advisors) were asked to participate in focus group interviews; participants were asked questions concerning the role of leadership in water technology innovation in enhancing job creation. The standardised non-structured questions had 31 sub questions to cover the two research objectives namely:

(1) to investigate successes and limitations surrounding leadership involvement in water technology innovations to enhance job creation and;
(2) to investigate the relationship between leadership, water technology innovations and job creation.

3.6 Data analysis

After the focus group interviews had been conducted at all the sampled villages, the qualitative data was coded, and a data dictionary created to explain the meaning of each code. Then the data entry process started, using Statistical Packages for Social Scientists (SPSS). Univariate analysis was used to test for categorical variables, and bivariate analysis was used to test for any correlations. Multivariate analyses was conducted to test multiple linear regression analysis. This was followed by data display, which went a step beyond data reduction to provide an organised, compressed assembly of information that allows one to draw a conclusion. The researcher established patterns of interrelationships that suggested why the success or limitations in leadership involvement in water technology innovations to enhance job creation and how leadership involvement in water technology innovations contribute to job creation. After all this was done, the data was then interpreted, in the form of a report.

3.7 Village interviews

After all, 21 focus group interviews had been carried out, the researcher used content analysis to summarise and categorise the interview field notes and recordings of data according to their typicality common themes. The researcher organised data, breaking it into manageable units, synthesising data, discerning patterns of situations, and discovering what was important and what was to be learned. Individual themes were used as the coding sampling units for analysis. After all the focus group interviews, the notes on the responses were processed for the phenomena to speak for itself. A coding system to code all the responses was developed, by creating abbreviations of the themes from the questionnaire which was used. The research results are presented in graphs and charts under the section on Results and Discussions.

3.8 Data collection procedures and techniques

The nature of the research design was that of a case study. The data was collected by means of direct, systematic observation and focus group interviews. In the execution of these methods, the research participants (interviewers and interviewees) had to be obtained to carry out the research in terms of the case study research strategy discussed above. The following sub-sections sketch the research techniques used during the fieldwork on the Kavango East Region.

3.9 The questionnaire

The research instrument used was an eight-page questionnaire developed for interviews with focus group interviewees in the grassroots community villages of the Kavango East Region, using a random sampling technique. The questionnaire was written in English, but it was administered in the vernacular (RuSambyu, Rumanyo and Thimbukushu respectively) in order to make it easy for the interviewees. The inclusion of non-structured questions in the questionnaire enabled the researcher to elicit the respondents' unique views on particular issues of concern. The questionnaire consisted of 22 questions and was organised into three sections namely:

Section A: Demographic information

This section contained items that identified details about the respondents in relation to their gender and number of respondents.

Section B: What are the roles of leadership in water technology innovations to enhance job creation?

This section probed the Regional Leaders' visits to the villages in the last five years, and how many times Regional Leaders visited the particular villages. The section also probed if the visitations took place, if so, how many times were they engaged in discussions between community and Regional Leader and why such discussions? It also probed the number of times the community had come together with their Regional Leaders to discuss issues concerning water technology innovations at their villages. The section sought to know if Regional Leaders ever suggested the allocation of resources for water technology innovation, and how much that was. It also sought to confirm if the Regional Leaders really allocated financial resources for water technology innovations and how much that was.

The section further probed if the Regional Leaders had not visited their respective villages, what the village leaders did to seek audience/engagement with the Regional leaders concerning water technology innovations at their village and what were the reactions of their Regional Leaders on the matter. The section also sought to understand if the respective villages were geared for using water technology innovations to create jobs for themselves. It therefore, asked if there was a technical group/committee at the respective villages, which was responsible for speaking to Regional Leaders concerning the need to use water technology innovations to enhance job creation at their respective villages. If their technical group is in place has it managed to speak to the Regional Leaders on the need to use water technology innovations to enhance job creation. The section furthermore, sought to understand from the community point of view, how they viewed leadership involvement or lack thereof, in water technology innovations and how this will influence job creation at their respective villages. The section concluded by probing how many jobs had been created at the respective villages through the use of water technology innovations and the reasons behind the number of jobs created.

3.10 Research ethics

Permission to conduct the study was sought from the Kavango Regional Governor, in writing. The researcher ensured that all focus group interviews started by giving a statement of intent where the researcher assured the respondents that the information and data collected would be used solely for the research and that the respondents would have open access to the results once they were published. Informed consent from the respondents was also sought before the necessary information was collected. During the entire investigation, anonymity and confidentiality was maintained by not recording any names and not disclosing any information between focus groups. Data is stored in a locked cabinet and will be destroyed by shredding and burning after 5 years.

4. Results & Discussions

The role of leadership in water technology innovations

Table 4.1. Spearman's Correlations of variables

Source: Research Findings

Spearman's rho

	Village Code	Q 1.1 - 1.2 Number of times the Regional Leaders visited the village in the last 5 years	Q1.3 Number of times the Regional Leaders were engaged in discussion	Q1.4 Number of times the Regional Leaders were engaged on water technology innovations	Q 1.5 - 1.8 How much has been allocated to Water in the Regional Budget	Q 1.9a - 1.10 How do you seek an audience with the Regional Leaders	Q 1.9b How did the regional leaders respond to your requests for meeting	Q1.11 Do you have committees to discuss problems in the village	Q1.12 Impact of leadership on development	Q.1.13b Types of jobs created
Q1.3 Number of times the Regional Leaders were engaged in discussion	.576**	.706**								
	,01	,00								
Q.1.4 Number of times the Regional Leaders were engaged on water technology innovations	.484*	.607**	.695**							
	,03	,00	,00							
Q 1.5 - 1.8 How much has been allocated to Water in the Regional Budget				.487*						
				,03						
Q 1.9b How did the regional leaders respond to your requests for meeting						.496*				
						,02				
Q1.11 Do you have committees to discuss problems in the village							-.440*			
							,05			
Q1.12 Impact of leadership on development	.740**						.497*	-.439*		
	,00						,02	,05		
Q2.1 Factors affecting economic development in your village					.482*					.594**
					,03					,00
Q.2.4 Impact of Water innovation in wealth creation										.548*
										,01
Kavango Regional Constituency	.980**		.581**	.544*					.731**	
			,01	,01					,00	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.2 Role of Leadership in Water Technology Innovations

Variable	Description	Frequency	Percentage
Number of times the Regional Leaders visited the village in the last 5 years	None	7	33.3%
	Once	3	14.3%
	Twice	2	9.5%
	Three	1	4.8%
	Four Time	0	0.0%
	Five Or More	8	38.1%
Number of times the Regional Leaders were engaged in discussion	None	7	33.3%
	Once	5	23.8%
	Twice	2	9.5%
	Three	1	4.8%
	four time	0	0.0%
	five or more	6	28.6%
Number of times the Regional Leaders were engaged on water technology innovations	None	12	57.1%
	Once	2	9.5%
	Twice	2	9.5%
	Three	1	4.8%
	four time	0	0.0%
	five or more	4	19.0%
How much has been allocated to Water in the Regional Budget	None	9	42.9%
	Proposed but no allocation	12	57.1%
	Proposed and allocated	0	0.0%
	Allocated without proposing	0	0.0%

Table 4.3 Leadership Communication in Water Technology Innovations

Variable	Description	Frequency	Percentage
How do you seek an audience with the Regional Leaders	Sent a letter	3	14.3%
	Went physically to the offices	13	61.9%
	Did not contact the leaders	5	23.8%
How did the regional leaders respond to your requests for meeting	Ignored our request	2	9.5%
	leader listened but did not provide resources	16	76.2%
	leader listened and provided resources	0	0.0%
	not applicable	3	14.3%
Do you have committees to discuss problems in the village	Not in place	7	33.3%
	No, but we would like to have them	1	4.8%
	No, we cannot afford to pay them	7	33.3%
	Yes, it is in place and organized	6	28.6%
Impact of leadership on development	Poverty eradication	0	0.0%
	Job creation	0	0.0%
	improved economic activities	0	0.0%
	sustainable development	0	0.0%
	all of the above	11	52.4%
	not aware	10	47.6%

Source: From the study findings

A total of 61.9% of respondents indicated that communities seek audience with regional leaders, mostly by going physically to their offices. On the question whether their regional leaders respond to their (communities) request for a meeting, 76.2% of the respondents indicated that their regional leaders listened to their concerns but did not provide resources. The rationale behind this is that there is no dedicated budget given to regional leaders which caters for community development, and this is hampering development in the rural areas of the Kavango East Region. It might be that regional leaders are willing to allocate resources, but they do not have the resources at their disposal.

A total of 28% of the respondents indicated that they have a committee that discusses problems in the villages. On the same question 33.3% of the respondents said they do not have one, because they can't afford to pay for it, since government does not pay them. While the other 33.3%, also indicated that the committee is not in place without any reason (See table 4.2 and 4.3 above for more supported by table 4.1).

On the impact of regional leadership on development, 52.4% indicated that proper leadership will contribute to poverty eradication, job creation, improved economic activities, and sustainable development. Sadly, 47.6% of respondents indicated that they are not aware of anything. This may be attributed to a lack of education in the community to enable the community to know what is expected from their elected regional leaders (also see table 4.3 above for more).

Table 4.4 Jobs Created

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Q1.13 How many jobs have been created	21	0	101.00	458.00	21.8095	22.07627

Source: From the study findings

The mean of jobs created is 21.8095, with standard deviation of 22.07627, the maximum jobs created is 101 at Shighuru village. Results from the research findings indicated that 85.7% of jobs created were mainly in gardening and manual irrigation (see table 4.4 above). This indicates that the community of the Kavango East Region is committed to strive and improve their lives with gardening and manual irrigation (using water). All they need is leadership support with water technology innovations to produce at a large scale.

5. Conclusion

The overall results obtained from the grassroots villages of the Kavango East Region, show that the leadership is not playing its role in water technology innovations to enhance job creation. Moreover, the grassroots communities also revealed that regional leaders from the radius of 81-222 kilometres reside within their communities since there is a long distance from town. This gives them more opportunities to meet their community from time to time.

As a result, the Regional Leadership's impact on development is felt stronger at villages which are situated far away from Rundu Town ($r = 0.74$, $p = 0.00$). This can also be linked to support the 56% poverty level in the Kavango East Region reported by the Namibia Statistics agency. This is true because more people of the Kavango East Region live at villages near Rundu Town and regional leaders do not attend to those villages. That is why the poverty level is higher in that Region.

The grassroots communities of the Kavango Region view leadership involvement in water technology innovations as something that will influence poverty eradication, job creation, improved economic activities and sustainable development. From the spearman correlation of the research findings (Table 4.4 above), on village distance from Rundu Town, we see that at least 54.76% (r =0.74)2 of the predictability of Regional leadership impact on development is the result of the distance from the urban centre (Rundu Town).

5.1 Recommendations

This paper considers recommendations that would help leaders to support the use of water technology innovations in enhancing job creation in the Kavango East Region to:

• Understand the type of tools and equipment, which the communities need to use
water technology innovations to enhance job creation.

• To know other sort of support which leaders should offer to the communities in
order for them to feel motivated to continue using water technology innovations
to create jobs for themselves.

• For leaders to know and understand the barriers affecting the use of water
technology innovations by the communities

These recommendations are important to enable regional leaders of Kavango East Region be conscious of the existing gap between leadership involvements in water technology innovations in enhancing job creation to the grassroots communities and the asymmetric nature within the regional economies.

Therefore, this paper recommends:

To the Central Government

• That there should be a policy to compel regional leaders to live within the
community or constituency from which they are elected during. If Regional
Leaders do not live within the communities, which elected them, it will be hard
for them to know their community's needs which require their attention.

• That there should be a prescription on the number of villages developmental community meetings based on the number of villages in the particular constituency. These meetings should be convened by regional leaders. At such meetings, the community will be given a chance to rate the quality of their
regional leader's engagement.

• That the central government the Ministry of Urban and Rural development needs
to come up with capacity development program for regional leaders. Regional leaders need extensive training to understand their roles and influence on
community development, poverty eradication and job creation, before they can
resume their duties and not just a mere induction since some regional leaders
lack advanced education in development matters.

• That there should be a mechanism in place, which will give certain power to
regional Governors to supervise Constituency leaders (including the Chairperson
of the Regional Council) in their activities in the villages including community
development issues.

• That the Ministry of Rural and Urban development, should allocate a budget to
the Constituencies, to enable regional leaders to fund some critical development
projects such as the use of water to create jobs for the rural poor.

To the regional leaders

• That there is a high need for Regional Leaders to implement water technology
innovations in Kavango East Region, this will impact on wealth creation, job
creation, improve self-reliance, reduce poverty and reduce inequality.

• That there should be a mechanism in place for regional leaders to improve their
working relations with the communities.

• That regional leaders should understand the importance of community empowerment, as a key to self-reliance and a way of promoting socio-economic development in their regions.

To the grassroots communities

• That there should be a program to capacitate community members to understand
the role of their leaders. The community must be trained to understand the roles
of the regional leaders. This will make them focused and not give up in their
efforts to self-reliance by using their regional leaders.

• That their Community should be given legal power to remove constituency
(Regional) leaders who are not cooperating with the community or not
contributing to development within their communities even when their term of
office has not expired.

• That there should be a mechanism to make regional leaders account for the
promises they make to the communities based on their discussion or during
community meetings or visits.

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Author Profile 1

Dr. Romanus Kavindame Kawana is one of the young Namibian scholar, trainer and a mentor. He earned his Doctorate of Business Administration, interrogating "The Role of Leadership in Water Technology Innovations to enhance Job Creations: In Kavango East Region", from University of Namibia. On which he became the First person to be awarded this Degree from an Institution of higher learning in Namibia.

He obtained his Diploma in Criminal Justice and Forensic Auditing/Investigations at the University of Johannesburg (2008) in South Africa; Baccalaureus Technologie in Forensic Investigation/Audtiting at the University of South Africa (2011); Bachelor in Household Economic Approach and Analysis at the University of Kuazulu Natal (2012); Master in Business Administration at Midlands State University of Zimbabwe (2013). Doctor of Business Administration from the University of Namibia (2017) and a Master of Agriculture from the University of KwaZulu Natal (2018).He is a professional member of the Institute of Internal Auditors: South Africa since 2009 and he became a member of the Institute of Directors of Zambia in 2016.

In 2004 the Candidate served at a Relief Teacher at Shambyu Combined School. The same year in September, the Candidate joined the Kavango Regional Council as a Clerk. As from 2005-2008 served as an Accountant at the Ministry of Works, Transport and Communication. From 2008-2010 the Candidate served as a Chief Clerk responsible for Mukwe Constituency as well as Divundu Settlement, at Kavango Regional Council. As from 2010-2012 he served as a Control Officer at Erongo Regional Council, in June 2012 he was promoted to the level of a Chief Control Officer. As from 2014 the Candidate joined Office of the Prime Minister, Department State Owned Enterprises Governance Council Secretariat, which later on became the Ministry of Public Enterprises as a Deputy Director.

He serves as an independent member of Public Accountants and Auditor Board of Namibia, Namibia Development Trust and as a Council Member at National Council for High Education. He serves as a supervisor for the several research projects of Business Administration Diploma and Masters Degree students in the Namibia Business School. He teaches part-time at the same School. He has published 1 Peer reviewed article and has presented several papers at National and International level conferences.

Author Profile 2

The Rev. **Dr. Greenfield Mwakipesile** is a management professional with wide ranging experience in research, training, sales, marketing and administration in industries ranging from manufacturing, distribution, wholesaling, retail and services.

Education

Th.D.
Atlantic International University - USA

MBA
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He has over twenty five years of experience in marketing. He has worked as a Researcher, Lecturer/Trainer, Sales Manager, Marketing Manager, Product Manager to MD and CEO.

Prior to joining the NBS consulting team as a marketing expert, Dr. Mwakipesile worked as Marketing and Sales Director for some multinational. He was charged with establishing and overseeing the sales team, managing the Marketing Mix, creating Sales and Marketing plans for the

company and seeing to their successful implementation. He also gave direction on market penetration and dealt with key account customers. Amongst the brands marketed under his most recent portfolio were HP, Alva Gas, Jindal Gas, Karbonn Smart, One Stop Solar, Ducellier Batteries, Diplomat Furniture, SKM Motorbikes, Skyworth TVs and Swag, to name a few.

Other Working Experience:
A. December 1989 to April 1990:- PTC HQ - Transport Controller's Assistant:
B. January to February 1991:- Market Research Analyst - SUGAR DISTRIBUTORS
C. March to May 1991:- News subeditor - Analyst ZBC
D. June 1991 to May 1992: - Trainee Manager - OK BAZAARS
E. September 1992:- Acting Supermarket Manager - OK BAZAARS, First Street
F. October 1992 - Acting Sales Manager OK BAAZARS Second Street.
G. November 1992: -Branch Administration Manager - Bon Marche' Borrowdale
H. July 1993 to April 1994 - Sales Manager and Acting Branch Manager - Bon Marche' Borrowdale.
I. August 1994: - Lancaster Industrials as National Sales and Marketing Manager
J. December 1995 - Zimbabwe Pharmaceuticals (ZimPharm) Marketing Manager Consumer.
L. September 1997 - National Sales Manager for ZIMPHARM.
M. December 1997 - Sales and Exports Manager for ZIMPHARM.
N. April 2000 – June 2003 BP And Shell Marketing Services - Senior Category Manager Non Fuel Income Atlantica.
P. October 2003 to current – Director & Board Chairman Reset Investments
Q. April 2004 to current – Director & Board Chairman Highdraw Marketing
R. January 2009 to current – Director & Board Chairman IPGZ

Author Profile 3

Prof **Kenneth Kamwi Matengu** (born 1978, Katima Mulilo) is a Namibian professor. He was Pro-Vice Chancellor for Research, Innovation and Resources Mobilization at the University of Namibia from 2016 to 2018. On 29 June 2018, Matengu was appointed as the third Vice Chancellor of the University of Namibia becoming the youngest person to assume the position.
Prof. Matengu did his high school at Caprivi Senior Secondary. He holds a Certificate in International Relations from the University of Tampere, Bachelor's degree in Geography and Sociology from the University of Namibia, Doctor of Philosophy, Ph.D (exemia cum laudar) in Innovation Diffusion and Development from the University of Eastern Finland. He has published 50 peer review articles, books and book chapters, as well as international conference papers.