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Disrupting and Reclaiming Local Foodways

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Abstract

The allure of modernising food systems as a fast track to achieving food security is backed by both state and corporate agendas but has contributed to a shift away from local and traditional diets. This shift has also damaged the cultural identities attached to the use of certain foods in many communities. This dissertation arose out of the current debate regarding the absorption of local foodways into global food systems. It sought to address the questions: In which ways and to what extent is a delocalisation of foodways taking place? What does this mean for food rights and agency of local communities? And, in bringing attention to local foodways, how can global food systems be transformed and reimagined? Through two case studies, this research explored local foodways as social, cultural, and physical systems in two areas in northern KwaZulu-Natal, South Africa: the peri-urban location of KwaHhoHho and the rural area of Ingwavuma. The research aimed to obtain an understanding of community members' lived experiences of their local foodways in each area. It also investigated the change in characteristics of local foodways as they relate to the nature-culture dichotomy, defined as a divide found between society and nature in which nature is rendered a resource and the relational link between humans and nature is eroded. In-depth observations of participants' foodways were garnered through semi-structured interviews conducted with selected residents in 2022 and 2023, together with walking interviews through the vegetation near their homes. The results showed the foodways of resident participants to be shaped by struggles over land, power and discrimination. The foods consumed in both areas consisted of fresh vegetables, grains, beans, and meat. However, where participants obtained most of their food from their own farms and fields, a greater variety of traditional foods was found. The lifestyle of farming and preparing traditional foods took place in both areas despite an increased reliance on store-bought foods; this move towards store-bought produce was particularly apparent in more urbanised KwaHhoHho. Local foodways were perceived as transforming in light of modernisation and wider global and social changes coupled with environmental, social, and economic challenges faced by local farmers. A trend of a slow breakdown in local foodways and an absorption into global food systems and markets was observed, in both case studies; however, it was perceived to be more pronounced in KwaHhoHho. Despite this, participants' foodways were observed to be complex, interlinked networks tethered to culture, heritage, and nature. Ultimately, the research affirms local foodways as spaces that foster a deeper bond with nature and strengthen community bonds and identity

Keywords: Foodways, indigenous knowledge, nature-culture dichotomies, traditional foods

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Chapter One: Introduction

The transformation since the 1980s of agricultural and genetic technologies and science has had a profound effect on society's relationship with nature and food. No longer is there a reliance on seasonal, local produce; all year round supermarkets provide access to a variety of foods from around the globe. However, this perception of variety and abundance is misleading. Only the wealthy can afford this, while those who cannot are limited to cheaper and processed foods. Even though access to new and exotic foods has been made easy for a certain few, there appears to be an overall loss in the diversities of local edible plants to which people have access (Turner and Turner, 2007).

Profound shifts can be seen in the way that food is being grown, distributed, processed, wasted and consumed, resulting in threats to both food and ecosystems (Global Alliance for the Future of Food, 2021). Since the 1940s, there has been an amplification of agricultural production which has influenced the structure of food systems across the globe. This includes, but is not limited to, the affordability of nutritious food, its distribution and food preferences (Gregory et al., 2005; Latham, 2015). As globalisation and urbanisation increase, food systems are changing rapidly. Accompanying the urbanisation of rural areas, as seen in the last couple of decades, is the growth of supermarkets and global retail chains in Southern Africa (Gregory et al., 2005; Campbell, 2016). This, as these authors note, has and will continue to cause a decline in traditional wholesalers who purchase from smallholder producers in Southern Africa.

The dominant narrative is that large-scale agricultural practices can feed growing populations and fight food insecurity, hence they are presented as efficient and productive (Shiva, 2016; Latham, 2015). Yet, as Shiva notes, monocultures and other "new technologies" are inefficient and wasteful, with industrial fisheries and agriculture producing fewer resources than they consume (Shiva, 2016: 207). Referring to the fact that global food systems using large-scale agricultural methods is so pervasive it is hard to find more traditional or sustainable options, Shiva (2016: 26) asserts that "farmers are robbed of their freedom to choose what they grow, and consumers are being robbed of their freedom to choose what they eat".

The crops found in supermarkets are frequently ultra-processed, or foods disjointed from local ecosystems and traditional diets. Current food systems have contributed to Indigenous communities no longer consuming local plants (Akinola et al., 2020). Other factors, such as environmental degradation, have resulted in policies which prevent people from harvesting natural resources. For instance, conservation strategies may prohibit access to certain plants which would previously have been harvested and eaten by people living in the area (Cocks and Dold, 2006; Petersen, 2014; Stålhammar, 2021). The move away from local foods has led to people adopting nutrient poor and unsustainable diets. It has also damaged the cultural identity attached to the use of certain foods in many Indigenous communities, because as these foods are being lost the cultural knowledge and rituals attached to them are no longer being passed down (Turner and Turner, 2007).

The growing impact of human-induced greenhouse gas emissions since 1750, has caused global temperatures to increase, changes in the intensity and timing of precipitation, sea levels to rise and vegetation and land-cover change (Brown et al., 2015). The effects of climate change on food systems are typically most experienced by the vulnerable and poor, as they are more likely to be exposed to stresses brought about by climate change such as reduced crop yields and surging food prices because a large majority of their resources is spent on producing or purchasing food (Bakre, 2015; Gregory et al., 2005). Agrochemical companies have always been present in food systems, but the climate crisis enabled them to "provide climate solutions" by offering products they portrayed as climate resilient and

reliable (Bakre, 2015; McMichael, 2000). 75% of the poor can be found in rural areas in sub-Saharan Africa where subsistence[1] farming is relied on for food access. (Aliber, 2015; Mbatha et al., 2021). Subsistence farmers typically depend on rainfed agriculture and are particularly vulnerable to changes in climate such as increased rainfall variability which can cause unpredictable crop production (Bakre, 2015). As a result, farmers are faced with pressure to purchase costly agricultural inputs and/or turn to store-bought foods, which are expensive.

In many ways what these authors are alluding to is the breakdown of "local foodways", a concept that is central to this dissertation. The qualification "local" is used throughout this dissertation as a means of describing food systems which belong to the people, ecosystems, cultures and context of a particular area. In literature, "local" foodways are sometimes referred to as traditional or indigenous food systems; although this dissertation embraces elements of these definitions, these terms are used with caution because they might imply that local knowledge and methods are historic and outdated. Foodways are both embedded in the location of a community in time and linked to ancestral practices as well as being fluid and adaptive as time passes. As stated by Ruelle and Kassam (2003: 321) "foodways provide continuity with the past, remain relevant in the present, and offer future possibilities". Rearrick (2009: 10) defines foodways as "relating to the food traditions and customs of a people: what people eat, how they eat it, whom they eat it with, and the variant social aspects of eating". Alkon et al. (2013: 126) similarly define local foodways as "cultural, social and economic food practices, habits and desires".

This research exists at the collision of these global happenings. The participants foodways in this study are deeply connected to and affected by climate change, the delocalisation of food systems and the increase of food monopolies. The breakdown of local foodways in other parts of the world, discussed by the authors above, can also be observed within the communities visited, offering insight into global trends the study is situated within. These observations are important due to the cultural and ecological value the local foodways investigated hold and the impact this breakdown will have on indigenous communities.

This dissertation celebrates the contemporary local foodways, including recognising the historical and cultural importance they still carry. Drawing on the work of Highfield (2017), the dissertation understands food and foodways as archives that tell a story of social and economic shifts, trade, oppression, heritage and culture through which lost connections and forgotten histories can be accessed. As Highfield (2017: 5) states:

> Paying attention to food in those stories – what is eaten, how it is grown or procured and by whom – impacts our understanding of what is happening in the story. The foods people choose to eat and the ways they prepare those foods speak volumes about their relationship to the land and reflect their history.

Local foodways and nature are intimately connected (Global Alliance for the Future of Food, 2021). Not only are local foodways shaped by local ecosystems, they also show an intimate connection and dependence on the natural resources of the area. Central to this dissertation is an investigation of the current erosion of people's relationship with, and access to, the natural world and what it provides. This erosion, often referred to as the "metabolic rift" (McClintock, 2010), has become a point of concern among scholars and references a dualism which has arisen between society and nature because of

[1] For the purposes of the dissertation, I define "subsistence" farmers used by Aliber and Hart (2009: 439) as "those who produce food primarily for consumption in their own households, whether as a main source or extra source"

dominant western worldviews. This separation between human and non-human[2] actors has, in many ways, justified the extraction of nature as a resource in the name of progress (Fraser, 2017). The fissure between humans and nature, accompanied by and associated with ecological damage, has contributed to the breakdown of local foodways as people have been severed from natural systems, such as land and waterscapes, and the ecosystems they contain (Ruelle and Kassam, 2003). At the same time, global food systems and industrial large-scale agriculture has resulted in a separation of people from the production of food and culinary knowledge (McClintock, 2010). In contrast to global food systems which facilitate minimal interaction between consumers and the natural world, local foodways are fully immersed within, and thus strengthen the ties between, humans and nature. Local foodways also tend to emerge out of indigenous worldviews which view nature, humans and the non-human world as an inter-relational web of relational connections (Salmón, 2000).

In a document commissioned by the Global Alliance for the Future of Food, the need for transformation within current food systems is underlined: "The type of transformation we need to create a future of food that is sustainable, inclusive, equitable, and resilient involves reawakening the senses, and rekindling our relationships with our communities and with nature" (Global Alliance for the Future of Food, 2021: 4). This type of transformation is something which can be glimpsed in the foodways observed in this study. These foodways paint a picture of small, everyday gestures of food sovereignty. "'Food sovereignty' is defined as the right of people to democratically control or determine the shape of their food system, and to produce sufficient and healthy food in culturally appropriate and ecologically sustainable ways in or near their territory" (Swanby, 2024: 320) and as "the right to determine their own food system and its management" (Akinola et al., 2020: 2). In the face of dominant local food systems, the foodways documented in this study take our focus from mass production, quick access, fast food to local ecosystems, heritage, nature and human connection.

1.1 Aims and objectives

The research aims were to obtain an understanding of community members' lived-experiences of local foodways in KwaHhoHho and Ingwavuma, KwaZulu-Natal, and to investigate the changes in characteristics of local foodways as they relate to the nature-culture dichotomy.

The research objectives were to:

1. Gain an understanding of the historical background and context of foodways in the case study areas.
2. Investigate what foods are consumed by participants and where they are obtained.
3. Investigate how foodways have changed over time.
4. Gain an understanding of the sources of change in local foodways.
5. Investigate the cultural and social relationships and meanings entwined with food as well as the connection between foodways and nature.

The research for this dissertation is situated within contemporary discussions surrounding environmental and political justice, socio-economic shifts, food sovereignty and nature-culture dichotomies. It employed a dual case study research approach, investigating the local foodways of

[2] The term "non-human" is used in this research in reference to animals, insects, plants and other agents within nature in a way which recognises their inherent agency and role within nature (Tsing, 2013).

KwaHhoHho and Ingwavuma, two rural areas situated in the former homelands in Northern KwaZulu-Natal, South Africa, where traditional practices and farming methods are often tied to the food systems of the area. The research was mindful of the archival richness of foodways and the capacity that the study of food practices has to reveal human relationships with nature, climatic and lifestyle shifts, the pressures and effects of modernisation and global and local trends in knowledge transmission between generations. The study sought to uncover the links between contexts and subjective experiences and obtain an understanding of the histories, perceptions and realities underlying local foodways.

1.2 Structure of the dissertation

The dissertation begins by analysing the literature relevant to local foodways. This covers what local foodways are and their importance; the nature-culture dichotomy; factors leading to a breakdown of local foodways; and the concept of food sovereignty. This is followed by the research methodology, where the strategies in collecting and interpreting data are discussed and justified. The case studies are then examined in detail, looking at historical and contemporary events which had or were taking place. Thereafter the policies and actors regarding foodways and influencing participants are discussed, drawing on literature, document analysis, and interviews with government extension officers and non-governmental organisations (NGOs). The following two chapters draw on the insights collected from semi-structured interviews with participants in both study sites, where an overview of current foodways is given and changes which have and were still taking place at the time are described and analysed. These two chapters carry the most weight within the dissertation as they prioritise the insights and experiences of participants from the case studies. The discussion brings together participant knowledge and the literature, and identifies similarities with other Indigenous communities, and local and global trends. Lastly, the conclusion summarises the findings linking them to the aims and objectives, and identifies gaps where more research is needed as well as future areas of study.

Chapter Two: Literature Review

This dissertation engages with a range of literature to situate debates around local foodways. The literature reviewed in the following chapter aims to give readers the context and global phenomena that the local foodways investigated exist within. The chapter is structured in two parts. The first part outlines key theoretical and conceptual debates, including: An overview of: local foodways giving readers an understanding of the dynamism of the term; and the historical accounts of nature-culture dichotomies that have influenced humans' relationship with nature and their local foodways, something which remains relevant in KZN due to the close connection between nature of local Zulu foodways; Local epistemologies and the principles and worldviews underlying them; and the concept of food sovereignty, both the erosion of food sovereignty linked to the breakdown of local foodways and as a goal which aligns with the reviving of these foodways.

The second part examines issues that have emerged from research on local foodways, including multiple interrelated factors identified as leading to the breakdown of local foodways. It focuses on the themes that emerged strongly during the literature review phase viz, colonisation, stigma, access to land and natural resources, the delocalisation of the food supply, and the transmission of knowledge. A parallel of these phenomena can be seen with the local foodways of this study.

SECTION 1: Theoretical and Conceptual Debates

2.1 Local foodways

Local foodways are, in part, the practices transmitted within a community of growing, collecting, harvesting, preparing, storing, buying, consuming and sharing food. As noted by Maundu et al. (2013) these are both everyday practices which can also be associated with special occasions (such as festive events or rituals).

Foodways have strong ties to culture, heritage and identity. Rearrick (2009) and Alkon et al. (2013) make use of the term "foodways" as going beyond the mechanisms of accessing, producing and processing food to include the customs, traditions, social, cultural and political aspects as well as where they connect to desires, aspirations and habits within everyday life. Rearrick (2009) remarks that foodways can act as vectors for communicating values and spreading cultural knowledge. Memories that have been established through childhood family dinners and routines can be held and stored within certain foods only to be released by a smell or flavour. As Rearrick (2009) notes, foodways emerge at the intersection of food and culture. In this way they are recognised as social systems that can be used to express identity and culture.

Rituals and symbolism within food systems are significant. Kroll (2016) states that these may be the everyday rituals around food within a household; however, within local foodways in particular, the cultural and social symbols and rituals with which foods are chosen, and how they are eaten and prepared becomes a central part of the food system (Alkon et al., 2013; Kroll, 2016).

If we use a broader definition of foodways, meal sharing plays a significant role within the social systems of households and communities. Food is a gateway into friendship and love. In this sense it goes beyond the basic needs of survival, becoming a social tool for forming connections. "While food may be used among the poor to signify relative power and influence, horizontal transfers of food through borrowing

and sharing are at least as important and demonstrate solidarity while constituting an informal safety net which can reduce household vulnerability to hunger" (Cooke, 2012, cited in Kroll, 2016: 25). In the book *Stirring the Pot*, former residents of District 6 in Cape Town, South Africa, forcibly removed to other areas, speak about how the sharing and exchange of food created community and family during Apartheid. They noted that commenting on the smell of a neighbour's food would often lead to an invitation to come inside and share a meal and conversation. In this way, food can be seen as a vector to strengthen social webs through forming cohesion and solidarity within neighbourhoods (McCann, 2009).

However, as discussed later in this chapter, local foodways in the face of urbanisation, modernisation and globalisation are being abandoned for western style food systems. Maundu et al. (2013) note that it is the younger generations who are most affected, to a point where knowledge about local foodways, their traditions and practices are being lost altogether.

2.2 Nature-culture dichotomies

Haila (2000) speaks about the widespread conception of nature as external to society. He claims that there has been a shift in the historical relationship between humans and nature, caused by a complex web of determinants in which nature and culture have been placed on two sides of a dualism, and that this has been reproduced because of the way humans interact with the world. First, through turning our exchanges into a subject-object relationship and second, the simplification of these relationships; for instance, the totalising distinction between "the environment" and "us". He posits that these conceptualisations have arisen out of dominant western metaphysics of nature based on two assumptions, that nature can be bounded as a single, unified entity and the Cartesian separation of "I" and "the world". Further, White (cited in Haila, 2000) speaks about how, beginning in Europe during the Middle Ages, there has been a shift from humans being part of nature to the exploiter of nature, arising from the notion that nature needs to be dominated and tamed.

The artificial boundary between humans and nature is discussed in the work of Fraser (2017) who addresses the treatment of the so-called natural realm as a free resource to extract and appropriate for human and capital gain and how this has furthered the division between humans and nature. She states that "[n]ature ... is made into a resource for capital, one whose value is both presupposed and disavowed" (Fraser, 2017: 63). McClintock (2010), drawing on earlier works by Karl Marx (1981) and John Bellamy Foster (2000), refers to this separation as the "metabolic rift", claiming that all agricultural resources and foodways have been commodified, including seeds, land, biodiversity, soil fertility, and water, as well as agricultural knowledge. This has resulted in a separation of people from the land, nature and culinary knowledge as they no longer produce their own food or have access to the means of production. Schneider and McMichael (2010: 477) also draw a connection between a physical rift and an epistemic rift, stating that "the capitalist division of labour creates a rift in the production and reproduction of embodied knowledge of local ecosystems and potentially sustainable agricultural practices".

Foster (2000), Jason Moore (2008), and Schneider and McMichael (2010) address the connection between the metabolic rift and environmental degradation rooted in the disruption of the soil nutrient cycle. They list the separation of rural producers from their means of production, increasing rural-to-urban migration, the shipping out of nutrient topsoil, and private property as primary causes. Schuttler et al. (2018) further note that a lack of interaction with nature can result in less enthusiasm to invest in

its protection or consider it in urban planning thereby installing deeper isolation and alienation between humans and nature.

The perception that a boundary can be constructed between nature and culture is deeply flawed. The conception of a "pure Nature" is, as Haila (2000) points out, non-existent. "Against the subjectivity of men stands the objectivity of the man-made world rather than the sublime indifference of an untouched nature" (Arendt 1956, p. 137 cited in Haila, 2000: 169). Haila (2000) notes that dualism encourages a destructive method of interacting with nature.

Ruelle and Kassam (2003) articulate how an ecological way of thinking is central to many indigenous cultures in stark contrast to the perceptions of dualism between humans and nature. Instead, they speak about the kindred to other beings in a world of inter-related webs. Indigenous foodways are grounded in principles of reciprocity between health, culture and nature and can thus play a role in repairing the relationship between humans and nature:

> Agroecology, regenerative approaches, and indigenous foodways are, first and foremost, about a different relationship with the world from which we draw our resources. This reflects an ecological worldview that reifies the living world and the complex dynamics of living beings, their interactions and interdependencies, and the coevolution of humans and animals, microbes, plants, and pests, etc., over time. It suggests a move away from worldviews that homogenize and reduce nature as separate from human beings. (Global Alliance for the Future of Food, 2021:19).

Ruelle and Kassam (2003) bring attention to these types of ecological worldviews in many Dakota or Lakota speaking nations, where prayers and public speeches begin with an acknowledgement of "all my relations" (in Lakota "*mitákuye oyá*"). Similarly, Salmón (2000) speaks about how the Rarámuri in the eastern Sierra Madres of Chihuahua, Mexico, have a kincentric ecological human-nature relationship. "Kincentric ecology pertains to the manner in which Indigenous people view themselves as part of an extended ecological family that shares ancestry and origins" (Salmón, 2000:1332). The Rarámuri concept of *iwígara* captures this understanding and can be crudely translated into English as "the total interconnectedness and integration of all life in the Sierra Madres, physical and spiritual. To say *iwígara* to a Rarámuri calls on that person to realize life in all its forms" (Salmón, 2000: 1328). Wane (2005) speaks about African indigenous knowledge systems and worldviews, which show characteristics that align with other Indigenous communities. She notes that despite the plurality of cultures found within Africa, there is commonality in their view of reality such as in human-nature relations. She states that ecology is deeply suffused to indigenous learnings because it is holistic knowledge arising out of deep relationships between humans, non-human actors and nature.

The relational and spiritual connection between communities and nature has also been perceived in research conducted in Southern Africa. Observations by Marshak et al. (2021) in Northern KwaZulu-Natal, South Africa, describe how a part of traditional farming practices is the context-dependent understanding of the interconnectedness of plants, people, animals and/or weather patterns and the causal link between them. They note how farmers become attuned to these patterns between these actors, and how the presence of one (such as when *inyoni* [birds] sing) means a change in another (first rains) and that this knowledge is something which is embedded in cultural aspects of everyday life and is living knowledge acquired through practice. As such, partaking in local foodways encourages an awareness of the interconnection between humans and non-human actors and can rewire the dualism found within Western worldviews. This potential of local foodways to strengthen and heal relationships to nature is supported by Ruelle and Kassam (2003: 329) who state that foodways can be used to foster relations between humans, plants and animals: "As they learn how to gather plants and prepare traditional foods, young people realize that their identities derive from their relations, both within their

human communities and with plants and other animals". However, Marshak et al. (2021) note that there has been a loss of the relational connection between humans, nature and those between with the introduction of commercial seeds and industrial farming practices.

2.3. Local epistemologies: The transmission of knowledge

Vital to this literature review are ways of knowing that exist outside of textually dominant, colonial knowledge systems; these are often referred to as indigenous epistemologies. The essence of indigenous knowledge systems can be defined as:

> [A] worldview that shapes the community's relationships with surrounding environments. It is a product of native people's direct experience with nature and its symbiotic relationship with the social world and, as such, is crucial for community survival. This knowledge, ancient, proven, and based on cognitive understandings and interpretations of the social, physical and spiritual world encompasses concepts, beliefs and perceptions of local peoples and the natural human-built environments (Wane, 2005: 29).

Wane writes further (p. 33) that "indigenous knowledge is alive. And Indigenous peoples are actors through their knowledge use, not passive repositories of knowledge separated from their daily activities. Holistic-based knowledge is produced and reproduced through both human relationships and relationships with nature. It's very character suffusing ecology to indigenous education". What she captures is the fact that indigenous knowledge is formed – and continues to develop – from everyday experiences and interactions.

Sharif et al. (2016: 570) unpack the concept of Embodied Knowledge, an "action-oriented knowledge that is more focused on the social acquisition and the way a person communicates and interprets their environment". They hold that participating in the socio-cultural practices of food systems within a community – that is, within local foodways – in accordance with cultural values creates a type of joint embodied knowledge that is as much about the physical practice as about an understanding of the socio-cultural elements and symbols of food practices. This understanding closely ties to Ruelle and Kassam's (2003) emphasis on practical wisdom, recognising the importance of actively participating in food practices and the transmission of knowledge between generations, particularly from mother or grandmother to daughter (Ruelle and Kassam, 2003; Sharif et al., 2016). Wane (2005) notes that indigenous knowledge is transmitted experimentally and orally, with boundaries that are non-linear, requiring an intuitive and qualitative way of thinking which is spiritual and collectively created. Importantly, she discusses the holistic nature of indigenous knowledge, stressing the principles of totality. Where in western epistemologies science, spirituality, art, medicine and philosophy are separate, no divide is found within indigenous epistemologies.

In a study done of the Standing Rock Nation in Dakota, USA by Ruelle and Kassam (2003), they found that local foodways have been disrupted because indigenous knowledge systems, particularly the education of Native youth, have been eroded. The causes were that their access to resources, and therefore their ability to partake in local foodways, was cut off, as well as the indoctrination of Standing Rock children with "mainstream" American skills and values. Similarly, the Baka elders in Cameroon interviewed by Carson et al. (2018) also mentioned concern about the loss of traditional culture and ecological forest knowledge with youth who attended "formal education". While still acknowledging the benefits education has had for community advancement, they spoke about the importance of youth being given the chance to learn traditional knowledge, which is learnt from elders in the ways expressed above.

What these examples highlight is how frequently "traditional" education and "formal", "mainstream" education are seen as mutually exclusive. Breidlid (2009) speaks about a cultural border which a child from a traditional African culture crosses from their worldview to school where they learn scientific concepts presented in a Western science classroom. He goes further, observing that local culture when brought into school fails to acknowledge or to bring the epistemological foundation of indigenous culture into the curriculum. Fre (2018) writes about how the academic system promotes values and methodologies of dominant propositional/scientific knowledge systems, forcing scholars in the Global South to submit to these or be dismissed. As such, education has been shown to disrupt the transmission of indigenous knowledge as preference is given to western epistemologies over indigenous epistemologies (Ruelle and Kassam, 2003; Carson et al., 2018).

Overall, there is a clear distinction in the principles, values and worldviews of western and indigenous epistemologies as well as how this knowledge is learnt and passed on. Knowledge within local communities is passed through actively participating in cultural and everyday activities with elders and the transfer of this knowledge can be disrupted if this does not take place. Current academic systems and education curriculums are created out of western epistemologies and as such have the consequence of putting children in a space where they take on these western knowledge systems while becoming separated from indigenous ones.

2.4 Food sovereignty

Food sovereignty is in essence a social movement which promotes a radical transformation of the entire food system (HLPE, 2020). It challenges the practices and policies in existence by asking "who are the 'winners' and who 'losers'?" Instead of prioritizing market demands and corporations, which current agricultural systems seem to do (Von Braun and Díaz-Bonilla, 2008), food sovereignty looks to promote the producers, consumers and distributors (HLPE, 2020). As Ngcoya and Kumarakulasingam (2017: 485) state:

The food sovereignty movement is the response of peasants, Indigenous peoples and small-scale farmers to the multiple acts of violence unleashed against their lives and social fabrics by the deepening of processes of neoliberal globalization, especially those associated with trade liberalization, Structural Adjustment Programs and Trade Related Intellectual Property Rights, as well their exclusion from international decision-making about food-related issues.

The right to food sovereignty was defined in the 2007 Nyéléni Declaration , which arose from farmer and civil society movements, as "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems" (Nyeleni, 2007: 9). This understanding of food sovereignty aligns with authors such as Wezel et al. (2009) and Ngcoya and Kumarakulasingam (2017) and recognises food sovereignty as a political movement which focuses on agency and the right to control over decisions. As such, it is concerned with power and control in the food system.

Swanby (2024: 320) highlights six aspects core to food sovereignty identified by Nyéléni (2007) and notes how industrial agriculture encouraged within food security approaches tend to impose on this:

> The six pillars that commonly define Food Sovereignty are: food for people (as opposed to commerce); placing producers at the centre; localization of food systems; localization of decision-making; building skill

and knowledge (in contrast to industrial agriculture, which tends to de-skill and enclose knowledge commons); and working with nature (agroecology).

Vazquez (2011) and Akinola et al. (2020) highlight the strong connection between indigenous foods and knowledge, and food sovereignty. Vazquez (2011) brings attention to the fact that in this current world many people who hold indigenous knowledge have become separated from the ecosystems, cultural norms and institutions where this knowledge was formed. Further, there has been an erosion of people's food sovereignty, linking it to the lack of access to natural resources and loss of control within the food market (Ruelle and Kassam, 2003; Vazquez, 2011; Akinola et al., 2020). Within the Standing Rock Nation, the inability to participate within local (indigenous) foodways was identified as a threat to the community's food sovereignty. It is important to note that food sovereignty is also the right to choose not to eat indigenous foods; however, in the case of Standing Rock, the elders participating within the research identified their ability to participate in these foodways as significant (Ruelle and Kassam, 2003).

Food sovereignty places emphasis on local foods and food systems, looking to (re)localise and benefit communities economically, culturally, nutritionally and environmentally, in that it "seeks to create food systems that honour the cultural context in which each community's food system exists while making healthy local and traditional foods more accessible to members of its community" (Vazquez, 2011:22). Therefore, food sovereignty can be understood as a movement which promotes the restoration and upliftment of local foodways to give people agency over their own foodways while recognising the other socio-cultural aspects of food. As stated by Turner and Turner (2007), the revival of local food systems and the rebuilding of food sovereignty can be a key step to repairing the health of communities and individuals, overcoming some of the socio-cultural impacts of colonialism, and preserving biodiversity. Authors such as Bodirsky and Johnson (2008), Ernstson (2013a), and Grey and Patel (2015) understand food sovereignty as a type of decolonisation, stating that elevating local foodways can foster the revival of indigenous food practices and knowledge which is necessary in healing the trauma of post-colonialism (Bodirsky and Johnson, 2008; Ernstson, 2013a). It is important to note that like local foodways themselves, the means of building food sovereignty is context- and community-specific (Vazquez, 2011).

SECTION 2: Issues Emerging from Research on Local Foodways

2.5. Colonisation, stigma and indigenous food systems

Entrenched histories that uphold colonial and Western ways of thinking and knowing have played key roles in both preventing people from participating in their foodways and creating a mindset of the dualism between nature and society. The introduction of new agricultural methods and crops began a process of culinary acculturation[3] which is still visible both in food systems and in people's psychology (Turner and Turner, 2007; Vazquez, 2011). Kuhnlein and Receveur (1996) speak about a dietary change of Indigenous peoples worldwide, noting that new foods such as sugar, refined grain flour and bread have been rapidly introduced with little to no acknowledgement or respect for the cultural and nutritional benefits of food historically. Turner and Turner (2007) investigate the shift in the food

[3] "A process in which members of one cultural group adopt the beliefs and behaviours of another group." (Zahari et al., 2019: 488).

systems of Indigenous peoples of western Canada after European newcomers arrived. They speak about how, framed as "civilizing the natives", there was a push towards European-style farming that resulted in settlers taking over the land and resources. They maintain that this was detrimental because of the strong ties between culture and the land, as well as an immense number of cultural practices and knowledge surrounding foods and social bonds, that Indigenous people were now severed from (Turner and Turner, 2007).

Africa's story follows a similar narrative. Highfield (2017) speaks about how over 2000 species of grains, vegetables, roots and fruits native to Africa were replaced by imported crops during the colonial era and still continue to be neglected. The discarding of indigenous crops can be observed even before then in North Africa's trade with Europe where those who controlled the routes of transmission had the power to manipulate the consequences to some extent (Highfield, 2017). Cassava and corn replacing yam and rice as staples after their establishment in West Africa by the late 16th century comes forth as a telling example (Highfield, 2017). In 2021 maize made up 20.6 percent of total calories consumed in Southern Africa (IFPRI, 2024).

The ability to participate in foodways means having the knowledge needed to partake in them. Contained in many local foodways is indigenous knowledge about plants, agricultural methods, food preparations and rituals. Ruelle and Kassam (2003) show a clear link between the breakdown of local foodways in the Standing Rock Nation in Dakota, USA and the breakdown of indigenous knowledge systems. Vazquez (2011) notes that indigenous knowledge is disempowered by the dominance of culturally Western local management and development plans, noting that indigenous practices are treated with disdain where Western practices were admired. Gary Nabhan (1997) stated that the shift in food systems did not start when economic and resource development began, but rather in the earliest stages of colonisation when local culture was disrupted. Disruptions were caused in part by a dominant narrative of the superiority of certain ideals and caused long-term mindsets of inferiority and shame in indigenous knowledge and practices (Nabhan, 1997).

Akinola et al. (2020) bring attention to how colonisers portrayed many indigenous foods as 'poor man's food'. For instance, the labelling of traditional leafy vegetables as 'weeds' since 1960 has led to the decline in the use of these wild-food resources (Akinola et al. 2020). Although literature on the extent of this is limited, narratives of white supremacist ideology of certain foods and food practices are reflected in society today. Maseko et al. (2017) speak about the low status African leafy vegetables have among some South Africans. This is also highlighted by authors such as Modi et al. (2006) and Mabhaudhi et al. (2016) who bring attention to the negative status wild African plants still carry.

Global food systems have resulted in increasingly fewer people growing their own food. Instead people have turned to purchased food from supermarkets which offer conventional foods with few ties to the local environment. Akinola et al. (2020) posit the idea that the promotion of local foodways and wild foods can help counter these negative perceptions and attitudes.

In many parts of the world local foodways are being broken down due to people losing access to the natural resources, plants and foods required to participate in them. Patel and Grey (2015) speak about how forced relocation, laws restricting movement and the enclosure of land in North America has, in many cases, rendered harvesting from the wild impossible. Likewise, Turner and Turner's (2007) study of traditional food systems of Indigenous peoples of western Canada concluded that "[t]he reserve system, land privatization and the legislated restrictions, as well as population changes, have compounded to alienate Indigenous peoples from their original resource sites and from the resources themselves" (Turner and Turner, 2007: 63). Similarly, research done in South Africa by authors such as

Cocks and Dold (2006), Petersen (2014), Cocks and Shackleton (2021) and Stålhammar (2021) has brought attention to the growing inability of people to access natural resources, preventing them from participating in local foodways. Kuhnlein and Receveur (1996), using examples from Mexico and Guatemala, note that traditional peasant agriculturalists have been forced from their traditional land into marginal areas due to population pressure and cash-cropping activities. As a result, access to density and number of plant and animal species has severely diminished (Kuhnlein and Receveur, 1996).

2.6. Delocalisation of the food supply

Kuhnlein and Receveur (1996: 423) define delocalisation as "the processes by which food species and varieties, production techniques, and use patterns disseminate throughout the globe". Akinola et al. (2020) state that since the early 20th century and the Green Revolution in the mid-1960s, the focus has been on developing conventional cereal and crops which have replaced locally produced crops and resulted in a decrease in the use of domesticated wild foods that have played an important role in the diet of African communities. Turner and Turner (2007) hold that many local and Indigenous communities are shifting their food systems to adopt food produced through large-scale industrial modes which are often less nutritious and not local.

According to Latham (2015) this has arisen out of the prevailing narrative that the food hunger crisis can only be solved by industrial food production and technology and that local farms are non-viable production systems. Yet research has shown that this high-input, resource-intensive production negatively affects both ecosystem functioning and long-term sustainability (Von Braun and Díaz-Bonilla, 2008; Latham, 2015; FAO, 2024). Further, Von Braun and Díaz-Bonilla (2008) point out that these systems created "winners" and "losers", negatively affecting poorer communities.

Modern approaches to agricultural development encourage the use of technological solutions (Gouse, 2012; Department of Agriculture, 2020). The push towards high input agriculture as the solution to African hunger has been accompanied by the adoption of biotechnology among other interventions (Fig, 2024). The South African government has been open and supportive of the role of biotechnology and agrochemicals in food security, agriculture, and rural development (Gouse, 2012). However, the property rights for these technologies belong to large multinational companies; for instance, in 2015, 75 per cent of global agrochemicals and 63 per cent of the commercial seed market was controlled by BASF, Bayer, Dow, DuPont, Monsanto[4] and Syngenta (Greenberg, 2024). In this way, companies, backed by the state, have monopolised most aspects of the food system, such as agricultural inputs including seed, pesticides, herbicides and chemical fertilisers.

The takeover of the production of food by large scale agriculture and the monopolisation of agricultural inputs by multinational companies is coupled with an increasing reliance of people on processed foods and supermarkets. Kuhnlein and Receveur (1996) document the decrease in the use of locally harvested foods as people have become reliant on limited market foods resulting in less food diversity. Du Toit and Neves (2014: 838) refer to the undermining of local markets: "While supermarkets doubtlessly help ensure cheap food for those workers who can pay, their supply lines have tended to marginalise small producers and small and medium enterprises (SMMEs), while their retail activities have tended to depress the prospects for the local informal sector". They note that in South Africa, supermarket retailers have dominated markets which would usually be spaces which local industries or informal markets would occupy and develop. Kroll (2016: 11) asserts that the expansion of supermarkets is transforming food systems, especially in developing countries such as South Africa: "Big Food is

[4] As of June 7, 2018 Monsanto was bought by Bayer (Bayer, 2018)

strongly and actively shaping the consumer food environment in South Africa, making energy-dense, ultra-processed food products more available, accessible and affordable... while possibly undermining local markets when the bulk of produce is sourced from metropolitan distribution hubs".

A study conducted in 2020 in a peri-urban village, in Vanuatu (a Pacific small island developing state) showed that a shift in lifestyles brought about by increasing urbanisation has caused dietary shifts negatively impacting nutrition and health status as well as eroding "kastom"[5] and social fabrics. Shifts in diets from locally grown to store-bought foods was predominantly described as motivated from necessity linked to poverty rather than preference, land issues and growing pressures to earn an income resulting in less time available for gardening and food preparation (Savage et al., 2020).

Likewise, a study of dietary practices among the Nankane, in Northern Ghana showed a shift from sorghum as a main food staple to millet and a decrease in hunting in the Indigenous populations in part due to the evolution of the cropping system (Tripp, 1998). In another example, the Sahhi people of the western Canadian Arctic reported a generational decrease of nutrient-dense traditional foods following an increase in market food. This was also shown to correlate with a loss in dietary quality and health (Kuhnlein and Receveur, 1996).

As Rearick (2009) says, those who regulate the food have the power to control others, and Grey and Patel (2015: 438) conclude: "Through adoption of a Westernized diet, the colonial supplants the traditional in the most literal sense, with non-nutrient-dense, industrial foods deculturing people from the inside out".

2.7. Additional contemporary factors from case studies

Emerging literature on research conducted with local communities highlights a breakdown of local foodways and its sources from the perspective of community members. In this literature, contemporary interlinking factors can be identified which have also led to the breakdown of local foodways. Socio-economic and climate shifts are emerging as leading factors in the change of diet and accompanying lifestyles within local foodways.

In research conducted by Shackleton et al. (2019) to assess the decline in field agriculture in South African communal areas, they found a myriad of social and environmental factors which have led to this decline on a local level. These include economic circumstances where lack of access to income for purchasing farming inputs coupled with shops convenience of cheap foods had led to less incentive to farm; lack of practical government support; negative associations attached to an agrarian way of life; lack of interest from youth; and climate related barriers such as rainfall reduction and variability all make it increasingly difficult to farm.

Similarly, research by Savage et al. (2020) into the local perspectives of changing food and nutrition security in Vanuatu, highlighted comparable disruptors. In Port Vila, a peri-urban village on the outskirts of the country's capital, a change in lifestyle accompanying the socio-economic trends, due to increasing urbanisation, was identified as a root cause to a change of diet from garden to store-bought

[5] Pidgin word referring to traditional culture.

foods. Economic pressures stemming from a shift to a cash economy resulted in less time put into farming as the pressure to earn an income increased. Importantly, the shift to store-bought foods was ascribed by elders as being done out of necessity as opposed to preference and identified subsistence farming as integral to their way of life. Youth in the area, however, were described as forming a preference for store-bought foods and showed a disinterest to learn local foodway methods (Savage et al., 2020). These socio-economic shifts and youth preferences were also found in other villages in Vanuatu (Savage et al., 2020).

Along with social shifts, climatic factors were identified as push factors towards store-bought foods. Participants in Port Vila described climate change and variability with unpredictable seasons and increasing in extreme temperatures, reducing subsistence farming viability (Savage et al., 2020). In a remote rural village in Vanuatu, where subsistence farming was the main source of food, this change in climate was identified as the major cause to the disruption of the local foodway. Participants described how climate trends such as dry seasons and shorter rainy seasons, unpredictable growing seasons, and increased climate variability created major challenges leading to subsistence farming vulnerability (Savage et al., 2020). Research conducted by Bakre (2015) and more recently by Leonard (2022) in local communities within Northern KwaZulu-Natal, South Africa corresponds to that done by Shackleton et al. (2019) and Savage et al. (2020). It was found in these studies that a change in climate has prevented people from growing food and engaging in livestock production and instead forced them to rely on shops.

Despite the many factors that are leading to a breakdown of local foodways, there are still people who are using, are dependent on, and are participating in local foodways today. This shows the potential these systems have for ecosystems, culture, upliftment and creating an environment of free choice. Leakey et al. (2021) note that there is an increasing recognition of the importance of African indigenous plants and their role in food and agriculture. Ruelle and Kassam (2003: 316) sum it up positively: "despite the complex challenges of colonialism, genocide, environmental contamination, neo-liberal trade structures, and climate change, Indigenous communities are working to determine their own food systems, both by asserting their inherent rights in political fora and strengthening capacities within their communities".

The literature engaged with in this chapter was divided into two parts. The first section, which outlined the theoretical and conceptual debates, helped situate local foodways within the broader discussions of nature–culture relationships, power, identity, and the historical processes that have shaped human–foodway interactions. This framing provides the conceptual lens through which the study approaches local foodways in northern KwaZulu-Natal. The second section, which focused on issues emerging from research on local foodways globally, offered concrete examples of how these debates play out in lived realities, grounding the relevance of these themes within the everyday experiences of communities. The literature outlines factors which have been linked to a breakdown of local foodways such as studies done in Dakota, Mexico, Guatemala, South Africa, Northern Ghana, Canada that have pointed out a definite breakdown of local foodways worldwide and the take-over by large-scale agricultural methods. Due to the aim of this research to understand community members' lived-experiences of local foodways and document the changes in characteristics of local foodways as they relate to the nature-culture dichotomy, the insight into the breakdown of other local foodways is essential to fully understand the significance and possible causes of these phenomena.

Scattered throughout the literature is the desire to reclaim and heal local foodways and the outcomes this can have for individuals' and communities' food sovereignty, which is currently being significantly undervalued. The research conducted in this study hopes to further encourage this sentiment.

Chapter Three: Research Methodology

The purpose of this chapter is to outline and justify the research methodology employed to investigate the complex dimensions and relationships of local foodways in two communities in northern KwaZulu-Natal, South Africa. This research was approached through qualitative methods supplemented with relevant literature, seeking to understand foodways as systems rooted in lived experience. The chapter begins by introducing the two case studies in which the research took place, followed by descriptions of the methods used to gather qualitative data, including semi-structured interviews, walking interviews, visual observation, and geospatial mapping. It then explains the process of data analysis and discusses the ethical considerations and limitations that were encountered during the study. Through this structure, the chapter demonstrates how each methodological choice supported the central aim of understanding local foodways as lived, dynamic, and context-specific systems.

The research revolved around the foodways of two communities in Northern KwaZulu-Natal, South Africa; the communities were identified through scoping trips and word-of-mouth descriptions. Most of the data was obtained through semi-structured interviews with participants from the areas and key informants. Interviews with thirty-five participants were conducted in September to October of 2022, with another seven key informant interviews in 2023/2024. The interviews were later translated into English from Zulu, transcribed and then analysed using Thematic Content Analysis (TCA). Together, these methods provided a foundation for understanding the ways in which foodways are practised, experienced, and transformed within the two case study communities.

3.1 The case studies

This research was centred around two case studies in the uMkhanyakude District Municipality, the northernmost eastern part of KwaZulu-Natal, South Africa (see Figure 1 below). Both areas are situated in former homelands with many residents being subsistence farmers.

Figure 1: Map of KwaHhoHho and Ingwavuma, KwaZulu-Natal.
Points indicate areas where interviews took place at participants' homes
Source: Map created by Jessica Fortes using QGIS. OpenStreetMap contributors, 2022.

The use of a case study approach[6] was essential as foodways are dynamic and complex systems unique to each community, and the research intended to capture these unique elements. Merriam (1985) notes that a case study method of research results in a holistic intensive description and analysis of a single phenomenon. To do this the research must rigorously examine the interplay of all facets to reveal a full picture (Merriam, 1985). A thorough investigation of a single area allowed for the multiple lived experiences of participants to come together to paint a colourful picture until a common narrative emerged which illustrated the complexity of each foodway. However, due to this, the case study approach also offers limitations as the research conducted represents the foodway of a single community and cannot be applied on a large scale (Merriam, 1985; Zainal, 2007).

The choice for a multi-sited study allowed for the research to investigate the similarities and differences between two local foodways and observe where experiences align and where external and internal factors shape these foodways in unique ways.

Scoping trips to potential case study locations were carried out before the official visit in 2022. The scoping trips took me to three places, KwaNgwanase, KwaHhoHho and Ingwavuma; however, only the last two were selected for the study (see Figure 1). This allowed me to introduce myself and the research idea to the potential participants and gauge whether they were open for me to conduct interviews. It also allowed me to obtain an understanding of the areas. KwaHhoHho was selected due to its easy access and close proximity to an urban area while having active local foodways that allowed me to get an

[6] "Case study is differentiated from other research strategies because the focus of the research is a bounded system or case." (Brown, 2008: 2)

understanding of how proximity to urban areas may affect these foodways. Ingwavuma and KwaNgwanase had many elements in common due to their rural nature. However, those in Ingwavuma were perceived by community and Biowatch members to have a closer relationship to the surrounding vegetated areas which I was interested in pursuing; as such it was selected as a case study. Both communities also had a good relationship with the non-governmental organisation (NGO) Biowatch, which gave an opening into the community.

KwaHhoHho (see Images 1 and 2) is located in peri-urban farmlands. Farmers here have access to nearby towns such as Mtubatuba, the largest urban centre in the district, and are exposed to industrial farming practices (van Niekerk and Wynberg, 2017). Ingwavuma is a rural area at the periphery of the uMkhanyakude district bordering Eswatini. Although Ingwavuma is still influenced by urban factors it is more isolated with little access to urban hubs. Kwalindizwe is an area in Ingwavuma which is particularly rural and situated in the middle of indigenous vegetation (see Image 3). This part of Ingwavuma was taken as the case study.

A scoping trip to KwaNgwanase and KwaHhoHho was completed from 6–11 June 2022 and to Ingwavuma from 28 June–01 July 2022. This was done through accompanying Biowatch staff who were interviewing farmers in the areas. Attending interviews with Biowatch farmers gave me insight into the lifestyle of farmers in the area and a starting point to my research. However, entering via Biowatch also entailed that I only met with those farmers who had been working and learning from Biowatch for years. Only once I began my research was I able to identify participants who were not members, yet community members still tended to associate me with the organisation. This was both an advantage and a potential bias. Due to the work and relationship Biowatch had with the community, I was welcomed, and community members were happy to take part in my study. However, being associated with Biowatch and their practices – although there was no evidence of this being the case – may have led to participants speaking about what they thought I was interested in or assuming I had an agenda of encouraging people to farm.

***Image 1**: KwaHhoHho taken from a participant's home, during the dry season.*
7 September, 2022.

***Image 2**: KwaHhoHho looking onto the community garden, during the rainy season.*
10 June, 2022

Image 3: Vegetation of Kwalindizwe and houses (top left), during the dry season. 19 October, 2022

3.2 Data collection

Foodways experiences in KwaHhoHho and Kwalindizwe, Ingwavuma were captured through the stories and memories of the communities living in these areas. The primary form of data was collected through qualitative research centring the perspective of participants and understanding foodways through their stories, memories and observations. Fossey et al. (2002) maintain that understanding foodways through the realities of participants is critical to local foodways research that is rooted in choice and experience because it enables insight into the meaningful dimensions of their physical existence and social worlds.

Foodways are a compilation of different relational links that function together to create a system. Because of this, the research investigated what food people ate in the area; the varying social and cultural aspects that food had to them; how what they ate changed over time and why; where food was obtained from; how much was cultivated or harvested from the wild; and the rituals and cultural practices that were linked to food. It also explored how the foodways in these areas were affected by gradual lifestyle, mindset and environmental changes happening in these communities (see Appendix 1 for the questionnaires used).

3.2.1 Key respondent interviews

Qualitative data was collected through semi-structured in-depth interviews conducted with key informants. This was done with the work of DiCicco-Bloom and Crabtree (2006) in mind. They write about how minimally structured interviews encourage informants to express their opinions as well as become participants in the making of meaning and identifying what is important.

The interviews were thus structured with open-ended questions and conducted one-on-one. An individual in-depth interview allowed me to understand the individual's subjective experience of their foodway. For those who were intimately engaged with local foodways or were personally affected by their disruption, questions were included which encouraged them to speak about their emotions, experiences, memories, and desires. This allowed an understanding of their lived experience that was an important foundation for my research.

Within the case studies participants interviewed fell into four categories; farmers, non-farmers, herders and youth, and interview questions were tailored according to which they aligned the most with.

Originally, the intention was to interview an equal proportion of small-scale farmers and residents who did not farm; however, it became apparent that these lines are not clear cut. In many cases those identified themselves as 'non-farmerss' had small home gardens in which they grew food for their household. The definition of 'farmers' used in this research included those who at the time of the interviews had home gardens, even if they were struggling to produce crops. As a result, there were very few participants who could be classified as non-farmers, and all of these resided in KwaHhoHho. Participants who considered themselves "farmers" were generally associated with Biowatch. Because of the lack of a clear distinction between farmers and non-farmers, I keep the distinction between the two blurred. It is important to note that even those who were not farming at that time declared having some knowledge on how to farm. The fact that many "non-farmers" turned out to be "farmers" meant that more "farmers" were interviewed, which in fact is in line with the actual ratio of farmers to non-farmers in the area. As such, "farmers" defined in this thesis are participants who at the time of the research were actively involved with farming. "Non-farmers" conversely were those who were not actively involved in farmer and self-identified as such. However, this did not mean that they did not possess the knowledge of farming as this knowledge was often learnt in childhood..

Roles within the local food system were highly gendered. In many cases it was elderly women who were in charge of food and cooking within the household while men tended to own and herd animals as well as hunt. In some cases, older men were also involved with farming, but this was unique. These dynamics were reflected in the interviews as most farmers interviewed were elderly women and all the herders and hunters interviewed were men. Non-farmers interviewed were all women as they oversaw the food within their homes

The first set of interviews was conducted in KwaHhoHho from 5–14 September 2022. Eight small-scale farmers, five non-farmers, three men who have livestock and one youth were interviewed making a total of 17 interviews. Although five people were classified as non-farmers only two people did not have any garden at all; the other three have been given the status non-farmers because they grew very minimally and/or they were at that moment not growing any crops. One walking interview was also completed with three of the farmers looking at the wild foods in the area that people ate.

From 16–27 October 2022 the second set of 18 interviews were completed in Kwalindizwe, Ingwavuma. Ten small-scale farmers, three herders, three hunters of wild animals in the area, and two youth were interviewed; in addition, three walking interviews were completed with these same interviewees. Although non-farmers were searched for, none could be identified in the area as it appeared that everyone in Kwalindizwe farmed to a degree and 70 percent of households were represented in the interviews.

In September 2023 and the beginning of 2024 a final set of semi-structured interviews was completed with key informants. This consisted of one Biowatch member, one youth in agroecology, one extension

officer in KwaHhoHho as well as the head of office in the agricultural extension services in Mtubatuba local municipality and three agricultural and one animal extension officer in Ingwavuma.

Participants were selected based on their knowledge and involvement in local foodways. This included farmers, herders, hunters, youth, and a few non-farmers. Demographically the intention was to have a spectrum of age and gender. However, due to availability of participants and the topic I was investigating, the majority of participants ended up being elders. As such, the research refocused to understand the lived-experience of foodways in the lifetime of elder participants with only a few interviews with younger generations offering their perspective into topics of the youth, mindset and lifestyle shifts and intergenerational knowledge. Participants were generally from similar socio-economic backgrounds due to the rural and homogenous nature of the communities, and no detailed socio-economic data was collected. In the end this approach allowed the research to capture the perspectives of those most engaged with local food practices while reflecting the realities of the communities studied.

3.2.2 Interview design

The interviews were designed to encourage a relaxed, conversational atmosphere. The questions and themes were prepared beforehand and piloted prior to the interview with peers. However, the discussion was not limited to these to avoid missing key issues.

The prepared questions were based on the research aims and the results of the literature review, observations obtained through the scoping trips, discussions with academics who have completed similar research, and Biowatch members who I accompanied for the scoping trips and guided me through the cultural landscapes of the areas.

Several themes were identified. The first theme was a description of the foodways in both areas. Questions were asked about the food people ate in the area, how this has changed over time and why, where food was obtained from and how much was cultivated or harvested from the wild.

A social and cultural/traditional link between individuals and the choice, preparation and exchange of food was also identified. In relation to this theme, questions were based on the intertwined nature of food with social and spiritual events, the etiquette around bringing and sharing food with neighbours and how this has influenced relationships, and the use and preparation of traditional plants – both cultivated and wild.

The connection between nature and culture was explored through asking questions about participants' relationships to nature, how they would define nature and the role it plays in their lives. This was particularly fruitful in Ingwavuma due to its access to rich vegetation and biodiversity.

The last theme covered how foodways have changed in the area and the causes of this change. Here participants were asked to reflect on how food systems have changed since they were youths growing up in the area. Two sub-themes were identified within this: environmentally and socially induced change. Participants were asked how people's attitudes, priorities and mindsets have also shifted.

3.2.3 Interviews

Key informants were identified through members of Biowatch who have close connections with community members, inquiring with community members themselves who they felt would be the most knowledgeable, and a youth member within the community acting as my guide and translator.

IsiZulu is the dominant language in KwaHhoHho and Ingwavuma and consequently interviews were conducted in Zulu with the help of a translator unless participants indicated that they would prefer to do theirs in English. A young community member was identified from both areas to act as a translator, guide and intermediate. Selecting someone from part of the community offered several benefits including access to community members, an understanding about the dynamics of the area, as well as giving a job opportunity and experience to a young member of the community instead of bringing in an outsider. The fact that the translators were intimately connected to the community meant both that they were able to understand what participants were referring to and to provide context. Both translators were enthusiastic and excited by the opportunity and enjoyed the experience.

Interviews lasted between 30 minutes to two hours. All were voice recorded and later transcribed and translated.

During the write-up process additional key informants were identified. This included extension officers, Biowatch members and youth. These interviews, excluding one which was done in person, were performed online in English, recorded and later transcribed.

3.2.4 Walking interviews

Qualitative data was also collected through walking interviews with participants who had knowledge about the wild foods eaten and landscapes of the areas. This data was documented with photos and an audio recording of the walk. In KwaHhoHho three participants accompanied me on one walking tour in the bushier area on the edge of KwaHhoHho, while in Ingwavuma one participant guided me on two walking tours, one through the thick wilderness (seen in Image 4) and another through a favourite foraging site of the locals, while a different farmer led me on a walking tour along the main road.

This method of data collection was used to get an understanding of participants' relationship with wild vegetation. Informants were asked to walk through the vegetation near their homes and describe the plants they foraged, their uses, and their traditional and/or social importance.

Image 4: *Walking interview in the wild vegetation in Ingwavuma. 24 October, 2022*

3.2.5 Visual data and observation

In-person interviews in both locations allowed for visual data and observations to be collected which both helped stimulate questions and contextualise individual stories. Participants' gardens, social dynamics, the vegetation and layout of areas among other things was observed and kept account of via journal entries and images. This also included participating in a farmers agroecology training session presented by Biowatch in KwaHhoHho and a Biowatch meeting in Ingwavuma.

3.2.6 Geospatial Mapping

To complement data collected from interviews with participants in KwaHhoHho and Ingwavuma, Geographic information system (GIS) mapping was done to gain geospatial information of land use, vegetation change and historical borders. Data was taken from the Department of Forestry, Fisheries and the Environment's SA national land-cover datasets and OSGeo private communication. This data was mapped using Quantum geographic information system (QGIS) geographic information system software. Aerial photographs were also sourced from Google Earth.

3.3 Data analysis

The research data analysis was completed in a way that aimed to bring forth the voice of the interviewees. Thematic Content Analysis which is a descriptive presentation of qualitative data (Anderson, 2007) was used to do this. However, in the process of deciding which data was relevant, the

biases and preferences of the researcher inevitably come through and, as such, a representation of this data as objective is misleading.

In the data analysis themes were identified in common over all interviews. Once these themes were found, text from transcribed interviews was pasted under each theme. In order to preserve the voice and meaning of the participants the writing was kept in the voice of the interviewees and the themes were a reflection of interviews and were not created beforehand (Anderson, 2007).

The observations were subjectively interpreted and analysed and used to determine interview questions and potential themes within the discussion. Literature analysis was completed through TCA, while recognising it as secondary data.

3.4 Ethical approach

Mpoe Johannah Keikelame and Leslie Swartz (2019) take note of the fact that research conducted among Indigenous peoples within Africa has been exploitative and has failed to benefit the researched party. They propose a "decolonising research methodology". The approach "is used to challenge the Eurocentric research methods that undermine the local knowledge and experiences of the marginalised population groups" (Keikelame and Swartz, 2019: 1). Central to this is creating the correct spaces. Considering this, although the structure of this research, such as semi-structured interviews, cannot be fully decolonised research, a decolonising research methodology was practised, focusing on creating respectful, transparent and self-reflexive spaces which were mindful of indigenous worldviews, cultural values and language and bringing these into how the data was interpreted.

This research also complied with the ethical standards of the University of Cape Town (UCT) as per UCT's code for research involving human subjects. The UCT ethical clearance was obtained in 2022 [Reference no. FSREC 067 – 2022]. Prior to the interview interviewees were informed of the research topic, where the information acquired will be used and for what purpose as well as their right to decline participation at any point of the interview. The interviewees' anonymity and privacy was preserved and safeguarded. Before each interview began participants were asked for permission to be recorded and were assured that these recordings would only be used for the researcher's private use. They were also asked to give their verbal consent.

After the conclusion of the study, in-person feedback will be given to participants in a clear and coherent manner in which they will be informed of the findings as well as offered a space to voice any questions, concerns or comments. The feedback will take the form of a short animation with illustrations to a Zulu voiceover, followed by a discussion in which questions can be asked and further clarification received. —

3.5 Limitations

The largest limitation within the research was the language barrier. This offered challenges for two reasons. First, because of my inability to speak Zulu, all information was mediated through a translator. To avoid gatekeeping and to try to use the words of the participant the interviews were recorded, and later translated and transcribed into English by a Zulu translator through the University of Cape Town. Despite this, during the interview some information was omitted by the translator that I may have

wanted to pursue further and at times there were ambiguities in the transcriptions. The other, arguably more pressing challenge was the distance language created between the participant and myself. Small-talk and light compliments which are integral moments to forming a relationship were tricky and as such I had to rely on body language to create a connection.

The natural boundaries presented when writing an academic dissertation, such as the structure and timeframe required limited my research as it imposed specific timeframes and the information gathered was limited to the scope of the aims of the study. There was pressure to collect data that could be used for a research question and although I tried to begin my research without preconceived notions or looking for a particular answer. I am unsure how much this influenced my research.

The timeframe of the research also resulted in the interviews having been conducted just prior to the winter months when crops were harder to grow and water scarcity was at the forefront of participants' minds. This too may have influenced participants' responses to questions such as "How much food is bought at the shops?"

The large presence of Biowatch and my introduction into the community through them is also important to note. Members of Biowatch were those who used agroecological methods in their farming and as such my association with Biowatch may have led to assumed farming values aligning with those of Biowatch. This could be seen in how 'farmers' vs 'non-farmers' were defined to me by participants. It also may have influenced the answers participants gave me.

My upbringing and education also created the mindset with which I approached this research. On the one hand my social science background permitted an interrogation of the environmental and socio-political dimensions of the research, however, it also meant that I was limited by the lens with which I experienced and interpreted the data. My academic background meant that I had an academic approach to the analysis of data which may have resulted in a bias towards which data is valued above others. My position as a young, white, female student at the University of Cape Town may have influenced how participants engaged with me, either through omitting certain opinions or influencing what people say based on what they believe I wished to hear.

Lastly, my lived experience and cultural upbringing are different to most of my participants and therefore a limitation when it comes to the cultural interpretation of data. The vast cultural difference means that even if there was verbatim translation, a lot of the meaning may still have been lost. As such, I aspired to use the lens of the participants as much as possible by using their voices in my writing and being aware of the cultural values and indigenous worldviews shaping how everything is conceptualised.

This chapter outlined and justified the research methodology used to explore the complex and lived dimensions of local foodways in KwaHhoHho and Ingwavuma. Drawing on literature it described how a qualitative, multi-sited case study research approach is needed to understand the complexity of lived foodways. It also discussed process of data analysis used, ethical considerations that shaped the research as well as the limitations encountered. Together, these methods provided a framework of research through which to understand foodways as dynamic, context-specific systems shaped by both social and environmental factors.

Chapter Four: The case studies

As discussed, this multi-sited study is centred around two case studies in KwaHhoHho and Ingwavuma in the uMkhanyakude District Municipality, situated in the northernmost eastern part of KwaZulu-Natal, South Africa. This chapter provides background understanding, giving context to the research by looking at the demographics and socio-economic background of the people who live there, the geology, vegetation and climate, land uses and political histories of both the places and the people residing in them. This is done using both secondary and primary data. Secondary data includes demographic, socio-economic, and environmental information obtained from existing sources. Primary data collected through this research, including field observations, visual data, interviews with participants such as Biowatch members and extension officers, and GIS-based maps generated using collected or publicly available datasets, were utilised where indicated. By combining these sources, the chapter establishes the broader context in which local foodways are practised, lived, and influenced, providing the foundation for the analysis presented in subsequent chapters.

Most of the statistical data of the case studies are from the Census 2011 Community Profile Databases. New census data released in 2022 is not yet available for case studies areas; thus, the research was limited to the most recent available data, albeit collected in 2011. This is cited throughout as Census 2011 (StatsSA, 2011) unless otherwise indicated.

4.1 Geographic location

Although KwaHhoHho is peri-urban and Ingwavuma is rural and have many differences, they are also alike, with the majority of those living there facing similar challenges and partaking in subsistence farming. The rest of this chapter provides the data substantiating this statement.

KwaHhoHho (GPS coordinates: 28.4031 S, 32.0745 E) is located in peri-urban farmlands and an 8-km, 20-minute drive along a steep dirt road from the town centre of Mtubatuba (see Figure 1). It is situated in the Mtubatuba municipality within the uMkhanyakude district. The area of KwaHhoHho covers 23.98 km^2. Census 2011 indicates a total of 408 households with a population of 2,529 in 2011. The definition of a peri-urban area is that "of or relating to an area immediately surrounding a city or town" (Merriam-Webster, 2024). Varkey (2019) highlights how peri-urban areas show the intimate relationship found between urban areas and their surroundings, and notes that these areas are often transitionary zones in which – often rapid – changes in the built environment, socio-economic activities and populations can be seen. The area of KwaHhoHho was observed to have the characteristics of a meeting point of the urban and rural due to its proximity to Mtubatuba as well as a hybrid feel of a transitionary space with both rural and urban lifestyles.

Ingwavuma is a rural area at the periphery of the uMkhanyakude district, bordering eSwatini and situated in the Jozini municipality (see Figure 1). In this research the term rural was defined following Chigbu (2013: 815) as "land-spaces with culturally defined identity; situated within a place statutorily recognised as non-urban; and occupied by settlers predominantly depending on primary sources of labour for their livelihood". From this definition it is important to note that these areas are fluid and still influenced by technology and globalisation. Ingwavuma itself is a large area with varied conditions; Kwalindizwe where the interviews took place, is situated 20 minutes along a dirt road on the densely vegetated higher periphery of Ingwavuma. Kwalindizwe (GPS coordinates: 27.097805 S, 31.98172 E) covers 4.18 km^2 with 112 households and a population of 584 in 2011 (Census 2011).

4.2 Historical background: Conflict over land and power

Conflicts over land and power have significantly shaped the lives of people within the case studies and influenced the land uses, livelihoods and landscapes of these places. Both case study areas are situated

in the former homelands[7] (see Figure 2) and both the livelihoods of those living in the areas as well as the places themselves reflect this history.

A quote taken from the Kumarakulasingam and Ngcoya (2016) acts as a guideline for the following section: it gives a simplistic summary of how political dimensions have shaped the livelihoods of communities within the former homelands:

> [The] condition of sub-subsistence is primarily the result of the success of colonial and apartheid policies. The establishment of native reserves and their subsequent transformation into Bantustans ["later referred to as "homelands"] were important to the consolidation and maintenance of White supremacy, for they created a source of cheap labour for the White economy and thwarted the possibility of a unified African nationalism from emerging (Brookes and Hurwitz 1957; Mbeki 1964). With the implementation of the 1913 and 1936 Land Acts, native reserve areas that had been once self-reliant (see Bundy 1979) were transformed into rural slums dependent upon imported food and wage remittances of migrant labour. (Ngcoya & Kumarakulasingam, 2016: 853).

For instance, the expansion of sugar production in KwaZulu-Natal can be linked directly to the dispossession of Africans, where black people were forcibly removed from fertile agricultural land which was then used for sugar plantations (Dubb, 2012). Figure 3 shows land use in Mtubatuba in 2020 and also shows the lines of the former homelands. Commercial sugarcane plantations follow the border of the former homelands closely (seen in pink), and, within these former homeland areas subsistence farming on small plots and housing can be seen. This is not a coincidence but a reflection of the histories of these areas. The map illustrates the ways in which land uses surrounding KwaHhoHho still run along the boundaries created during apartheid, thus reflecting the influence on the land uses in the area even post-apartheid. The high proportion of subsistence farming found within the borders of the former homelands is unpacked in the overview of the political economy of the homelands detailed below.[8]

[7] The homelands were areas to which black Africans were forcibly removed according to their ethnic identity under the concept of 'separate' development. (Apartheid Museum, 2024).

[8] The terminology in use at the time of an event will be used, rather than the current term for an event, population group, political movement etc.

Figure 2: *GIS map of Northern KwaZulu-Natal overlayed with former homeland data*
Source: OSGeo Africa, 2012. Private communication.
Created by Jessica Fortes using QGIS. OpenStreetMap contributors 2022.

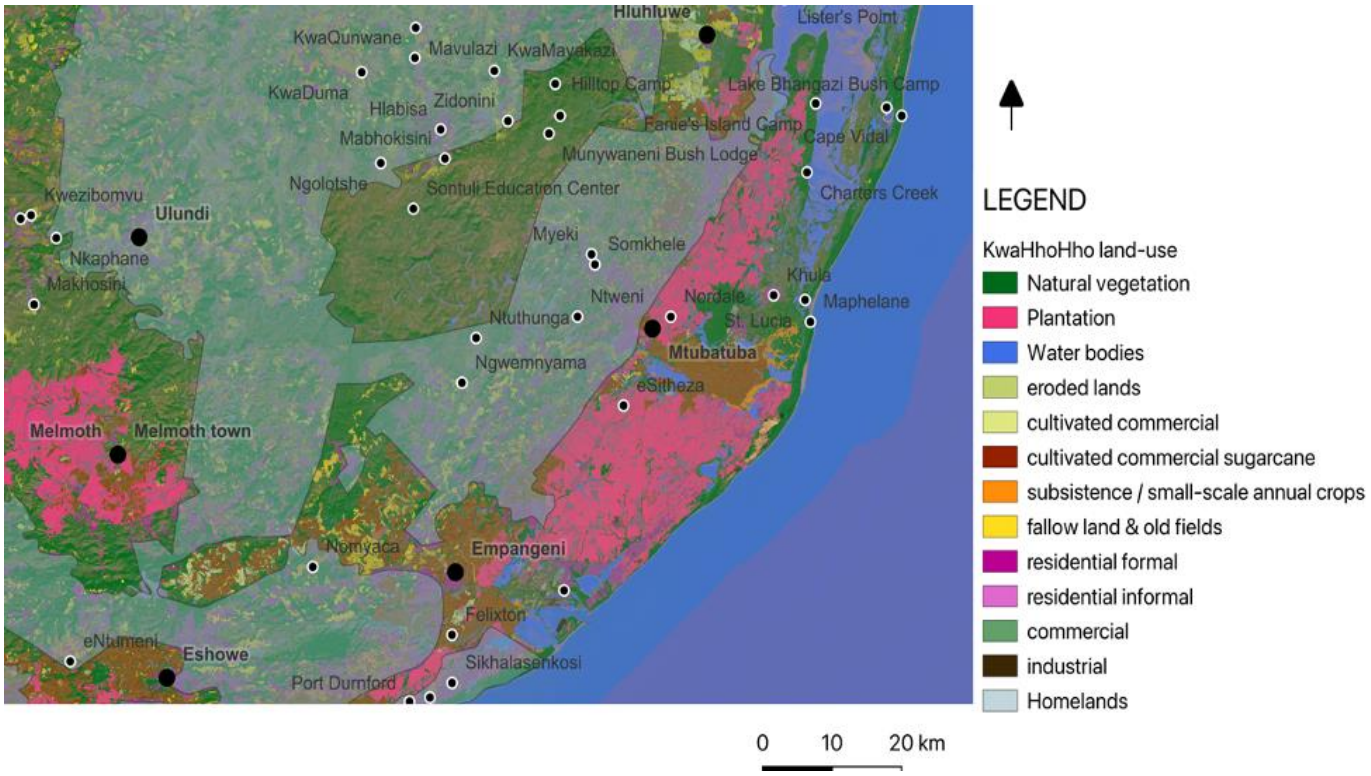

Figure 3: *Land use and former homelands surrounding Mtubatuba.*
Source: SANLC (2020) and OSGeo private communication.
Created by Jessica Fortes using QGIS. OpenStreetMap contributors 2022.

The "native reserves" Kumarakulasingam and Ngcoya referred to above were defined by two laws, the Land Acts of 1913 and 1936. Together, they split South Africa into legally designated "black" and "white" territories while implementing severe restrictions on both the rights of black people to own land as well as the property rights of sharecroppers and tenants on white farms. Even though these acts were repealed in 1991, the patterns of land holding in rural South Africa still reflect them (Lahiff, 2001).

Post-World War I, government settlements in Natal were created under the Land Settlement Act (of 1912, and as later amended) which aimed to settle poor whites on agricultural lands with the possibility of plantation production at the forefront White occupation led to the introduction of commercial farming to the area. However, long before this the amaThonga and amaZulu were practicing agriculture and keeping cattle on the same land (Lincoln, 1995).

The 1913 Natives Land Act prohibited Africans from acquiring land outside of "reserves" (Lahiff, 2001). The black populace, which made up 80 per cent of South Africa's population, were confined to 13 per cent of the land surface area (Van Onselen, 1996 as cited by Department of Rural Development and Land Reform, 2013). Black people were forcibly removed from their land and other property and the land they obtained as compensation, if any, was inferior both in size and quality (Lahiff, 2001). While land of high agricultural value was assigned to white areas, the reserves were environmentally degraded and usually characterised by rocky land with thin topsoil and erratic rainfall which made them unsuitable for farming (Bakre, 2015).

Not only were these areas unsuitable for farming but the high concentration of people led to overcrowding. Following the Land Acts, the reserves degenerated, and a rapid process of underdevelopment took place, not only hindering people's ability to export grain but also their ability to grow enough food to feed themselves (Hickman, 2011).

This process paved the way for, and was further entrenched by, the coming to power of the overtly racist National Party in 1948 with the ideology of "separate development" under the banner of "apartheid" (Lahiff, 2001). Laws such as the Population Registration Act (1950) established the racial stratification of economy and society classifying people as 'African', 'White', 'Indian' and 'Coloured' and restricted the movement, education, residence, and employment rights of those considered 'non-white '(Lahiff, 2001). In addition, more than 3.5 million people were forcibly removed to the homelands between 1960 and 1994 (Lahiff, 2001).

The National Party brought with it a shift in agenda from reinforcing a model of black agriculture in the reserves to creating homelands as labour pools which would benefit white farms and other industries (Cochet et al., 2015). This resulted in migrant male workers leaving women and children to take care of what remained of the farming operations, which among other aspects of homelands, resulted in the destruction of black agriculture: "smaller plots per family, rigid crop rotations, out of animal traction, distancing and disruption of the flow of biomass within production units, the slaughter of "surplus" animals, decapitalisation, and lower yields. It also had detrimental effects on social cohesion within communities" (Cochet et al., 2015; 19-20).

Cattle-keeping, which is in the male Zulu domain, as opposed to agriculture which resides more in the women's domain, holds great value in Zulu culture (Hickman, 2011). Cattle are valued for their producing food and milk as well as being (symbolically) a bank or for lobola (MacKinnon, 1999; Hickman, 2011). According to Lincoln (1995) and Hickman (2011) cattle keeping managed to endure far better than agriculture during the colonial period as it was better able to adapt to the onslaught of white commercial farming demands and the wider capitalist economy. This was in many ways a result of increasing emphasis being placed on increasing herds as a source of food and income as migrant labour resulted in less time and energy for homestead food production (Hickman, 2011).

However, in 1939, under the banner of Betterment planning, policies were put in place to enforce disciplinary action against the "demon of overgrazing" (De Wet 1995: 42 quoted in Cochet et al., 2015) by limiting the number of livestock owned by black families. The authorities justified this step based on

the levels of degradation and erosion overgrazing caused in the homelands. However, this justification failed to acknowledge how this was causally linked to nearly the entire "Native" population being concentrated on 13 per cent of the national territory. The Department of Native Affairs was tasked with eliminating "redundant" livestock. This process led to a further decapitalisation of black people in the homelands as cattle were not only the remaining form of capital accumulation, but manure was a primary source of fertilisation for crop production (Cochet et al., 2015).

It is no surprise that the lifestyle of those living in KwaHhoHho and Ingwavuma today reflects the histories of the land and people. High levels of inequality, poor services and infrastructure, and degraded land leaves the majority of agrarian practices in these areas at a subsistence level, despite the fact that today, KwaZulu-Natal is known as a food basket with highly developed large-scale farming (Adey et al., 2004). Yet, it also has some of the most "underdeveloped" poorest areas. In the former homelands, agriculture is exceptionally marginal compared to the agricultural sector dominated by commercial farming and farming in these areas is commonly classified as subsistence (Adey et al., 2004).

4.3 Demographics and socio-economic background

The following overview of KwaZulu-Natal draws on Bakre (2015): it is one of the most rural provinces of South Africa with 92.6% of people residing in rural areas. The province has been associated with poor service delivery, inadequate infrastructure and widespread marginalisation, all of which can be linked to the histories of the areas, which have yet to benefit adequately from post-apartheid transformation. Rural settlements in KwaZulu-Natal are characterised by high levels of poverty, which can be traced back to the discriminatory Natives Land Act of 1913, which forced Black South Africans from their land and property onto marginalised, non-profitable land. Table 1 shows the impact of this history on unemployment and the dependency ratios in the two municipalities in which the study areas are situated, as compared to South Africa as a whole. As can be seen below, the data points to the low incomes and access to jobs in these areas, almost double the rate for South Africa as a whole.

Table 1: Unemployment and dependency ratios, Mtubatuba and Jozini Municipalities and South Africa Source: Census 2011 (StatsSA, 2011).

	Unemployment (%)	Dependency ratio (%)
Mtubatuba Municipality (including KwaHhoHho)	39	78
Jozini Municipality (including Ingwavuma)	44.1	82.4
South Africa	21.42	49,2

Within the uMkhanyakude District Municipality, the two main economic sectors are agriculture and tourism (Cooperative Governance and Traditional Affairs, 2020). However, rural livelihoods in the area are often diverse, with income gleaned from numerous sources. Beyond agriculture and tourism, these include remittances, government social grants and other non-farm income generators (Ngcoya and Kumarakulasingam, 2016).

4.3.1 Grants

Government social grants are used by the South African state to address food insecurity, poverty and inequalities. Within South Africa, the coverage of social grants is extensive, extending beyond the individual beneficiary to the household (Mtyingizane, 2018). Social grants were first introduced in the mid-1990s but have increased significantly (Sinyolo et al., 2016). Figure 4, taken from the General Household Survey 2022 by StatsSA, illustrates a positive trend for social grants from 2003 to 2022.

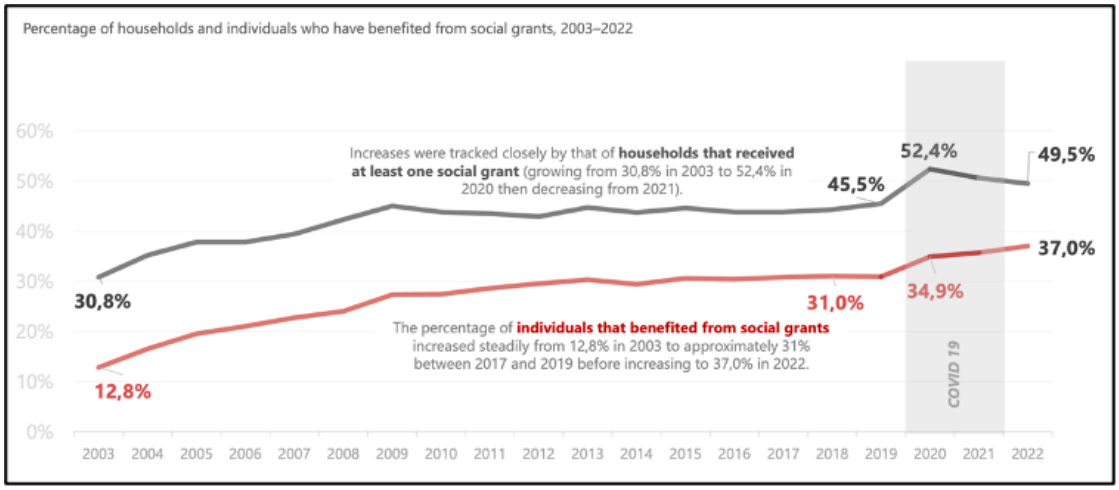

Figure 4: *Percentage of households that benefited from social grants between 2003 and 2022*
Source: StatsSA 2022

Pienaar and Von Fintel (2014) note that from 2008-2014 (when their research was conducted) there was a rapid decline in household hunger in the former homelands of South Africa, largely linked to an increase in the number of beneficiaries accessing social grants. Dependence on social grants, particularly in the former homeland regions, is extensive (Pienaar and Von Fintel, 2014). Social grants are administered by the South African Social Security Agency (SASSA) on behalf of the Department of Social Development and are provided to categories of people who are vulnerable to poverty and in need of state support. KwaZulu-Natal has the highest number of beneficiaries of the provinces within South Africa with 4 125 476 beneficiaries (22 per cent of total number of beneficiaries in South Africa) in December 2022 (SASSA, 2022). In KwaZulu-Natal the highest share of recipients in 2022 were those receiving the Child Support Grant (2 976 575), Old Age Grants (752 674) and Disability Grant (223 722) (SASSA, 2022). A study in the local municipalities Mtubatuba (KwaHhoHho) and Jozini (Ingwavuma) showed that in 2015 71.1 per cent and 75.3 per cent of people, respectively, had access to grants and subsidies (Mkhize, 2018). Table 2 shows the amounts received per grant type.

Table 2: *Amount received per grant type*
Source: SASSA, 2023.

Grant Type	October 2022	April 2023	October 2023
Old Age Grant (Below 75 years)	R1 990	R2 080	R2 090
Old Age Grant (Above 75 years)	R2 010	R2 100	R2 110
War Veteran's Grant	R 2 010	R2 100	R2 110
Disability Grant	R1 990	R2 080	R2 090
Care Dependency Grant	R1 990	R2 080	R2 090
Foster Child Grant	R1 070	R1 120	R1 130
Child Support Grant	R480	R500	R510
Child Support Grant Top-Up	R240	R250	R250
Grant In Aid	R480	R500	R510
Covid-19 Social Relief of Distress	R350	R350	R350

Research conducted by Sinyolo et al. (2017) in KwaZulu-Natal brought attention to the change in lifestyles that may accompany the presence of grants. Of those relevant to foodways were the increasing use of genetically modified (GM) seeds, synthetic fertilisers and pesticides, and less incentive to be

entrepreneurial among smallholders (Sinyolo et al., 2016,2017). Haysom and Fuseini (2017) note a reorganisation of food systems to capture social grants in favour of supermarkets. They bring attention to the grant system as encouraging food to be bought from supermarkets. For instance, a marginalisation of local and informal traders with the introduction of an electric card payment system (Haysom and Fuseini, 2017).

Interviews with participants, Biowatch members and extension officers suggested that subsistence farming in rural communities was needed in tandem with grants, be it to supplement produce – for instance buying oil or salt – in winter months when crops failed and/or to buy agricultural inputs such as seeds. A Department of Agriculture (DoA) officer noted this to be the case, remarking that grants are used as a supplement to crops which are essential to achieving food security.

Participants stressed the need for subsistence farming as a form of saving money and eating nutritiously. Respondents noted that the amount of income from social grants was not enough to enable them to stop growing their food altogether, though it did allow for other store-bought foods to be incorporated into their diets and offered relief during winter months. Although the extent to which grants have affected foodways was not captured in this study, their large presence means it is important to acknowledge social grants as potential drivers of change.

4.3.2 Gender, education and youth

In both KwaHhoHho and Ingwavuma there was a higher proportion of women to that of men. This can be linked to the fact that it is usually the men who migrate to urban centres (Bakre, 2015; Cooperative governance and traditional affairs, 2020). This also means that women are often positioned as heads of the household and, as was seen during the research, this includes most aspects of local foodways such as the growing, sourcing and preparation of food (Cooperative Governance and Traditional Affairs, 2020). Table 3 gives some demographic statistics of both areas. The fact that those living in these areas are all black, isiZulu-speaking Africans can be linked to the fact that these areas are situated in former homelands to which black people were forcibly removed (Lahiff, 2001). Low employment rates, despite the high proportion of young people in the area (see mean age), points towards the lack of job opportunities in the area. Low employment rates with a heavy reliance on social grants is a characteristic found throughout the UMkhanyakude District (Mkhize, 2019). Mkhize (2019), notes the high levels of poverty, inequality and unemployment among the youth[9] in the district. This in turn leads to high levels of dependency which places further pressure on those with employment.

Table 3: *Demographic statistics of KwaHhoHho and Kwalindizwe, Ingwavuma from 2011 Source: Census 2011 (StatsSA, 2011).*

Municipality	Proportion of women to men (%)	Matric [10] qualification (%)	Employment (%)	Mean age	isiZulu first language (%)	Black African (%)
KwaHhoHho	53.2	32.8	9.7	18	95	100
Kwalindizwe, Ingwavuma	54.8	36.4	24.2	22.6	96	100

[9] 15 to 34 years (StatsSA, 2024).

[10] National Senior Certificate (NSC)

4.3.3 Migration

The process of rural-urban migration, whereby rural dwellers migrate to urban areas, is taking place within KwaZulu-Natal (Bakre, 2015). Participants in Ingwavuma spoke about a breakdown in community dynamics as people, especially the younger generation, move out of the area in pursuit of the opportunities these areas offer, such as jobs, education and services. One farmer who grew up in Kwalindizwe, Ingwavuma noted: "*People are slowly coming back here but not as many as they were before. When I was born there were many people living here, but they have left*" (Participant 2, Ingwavuma, 2022). Data from 2001-2011 reflect this trend as it showed that in Jozini, the population growth rate dropped from 2,6% to 0,9% (StatsSA, 2011).

In KwaHhoHho, annual population change between 2001 to 2011 was an increase of 1.8% (StatsSA, 2011). For this area, participants spoke about the opposite phenomenon to Ingwavuma, describing the area as becoming dense and overpopulated. In discussions on how the area has changed, an elder from KwaHhoHho reflected: "*There were no houses next to mine. We are crammed now like it's the township.*" (Participant 19, KwaHhoHho, 2022). This may be due to the area's proximity to Mtubatuba. Aerial photographs (see Figures 5 and 6) taken in 2022 during the time when the interviews were conducted clearly show that households in KwaHhoHho are more densely developed than those in Kwalindizwe

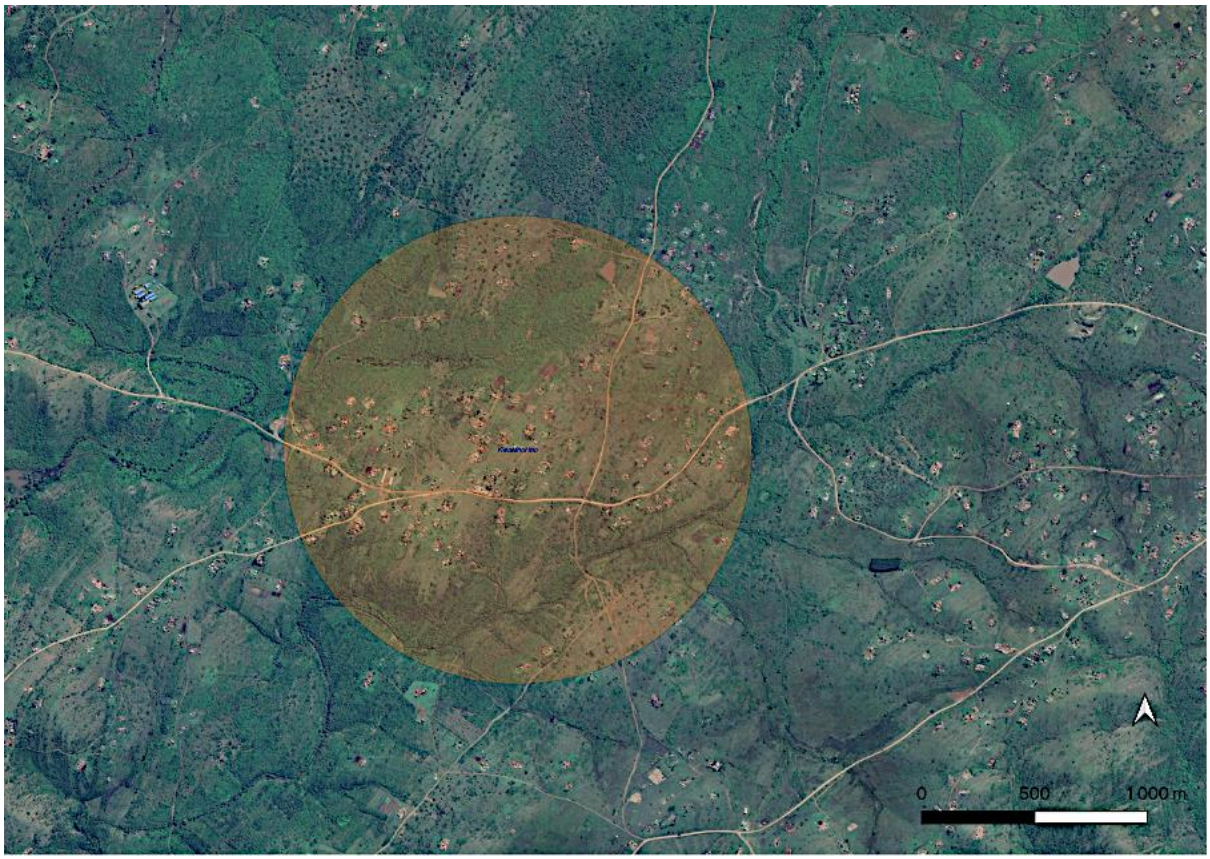

Figure 5: *Aerial photograph of KwaHhoHho showing housing density, 2022*
Source: Google Earth. The interview area is highlighted in yellow

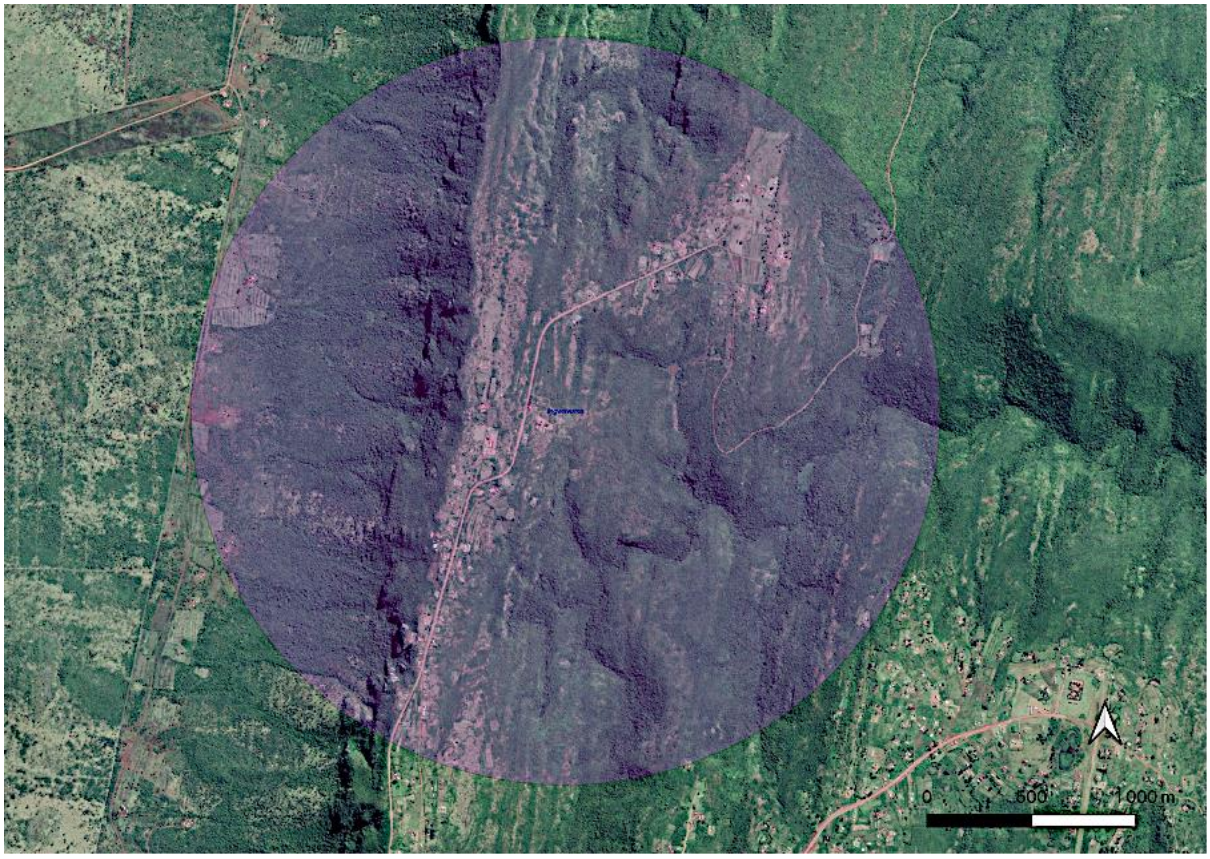

Figure 6: Aerial photograph of Kwalindizwe, Ingwavuma, 2022 showing housing density
Source: Google Earth. The interview area is highlighted in purple.

4.4 Land use

a) KwaHhoHho

Mtubatuba, near KwaHhoHho, is the oldest commercial town in the region and a prime industrial zone (Umgeni Water, 2016). The area is dominated by agricultural activity with 42.7% of the land being used for subsistence agriculture and plantations (Umgeni Water, 2016). Figures 7 and 8 show the land use of the areas through GIS mapping using data from South African National Land Cover (SANLC, 2020). Surrounding Mtubatuba industrial timber plantations (pink) and commercial sugarcane (brown) can be seen. The sugarcane and forest plantations of alien eucalyptus and pine trees are dominant industries in the area, carrying on from the Apartheid era (Karumbidza, 2006). Participants from KwaHhoHho practiced subsistence farming, as shown in orange in Figure 8, together with natural vegetation (green) and residential areas (purple).

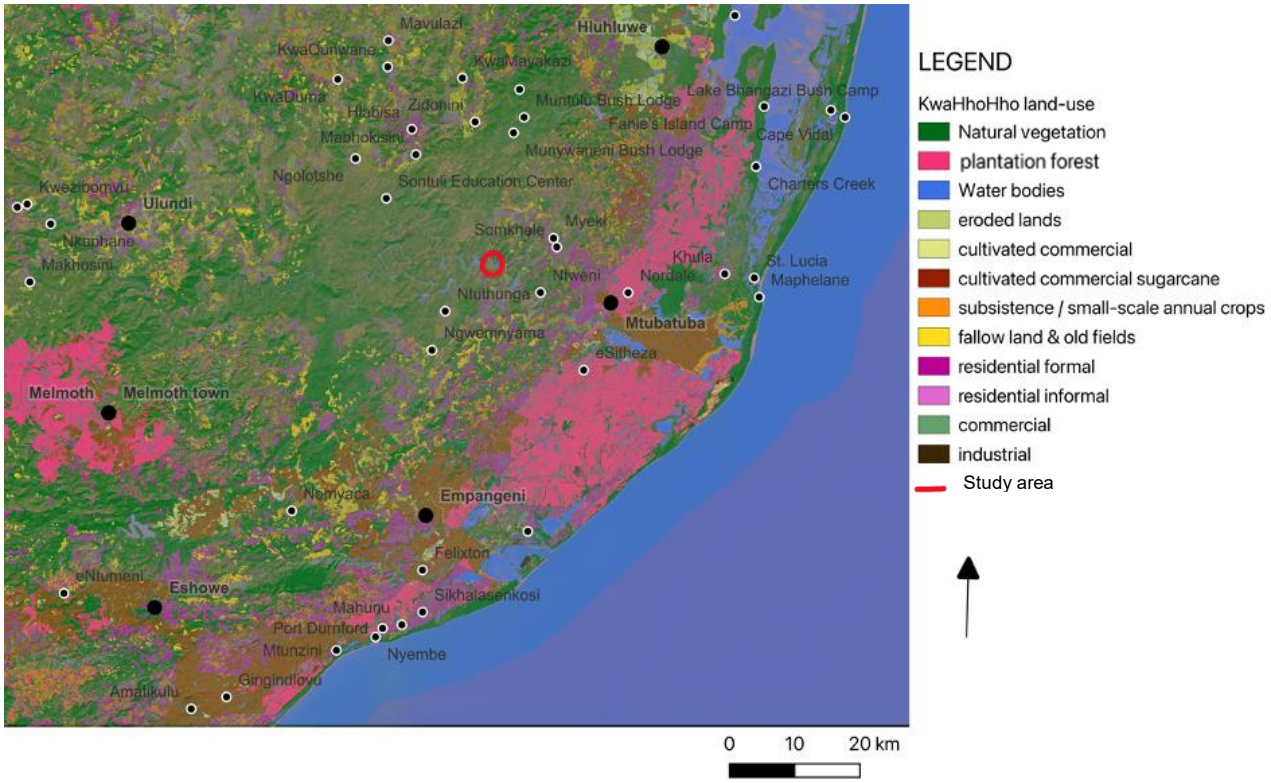

Figure 7: *KwaHhoHho and surroundings land uses, 2020*
Source: Data sourced from SANLC, 2020 and map created by Jessica Fortes using QGIS. Interview area circled in red.

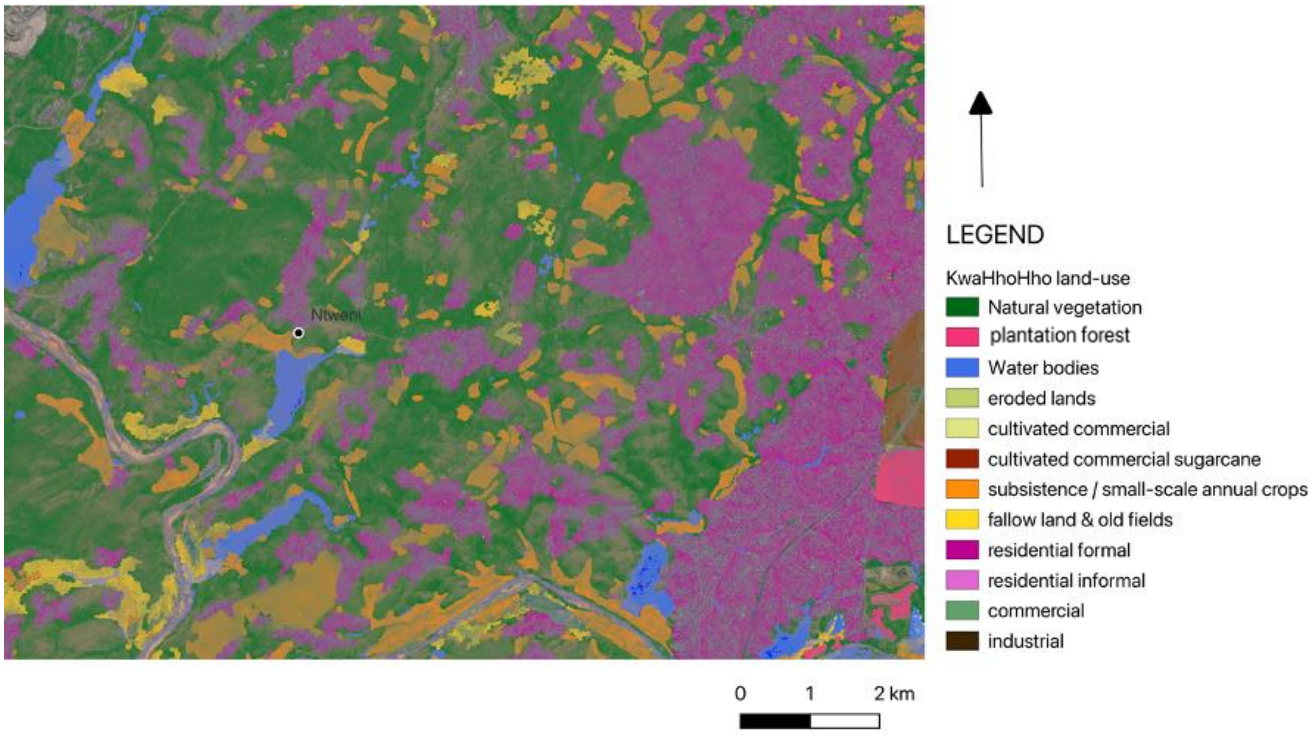

Figure 8: *Detailed KwaHhoHho land uses, 2020. Zoomed in area from Figure 7.*
Source: Data sourced from SANLC, 2020 and map created by Jessica Fortes using QGIS.

b) Ingwavuma

Land use in Ingwavuma (Figures 9 and 10) compared to KwaHhoHho shows a similar distribution of small-scale farming (orange) attached to residential areas (purples) but with the surrounding natural vegetation covering a greater area. Furthermore, there is no sugarcane and the plantation forest is much more limited.

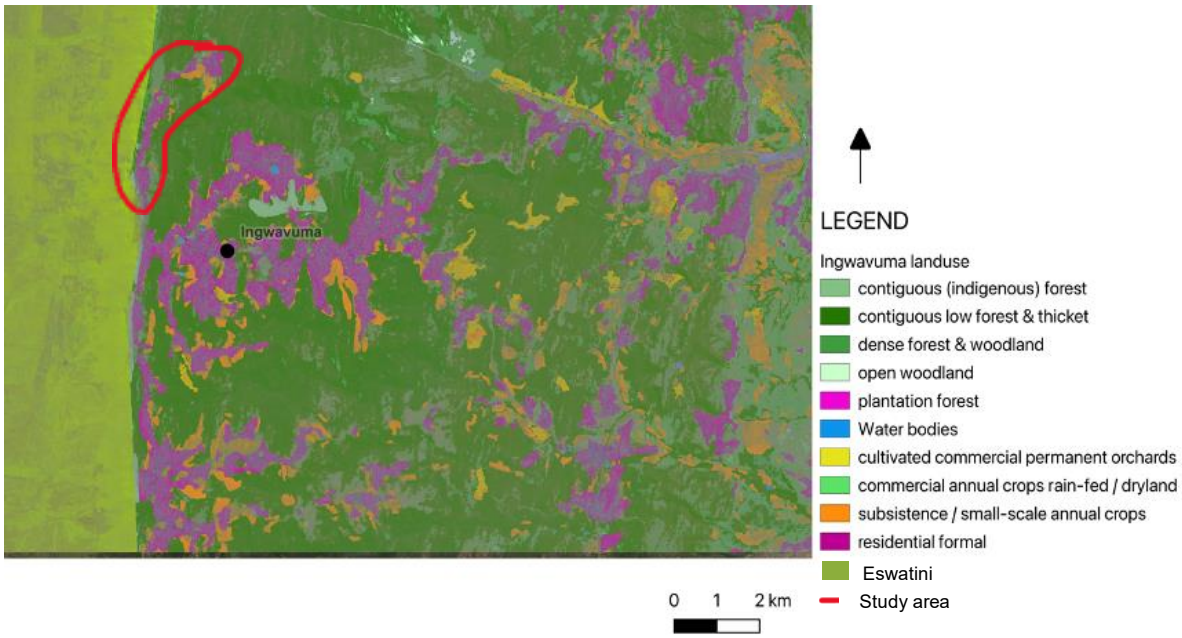

***Figure 9**: Ingwavuma and surroundings land uses, 2020.*
Source: *Data sourced from SANLC, 2020 and map created by Jessica Fortes using QGIS. Area where interviews took place circled in red.*

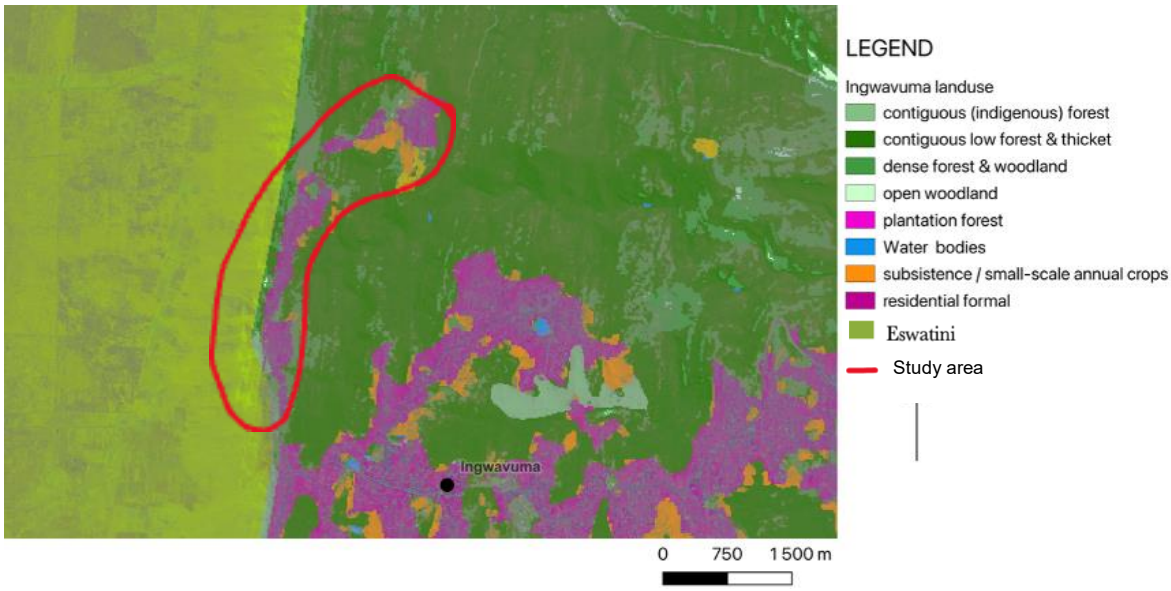

***Figure 10**: Detailed land use in Ingwavuma, 2020.* Source: *Data sourced from SANLC, 2020 and map created by Jessica Fortes using QGIS. Area where interviews took place circled in red.*

Land in South Africa's former homelands is held under communal tenure, where access is tied to membership of a tribal community rather than private ownership. Chiefs and headmen oversee land allocation and use (Adey et al., 2004). Since both KwaHhoHho and Ingwavuma fall under this system, farmers do not own their land and must obtain approval from local leaders for land-use decisions

(Ngcoya and Kumarakulasingam, 2016; Mbatha, 2022). For a more detailed explanation see: 5.4 Traditional Authorities

4.4.1 Subsistence farming

Within KwaZulu-Natal, 89,8 per cent of farming was backyard farming with 82,8 per cent producing only for their own consumption in 2022 (Census 2022). As noted by Ngcoya and Kumarakulasingam (2016) small-scale farmers often grow crops to supplement purchased food. This was seen to be the case with most participants interviewed, although the extent of this varied per person and between the two case studies, with a greater reliance on shops found in KwaHhoHho. Ngcoya and Kumarakulasingam (2016) claim that subsistence gardens in the former homelands in KwaZulu-Natal are typically small plots of lands attached to their homes and estimated that near Mtubatuba these range between 0.5 and 2 hectares per household.

Small-scale farmers usually practise traditional farming methods in these gardens that are passed down through generations. Industrial agricultural methods are also used and taught by agricultural extension officers in the areas. Industrial agriculture is based around new technologies such as GM seeds and their co-technologies such as chemical fertilisers and pesticides as well as monocropping methods and soil tests (Dubb, 2012). Traditional farming methods on the other hand, have adapted out of the complex local conditions, require no external inputs and include a large variety of traditionally cultivated crops (a mixture of grains, legumes, cucurbits and others) and crop wild relatives and animal wildlife using ecologically sustainable and companion planting techniques (Dubb, 2012; van Niekerk and Wynberg, 2017). Another important aspect among small-scale farmers is seed networks of exchange which take place between farmers, relatives and other members within the community. These systems of exchange are important for strengthening social systems, enabling farmers to have a large diversity of seeds, as well as for financial reasons (van Niekerk and Wynberg, 2017).

With high levels of poverty in the area, subsistence farming is vital to people in rural areas as a means of food production. During the rainfall season yields increase and people can reduce their food expenditure significantly (Ngcoya and Kumarakulasingam, 2016). As noted by Edward Lahiff (2000) subsistence farming is often associated and practised in the former homelands and is largely a household activity which tends to be work performed by women and sometimes older men and children. (Lahiff, 2001: Bakre, 2015). Ngcoya and Kumarakulasingam (2016: 853) state that "subsistence is a condition, not a choice. If one is a subsistence gardener, one is black, most likely a woman, and very likely lives in one of the former Bantustans[11]" .

Owning of cattle is also a significant part of people's lives. Cattle are both a source of sustenance, Zulu identity and income. Participants often referred to their animals as their "banks", and these animals roam freely around both Mtubatuba and Ingwavuma.

4.5 Geology, Vegetation and Climate

4.5.1 Climate

The uMkhanyakude District area is characterised by diverse underlying geological formations and many river catchments which result in a variety of environments (Umgeni Water, 2016). The area is marked by erratic dry and rainy seasons with a sub-tropical climate. From November to February it typically experiences a hot and wet summer which turns into a cold and dry winter between June and August. Summer temperatures range from around 30 degrees Celsius rising to about 40 degrees in the peak months of December to February, with winter months dropping no lower than 16 degrees Celsius.

[11] Separate territories created by the apartheid regime in South Africa for black African occupation (Nyambi and Makombe, 2019).

(Umgeni Water, 2016). Although the area is prone to droughts and climate variability, rainfall normally occurs between October and March with peak rainfall in January (Umgeni Water, 2016; Sacolo et al., 2018; Leonard, 2022). Figure 11 shows mean annual precipitation using data from rainfall stations near the case studies areas

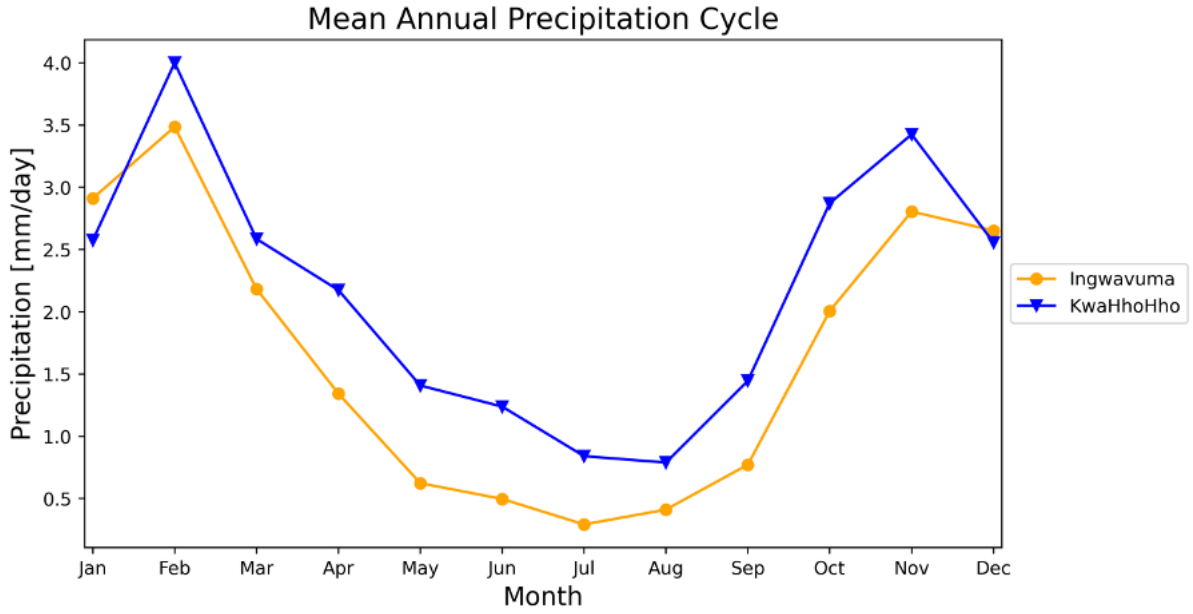

***Figure 11**: Mean annual rainfall near KwaHhoHho and Ingwavuma from 1991-2022*
Source: data supplied in private communications by SAWS (2024) for climate stations Makatini Research Centre (Ingwavuma) and Riverview (KwaHhohho). Mapped by Jessica Fortes.

A study by the Department of Environmental Affairs (2017) on the change of climate in KwaZulu-Natal has been circulating. Of particular relevance to this research is a change in temperature, rainfall and extreme events. This vulnerability study of the impacts of climate change compared climate change trends predicted from models in 2009 for KwaZulu-Natal to those in 2016, and also discusses future predictions. An overarching increase in temperature for KwaZulu-Natal was estimated, and remains valid, as well as in the annual means of maximum temperatures.

Rainfall patterns were discussed as being less predictable and simple to identify (DEA, 2017). In the summary of climate projections in KwaZulu-Natal the study did note that model projections tended towards decreasing annual rainfall in the north; however, this was identified as a small change (DEA, 2017). Despite the fact that this was not firmly announced in the paper, other authors (Leonard, 2022; Patrick 2021) speak about a decrease in rainfall within the uMkhanyakude municipality where the case studies are situated, however, the source of this data has been unclear. Qualitative data from interviews near the case studies also point to a reduction of rainfall which is emphasised far more than the quantitative data implies.

A study completed of climate trends in South Africa by Thomas et al. (2007) using both climate data analysis and participant interviews brought attention to the increase in rainfall variability and flash flooding. They note an increasing interannual variability in the rainfall record and a trend towards higher rainfall in the first half of the growing season, with an increase in early season rain days and a decline in late season (February and March) rains. "This is further represented by an increase in heavier rainfall events in the early season and a predominance of low volume rain events later in the season" (Thomas et al., 2007: 307). These findings align with the Department of Environmental Affairs (2017) article which states that "climate change will also affect important climatic attributes such as seasonality, intensity, frequency and persistence" (DEA, 2017: 51). The increase in climate variability was also noted by Bakre (2015), Mthembu and Hlophe (2020), Leonard (2022) and Patrick (2021).

Recent research conducted in the uMkhanyakude region by Bakre (2015) Mthembu and Hlophe (2020); Leonard (2022); Patrick (2021) and the uMkhanyakude district municipality (2021/2022) point to a link between the changes in climate and food insecurity. Most residents living in uMkhanyakude rely on rain-fed agriculture. Higher temperatures and lower annual rainfall lead to drying top-soils and increased need for irrigation while an increase of flash flooding and droughts cause erosion, rotting and destruction. This has resulted in huge challenges for growing crops and owning livestock and as such has affected food security in the area.

4.5.2 Vegetation type, soil and topography

Bush encroachment is something faced in many places due to land use, climate change and alien invasive species. Hoffman (2014) speaks about bush encroachment of woody plants in the savanna biome taking place in KwaZulu-Natal. This is the result of local drivers such as a lack of fire due to human interventions and overgrazing, as well as global drivers such as climate change and air composition. Over the last 100 years there has also been an influx of alien species which have colonised the land and outcompeted indigenous plants (Hoffman, 2014; Mthembu and Hlophe, 2020).

Figures 13 and 14 below show the vegetation type in both areas using GIS mapping. The vegetation type can be understood together with the soil type and topography of the areas. The case studies have different vegetation types; however, in both areas satellite data suggests an increase in woody vegetation.

a) KwaHhoHho

Vegetation in the case study area of KwaHhoHho, is comprised of Zululand coastal thornveld (blue) (Figure 12), which forms part of the savanna biome and is found on gently undulating landscapes supporting wooded grassland (see Image 5). A strong feature of the vegetation is clumps of bushes which are particularly numerous on deeper soils (Mucina and Rutherford, 2006). The vegetation is made up of small-trees, succulent trees, tall and low shrubs, herbaceous climbers and herbs.

The area is underlain by Letaba formation basalts of the Karoo supergroup with soils to a depth of 200-33mm (Mucina and Rutherford, 2006). Due to the location of KwaHhoHho on the higher-lying areas, the area is characterised by shallower, less nutrient-rich, mayo soil type with a high clay content (Mucina and Rutherford, 2006). Mayo soil types are classified as having a poor land capacity and are known to not be suitable for arable agricultural land use. However, they are good for natural pastures for light grazing (Setsipane, 2022).

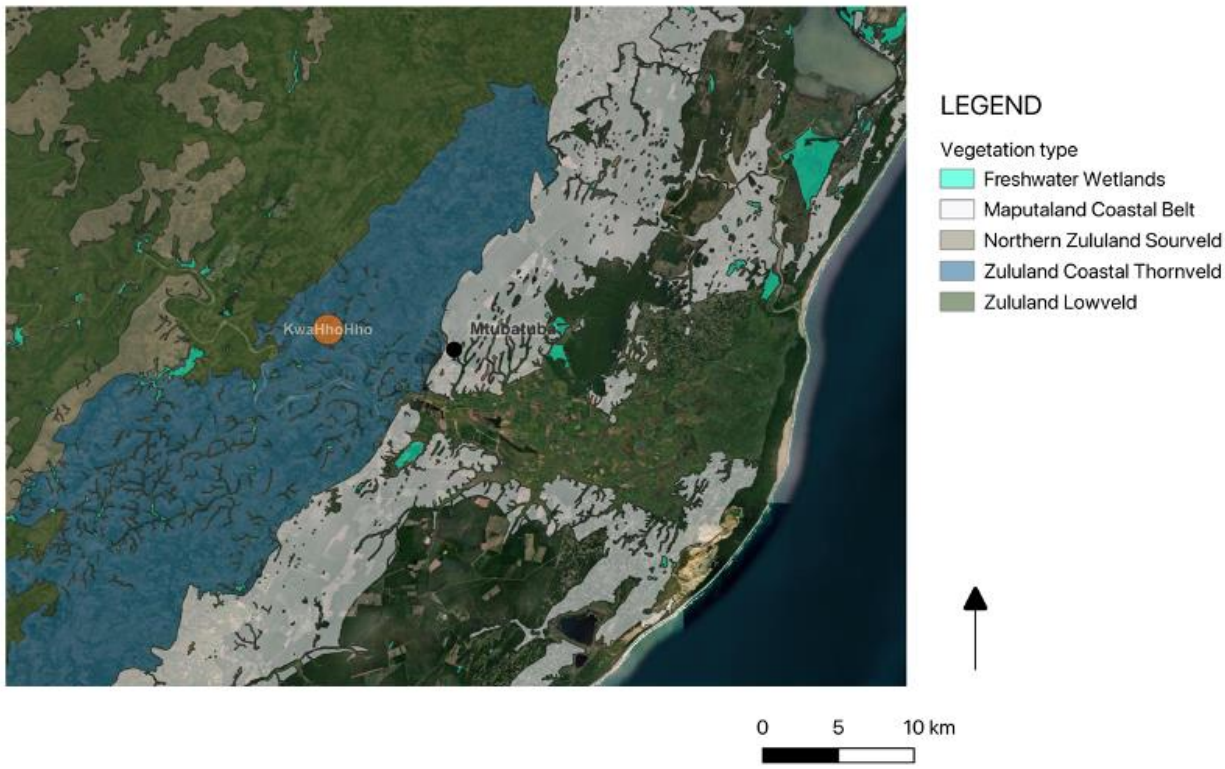

***Figure 12**: GIS map of Vegetation at and aroundKwaHhoHho*
Source: Data sourced from Dayaram et al. (2019). Map created by Jessica Fortes using QGIS.

***Image 5**: KwaHhoHho showing the Zululand Coastal Thornveld vegetation.*
Source: Google Earth. 2022

Research conducted by van der Linden et al. (2008) highlights how land use and soil properties have influenced the floristic variation in the riparian woody assemblages. Grasslands are being colonised by woodland and forest communities (van der Linden et al., 2008).

b) Ingwavuma

Figure 13 illustrates the vegetation type at and around Ingwavuma: Lebombo Summit Sourveld (blue) is located around the built-up areas of Ingwavuma. Surrounding Ingwavuma Southern Lebombo Bushveld (yellow) can be seen.

Lebombo Summit Sourveld is found at localised highpoints on the crest of Lebombo Mountains. It is characterised by open, tall, wiry, sour grassland on ridge plateaus and sloping flanks and peppered with solitary savanna trees and low bushes (see Image 6 below). Mucina and Rutherford (2006) state that the Lebombo Summit Sourveld is one of the most endangered vegetation types in KwaZulu-Natal due to the encroachment of alien plants as well as overgrazing and expanding cultivation).

The Lebombo Summit Sourveld is found on the shallow soils of Glenrosa and Mispah forms on the Karoo Supergroup (Mucina and Rutherford, 2006). This means that it has a rocky soil type which is genuinely shallow as they are impeded by a layer such as a weathering saprolite or hard rock (Setsipane, 2022). These characteristics mean this soil has a low agricultural potential as it is not suitable for cultivation and only light grazing (Setsipane, 2022)

Surrounding Ingwavuma and the Lebombo Summit Sourveld is Southern Lebombo Bushveld. This vegetation is characterised by open bushveld dominated by *Acacia* and *Combretum* species (Mucina and Rutherford, 2006).

The case studies and multidimensional livelihoods of those living in KwaHhoHho and Ingwavuma reflect the history of South Africa as former homelands. Although KwaHhoHho is peri-urban and Ingwavuma is rural, and they have many differences, they are also alike, with the majority of those living there facing similar challenges and partaking in subsistence farming. They are both situated on diverse biomes which are increasingly being colonised by bushy vegetation, and face water struggles in the face of hotter temperatures and dryer growing seasons.

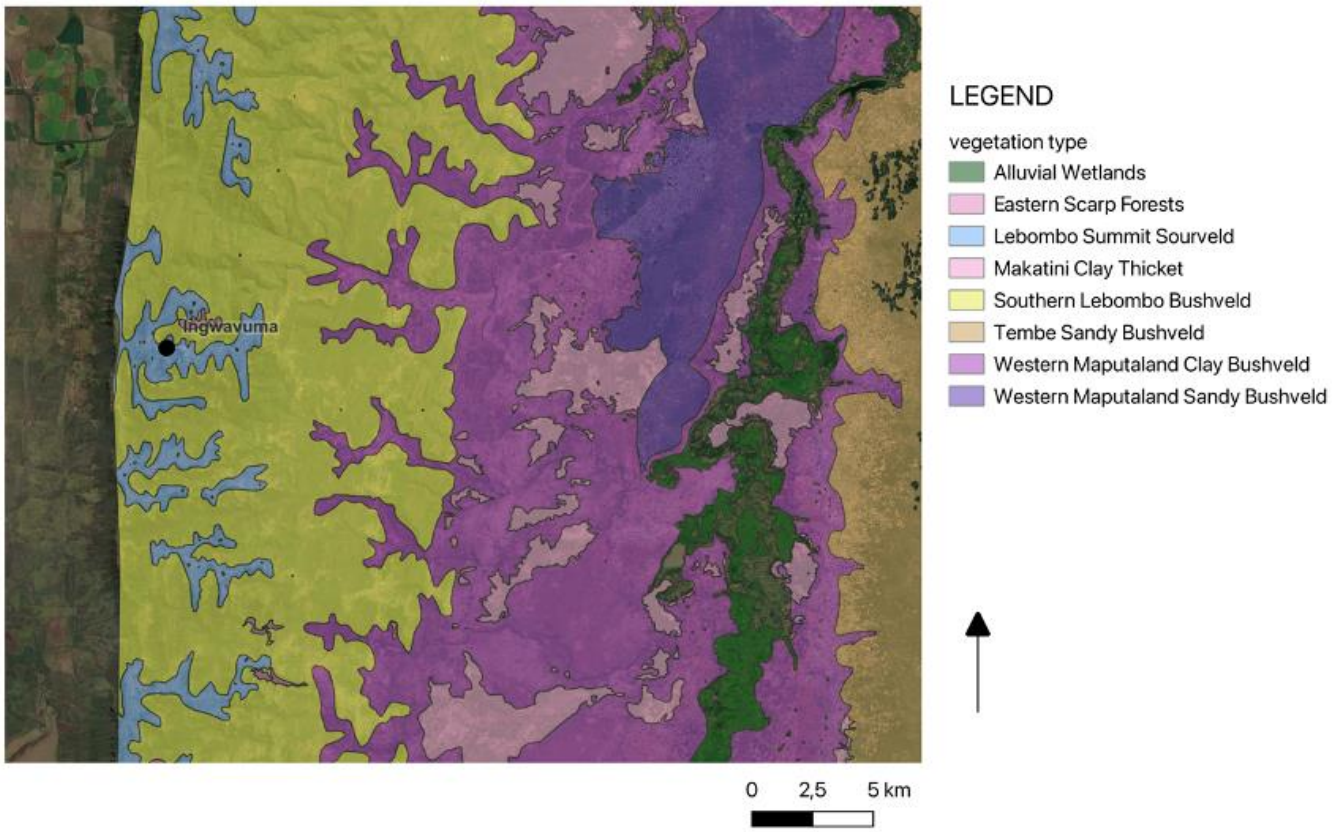

Figure 13: *GIS map of vegetation type at and around Ingwavuma Source: Data sourced from Dayaram et al. (2019).. Map created by Jessica Fortes using QGIS. Ingwavuma area circled in red.*

Image 6: *Kwalindizwe located on the sloped escarpments of the Lebombo Mountains. Source: Google Earth. 2022*

In conclusion, this chapter has provided a detailed background of the case study communities, integrating socio-economic, environmental, historical, and political information from both secondary sources and primary data, including insights from participants, visual observations, and GIS mapping.

By doing so, it establishes the foundation necessary to interpret the lived experiences of local foodways, which are explored in subsequent chapters.

Chapter Five: Policy Context and Key Actors

External actors also play a large role in shaping local foodways and the decisions made by participants regarding their foodways. This chapter broadens the scope slightly, to acknowledge the role of some of these actors in foodway systems. The choices made by farmers, particularly, are influenced by the resources that are provided in the form of technologies, seeds, information and training. Within KwaHhoHho and Ingwavuma, key actors include government officials (seen most prominently in the form of agricultural extension officers), multinational companies within the agricultural sector, non-government organisations (in particular, Biowatch) and traditional authorities. This chapter will also explore how these actors may be actual but not always direct drivers of change in the foodways studied. It discusses different approaches to strengthening food access and availability from actors and speculates as to what mindsets and motives underline their decisions. This chapter does not intend to quantify how much of an influence these actors have had on local foodways; rather, it recognises the complexity of the system and acknowledges that other actors beyond those partaking in local foodways are influencing them both directly and indirectly.

5.1 Government structures

Access to food is a constitutional right within the Republic of South Africa's Constitution where it states that "everyone has the right to have access to sufficient food and water" (section 27(1)(b)) and food security is a national priority (Republic of South Africa, 1996). Food security falls within the responsibility of South Africa's agricultural sector which currently (as of June 2019) falls under the national authority of DALRRD, the Department of Agriculture, Land Reform and Rural Development, previously DAFF, the Department of Agriculture, Forestry and Fisheries (Hlahla et al., 2023).

It can be seen from DALRRD websites that mention subsistence farmers, that the department has taken a value-chain focus towards creating food security. DALRRD's mandate states *"*To provide national frameworks to promote the sustainable household and national food production by improving production systems of subsistence producers in the agricultural, forestry and fishery sector to achieve food security and sustainable livelihoods*"* (DALRRD, 2023). In their *Strategic Plan 2020-2025*, focus is placed on expanding agricultural production and transforming the industry. Strategies to support small-scale farmers include rural outreach and capacity building that aims to link farmers with markets through the guidance of extension workers (DALRRD, 2023).

The provincial government exercises legislative and executive powers in accord with national government policies. The Department of Agriculture and Rural Development (DARD) governs the agricultural sector within KwaZulu-Natal (Hlahla et al, 2023). In DARD's most recent *Strategic Plan 2015-2022,* they state "The KwaZulu-Natal provincial government has emphasised the need for agricultural potential to be unleashed to ensure food security, grow the contribution of this sector in the provincial economy, to increase the extent of land under agriculture production and to expedite the resolution of land claims to minimize loss of production" (DARD, 2015a). DARD thus aims to achieve food security and address existing inequalities of land dispossession and poverty through encouraging the commercialisation of smallholder[12] producers in KwaZulu-Natal. The approach typically involves integrating smallholders into commercial value chains though connecting them to markets, whose demands often require agricultural inputs such as seed, fertiliser and pesticides (DARD, 2015a; Stephen and Drimie, 2021).

The case studies fall under the Jurisdiction of uMkhanyakude District Municipality as well as the Jozini (Ingwavuma) and Mtubatuba (KwaHhoHho) local municipalities. The values of national and provincial

[12] For the purposes of this dissertation, I define "smallholder farmers" as farmers who "produce food for home consumption, as well as sell surplus produce to the market" (DAFF, 2013).

governments can be seen reflected in the governance and policies on a local level: For instance, in the principles and focus of agricultural and livestock extension officers positioned in the areas. Extension officers work with subsistence farmers and provide them with advice and knowledge pertaining to agriculture. In interviews with these extension officers, it became clear their intentions aligned with national and provincial governments, with their focus on introducing small-scale farmers to markets. For instance, an extension officer in Ingwavuma stated: "*I've been given the responsibility in the ward to educate farmers to farm for profit. So, if you are getting farmers to farm for profit, there are a lot of activities that we have to do to ensure that they get to that level because the demand - responsibility of the municipalities or department - is to close the gap between smallholder farmers and subsistence farmers.*" (Participant 39, Ingwavuma, 2023).

The push towards profit is important to note when investigating external influences on local foodways. Most of the participants from KwaHhoHho and Ingwavuma are subsistence farmers and a few smallholders, in the sense that they are part of communal gardens and/or sell at local markets. A food security approach focused on using commercial farming methods, biotechnologies and co-technologies and centring the introduction of farmers to markets, either bypasses the richness and diversity of traditional subsistence agriculture – as detailed in section 6.1 and section 6.3 below – and/or reconstructs it to fit into wider global food systems. These global food systems are profit-driven, high extraction and encourage monocultures of non-traditional foods. In order to keep up with the high demands, farms need to provide high quantities of produce which are to supermarket standards. These foods are conventional crops and because of the large quantities of produce farmers are expected to supply, monocropping techniques are often required. (Fig, 2024; Gouse, 2012). As such, the push towards joining these markets can lead to the dismantling of traditional farming systems in place. For instance, in KwaHhoHho it was discussed how a few years prior to 2022, a group of farmers had started selling their produce to a supermarket and as a result their gardens had turned into a single crop and they were no longer growing a diverse range of traditional foods. Clapp (2024) notes that the introduction of hybrid seed and agrochemicals promotes monocropping agricultural systems that decrease plant genetic diversity and make crops less climate resilient.

It is important to recognise that commercial farming per se is not a bad thing. It has the potential to be a valuable – and much needed – means of income and poverty alleviation. The (likely unintentional) lack of balance and sensitivity to the losses that ensue from the official government approach, as typically promoted by extension officers, are the issue. The problem lies in how the approach of encouraging commercial farming methods fails to consider other aspects of people's existence, such as their cultural identity, sense of historicity and traditional knowledge.

5.2 Multinational companies: Monopolisation

Underlying rural development programs in KwaZulu-Natal is the goal for successful commercialisation. This has resulted in governments at all three levels opening the gap for biotechnological companies to gain dominance over rural agriculture, favouring methods that accompany commercial large-scale agriculture over traditional farming methods which require little input (Williams, Pelser and Black, 2018). As noted by Fig (2024), these pressures can create a dependency on hybrid or genetically modified seeds, fertilisers and herbicides. Within KwaZulu-Natal, GM cultivars are available and easily accessible and often promoted over traditional seeds which are decreasing in availability and accessibility (Williams, Pelser and Black, 2018).

One way the government promotes biotechnology in KwaHhoHho and Ingwavuma is through extension officers. The six extension officers interviewed all viewed their role as that of educators, describing how farmers would come to them for advice which they would give based on their own knowledge and expertise. Their goal is food security with a subgoal of introducing farmers to markets. Four of the five agricultural extension workers interviewed advocated for the use of biotechnology, even though the extension worker who encouraged the use of organic farming claimed far more success within communities. One extension officer who had just begun working in Ingwavuma remarked: "*My*

responsibility is to transfer the new innovations... I always go around and search for something that will be user friendly... There's a new variety in the market. I introduce those cultivars, helping the state companies to introduce that seed to these people and give them the advantages and disadvantages of those particular cultivars." (Participant 36, Ingwavuma. 2023). They named the seed companies Pannar and Syngenta in particular, mentioning that farmers buy vegetable and maize seeds from these companies. The previous officer in the area had a stronger focus on pesticides and fertilisers, stating "*I used to advise them that if it is this chewing insect you must use this kind of chemical, if they are biting insects then you can use this, if those diseases they can use this on their plants. Chemicals like Malathion*[13] *to deterrence 50 per cent. Also, fertilisers. Because plants do need fertilisers."* (Participant 37, Ingwavuma. 2023).

Subsistence farming in local foodways through traditional methods such as seed saving, seed sharing, companion planting and farming in a way where no external inputs are required is not only healthier for consumers and the environment (Akinola et al., 2020) but was also emphasised by participants as a way of saving money (see Chapter Six). Whereas traditional practices are self-sufficient, with the promotion of these innovations and technologies, farmers become locked into a cash economy requiring them to pay for yearly inputs such as single use seeds as well as co-technologies such as pesticides, herbicides and fertilisers (Kloppenburg, 2004). Because the seeds are designed for single usage by seed companies, traditional seed saving practices are broken down and with-it social networks (Greenberg, 2024).

Marshak et al. (2021) investigated the ecological deskilling [14] of subsistence farmers following the introduction of modern seed varieties, including hybrid and genetically modified seeds and their co-technologies. The research was conducted in Northern KwaZulu-Natal, in a community not far from KwaHhoHho and Ingwavuma. They identify a loss of ecologically-based practices which "involves the replacement of traditional locally adapted seed and farming practices with generic seed and co-technologies developed at a distance" (Marshak et al., 2021: 1207). This points to the incompatibility between traditional practices and new technologies which are introduced and promoted by extension officers in the area. For instance, growing pumpkins and beans between maize plants (a common practice observed in both KwaHhoHho and Ingwavuma) can no longer be done if farmers use RoundUp to spray as using these chemicals calls for monocropping of crops. Marshak et al. (2021) also identify a loss of relational knowledge and socio-ecological agency, stating

> [A] loss of relational knowledge occurs when there is a cognitive disconnect between farmers and key elements of the agroeco-system. This occurs when local or traditional farming knowledge becomes devalued in favour of expert-lead innovations. A loss of socio-ecological agency occurs through the way in which a growing reliance on modern seed and co-technologies can reduce the ability of farmers to act autonomously and to make free and informed choices in how they farm and respond to socio-environmental changes" (Marshak et al., 2021: 1208).

Another way in which extension officers can impact local foodways is through the promotion of conventional crops, such as spinach, cabbage, beetroot and GM maize over traditional crops such as sorghum, Zulu potato, taro and calabash to name a few, as seed companies do not typically produce traditional seed varieties (Greenberg, 2024). An extension officer who promotes the use of new cultivars noted that traditional farmers have their own seeds, but that this is something separate to those seeds that the extension worker recommended: "*It's something that they have (traditional seeds). We don't keep those, the only thing that we supply is the maize and beans. Then vegetables; your cabbage, your spinach, your beetroot. What else? Onions – we issue those to them*" (Participant 36, Ingwavuma, 2023).

[13] Malathion, although banned in many countries due to it being very toxic, is still used widely in the Global South. It can be found on the PAN (Pesticide Action Network) international list of highly hazardous pesticides of 2021, where they note its long-term chance of causing cancer and high toxicity to bees (PAN, 2021).

[14] "[The] intertwined nature of social and ecological relationships in agricultural systems and how their coevolution can be altered, reoriented and/or ruptured through the introduction of new seed technologies" (Marshak et al., 2021: 1191).

Not only does the promotion of conventional crops lessen the accessibility and availability of traditional foods but it also reduces plant and diet diversity, which is significant to food security and resilience to stresses such as climate change (Roche et al., 2008; Wynberg et al., 2012). In many ways this also prevents food sovereignty as farmers and consumers are no longer in control of food outcomes but instead are dictated by markets and capital (Fig, 2024, Greenberg, 2024).

Marshak et al. (2021) note that farmers become dependent on the knowledge of extension officers as GM seeds and co-technologies are based in industrial agricultural methods and traditional knowledge is side-lined. They further bring attention to the fact that farmers are often unaware of which cultivars they use, from which company and whether it was open-pollinated variety, GM seed or conventional hybrid. Interviews undertaken in this research with extension officers also found a lack of clarity regarding which seeds were used and from which company, even when asked about this directly. For instance, an extension officer in KwaHhoHho stated: "*We don't choose seeds, we just order and the seeds will come. We don't usually choose the company we buy, that is not for us. What I can tell is that every time the seeds there we are receiving they offer quality*" (Participant 43, Mtubatuba 2024). The lack of information and type of training received by the extension officers and how this is then passed to farmers, means that farmers lose their ability to choose which seeds they grow.

5.3 Non-Governmental Organisations

In contrast to these narratives are a group of Non-Governmental Organisations (NGOs) in the region which advocate for the use of traditional farming methods and seed saving practices while criticising current developmental trends that prioritise mechanisation and commercialisation.

NGOs have been present in Africa since the colonial period. That said, there has been a significant proliferation since the 1980s, post-independence (Oyugi, 2004). The 1970s in Africa brought with it a shift in attitude away from state-centred development towards bottom-up approaches in which NGOs played a significant role. The steady roll back of the state, coupled with the failure to provide basic services has caused the presence of NGOs to burgeon (Oyugi, 200; Nega and Schneider, 2014). The areas where the interviews were conducted have limited government support and a lack of provision of basic services and as such, NGOs are filling the gap (Oyugi, 2004; van Niekerk and Wynberg, 2017; uMkhanyakude district municipality, 2021/2022). Adey et al. (2004) take note of the fact that since government policies are placing focus on emerging farmers,[15] there has been a push for NGOs to intervene and assist the government in supporting subsistence farmers.

5.3.1 Biowatch South Africa

The environmental justice NGO Biowatch South Africa has played an active role in KwaHhoHho and Ingwavuma since 1999. It works with smallholder farmers, the majority of which are women, across five communities in the UMkhanyakude District as well as civil society organisations and government. The goal of the organisation is to give people control over their foodways and natural resources within an agroecological, biodiverse and sustainable system (Biowatch, 2024).

Their presence has had a large role in shaping the foodways of participants. Biowatch promote agricultural practices in line with agroecology principles that entail a reduction in external inputs (such as synthetic fertilisers, seeds and chemicals) by using sustainable farming practices, such as including livestock in plant cultivation, building strong seed archives, promoting traditional seeds and seed exchange among farmers, as well as introducing intercropping and prioritising species variety. Biowatch aim to create sustainable agroecological practices, to increase food security and sovereignty, and to help

[15] "Emerging farmers" is the term used by the government to reference (black) farmers who are starting commercial farming for the first time (DALRRD, 2023).

farmers take care of natural resources while raising public awareness and empowering through knowledge (Biowatch, 2024). Explaining the role of the NGO in the local communities, a member of Biowatch noted *"We build on what they know. We introduce some other innovations that are happening somewhere else in the world that are useful and helpful. And those who are very good at execution, they almost run it. We're not training them anymore, we use those sites as learning sites because we have established and we've changed the mindset of people and people are growing food for themselves. ...we become a network in a community of practice for agroecology."* (Participant 41, Mtubatuba, 2024)

Participants in both areas often referred to Biowatch when explaining farming methods or what inspired them to farm a certain way. Although Biowatch introduced new innovations, these appeared to align strongly with traditional farming practices and had the effect of strengthening and promoting traditional knowledge systems and local foodways. A few farmers even noted that their relationship with Biowatch reconnected them to the traditional farming methods of their childhood: "*The food I ate growing up is the same food I eat now because I do not use fertilisers. We ploughed in our gardens and then put compost in soil not fertilisers. Because of the growing demand there was a time where fertilisers were used. However, Biowatch came and advised us, and they took us back to the way we used to do things, and we stopped using fertilisers and used compost like before."* (Participant 20, KwaHhoHho, 2022)

Seed-saving networks are at the heart of traditional foodways. They ensure that traditional varieties are preserved, bring people together and encourage the exchange of knowledge as well as allowing farmers to remain independent as they do not have to buy seeds. Biowatch supports seed exchanges and a district-wide community of practice, and in so doing both celebrates and promotes traditional farming practices. Seed exchanges organised by Biowatch got people together from all over the uMkhanyakude district. A participant from KwaHhoHho who acted as one of the trainers for Biowatch said: "*I usually meet with other farmers from Pongola, Ingwavuma, Ngwanase and other places. We are all old in our gatherings, so we share knowledge, and it helps to go to these places because it makes us strong. We also meet to show and educate young people who do not know the different types of seeds and how to prepare them. We also educate each other on how to cook and prepare different crops."* (Participant 24*,* KwaHhoHho, 2022*)*

The outcome that the presence of Biowatch has had on current foodways in KwaHhoHho and Ingwavuma can be better understood through a comparative analysis with the work of Mahlase (2017) in Hlabisa, KwaZulu-Natal which explored the uptake of GM maize by smallholder farmers. The foodways in Hlabisa were seen to have been significantly altered due to the influence of seed companies (particularly Monsanto[16]) and the local Department of Agriculture who were identified by farmers as being the primary drivers of external agricultural knowledge and support in the form of advisory and extension services. Mahlase (2017) traced the dominance of these actors in the area to an uptake of the use of GMOs and a resulting shift in foodways away from traditional, heterogenous, self-contained systems:

> The home gardens of GM crop farmers are changing to becoming less diverse and homogenous like their commercial counterparts and valuable traditions are slowly being eroded... traditional maize farming has been undermined by agricultural policies and seed companies advocating for the use of "better" modern maize varieties over the traditional ones... This could become a dangerous trajectory with the erosion of traditional maize farming knowledge in the smallholder agriculture context (Mahlase, 2017: 73).

In many ways, it is the fact that farmers in Hlabisa received advice from governmental extension officers and Monsanto without being exposed to alternatives which encouraged the uptake of technical solutions, such as GM seeds, fertilisers and pesticides. However, in both KwaHhoHho and Ingwavuma, Biowatch promotes a contrasting narrative that brings awareness to the caveats of these "solutions" and offers advice and teaches skills which encourage the farmers' traditional together with agroecological methods. It is clear that in both KwaHhoHho and Ingwavuma, Biowatch has been favoured by subsistence farmers in the area. When farmers were asked where they had learnt to farm/herd,

[16] As a result of acquisition, Monsanto was renamed Beyers in 2018.

participants would mention their childhood and Biowatch: " *We used to observe our grandmothers. However, right now we farm the way Biowatch taught us to. Back in the day we learned from our grandmothers but now we use the information we got from Biowatch. Yes, they taught us.*" (Participant 22, KwaHhoHho, 2022) Only herders mentioned extension officers. The extension officer assigned to KwaHhoHho (Participant 43, Mtubatuba, 2024) noted that she has played less of a role when it comes to giving farming advice as farmers have their own farming practices (traditional practices with the support of Biowatch). There did not appear to be a forced choice between Biowatch and government support however, the principles of agroecology and the farming techniques taught by extension officers clashed because they were not complementary. As a result, those strongly involved with Biowatch did not receive support from extension officers when this clash arose. The large presence of Biowatch provides a plausible explanation for the reduced presence of extension officers in Ingwavuma.

Although it is not accurate to say that the presence of Biowatch has resulted in the vibrant local foodways that exist in KwaHhoHho and Ingwavuma, their influence has played a significant role in maintaining and promoting foodways and shaping them differently to places where other actors played a larger role.

5.4 Traditional Authorities

In both case studies there exists a dual governance system, made up of traditional authority and municipal structures. Ingwavuma falls under the Jozini Local Municipality within the uMkhanyakude District Municipality, which has six participating traditional leaders. KwaHhoHho, falls under the Mtubatuba Local Municipality within the uMkhanyakude District Municipality and by contrast has only one participating traditional leader (Cooperative Governance and Traditional Affairs, 2020).

The role of traditional authorities and local Indunas[17] was not investigated in depth in this research due to their infrequent mention in participant interviews. Moreover, literature was limited, and I was unable to obtain interviews with traditional leaders or the local Induna. However, it is important to note their role in allocating land within these communities (Ngcoya and Kumarakulasingam, 2016). Within the former homelands of South Africa, land is held under "communal tenure". This means that instead of private land ownership, land comes from membership of a socio-political community (tribal unit). Tribal authorities, such as headmen and tribal chiefs manage communal tenure (Adey et al., 2004). Both KwaHhoHho and Ingwavuma are situated in communal land and because there is no private ownership of land in these areas, subsistence farmers do not own their land. As such decisions on land use need to be approved by local leaders (Ngcoya and Kumarakulasingam, 2016; Mbatha, 2022).

Technically, households on communal land have residential rights as well as rights to land for crop production, as well as having access to common resources such as grazing, foraging areas and other natural resources (Adey et al., 2004). Yet Rangen and Gilmartin (2002) note the challenges of land rights especially for female-headed households. They state that customary law tends to limit the formal means through which women have rights to land, or in which their needs for land, independent of a male associate, can be addressed. This is because gender equality within this sphere is uncommon. For instance, customary laws discourage women from owning land or property, resulting in the traditional authority (under whose jurisdiction land issues fall) usually granting permits to occupy land to the man of the household. Thus, access to land is through a woman's relationship with a man such as fathers, husbands or sons (Makheta, 2024). This may be a challenge within foodways as it was apparent that women dominate this domain and these foodways are dependent on land access. A farmer noted the challenges of finding land to farm as she claimed that there is little support given to women for

[17] Term given to a tribal (Zulu) councillor or headman in the area. "Especially in traditional Zulu society: a headman, councillor, or officer under a chief, often responsible for overseeing the affairs of a district made up of a number of villages" (DSAE, 2025).

subsistence farming from both local and government authorities as preference was given to income-generating activities such as mining.

In conversation with a herder who also farmed in KwaHhoHho he alluded to a breakdown of customary systems taking place. A common theme discussed by women growing crops was the challenge of and lack of support for protecting their gardens from cattle, as erecting and maintaining fencing was expensive.[18] It was in reference to this that it was noted that:

> *Back then* [when he first began to farm]*, before we started planting in the gardens, we would go to court* [tribal court] *where we would let the king know that we were about to start planting. Thereafter, there would be a decree that would be passed in the entire community telling everyone that anyone who has cows must look after them so that they do not enter the gardens. No one is passing the decree or people are not being told by the king to look after their cows anymore. This is why the cows just get into the gardens and eat people's food.*" (Participant 32, KwaHhoHho, 2022).

This quote suggests that customary systems supporting farming livelihoods are no longer functioning as they used to, which can or has potentially led to a change in local foodways due to a lack of support with increasing challenges.

This chapter has highlighted some of the external factors shaping the local foodways of KwaHhoHho and Ingwavuma. Subsistence farmers are sandwiched between several actors and narratives that drive changes felt within local foodways. On the one hand, state actors encourage commercialisation and the use of biotechnologies. This is pushed by extension officers who stay in the areas and offer advice in line with these principles. Similarly, multinational companies dominate the food system and capitalise on the current climate and food crises to encourage the use of patented biotechnologies and agrochemicals. On the other hand, activist NGOs, including Biowatch, offer opposing perspectives and encourage agroecological farming methods. Customary land laws, gender politics, and changing priorities were also noted. After contextualising local foodways within these external influences and pressures the following chapter investigates and describes the local foodways of KwaHhoHho and Ingwavuma perceived and experienced by participant residents.

[18] This topic is further expanded upon in Chapter Seven.

Chapter Six: Local Contemporary Foodways

This chapter gives an overview of local foodways in KwaHhoHho and Ingwavuma. Foodways were shown to be complex, intertwined networks tethered to culture, heritage, and nature. It became increasingly evident during the research that in both case study areas local foodways were irrevocably linked to nature and, as such, extremely sensitive to any fluctuations within it (see Chapter Seven). Food systems were also not distinct from everyday social and cultural practices but rather were embodied within all aspects of daily life.

6.1 Main diet

The interviews showed participants living in both KwaHhoHho and Ingwavuma who partook in local foodways to have similar diets consisting largely of unprocessed foods. When these participants were asked what they ate and from where it was obtained, they would typically speak about the fresh vegetables and traditional bean varieties that make up most of their diets. Maize was mentioned frequently, especially when individuals grew their own. In these cases, participants would also elaborate on the way it was ground and by whom. When sitting outside, Zulu chickens were often clucking nearby, and participants would indicate they were a main source of meat, as well as beef which is mostly bought in the shops. Zulu chickens are usually characterised by their dark colouring with white undercoat and are well adapted to a rural lifestyle. Participants spoke about how the price of these birds was higher than chicken from the shops but worth it because of their tough but rich flavours.

In the months of July to October 2022 during which the interviews took place, participants mentioned cabbage, sweet potato, spinach, pumpkin, beetroot, onions, lettuce, carrots, calabash, green pepper (in the order of most mentioned) as staples within their diet and noted that these vegetables are eaten with a base of maize, a variety of traditional beans, and meat.

6.2 Obtaining food

In KwaHhoHho participants both grew food as well as bought produce from shops and neighbours. The more developed small-scale farmers, especially those closely connected to Biowatch, proudly expressed their ability to rely solely on their gardens for vegetables in the summer months. One participant, who spent hours a day in her garden stated: "*Most of the food I eat is the food that I grow in the garden. I get vegetables from the garden and also traditional food.*" (Participant 21, KwaHhoHho, 2022*).* The distinction between vegetables and traditional food was not made often because in general vegetables from the garden were considered traditional food. Here, however, the participant was referring to traditional grains and bean varieties that she grew as these are traditional foods not found in supermarkets.

While growing of one's own food was spoken about proudly by some KwaHhoHho residents, others confessed to their growing reliance on the shops: " *We normally get the food from ... most of the time we get food from the shop because when we plant, we don't normally use food from the garden. Because maybe like we have bad luck, the food does not grow*[19] *so, most of the food we buy is from town.*" (Participant 22, KwaHhoHho, 2022*).*

In Ingwavuma, vegetables were predominantly obtained from the garden. In these gardens, which were either situated in their backyards or as part of a communal garden, people practised small-scale farming. "*From the garden I get mealies, I get nuts and I get sweet potatoes. I get beans. Jugo beans. Mung bean. Pumpkins. Amabhece- melons. Calabash. Currently, I only buy cooking oil from the shops* [Spar]*. And stock cubes* [Knorrox]*. And meat, like chicken and then beef. And also, onions."* (Participant 2*,* Ingwavuma, 2022*).*

[19] See section 7.1.3. below for a discussion on the reasons why the gardens were not thriving.

During some bad winter months, or when it had been a poor season for growing, people went to the shops or bought from neighbours. One resident, who due to the challenges within the growing season struggled with her crops that year, stated: " *We get the food from the garden only when we have planted and if there was enough rain. If we have a surplus of what we have planted we usually sell it so that we can buy other food.*" (Participant 5, Ingwavuma, 2022).

6.2.1 Farming

The practice of growing food is something deeply intertwined with the lives and culture of female participants in both KwaHhoHho and Ingwavuma. Nearly all participants learnt to farm from their mothers and grandmothers who had gardens of their own. An elderly farmer in Ingwavuma stated: " *We grew up planting, growing food here at home even now I still grow food*" (Participant 15, Ingwavuma, 2022), while a participant from KwaHhoHho observed *"... ever since I was born. I can't stop, it's a part of me. Even now I am thinking about my garden and the time I should be spending there*" (Participant 19, KwaHhoHho, 2022).

The older generations take great pride in being farmers and growing their own food. For instance, a participant known as one of the older generations of farmers in Ingwavuma stated: " *When I want to cook and I realise that I don't have enough ingredients and some are only available in the shops, I get the peanuts from the garden and the chicken and cook them together. I do this when I have visitors to show off that I am a real farmer and I get all the fresh produce from my garden*" (Participant 5, Ingwavuma, 2022*).*

Biowatch has also intervened in both areas, assisting participants in adapting to some of the challenges[20] of growing food in a changing environment, teaching them agroecological methods which can be combined with traditional practices, and helping farmers to reduce reliance on external inputs such as buying seeds, fertilisers and chemicals. Participants spoke fondly of the skills that they have learnt through Biowatch, and many have gone on to become trainers themselves. Although farming in the area has always had elements of agroecology, Biowatch farmers spoke about some of the shifts in farming practices: " *There are changes now because before we just planted. Currently, we first dig holes where we put and keep green manure in, so that when it rains the water stays there in that hole*" (Participant 18, Ingwavuma, 2022*).* Those who were identified as farmers by word of mouth were usually those who had connections to Biowatch and grew their food without the use of chemicals or fertilisers. Yet, as mentioned above, most participants have an embodied knowledge about farming which was taught to them growing up in rural areas where their mothers and grandmothers grew food.

When participants were asked what food makes up most of their diet, the first thing they considered was what they grew. In most cases, if they were unable to grow their food, they would express their desire or inability to grow. In conversations that took place discussing the roots of where participants leant to farm, a link between the reverence of farming and heritage was highlighted. Farming was described as an inherited practice and participants spoke about continuing the lifestyle of their ancestors through farming. It was also closely tied to tradition in that when asked what makes certain foods "traditional" food it was said to be vegetables or wild leaves and fruit that were grown in their gardens[21]. Or for some, produce that was nurtured and cared for using farming practices that aligned with the principles, values and traditions passed down from older generations.

The ability to grow food was something valued by farmers and despite increasing challenges to do so, participants worked hard to maintain foodways centred around farming. The interviews gave the

[20] See section 7.1 below for the environmental challenges and their effects on farming practices.

[21] The lines for what was traditional differed. Most considered it food from the garden but traditional "methods" of farming and values were not as clear cut. They were similar in nature but subjective and adaptive. See section 6.3.

impression that safeguarding foodways was a powerful gesture of cultural continuity and the maintenance of these foodways preserved cultures because of how deeply they were intertwined.

Participants spoke about the exchange of knowledge between farmers. They proclaimed their eagerness to encourage people to have their own gardens and spoke about how they learn from one another. As discussed in section 5.3.1, these knowledge exchanges effectively created a community of practice across a number of areas in the uMkhanyakude district. Part of the gatherings were seed exchange festivals also organised by Biowatch. Here different varieties of traditional seeds were exchanged, and seed rituals performed. The exchange of seeds was not, however, only limited to these events. In Ingwavuma in particular residents spoke about the support network surrounding seeds. Although participants did sometimes source seeds from shops, this was usually only when neighbours did not have them. In most cases participants saved a percentage of crops to use as seed for the following year, and in cases where crops failed, they went to their neighbours who would either gift them the seeds or give them as part of an exchange for different seeds. A participant from Ingwavuma who has been farming her whole life stated: "*Sharing is something we have always done from a long time ago... It builds relationships from one person to another. It also encourages other people because once you give them the seeds they are motivated to plant*" (Participant 3, Ingwavuma, 2022*)*.

As with seed, those who farmed were generous with their harvests and spoke about the importance of sharing food with those without access. A woman who noted that sharing food was common practice in her youth said: "*We see it as important to share food...because the food that we plant ... there are those that don't have it. They don't plant because they have no means to. As a result, we think it's better to give and share with them so that they can get the goodness that comes from this food. Once they have discovered the following year they can ask for the seeds and start their own garden. We see it as very important to share traditional food.*" (Participant 18, Ingwavuma, 2022*)*.

What was observed was the way that relationships were built and sustained by foodways. Exchanges of knowledge and seeds with other community members – and members of other communities – brought people together and strengthened ties through the excitement and love of growing. The sense of close community between those who considered themselves farmers, especially more active members of Biowatch, was apparent. It was observed how social relations were animated by farmers' attempts to strengthen their foodways and a mutual understanding of what these foodways meant.

The value that growing food has to people was consistent in both areas. All those who had gardens expressed the economic, health, access and autonomy advantages. A farmer in KwaHhoHho elaborated saying:

> *The reason why I plant these types of food is that they are healthy for the body. Foods such as sorghum and butternut squash are able to heal the body from certain illnesses. There is no need for eating store-bought food which is treated with chemicals, you eat food from home. Life is always good because we plant and grow our foods naturally (...) There is a huge difference because food from town is tasteless compared to the food we plant which is full of flavour. Also, the food we plant keeps us full for longer compared to the one from shops which makes you hungry all the time. At other times your skin develops a rash because you are not used to it. For example, the cabbages we plant are firm and sweet compared to the ones in town which are tasteless and not in good condition."* (Participant *24,* KwaHhoHho, 2022*)*

Most participants placed emphasis on the importance of farming for economic stability and autonomy as well as the need to grow food because of how expensive it was to buy. "*It is very important to teach children how to farm and to know their way around the garden. I may die one day so the knowledge of farming is important for them to possess because it helps them not to rely on the shops. This will help them during tough times because they will know that they can farm which is why I farm with them.*" (Participant 24, KwaHhoHho, 2022). Participants thus highlighted that the preservation of knowledge systems was crucial to survival. The maintenance of this relationship with the land and the endurance of cultural memory was a form of power, and an armour against hardship.

6.2.2 Shops and neighbours

In KwaHhoHho there was a great variety of shops which were situated in the urban area of Mtubatuba, a 20-minute drive away. There were small informal shops in KwaHhoHho itself; however, participants claimed that they do not like to buy from these stalls, with one saying "*I don't like the food that we buy in this market…They've got some expiry dates that are due (….) Ya, it's not fresh. So, I like to buy in town*" (Participant 23, KwaHhoHho, 2022*).* Although many people relied on the bigger shops for all their food, others liked to buy fresh food from small-scale farmers in the area and other food, such as red meat, from the bigger shops. One participant, who faced challenges which prevented her from growing her own food even though she had traditional agricultural knowledge obtained from her childhood in rural KZN, stated "*Our main food is the food we buy in town, meat, mealie meal and rice…In the market*[22] *it's spinach, cabbages, like all vegetables.*" (Participant 23, KwaHhoHho, 2022*).*

In Ingwavuma, the only grocery shop was a Spar supermarket in a town which is also a 20-minute drive by car from the area where participants resided. There were also informal stalls in town. Conversations with residents showed that people mostly buy cooking oil and sugar at the shops. An elder, who farmers in the area go to for her knowledge of farming and seeds, stated "*I don't buy that much in the shops, only the stuff that I cannot plant.*" (Participant 18, Ingwavuma, 2022*).*

When asked which foods are bought from the shop, participants from Ingwavuma mentioned meat, oil and sugar the most. Meat and oil were also mentioned frequently in KwaHhoHho; however, rice, maize and potatoes, which are staple foods, were also frequently mentioned.

6.2.3 Livestock

The ownership of livestock, in particular chickens, goats, and cows, was common practice in KwaHhoHho and Ingwavuma. The possession and taking care of livestock, particularly cows, was deeply gendered. All herders I spoke with were men, and all conversations about the importance of livestock were strongly kept within the male domain. Participants conveyed how the owning of goats and cows was an important part of Zulu culture, referring to them as their "banks". One herder in KwaHhoHho who spoke about the care with which he looks after his flock, stated: "*Let me say this especially for us Zulus, cows were our banks. Because there were no banks before it was a must for a man to have livestock. If there was something important that needed to be done in the household, you would choose one cow in the kraal and sell it. It was like that because cows were like money in the bank, we banked with cows.*" (Participant 32, KwaHhoHho, 2022*).* Similarly, a male herder in Ingwavuma said "*It's important because when I have financial struggles, I can sell to make money. I can sell it again if I want to pay for my child's school fees so that my children can have a better education. It's also helpful when there is a family member who is sick or there is a death; I can quickly sell some of my livestock to my neighbours who will want to observe a certain ritual.*" (Participant 9, Ingwavuma, 2022*).*

The slaughtering of these animals was more than sustenance, being deeply intertwined with culture and ceremony, making access to these animals very important. One respondent who had raised livestock from when he was a youth stated: *"When it comes to having livestock, I have cows because there are times when I need to do a traditional ceremony in my house. I then take one cow in the kraal and slaughter it. There are other ceremonies that require cows in order to observe tradition in our house."* (Participant *32,* KwaHhoHho, 2022*).* This demonstrates the important interconnectedness of food and tradition.

As with farming, the knowledge of how to care for animals was in most cases passed down over generations and obtained through experience. Many of the herders spoke about how they were taught to look after animals as young boys by helping their fathers and grandfathers. A man who grew up in

[22] Informal stalls where women sell their produce.

Ingwavuma said: "*It's more of a lifestyle yeah yeah, when you are a boy in rural KZN you are told from when you are small that you look after chickens, then you go past chickens and look after goats, go past goats and look after cows.* Yeah, *it's a step-by-step process you learn along the way, but it's mainly a lifestyle thing."* (Participant 35, Ingwavuma, 2022*).* Another herder whose childhood was spent in KwaHhoHho reminisced: *"To learn how to manage cattle I used to watch my grandfather who had cattle do it. I used to watch him spraying his cattle when it had ticks and taking care. The cattle are really important. I am passionate about* [livestock] *and this requires passion.*" (Participant 27, KwaHhoHho, 2022*).* Although no one in KwaHhoHho mentioned any formal training, in Ingwavuma two of the three herders interviewed did so, one who studied agriculture and the other who spoke about an extension officer from the Department of Agriculture who taught people in the area how to look after animals.

6.2.4 Wild foods and nature

Nature, conceptualised by participants as such elements as trees, grass, weather, the seasons, snails, earthworms and soil, was not viewed as it is in Western cultures, as a resource to be exploited or something separate from us. Instead, nature was seen as a body co-existing with and an entity linking people to their roots. When speaking about her connection to nature a participant said "*I am part of it just like a tree is part of it. That is why I have to take care of trees and not cut them down because when I do I kill a part of me. And also, when you talk about nature you talk about where I come from, what happened, who I am. That is my journey too; that is why I love nature. And the fact that I am a Zulu, I love being a Zulu woman.*" (Participant 21, KwaHhoHho, 2022*).* Because of the deep relationship between participants, nature and foodways, nature was considered as an integral part of foodways, as an active agent.

Language indexes how things are understood by those who speak it. Yet it also shapes the way that something is conceptualised by those who are brought up in that language (Mykhailyuk and Pohlod, 2015). The language participants used to speak about nature in the interviews highlighted the different ways that nature was viewed by those who speak English compared to how it is conceptualised in the Zulu language. This was brought to light when looking at wild foods by an elder with a deep knowledge of wild foods in Ingwavuma who said "*Banomona, abafuni*" which translates into English as "*They are jealous and do not want to*" (Participant 18, Ingwavuma, 2022*).* Here she is referring to wild plants who "refuse" to be replanted into tamed gardens because they like and need the wild where everyone can have access to them. The use of "they" and "jealous" recognised these plants as having a will and agency, changing their status from an "it" an object, to "them", a subject. She went further, saying: "*Ey, we, I am related to this person (...) Because I live within her-earth. (...) I live there...I take her as my best friend (...) I take nature and the soil as my good friends.*" (Participant 18, Ingwavuma, 2022*).* The use of the term "person" challenges the hierarchy of nature seen in western ways of thinking where humans are viewed as being superior to other beings and as such are entitled to exploit and use nature instead of engaging and negotiating with it in a vital exchange.

The rural nature of Ingwavuma, nestled within a deep rural landscape and the lifestyle that accompanies it, means that there was a profound understanding of and reliance on the "wild". This in turn was reflected in the foodways of this area where people were extremely susceptible to changes in nature. Instances of this could also be seen in KwaHhoHho, but the connections were best observed within each individual garden rather than outside of these spaces.

Wild fruits[23] (see Figure 14 and Table 4 of wild foods in Ingwavuma) were the most common type of wild foods foraged by residents of Ingwavuma (and a few participants from KwaHhoHho). These fruits were foraged in the summer months and the knowledge of them was held by participants across gender and age. When asked how she learnt about different edible wild fruits, a participant replied "*Most of the wild fruits when we were born, we found older people eating them or using them for healing, so we*

[23] Scientific and common names are provided where possible however in many cases local Zulu names could not be linked to scientific and common names and this is recommended as an area for future research.

followed in their footsteps. Other fruits or herbs we discovered as we [were] exploring; we were eating at the same time being healed physically" (Participant 20, KwaHhoHho, 2022*).*

In KwaHhoHho, the number of people who picked and ate these fruits, as well as the frequency and variety, was far less than in Ingwavuma, where most people picked wild fruit and *imfino* (spinach-like wild growing "weeds") during the summer months.

In KwaHhoHho, when asked which wild foods are eaten in the area, a participant responded: " *We don't have fruits here but sometimes you find it in the bushes then you eat it*" (Participant 23, KwaHhoHho, 2022*).* This was echoed in other interviews. The same participant went on to explain that people no longer go out and seek these foods regularly, because these trees were no longer as frequently found. "*Ei, you can't know it amathunduluka* [kei fruit]*, the berries that are the berries you don't know, they were so nice and sour. But now there are no such things. But when we were young, we used to get them in the bushes."* (Participant 23, KwaHhoHho, 2022*).* Another participant reminisced: " *There were a lot of trees like the palms. When the schools open in February we would come back home late because we would spend our afternoons sitting by these trees and eating the palm fruits. Back in the day, there were a lot of them.*" (Participant 22, KwaHhoHho, 2022*).* In contrast to the decline of indigenous wild fruits, many people mentioned some introduced invasive species, such as wild guava and fig, which they had growing on their properties.

Participants living in Ingwavuma by comparison all spoke about eating wild fruit while collecting wood for cooking. When asked what fruit, the first response was a heartfelt "s*o many fruits!*" Even during a walk along the main road with one of the participants, many different plants were pointed out: " *This is nature, we grew up eating these fruits even as old as we are we still eat them."* (Participant *7,* Ingwavuma, 2022). From the three walking interviews which took place in Ingwavuma, 32 wild fruits were identified. During one of these excursions a woman explained: " *We believe that when you eat these fruits you become well. You must eat these wild fruits at least once a year for good health.*" (Participant 18, Ingwavuma, 2022*).*

Similarly, wild meat hunted in the bush by locals was also consumed by those in Ingwavuma. In total 16 wild meats were mentioned (see Table 5). A farmer who has deep roots within her traditional foodways and has eaten wild meat since she was a child explained that "*For the wild animals, their meat is healthy because they eat a lot of different leaves. Meat has health benefits for our bodies such as the healing factor because of all the leaves they ea*t." (Participant 18, Ingwavuma, 2022*).*

According to those I interviewed, it was the men who hunted, and of those men, most of them hunted for their families while only a few sold their meat. Each hunter had different methods depending on the animals they hunt. One participant who hunted large animals such as duiker and impala spoke about setting traps to catch the animals: "*I set the traps using a wire [...] We trap the animal in the place where they like to go. Once we observe that there is a place they like to spend time in, we set a trap. Once the trap is set, we herd them towards it. If a calf is trapped, we set it free but if it's an old one we don't let it go. These animals have places where they sleep so we know that if they are where they should be. I hunt maybe twice a week.*" (Participant 1, Ingwavuma, 2022*).* Another participant who caught birds such as the Hadeda spoke about creating a trap using the fruit of the *inomfi* tree which becomes a sticky gum when chewed. "*I set a trap where it drinks water. I take a small stick. I chew the sticky stuff*[24] *and put it on the stick. I will put it where they drink water. When it gets to the water it will get stuck. I just take it with my hand.*" (Participant 17, Ingwavuma, 2022*).* Others, especially the younger hunters spoke about using dogs to hunt.

[24] The sticky stuff refers to a wild plant called *Inomfi*, when chewed it can be used as a gum to catch birds as they get stuck when they stand on it.

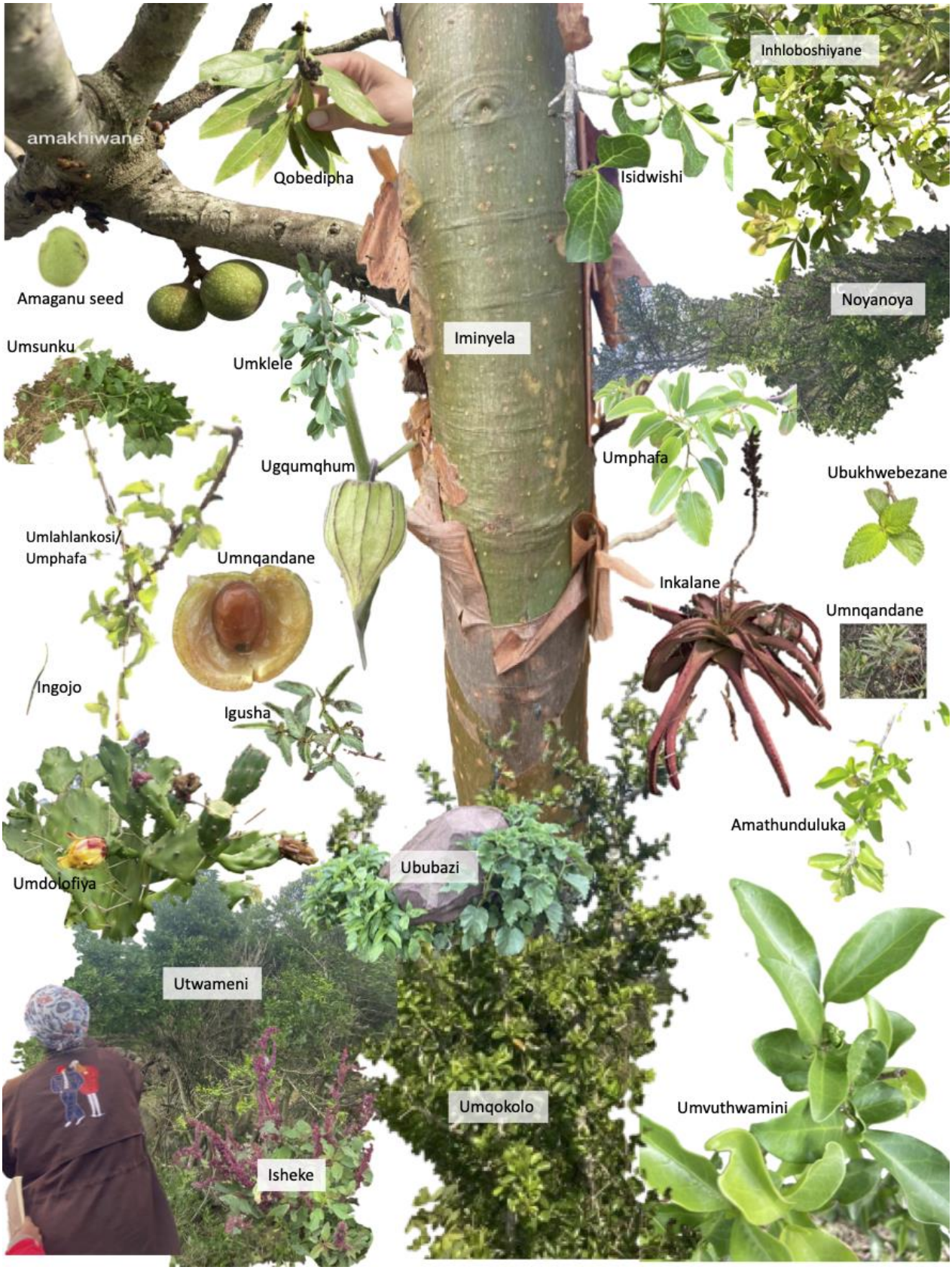

Figure 14: *Wild foods with isiZulu names. Data collected during walking interviews with participants*

Table 4: *Comments about some of the wild foods from walking interviews with Participant 2, Ingwavuma, 2022.* Scientific and common names given where possible.

Food item	Comment
Ingotshwa	*"If you are eating ingotshwa you don't eat all of it, you eat the ends... it can also be cooked like spinach"*
Isidwishi	*"Tell them that when it's ready it becomes black like black berries ... We believe that when you eat this fruit you become well. You must eat these wild fruits at least once a year for good health ... it protects us from the seasonal flu, it protects us from other diseases"*
Ubukhwebezane *Species: Lantana rugosa Thunb.* *Common: Bird's beer*	*"The fruit.. it's purple... it's obviously delicious... you crush its seeds, it's very nice. It's sweet... its one of the fruits with the hairy looking leaves"*
Umphafa *Species: Ziziphus mucronata Willd.* *Common name: Buffalo thorn*	*"Yellowish when it's ready... it has a distinct taste"*
Umnqandane *Species: Diospyros lycioides Desf.* *Common name: Climbing star-apple*	*"It is edible, it's just that some of the people do not eat it. And some of the people do not know that it is edible... it's sweet, sweet, sweet".*
Igusha	*"Igusha is slippery"*
Umdolofiya	*"You roll it around with your foot so that the thorns can come out"*
Ucana	*"It's good for BP. It's for cooking imfino. It's a weed but not a weed to us... it is very delicious"*
Uqadolo *Common name: Blackjack* *Species: Bidens pilosa L.*	*"The soup from the blackjack you drink it... you treat BP"*

Table 5: *Wild meat hunted in Ingwavuma taken from interviews with hunters.*

Zulu name	English translation	Comments
1. *Unogwaja*	Rabbit	
2. *Impunzi*	Common duiker	
3. *Umsumpe*	Red Duiker	
4. *Uchakide/ Untsholweni*	Mongoose	*"Likes to stand on their two legs so they can be tall...they are trouble to many farmers because they eat the chickens."* (Participant 42, Mtubatuba, 2024)
5. *Isinkankanka*	Wild bird (crested guinea fowl)	"*It has a long beak, it's the one that makes haha sound.*" (Participant 17, Ingwavuma, 2022)
6. *Inkawu*	Vervet monkey	
7. *Isinkwe*	Bush baby	
8. *Insimango/ Insimangwe*	Samango monkey	
9. *Impangele*	Guinea fowl	*"The bird with tough meat...Zulu royals (males) use its coat for traditional attire."* (Participant 42, Mtubatuba, 2024)
10. *Inkankane*	Hadeda bird	*"Greyish with a long pointy beak that feeds on insects... they are very loud.. they are quite good at airing the soil with their beaks."* (Participant 42, Mtubatuba, 2024)
11. *Inbababala*	Bush buck (female)	
12. *Unkonka*	Bush buck (male)	
13. *Ingulube yehlathi*	Wild pig	
14. *Indlonzi*	Serval	
15. *Inyoka*	Snake	
16. *pala*	Impala	
17. *Ingungumbane*	Porcupine	
18. *Izingwejeje/ Izitshidane*	Squirrels	
19. *Intibane*	Warthog	

6.3 Traditional foods

There were no clear boundaries as to why some foods were classified as "traditional". As with many elements of these foodways, what made something important – or in this case "traditional" – was intertwined with a continuation of a way of living that has been passed down. In other words,

'traditional' described the growing of food, the type of food, the preparation of food, and the consumption of food in the way that their parents and grandparents did. Thus, there were no rules or guidelines on what makes food traditional, other than it was intertwined with the lifestyle of these places. Hence, when asked to define what makes certain foods traditional, the answer could be reduced to its simplest form as "because it is."

Participants stated that traditional foods were vegetables and meat that had been grown and eaten in the area. A well-known older small-scale farmer in Ingwavuma stated that what makes these foods traditional was:

> *Because it's the food we get from the soil, it's natural, it's not processed and goes via the shops. This is natural food which has been passed from generation to generation since the olden days... What is important about Zulu traditional food is that when you cook it, it does not require a lot of ingredients or other garnishes like the food that you buy from the shops which requires you to stir in something so that it becomes delicious. With traditional food you pick from the garden and cook it without adding many ingredients, and you eat.* (Participant 5, Ingwavuma, 2022*).*

Another participant from Ingwavuma who prided herself on her extensive seed archives of traditional crops said: "*There is a lot of food and different types of foods that are traditional that we get from our gardens that we grew up eating, which is still available till today. Like beans and maize, Zulu potato, taro. We consider this food to be traditional because it is available or accessible, we don't buy it.*" (Participant 18, Ingwavuma, 2022*).*

Maize was brought up by most of the participants as a staple food; however, some varieties were considered more traditional than others. Several hybrid maize varieties are grown in the area, but those farmers with strong seed banks still grew the traditional varieties. Further, whether it was grown or bought and the way in which it was ground (using traditional methods or not) contributed to determining whether it was traditional: "*Traditional: It's because I produce this maize myself and it was left to me by my mother, grandmother and those that came before them. That is why we also use it because they left it, we took it and use it. We plant it, save it and make maize meal, it's that cycle. Since we make our own maize meal it helps us not to go to the shops. We use dried maize."* (Participant 24, KwaHhoHho, 2022*).* Another participant from KwaHhoHho, one of the main farmers in the area known for the wide variety of crops that she grew, demonstrated the difference in textures between maize that she grew and ground compared to store-bought maize: "*This one I bought in the shops and this one we grind it with our own machine. This one is very nice, [better] than this one. You see the big difference between the foods you make for yourself compared to store-bought food. This is the perfect one to cook, number 1! This is the traditional Zulu food we are talking about.*" (Participant 24, KwaHhoHho, 2022*).*

The question of what made these foods traditional was perhaps better phrased – and understood – by the question: "What makes traditional foods important?" One participant answered: "*Traditional food gives us strength, it's healthier and makes us alive so that we are not weak, it gives us power*" (Participant *31,* KwaHhoHho, 2022), while another claimed "*I am not too sure ... how I can say it? ... I believe that when this food is cooked or planted it brings us closer as a family than the store-bought food which we don't have the money to buy."* (Participant 15*,* Ingwavuma, 2022*).* These thoughts were echoed by other farmers in both areas. The health benefits and strength received from consuming these foods was particularly emphasised.

There was a wide variety of foodstuffs which fell into the category of traditional food yet some were referenced more than others. Farmers also spoke about certain dishes; for instance, one participant, when speaking about preparing foods for a traditional event, stated: "*Like maize to make izinkobe*[25] *and*

[25] Mixture of maize and beans. This is not samp, although some people confuse it for samp. There is no English word for this type of food.

put jugo beans. If we do have sorghum or cow pea, we make traditional beer. Things like sweet potatoes and taro (amadumbe) must be there." (Participant 25, KwaHhoHho, 2022*)*

Food was identified as an integral part of social events and rituals, although the slaughtering of a cow or goat seemed to hold the most symbolic value. The bringing and eating of food at these occasions was also important and participants spoke about how when events such as funerals took place they would prepare and bring food. One participant stated: "*There will be sweet potatoes, amadumbe, samp and there are different ways to cook samp. There will also be imfino and we boil Zulu chicken and jugo beans (.....) If there is umemulo*[26] *there will be that food. Other people will put it on the dining tables for the guests to eat*" (Participant 34, KwaHhoHho, 2022*).* Another said: "*You will find that in some rituals jugo beans are needed, or cooked or raw mealies, sweet potatoes or taro, all these things will be put at the ancestral altar*[27]*. Farming is good because it helps you to obtain such things easily because at times you don't know where to get them. Hence, I say there is a connection.*" (Participant 24, KwaHhoHho, 2022)

In summary, the historic and current local foodways of KwaHhoHho and Ingwavuma can be described as culturally and socially rich, complex and deeply related to nature. Both locations had a linkage between food, culture and livelihoods and participants from both areas had a strong knowledge base which allowed farmers autonomy over their foodways. These foodways were not only nutritious, enabling farmers to have food security despite financial struggles, they were also of high cultural significance. Traditional foods such as maize, vegetables, grains and a variety of beans and meat made up the majority of people partaking in local foodways. These foods were obtained where possible from small-scale farming. Farming was a huge part of participants' lifestyles, echoing those of their ancestors and the knowledge which was passed down through generations. Because of the strong linkages between food and culture, food was used as a cultural symbol and its presence was important during significant events.

Yet, despite the participation of participants in local foodways that are described above. It could be perceived that the local foodways were changing with more people buying produce from the shops, eating processed foods and pulling away from the lifestyles and values described above. In Ingwavuma this was seen only mildly, however KwaHhoHho it showed more extensively, especially in youth and the working class. The next chapter discusses the ways in which maintaining the lifestyle of growing foods, keeping livestock, foraging and hunting was becoming more of a challenge and foodways were shifting, moving away from historic local foodways systems to accommodate challenges such as crop failures due to changes in climate, modernisation of the areas, lack of support and urban migration.

[26] Girls' coming of age ceremony

[27] The isiZulu term used was "Umsamo".

Chapter Seven: The Shaping and Shifting of Foodways by Environmental and Social Changes

Through investigating participant memories, this chapter documents how foodways—and factors vital to these foodways—have changed in their lifetime. The foodways investigated were influenced by the interaction of large-scale social and climatic factors taking place alongside local changes in the area. These large-scale phenomena included climate change and variability, landscape changes, modernisation, education and rural-urban migration. At a smaller scale, these factors acting in concert could be attributed to a decrease in farming and the consumption of traditional foods, with more people having become reliant on store-bought produce.

7.1 Experiences of environmental change

7.1.1 Climate change and variability

Climate change and variability were mentioned as one of the most prominent phenomena affecting the lifestyles of those interviewed. When reflecting on challenges to farming and cattle-rearing, changes in rainfall patterns over the course of participants' lives were at the forefront. At first this appeared to be due to reduced rainfall as every participant spoke about a lack of water availability from precipitation; however, deeper probing into the intricacies of this change revealed not only reduced rainfall, but also rainfall variability, flash flooding and an increase in temperatures that, in turn, led to the reduced availability of water. These phenomena are confirmed by literature (see section 4.5.1.).

A farmer in Ingwavuma reflected the change of rainfall patterns in Ingwavuma, saying: "*The rain doesn't rain the way it used to before, where it was raining calmly and there were no floods which erode everything, the soil and its nutrients. Everything that is in the soil is eroded by these floods. When it rains, it is too much. Sometimes it doesn't rain and when it does it showers, resulting in floods that erode everything, and the nutrients meant for our plants.*" (Participant 18, Ingwavuma, 2022).

Small-scale farmers in KwaHhoHho experienced similar phenomena. Like many participants from Ingwavuma, the change was often simply ascribed to a lack of rain, although some participants did note that it was more intricate than that, instead of a change in the amount of rainfall they pointed to a change in the rainfall patterns. An elder who grow up farming sorghum on her family farm and moved to KwaHhoHho after her marriage explained that: "*Nature has changed, it is no longer the same nature we knew growing up...Hot days are extremely hot, cold days are extremely cold, and the thunderstorms have become very unpleasant and scary. At the end you just learn that the weather patterns have changed from what they used to be back then.*" (Participant 22, KwaHhoHho, 2022). Another participant, living down the road from her, noted: "*Currently, it hardly ever rains—climate change is the cause of that—which contributes to the changes on the soil. The last time we received rain there was a lot of erosion, instead of the soil absorbing the water. The hoe can't get into the soil.... We started noticing the changes from 2012 because from 2010 moving backwards things were much better. Currently the changes are still taking place.*" (Participant 25, KwaHhoHho, 2022).

7.1.2 Water scarcity and challenges to farming

In KwaHhoHho, where the houses in the area are closer together than in Ingwavuma, the lack of rainfall appeared to be particularly challenging. A farmer reflecting on how access to water has changed since she grew up noted "*Currently we have been disturbed by the lack of water as you can see. We don't know the main reason but back in the day we never ran out of water. The rivers were full and other things were good. Back then it was not like this. There were no taps...we fetched water from the river*" (Participant 28, KwaHhoHho, 2022). This sentiment was held by most participants who

emphasised the fact that many of the rivers and dams which made up the landscape of the area have now dried up. "*We had a lot of water - there were many springs where we used to get water, but all those springs have dried up. You see all these areas called Emthonjeni*[28] *where there used to be springs which have dried up lie at Dlu'mbheke or near Ponqo's house or let me say behind Jobe's house there was a spring. There are no longer springs and marshes.*" (Participant 25, KwaHhoHho, 2022).

A male farmer and herder speaking about the outcome of this change passionately exclaimed: "*It is hard because it does not rain. During our times, you would see around August maybe corn as big as this*" – he demonstrated lifting his hand above his head – "[then] *around February or March, it used to start raining right through the year every year. But look now it has not rained since that year. Because it doesn't rain, we can't even plant, you can't plant anything. When it is like this it gets harder for the cows that eat grass here, there is nothing – even the dried grass is finished as you can see.*" (Participant 29, KwaHhoHho, 2022).

In Ingwavuma, the main source of water for crops comes from rainfall supplemented by water from dams, rivers and a community borehole. However, these additional water sources are problematic, resulting in rainfall being extremely important as carrying water far distances is unsustainable for bigger gardens, and, as noted by participants, boreholes also require servicing, and often break for long periods of time.

Other factors, such as changes in land use, vegetation and over-abstraction, can also be potential sources of the change in water availability. But participants cited climate – and rainfall – change as the sole cause, despite probing on the reasons for the change. Even while acknowledging that other factors may be driving this change, the focus of the participants' perceptions was climate change.

7.1.3 The challenges climate variability presents to farming

Changes in weather patterns impacted the ability of participants to grow food. Participants from both KwaHhoHho and Ingwavuma pointed to the challenges faced when rain came at the wrong time in the planting season (resulting in the crops spoiling) or an increase in temperatures (burning the produce and drying out the soils). These observations align with climate predictions by the Department of Environmental Affairs (2017) and Thomas et al. (2007) as well as other research conducted in Northern KwaZulu-Natal detailed in Chapter Four, (See section 4.5.1). A farmer living in KwaHhoHho whose garden showed an abundance of plant varieties explained:

> *It is difficult because of the soil and weather conditions. At times during the sowing season or when it rains you get encouraged to sow. Then the sun with its heat just destroys everything. We don't get to harvest anything because everything gets burned. This does not deter us, we still go back to our gardens and try again. When you plant it is important to leave some seeds on the side in case what you have planted is damaged by the sun. This allows you to constantly try again. Another thing is you sow into the soil and wait for the rain which never comes and maybe it will rain in December. This disrupts the way we do things because we don't plant in December. You see, by this time, there should be corn kernels. Others are still growing because there is no rain, we are now expecting it in December, and we don't know when. ... Traditional seeds require lots of rain.* (Participant 25, KwaHhoHho, 2022).

This was echoed by other participants from both KwaHhoHho and Ingwavuma.

As noted, rainfall was also often received at the wrong time of the year; a month or two later was noted to cause more damage to the crops than good. A farmer in Ingwavuma, spoke about her lack of produce that year. Indicating her empty garden, she stated:

[28] Translated into English as "at the source".

> *I have not been able to get seedlings and even save some of the seeds. Everything is dead because of the water; I was able to harvest a little. It did rain but at the wrong time. When it rains it needs to start raining around October, and it must not be heavy so we can plant. It rained in November after we planted the year before last. This year we have not started planting because it hasn't rained. It is in the past years, especially in the early 2000s, when the weather patterns started to change which also affected the way we were planting which is no longer the same as before.* (Participant 13, Ingwavuma, 2022).

In both case studies it was noted that flash floods are becoming more common; the sudden large volume of water floods the fields, spoiling the crops and causing erosion instead of being absorbed into the soil. A farmer devoted to creating ample plant diversity in her garden noted specifically that both heavy sun and heat as well as too much rain had resulted in some of her crops rotting. She claimed that although people try, crops such as Jugo beans (a staple traditional Zulu food eaten both in KwaHhoHho and Ingwavuma) were no longer grown because of this phenomenon *"When you cook it, it tastes like it's spoiled... It does not taste good because of the rain which destroys it."* (Participant 18, Ingwavuma, 2022). Another farmer, living a few houses down, identified two other traditional crops, cowpea and mung beans, that also spoil when it rains too much.

7.1.4 Changes in the landscape

A change in the surrounding natural landscapes was linked by participants to the climate, as well as other factors. In general, the changes in landscape took the form of shrinking water bodies and the colonisation of grasslands by bushy vegetation and alien plants. A participant from KwaHhoHho who spent her childhood farming, and was able to sit in trees eating wild fruits, spoke about how many plants can no longer be found in the area:

> *Here, by the river, there used to be a tree called uMsokosoko*[29]*. We used to use the sap of that tree to wash our clothes. During the day when we were dirty, we would go down to the river and pick the leaves of that tree, take off our clothes and wash them with the leaves. We would leave with clean clothes. That tree is no longer there... The riverbanks were full of them, and I think it's the changes in the weather patterns – as a result they end up dying. Most of the things that were familiar to us are gone.* (Participant 22, KwaHhoHho, 2022)

Another participant, reflecting on the fact that she can no longer eat all the wild foods she used to when she was young, stated: "*It is rare to find traditional things now. It is rare, rare. But what you find in the bushes is mangoes, guavas and those fruits. Not like before. Ei, you can't know it amathunduluka (kei fruit*[30]*), the berries that is the berries you don't know, they were so nice and sour. But now there are no such things. But when we were young, we used to get them in the bushes.*" (Participant 23, KwaHhoHho, 2022)

The loss of familiar species was something felt more by those in KwaHhoHho as participants from Ingwavuma still find many wild fruits close to their homes. Yet, even with the large variety of wild foods in the area, participants noted that some of these plants were no longer as accessible. An elder describing all the wild foods she eats expressed her concern that the younger generations would not have as much access to wild foods. She remarked: "*I grew up here. There are some wild fruits that aren't available now... There are still (wild fruits) but not like before. There are a lot of types of foods that have gone extinct. There are also wild fruits that were in the bushes that are now extinct. Java plum*[31]*. Amarula, figs. They are still available but not as many – like they are vanishing. Turkey berry,*

[29] Scientific name: Sesbania sesban (L.) Merr. subsp. sesban

[30] Scientific name: Dovyalis caffra Family: Salicaceae Common names: Kei appel.

[31] Scientific name: Syzygium cumini

Amakholokojane, Blue sourplum, caustic creeper, close to extinction." (Participant 18, Ingwavuma, 2022).

Hoffman (2014) and Mthembu and Hlophe (2020) point to an increase in the presence of alien species in the savanna biome. This was something noted in Ingwavuma particularly. On a walking tour through Ingwavuma, a participant, pointing to some of the trees near the road, exclaimed: "*You know what…if more trees instead of more fruit it's a problem because trees…the poisonous species (referencing alien species) are killing fruits we are eating. The soil is getting less nutrients…they just arrived … it all happened gradually. The trees are killing our food..Just like sugarcane.*" (Participant 18, Ingwavuma, 2022).

One of the most pressing concerns regarding vegetation change commented on by both residents from KwaHhoHho and Ingwavuma was the decrease of grass, an important resource for livestock rearing. "*Now the grass has vanished and there are more bushes. There is no grass.*" (Participant 12, Ingwavuma, 2022). The phenomenon of bushes replacing grassland in savanna biomes is well known and confirmed by research conducted by Mucina and Rutherford (2006), Dayaram et al. (2019), Hoffman (2014), and Mthembu and Hlophe (2020).

In Figures 15 and 16 below, GIS maps created from data sourced from Dayaram et al. (2019) show the change in vegetation from 1990-2014. In Figure 16, the red illustrates the areas in Ingwavuma where there has been a colonisation of grassland by woody vegetation. This indicates noticeable bush encroachment in the area. However, in Figure 16 of KwaHhoHho this is less obvious. An image taken during the research (Image 7*)* suggests that the reduction of grass is an outcome of land degradation potentially due to changes in land use and climate, creating a barren landscape. This degraded land was no longer able to provide food for animals even though satellite data may still identified it as grassland. In KwaHhoHho a man who worked within the community noted that former cultivated areas for sugarcane found within the valleys had been colonised by pioneer and exotic species of trees and bushes. "*The areas we used to be arable land is now developing. Savanna forest and this lantana species which is now closing off the grassland to become the little bit shabby and bushy.*" (Participant 41, Mtubatuba, 2024).

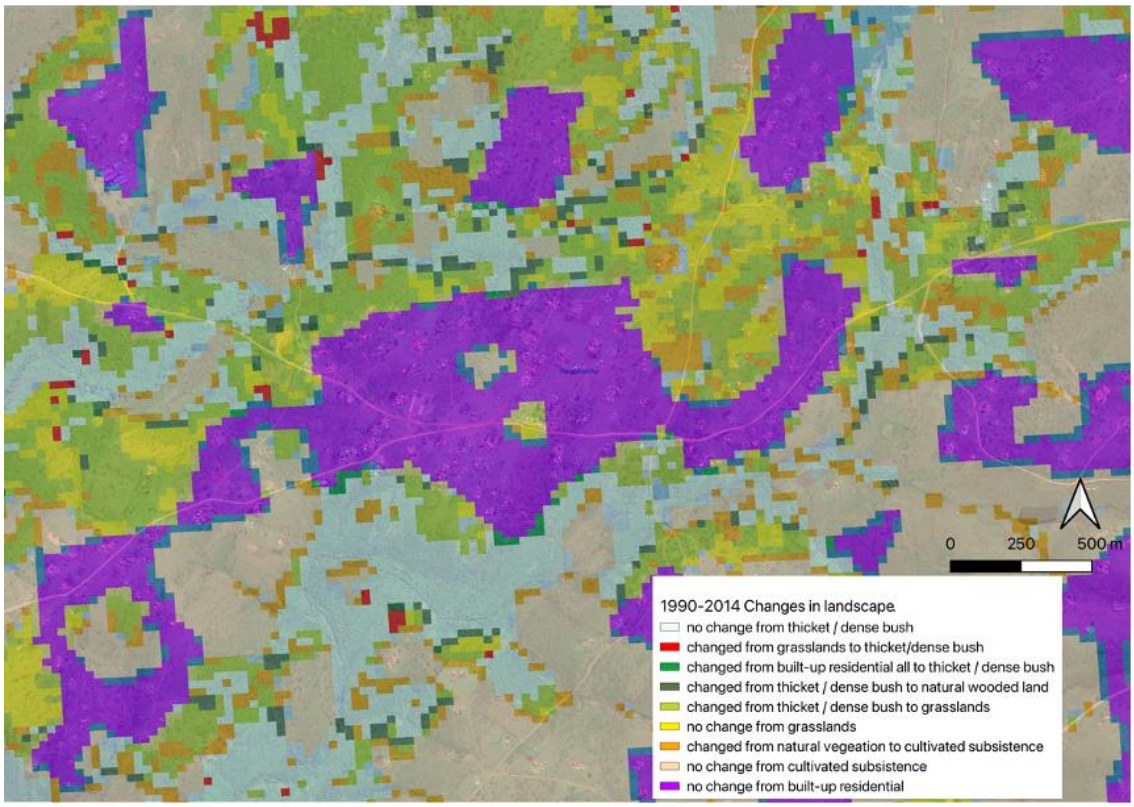

Figure 15: *GIS map over Ingwavuma showing landscape changes between 1990-2014*
Source: Data sourced from Dayaram et al. (2019) and map created by Jessica Fortes using QGIS.

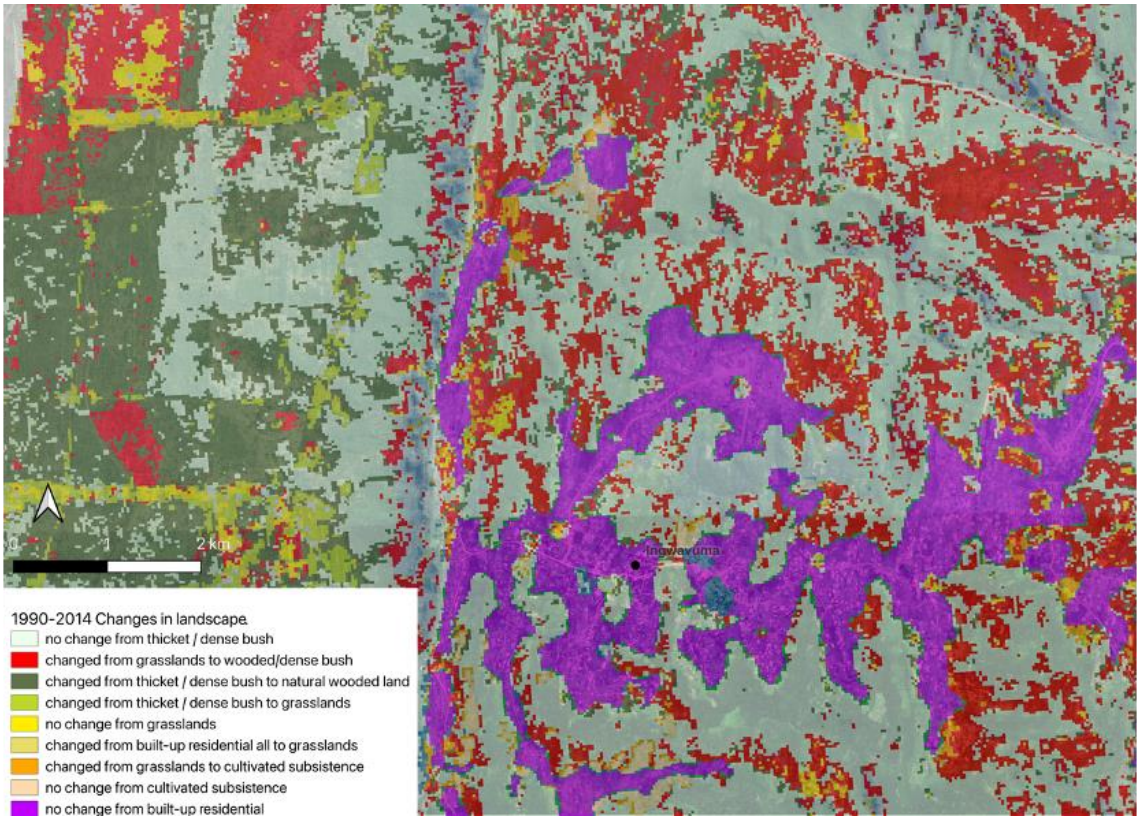

Figure 16: *GIS map over KwaHhoHho showing landscape changes between 1990-2014*
Source: Data sourced from Dayaram et al. (2019) and map created by Jessica Fortes using QGIS.

Image 7: *Area classified as grassland in KwaHhoHho. The image shows that although the area may be classified as grassland it is not necessarily functional for livestock. Image taken by Jessica Fortes. 11 September 2022*

7.1.5 The effect of grass depletion on herders

The reduction in grass was identified as a foremost challenge to herders. A herder in KwaHhoHho who learnt to look after animals from an uncle he was sent to live with noted: "*During the times when I started to have livestock it was easier because there was plenty of grass and the cows were eating without problems. There were calves, we used to milk the cows to make maas. Right now, the way it is so dry, things are no longer the same as it was before. It has become difficult because the cows must walk long distances looking for a place to graze. You find that some of these places have less grass, or it no longer grows at all*" (Participant 32, KwaHhoHho, 2022). Another herder who moved to Ingwavuma in 1979, commented: "*The situation is not good because there is no grass, not much grass for the cows*" (Participant 9, Ingwavuma, 2022). The lack of grass was something which arose in every discussion regarding cattle; and farmers pointed to it as a contributing factor to the challenge they face, of cattle breaking into their gardens in search of food.

Overgrazing, population pressure and a loss of grazing land due to land use changes were also potential causes of a lack of grass; however, as with the participants' perceptions of the causes of water scarcity and noting only "climate change" here, participants did not acknowledge other causal factors to the lack of grass. The extent that these factors played in participants' experiences was not covered in the research.

Figure 17 below illustrates the effect weather patterns and landscape changes have had on local foodways, as related through the story of a participant born in KwaHhoHho in 1984 who lived in a household of ten people. They had a small garden on the property, but at the time of the interview most of the food they ate was bought from shops. The figure illustrates the knock-on effect changing weather patterns have had on foodways. The effective push towards making certain decisions when it comes to the type of food and where it is sourced is seen as alternative choices (namely farming) is almost impossible for both practical and economic reasons. As a result an increased reliance on store-bought foods can be observed.

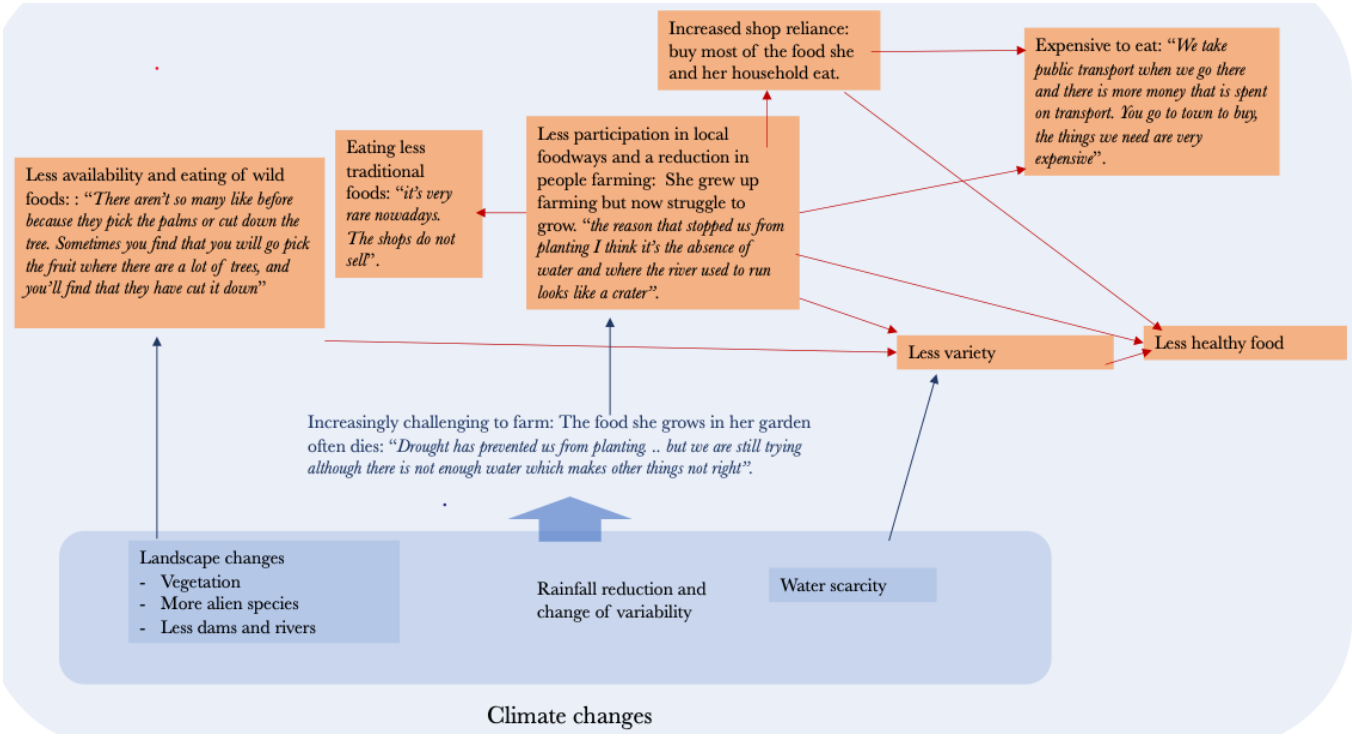

***Figure 17**: Mind map of the effect of climate changes on Participant 34's foodways*

7.2 Social phenomena disrupting food systems in KwaHhoHho and Ingwavuma

Climatic factors were at the forefront of participants' minds when discussing disruptors to the food system. These participants tended to be the elder generation who made up most of the participants in this study as their foodways relied on rainfed farming practices. However, larger social shifts also influenced local foodways in KwaHhoHho and Ingwavuma. These shifts were more complex and subtle in nature, as described in the next sections.

7.2.1 Modernisation

In both KwaHhoHho and Ingwavuma increased modernisation and the commodification of food was noted by many respondents. Older residents spoke about how the awareness of and need for money had increased since they were younger. "*This new generation thinks about money a lot. It's not like old people who never used to think that they must always have money. Today people live for money whereas back then people did not care that much about money. Now everything needs money and if you don't have money, you won't get the things that you want*" (Participant 14, Ingwavuma, 2022). This

was also reflected in conversations with extension officers and Biowatch members who worked in the case studies. The common narrative was that youth were motivated by the monetary aspects of agriculture and were only interested in commercial agriculture as opposed to subsistence farming.

In KwaHhoHho, there was a general sense that community ties were not as tight as they used to be. This could potentially be attributed to the growing number of people in the area and the general mindset shift that has accompanied modernisation. This mindset manifests in a change in how exchanges are conceptualised. For instance, participants discussed how when they asked for something from community members it would often require a form of payment and there was a growing 'every-man-for-themselves' mentality instead of a sense of solidarity between people. A woman farmer who arrived in KwaHhoHho in 1991 stated: "*It is difficult to put food on the table, meaning things are not the same as they were before, like together as neighbours we were able to take from the provisions and give those that asked. If I was short of food I could easily go to my neighbour and ask, and they would freely give without any expectations. We shared food with each other. Currently, we don't share or even do exchanges" (*Participant 25, KwaHhoHho, 2022). This was not the case with all participants as many did speak about sharing produce with neighbours in need. However, the general sense was that these ties were not as strong as they used to be, with monetary transactions now playing a larger role.

7.2.2 Rural-urban migration

In the peri-urban area of KwaHhoHho, participants spoke the area as becoming dense and overpopulated. "*We are crammed now like it's the township*" (Participant 19, KwaHhoHho, 2022). From personal observations there was a sense that an increase in residents in KwaHhohho had broken down the community dynamics as people no longer know everyone as intimately and often referred to a time where people were close.

Participants from Ingwavuma also spoke about a breakdown in community dynamics as people, especially the younger generation, moved out of the area, the opposite phenomenon to KwaHhoHho, in pursuit of education, employment and other elements of an urban lifestyle. A woman who had grown up in Ingwavuma and lived with her two grandchildren stated: "*People are slowly coming back here but not as many as they were before. When I was born there were many people living here, but they have left*" (Participant 2, Ingwavuma, 2022).

7.2.3 Pursuit of education over rural lifestyles

In both areas, education was identified as a new factor that had created a disinterest in, or had guided people away from, the local way of life and accompanying foodways. Participants spoke about how the younger generation was more academically educated, which older farmers linked to a growing reluctance to participate in the local foodways they were brought up in. In KwaHhoHho, an elder stated: *"I am not sure, but I do think that because the older generation believed in traditional food compared to the current one which seems to be more educated and has a lot of money. When I was growing up, we used to start with gardening before school and even after school we would go and work in the garden. Currently, people go to school or far away universities, they have money to buy the food they like, and they don't pay attention to traditional Zulu foods."* (Participant 25, KwaHhoHho, 2022).

Another elderly participant in Ingwavuma claimed that "educated people" – referring mostly to the youth – had to be forced to do traditional Zulu things, stating: "*When you tell them about farming, they say they don't have time.*" (Participant 4, Ingwavuma, 2022). Whereas the older generations grew up absorbing knowledge of the land, the younger generation was perceived (by both older generation and the youth interviewed) to rather seek academic knowledge and in doing so leaving behind the lifestyle which they had grown up in. As stated by one of the youth interviewed: "*People move from here mainly looking to advance their life.*" (Participant 35, Ingwavuma, 2022). Although some participants referred to the lack of interest in local foodways and farming practices as laziness ("*I think it's because children*

have become lazy to prepare these foods." (Participant 3, Ingwavuma, 2022), some thought it had become apparent that the younger generation were pursuing a different set of priorities and lifestyles. A twenty-five-year-old male herder from Ingwavuma, when speaking about why youth no longer herd animals and farm, reflected: "*More people have been exposed to urban life and so forth. So, looking now at how it was long ago, burnt by the sun through the hills looking for cattle, when you can be in urban areas, studying and advancing your life in that way."* (Participant 35, Ingwavuma, 2022).

7.2.4 "Captured" education

What also emerged was an underlying stigma attached to subsistence farming. Subsistence farming is referred to by some as being associated with poverty and the elderly, especially older women. This perception arose from discussions with youth in the area, three young women still living with their families and two young men who had been to universities out of the area and were visiting the area. It also appeared to be an underlying assumption among most participants in the area when they spoke about subsistence farming, including those partaking in subsistence farming.

A particularly interesting interview was with a youth who had chosen to practice subsistence agroecology after getting his tertiary education. In the discussion he spoke about how community members and fellow young people were often confused by the fact that he wanted to farm, assuming that he was either forced to do it or suggesting that he find a wife to do it for him. He mused:

> *You know, as soon as you start farming people, even just personally, people have a lot of things to say, like, why farming? People just frown upon it, the fact that I have tertiary education and I'm farming out there by choice. They think this is going backwards or something. So, some people even offer to do it for me, "let me do it for you then you will pay me". You know it's a whole ... as a society ... not even just the youngsters, even the older people, they'll just offer to do it for you. Because they're like: "No, I know you youngsters don't like doing this". I'm like, no, I want to do this by choice* (Participant 42, Mtubatuba, 2024).

This stigma could potentially be accounted for as a push away from traditional farming practices for youth and attribute to why they were not interested in traditional food and practices.

When discussing schools in northern rural KwaZulu-Natal this young farmer, who had completed his tertiary education in Pretoria and returned to KwaZulu-Natal to practice agroecology, identified schools as sites that promote Western food systems and farming practices, thereby inadvertently stigmatising local foodways. He explained

> *Once you go to school, even now in our curriculum you're learning about fruits: In foundation* [phase] *"A for apple" and then for the vegetable, it's a cabbage. You know, you don't see sorghum there ... so they sort of promote that type of view ... I think that the culture, the children they evolve*[32]*. And that we always evolve as people migrate from one area to the other. In one way or another there are cultures which will be incorporated somehow into our lives. But I think that through the weakness in our curriculum that is habituated in such a way that it suppresses what was already there. It is perpetuated you know. So it's not that it shouldn't be there or seen at all. No, people need the exposure to know what other people are eating, need exposure to explore other things as well ... but it is a one-sided system that promotes the one and suppresses the other. And I don't think that is good for our environment as far as biodiversity is concerned. As far as cultural diversity is concerned. ... yeah, you get to choose but if you're exposed to just one side it isn't a choice. The other one* [traditional foodways] *is sort of seen as being backwards, frowned upon, etc. You don't have much to eat, you are poor,*

[32] Here he refers to culture and people changing with the times and external influences of modernisation, urbanisation, media etc.

> *you are starting to eat just what's around, you pick a number of leaves on something which is uncultivated, to eat this is to be poor* (Participant 42, Mtubatuba, 2024).

In essence, the fact that the education system is underlaid by global narratives of modernisation and Western principles means that local systems and ideologies are overshadowed and undervalued. As a result, youth are subconsciously pushed to strive for the Western lifestyles while traditional cultures and ways of living, growing and eating are seen as a life to leave behind.

7.2.5 Herders

Participants from KwaHhoHho in particular spoke about a trend of young men going off to study or leaving their cattle and goats to wander around KwaHhoHho, when previously they would have spent the day herding cattle and making sure that they were pastured in the right areas. A man who grew up as a herder in Ingwavuma and at the time of the interviews worked within the rural communities of Northern KwaZulu-Natal, including KwaHhoHho, stated: "*Today there are very few herd boys because we are forced to go to schools and it is only the elders that look after the cattle now*" (Participant 41, Mtubatuba, 2024).

This has become a significant challenge for subsistence farmers, who now struggle to keep the animals from eating their crops and breaking down makeshift fences. For example, one respondent, a woman who was born in KwaHhoHho in 1958 and used to eat the food from her mother's garden, now buys food from the shops with her pension money because a lack of fencing has made it too difficult for her to farm. She remarked:

> W*e can't plant now. Before there were shepherds for the cattle, like cows, and right now you can't have a garden if you haven't fenced the area where you intend to have a garden. It's just not easy to do so because poles and the fence are so expensive. All my pension money goes towards buying the food. Therefore, earlier on we used to plant, and the cows didn't come near the garden because of the shepherds. Currently, no one shepherds the cows and goats, most of the herdsmen open the kraal and leave their cows to roam around and then you will find that they will eat everything in the garden especially if you are not in the house... People changed: they don't want to shepherd anymore... Sometimes you yell and shout asking why the cows are in your garden or pooping in your yard; they just ask you, why can't you put up a fence*? (Participant 26, KwaHhoHho, 2022)

Older members of KwaHhoHho often associated the failure of herders to keep livestock out of their gardens as a lack of respect for farmers. They spoke about a breakdown of understanding and respect between people within the area, reflecting on a fragmentation of the cohesion which existed in KwaHhoHho when the area was less populated, and everyone farmed and had cattle. This shift can also be attributed to a loss of accountability—or rather a shift in responsibility—from the herder to the farmer. A male herder who moved to KwaHhoHho in 1964 where he learnt to raise livestock and farm stated: "*I am one of the members in the gardening project*[33] *there. In the previous week, I received a call where they were warning me about one of the neighbour's cows that barged into the garden and broke the fence that I have now fixed. I want to say this, that is very much troubling nowadays because we never used to fence the gardens." (*Participant 32, KwaHhoHho, 2022*).* He attributed the need for fences to the fact that customary systems are no longer in place; these systems used to protect farmers and hold herders accountable[34]. In Ingwavuma, a similar pattern was seen. A woman living in the area said: "*Others still have this mentality that there is no need to herd the cattle. Even when the children come back from school they do not look after them.*" (Participant 12, Ingwavuma, 2022).

Gender roles played a crucial part in the structure of local foodways in the case studies. Whereas livestock farming, hunting, and commercial farming, or farming which requires heavy machinery such as

[33] A group of farmers working with Biowatch.
[34] Quote found in section 5.4.

ploughing, remained the domain of men, subsistence farming for household consumption remained that of women, particularly the elderly. It became clear that minimal support had been given for subsistence farming from government, local authorities and among community members themselves, especially as lifestyle shifts such as modernisation and global food systems begin to dominate. As a member of the community of KwaHhoHho and a Biowatch representative noted:

> *Something like food crops, women are struggling, because they have to feed their families. And they have to scratch here and there to get the land and plant for their families. But with very little support from the government and from the traditional council, from their families. So little. The private councils are not interested in farming anymore, but they want something like mining, which could give you quick rewards. And with family members, you can only force your kids, but you cannot force everyone to help you in the field.* (Participant 41, Mtubatuba, 2024).

7.3 From soil to shops: Increasing reliance on store-bought food

A decrease in small-scale farming and a growing reliance on store-bought food, particularly for participants living in KwaHhoHho was observed, largely because of the collective challenges to growing food in the case study areas: increasing climate variability, reduced interest in local foodways and the pursuit of education over rural lifestyles. Given the complexity of local foodways and the myriad of local and global factors influencing them, it is unlikely that this study has captured all the intricacies leading to this change. However, it has captured the changes and their causes from the perspectives of those within these food systems.

7.3.1 The effect of social and environmental changes on farming within KwaHhoHho and Ingwavuma

Historically, KwaHhoHho and Ingwavuma were places where subsistence farming was practised. This is still largely so in Ingwavuma; however, participants from KwaHhoHho communicated a change in the lifestyle of those living in the area. A participant who had lived in KwaHhoHho for the past 32 years and grows all the vegetables in the garden for her household of nine remarked: "*The fact that the number of people who are farming has declined makes a huge difference. When I didn't have something, I could easily get it from my neighbours, but now you just can't. If you can't farm for yourself, you will not get what you need from anywhere. People are no longer interested in farming*" (Participant 25, KwaHhoHho, 2022).

The quote also points to aspects which make it increasingly difficult to farm. For instance, a woman who had spent her entire life in KwaHhoHho and who farmed predominantly traditional foods as a source of income stated: "*Since it is not raining, we buy mealie meal from the shops. We used to have a machine to grind mealies. Like peanuts we can't harvest them anymore because they do not get ripe. I have to buy them in the shops*" (Participant 19, KwaHhoHho, 2022). This was true for many participants, where environmental factors as well as lack of fencing and time available meant that they ceased to farm. When discussing the link between a change in foodways and shifts in climate, a man who grew up in Ingwavuma and assisted farmers in both case study areas to grow their own food with a focus on traditional seeds noted: "*Food and culture are being challenged by climate change as well. There are crops that you don't see anymore because of drought and because of few people growing.*" (Participant 41, Mtubatuba, 2024). The loss of traditional foods and foodways roots to culture having been affected by the change in farming practices is demonstrated in this quote. These themes were a reoccurring realisation and core to this research which will be picked up on again later on.

Along with a reduction in the number of those farming, participants from KwaHhoHho said that a change in farming practices had taken place in their lifetimes. "*When I was growing up our grandfather used to plough pumpkins, mealie meals, and amabele or as you know it sorghum. He used to plough it all and we used to eat it in beans. We used to eat everything that was ploughed by my grandfather. At the store, they used to get meat and mealie meal only and cooking oil.*" (Participant 23, KwaHhoHho,

2022). Participants spoke about an abundance and wealth of produce when they were growing up as opposed to now where, especially during the drier season, it was harder to get food to grow or have enough to save. "*Things like mealies: Before it was a lot, we would put it into the machine and grind it. But now there isn't much; the little you get you to make izinkobe*[35] *and eat, it's not enough. We no longer have izinqolobane*[36] (Participant 22, KwaHhoHho, 2022). It appeared that there was a decline in the use of *izinqolobane,* causing them to become scarce. When asked what it was like to put food on the table when she was younger, an older farmer in KwaHhoHho stated: "*It was easy. Because every season there was this thing that they would grow. Season by season, they had something to e*at ... [Now, just after the winter months, many small-scale farmers buy food from the shops]. *You can't make it anytime because there is no mealie meal. They don't have places to save it, but my grandfather used to save it in the big tank... That tank is now lying there, dead*" (Participant 23, KwaHhoHho, 2022). Here she used the metaphor of a dead tank to illustrate the lack of crop abundance and increasing challenges to farming.

7.3.2 Store-bought food

The shift in foodways was accompanied by a growing reliance on the shops. A woman in KwaHhoHho who struggled to produce crops in her garden and as a result had to buy food from the shops noted: "*What makes it more difficult is that everything we need has to be bought in the shops in town. You go to town to buy, the things we need are very expensive. Back then life was great because there were just fewer things we needed from town - maybe cosmetics and oil.... Food now is less healthy because they buy it from the shop. What was healthy is the food they used to grow*" (Participant 34, KwaHhoHho, 2022). As mentioned, many participants believed store-bought foods to be less healthy than home-grown foods, finding for instance that cabbage bought at the shops would often cause stomach cramps which did not happen when they grew the food at home. Participants noted that the vegetables from the shops were bland in flavour and contaminated with chemicals. "*The food that we currently eat is different because I think it has a lot of chemicals. The food we ate growing up we prepared it ourselves like samp, and pumpkin pudding and we ground our own maize meal. Today's food is different"* said one farmer who grew up farming in the area (Participant 25, KwaHhoHho, 2022).

7.3.3 Food variety

Even those living in Ingwavuma, where most people still grow their own food, felt that the food they eat now is less healthy than it once was owing to a reduction in variety. "*I say this because growing up we used to eat things like the caustic creeper, and imnoyi and we were very healthy. Right now, we have diseases like diabetes and BP*[37] *– things we previously did not know about. Our parents died and they did not have these diseases, but we have them now*" (Participant 2, Ingwavuma, 2022). Caustic creeper and *imnoyi* are both local wild plants that participants identified as declining in the case study areas. In KwaHhoHho, where this impact has been the most pronounced, participants claimed that they hardly ate any of the wild foods they ate in their childhood. "*Here is nothing that grows from the wild that I pick...yes, before we used to pick and eat. The only thing that is left are guavas*[38] *– other things are no longer there*" stated Participant 26 (KwaHhoHho, 2022) when asked if she harvests any foods from the wild. Participants linked the decline in the presence of these plants to biodiversity loss as a result of landscape and environmental changes, as discussed earlier in this chapter.

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[35] Samp and beans cooked together

[36] Izinqolobane is a structure built to store food

[37] Blood pressure

[38] Guava is not indigenous and is in fact highly invasive in these areas in KZN.

7.4 Downward trends in the consumption of traditional foods

Traditional foods such as fresh vegetables, bean varieties, maize and grains were still eaten by most people living in KwaHhoHho and Ingwavuma. However, respondents indicated that in the last few generations the amount of traditional food grown, prepared and consumed had declined. This was deemed to be linked to weather conditions, making it harder for people to have access to traditional foods, along with an increase in store-bought foods and a disinterest by youth.

When discussing the link between a change in foodways and shifts in climate, a man who grew up in Ingwavuma and assisted farmers in both case study areas to grow their own food with a focus on traditional seeds noted: "*Sorghum needs a village to grow … Sorghum is also linked to many rituals, ingredients in the household … How we talk to our ancestors is linked to small grains, one of them is brewing and making fermented beer*" (Participant 41, Mtubatuba, 2024). One participant who lived in KwaHhoHho and who sustained herself and household of ten predominantly from food bought in the shops, stated: "[Eating traditional food is] *very rare nowadays. When last did I eat maize bread…not too often. Even samp we do not eat all the time. I think with the maize bread – before we knew that we planted maize, harvested it when it's time, then cooked it or charred it. But now there is maize even if you can plant, it dies. The shops do sell some and some of it is not there. …Oh, my word I still love it! It's just that it's not available.*" (Participant 34, KwaHhoHho, 2022) This seemed to be true for many participants in KwaHhoHho who were dependent on the shops and was particularly prominent in and just after the winter months when the interviews took place. The fact that traditional food is so tied to land and farming means that the transition to store-bought foods, which are processed and often made up of conventional foods, would naturally cause a decrease in traditional foods being eaten. As Participant 23 (KwaHhoHho, 2022) noted "*The stores are for the things of today*".

Another aspect leading to the shift away from traditional foods lay with the social changes taking place. As with the lifestyle that accompanies these foods, youths' desire to eat traditional foods was waning. In both areas, participants spoke about how the younger generation preferred the store-bought foods and flavours to more traditional foods and recipes. An eighteen-year-old from Ingwavuma said "*I used to eat a lot* [of traditional foods] *when I was growing up, currently I eat it less often. I got tired of it. I ate it too much growing up. Food from the shops has a variety of spices and flavours compared to the one we cook here where you only mix in salt, oil and soup…We like pizzas and KFC*" (Participant 16, Ingwavuma, 2022). Despite this, most of the food the eighteen-year-old ate was food grown in the garden, but she explained how youth in the area buy food from the shop when they can.

An older woman living in Ingwavuma with her children spoke about how she now ate less traditional food because her children did not like the taste:

> *Once I came back with it* [maize], *I carried it by myself and put it into the mill machine myself. As we ate, they told me 'Mom we can't eat this.' Now I usually buy it for myself where I collect my pension. People are doing what is relevant to them now, they did not grow up in the time when we were eating isipata*[39]*. When you tell the children of today about isipata no one knows about it. I don't think they will ever plant maize. Because they have to prepare stews, they can plant things like spinach but not maize. They don't want to farm, I think they farm at the store*s" (Participant 7, Ingwavuma, 2022).

A youth from KwaHhoHho (Participant 44, KwaHhoHho, 2022) similarly spoke about how she and other young people in KwaHhoHho did not mind traditional foods, but preferred flavourful, processed foods from the shops. She claimed that they do enjoy eating traditional foods occasionally, however they do not like to consume them every day.

[39] Explained by the participant as a type of maize which has been kept underground.

7.5 Loss of knowledge

A man who grew up in Ingwavuma, and at the time of the interviews worked in Mtubatuba with the communities of both KwaHhoHho and Ingwavuma, drew a link between education and a loss of traditional knowledge about both traditional foods, recipes and farming as well as how to act as custodians to the land and its resources. He stated: "*Today, traditional knowledge is vanishing away. Because they're not taught it at school. The grannies don't have time with kids. And the kids are from the young girls, not from maidens. The culture's completely broken…You learn by doing and experience and practising*" (Participant 41, Mtubatuba, 2024). This brings attention to a breakdown of knowledge acquired through practice, in particular, the knowledge related to traditional farming methods and practices. The change within youth, where they no longer spend their childhood in the fields with their parents or grandparents, was often mentioned. When asked how this affects local traditional foodways he stated: "*They don't even know the food names anymore. The dishes. You* [the youth] *don't experience it and there's less plantings*" (Participant 41, Mtubatuba, 2024).

Traditional knowledge was not the only issue this participant referenced as being affected by the change in childhood lifestyles. He associated the shift of children from local upbringing in the household to schools with a loss of traditional worldviews and people's relationship with and understanding of nature. The participant spoke about how elders from rural families possessed an understanding of how to protect nature and the understanding of what sort of animals or trees that you could harvest and not harvest, stating: "*here is a rural family kinship towards nature, where they are the custodian of that resource*". Yet he noted that children are no longer taught this in childhood because they go to school where a different type of knowledge is absorbed: "*For us* [those who grow up with indigenous ecological ideology]*, it looks like nature is being disconnected from the community that is close by*" (Participant 41, Mtubatuba, 2024).

When speaking to an older man who hunted wild meat in Ingwavuma, he spoke about learning this knowledge and skills from his grandfather and his attitude towards nature reflected this ideology; however, he noted that he did not teach his children as they were not interested in hunting. An elderly female farmer stated, "*[nature] is something important to us, part of our tradition. We grew up with it all around us and we must take care of it*" (Participant 5, Ingwavuma, 2022). This understanding of nature was embraced by all the elder farmers I spoke with, but the sense that this relationship was fading was prevalent in how they spoke about the new age.

A Biowatch member who had been active in communities of both KwaHhoHho and Ingwavuma and grew up in the area, mentioned that there were rituals which acknowledged nature: "*Before you plough your field, before the community ploughs, they have to go and plough the chief's field or even before ploughing, they have to go to the mountain to honour the nature to ask for rain, for a good season and also to leave the seeds in the bush, so that [it] germinates; no one will help, no one will harvest it"* (Participant 41, Mtubatuba, 2024). However, he claimed that these rituals no longer take place and with it the knowledge of how to perform them has been lost.

Overall, the social changes in KwaHhoHho and Ingwavuma are being reflected within their foodways. The research showed that some (see section 6.2.1), chiefly elder, participants staying in the area continued to maintain a lifestyle like that of their parents and grandparents which involved using traditional farming methods, herding and eating unprocessed fresh produce. Although there has been a reduction in the frequency of preparing the more complicated traditional recipes, fresh vegetables, beans, meat and grains remain staples. However, those who maintain this lifestyle do so both out of familiarity and desire and also out of necessity rooted in poverty. The lifestyle is not easy and the challenges to growing these foods persist. Gradual changes in community dynamics, mindsets and ideals as well as other social factors within these areas are causing a move away from aspects of these food systems.

Chapter Eight: Discussion

Local foodways are found at the intersection of identity and food and are rooted in social life, economic practice and cultural tradition (Rearrick, 2009; Alkon et al., 2013). Yet these foodways have been shown to be fluid in nature, constantly altering as aspirations, knowledge and lifestyles change within local communities (Rearrick, 2009; Alkon et al., 2013; Kroll, 2016). A key finding from this research, based on interviews describing foodways through participant memories, suggest foodways are systems emerging as a way of life, born out of childhood memories, dietary preferences, lived experience, and social cohesion.

Despite aiming to create a boundary around local foodways for the research, their complexities came to light with a myriad of interlinking factors. For instance, in asking how food is acquired, participants opened the floor to questions of land access, seasonality and climatic shifts, seed systems, governance, knowledge, education, stigma, and modernisation. Yet, even with these complexities, the trends taking place within the local foodways in KwaHhoHho and Ingwavuma were exceptionally similar, despite happening at different rates. Participants from both areas who partook in traditional farming methods or still maintained the local foodways from their youth described a similar diet and traditional foods, sourced through the same means and underpinned by the same principles.

This chapter pays attention to a few key themes which arose out of the research and explains how each of these – modernisation worldviews, government policies, climate and landscape change, loss of traditional knowledge, loss of people's connection to nature – link to the changes in local foodways in the case studies.

8.1 Modernisation worldviews

Sokk (2024) writes about the challenges faced by Indigenous and local communities stemming from the unrelenting forces of modernisation brought about by globalisation, urbanisation, economic development and industrialisation. He notes that "modernisation can lead to the homogenisation and standardisation of cultural identities within Indigenous communities, as traditional ways of life are increasingly influenced by dominant Western ideologies, values, and lifestyles" (Sokk, 2024: 18). One way in which this homogeneity can be seen within local communities is in the shifting of food systems. Local foodways are culturally and contextually adapted yet, faced with the forces of modernisation, they are homogenising with global food systems. In other words, there is a delocalisation of foodways taking place within rural areas (Friedmann, 1992; Kuhnlein and Receveur, 1996; Turner, 2007; Akinola et al., 2020).

In KwaHhoHho and Ingwavuma participants spoke about their increasing reliance on store-bought foods. Elders linked this to a loss of local knowledge and practices as they no longer had easy access to traditional foods. Traditional foods were defined by participants as foods obtained and prepared in the ways that were passed down from their ancestors. A woman who spoke about her strong connection to KwaHhoHho as the place where she had grown up, explained how she had found herself eating fewer traditional foods. She noted her main diet had always consisted of traditional foods, but this had changed as she started to buy more foods from the shops which did not sell traditional produce. She, and other participants in the study, described moving away from local food systems, and increasingly depending on food available in supermarkets, thus losing the diversity and significance of these foodways. Rana and Bisht (2023) note that pre-globalisation local diets consisted of locally and seasonal foods. Yet, youth, and those earning more money now favour fast foods leading to undernutrition and other food-related diseases. Such changes in diet, because of increasing participation in global food systems and change in livelihoods, were also identified in a study conducted with Indigenous Gunas communities of Panama (Lam et al., 2023). In this study it was found that underlying a shift away from traditional diets was a lack of accessibility to traditional food ingredients coupled with the increasing availability of westernized dishes (Lam et al., 2023).

Global food systems are homogenous, tending to centre Western ideals and lacking sensitivity to specific contexts. For instance, rituals around animal slaughter which may be culturally significant are not performed in abattoirs. On the other hand, local foodways are definitionally culturally appropriate as they are borne out of the culture of the area. Participants explained that what makes foods culturally significant extends beyond the type of food and includes its growing, preparation and consumption in the way of their ancestors, with the eating of traditional foods connecting them to their culture. As such, some cultural practices and foodways are one and the same. For instance, herders in both KwaHhoHho and Ingwavuma discussed the spiritual rituals in the slaughtering of animals while farmers noted ceremonies before planting. Likewise, in a study investigating traditional ecological knowledge and indigenous foodways in the Peruvian Andes, food relations went beyond the purposes of provision but were seen as a key aspect of cultural identity. Describing this study, Huambachano, (2019: 103) remarks that "Each year activities associated with food, such as harvesting ceremonies, dances, pow wows, and communal food festivals renew the family, community, cultural, political, and social relationships that connect Indigenous peoples with all community members, including plants, rivers and spiritual beings".

What is clear is that the loss of cultural practices and community identity is attached to the shifts from local foodways to homogenous global food systems. The research perceived three shifts exacerbating a move away from local foodways ofKwaHhoHho and Ingwavuma. These are: 1) youths' perceptions and preferences had embraced modernisation, a desire to move from rural areas to urban ones, preference for urban centres with access to education, jobs, and the convenience and lifestyle of the city; 2) modern methods of commercial farming, delocalisation of the food supply and hyper-processed food; and 3), elders faced with increasing challenges to maintain local foodways. Savage et al. (2020) found that increasing access to urban areas and lifestyles in Vanuatu was a significant factor affecting the shift away from local foodways and traditional diets. Although the preference for locally grown foods was present in older generations these preferences were shifting in children who chose fast foods such as rice and noodles over island food (Savage et al., 2020). Elders in Vanuatu expressed sadness for the loss of knowledge relating to traditional cooking methods and local dishes especially in the younger generations. They noted the practices of sharing these foods were important cultural practices and took pride in 'aelan kakae' (island food) (Savage et al., 2020). The results of this study align with these findings, with local elders expressing similar sentiments. Such changes suggest a generational breakdown in local foodways, including those of KwaHhoHho and Ingwavuma, and with it a change to less sustainable, nutritious and culturally significant diets.

Roche et al. (2008), Grey and Patel (2015) and Rana and Bisht (2023) note the reduction of variety and nutrition in diets as people move from traditional foods through subsistence means to processed and store-bought foods. Similar findings were reported in KwaHhoHho and Ingwavuma where traditional diets made up of cultivated crops, wild foods and livestock showed great plant diversity and varieties in participants' diets that was greatly reduced with the shift to store-bought foods. Participants also expressed that store-bought foods contained pesticides which they would prefer not to consume, favouring to grow their own food and noting that their own garden food kept them healthier and satisfied for longer.

A large part of local foodways is the growing of food through traditional farming practices. Although traditional foods include certain varieties and species not found in stores such as sorghum and Zulu potato, they also include standard vegetables such as broccoli, spinach and sweet potato. What appeared to make these foods "traditional" over those found in supermarkets was the fact that they were grown in local gardens. This perception of the linkage between food from the soil and tradition (in this case a fluid term often associated with knowledge and practices that are passed from older generations) was embedded in participants' notions of ancestry and inherited custom.

Friedmann (1992) and Turner and Turner (2007) remark that the delocalisation of foodways includes a shift towards food produced through large scale industrial modes. A substantial body of research confirms how multinational companies are monopolising the global food system, taking over food production as well as agricultural inputs (Kloppenburg, 2004, Clapp, 2024; Greenberg, 2024). Through such pressures, local foodways have become absorbed into wider food systems, creating a dependence on processed foods and food monopolies (Kuhnlein and Receveur, 1996; Kroll, 2016).

Local foodways and the ability to grow one's own food were identified as giving participants in the case studies autonomy and a sense of control. Participants spoke about how farming allowed them to choose what they ate (traditional varieties and culturally significant food not found in stores) as well as how it was grown (without the use of chemicals, which was the case with store-bought food). In global food systems, the choice of how food is grown, the use of pesticides and synthetic fertilisers as well as the varieties available are in most cases taken away from the consumer (Grey and Patel, 2015). As such, local foodways can be considered to enable agency in food security while the growing pressure to partake in global food systems disrupts this agency.

The independence and security which arose from being self-reliant and not having to purchase expensive produce was also mentioned. The foodways in the case studies could not be removed from the social and political context of the areas. Lahiff (2000) and Ngcoya and Kumarakulasingam (2016) note that subsistence farming is identified as a potential source of income and means of production. Yet, more critically, subsistence farming is not exclusively a choice but a livelihood strategy that black women in the former homelands have needed to adopt due to the high levels of poverty and inequality as well a generalised lack of support in these areas. Although participants did not identify subsistence farming in local foodways to exclusively being a result of poverty, they acknowledged the importance of farming for food security and money saving. For instance, a common response from participants in both KwaHhoHho and Ingwavuma was the perception that youth will need to learn to farm for financial reasons, a lesson they believed would be learnt sooner or later. "*They need to learn how to survive. They must learn how it's like to be a farmer*" (Participant 7, Ingwavuma, 2022). Crucial to this is the minimising of external costs and inputs.

Participants identified their increasing involvement and reliance on the cash economy as a factor leading to the breakdown of local foodways as they no longer had the energy or time to be in their gardens. The role of money was recognised as shifting dynamics within the community. As discussed in Chapter Six, modernisation and its accompanying mindsets, in which money is the vector of exchange, changed relationships between people. Spaces where bartering and sharing had historically been the mode of exchange were now spaces where payment was required. The social networks created through community-based labour and sharing of food and seed that still existed, but were historically more prominent, also built resilience within communities themselves. For instance, van Niekerk and Wynberg (2017) traced the pathways of seed exchanges within the same communities described in this research. They found that seed-exchanges maintained good community and family relations, quoting a participant who remarked that "sharing seed maintains relationships and love, there is no animosity or hatred [among people who share seed]" (van Niekerk and Wynberg, 2017: 1116). Yet participants noted that with modernisation the social networks formed through these local practices were increasingly breaking down. For instance, Clapp (2024) links the breakdown of seed-saving networks with the growth of single-use hybrid and other modern seed varieties.

8.2 Government policies

Local foodways are examples of alternative food systems which nevertheless exist within global food systems rather than as distinct entities. External actors, and the power of the government, business agendas, and industrial mindsets were clearly visible within the local foodways of KwaHhoHho and Ingwavuma. Local government and the influence of policies on the foodways in the case studies manifested in a push towards the use of industrial farming methods over traditional practices and a focus on introducing farming to commercial markets and encouraging commercial agriculture instead of supporting subsistent practices.

Latham (2015) notes how a push towards industrial agriculture in the name of food security and rural development has encouraged a new style of agriculture requiring external inputs, and steering subsistence farmers away from traditional farming practices. Findings from the current research suggest that commercial agriculture and its use of industrial farming methods were given more support from government than traditional farming methods. An analysis of national, provincial and local policy

documents (respectively, the Department of Agriculture, 2020; Department of Agriculture, 2024; KwaZulu-Natal Department of Agriculture and Rural Development, 2024) confirmed this to be the case; agricultural and livestock extension officers in KwaHhoHho and Ingwavuma likewise confirmed that their focus was on commercial agriculture and training farmers in farming practices that use biotechnologies and associated inputs.

Yet, as noted by Von Braun and Díaz-Bonilla (2008) and Latham (2015), industrial agricultural practices are known to be unsustainable in that they are extractive, short-term and profit-motivated. The local foodways observed in the case studies on the other hand showed a long-term relationship with the land. Traditional farming methods, like agroecology, are non-extractive, feeding the earth and protecting nature so that the land can be used for following generations. The intergenerational nature of these foodways means that the knowledge of how to maintain the land is passed down and with it a way to co-exist with nature rather than extract from it. Seed-saving networks allow for the saving and sharing of seeds without having to buy new seeds each year, and seed variety allows for resilience in changing climates (Kloppenburg, 2004). Despite this evidence, the research found there was a lack of support for local practices and a push towards industrial farming methods by government at all three tiers and their representatives. Evidence of this is in the conversations with extension officers; moreover, government support was not mentioned by participants, and a person working closely with both communities confirmed the lack of support given to subsistence farmers (Participant 41, Mtubatuba, 2023). The encouragement for industrial farming methods and for farmers to join the market reduced participants' ability to define their own food system, with local systems breaking down as a result and becoming dependent on large-scale multinational companies.

Kuhnlein and Receveur (1996) and Kroll (2016) discuss how global food security practices which encourage the use of technological fixes reduce food sovereignty as they place emphasis on increasing production and often lead farmers to be dependent on large multinational companies. In many ways, there is a loss of agency, found within local farmers and herders in the case studies and more generally, due to a lack of recognition and hence support. Food sovereignty means the ability to define one's own foodways but that requires support by government and other actors. Given the choice, it seemed as though participants, predominantly elders, would choose to participate in local foodways, yet external factors made it substantially more difficult to make that choice. The presence of the NGO Biowatch in both communities confirmed this as participants showed enthusiasm and preference for Biowatch, who did not bring in a new system but rather worked to support and promote the traditional knowledge and foodways already in place. In other areas of KwaZulu-Natal, such as in Hlabisa where Monsanto (at the time) was present, farmers moved from traditional to industrial farming practices, becoming dependent on multinational companies (Mahlase, 2017).

The way in which food was grown was highlighted by participants as culturally important. The absence of adequate support for traditional farming methods and the pressures by government to incorporate industrial agricultural techniques, showed a lack of recognition of the ties to identity, culture and heritage traditional farming techniques and practices carried within them.

8.3 Climate and landscape change

A study conducted in the uMkhanyakude municipality where KwaHhoHho and Ingwavuma are situated suggests that rain-fed agriculture in the area and, as such, food security, will be negatively affected by lower annual rainfall, increased rainfall variability, high temperatures, drying of topsoils and a reduction of water in the soil (Mthembu and Hlophe, 2020). The current research findings confirmed such trends, with farmers identifying the threat of climate change and its influence on people's ability to partake in foodways identified as a key challenge. Participants brought attention to the increasing challenges of growing and foraging food, including change in seasonal rainfall times, increased sun radiation, extreme events as well as vegetation changes. Accounts from other parts of South Africa (Bakre, 2015; Shackleton et al., 2019; Leonard, 2022) give similar testimonies, expressing how changes to climate are amongst the most pressing forces behind changing to store-bought foods, as the ability to

farm becomes more challenging. In uMkhanyakude District Municipality of Northern KwaZulu-Natal, Bakre (2015) found that among subsistence farmers access to water with changing climate was a major challenge to growing food while Leonard (2022) linked climate variability to crop failure and a general decrease in the amount of food farmers can harvest. Rana and Bisht (2023) note the increase of migration within farmlands is in areas where farming is reliant on rainfed agriculture, and as a result people are moving away from farming due, in part, to poor crop yields.

Participants' lack of resilience to environmental changes was seen to be behind the shift towards store-bought food within the elder generations who, although expressing a desire to grow food, found these challenges too much. There was observed to be increasing struggles due to climate change to have successful crop yields, coupled with the lack of support for women in subsistence farming from government, family members and other forms of authority. This meant that communities ended up adopting a store-bought diet, particularly in winter months.

Through examining literature (Mucina and Rutherford, 2006; Hoffman, 2014; Mthembu and Hlophe, 2020) and using QGIS mapping of vegetation change in KwaZulu-Natal, Chapter Four identified a change in vegetation, including bush encroachment and an increase in alien species. This change was confirmed in the interviews where landscape transformation was spoken about as influencing local foodways. Participants discussed how traditional diets comprised both cultivated crops and wild foods. In KwaHhoHho especially, participants mourned the loss of wild foods with the change in vegetation types and herders spoke to the increasing challenges to owning livestock due to bush encroachment on grasslands.

Although participants from the case studies spoke about vegetation change and linked this to a shift in climate systems and an increase of alien invasive species, other factors could also be responsible for this transformation. Elsewhere in the world the change in vegetation and loss of grassland for herders are seen to be linked to factors such as land use changes and overpopulation. For instance, in 2019 in the Flathead Indian Reservation in Northwestern Montana, Smith et al. (2019) found that wild foods are becoming scarcer which participants linked to increased population, agricultural encroachment, land use change and overharvesting. Within KwaZulu-Natal, Jewitt et al. (2015) investigated land-cover change between 2005-2011 and found that agriculture, the built environment, timber plantations, mines and dams were the major causes of habitat loss and vegetation change in the province. Comparing this to the QGIS mapping of vegetation change in the case studies, as well as participant interviews, it appears that in KwaHhoHho (situated near the urban area of Mtubatuba which was noted by participants as becoming overcrowded) these factors are likely to have contributed to the loss of grassland and wild foods in the area.

In Ingwavuma, participants' perceptions of the loss of grassland due to bush encroachment aligns with the data seen through geospatial mapping of changes in vegetation of the area. As such, land use, agriculture and built environments do not appear to be underlying grassland change in Ingwavuma but rather predominantly a result of bush encroachment.

8.4 Loss of traditional knowledge and practices

Sharif et al. (2016) and Wane (2005) speak about indigenous or local knowledge as a holistic-based epistemology in which knowledge is learnt through participation in cultural and everyday activities with holders of this knowledge. They draw a distinction between textual and valorised Western knowledge learnt in schools and local knowledge which is absorbed and created through socio-cultural practices. Similarly, participants from KwaHhoHho and Ingwavuma placed a strong emphasis on knowledge as intergenerational, learnt from their parents, grandparents or elders in the community. They spoke about traditional knowledge as something which was acquired through doing and being, aligning with Wane (2005) and Sharif et al. (2016), and noted that it was participating in practices of local foodways that knowledge was passed on, which was more than just the physical actions, but included socio-cultural elements, symbols and values in food practices.

Understanding traditional knowledge in this way makes it clear why participants regarded a loss in the transmission of knowledge as part of a lifestyle shift in which youth no longer partake in the practice of growing, herding, preparing food and eating with older generations. The knowledge that is being lost includes that of traditional farming practices, of how to look after animals and which plants to forage. This contains knowledge of the importance and cultural significance of eating certain traditional foods for the body and soul as well as how to act as custodians of the land and its resources. Participants spoke about how in their youth they learnt to farm through working in the fields with their mothers and/or grandmothers; likewise young boys learnt to care for livestock by being in the pastures with their fathers or grandfathers. While doing this they would learn which plants could be foraged for both their edible and medicinal purposes.

However, participants identified a breakdown in the passage of this knowledge as youths go to school and have changed their priorities and are no longer immersed in social-cultural foodway practices. The linkage between the breakdown of traditional knowledge/culture and education can also be seen in other communities. In the Standing Rock community in Dakota (Ruelle and Kassam, 2003) elders spoke about how even when children at school learned about foodways they would only learn that specific plants can be eaten and not the practical wisdom of how to gather, locate and prepare them, nor be given opportunity to practice it. One of the younger participants at Standing Rock who attended boarding school noted that at school she was unable to prepare traditional foods and as a result forgot how to.

The shifts taking place in KwaHhoHho and Ingwavuma show the loss in the cultural practices attached to residents' diets. As youth stop engaging with local foodways they were said to have lost connection to the cultural roots attached to them. The loss of cultural identity as a result of a change in diets and food practices was captured in research with northern Aboriginal communities in Canada where a participant stated: "once we stop hunting and doing those traditional things, we are not Dene" (Guyot et al., 2006: 414); here they noted the importance of having access and taking part in traditional food practices as a form of cultural preservation.

The intimate link between lifestyle, knowledge and culture means that this passage of knowledge through generations is also a passage of cultural meaning. When this passage of knowledge is broken, or the knowledge lost, so too are the cultural meanings held within these practices. For instance, Wane (2005) notes how indigenous knowledge is not only formed through interactions with human beings but also the non-human world and, as such, naturally suffuses ecology with indigenous education. When participants in KwaHhoHho spoke about a loss of wild foraging because of the changes in vegetation, and how youth no longer grow up learning about nature from their elders, they were speaking about how youth weren't learning a rural family kinship towards nature which is embedded in Zulu culture.

Hence, it is no surprise that the unintended consequences of education are amongst the main factors identified by participants as a disruptor to the transmission of indigenous knowledge. Education has long been used as a tool of power, control and cultural acculturation, especially under the apartheid regime (Hill et al., 2012). As such, Hill et al. (2012) maintain that with South Africa's transition to democracy in 1994, there was a push towards building an education system that could redress past injustices, reduce inequality and improve people's quality of life (Hill et al, 2012). Section 29 of the Constitution of 1996 established education as a fundamental human right (Asmal and James, 2001). Complementary legislation, such as the South African Schools Act (Republic of South Africa, 1996c), made schooling compulsory for children from age seven to fifteen (Hill et al., 2012; GCIS, 2015). As a result, a social change has taken place whereby youth in rural communities now spend a large majority of their childhood in schools whereas their parents and/or grandparents would have spent this time immersed in rural livelihoods. Indigenous knowledge and culture are learnt through being immersed in these livelihoods, as youth spend time with elders in gardens, preparing food and interacting with nature, they are taught about the practical and spiritual knowledge attached to each activity (Wane, 2005). Despite the importance of education within the South African context and high levels of inequality, participants perceived the unintended consequence of the disrupting of traditional knowledge. Firstly, because youth go to school, they no longer spend time in fields with older generations and, as such, are not immersed in a way that they gain embodied indigenous knowledge.

Secondly, education was seen as promoting western systems and worldviews over traditional ones. Participants spoke about how older generations 'believed' in traditional food compared to educated youth.

The word "believe" was used more than once by participants and is noteworthy because it emphasises the mindset change taking place. It highlights the dualism between elders who believe in traditional foodways as important for health, autonomy, culture and lifestyle resistance, and youth whose beliefs and aspirations are formed out of "mainstream" skills and values which are embedded in our "captured" education as well as within wider society to which youth are closely connected (Moloi, 2007). These aspirations work with concepts of development and modernisation (Moloi, 2007) and as such can be said to place traditional foodways and lifestyles as that which to modernise and develop from.

Stigmas of inferiority and shame in indigenous knowledge and lifestyles have roots in colonialism and are still a dominant narrative within society (Nabhan, 1997; Vazquez, 2011; Maseko et al., 2017). Akinola et al. (2020) bring attention to the branding of indigenous foods as "poor men's food". A young male with a tertiary degree living near KwaHhoHho noted that he often received confusion and pity when showing interest in local farming practices as people saw it as something beneath him and belonging to the realm of elder women. Thus, the stigma attached to traditional farming, which youth are said to show little interest in learning about, is something which acts as a barrier against the transfer of knowledge.

Fre (2018) discussed the ways in which educational systems and food strategies are underlaid by global narratives of modernisation, neoliberalism and Western principles and the failure to appreciate and promote local systems and ideologies. As a result, people are pushed to strive for these lifestyles while traditional ways of living, growing and eating are viewed as something to move away from. Elders from KwaHhoHho and Ingwavuma expressed their sadness in this phenomenon and seemed to point towards education in schools and indigenous education as being mutually exclusive. A youth who practices subsistence agroecology in KwaZulu-Natal highlighted the need for representation of local knowledge and foodways in school curricula, pointing out that despite schools – and the media – currently being spaces which add to the dismissal of indigenous epistemologies and local foodways, they are also spaces in which they could be promoted. Breidlid (2009) speaks about the cultural and worldview barrier through which youth pass when they go to school compared to home, yet this barrier is something which can be addressed by bringing into education local worldviews, local knowledge and promoting the benefits of local foodways for health, culture and for identity. Kimmerer (2002) notes that incorporating indigenous knowledge into education curricula (for instance, traditional ecological[40] knowledge into biological science) improves and adds to approaches as well as encouraging and validating native students about their own knowledge systems. She stresses that when incorporating indigenous knowledge into education, local worldviews from which this knowledge arises must be recognised and understood. "Respectful use of traditional ecological knowledge in education calls for thoughtful consideration of the cohesive, internally consistent worldview to which it belongs" (Kimmerer, 2002: 437).

8.5 Less connection to nature

The local foodways of KwaHhoHho and Ingwavumaa are closely tied to the natural world and, as such, the interactions between participants and nature were of interest. This relationship was most apparent when discussing foraging and hunting of wild foods. While doing walking interviews in the area I was able to observe how nature was spoken about in familial terms. The view of nature held especially by elders resists the dominant Western view of nature as a resource and as an object to extract from in the name of progress. Haila (2000), Schneider and McMichael (2010) and Fraser (2017) as well as other

[40] "[The] knowledge, practice, and belief concerning the relationship of living beings to one another and to the physical environment" (Kimmerer, 2002: 432)

critics note that within dominant standards stemming from Western society a growing rift can be seen in which nature and culture have been placed on two sides of a dualism and that this is being reproduced because of the way humans interact with the world. This dualism supports a destructive method of interacting with nature (Haila, 2000). Hence the importance of encouraging indigenous understandings as an inspiration and counternarrative.

By scrutinising foodways, a connection can be drawn between the type of foodways people engage with and the conception of nature which both evolve out of and are held within these systems. The nature described by participants and their relationship towards the natural world – which is found within many indigenous communities (Wane, 2005) – is a central theme in the current research. Yet I also observed how there is a change in the ways in which nature is known, alongside the shift towards global food systems and accompanying lifestyles, especially by the youth, who largely no longer partake in local foodways but rather seek urban lifestyles and diets.

Elders spoke about their role as custodians of the land and its resources. They referenced nature in familial terms, with mutual respect and as active members within foodways. Likewise in other studies where local foodways are in place, such as that of many Lakota speaking communities of Dakota, United States (Ruelle and Kassam, 2003) and the Rarámuri in Mexico (Salmons, 2000) there are similar ecological ways of thinking.

Ruelle and Kassam (2003) speaks about the kindred to other beings felt by the Lakota communities, viewing themselves in a world of inter-related webs. This worldview shows itself to be like that of the elders in KwaHhoHho and Ingwavuma, who saw themselves as part of nature. For instance, elders in the Lakota communities said they often begin prayers with an acknowledgement of all their relations including acknowledging non-human actors as being related to them. Likewise, in interviews with participants from KwaHhoHho and Ingwavuma nature, creatures and plants were referred to in familial terms[41].

Participants in the case studies also stated that this understanding of nature is not being passed on to younger generations. When discussing the loss of knowledge, reference was also made to a loss of the rural family kinship with nature. Participants linked this to modernisation happening in the areas. This points towards a similar pattern as described in literature of the "metabolic rift" of how neoliberal/western lifestyle promote a dualistic relationship between society and the natural world (Haila, 2000; Fraser, 2017; Schuttler et al., 2018). These authors and McClintock (2010), identify neoliberal thinking as having promoted the view of the natural realm as a free resource to extract and appropriate in the name of progress while simultaneously, natural resources are being commodified. As a result, what can be seen is the separation of people from nature both physically and psychologically

Local foodways are rooted in rituals, social life as well as economic practices. It is these very elements which make local foodways unique and valuable. The local foodways of participants in rural KwaHhoHho and Ingwavuma are not only unique to the foodways found in western and/or urban society but because participating in these foodways means engaging constantly with the natural world, they support a stronger understanding of a reliance and relationship with nature. Kimmerer (2002: 433) notes the link between indigenous knowledge of nature and people's lifestyles. She states how traditional ecological knowledge is "born of long intimacy and attentiveness to a homeland and can arise wherever people are materially and spiritually integrated with their landscape... [it] is rational and reliable knowledge that has been developed through generations of intimate contact by native peoples with their lands". Chapter Two described how societies' relationship towards nature has changed over time, while food systems were also changing. In many ways the shift in agricultural practices and the delocalisation of the food supply has contributed towards the growing rift between humans and the natural world as no longer are we faced daily with our reliance on, or made to engage with, nature.

Yet, within KwaHhoHho and Ingwavuma nature in its many forms was consistently referenced when discussing subsistence farming, be that the wild foods and animals that can be hunted and harvested, soil

[41] See section 6.2.4. Wild foods and nature

microbes which need to be nourished, pests and diseases affecting livestock, and plants and climate which can offer both challenges and life to crops. The close relationship to nature, which was seen as integral to participants' way of life, highlighted how intimate the link is between different foodways, and the perception of their connection to nature.

As such, the research showed that the case study areas as both a node for concern, in which the effect of modernisation can be seen as creating a rift between youth and the natural world, and spaces of potential transformation where local foodways can be viewed as rich systems where alternative views of nature are seen and practised, including engaging with the land and its resources through traditional farming practices, and how this can inculcate this mindset. Thus, acknowledging and celebrating local foodways can begin to heal the rift created by the industrialisation of food systems, urbanisation and modernisation as discussed in the literature.

8.6 Conceptualising foodway influences

The local foodways investigated in the research, and the changes within them, brought out the themes discussed in this chapter. The relationship between these themes and how they engage with the local foodways is illustrated in Figure 19. In the lifetime of participants, the food that they eat, where it is sourced, how it is grown and prepared, and the knowledge, practices and everyday actions surrounding food were shown to be adapting because of modernisation, government policies and NGO interventions, climate and landscape change, loss of traditional knowledge and a disconnection from nature. On the one hand, government policies and modernisation emerged predominantly in farming practices which showed the pressure to use industrial methods in place of traditional farming practices; on the other hand, there was a counter push by the NGO Biowatch to strengthen traditional farming practices while incorporating new farming tools[42]. Changes in local diets, with a reduction of wild foods and traditional crop varieties, reflected the increasing challenges to farming due to climate and vegetation change in addition to modernisation mindsets promoting a shift away from subsistence and small-scale farming practices. The loss of knowledge both affected and was affected by a decrease in traditional practices, with education playing a role in shifting youths' worldviews and impeding embodied knowledge which in the past was learnt in childhood. Lastly, as seen in the figure, modernisation mindsets and a loss of indigenous worldviews was seen as increasing the divide and dualism in the understanding of nature.

[42] Agroecology

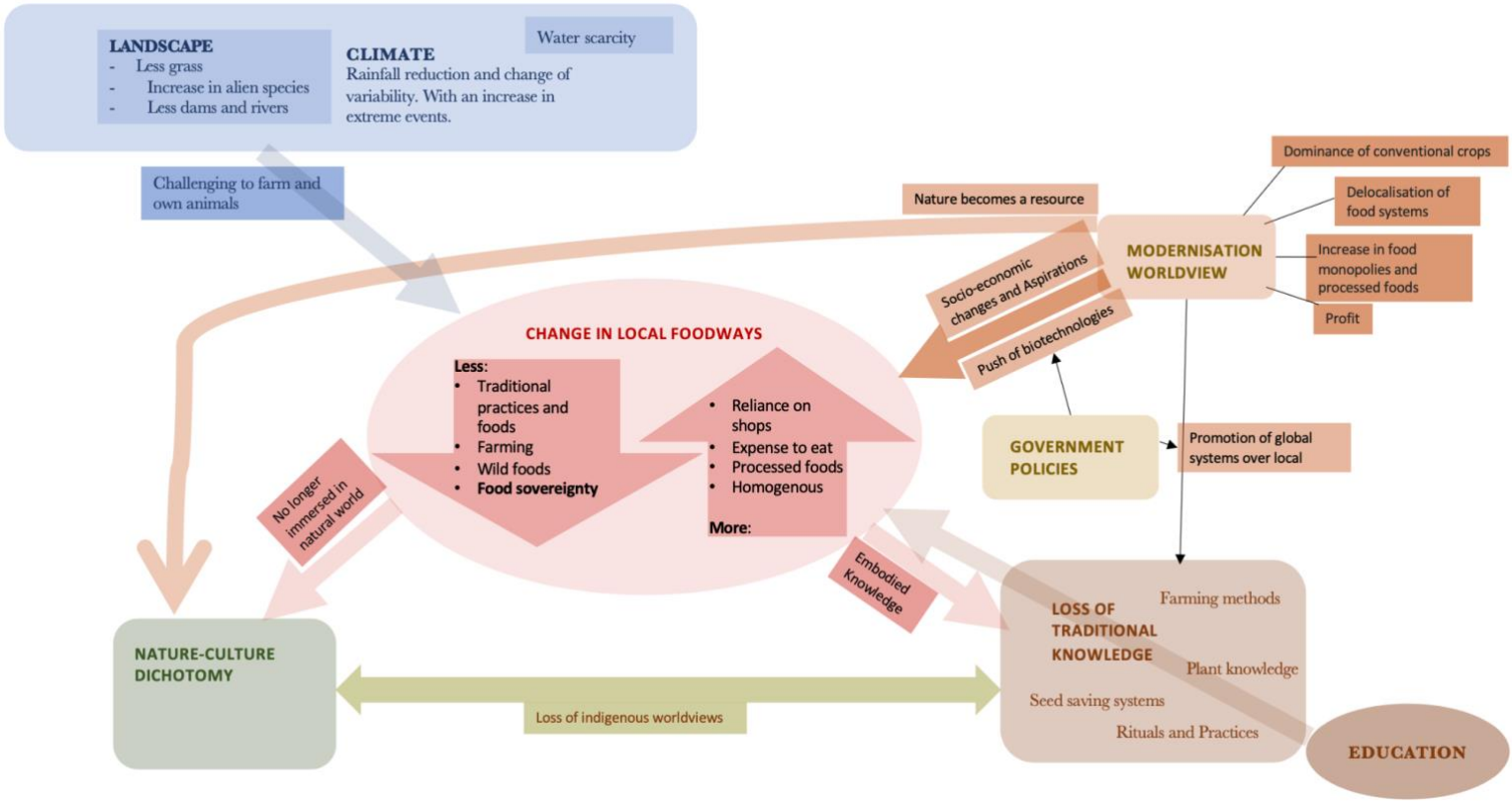

Figure 18: *Mind map of different influences on local foodways*

8.7 Conclusion

As discussed above, local foodways are unique and valuable. This chapter discussed the complexity and fluidity of local foodways, bringing attention to what has made them socially, culturally, economically and nutritiously important. Foodways investigated by Salmons (2000), Ruelle and Kassam (2003) Savage et al. (2020) and Leonard (2022) showed that these are not isolated but a general trend within local foodways. The research confirmed that there is no single element resulting in the diets, practices and preferences surrounding food for participants in the case studies. Although the general trend pointed towards a breakdown in local foodways, the catalyst for such changes differed per person and there were multiple interlinking elements behind these changes.

The research also illuminated how local foodways have contained within them many elements which define food sovereignty. These include the fact that they give agency to people to choose what they eat and how to obtain it; they are rich in culture, encourage long-term strength and relationships with nature; and are nutrient rich, full of variety and free from agricultural chemicals. The case study areas are spaces where food sovereignty is being infringed upon because of the external pressures of modernisation, global systems, climate change and lack of support by government and policies.

Chapter Nine: Conclusion

This last chapter synthesises the research and concludes the dissertation. This is done by providing an overview of the chapters, followed by a breakdown of the results of the objectives, and the identification of areas for further research and actions that can be taken.

9.1 Overview

Chapter One (the Introduction) outlined the context for this research and presented the main aims and objectives. **Chapter Two** covered the engagement with relevant literature from around the world. It described findings by academics and later compared them to data uncovered in the research. The literature focused on the nature-culture dichotomy, historical and contemporary phenomena leading to a breakdown of local foodways, and the concept of food sovereignty. **Chapter Three** documented the approach and methodology underpinning the research, the physical process of the research, ethical considerations, and acknowledged my personal limitations as the researcher. **Chapter Four** provided baseline data on the research sites, including statistics, GIS mapping, and available academic literature. This included investigating the case study areas' demographics and socio-economic factors, political histories, geology, vegetation and climate, currently and how these have changed over time. **Chapter Five** identified key actors and policies whose influence had affected the local foodways under study, based on interview data and document analysis.

The next two chapters form the centrepiece of this research and describe participants' subjective experiences of local foodways, from data collected from participant interviews. **Chapter Six** showcased the complexity and diversity of foodways by answering the questions of what food is eaten, how is it prepared, its social and cultural significance, and how knowledge about foodways is transferred. **Chapter Seven** identified and documented the changes taking place within foodways, and their causes. These were attributed by participants to socio-economic and climatic changes, although other factors were presented as likely influencers. Lastly, **Chapter Eight**, the **Discussion**, brought together the elements found within literature and participant interviews. This chapter contextualised the transformation of KwaHhoHho and Ingwavuma's food and knowledge systems within a wider literature of other local/Indigenous communities and looked towards local foodways as gateways to mending the rift between society and nature.

The use of two case studies in northern KwaZulu-Natal allowed for a multi-sited analysis. The two areas were situated in former homelands and with similar cultural identity yet were exposed to varying degrees of urbanisation, land use change, water availability and modernisation. What became evident was that the types of changes in local foodways and sources of change were trends shared by both communities. In Ingwavuma, where these changes were only starting to arise, local foodways were easily discernible and still dominant, although participants noted increasing struggles and changes in the system. In KwaHhoHho however, the absorption of local foodways into global food systems appeared more pronounced and landscape changes were seen to have almost entirely broken down the inclusion of wild foodways in the food system. Despite this, participants still partaking in local food systems in KwaHhoHho resembled the foodways of those in Ingwavuma. For this reason, findings or trends often applied to both case studies despite the differences in degree and pace of the changes taking place.

9.2 The objectives

Table 6 below presents the key findings against the objectives.

***Table 6**: Table of objectives, related chapters, methods used and key findings*

Objectives	Chapter	Methods	Key findings (Ingwavuma)	Key findings (KwaHhoHho)
Gain an understanding of the historical background and context of foodways in the case studies	4	Document analysis, GIS mapping, Participant interviews	- Characteristics reminiscent of former homelands (poverty, dispossession, inequality, poor service delivery, land degradation, low agricultural potential) -Climate variability -Change in rainfall patterns -Less grassland and fewer wild plants and animals -Bush encroachment	- Characteristics reminiscent of former homelands (poverty, dispossession, inequality, poor service delivery, land degradation, low agricultural potential) -Climate variability -Change in rainfall patterns -Less grassland and very few wild plants and animals -Bush encroachment
Investigate what foods are being consumed by participants and where they are obtained	6	Participant interviews, Walking interviews	-Fresh vegetables, bean varieties, chicken, beef -Subsistence farming, Minimal store-bought, -Foraged wild foods -Hunted wild meats	-Fresh vegetables, bean varieties, chicken, beef -Subsistence farming, -Store bought foods
Investigate how foodways in the case studies have changed over time	2, 7, 8	Participant interviews, Literature review	-Reduction in the scale of farming -Increased reliance on store-bought and processed foods especially in winter months	-Significant reduction in farming and foraging -Increased reliance on store-bought and processed foods especially in winter months
Gain an understanding of the sources of change in the local foodways	2, 5, 7, 8	Participant interviews, Literature review, GIS mapping	-Climate change -Modernisation -Education -Youth aspirations	-Climate change -Modernisation -Education -Youth aspirations -Overcrowding and land use change
Investigate the cultural and social relationships and meanings entwined with food as well as the connection between foodways and the natural world	2, 6, 8	Participant interviews, Literature review	-Food and culture deeply connected -Relational relationship with nature is found in local foodways and indigenous worldviews	-Food and culture deeply connected

9.2.1 Gain an understanding of the historical background and context of foodways in the case studies

The historical background and context of foodways in KwaHhoHho and Ingwavumaa were discussed in Chapter Four. The case studies are situated in the former homelands of South Africa where there is a history of oppression and displacement. This has affected foodways in the area due to a loss of land, the shift from small-scale subsistence farming to large-scale farming, a reduction in the amount of cattle

owned and herding land, land degradation, poor service delivery, and poverty. These histories were shown to be linked to the large percentage of subsistence farmers found in both areas, who practise traditional farming methods. The investigation into the context of foodways within the case studies also showed changes in geology, vegetation and climate that were taking place, making foodways more vulnerable and their maintenance more difficult. Climate change and poor soil quality resulted in a lack of water, difficulties in farming, and crop failures, while the reduction of grasslands and increase in alien species were partly responsible for a lack of grazing for livestock as well as a reduction in wild foods.

9.2.2 Investigate what foods are being consumed by participants and where these are obtained

What foods were eaten by participants and where these foods were obtained was determined through semi-structured interviews with participants and discussed in Chapter Six. Participants' diets were largely based on "traditional foods", consisting of fresh vegetables and traditional bean varieties as well as Zulu chicken and beef. These foods were, when possible, obtained from the garden using traditional farming methods and privately owned animals. These foods and methods of sourcing were deeply entwined with lifestyle and ceremony. However, particularly during winter months when challenges to farming increased, food was purchased from stores and local vendors; this was found to be especially prevalent in KwaHhoHho. Wild foods such as plants, fruit, and wildlife also contributed to people's diets, although this was found mostly in Ingwavuma. These foods were said to be important parts of people's diet for variety, strength and power and were obtained through foraging and from local hunters.

9.2.3 Investigate how foodways in the case studies have changed over time

Tracing the lifetimes of participants revealed a change in foodways. In general, the trend was a reduction in farming practices and an increase in shop-bought and processed foods. As documented in Chapter Seven, older participants described how as children their parents grew food on a large scale using ploughs and stored excess food in *Izinqolobane*, a structure to store produce. However, they noted this is no longer the case and farming was now done on a smaller scale. The number of people who farm has also declined and many have turned to purchasing food from the shops. Pointing towards more current times and the future, both youth and older participants discussed the move away from local foodways and traditional foods by youth and identified preferences for processed and shop-bought foods, rather than growing their own. Chapter Eight highlighted the fact that these changes are not only happening in the local foodways of the case studies and can also be observed in other communities where local foodways can be found. The variety within local diets was also mentioned in Chapters Two and Seven, where the move to store-bought foods has meant the loss of variety inherent to traditional and wild foods.

Chapters Two and Five pointed out changes taking place in food production where the push towards industrial production methods and their co-technologies has interrupted traditional systems of farming practices, causing foodways to reshape. A knock-on effect can be seen whereby GM seeds disrupt seed-saving networks and hence social systems, companion planting is replaced with monocropping, and livestock are no longer part of the garden system as synthetic fertilisers are introduced. At the time the research was conducted, a move to industrial agricultural methods was noted as a subtle change in the case study areas, possibly due to the long-term presence of the NGO Biowatch, which offers a strong counter-push to the use of commercial agricultural technologies within communities. However, the presence of government extension officers in both areas and the fact that these technologies are often free initially, suggest the possibility that change will take place in some aspects of the foodways in due course.

9.2.4 Gain an understanding of the sources of change in the local foodways

The sources of the changes were investigated through a combination of subjective experiences described in the interviews (Chapter Seven), literature analysis looking at historical and contemporary phenomena

(Chapter Two) and analysing actors and policies which encourage or discourage certain changes (Chapter Five).

Participants in both areas connected the increase in store-bought foods, and the reduction of traditional foods and farming/herding as well as the consumption of wild foods, to hindering physical and socio-economic factors. Physical factors consisted of climate and vegetation change while perceived socio-economic factors were an increase in modernisation in the areas, education, and urban lifestyles taking priority, accompanied by a disinterest in traditional foodways by the youth. The effect of the hindering factors was present in both areas, but to different degrees: stark in KwaHhoHho while more nuanced in Ingwavuma.

The literature pointed towards the introduction of industrial food production and technology which has encouraged people's dependence on food monopolies with limited availability of local foods (Roche et al., 2008; Wynberg et al., 2012). Similarly, new agricultural methods, GM seeds and their co-technologies were discussed as breaking down local foodway systems as they replaced traditional methods (Marshak et al., 2021).

The encouragement of new agricultural methods by the South African government was discussed in Chapter Five. Government extension officers focused their training and advice to farmers around these strategies. This chapter also highlighted how other actors are influencing the local foodways of KwaHhoHho and Ingwavuma, such as the NGO Biowatch, which encourages traditional farming methods, promotes seed sharing systems, and integrates new agroecology methods.

9.2.5 Investigate cultural and social relationships and meanings entwined with food and the connection between foodways and the natural world

Chapter Two brought attention to the intimate link between food, culture, and the natural world, pointing to the fact that local foodways exist at the intersection of these three spheres (Rearrick, 2009). A link can be found between the industrialisation of food systems, and a consequent breakdown of local foodways, to a loss of these intimate links. Food has become more homogenous, lacking cultural sensitivity, and centring Western ideals (Turner and Turner, 2007; Vazquez, 2011; Grey and Patel, 2015; Akinola et al., 2020).

The cultural and social relationships and meanings entwined with food were seen in Chapter Six where participants spoke about the food they eat, how they prepare it and where it is obtained. Foods such as fresh vegetables, beans, chicken, and beef grown through traditional practices in household gardens hold the status of "traditional foods", which was often referenced in relation to ancestry, time spent with family members, and everyday life. The systems underlying these foodways such as knowledge transmission, food sharing and seed networks showed themselves to be strongly supportive of social cohesion and enabled the tracing of community ties.

The natural world has a large influence on foodways in the case studies. This can be seen in Chapter Seven where participants highlighted their vulnerability to changes in climate and vegetation. Participants had a definite relationship with the natural world that extended beyond utility. In Chapter Six, elders discussed their familial relationship with nature, which represented a stark contrast to the extractive relationship found within global food systems (Haila, 2000). Observing the relationship with nature that was found where participants' foodways were immersed in and reliant on the natural world revealed how this close connection, coupled with a recognition of nature as an entity beyond a resource, promotes a bond between people and nature that is not found in contemporary human-nature relationships. This alternative perception of nature can be used to reimagine and reconstruct the existing, and mostly unsustainable, relationship between humans and nature that is dominant in our society. Transformation requires both the vision of alternative and practical steps as to how the alternative can be reached; traditional foodways can potentially provide both.

9.3 Gaps and future areas of research

This dissertation has revealed the complexities of local food systems in the two case study areas and brought attention to the movements and actors that are influencing them. The research focused on the insight, beliefs and perceptions of participants and hence the picture constructed was guided by subjective perceptions that were later situated in academic literature. In light of the findings of this study, this section identifies some research gaps, as well as potential ways forward.

It was beyond the scope of this study to investigate fully the role of land access for foodways. This research has not gone into either the intricacies of the effect that lack of access to land has had on the foodways in the case studies, or the politics of land. Both factors are likely to have profound effects on the local foodways of KwaHhoHho and Ingwavuma and would warrant further investigation.

Access – defined as "the ability to derive benefits" from land (Ribot and Peluso, 2003: 153) – is essential to local foodways, which are dependent on the ability to farm and access natural resources. Land goes beyond livelihoods and the ability to produce food; it is connected to identity and culture and gives a sense of place, which is disrupted when people's rights to own and access land are taken away (Shackleton et al., 2019). Due to the nature of foodways, it is important to acknowledge the struggles arising from lack of access to land as well as the histories of dispossession where people were forcibly removed from the land and hence were unable to farm or access certain areas, fracturing existing assets and embodied knowledge.

The communities of KwaHhoHho and Ingwavuma have faced a history of dispossession including struggles around land access (Dubb, 2012). Conflicts over land and power during colonial times and apartheid have played a central role in shaping local foodways in the case studies as people were forced from their land and means of production (Ngcoya and Kumarakulasingam, 2016). Policies and laws have yet to be effectively implemented to address the racial inequality of land ownership. Makhetha (2024) notes that those who experience these impacts to a greater extent are black women who are the most disadvantaged when it comes to accessing land through government and communal land reform programmes. Further research into the role of access to land and local land politics in foodways would be beneficial to understanding these food systems, including ways to support food producers, and older female community members in particular.

Histories of racial discrimination which took place in the former homelands and its effects on foodways were touched on in the literature yet did not come out explicitly in the interviews. To fully understand the extent to which the history of these areas have shaped local foodways a more nuanced and comprehensive investigation is needed. Analysing the link between the histories of these areas and changes in food and agricultural practices as well as access to natural resources. Further interviews with residents of these areas would be required with a focus on how local politics and governmental regulations impacted local foodways. This additional investigation could be particularly potent with regard to the subsistence nature of local foodways, land and resource access, gender burdens, and local poverty dynamics, and their respective roles in what people choose to eat and how they farm.

The extent to which the roles of external actors – such as government, multinational companies, traditional authorities, and NGOs – impact local foodways is also something which requires further investigation. Although these actors, what they promote, and their influence are discussed in this study, many questions remain. Research with key actors within these sectors about their roles, intentions and any planned interventions would provide a fuller picture, in tandem with participants' perceptions.

Paramount to this dissertation is the question of the future of local foodways. The research has provided an overview of local foodways in KwaHhoHho and Ingwavuma as well as factors that reconfigure them as they adapted to new stressors, disruptions, and global influences. Understanding how these phenomena have shifted local foodways can generate a vision of what the future may hold. Local foodways were identified as vectors of cultural practice, indigenous worldviews as well as ecological and traditional knowledge. Preserving the values and practices embedded in these foodways can be a tool for

ensuring that the identities and cultures from which foodways arose are not lost in the powerful whirl of globalisation and changing climates.

However, this raises the question of how and in which ways these foodways can be preserved or upheld in such a way that they are part of, and receive the benefits arising from, the changing food system. Yet, finding ways in which they still embody the elements which make local foodways so significant instead of being completely absorbed into global food systems. Youth perceptions and narratives surrounding local foodways are especially relevant in this regard.

Camp (1982: 289) noted that "[f]oodways consist of a set of dietary and cultural alternatives most fully expressed and exposed in unconscious choices and preferences." This suggests that it is both conscious and subconscious associations and preferences which shape the foodways people choose to participate in. Youth who will inherit the local foodways of KwaHhoHho and Ingwavuma did not appear to be interested in them. They appeared to even have a negative perception of these systems and accompanying lifestyles in comparison to "modern" lifestyles and food systems. It became clear in discussions with youth who planned to study agriculture, as well as the extension officers, that several were interested in large-scale agriculture as a job opportunity. The interest in the dominant model of large-scale agriculture is likely to have been influenced by the education youth receive as well as advertising and the support systems available from actors such as extension advisors. Large-scale agriculture is often assumed within education and governmental systems to be productive, modern and where the money can be found. However, this form of agriculture is largely severed from the agriculture and traditional food practices central to local foodways, which are associated with subsistence practices.

Given that only five young people were interviewed, the research relied heavily on the insights and perspectives of the older generation who practice traditional subsistence farming. From their perspective, there is a general lack of interest in farming from youth. The current study did not investigate in any depth the extent of the reported decrease in interest in farming by youth and the strength of the apparent negativity, nor did it attempt to validate the perceptions of elders in a wider sample of youth than the five interviewed. Substantiating this research with further investigation of youth would paint a fuller picture and potentially give insight into the future of local foodways.

There appeared to be a strong need and case for supporting the current participants of local foodways. With the increasing struggles arising from changes in climate, policies favouring commercial farmers, as well as pressures to join global food systems, there is a need to find strategies that encourage and support local foodway practices. Such efforts could empower people to maintain and strengthen these systems.

The richness and significance of local foodways, and the connection they inspire with nature, is clear. Local foodways need to be promoted and protected in light of modernisation and climate change. Yet the desire for these foodways is something which needs to come from those on the ground. This means accepting that local foodways are always changing and may look different as they adapt to the desires of those partaking in them. What is important is identifying which changes taking place within local foodways are natural and which changes infringe on people's food sovereignty. The research has contributed to identifying these changes, offering suggestions of which elements may be disrupting food sovereignty in these systems while recognising the importance of supporting community agency in their food system choices. In light of hard economic realities, especially youth unemployment, research is urgently needed into how to improve perceptions of foodways, and the empowerment, agency, and satisfaction they can deliver.

This dissertation arose out of environmental and geographical disciplines, with the intention of understanding local foodways, the connection between people and nature and disruptions to local communities' food sovereignty by government, multinational companies, globalisation, modernisation, and society. However, there are other fields in which this study could, with further research, be carried out. This might include an investigation of farming methods and their sustainability and the conservation of nature. Local foodways using traditional farming methods are typically sustainable

systems, with limited use of harmful chemicals (Von Braun and Díaz-Bonilla, 2008; Latham, 2015). Understanding and bringing these methods into large-scale or small-scale agriculture could potentially help with reducing soil and ecosystem damage caused by current methods. The perceptions of nature found by those participating in local foodways also have the potential to foster deeper connections to nature and, as such, could encourage a desire to protect and nurture the surrounding environment. This research brought attention to the gendered roles of labour, as well as gender stigmatisation and support which could be interesting to understand within feminist literature, particularly within the realm of political ecology. A feminist lens could deepen our understanding of the gendered nature of food production and preparation and reveal how gender roles in foodways are shaped by larger economic, social and political forces that cause women's knowledge and labour to be unsupported, undervalued, and unrecognised. Lastly, perceptions and subconscious social influences about what people choose to eat can be further investigated in the spheres of anthropology, psychology, and food strategies.

9.4 Actions to be taken

Within current society where access to income is paramount to a comfortable lifestyle, the perception seems to be that local foodway lifestyles and the time and effort to access and prepare traditional foods clash with the ability of youth to make an income. Levels of unemployment are extremely high (as seen in section 4.3) and it is unlikely that things will improve soon. As one of the elders in the research said "[traditional food] *takes a long time to cook, even longer to prepare. You see things like samp, you have to crush the mealies even nuts and it takes a long time*" (Participant 3, Ingwavuma, 2022). Farming and herding are equally hard labour, especially in changing climates, and it is hard to imagine finding the time to farm while simultaneously working a nine-to-five job. This does not mean that these foodways need to be lost to global ones, nor that the cultural and social elements and indigenous worldviews stored in them must dissolve. What is needed is a transformation and reimagining of food systems. The support of local food systems requires consideration of multiple factors. How can local foodways be adjusted to meet the needs of all local interest groups, including youth? How can dominant food narratives be re- or deconstructed to promote local knowledge? How can global foodways be altered to allow space for local food communities to thrive? There is also a clear need for greater inclusion of employment and youth in local foodways. Identifying ways in which these could be achieved without breaking down local systems would act as a great motivator as well as ensuring a passage of practice and knowledge through generations. The research conducted in this study points to a number of actions which can be taken to promote and support local foodways. These include:

- Incorporating local knowledge and farming practices into extension work and government strategies for food security and agrarian transformation. This could take the form of encouraging local seeds over GM and other hybrid seeds; working with existing farming methods and carefully evaluating the relevance, context and usefulness of introducing new farming methods; and creating strategies which allow farmers to join markets without compromising their local food systems.

- Offering support to existing local farmers in the form of fences, irrigation systems, traditional seeds as well as knowledge and land access.

- Supporting and promoting local foodways by including edible indigenous plants and local farming practices in school curricula, feeding schemes, and educational gardens.

- Findings in the research suggest that an essential factor in promoting continued participation in local foodways is rooted in how these systems are represented in social circles, policies, education, and modern aspirations. Counternarratives that promote local foodways are clearly needed in media, curricula, agriculture policies, practices, and training to challenge the stigma surrounding indigenous worldviews and local knowledge and to provide alternatives to modern global food systems.

- Identifying strategies for incorporating the needs and desires of youth in local foodways is needed. Working with youth to identify their needs and adapting local foodways without compromising the essence of these systems could create a greater desire and motivation to participate in local foodways.

In this research, I was interested in foodways as complex, intertwined, and dynamic systems. The ecologies of food in the study areas were seen to be a web, rooted in context and everyday cultural life and always changing and adapting. In the title of this dissertation, the word "disruption" refers to those elements which are disturbing the system, wearing down people's ability to participate in it. This includes climate change, lack of support and social movements. "Reclaiming" emerges from a Latin root meaning to "cry out or against." This captures a sense of maintaining continuity with the past through safeguarding food systems within gradual lifestyle shifts. This can be seen in the everyday actions of elders within the communities who still maintain and promote their local foodways and knowledge. This research endeavoured to hold space for the tension between "disruption" and "reclamation" when exploring the complexity of these food systems. Further research in these areas would support primary food producers – mostly elder women farmers –who, over and above all of their other activities, provide a bulwark against physical and cultural destitution for themselves, their families, and their communities. However, at the same time looking towards youth as the future and embracing appropriate change.

References

Adey, S., Kotze, C. and Rijkenberg, F.H. 2004. Small-Scale Farming in KwaZulu-Natal: Experiences from some 'Promising Pockets'. In Wiskerke, J.S.C. and van der Ploeg, J.D. (Eds.) *Seeds of Transition: Essays on novelty production, niches and regimes in agriculture*, pp. 203-224. Assen, The Netherlands, Van Gorcum.

Akinola, R., Pereira, L.M. and Mabhaudhi, T. 2020. A Review of Indigenous Food Crops in Africa and the Implications for more *Sustainable and Healthy Food Systems. Sustainability* 12, 3493. Available at: https://doi.org/10.3390/su12083493. Accessed on 06/12/24.

Aliber, M. and Hart, T.G. 2009. Should subsistence agriculture be supported as a strategy to address rural food insecurity? *Agrekon*, 48(4), pp. 434-458.

Alkon, A.H., Block, D. and Moore, K. et al. 2013. Foodways of the urban poor. *Geoforum,* 48, pp. 126–135.

Anderson, R. 2007. *Thematic Content Analysis: Descriptive Presentation of Qualitative Data*. Online. Available at: http://rosemarieanderson.com/wp-content/uploads/2014/08/ThematicContentAnalysis.pdf. Accessed on 06/12/24.

Apartheid Museum. 2024. *The Homelands*. Online. Available at https://www.apartheidmuseum.org/exhibitions/the-homelands#:~:text=The%20policy%20of%20separate%20development,way%20for%20massed%20forced%20removals. Accessed on 06/12/24.

Asmal, K. and James, W. 2001. Education and Democracy in South Africa Today. *Daedalus* 130, 1: pp. 185–204. Online. Available at: http://www.jstor.org/stable/20027684. Accessed on 18/03/2024.

Bakre, R.O. 2015. Water resource management for subsistence farming in ward 19 of KwaZulu-Natal. M. Tech, Durban University of Technology. Online. Available at: http://ir.dut.ac.za/bitstream /handle/10321/1305/BAKRE_ 2015.pdf?sequence=1&isAllowed=y. Accessed on 18/03/2024.

Bayer. 2018. *Bayer closes Monsanto acquisition*. Online. Available at: https://www.bayer.com/media/en-us/bayer-closes-monsanto-acquisition/#:~:text=Leverkusen%2C%20June%207%2C%202018%20%2D,sole%20owner%20of%20Monsanto%20Company. Accessed on 06/12/2024.

Biowatch South Africa. 2024. *25 Years of Action*. Online. Available at: https://biowatch.org.za/about/ Accessed on 06/12/24.

Bodirsky, M. and Johnson, J. 2008. Decolonizing Diet: Healing by Reclaiming Traditional Indigenous Foodways. Cuizine: The Journal of Canadian Food Cultures1(1). Available at: https://doi.org/10.7202/019373ar. Accessed on 06/12/24.

Breidlid, A. 2009. Culture, indigenous knowledge systems and sustainable development: A critical view of education in an African context. *International Journal of Educational Development*, *29*(2), pp. 140-148.

Brown, M.E., Antle, J.M. and Backlund, P. et al. 2015. *Climate Change, Global Food Security, and the U.S. Food System*. Online. Available at: http://www.usda.gov/oce/climate_change/FoodSecurity2015Assessment/FullAssessment.pdf. Accessed on 06/12/24.

Brown, P.A. 2008. A review of the literature on case study research. *Canadian Journal for New Scholars in Education/Revue Canadienne Des Jeunes Chercheures et Chercheurs en Education*, 1(1).

Campbell, M. 2016. South African supermarket expansion in sub-Saharan Africa. *Third World Thematics: A TWQ Journal*, 1:5, pp. 709-725, DOI: 10.1080/23802014.2016.1327796.

Carson, S.L., Kentatchime, F. and Nana, E.D. et al. 2018. Indigenous Peoples' Concerns About Loss of Forest Knowledge: Implications for Forest Management. *Conservation and Society*, 16(4), 431–440. Online. Available at: http://www.jstor.org/stable/26500657. Accessed on 04/12/2024.

Census *see* Statistics South Africa

Chigbu, U.E. 2013. Rurality as a choice: Towards ruralising rural areas in sub-Saharan African countries. *Development Southern Africa*, 30:6, pp. 812-825. DOI: 10.1080/0376835X.2013.859067.

Clapp, J. 2018. Mega-Mergers on the Menu: Corporate Concentration and the Politics of Sustainability in the Global Food System. Global *Environmental* Politics, 18 (2), pp. 12–33. DOI: 10.1162/glep_a_00454.

Cochet, H., Anseeuw, W. and Fréguin-Gresh, S. 2015. South Africa's Agrarian Question. Cape Town, HSRC Press.

Cocks, M.L. 2006. Biocultural diversity: moving beyond the realm of 'indigenous' and 'local' people. *Human Ecology*, 34 (2), pp.185-200.

Cocks, M.L. and Dold, A.P. 2006. Cultural significance of biodiversity: the role of medicinal plants in urban African cultural practices in the Eastern Cape, South Africa. *Journal of Ethnobiology*, 26 (1), pp. 60-81.

Cocks, M.L. and Shackleton, C. 2021. Colonial legacies shape urban nature: why this should change. *The Conversation*. Online. Available at: https://theconversation.com/colonial-legacies-shape-urban-nature-why-this-should-change-156334. Accessed on 12/06/2024.

Cooperative Governance and Traditional Affairs. 2020. *Mtubatuba Integrated Development Plan* (IDP). Pretoria, South Africa. Online. Available at https://www.cogta.gov.za/index.php/docs/kwazulu-natal/. Accessed on 12/06/2024.

Counihan, C., Van Esterik, P. and Julier, A. (Eds.) 2018. *Food and Culture: A Reader.* 4th Edition. New York, NY, Routledge.

D'Ambrosio, U. and Puri, R.K. 2016. Foodways in transition: food plants, diet and local perceptions of change in a Costa Rican Ngäbe community. *Journal of Ethnobiology and Ethnomedicine* 12, 3. Available at: https://doi.org/10.1186/s13002-015-0071-x. Accessed on 12/06/2024.

DAFF *see* Republic of South Africa. Department: Agriculture, Forestry and Fisheries

DALRRD *see* Republic of South Africa. Department of Agriculture, Land Reform and Rural Development

DARD *see* KwaZulu-Natal. Department of Agriculture and Rural Development

Dayaram, A., Harris, L., Grobler, B., van der Merwe, S. et al. 2019. Vegetation Map of South Africa, Lesotho and Swaziland 2018: A description of changes since 2006. *Bothalia*, 49(1). DOI: 10.4102/abc.v49i1.2452 /view/2452/2772.

DEA *see* Republic of South Africa. Department of Environmental Affairs

Department of Agriculture *see* Republic of South Africa. Department of Agriculture

DiCicco-Bloom, B. and Crabtree, B.F. 2006. The qualitative research interview. *Medical Education*, 40 (4): 314-321. Available at: https://doi.org/10.1111/j.1365-2929.2006.02418.x.

Dictionary of South African English. Online Dictionary available at https://dsae.co.za/entry/induna/e03265. Accessed 10/01/2025.

DSAE *see* Dictionary of South African English

Du Toit, A. and Neves, D. 2014. The Government of Poverty and the Arts of Survival: Mobile and Recombinant Strategies at the Margins of the South African Economy. *The Journal of Peasant Studies* 41(5). DOI: 10.1080/03066150.2014.894910.

Dubb, A. 2012. Social reproduction, accumulation and class differentiation: small-scale sugarcane growers in Mtubatuba, KwaZulu-Natal, South Africa. Working Paper 25. PLAAS. University of the Western Cape.

Ernstson, H. 2013. Re-translating nature in post-apartheid Cape Town: The material semiotics of people and plants at Bottom Road. In *Actor-networktheory for development: Working paper series,* 1–35. Online. Available at http://www.cdi.manchester.ac.uk/resources/ant4d/documents/ANT4DWorkingPaper4Ernstson.pdf. Accessed on 04/12/2024.

FAO *see* Food and Agriculture Organization of the United Nations

Fig, D. 2024. Corporate capture of agricultural and food policy in South Africa. In Wynberg, R. 2024 (Ed.) *African Perspectives on Agroecology*. Why farmer-led seed and knowledge systems matter. DOI: 10.3362/9781780447445.

Food and Agriculture Organization of the United Nations. 2024. The State of Food and Agriculture. Online. Available at: https://www.fao.org/publications/home/fao-flagship-publications/the-state-of-food-and-agriculture/en. Accessed on 06/12/24.

Fossey E., Harvey C., McDermott F. and Davidson L. 2002. Understanding and Evaluating Qualitative Research. *Australian & New Zealand Journal of Psychiatry,* 36(6): pp. 717-732. Doi: 10.1046/j.1440-1614.2002.01100.x

Fraser, N. 2017. Behind Marx's Hidden Abode: For an Expanded Conception of Capitalism. In Deutscher, P. and Lafont, C. (Eds.) *Critical Theory in Critical Times: Transforming the Global Political and Economic Order*. New York: Columbia University Press, pp. 141-159. Available at: https://doi.org/10.7312/deut18150-009. Accessed on 06/12/24.

Fre, Z. 2018. The case for indigenous knowledge systems and knowledge sovereignty. In *Knowledge Sovereignty among African Cattle Herders,* pp. 12–32. UCL Press. https://doi.org/10.2307/j.ctv3hvc5n.7.

Friedmann, H. 1992. Distance and durability: Shaky foundations of the world food economy. *Third World Quarterly*, 13 (2), pp. 371-383.

Global Alliance for the Future of Food. 2021. *The Politics of Knowledge: Understanding the Evidence for Agroecology, Regenerative Approaches, and Indigenous Foodways*. n.p.: Global Alliance for the Future of Food, 2021. Online. Available at: https://futureoffood.org/wp-content/uploads/2022/03/GA-Politics-of-Knowledge.pdf. Accessed on 04/12/2024.

Gouse, M. 2012. South Africa: revealing the potential and obstacles, the private sector model and reaching the traditional sector. In Fukuda-Parr, S. (Ed.) *The Gene Revolution*, pp. 175-195. Abingdon, Oxfordshire, Routledge.

Government Communication and Information System. 2015. *Education, South Africa Yearbook 2015/16*. Online. Available at: https://www.gcis.gov.za/sites/default/files/docs/resourcecentre/yearbook/Education-SAYB1516.pdf. Accessed on : 18/03/2024.

Greenberg, S. 2024. Corporate expansion in African seed systems: implications for agricultural biodiversity and food sovereignty. In Wynberg, R. 2024 (Ed.) *African Perspectives on Agroecology: Why farmer-led seed and knowledge systems matter.* DOI: 10.3362/9781780447445.

Greenberg, S. and Drimie, S. 2021. The state of the debate on agroecology in South Africa: A scan of actors, discourses and policies. Final report. Online. Available at: https://foodsecurity.ac.za/wp-content/uploads/2022/11/TAFS-project_The-state-of-the-debate-on-agroecology-in-South-Africa-A-scan-of-actors-discourses-and-policies.pdf. Accessed on 18/03/2024.

Gregory, P., Ingram, J. and Brklacich, M. 2005. Climate and Food Security. *Philosophical transactions of the Royal Society of London. Series B, Biological sciences*. DOI: 360. pp. 2139-48. 10.1098/rstb.2005.1745.

Grey, S. and Patel, R. 2015. Food sovereignty as decolonization: some contributions from Indigenous movements to food system and development politics. *Agric Hum Values*, 32, pp. 431–444. https://doi.org/10.1007/s10460-014-9548-9.

Guyot, M., Dickson, C. and Paci, C. et al. 2006. Local observations of climate change and impacts on traditional food security in two northern Aboriginal communities. *International Journal of Circumpola Health*, 65:5, pp. 403-415.
DOI: 10.3402/ijch.v65i5.18135.

Haila, Y. 2000. Beyond the nature-culture dualism. *Biology and philosophy*, 15(2), pp. 155-175.

Haysom, G. 2015. Food and the City: Urban Scale Food System Governance. *Urban Forum*, 26, pp. 263–281. https://doi.org/10.1007/s12132-015-9255-7.

Haysom, G. and Fuseini, I. 2017. Urban social protection and food systems: Lessons from South Africa. In Frayne, B., Crush, J. and McCordic, C. (Eds.) *Food and Nutrition Security in Southern African Cities*, pp. 66-85. New York, NY, Routledge.

Hickman, A. 2011. *Land, labour and livelihoods : the production of nature and poverty in northern KwaZulu-Natal.* Thesis, Master's degree, Geography. University of KwaZulu Natal. Avalible at: http://hdl.handle.net/10413/8154. Accessed on 04/12/2024.

High Level Panel of Experts. 2020. *Food security and nutrition: Building a global narrative towards 2030.* A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome. Online. Available at: https://openknowledge.fao.org/server/api/core/bitstreams/8357b6eb-8010-4254-814a-1493faaf4a93/content. Accessed on 04/12/2024.

Highfield, J.B. 2017. *Food and foodways in African narratives: community, culture, and heritage.* New York, NY, Routledge.

Hill, L.D., Baxen, J. and Craig, A.T. et al. 2012. Citizenship, Social Justice, and Evolving Conceptions of Access to Education in South Africa: Implications for Research. *Review of Research in Education* 36: 239–60. Online. Available at: http://www.jstor.org/stable/41349030. Accessed on 04/12/2024.

Hlahla S, Ngidi M, Duma S.E. and Sobratee-Fajurally N. et al. 2023. Policy gaps and food systems optimization: a review of agriculture, environment, and health policies in South Africa. *Front. Sustain. Food Syst.* 7:867481. DOI: 10.3389/fsufs.2023.867481.

HLPE *see* High Level Panel of Experts

Hoffman, M.T. 2014. Changing patterns of rural land use and land cover in South Africa and their implications for land reform. *Journal of Southern African Studies*, 40(4), pp. 707-725.

Huambachano, M. 2019. Traditional ecological knowledge and indigenous foodways in the Andes of Peru. *Review of International American Studies*, 12(1), pp. 87-110.

IFPRI *see* International Food Policy Research Institute

Intergovernmental Panel on Climate Change. 2022. Climate Change 2022: Impacts, Adaptation and Vulnerability. Online. Available at: https://www.ipcc.ch/report/ar6/wg2/. Accessed on 06/12/24.

International Food Policy Research Institute, 2024. Southern Africa drought: Impacts on maize production. Online. Available at: https://www.ifpri.org/blog/southern-africa-drought-impacts-maize-production/. Accessed on 03/12/2024.

Jewitt, D., Goodman, P.S. and Erasmus, B.F.N. et al. 2015. Systematic land-cover change in KwaZulu-Natal, South Africa: Implications for biodiversity. *S Afr J Sci.*, 111(9/10), Art. #2015-0019, Avalible at: http://dx.doi.org/10.17159/ sajs.2015/20150019. Accessed on 04/12/2024.

Kandlakunta, B., Vemula, S., Gavaravarapu, S. and Kumar, A. 2016. Traditional foods, functional foods and nutraceuticals. *Proceedings of the Indian National Science Academy* 82(5), pp. 1565–1577.

Karumbidza, J.B., 2006. A study of the social and economic impacts of industrial tree plantations in the KwaZulu-Natal province of South Africa. Fundación Movimiento Mundial por los Bosques Tropicales. Online. Available at: https://www.academia.edu/download/91107392/WRM_20SA_20plantations_20report_20-_20Karumbidza1.pdf . Accessed on 19/11/25.

Keikelame, M. J. and Swartz, L. 2019. Decolonising research methodologies: lessons from a qualitative research project, Cape Town, South Africa. *Global Health Action*. 12(1):1561175. Doi: 10.1080/16549716.2018.1561175.

Kepe, T. and Tessaro, D. 2014. Trading-off: Rural food security and land rights in South Africa. *Land Use Policy*, 36, pp. 267-274.

Kimmerer, R.W. 2002. Weaving traditional ecological knowledge into biological education: a call to action. *BioScience*, 52(5), pp. 432-438.

Kloppenburg, J. 2004. *First the seed: The Political Economy of Plant Biotechnology, 1492–2000.* Madison, WI: University of Wisconsin Press.

Kroll, F. 2016. *Foodways of the poor in South Africa. How value-chain consolidation, poverty & cultures of consumption feed each other.* Available at: https://doi.org/10.13140/RG.2.2.29215.15524. Accessed on 19/11/24.

Kuhnlein, H.V. and Receveur, O. 1996. Dietary Change and Traditional Food Systems of Indigenous Peoples. *Annual Review of Nutrition* 16, pp. 417–442. Available at: https://doi.org/10.1146/annurev.nu.16.070196.002221. Accessed on 19/11/24.

Kumarakulasingam, N. and Ngcoya, M. 2016. Plant provocations: botanical indigeneity and (de) colonial imaginations. *Contexto Internacional*, 38, 843-864. DOI:10.1590/s0102-8529.2016380300006.

KwaZulu-Natal Department of Agriculture and Rural Development. 2015a. *Strategic Plan 2015-2022*. Pietermaritzburg, KwaZulu-Natal Department of Agriculture and Rural Development. Online. Available at: https://www.kzndard.gov.za/images/Strategic-Plan-2015_2022.pdf. Accessed on 06/12/24.

KwaZulu-Natal Department of Agriculture and Rural Development. 2015b. *Strategy for Agrarian Transformation in KwaZulu-Natal*. Pietermaritzburg, KwaZulu-Natal Department of Agriculture and Rural Development. Online. Available at: https://www.kzndard.gov.za/images/Agrarian-Transformation_Brochure_2015_2.pdf. Accessed on 06/12/24.

KwaZulu-Natal Department of Agriculture and Rural Development. 2024. *Vision for uMkhanyakude District Municipality*. Online. Available at https://www.ukdm.gov.za. Accessed on 05/12/24.

KwaZulu-Natal Provincial Treasury. 2019. Socio-Economic Review and Outlook 2019/20. Online,. Available at: https://www.treasury.gov.za/documents/provincial%20budget/2019/3.%20Estimates%20of%20Prov%20Rev%20and%20Exp/KZN/1.%20Budget%20Overview/KZN%20-%20EPRE%20-%20Budget%20Overview.pdf. Accessed on 05/12/24.

Kwik, J. 2008. Traditional food knowledge: A case study of an immigrant Canadian" foodscape". *Environments*, 36(1), 59.

Lahiff, E. 2001. An Apartheid Oasis? Agriculture and Rural Livelihoods in Venda (1st ed.). London and New York, Routledge. Available at: https://doi.org/10.4324/9781315827858. Accessed on 19/11/24.

Lam, R.D., Huynh, L.T. Lozano Lazo, D.P. and Gasparatos, A. 2023. Diet change and sustainability i Indigenous areas: characteristics, drivers, and impacts of diet change in Gunayala, Panama. *Sustainability Science*, 1-23.
Doi: 10.1007/s11625-023-01325-0.

Latham, J. 2015. How the Great Food War Will Be Won. *Independent Science News*. Online. Available at: https://www.independentsciencenews.org/environment/how-the-great-food-war-will-be-won/. Accessed on 06/12/24.

Leakey, R.R., Mabhaudhi, T. and Gurib-Fakim, A. 2021. African Lives Matter: Wild Food Plants Matter for Livelihoods, Justice, and the Environment—A Policy Brief for Agricultural Reform and New Crops. *Sustainability*, 13(13), 7252. https://doi.org/10.3390/su13137252.

Leavy, J. and Hossain, N. 2014. Who wants to farm? Youth aspirations, opportunities and rising food prices. *IDS Working Papers,* 439, pp. 1-44. Available at: https://doi.org/10.1111/j.2040-0209.2014.00439.x. Accessed on 19/11/24.

Leonard, L. 2022. Climate Change Impacts and Challenges of Combating Food Insecurity in Rural Somkhele, KwaZulu-Natal, South Africa. *Sustainability*, 14(23), Available at: 16023. https://doi.org/10.3390/su142316023. Accessed on 19/11/24.

Leonard, L. 2023. Climate change, mining development and residential water security in the uMkhanyakude District Municipality, KwaZulu-Natal, South Africa: a double catastrophe for local communities. *Local Environment*, *28*(3), pp. 331-346.

Lincoln, D. 1995. Settlement and servitude in Zululand, 1918-1948. *The International Journal of African Historical Studies*, 28(1), pp. 49-67.

Mabhaudhi T., Chibarabada T. and Modi A. 2016. Water-Food-Nutrition-Health Nexus: Linking Water to Improving Food, Nutrition and Health in Sub-Saharan Africa. *International Journal of Environmental Research and Public Health,* 13(1):107. Doi: 10.3390/ijerph13010107.

Mahlase, M. 2017. *Exploring the uptake of genetically modified white maize by smallholder farmers: the case of Hlabisa, South Africa.* Master's Thesis, Environmental and Geographical Science, University of Cape Town. Available at: http://hdl.handle.net/11427/24452. Accessed on 19/11/24.

Makhetha, E. 2024. Rural livelihoods and land reform in South Africa: An intersectional perspective o women's lived experiences. *Social Sciences & Humanities Open*, 10, p.101037.

Makofane, H.R. and Selepe, M. 2022. The Role of Non-Governmental Organizations (NGOs) in South Africa with Specific Reference to Rural Development. *Eurasian Journal of Social Sciences*, Eurasian Publications, 10(4), pp. 262-276.

Manyangadze, T., Chimbari, M.J. and Rubaba, O. et al. 2021. Spatial and seasonal distribution of Bulinus globosus and Biomphalaria pfeifferi in Ingwavuma, uMkhanyakude district, KwaZulu-Natal, South Africa: Implications for schistosomiasis transmission at micro-geographical scale. *Parasites & Vectors*, *14*(1), pp. 1-9.

Marshak, M., Wickson, F. and Herrero, A. et al. 2021. Losing practices, relationships and agency: ecological deskilling as a consequence of the uptake of modern seed varieties among South African small-holders. *Agroecology and Sustainable Food Systems,* 45(8): pp. 1189–1212. Available at: https://doi.org/10.1080/21683565.2021.1888841. Accessed on 19/11/24.

Maseko, I., Mabhaudhi, T. and Tesfay, S. et al. 2017. African leafy vegetables: A review of status, production and utilization in South Africa. *Sustainability*, 10(1), 16. Available at: https://doi.org/10.3390/su10010016. Accessed on 19/11/24.

Maundu, P.; Muiruri, P. and Adeka, R. 2013. *Safeguarding Intangible Cultural Heritage: Traditional Foodways of the Isukha Community of Kenya.* UNESCO, Kenya.

Mbatha, M.W., Mnguni, H. and Mubecua, M.A. 2021. Subsistence farming as a sustainable livelihood approach for rural communities in South Africa. *African Journal of Development Studies*, 11(3), p.55.

Mbatha, P. 2022. Unravelling the perpetuated marginalization of customary livelihoods on the coast by plural and multi-level conservation governance systems. *Marine Policy*, *143*, p.105143.

McCann, J.C. 2009. *Stirring the pot: A history of African cuisine*. Athens, Ohio, Ohio University Press.

McClintock, N. 2010. Why farm the city? Theorizing urban agriculture through a lens of metabolic rift. *Cambridge Journal of Regions, Economy and Society*, 3(2), pp. 191-207.

McMichael, P. 2000. The power of food. *Agriculture and Human Values*, 17, pp. 21-33.

Merriam-Webster. 2024. *Dictionary*. Online. Available at: https://www.merriam-webster.com/dictionary/induna. Accessed on 03/12/24.

Merriam, S.B. 1985. The case study in educational research: A review of selected literature. *The Journal of Educational Thought (JET)/Revue de La Pensée Éducative*, *19*(3), pp. 204–217. Available at: http://www.jstor.org/stable/23768608. Accessed on 03/12/24.

Mkhize, M.W. 2018. *Population and human development indicators of UMkhanyakude District Municipality.* Master's dissertation, University of KwaZulu-Natal. Online. Available at: https://researchspace.ukzn.ac.za/items/0f69de17-24cc-4734-b5ed-536139001719. Accessed on 06/12/24.

Modi, M., Modi, A. and Hendriks, S. 2006. Potential role for wild vegetables in household food security: a preliminary case study in Kwazulu-Natal, South Africa. *African Journal of Food, Agriculture, Nutrition and Development*, 6(1), pp. 1-13.

Mohanty, B.B. and Lenka, P.K. 2023. 'For them farming may be the last resort, but for us it is a new hope': Ageing, youth and farming in India. *Journal of Agrarian Change*, 23(4), pp. 771-791.

Moloi, K. 2007. An overview of education management in South Africa. *South African Journal of Education*, *27*(3), 463-476.

Mthembu, A. and Hlophe, S. 2020. Building resilience to climate change in vulnerable communities: A case study of uMkhanyakude district municipality. *Town and Regional Planning*, *77*, 42-56.

Mtyingizane, S. 2018. *Social grants, food security and coping strategies: a case study of selected households in Umhlathuze District, KwaZulu-Natal.* Doctoral dissertation, University of Zululand.

Mucina, L. and Rutherford, M.C. (Eds.) 2006. The vegetation of South Africa, Lesotho and Swaziland. *Strelitzia,* 19. South African National Biodiversity Institute, Pretoria.

Mykhailyuk, O.Y. and Pohlod, H.Y. 2015. The Languages We Speak Affect Our Perceptions of the World. *Journal of Vasyl Stefanyk Precarpathian National University*, 2. DOI: 10.15330/jpnu.2.2-3.36-41.

Nabhan, G.P. 1997. *Cultures of Habitat.* Washington, D.C., Counterpoint.

Nega, B. and Schneider, G. 2014. NGOs, the State, and Development in Africa. *Review of Social Economy*, 72:4, pp. 485-503. DOI: 10.1080/00346764.2014.958901.

Ngcoya, M. and Kumarakulasingam, N. 2017. The lived experience of food sovereignty: Gender, indigenous crops and small-scale farming in Mtubatuba, South Africa. *Journal of Agrarian Change*, 17(3), pp. 480-496.

Nyambi, O. and Makombe, R. 2019. Beyond Seeing QwaQwa,"Homelands," and "Black States": Visual Onomastic Constructions of Bantustans in Apartheid South Africa. *African Studies Quarterly*, *18*(4), pp. 1-20.

Nyéléni. 2007. *Nyéléni statement*. Given at the Forum for Food Sovereignty, Sélingué, Mali, February. pp. 23-27, 2007.

OpenStreetMap Foundation. 2024. OpenStreetMap. Online Available at: https://www.openstreetmap.org. Accessed 30/06/2024

OSGeo Africa. 2012. Shapefiles of TVBC states. Private communications.

Oyugi, W.O. 2004. The role of NGOs in fostering development and good governance at the local level in Africa with a focus on Kenya. *Africa Development*, *29*(4), pp. 19-55.

PAN *see* Pesticide Action Network

Patrick, H.O. 2021. Climate change and water insecurity in rural uMkhanyakude District Municipality: an assessment of coping strategies for rural South Africa. *H2Open Journal*, *4*(1), 29-46.

Pesticide Action Network. 2021. PAN International List of Highly Hazardous Pesticides. Online. Available at: https://pan-international.org/wp-content/uploads/PAN_HHP_List.pdf. Accessed on 06/12/24

Petersen, L. 2014. Cape Town's trade in wild medicines: ecological threat or essential livelihood resource. Sustainable Livelihoods Foundation: Cape Town, South Africa.

Pienaar, L. and Von Fintel, D. 2014. Hunger in the former apartheid homelands: determinants of convergence one century after the 1913 land act. *Agrekon*, *53*(4), pp. 38-67.

Puplampu, K.P. and Tettey, W.J. 2000. State-NGO relations in an era of globalisation: the implications for agricultural development in Africa. *Review of African Political Economy*, 27:84, pp. 251-272.
DOI: 10.1080/03056240008704458.

QGIS. 2022. QGIS Geographic Information System. Open Source Geospatial Foundation Project. http://qgis.org. Researcher's selected. mapping tool for presentation of spatial data.

Rana, J.C. and Bisht, I.S. 2023. Reviving smallholder hill farming by involving rural youth in food system transformation and promoting community-based agri-ecotourism: A case of Uttarakhand state in north-western India. *Sustainability*, 15(11), p.8816.

Rangan, H. and Gilmartin, M. 2002. Gender, Traditional Authority, and the Politics of Rural Reform in South Africa. *Development and Change* 33 (4): pp. 633–58.

Rearick, N.A. 2009. "Food is something that we gather around": Foodway Practices among Arab Americans in Columbus, Ohio. Master's thesis, Ohio State University, 2009. Available at:http://rave.ohiolink.edu/etdc/view?acc_num=osu1243529334. Accessed on 03/12/2024.

Republic of South Africa. 1996. *Constitution of the Republic of South Africa Act 108 of 1996*. Online. Available online at: http://www.wipo.int/edocs/lexdocs/laws/en/za/za107en. Pdf. Accessed on 06/12/2024.

Republic of South Africa. Department of Agriculture, Land Reform and Rural Development. 2020. *Strategic Plan 2020- 2025*. Pretoria, DALRRD. Online. Available at https://www.dalrrd.gov.za/phocadownloadpap/Strategic_Plan/Strategic%20Plan%202020-2025.pdf. Accessed on 04/12/2024.

Republic of South Africa. Department of Agriculture, Land Reform and Rural Development. 2023. *Subsistence Farming*. Online. Available at: http://www.dalrrd.gov.za/index.php/core-business/food-security-agrarian-reform/food-security/subsistence-farming. Accessed on 06/12/2024.

Republic of South Africa. Department: Agriculture, Forestry and Fisheries. 2013. *Strategic Plan for Smallholder Support 2011 – 2014/15*. Directorate: Small Holder Development. Pretoria, DAFF. Online. Available at: https://www.dalrrd.gov.za/index.php/component/content/article/243-strategic-plan-for-smallholder-support?catid=19&Itemid=437.
Accessed on 02/12/2024.

Republic of South Africa. Office of the Presidency. 2013. *Towards the medium term strategic framework (2014-2019).* Rural Development and Land Reform. KwaZulu-Natal. Government Printer: Pretoria.

Ribot, J.C. and Peluso, N.L. 2003. A theory of access. *Rural Sociology*, 68(2), 153-181.

Roche, M.L., Creed-Kanashiro, H.M., Tuesta, I. and Kuhnlein, H.V. 2008. Traditional food diversity predicts dietary quality for the Awajún in the Peruvian Amazon. *Public Health Nutrition*, *11*(5), pp. 457-465.

Ruelle, M.L. and Kassam, K.A.S. 2013. Foodways Transmission in the Standing Rock Nation. *Food and Foodways* 21(4), pp. 315–339. Available at: https://doi.org/10.1080/07409710.2013.850007. Accessed on 03/12/24.

Sacolo, H., Chimbari, M. and Kalinda, C. 2018. Knowledge, attitudes and practices on Schistosomiasis in sub-Saharan Africa: a systematic review. *BMC Infectious Diseases*, *18*, 1-17.

Salmón, E. 2000. Kincentric ecology: Indigenous perceptions of the human–nature relationship. *Ecological Applications*, 10(5), pp. 1327-1332.

SANLC *see* South African National Land Cover

SASSA *see* South African Social Security Agency

Savage, A., Bambrick, H. and Gallegos, D. 2020. From garden to store: local perspectives of changing food and nutrition security in a Pacific Island country. *Food Security*, 12(6), pp. 1331-1348.

SAWS *see* South African Weather Service

Schneider, M. and McMichael, P. 2010. Deepening, and repairing, the metabolic rift. *The Journal of Peasant Studies*, 37(3), 461-484.

Schuttler, S.G., Sorensen, A.E., Jordan, R.C., Cooper, C. and Shwartz, A. 2018. Bridging the nature gap: Can citizen science reverse the extinction of experience? *Frontiers in Ecology and the Environment*, 16(7), pp. 405-411.

Setsipane, 2022. Soil, Land use and Land Capability Verification. Report for Environmental Management Assistance. Online. Available at https://sahris.sahra.org.za/sites/default/files/additionaldocs/Mareesburg%20Soil%20Land%20use%20Land%20Cap.pdf. Accessed on 06/12/2024.

Shackleton, C.M., Mograbi, P.J. and Drimie, S. et al. 2019. Deactivation of field cultivation in communal areas of South Africa: Patterns, drivers and socio-economic and ecological consequences. *Land Use Policy*, *82*, pp. 686-699.

Sharif, M.S.Md., Zahari, M.S.M. and Nor, N.Md. et al. 2016. The Importance of Knowledge Transmission and its Relation towards the Malay Traditional Food. *Procedia - Social and Behavioral Sciences,* 222, pp. 567–577.Available at: https://doi.org/10.1016/j.sbspro.2016.05.215. Accessed on 03/12/24.

Shiva, V. 2016. *Stolen Harvest: The Hijacking of the Global Food Supply.* University Press of Kentucky. Available at: https://doi.org/10.2307/j.ctt19dzdd6. Accessed on 03/12/24.

Sinyolo, S., Mudhara, M. and Wale, E. 2016. To what extent does dependence on social grants affect smallholder farmers' incentives to farm? Evidence from KwaZulu-Natal, South Africa. *African Journal of Agricultural and Resource Economics*, *11*(2), pp. 154-165.

Sinyolo, S., Mudhara, M. and Wale, E. 2017. The impact of social grant-dependency on agricultural entrepreneurship among rural households in Kwazulu-Natal, South Africa. *The Journal of Developing Areas.* 51. pp. 63-76.
Doi: 10.1353/jda.2017.0061.

Smith, E., Ahmed, S. and Dupuis, V. et al. 2019. Contribution of wild foods to diet, food security, and cultural values amidst climate change. *Journal of Agriculture, Food Systems, and Community Development*, 9 (Suppl. 2), pp. 191–214. Available at: https://doi.org/10.5304/jafscd.2019.09B.011. Accessed on 03/12/24.

Sokk, V. 2024. Tradition in Transition Investigating the Impact of Modernization on Indigenous Cultures. *Journal Social Humanity Perspective*, 2(1), pp.15-23.

South African National Land Cover. 2020. Change Assessment Dataset. Online. Available at: https://egis.environment.gov.za/sa_national_land_cover_datasets. Accessed on 06/12/2024.

South African Social Security Agency. 2022. *Ninth Statistical Report: Social Assistance, Period December 2022*. Branch: Strategy and Business Development, Department: Monitoring and Evaluation. Online. Available at: https://www.sassa.gov.za/statistical-

reports/Documents/December%202022%20%20social%20assistance%20%20report.pdf. Accessed on 03/12/2024.

South African Social Security Agency. 2023. *Annual Report 2022-23*. Online. Available at https://www.sassa.gov.za/annual%20reports/Documents/SASSA%20ANNUAL%20REPORT%202022-23.pdf. Accessed 06/12/2024.

South African Weather Service. 2024. Weathersa.co.za. Data for climate stations Makatini Research Centre (Ingwavuma) and Riverview (KwaHhohho) supplied in private communications.

Stålhammar, S. 2021. Polarised views of urban biodiversity and the role of socio-cultural valuation: Lessons from Cape Town. *Ecosystem Services*, 47, pp. 101-239.

Statistics South Africa. 2011. *South African Population Census 2011. Indicators derived from the full population Census*. Online. Available at: https://wazimap.co.za/profiles/ward-52705014-mtubatuba-ward-14-52705014/\. Accessed 06/12/2024.

Statistics South Africa. 2011. *South African Population Census 2011. Indicators derived from the full population Census.* Online. Available at: https://wazimap.co.za/profiles/ward-52702014-jozini-ward-14-52702014/. Accessed 06/12/2024.

Statistics South Africa. 2024. *Census 2022. Agricultural Households*. Online. Available at https://www.statssa.gov.za/publications/Report-03-11-01/Report-03-11-012022.pdf. Accessed on 06/12/2024.

Statistics South Africa. 2024. *Youth still find it difficult to secure jobs in South Africa*. Online, Available at :https://www.statssa.gov.za/?p=14415#:~:text=The%20United%20Nations%20defines%20the,aged%2015%20to%2034%20years. Accessed on 06/12/2024.

StatsSA *see* Statistics South Africa

Swanby, H. 2024. A movement for life: African food sovereignty. In Wynberg, R. 2024 (ed.) *African Perspectives on Agroecology: Why farmer-led seed and knowledge systems matter*, pp. 315–342. Rugby, UK: Practical Action Publishing. Available at: htt.org/10.3362/9781780447445. Accessed on 06/12/2024.

Thomas, D.S.G., Twyman, C. and Osbahr, H. et al. 2007. Adaptation to climate change and variability: farmer responses to intra-seasonal precipitation trends in South Africa. *Climatic Change* 83, 301–322. Available at: https://doi.org/10.1007/s10584-006-9205-4. Accessed on 06/12/2024.

Tripp R. 1992. Dietary consequence of changes in trade and agriculture for the Nankane of northern Ghana. *Ecol. Food Nutr.* 27: pp. 249-58.

Tsing, A, 2013. More-than-Human Sociality: A Call for Critical Description. In Hastrup, K. (Ed.) *Anthropology and Nature*, pp. 27-42. New York, NY, Routledge.

Turner, N.J. and Turner, K.L. 2007. Traditional food systems, erosion and renewal in Northwestern North America. *Indian Journal of Traditional Knowledge* (6), pp. 57–68.

Umgeni Water. 2016. *Universal Access Plan for Water Services Phase 2 Reconnaissance Study - uMkhanyakude District Municipality*. Online. Available at: https://www.umgeni.co.za/wp-content/uploads/2020/02/uMkhanyakude-UAP-Phase-2-Final-Report.pdf. Accessed on 05/12/2024.

uMkhanykude District Municipality. 2022. *Integrated Development Plan. 4th Generation 2017/2018 – 2021/2022*. uMkhanykude District Municipality. Online Available at: https://www.ukdm.gov.za/index.php/integrated-development-plan. Accessed on 06/12/2024.

Van der Linden, J.P., Siebert, F. and Siebert, S.J. et al. 2008. Characterisation of the woody assemblages of Zululand coastal thornveld along the Nseleni river. *Koedoe: African Protected Area Conservation and Science*, 50(1), pp. 113-125.

Van Niekerk, J. and Wynberg, R. 2017. Traditional seed and exchange systems cement social relations and provide a safety net: A case study from KwaZulu-Natal, South Africa. *Agroecology and Sustainable Food Systems,* 41:9-10, pp. 1099-1123. DOI: 10.1080/21683565.2017.1359738.

Varkey, A. 2019. A Review of Peri-Urban Definitions, Land Use Changes and Challenges to Development. *Urban India, National Institute of Urban Affairs* 39 (I). pp. 96-146.

Vazquez, J.M. 2011. *The role of indigenous knowledge and innovation in creating food sovereignty in the Oneida Nation of Wisconsin*. Iowa State University. Available at: https://doi.org/10.31274/etd-180810-1352. Accessed on 06/12/2024.

Venter, Z. 2020. We mapped green spaces in South Africa and found a legacy of apartheid. *The Conversation*. Online. Available at: https://theconversation.com/we-mapped-green-spaces-in-south-africa-and-found-a-legacy-of-apartheid-143036. Accessed on 06/12/2024.

Von Braun, J. and Diaz-Bonilla, E. (Eds.) 2008. *Globalization of Food and Agriculture and the Poor*. International Food Policy Research Institute. New Delhi, Oxford University Press.

Wane, N.N. 2005. African indigenous knowledge: Claiming, writing, storing, and sharing the discourse. *Journal of Thought, 40*(2), pp. 27-46.

Wezel, A., Bellon, S., Dore, T. and Francis, C. et al. 2009. Agroecology as a Science, a Movement and a Practice. A Review. *Agron. Sustain. Dev.* 29: pp. 503-515.

Wiersum, K. F., Singhal, R. and Benneker, C. 2004. Common property and collaborative forest management; rural dynamics and evolution in community forestry regimes. *Forests, Trees and Livelihoods* 14: pp. 281–293.

Williams R., Pelser D. and Black V. (Eds.) 2018. *Agroecology is best practice. Biowatch South Africa's work with smallholder farmers.* Biowatch South Africa, Durban.

Wynberg, R., van Niekerk, J., Williams, R. and Mkhaliphi, L. 2012. *Securing Farmers' Rights and Seed Sovereignty in South Africa. Policy Brief.* Biowatch South Africa, Durban.

Zahari, M.S.M., Tumin, A., Hanafiah, M.H. and Majid, H.N.A. 2019. How the acculturation of Baba Nyonya community affects Malacca food identity. *Asian Ethnicity*, 20(4), pp. 486-502.

Zainal, Z. 2007. Case Study as a Research Method. *Jurnal Kemanusiaan*, 5(1). Online. Available at: https://jurnalkemanusiaan.utm.my/index.php/kemanusiaan/article/view/165. Accessed on 06/12/2024.

Appendices

Appendix A: List of participants

Numbers were used as reference to ensure the anonymity and confidentiality of participants interviewed.

Respondent code	Category	Gender	Location	Date
Participant 1	Hunter	Male	Ingwavuma	October 2022
Participant 2	Farmer	Female	Ingwavuma	October 2022
Participant 3	Farmer	Female	Ingwavuma	October 2022
Participant 4	Farmer	Female	Ingwavuma	October 2022
Participant 5	Farmer	Female	Ingwavuma	October 2022
Participant 6	Farmer	Female	Ingwavuma	October 2022
Participant 7	Farmer	Female	Ingwavuma	October 2022
Participant 8	Hunter	Male	Ingwavuma	October 2022
Participant 9	Herder	Male	Ingwavuma	October 2022
Participant 10	Youth	Female	Ingwavuma	October 2022
Participant 11	Farmer	Female	Ingwavuma	October 2022
Participant 12	Herder	Male	Ingwavuma	October 2022
Participant 13	Farmer	Female	Ingwavuma	October 2022
Participant 14	Farmer	Female	Ingwavuma	October 2022
Participant 15	Farmer	Female	Ingwavuma	October 2022
Participant 16	Youth	Female	Ingwavuma	October 2022
Participant 17	Hunter	Female	Ingwavuma	October 2022
Participant 18	Farmer	Female	Ingwavuma	October 2022
Participant 19	Farmer	Female	KwaHhoHho	September 2022
Participant 20	Non-farmer	Female	KwaHhoHho	September 2022
Participant 21	Farmer	Female	KwaHhoHho	September 2022
Participant 22	Farmer	Female	KwaHhoHho	September 2022
Participant 23	Non-Farmer	Female	KwaHhoHho	September 2022
Participant 24	Farmer	Female	KwaHhoHho	September 2022
Participant 25	Farmer	Female	KwaHhoHho	September 2022
Participant 26	Non-farmer	Female	KwaHhoHho	September 2022
Participant 27	Herder	Male	KwaHhoHho	September 2022
Participant 28	Farmer	Female	KwaHhoHho	September 2022

Participant 29	Herder	Male	KwaHhoHho	September 2022
Participant 30	Non-farmer	Female	KwaHhoHho	September 2022
Participant 31	Farmer	Female	KwaHhoHho	September 2022
Participant 32	Herder	Male	KwaHhoHho	September 2022
Participant 33	Farmer	Female	KwaHhoHho	September 2022
Participant 34	Non-farmer	Female	KwaHhoHho	September 2022
Participant 44	Youth	Female	KwaHhoHho	September 2022
Participant 35	Herder/Youth	Male	Ingwavuma	October 2022
Participant 36	Agricultural extension officer	Male	Ingwavuma	September 2023
Participant 37	Agricultural extension officer	Male	Ingwavuma	September 2023
Participant 38	Agricultural extension officer	Male	Ingwavuma	September 2023
Participant 39	Animal extension officer	Male	Ingwavuma	September 2023
Participant 40	Manager at KZN Agriculture and Rural Development Department office in Mtubatuba	Female	Mtubatuba	September 2023
Participant 41	Biowatch member	Male	Mtubatuba	April 2024
Participant 42	Youth	Male	Mtubatuba	January 2024
Participant 43	Agricultural Extension Officer	Female	Mtubatuba	April 2024

Appendix B: Ethical clearance form

UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

Faculty of Science
University of Cape Town
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9 August 2022

Jessica Fortes
Department of Environmental and Geographical Science

Disrupting and reclaiming local foodways

Dear Jessica Fortes

I am pleased to inform you that the Faculty of Science Research Ethics Committee has approved the above-named application for research ethics clearance, subject to the conditions listed below.

- Restrictions on involving human participants in research must be adhered to, given current concerns about the spread of Covid-19. Please ensure that you are aware of and comply with UCT policy on this, as communicated by management.
- Implement the measures described in your application to ensure that the process of your research is ethically sound; and
- Uphold ethical principles throughout all stages of the research, responding appropriately to unanticipated issues: please contact me if you need advice on ethical issues that arise.

Your approval code is: **FSREC 067 – 2022**

I wish you success in your research.

Yours sincerely

A/Prof Melissa Densmore
Chair: Faculty of Science Research Ethics Committee

Appendix C: Consent form sample

Informed Voluntary Consent to Participate in Research Study

Project Title: Disrupting and Reclaiming Local Foodways

Invitation to participate, and benefits: You are invited to participate in a research study conducted with small-scale farmers and residents of Ingwavuma and KwaHhoHho. The study's aim is to investigate food systems in KwaZulu-Natal, South Africa. It will explore how these food systems have changed over time, the effect food systems have on people's connection to nature and the importance of local food systems. I believe that your experience would be a valuable source of information, and hope that by participating you may gain useful knowledge.

Procedures: During this study, you will be asked to answer some questions relating to your own food systems

Recording: We may take photographs and record audio. These will be used for personal record only. If you object to this, please indicate below.

Risks: There are no potentially harmful risks related to your participation in this study.

Feedback: You will receive feedback about the results through an in-person feedback session, together with a summary of research findings translated into local languages

Disclaimer/Withdrawal: Your participation is completely voluntary; you may refuse to participate, and you may withdraw at any time without having to state a reason and without any prejudice or penalty against you. Should you choose to withdraw, the researcher commits not to use any of the information you have provided without your signed consent. Note that the researcher may also withdraw you from the study at any time.

Confidentiality: All information collected in this study will be kept private in that you will not be identified by name or by affiliation to an institution. Confidentiality and anonymity will be maintained as pseudonyms will be used.

What signing this form means: By signing this consent form, you agree to participate in this research study. The aim, procedures to be used, as well as the potential risks and benefits of your participation have been explained verbally to you in detail, using this form. Refusal to participate in or withdrawal from this study at any time will have no effect on you in any way. You are free to contact me, to ask questions or request further information, at any time during this research.

I agree to participate in this research (tick one box) Yes No _____ (Initials)
I agree to be photographed Yes No _____ (Initials)
I agree to be audio-recorded Yes No _____ (Initials)
I agree to the use of properly anonymized recordings and information gathered in the construction and writeup of Jessica Fortes' thesis on disrupting and reclaiming local foodways.
Yes No _____ (Initials)

_____	_____	_____
Name of Participant	Signature of Participant	Date

_____	_____	_____
Name of Researcher	Signature of Researcher	Date

Appendix D: Interview questions

Informant's background

- When and where were you born?
- Have you always lived here (if not, where are you from and when did you move here)?
- How many people live with you?

People's current food systems

The first few questions I'm going to ask are about where you get your food from, why and how this has changed.

- Where do you get most of the food you eat from?
- How much of the food you and your household eat do you grow?
- What do you grow and is there a specific reason you grow it?
- Does what you eat change in winter and summer (how so)?
- What food do you buy from the shops?
- Are there any foods that you want but can't get here?

Questions on changes to foodways

- Is what you eat now different to what you ate as a child (and what has changed)?
- Do you believe that the food is healthier or less healthy today compared to when you were a child? Why and how?
- Do you think that it was easier or more difficult for the community to put food on the table when you were a child or today (why/why not?)?

- Have you ever lived in a city?
- **If yes:**
- How was the food different there?
- Where did you get your food from?

Questions tailored to informants with gardens

- How long have you been farming?
- Where did you learn to farm (parents or grandparents' garden?)
- How does it make you feel knowing you don't have to rely on shops etc.?
- (Proud, in control, independent?)
- Do you have to buy anything to farm – seeds, fertilisers, pesticides?
- Do you sell your produce and what do you sell?
- Who do you sell to?

- Has what you eat changed since you started growing your own food and how?
- Do you prefer what you eat now and why?
- How does the new diet make you feel?
-
- Do your children (if they have) farm too?
- If yes (do you think this is important and why/why not)?

- Did you have enough to eat lockdown and the unrest?
- Were there any foods you needed but couldn't get during these times?

Interview questions for those who do not have their own gardens

- Can you find everything you need from the shops?
- Did you/your parents ever grow your own food? If yes, why did you stop?
- Would you like to grow your own food and why/why not?
- (if would) What are some of the challenges that make it difficult to grow your own food?

A social and cultural/traditional link between individuals and food choice

Traditions:

- Are there things that you cook that you learned to prepare from your parents or grandparents? What are they?
- Are there any food traditions and recipes that you would consider your family's or your community's cultural heritage?
- Do you have access to all the foods needed to take part in these traditions?
- What foods that you grow/buy are traditional crops?
- What would you say makes them "traditional"?
- Do you think that your culture has anything to do with what you choose to eat? (If so) how does it influence it?
- Did you eat traditional food when you were young? What was this?
- What do you think is connection between tradition/culture/religion and food?
- Are there any foods that you eat for certain rituals?

Social:

- Do you share food or livestock with your neighbours? (Particularly relevant for those with gardens)
- What do you think is important/of value about sharing a meal or food with someone?
- When do you give food to someone and why?
- Are there any social events where you should bring certain food?

Questions about how the area has changed

- How has this area changed since you were young?
- Do you think you can show me where the most change has been on the map?
- Were there always this many shops?
- Which food shops are new?
- Where did people get food before the shops?
- Do you think the shops are a good or bad thing? Why?

- Has the forest / bush / veld changed at all over your lifetime? If yes, how?
- Why do you think these changes have occurred?
- How have these changes affected what you eat?
- Do you think these changes have been good or bad? Why?

Individuals' relationship and understanding of nature

- How would you define nature?
- What do you think is the role of nature in your life?
- How is what you grow influenced by nature/the environment?
- Do you pick any food or fruit from the wild? and if so what?
- Has how much you pick from the wild changed. Why do you think it has changed?
- How does it feel to get food from nature / the forest / the bush?
- Do you think your relationship with nature has changed? How and why?
- Did you grow food or pick any plants from the wild as a child? If so, what?
- Is there anything you pick from the wild that you eat a lot of?

- Do you have enough time to go for a walk through the vegetation near here and talk about the plants which are harvested by you and their uses as well as their traditional and/or social importance.?

Questions for Herders

- How long have you had livestock for?
- Why do you have livestock?
- Where did you learn to look after animals?
- What are the conditions like to have animals here?
- Have you found the vegetation (grassland) here has changed since you were younger and how?
- Can you describe how people's attitude of looking after animals is now and how it was?
- What do you think is the cultural value of livestock?
- Can you tell me about some of the ceremonies?
- Do you sell your animals or meat?

Questions for Hunters

- How long have you been hunting?
- How often do you hunt?
- Where did you learn to hunt?
- What animals do you hunt?
- How do you hunt them?
- What is your connection with nature when you hunt?
- When you hunt an animal do you have a connection with that animal?
- Do you sell the meat that you hunt?
- When is the best time to hunt?
- How do you prepare the meat, do you dry it, how do you save it?
- Do your children hunt?
- Are there rituals/traditions that revolve around wild meat?
- Has hunting become harder?

Questions for extension workers

- What role do you play with farmers and how many farmers do they work with?
- What do you do with them?
- Can you tell me a bit about your experience?
- Are people interested in learning from you?
- What type of farming methods do you use, etc. (gmo, fertilisers, pesticides)?
- Do you think those living in rural areas already have an understanding of how to grow food? If so, where do you think it comes from?
- Do you work with knowledge farmers already have or do you introduce new methods? Which?
- Does the knowledge you teach ever clash with how farmers have been farming, how do you work this out?
- How would you describe the type of farming people in rural KZN do?
- Do you give support to traditional agriculture?
- Do they come to you, or do you approach them?
- What are some of the challenges you face?
- Do you work with both men and women?
- Do you work with subsistence farmers or focus on getting people into the market?
- What is your relationship with traditional leaders?
- What do you think is the value of agriculture to people living in urban areas, particularly subsistence agriculture?
- To what extent do you think people are growing their own foods?
- Do you think people want to partake in subsistence farming?
- In what ways do you think the way people grow crops have changed?

- What do you think is the value of agriculture to people living in rural areas, particularly subsistence agriculture?

- What do you think are the different factors which are changing food systems in these areas?
- People were speaking about how climate has prevented people from farming, what are your thoughts on this?
- They also spoke about how the young are no longer interested and more interested in furthering their education than farming or participating in traditional food systems. Do you have any thoughts on this?

- To what extent are farmers still growing traditional food? (and why)
- People spoke about eating less traditional food, why do you think this may be the case?
- Do you think it may be the fact that people are growing less crops so they don't have as much access to these foods?
- What do you think is the value of traditional food?
- What do you think is the link between traditional food and people's identity?
- Do you think government projects give support to traditional agriculture?

Grants

- What is the role of grants among communities?
- What do you think people use these grants for?
- Are they used to purchase food?
- How important are they for food security?
- What do you understand as the link between food security and grants?

Traditional leaders

- What role do traditional authorities play in these areas? (KwaHhoHho and Ingwavuma)
- Do they play a role in land allocation?
- Do they do any liaising with extension workers?
- What role do traditional leaders play in agriculture and food security?
- People mentioned that (traditional leaders) used to play a more active role in mediating the relationship between farmers and herders. What are your thoughts on this?

Youth questions

- Do you think youth have the same approach to food and farming/herding as the older generation?
- From what I've seen, it appears that youth are not as interested in taking part in traditional farming practices, is that true?
- Do you think it is about not wanting to farm or that they want a different lifestyle? What is motivating this?
- What do you think this means for these food systems?
- What do you think this means for the knowledge of how to grow and prepare food?
- Do you think that it is just how youth always are and when they get older they will want to go back to their roots or do you think this is a new change?
- How much do you think this has to do with education?
- Do you think that it matters that youth are no longer interested?
- How do you imagine food systems and traditional practices changing in the future?

Biowatch questions

- What do you think the role of Biowatch is within KwaHhoHho and Ingwavuma?
- Do you think this extends beyond teaching people agroecology?
- Do you work with knowledge farmers already have or do you introduce new methods?

- What are some of the challenges you face with teaching farmers?
- Are you aware of any other projects aimed at assisting small-scale farmers or food security which are happening in the KwaHhoHho or Ingwavuma?
- What do you think are the different factors which are changing food systems in these areas? For instance: Climate, human activities, government interventions, people wanting a different life?