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Natural Capital as a Potential Asset Base for Sustainable Livelihoods Associated with Members of the African Initiated Churches in Vhembe District, Limpopo Province

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ABSTRACT

The purpose of the script is to investigate and provide a conceptual framework that propels the natural capital within the livelihood systems of members of the African Initiated Churches (AInCs). The sample identified three (3) churches within the independent churches framework which originated from the AInCs, some of which retained their outlook while others were transformed towards Pentecostal movements and charismatic ministries. A questionnaire was developed to collect data in relation to the respondent livelihoods, religious convictions and activities. Key informants were identified through a sampling technique, a nonprobability sampling method in which initial participants refer to other potential informants, through creating a chain that grows to access populations which may not be found under normal circumstances were used. A total of 221 questionnaires were administered, and those provided both quantitative and qualitative data. The questionnaire captured household demographic profile, livelihood capitals (natural, human, physical, financial, and social), vulnerability, household expenses, and the relationship between the respondents and the church. Drawing on sustainable livelihood literatures system thinking, AInCs theological perspective, and the outcome of this study, identify a central regulatory mechanism shaping stewardship, access, and use of natural resources. The paper argues that despite AInCs roles as informal institutions, the churches enables sustainable, resilient, and dignified rural livelihoods through spiritually informed natural capital governance. It is through this natural capital that food security, income generation and social reproduction are strengthened, particularly in marginalized rural communities. However, increasing pressures from climate change, environmental degradation, land insecurity, and socio-economic inequality have intensified livelihood vulnerability. The AInCs as influential grassroots institutions play a critical, yet under-recognized role in mediating rural livelihoods. This paper integrates natural capital into AInCs informed livelihood framework, highlighting the spiritual and communal dimensions of sustainability.

Keywords: Livelihoods, Rural, Communities, African initiated churches.

1. INTRODUCTION

The Sustainable Livelihood Framework (SLF) identifies core capitals, viz. human, natural, social, financial, and physical capital as assets that rural households rely on to construct and sustain their livelihoods (DFID, 1999). Natural capital was identified as land, soil fertility, water, forests, grazing and plowed fields and is significant because it provides a base for agricultural and non-agricultural activities. Effectively, natural capital serves as a foundation for other capitals to develop as access to natural capital provides income, food security and viability of agricultural-based livelihoods. As a result, the depletion of natural capital compromises agricultural-based livelihood strategies of rural communities and therefore exposes them to vulnerability to shocks. This paper assesses natural capital as a foundational asset for agricultural-based livelihoods of members of AInCs. Sustainability of livelihoods of the members enables them to provide financial support to the church.

2. MATERIAL AND METHODS

Study area

The study was conducted at Khalavha and Mangondi villages as centers of church convergence, but with church attendees originating from various villages of Pile, Tshino, Ngovhela, Tshithuthuni, Mauluma, Thohoyandou, Louis Trichardt, Ha-Mavhunga, Thembisa, Milaboni, Makwarela, Messina, Mulodi, Mangodi, Malavuwe, Malamulele, Gonden, Matsika, Malamangwa, Lufule, and Tshitangani. These villages are located at Vhembe District Municipality, situated at the northern tip of South Africa in the Limpopo Province. Figure 1, indicated that district has four local municipalities: Thulamela, Makhado, Collins Chabane, and Musina. Vhembe District is surrounded by African countries, on the north is Zimbabwe, in north-west is Botswana, and Mozambique on the east. Within South Africa, Vhembe District Municipality borders the Kruger National Park to the east, the Mopani District Municipality to the south-east, and Capricorn District Municipality to the south-west. In terms of population size, Vhembe District had a total of 1,402,779 people, with 416,728 residing in Makhado Local Municipality, 497,237 in Thulamela Local Municipality, 347,974 in Collins Chabane Local Municipality, and 32,009 in Musina Local Municipality (Stats SA, 2022). Thulamela Local Municipality is the most populous municipality in the District, while Musina Local Municipality is the least populous.

Sampling procedure

The sample identified three (3) churches within the independent churches' framework, which originated from the AInCs, some of which retained their outlook while others were transforming towards Pentecostal movements and charismatic ministries. Through Categorizing the chronological evolution of the Christian faith amongst the VhaVenda people, Figure 2. Shows various denominations and their outlook. Several mission organizations encountered the VhaVenda people in the Vhembe District. This includes the Dutch Reformed Church in 1863, the Berlin Missionaries in 1872, the Swiss missionaries in 1875, the Reformed Presbyterian Church in 1905, and the Reformed Church (Gerformeerde Kerk in Venda) in 1910. Their arrival gave rise to what is referred to as Pioneer Mission Established Churches, *the first generation* of churches in Vhembe District Municipality, as highlighted in Figure 2.

The second layer represents what is defined in this context as a Mission Established Pentecostal Churches (MEPC) whose footprints can be traced from 1890 with the establishments of Christian Catholic Church in Zion, Zion City, the Apostolic Faith Mission, the Catholic Apostolic Holy Spirit Church in Zion, the Zion Apostolic Faith Mission, the Assemblies of God (Anderson, 2000; Anderson, 2001; Anderson, 2004; Hexham & Poewe-Hexham, 2003). *The third category* is the African Initiated Churches (AInCs), which represent the third layer in Figure 2. The political events that gave rise to political organizations like the African National Congress (ANC) in 1912 were not limited to political formations but also found expression within Christian formations. This is seen in the establishment of denominations such as The Nazareth Baptist Church (Shembe Church), The Zion Christian Church, St. Engenas, the United African Apostolic Church, and the International Pentecostal Holiness Church (IPHC), among others. These churches were mainly established as a protest against the Eurocentric approach to the gospel. *The fourth category* is what is referred to here as the African Independent Pentecostal Churches (AIPC). In 1962, Michael Cassidy founded African Enterprise, an evangelical, multiracial organization open to charismatic experiences that is modeled on the Billy Graham Evangelistic Association. Cassidy considered apartheid anti-Christian, and he organized major multiracial Christian events during the apartheid era. In the 1970s and 1980s, neo-Pentecostal churches, such as the Rhema Church and the Durban Christian Centre, experienced rapid growth. Ray McCauley, who founded Rhema Church in 1979, emerged as one of South Africa's most important white neo-Pentecostal leaders, becoming president of the newly created International Fellowship of Christian Churches in 1985, South Africa's largest association of charismatic and neo-Pentecostal churches (Hexham & Poewe-Hexham, 2003). This period is being noticed by increase of independent charismatic ministries.

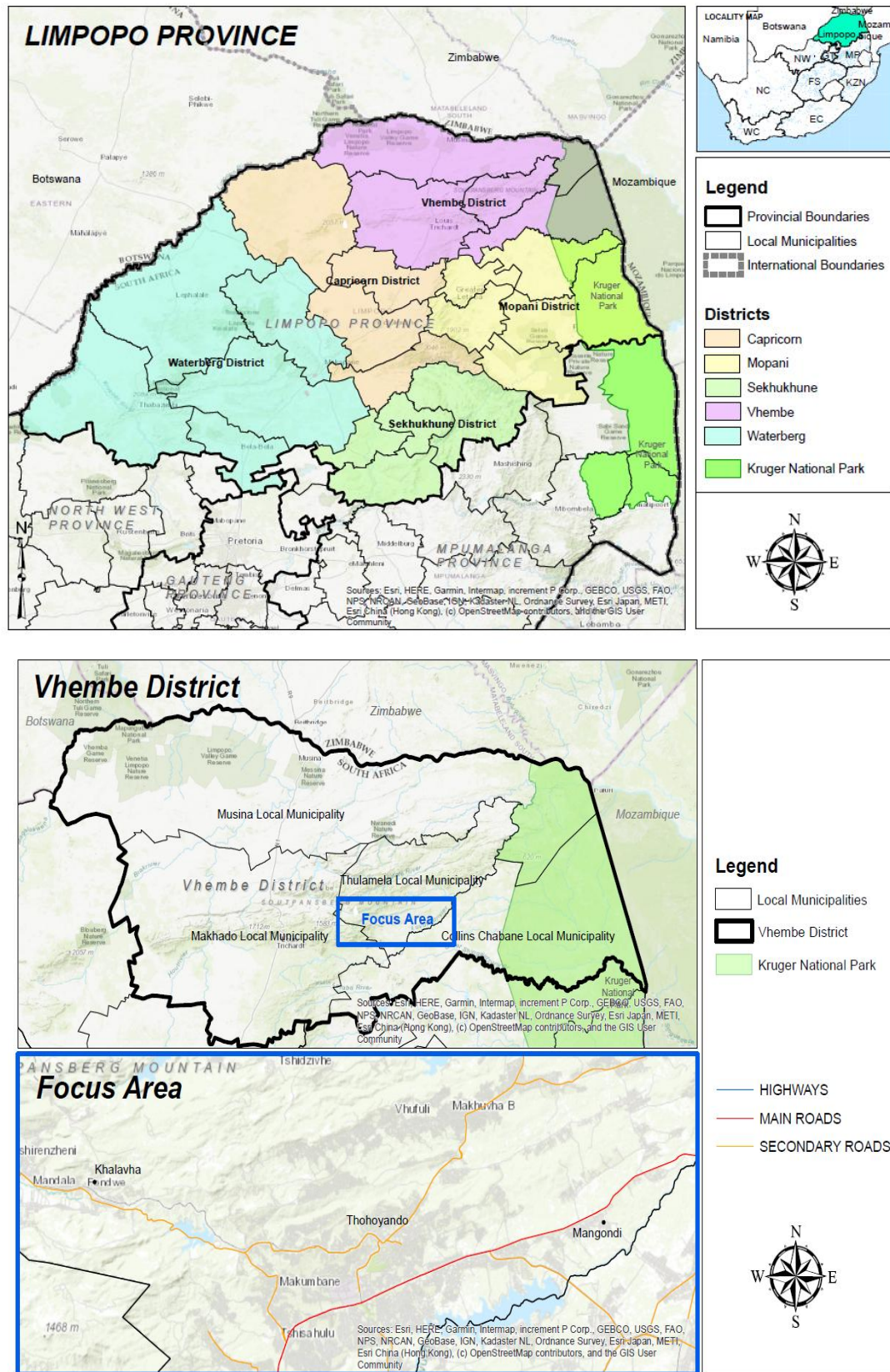


Figure 1. Location of Vhembe District Municipality in Limpopo Province of South Africa



Figure 2. Evolution of Christian movements in the Vhembe District

The fifth category is the modern Prophetic Ministries (PM), which have earned the branding of Prophets and Profit due to its enterprise model, attracting criticism even from state organs. Although AInCs, are found in third till the fifth layer in Figure 2, the study focused mainly on the third layer, which is the first generation of AInCs. These are the kinds of churches established and advanced by Africans in their own interpretation of the gospel, without foreign aid or control. They are also known for emphasizing indigenous knowledge in their quest to resolve their daily life challenges. This includes preservation of natural resources, practices, and structures which often promote stewardship of nature as a divine and communal responsibility. The sample also identified the African Independent Pentecostal Churches (AIPC), ministries that transformed from their AInCs, outlook to embody the character of modern Pentecostal and Charismatic ministries, while maintaining a local, self-governed structure without foreign regulators. The independence of these churches is from the fact that, unlike other denominations which are linked to mission establishments, i.e., churches whose origin is from outside the African continent and were spread through missionary endeavors, AInCs are therefore the kind of churches which originated from the African continent, championed by the indigenous people of the land. The study identified the following: Mulalo Zion Apostolic Church (MZAC), Bethlehem Apostolic Church (BAC), and the Holy Christian Apostolic Church (HCAC).

Data collection

A questionnaire was developed to collect data of respondents and their religious convictions and activities. Key informants were identified through a sampling technique. A nonprobability sampling method in which initial participants refer to other potential informants, by creating a chain that grows to access populations, and that may not be found under normal circumstances were used. The initial participants were identified and recommended by church leaders, based on availability and the ability to respond to the questionnaire. Data collection was conducted through interviews with key informants selected by the religious leaders and fellow participants. A total of 101 participants were interviewed at Holy Christian Apostolic Church, while at Mulalo Zion Apostolic Church 120 interviewed. A total of 221 congregants were interviewed. Questionnaire was developed to collect both quantitative and qualitative data. The questionnaire captured household demographic profile, livelihood capitals (natural, human, physical, financial, and social), vulnerability, household expenses, and the relationship between the respondents and the church. Each category included a set of questions, both open- and closed-ended, and the questionnaires targeted sampled individuals in their capacity as community and church members.

Interviews were conducted at the church premises, while others were conducted at the respondent homes. In addition to the above, some respondents were visited at their place of work, due to factors such as the suitable dates and time. It was also established that key church activities, such as church gatherings where people come together, are appropriate gatherings for engagement with church members. The respondents were encouraged to supply reliable, authentic, and valid data.

Data analysis

Interview data were recorded for analysis, and the collected data were compared and matched for consistency. Quantitative data were transcribed into MS Excel and analyzed, using the Statistical Package for Social Sciences Version 27 (SAS, 2009). The SAS FREQ procedure was used to generate simple frequency tables for variables of interest. Unmatched, non-correlating data were discarded as unreliable. Although respondents were still able to provide the required reliable, authentic, and valid data, a sense of discomfort was detected, particularly a reluctance to discuss potential controversial issues in public.

3. RESULTS & DISCUSSION

Socio-demographic characteristics of sampled respondents

Family position

Table 1 provides information on respondents' household positions. The significance of the household head is the most evident position of family. The significance of household head in most cultures, a position carries the responsibility of being a decision-maker and a breadwinner who accounts for the well-being of household members. The respondents had a mean age of 43.90, and among the 221 participants interviewed, 71.9% were household heads. Recent literature on gender and rural livelihoods indicates that the possibilities for opportunities to engage in specific livelihood options are tied to the strongly gendered ability to access resources (Anderson & Djurfeldt, 2015; Meinzen-Dick *et al.*, 2014). The household head provides an opportunity for more reliable information as family heads, because they are vested in daily household affairs. Mira *et al.*, (2024), viewed reliability as the consistency of measurements across time, instruments, and different observers. I support of the above, reliability can be explained as vital for ensuring that research results are replicable and trustworthy, thereby making the research findings stable and dependable. The results indicated that participants were responsible for their own households' livelihoods and were well-versed in the historical information of their households.

Table 1. Household positions of respondents

		Family position		
		Frequency	Percent	Valid Percent
Valid	Head of family	159	71.9	71.9
	Spouse	23	10.4	10.4
	Child	28	12.7	12.7
	Grandchild	3	1.4	1.4
	Parent	4	1.8	1.8
	Grandparent	4	1.8	1.8
	Total	221	100.0	100.0
Most participants (72%) were head of family.				

Families displays various demographic characteristics, the results showed that spouses constituted 10.4%, children (12.7%), grandchildren (1.4%), parents who are not household heads (1.8%), and grandparents (1.8%). The parents who were not categorized as household heads, live in an extended family with their children in the children's homestead.

Education

Level of education of the respondents plays a key role to effective members and leaders of AInCs, to make appropriate decisions of achieving improved livelihoods. In concur with the above, Monyai (2018) indicated that education plays a significant role in improving the livelihoods of individuals and communities, fighting poverty, and able an access to decent work. Table 2. show level of education of the respondents. The results indicated that 61.4% had secondary education, which constitute majority of respondents, while only 21.8% have tertiary education or were registered with institutions of higher learning. 10,5% of respondents have primary education while 3.6% have not attended school. The low number of respondents involved in tertiary education aligns with dropouts at secondary education as highlighted by Kyei (2014), who indicated that school dropouts in Vhembe District of Limpopo Province of South Africa were mostly in Grade 10 and were primarily driven by poor academic performance, teenage pregnancy, substance abuse, and negative attitudes toward school. SSA (2022) shows that 10.6% of AInCs had tertiary education, and in contrast to the above, the study discloses that 21.7% of the participants had tertiary education on the same district. This justifies that member of AInCs are considering education

as more important than before. Education improves knowledge and skills, and can contribute to the sustainable livelihood of respondents and their households.

Table 2. Education of respondents

		Frequency	Percent	Valid Percent
Valid	Never attended	8	3.6	3.6
	Primary school	23	10.4	10.5
	Secondary school	135	61.1	61.4
	University	48	21.7	21.8
	Other	5	2.3	2.3
	Total	220	99.5	100.0
Missing	System	1	0.5	
Total		221	100.0	
Most participants (61%) had secondary school qualification, whereas 22% had university qualification.				

Occupation

Saha & Bahal, (2014) indicate that diverse activities like skills and strategies which people employ to earn a living and sustain their livelihood are divided into primary, secondary and tertiary sectors and these sectors include agriculture, manufacturing, and services. In developing regions, livelihoods are diversifying from subsistence farming into non-farm sectors, including urban and informal sectors, to overcome poverty and economic constraints. Table 3 provides the frequency and percentage of respondents' occupations, which also affects their support to the AInCs movements.

Table 3. Occupation of respondents

		Frequency	Percent	Valid Percent
Valid	Stay home	66	29.9	30.0
	Student	13	5.9	5.9
	Farmer	13	5.9	5.9
	Worker	51	23.1	23.2
	Company employee	37	16.7	16.8
	Government employee	29	13.1	13.2
	Running a business	5	2.3	2.3
	Other	6	2.7	2.7
	Total	220	99.5	100.0
Missing	System	1	0.5	
Total		221	100.0	
Most participants (61%) had some sort of employment or were studying while 30% stayed at home.				

Out of 221 respondents, the results displayed a variety of household occupational activities except for 30% of them, who stayed at home. Participants involved in occupational activities, 23.2% described themselves only as workers, 13.2% were categorized as government employees while 16.8% were company employees. Students and farmers constituted 5.9% each, while businesspeople constituted 2.3% and others, particularly those who viewed themselves as hustlers constituted 2.7%. It was, however, established that although some respondents sold some of their vegetables and fruits, they did not regard themselves as businesspeople. In the quest for examining the relationship between class, age, gender and the choice of job, Dagume (2021) found that youth with secondary education are more likely to seek assistance from friends and family as compared to those with tertiary qualifications who are more likely to apply directly from the hiring companies. Vhembe District Municipality in Limpopo Province experiences a high unemployment rate with official figures hovering around 38% to 43% and youth unemployment exceeding 60% in some areas. The district relies on subsistence farming with a significant portion of the population working in the informal sector (COGTA, 2020).

Disability

Table 4 provides data about disability status of the respondents and, it shows that only 5% of the households declared to have family members who were living with disability. Person's physical ability is significant for their ability to participate in livelihood activities, whereas these declared people with disabilities are beneficiaries of government disability grant. This means that a person living with a disability may be prohibited to participate in economic activities. These disability beneficiaries receive income from a government disability grant, which supports their livelihood, and lessens the burden of vulnerability.

Table 4. Disability status of respondents

		Frequency	Percent	Valid Percent
Valid	No	209	94.6	95.0
	Yes	11	5.0	5.0
	Total	220	99.5	100.0
Missing	System	1	0.5	
Total		221	100.0	
Few participants (5%) had a disability.				

Gender representations

Table 5 shows the gender representations of the participants. The gender shows that 50.7% of the participants were male, while 49.3% were female. This result provides a balance of availability between the two gender categories. A study by Musa *et al.*, (2024) found that male- and female-headed households had varying access to livelihood assets and this contributed differently to main livelihood activities. It was concluded that gender influences access to and utilization of various assets as male-headed households had greater access to human, financial, and natural resources.

Table 5. Gender representation

		Participant gender		
		Frequency	Percent	Valid Percent
Valid	Male	112	50.7	50.7
	Female	109	49.3	49.3
	Total	221	100.0	100.0

As noted by Aphane *et al.*, (2010) in South Africa, livelihood is deeply gendered, with women facing structural, financial, and land-ownership barriers despite their centrality to rural economies. This means women are pushed into the informal sector, while men dominate the formal and high-remuneration sectors.

Land availability

Access to and ownership of land in South Africa remains unresolved as the matter remains deeply contested with women facing multiple intersecting barriers that limit their ability to secure land rights (Commission for Gender Equality, 2025). The main challenge of exclusion of rural communities from land ownership and decision-making processes are traditional governance systems which mainly affect rural communities' inheritance practices, financial constraints and weaken institutional support. Similar views were echoed by Mtero (2021) who asserts that, despite the policy rhetoric on pro-poor land reform in South Africa, equitable access to land remains elusive for the poor majority in both urban and rural areas. The progressive constitutional provisions and policy pronouncements do not match the realities on the ground where the lack of access to land for commercial agricultural production remains prevalent. The table 6 provides the frequency and percentage of land accessibility for agricultural production among the respondents.

Table 6 display accessibility to land for agricultural purposes. As presented in Table 6, about 55.7% of respondents reported not having access to the land they specifically use for agricultural production. This is consistent with claims that many black smallholder farmers are confined to the former homelands and have limited access to land (Aliber & Cousins, 2013). The participants do not recognize their backyard vegetable gardens, as agricultural land but as residential land. This confirms that equitable land redistribution should distinctly prioritize the differentiated and multiple livelihoods of poor social classes and enable them to construct viable

livelihoods (White *et al.*, 2014). Similar sentiments were echoed by Cousins (2007) who argued for accumulation from below as a key outcome of land reform. Changes in agrarian landscape shows that agriculture should generate income which should also support the livelihoods of many who are unemployed and underemployed, basically those who are located in rural communities.

Table 6. Access to agricultural production

Access to Land for Agricultural Production	Frequency	Percent
No	123	55.7
Yes	95	43.0
NA	3	1.4
Total	221	100.0

About 43% confirmed that they had access to land for agricultural activities. However, this access did not translate to ownership as land in the communal areas is accessed through Permission to Occupy (PTO), which is a legal document that acts as a land allocation record, issued by traditional authority or state organs, and it is often used for occupancy of land under tribal authority and/or unsurveyed tribal land. The preferred ownership arrangement would be through a title deed, allowing the land to serve as collateral if residents want to expand or upgrade their production. The lack of security of tenure remains a major challenge in the development and expansion of agricultural activities which are core drivers of rural livelihood.

The 43% of people who had access to land for agricultural purposes include those with larger residential yards that had sufficient space for household gardens, fields where they practiced their agricultural activities. Currently, residential stands are viewed as smaller than those allocated more than a decade or two ago. The result is that, even in residential areas, space for household gardens is becoming scarce or non-existent. This is because of reduced stand sizes due to population growth and modern residential infrastructure, which are so massive as to allow only landscaping aesthetics.

Land acquisition

The acquisition of land in communal areas in South Africa is governed by a framework designed to protect informal land rights and/or tenure security through the Communal Property Associations Act (No. 28 of 1996), the Interim Protection of Informal Land Rights Act (1996), and the proposed Communal Land Tenure Bill. These legislations are used to formalise transactions, exchanges and transfers of land acquired. Most communal land is held in trust by the state on behalf of residents, often managed and administered by traditional councils, which also bear the responsibility for allocating these informal land rights. Table 7. Display the way the land access of the 43% of the sampled population was acquired. This will also include acquiring land in the form of "permission to occupy" (PTO) or leasehold rights rather than direct, freehold ownership. Materechera and Scholes (2021) also confirmed that the dominant land ownership amongst participants in the study in Vhembe District was communal.

Table 7. Method of acquisition of agricultural land by respondents from AInCs in Vhembe District of Limpopo Province, South Africa

Theme	Frequency	Percent who said yes	Overall percent
		n=95	n=221
Bought	36	38	16
Inherited	21	22	10
Given by the chief/ leader	16	17	7
Permission to occupy	9	9	4
Department of Agriculture	8	8	4
Within a residential dwelling	4	4	2
From church	1	1	0.5

Table 7, shows 43% of respondents had access to agricultural land, 16% indicated that they bought the land, in comparison with 10% indicated that they inherited it coming from one generation to the other, and 7% indicated that they were allocated by the traditional authority as the administrators of the land. Land allocation by traditional authority does not translate into ownership but into an exchange of user rights. The 38% of respondents who acquired land through purchase did not have ownership conferred to them either

as the procured land was communal owned by the state and administered by the traditional authority. Table 7. Discloses that 9% of respondents had permission to occupy, 4% revealed that they cultivated within their residential land while only 1% reported that they used church land. Access to church land is the least important on the table 7, but church has also contributed to the provision of access to land for agricultural production with perception of poverty alleviation to the participants. Kabongo (2021), indicates that church can play a proactive role in addressing access to land by making its current land assets accessible to local communities and advocating for speedy land redistribution for agricultural production. This call has not been fully responded to particularly in the rural areas as there are no records of how much land is allocated to the church which may also be made available for use by the church membership and/or the general community.

Productivity of residential land

The combination of residence and agricultural production in the form of home gardens is not unique amongst rural households. Ogindiran *et al.*, (2014), reveals that household gardening activities remain an important avenue for food production for most urban and peri-urban populations. This means that home gardening play proactive role for enhancing food security, health, and social relations amongst households in contemporary South African society. Table 8. shows that 53% of the respondents utilize their household backyard food gardens where they planted vegetables. 40% of this household backyard food gardens respondent plant tomatoes, 10% plant spinach, 6% onions, and 4% cabbage. During summer season, respondents also planted maize (14%) under rainfed condition. This confirms Gautan *et al.*, (2004) who advocated that home gardens denote the traditional land use system around a homestead where numerous types of crops and vegetables are cultivated and maintained by the household with the outputs mainly for family consumption. The gardens were reportedly important sources of food and vegetables, fodder, spices, herbs for local medicines and flowers, and were also important means of on-farm conservation of resources.

Table 8. Frequency and percentage of crops planted at residential sites

Crop planting on the residential sites of respondents	Frequency	Percent who said yes n=118	Overall percent n=221
No	62	-	28
Yes	118	-	53
Vegetables:	89	75	40
Tomatoes	22	19	10
Spinach	21	18	10
Onions	13	1	6
Cabbage	9	8	4
Mustard	6	5	3
Carrots	6	5	3
Sweet potato	6	5	3
Beetroot	5	4	2
Pumpkins	2	2	1
Beans	2	2	1
Chilies	2	2	1
Butternut	1	1	0
Potato	1	1	0
Other Crops	3	3	1
Maize	31	2	14

Although the extent of land used for productivity could not be determined or quantified, the results showed that land was used not only for residential purposes but also for agricultural production to enhance livelihoods derived from natural capital. Most respondents planted vegetables (75%). Vegetables planted included tomato (19%), spinach (18%), and onion (11%). These are mainly exotic

vegetables that were planted and maintained during the production period. Other than exotic vegetables, Nesamvuni *et al.*, (2001) identified some most used indigenous vegetables, and those included: Okra (*Abelmoschus esculentus*) locally known as Delele mandande, African spinach (*Amaranthus hybridus*) referred to as Vowa, Black jack (*Bidens pilosa*) known as Mushidzhi, African cabbage (*Cloeme gynandra*) called Murudi, African spider flower (*Cloeme monophylla* L.) known as Mutohotoho, Bush okra (*Corchorus tridens*) referred to as Delele lupfumo, Pumpkin plant (*Cucurbita species*) known as Phuri, Bitter cucumber (*Momordica foetida* Schumach.) called Nngu, and Black nightshade (*Solanum retroflexum*) known as Muxe.

Table 8 identifies additional exotic vegetables that were planted in different seasons with indigenous vegetables mostly found during rainy seasons. The study also tested whether the respondents were familiar with the seasonal impact on productivity of certain crops. The most common crops that could not be planted during certain seasons were maize, tomato, and pumpkin, mostly due to their sensitivity to temperature extremes. The use of both exotic and indigenous vegetables indicated how natural capital such as land provided food at household level.

Household fruit production

Table 9 shows that Mango (63%), Avocado (37%), Orange (24%), Litchi (21%), Banana (18%), Lemon (12%), in contrast with Nartjie, Pawpaw, Peach, Macadamia, Guava, and Apple were found to be produced at a scale of less than 10%. This depicts that fruit production within households, adding an element of natural capital that serves as a useful resource, providing access to another form of agricultural production. Some of the fruits were found to be produced for consumption and for sale. However, Mokganya *et al.*, (2018) noted that most people in developing countries derive a substantial portion of their subsistence and income from wild fruit products. These natural products also made a significant contribution to the human and animal food web and were often a means of survival for millions of poor rural households (Belcher, 2005). Wild fruit plants can be used in many important ways, they were not just wild edible plants that contributed to the nutritional value of the human diet; they also provided other uses such as medicine and beverage production.

Indigenous fruits such as Marula (*Sclerocarya birrea*), locally known as Mafula, Wild Medlar (*Vangueria infausta*), known as Mazwilu, Monkey orange (*Strychnos spinosa*), known as Maramba, African Chocolate Berry (*Vitex payos*), known as Nthu, and Sour Plum (*Ximenia caffra*), referred to as Thanzwa, are dominant in the Vhembe District. They are crucial for local nutrition, tradition, and they are often harvested from the wild trees. This study confirmed that households not only enjoyed exotic fruits which were mainly planted in the homesteads but also harvested wild fruits in their fields and from the mountains.

Table 9. Frequency and percentage of household fruit production

Household fruit production		
Theme	Frequency	Overall percent n=221
Mango	140	63
Avocado	82	37
Orange	53	24
Litchi	47	21
Banana	40	18
Lemon	26	12
Nartjie	13	6
Pawpaw	11	5
Peach	7	3
Macadamia	7	3
Citrus (general)	4	2
Guava	1	0.5
Apple	1	0.5
The most common fruit trees were mango, followed by avocado, orange and litchis.		

The dominant fruits produced in the area were Mangoes (63%), Avocados (37%), Oranges (24%), Litchis (21%), and Bananas (18%). Production of these fruits could also be seen in excessive supply in informal markets which were mostly flooded with them during their harvest seasons. The production of exotic fruits and the harvesting of indigenous fruits indicated the significance of land and its access as natural capital. The financial resources that could have been used to purchase these fruits were therefore redirected to other household needs.

Fruit uses

The use of fruits produced mainly in households was categorized into consumption, sale, share/donate, and storage, as shown in Table 10.

Table 10. Frequency and percentage of fruit usage

Theme	Frequency	Overall percent n=221
Consume	126	57
Sell	53	24
Share/ donate	7	3
Storage	2	1
Most participants consumed their harvest.		

Table 10 display the usage of the harvested fruits. Some 57% of respondents used the fruits for household consumption while 24% sold them. The cash received was imperative to draw other resources for household use and thereby expanding livelihood sustainability. Many participants did not have the means to store their produce; those who stored their produce mostly used bags, a practice that only lasted a short time given the perishability of the harvest of some crops.

Benefits from other food products

Figure 3, respondents reported harvesting termites and their associated food products (22%), mushrooms (21%), beehives (9%), locusts and crickets (4%), and various kinds of caterpillars (1%). These were food products that were delicacies amongst the VhaVenda communities. These food serves as benefits of land access for household use and agricultural production, However, there were theological differences on whether some of these organisms were permissible for consumption by members of various AInCs denominations. This differences were can be listed as access, benefits, and usability of indigenous plants for medicinal purposes. The faction of the Christian faith, particularly the AInCs, were aligned with the Torah, the foundational sacred text of Judaism that underlies Christian theology. These sects strongly discouraged the consumption of certain food products. Secondly, the use of indigenous medicines was discouraged in the Christian cycles because of its association with the traditional religion, which was the religion that most Africans defected from when they subscribed to Christianity.

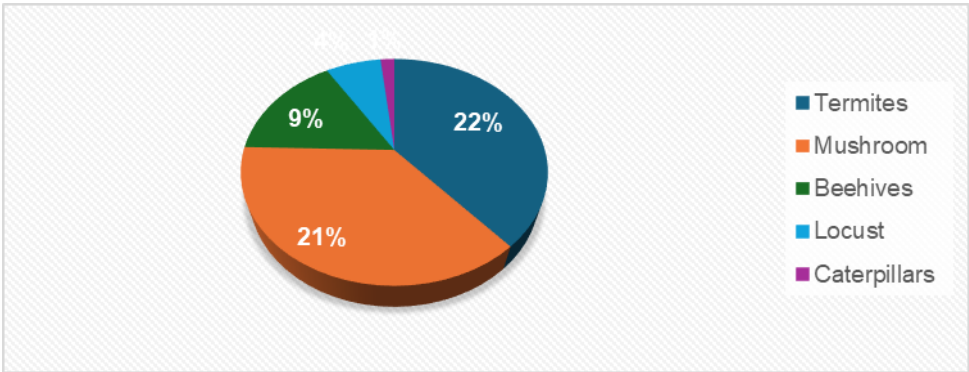


Figure 3. Additional foods consumed by members of AInCs in Vhembe District of Limpopo Province, South Africa

Other benefits from access to land

Table 11 display additional benefits from the land, including water and household food of different kinds (indigenous vegetables, indigenous fruits, and other food products such as termites and mushrooms).

Table 11. Additional land access benefits

Theme	Frequency	Overall percent n=221
Shade	9	4
Windbreaker	6	3
Medicinal plants	4	2
Firewood	3	1
Bird variety	1	0.5
Honey	1	0.5

The most additional land access benefits are 4% of shade, followed by 3% windbreaker and 2 % medicinal plants. This shows that participants prefer plants which is used for shade, followed by trees planted for windbreaks and other for medicinal benefits. These benefits from access to land also facilitated vital ecosystem services like pollination, carbon sequestration, and water purification.

Household food security

The use of natural capital such as land for household gardens underscores the significance of the natural capital for sustainable livelihoods. In a developing country like South Africa, income is a determinant of household food security, and home gardening activities are an essential part of family livelihood, providing sustenance and generating income throughout the year (Kirsten *et al.*, 2003) and filling major gaps in food and vegetable supply. Access to land of agricultural production for household food security provides households with direct access to food nutrients from both exotic and indigenous plants, such as roots, tubers, green leafy vegetables, nuts, legumes, and fruits. In recent years, household food security through household gardens has received attention from development agencies (Action, 2005; Nordin, 2005; HSRC, 2003). In South Africa, the initiative has received greater attention, particularly in terms of support for inputs and equipment (Moorhead & Wolmer, 2001).

McLachlan and Kuzwayo (1997) advocate that socio-economic conditions play an important role in household food security. Vulnerability increases when households are unable to grow or purchase adequate food (Buchmann, 2009). It is estimated that 39% of the South African population is not food secure because of their inability to cultivate crops and low purchasing power (Mgijima, 1999). According to Koyenikan (2007), household food gardens are vital for the enhancement of food security and agricultural intensification, and they require low economic resources and farm input such as organic manures, compost and indigenous pest control methods.

As Keeney (2000) indicates, household food gardens are a means of enhancing food security, health, and social relations among households in contemporary South African society. Natural capital, such as land, provides adequate and sufficient access to safe food for an active, healthy life (USDA, 2006).

4. CONCLUSION

The African Initiated Church (AInCs) members, particularly those living in rural communities, does not view natural capital as an economic asset but also as a resource linked to social, cultural, and spiritual elements, with the potential to shape livelihood strategies, identity, and resilience. The livelihoods of these communities were found to be land-based and nature-dependent, as evidenced by their participation in subsistence and small-scale farming. The study found that access to land and natural resources provides households with opportunities to meet their basic needs, reduce food insecurity, and generate income, particularly where formal employment is limited, as in Vhembe District Municipality. The same benefits extend to support AInCs, to thrive through financial support from the members. The livelihood strategies enabled by natural capital were identified and quantified. The study found that food security is strengthened when there is access to land as it provides more benefits in terms of both exotic and indigenous fruits and vegetables, including benefits associated with the harvesting of other organisms such as termites, flying termites, honey, mopani worms, and medicinal products which are harvested from various indigenous plants.

In addition, natural capital able income diversification, particularly through the sale of some harvested products, which provides a coping and resilient strategy by providing a safety net when vulnerabilities such as economic shocks, illness, and unemployment are cushioned. The study found that households with better access to fertile land, water, and grazing land are more resilient than those without access, including those with degraded or insecure tenure and access to natural resources.

Identified Constraints on the effective use of natural capital are, land tenure insecurity, vulnerability to land degradation, climate variability, and marginalisation from formal development programs. Unfortunately, these constraints reduce the livelihood potential of natural capital, thereby increasing vulnerability. The implication for Sustainable Rural Livelihoods is the need to protect and restore natural resources. Securing land access and tenure remains imperative to attract investors, and integrating faith-based institutions into rural development planning is necessary. In so doing, there would be an alignment with environmental stewardship and livelihood support programs. Natural capital serves as an empowering asset base for AInCs members' livelihoods, providing material sustenance, spiritual significance, and resilience, while being reinforced by strong social and faith-based networks.

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Author Contributions

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Contributed to the research through the execution of the research process, including data collection, fieldwork, and evidence gathering. He was also responsible for data curation and management, including data cleaning, annotation, organization, preservation, and maintenance to ensure its accessibility and usability for current and future research purposes. Also responsible for writing the original draft, including preparation, development, and publication of the initial manuscript and research findings.

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Provided critical review and revision of the manuscript through intellectual input, refinement of scientific content, and editorial improvements. He also contributed supervision and leadership, including oversight, mentorship, and guidance throughout the research process and manuscript development.

Tshikolomo Khathutshelo Alfred

Led the validation and verification of research findings, research methods, and the reproducibility of results to ensure scientific rigor and accuracy.

de Bruyn Melanie

Responsible for formal analysis, including the application of statistical, mathematical, computational, and other analytical techniques for data interpretation and assessment of research outcomes.

Mavhungu Tsumbedzo Jutas

Led the conceptualization of the study, including the development of the research concept, formulation of study objectives, and definition of overarching research goals. Also responsible for writing the original draft, including preparation, development, and publication of the initial manuscript and research findings.

Swanepoel Willem Jan

Developed the study methodology, including the design of research methods, study procedures, and the development of analytical frameworks and models to support the survey.

All authors contributed to the research process and manuscript preparation, reviewed the final version of the manuscript, and approved it for publication.

Informed consent

Oral informed consent was obtained from individual participants included in the study.

Conflicts of interests

The authors declare that they have no conflicts of interest, competing financial interests or personal relationships that could have influenced the work reported in this paper.

Ethical approval & declaration

The study was approved by the GENERAL/HUMAN RESEARCH ETHICS COMMITTEE (GHREC) Registration Number: REC-112922-058 of University of the Free State, SOUTH AFRICA. Ethical Clearance number: UFS-HSD2023/1308.

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Data and materials availability

All data generated and analysed during this study are presented within this manuscript.

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