UNIVERSITÄT ZU KÖLN

Geographisches Institut

Prof. Dr. Peter Dannenberg

Date: 30.07.2019

The Namibian maize sector and the role of the state: Impacts on local value chain development

Master's thesis

Carolina Kiesel

MSc. Geography

5304024

ckiesel@smail.uni-koeln.de

Münstereifeler Str. 5, 50937 Köln

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1. Introduction

The most important staple crop in Namibia is white maize (in the following maize, as opposed to corn, yellow maize), In the Zambezi region, most rural households rely on growing maize for food security and occasional income generation (Kamwi et al. 2015: 211). State actions have, for a long time now, targeted these through agriculture-related policy measures, which is estimated to have had impacts on the emerging formal maize sector in the Zambezi region.

The state's importance is increasingly being acknowledged and focused on in Global Value Chain (GVC) research, as opposed to a former firm-centric perspective (Kaplinsky&Morris 2016: 633). Current governmental come back and involvement in the economy is shaped by structural transformations and contending (Gereffi 2014: 9), so it requires a higher weight in value chain analysis to understand the new, diversified role of the state, which can be more active than the frame setter is was seen to be until now (Lee et al. 2014: 124). This applies to both global and domestic value chains, which always need to be assessed in their globalized context (Humphrey&Navas-Alemán 2010: 12).

Consequently, it is indispensable to assess both the maize value chain per se and its policy context, leading to the first superordinate question:

- What are the characteristics, concrete and desired, of the local maize value chain?

Here, local refers to the study area, the Zambezi region and, in the broader sense, the overall Namibian value chain as opposed to the regional (Southern African) and global scope. The value chain encompasses the trajectory of maize from the fields, through the milling process transforming it into meal (flour), and then traded to the end consumer. In contrast to this concrete notion, the policy visions display a desired value chain, which materializes in policy measures impacting the maize sector and value chain:

- How does the state influence local maize value chain development?

This question is to be answered by identifying the roles the Namibian state plays regarding the value chain, by loosely following the conceptualization of state roles and governance by Horner (2017) and Alford&Phillips (2018), amongst others. These state roles impact the value chain including its features and development.

This study first gives an introduction on the regional (ch. 2.) and the theoretical background, presenting value chain analysis, the increasing importance of the institutional context and the categorizations in the 'Role of the State' research (ch. 3). Afterwards, the method is explained including the theoretical approach of the Grounded Theory methodology and the actual research process and data used (ch. 4). The main part consists of the presentation of the results: Firstly, the descriptive ones on the first superordinate research question (ch. 5), and then, the analysis and discussion of both the roles of the state (ch. 6.1) and their impact on the value chain development (ch. 6.2). The study closes with an evaluation of the methodology (ch. 6.3) and the conclusion (ch. 7).

2. Regional background: The Namibian maize sector and the Zambezi region

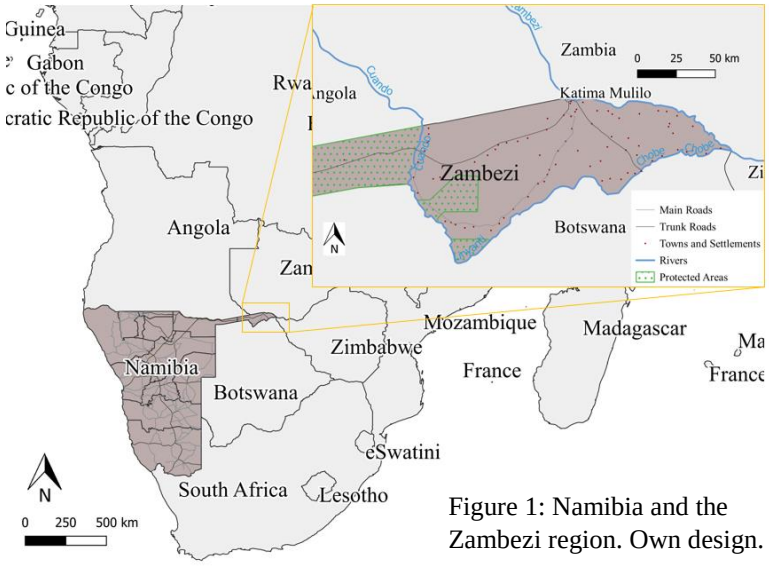

Figure 1: Namibia and the Zambezi region. Own design.

Namibia is a desert country in Southern Africa (see fig. 1). The Namibian agricultural capacity is significantly low due to a combination of arid climate and unfertile soils (Mendelsohn 2006: 10). Furthermore, the climate variability, the frequency of environmental hazards (especially droughts), and proneness to climate change limit the possibilities of Namibian agriculture (Msangi 2014: 5). Besides these natural constraints, Namibia also faces socio-economic challenges, e.g. poverty, food insecurity, the HIV/AIDS epidemic, and missing quality education (Frøystad et al. 2008: 1). Moreover, few benefit from the relatively high income level, since Namibia faces huge income inequalities: The Gini coefficient of around 57% places Namibia under the three most unequal countries in the world (the other two being Botswana and South Africa) (GRN 2017). Another indicative figure showing Namibia's socio-economic challenges is the high unemployment rate around 30% (NSA 2016: 13).

Namibia's agricultural sector is still marked by the period of South African mandate (1920-1990), as the political aims for agricultural development were directed to serve South African needs, including turning Namibia into a captive market for South African agricultural and horticultural products. The agricultural sector was characterized by monocultural production (especially meet) and otherwise decreased to a subsistence level (Mendelsohn 2006: 8, Frøystad et al. 2008: 3). Today's dualistic land tenure structure is a reminder of colonial times under both German and South African de facto rule, and consists of a Northern communal part (the Northern Communal Areas), which is characterized by small-scale subsistence

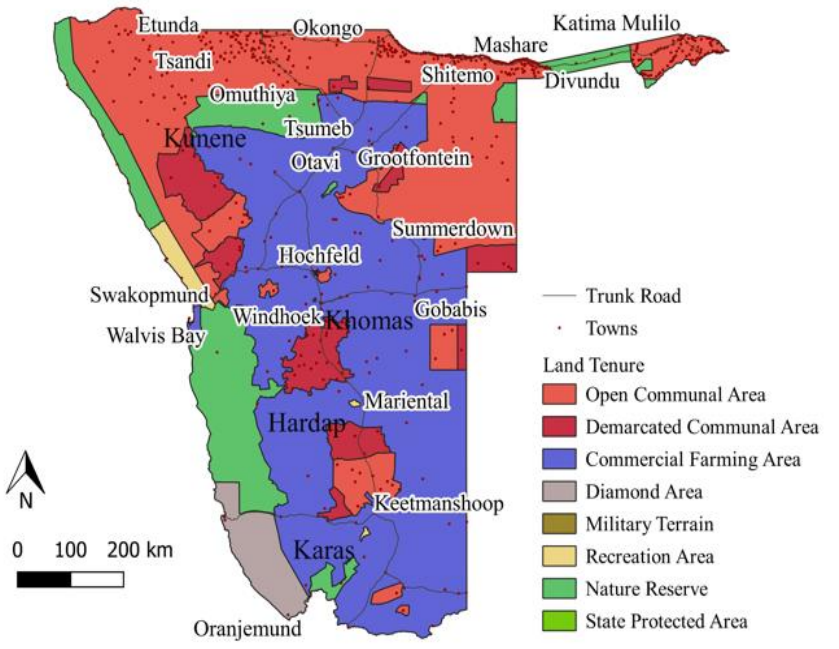

Figure 2: The land tenure system in Namibia. Own design.

farming, and a freehold tenure, commercially used part (see fig, 2, Mendelsohn 2006: 13f).

The Zambezi region lies in a northeastern salient and was formerly named after Leo Caprivi, a German chancellor who negotiated the Anglo-German treaty allowing the Germans access to the region and the Zambezi river. After it became clear that the Zambezi river could not provide a navigable link to Tanzania and the Indian ocean due to its rapids and the Victoria Falls, the region was left in a stage of administrative neglect for most of the time until independence. Exceptions were strategic-military utilizations because of the geopolitically important location, e.g. during the World Wars (Kangumu 2011: 163, 265f). The neglect, added to the geographical isolation, led to a particular, spatial, yet fragmented 'Caprivian identity' of people which were, for a long time, kept "in the periphery of political, social, cultural and economic development" (ibid.: 271). The disconnection from the 'mainland' also happens in terms of provision of public services and processed food, strengthening the culture of self-sufficient subsistence lifestyles (Botes&Metzger 1990: 205, Mendelsohn 2006: 59).

The Zambezi region benefits from the highest precipitation and least water shortage rates in comparison to the rest of Namibia. Given a productivity of roughly 0,5 t/ha, which is among the highest in Namibia, the region is the only one in Namibia frequently producing surpluses in maize (Frøystad et al. 2008: 6, Botes&Metzger 1990: 205, Mendelsohn 2006: 38). Moreover, it is the only small-scale 'non-commercial' farming area involved in the formalized maize sector (NAB 2014a: 28). The agricultural sector employs almost half of Zambezi's population (NSA 2014a: 8). Nevertheless, it is not spared from frequent droughts and floods (GRN 2013b: 7f).

3. Theoretical and conceptual framework

This following introduction into Value Chain analysis (ch. 3.1), the increasing perspective on institutions and the state's involvement (ch. 3.2), and the incorporation of the role of the state in Value Chain research (ch. 3.3) serves as the theoretical framework for the study of the Namibian maize value chain. The analytical framework including the detailed research questions will be presented in the next ch. 3.4.

3.1. Value Chain research, analysis and practical adoption

Value Chain research is often done under the subsuming term 'Global Value Chain (GVC) research' (Ravenhill 2014: 271). The generic term covers a variety of research directions using similar concepts with varying definitions and foci, e.g. (Global) Commodity Chains, Supply Chains (Management), (Global/International) Production Networks (Gereffi et al. 2001, Sturgeon 2001, Bair 2005: 174, Raikes et al. 2000). The research directions stem from various disciplines, schools of thought and have different scopes (Gibbon et al. 2008: 326). Kaplinsky&Morris provide a basic definition of value chains adequate for most of the approaches, describing value chains as the

> full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use (2001: 4).

In current research, value chains have been analyzed concerning a variety of aspects. First of all, the studied value chain is often presented regarding its **input-output structure**. This may include the identification of the activities, that is, the segments of the value chain, of the structure and characteristics of the actors within the chain segments (Gereffi&Fernandez-Stark 2018: 307f), and of flows along the chain – commodities, resources, services and knowledge – , including different options of channels linking segments within a value chain (Kaplinsky&Morris 2001: 53, Trienekens 2011: 53). Furthermore, analysis concentrates on the **geographical scope** of these flows and channels, which may involve more than one country, or even continent in the case of global value chains. Geographical chain structures can also be described at local levels and are increasingly gaining importance in a regional scope due to trade agreements and the emergence of new large economies (Gereffi&Fernandez-Stark 2018: 309f).

Another essential part of this initial value chain 'mapping' is the presentation of (output) **values of the chain** (Kaplinsky&Morris 2001: 53). Value is created along the chain, and therefore enables actors to generate rents, e.g. firm-internal rents like technology, organizational skills or marketing/branding, chain-specific rents (relational rents) and external rents like trade, policy and infrastructural rents (ibid.: 80f, Trienekens 2011: 63, Fengru&Guitang 2018: 19). Additionally, analyses concentrate **value capture**, which refers to the possibilities and capacities of local actors to retain the value created (ibid.: 19). It is often strongly dependent from power and control, e.g. regarding relational rents and the chances to access rents in general (Coe&Hess 2010: 133). Closely related to the question of value capture is the resulting value distribution, which has been analyzed along the chain (between segments), locations (developing/developed countries), and between firm-owners and workers (Gibbon et al. 2008: 331, Kaplinsky&Morris 2001: 86-91, Fitter&Kaplinksy 2001: 71).

A prominent value chain research approach regarding power and control structures in the chain is the '**governance**' of value chains. It concentrates on the relationship between consecutive segments of a chain, specifically between a so called 'lead firm' driving the chain and its

supplier(s) (Gereffi et al. 2005), which are often from developed and developing countries, respectively. This gives insights into the overall structure of the chain (including barriers to participation), enabling recommendations for policy initiatives or technical assistance (Humphrey&Schmitz 2001: 20f). Initially, a twofold distinction between buyer- and producer-driven value chain emphasized the powerful role of, either, dominant retailers which set standards their suppliers have to comply with, or producers controlling the chain by integrating the chain segments within the own firm (Gereffi 1994). This twofold conceptualization looks at governance as driving the chain, while newer (but not always replacing) approaches see governance as coordination (Gibbon et al 2008: 321): Five types of coordinating governance were conceptualized, which are differentiated by the degree of explicit coordination and power asymmetry within the value chain (Gereffi et al. 2005: 86f). Central to both governance perspectives are the lead firms, their location, and their relation to suppliers (Gereffi&Fernandez-Stark 2018: 310).

These primary foci in value chain research were quickly adopted by researchers, policy makers and development agencies as a base for a development tool (Werner et al. 2014, Marsden et al. 2000, Jackson et al. 2006, Schmitz 2005). Central to this development tool were the '**upgrading**' possibilities, enabling developing countries to capture more value by "actively changing the way they are linked to global value chains" (Gereffi et al. 2001: 2). – which depends, in turn, on the governance and power structures described before. Tab. 1 lists the four conventional upgrading types and four new upgrading trajectories.

Table 1: Forms of upgrading. Sources in right column.

Type of upgrading	**Description**	***Sources***
Product upgrading	"moving into more sophisticated product lines (which can be defined in terms of increased unit values)."	Gereffi et al. 2001: 5, Humphrey&Schmitz 2002: 1020f
Process upgrading	"transforming inputs into outputs more efficiently through superior technology or reorganising the production systems."	
Functional/Intra-chain upgrading'	Acquiring new functions or entering segments of the chain, up and downstream, but also altering linkages within the chain	
Inter-sectoral upgrading	"apply the competence acquired in a particular function of a chain (e.g. competence in producing particular inputs, or in export marketing) to a new sector"	
Social upgrading	Improve rights and entitlements of workers, their working conditions and protection of those, with effects on their dependents and community	Barrientos et al. 2011: 324
Entry in the value chain	"firms participate for the first time in national, regional, or global value chains. This is the first and one of the most challenging upgrading trajectories"	Gereffi&Fernandez-Stark 2018: 313
Backward linkages upgrading	"local firms (domestic or foreign) in one industry begin to supply tradable inputs and/or services to companies—usually multinational corporations (MNCs) that are located in the country and are already inserted in a separate GVC"	
End-market upgrading	"moving into more sophisticated markets that require compliance with new, more rigorous standards or into larger markets that call for production on a larger scale and price accessibility"	

The first four upgrading paths are concentrated on economic factors at the firm level and only implicitly include overall development based on trickle-down effects (Werner et al. 2014: 1224). These deficits are addressed in the three of the other four upgrading types (excluding 'end-market upgrading').

A way to achieve participation in (global) value chains and gain access to upgrading possibilities and regional development is **strategic coupling** between value chains (e.g. lead

firms) and regional 'assets' (e.g. local firms) by finding or establishing fitting complementarities (Coe&Hess 2010: 128, 131, Humphrey 2006: 589). It is, thus, a "dynamic processes through which actors in regions coordinate, mediate, and arbitrage strategic interests between local actors and their counterparts in the global economy" (Yeung 2009: 332). Despite good intentions behind the strategic coupling strategy, Coe&Hess identify a 'dark side' to it, as it may lead to uneven allocation of resources and the disruption of existing systems, affecting both firms and livelihoods (2010: 134).

This two-sided situation correlates to a general division in development organizations, namely between the aims of economic development and poverty reduction, which is also shown in the division between conventional and new upgrading types. Humphrey&Navas-Alemán identify two predominant types of project undertaken by the organizations, one concentrating on interventions working with lead firms – in the sense of strategic coupling –, the other on chain linkages – with a clear focus on poverty reduction (2010: 26, 38, 45). These latter projects are part of a general trend towards inclusive and pro-poor focused development projects and agendas, e.g. the M4P (Making Markets Work for the Poor) approach (DFID/SDC 2008).

3.2. The comeback of the state: In actual policies and in Value Chain research

The practical adoption of value chain analysis to the development context happens not only by foreign/international development organizations, but increasingly also by nation states. The GVC perspective to development and the globalized economy is, in its principles, consistent with the perspective on a liberal, globalized trade system mightily promoted by the Bretton Woods Institutions and their Washington Consensus. At the same time, it takes a step further by providing recommendations as to how policies can guide GVC development – going beyond the restricted possibilities within the promotion of a mere "macroeconomic 'enabling environment'" (Werner et al. 2014: 1242).

This results in the new 'Post-Washington Consensus world' (Gereffi 2014: 15), a new era characterized by the breach with the liberalization and privatization tendencies. Different than before, the Post-Washington Consensus era lacks clearly established new development guidelines – and while evolving policies and systems are strongly interconnected and interdependent, they are subject to decisive structural changes (Rodrik 2006: 973, Bhatia 2013: 315f). While the actual existence of this new trade regime policies was initially questioned, critiqued and reduced to a merely theoretical concept or press instrument (Sehring 2003, Gibbon&Ponte 2005, Öniş&Şenses 2005 2005), the Post-Washington Consensus is now recognized as an important context for global value chains (Gereffi 2014, Neilson et al. 2014). The importance of this change of thoughts is immense especially for the African agricultural sector, where coordination and market failures were prevalent. According to Dorward et al., the best way to overcome these is a mix of diverse policies, including promotion through subsidies and loans, support to farmer associations, development of information systems and market infrastructure, and the withdrawal of the state from interventions (2005: 84). This approach includes different perspectives on the agricultural sector, includes credit policy as well as interventions through state organizations like parastatals, and a new focus on small-scale farmers, which strongly differs from previous liberalization discourses (ibid.: 80, Scoones et al. 2005: 4f).

Former liberalization tendencies are also complemented or even substituted by regulatory measures, e.g. strengthening of labor rights and conditions or the creation or enforcement of environmental regulations, often as a consequence to social upheavals (Mayer&Pickles 2011:

11). This development is also called "regulatory renaissance" (Alford&Phillips 2018: 102). The departure from the Washington Consensus prescriptions enables states to come back to occupy their traditional (not only, but often regulatory) roles of fostering market development (Önış&Şenses 2005: 275). The new "return of the state" (Mayer 2014: 352) is happening especially in larger, emerging middle-income economies of the Global South like China and Brazil, but may also be the case in smaller countries. Their maturing economies and the fact that production is increasingly less footloose strengthens the government's possibilities in regaining control and leverage through regulations (ibid.: 352f). In value chain research, the state's comeback is increasingly acknowledged for the labor context (ibid.: 354, Mayer&Pickles 2014, Mosley 2017, Amengual&Chirot 2016, Gereffi&Lee 2016: 31, 34).

Along with this real-world development, calls for a stronger incorporation of the general institutional context into GVC research – conceptualization and case studies – are increasing (Smith 2015, Mayer et al. 2017, Ponte&Sturgeon 2014, Dannenberg&Diez 2016: 170). They often criticize the firm-centric approach of conventional GVC research, mainly in early works around Gary Gereffi (1994, Gereffi&Korzeniewicz 1994, Gereffi et al. 2001, 2005; Gibbon et al. 2008: 332, Bair 2005: 174). The institutional context – "the state, international organizations, labor groups, consumers, and civil society organizations" (Yeung&Coe 2015: 50) – is paid attention to in the Global Production Network approach (Coe et al. 2008, Henderson et al. 2002). In a rather practice-oriented framework, Riisgaard et al. 2010 also include "value chain interventions with broader scope and aims" (2010: 202) as an upgrading option, which can be initiated not only by the private sector (NGOs or Corporate Social Responsibility), but also governmental legislations. These actors were included in a recent governance research branch on public and private-civil governance alongside the traditional firm-centric private governance. The overall governance structure of a value chain, when influenced by so many actors, can shape up in different ways: either complementary (Bair 2017, Amengual 2010, Mosley 2017, Mayer&Gereffi 2010: 17, Patel-Campillo 2010: 95, Mayer&Pickles 2011: 13, Mayer 2014, Gereffi&Lee 2016) or divergent (Alford 2018, Abbott&Snidal 2009, Visser 2019, Smith et al. 2018: 569f, Neilson&Pritchard 2010: 1849).

Recently, the focus on actors and especially the state has also found its way into the conceptual base of Gereffi's Global Value Chain approach: Gereffi&Lee conceptualize the decisive impact of firm and non-firm governance, which shapes trajectories for social upgrading, including the 'multi-stakeholder path' and the 'public governance path' (2016: 33f). Furthermore, Dannenberg&Diez include the "stat as a domestic and international driver" as one of the key aspects in an institutional perspective on value chains in the global South (2016: 171). Finally, Gereffi&F-S recognize both "Local Institutional Context" and "Industry Stakeholders" (2018: 307) as dimensions for GVC analysis. In the latter, the state is included through its "government agencies including export promotion and investment attraction departments, ministries of foreign trade, economy and education amongst others" (Gereffi&Fernandes-Stark 2018: 316).

The institutional context is also focused on in latest research on the search for the "Role of the State" (Horner 2017, Horner&Alford 2019, Smith 2015, Neilson et al. 2014), showing the recognition of (1) the state's involvement in shaping value chains, and (2) the uncertainty regarding this involvement and its consequences. The importance of finding new policies and functions the state exercises is also stressed by Kaplinsky&Morris 2016 who emphasize the importance of the state's involvement in providing a "new industrial policy framework

encompassing strategies that are appropriate to the characteristics of these new GVC dynamics" (2016: 626).

This research direction concentrates on the impact of specifically the state on certain sectors or (global) value chains: The main foci are the interplay and consequences of governmental action, strategies and governance, showing why chains ended up in their current situation and therefore how they shape the economy and society. Different approaches, conceptual frameworks and study examples are presented in the next subchapter.

3.3. The Role of the State: Typologies and labels

A range of research literature deals with the emerging topic of the state role for value chains. Following the general demand for the inclusion of the state into value chain research as depicted in the previous subchapter, various attempts were undertaken to theorize this new approach (Smith 2015, Horner 2017, Alford&Phillips 2018). Among them are various systematic categorizations for the 'Role of the State' which are used in recent literature on global value chains and the impact of the state on it – as presented in the following.

Typologies

The current conceptual categorization builds on four approaches from different points of view, summarized in tab. 2. The oldest by Evans (1995) relates to how the (developmental) state promotes emerging domestic industries using different ways and techniques shaping different state roles (right column in tab. 2). He departs from the notion that exclusively contrasting definitions of state involvement ('dirigiste' vs. 'liberal' or 'interventionist' vs. 'noninterventionist') and the degrees in between them are not applicable to the contemporary structures. Instead, the specific kind of state action including its consequences has to be considered. These patterns of involvement are the base for Evans' roles of the state (1995: 11-13). Although he does not explicitly refer to value chains, the role concepts are easily applicable and have, indeed, been adapted to the global value chain context by Horner 2017.

On the other hand, Gereffi&Mayer's typology (2006) describes the institutions enabling or constraining the market and the actors' behavior, resulting in certain public governance characteristics (left column in tab. 2). This is done already in a globalized context, but not explicitly regarding global value chains. The typology is adapted by Alford Phillips 2018, which make the reference to global production networks. In the following, the various roles of the state of these four approaches will be presented and compared.

Table 2: Four typologies for the role of the state. Source see second row.

Concept: **"Market governance systems"**	Concept: **"Modes of state governance in the GVC/GPN context"**	Concept: **"State roles within GPNs"**	Concept: **"State involvement for development"**
By: **Gereffi & Mayer 2006**, used in:	By: **Alford&Phillips 2018**	By: **Horner 2017**, developed in:	By: **Evans 1995**, adapted by:
Mayer&Phillips 2017		Horner & Alford 2019	Horner 2017
Facilitative	**Facilitative**	**Facilitator**	**Midwife**
Regulatory	**Regulatory**	**Regulator**	**Custodian**
Distributive	**Distributive**		
-	-	**Producer**	**Demiurge**
-	-	**Buyer**	**Husbandry**

Commonly, the state acts as a **facilitator** towards its economy, and especially the economic sectors and value chains therein it wants to promote. The facilitative function of the government ranges from setting a general business appropriate environment (especially a legal framework), to specific measures like economic incentives (subsidies, tax reductions), through which it can design global value chains and/or establish a metaphorical 'greenhouse' to nurture and protect the targeted sector. In the context of global value chains (Horner 2017), facilitating trade policies are those improving international trade, namely mainly reduction and exemption of trade barriers (tariffs and non-tariffs), including export subventions and free trade agreements. Hence, it coincides with the liberalization approach of the Washington Consensus, and can indeed be held responsible for the establishment of a multitude of global value chains all over the world. Regarding agriculture, there are a variety of facilitative sectoral policies: price, marketing, input, credit, mechanization, land reform, research (generation and diffusion of new technologies), and irrigation policies (Ellis 1992: 3f), whereby trade related policies are considered to be a part of (output) price policies (ibid.: 71).

Horner's (2017) facilitative role is adjusted from the concept of **midwife** by Evans (1995). Both concepts have the incentive measures mentioned above in common, but a completely different idea of facilitative trade policies: For Evans, trade policies can serve the development of domestic industries, which, in a protectionist manner, are to be shielded by international competition by rising trade barriers – in direct contrast to the global value chain directed approach of Horner (2017, also Mayer&Phillips 2017, Alford&Phillips 2018).

The younger approaches (Horner 2017, Alford&Phillips 2018) count the trade restrictions to the **regulatory** functions of the state, as they hinder the establishment of value chains across national borders. Further regulations include labor law, environmental and natural resource protection, and standard requirements and control regarding processes and products. These regulations match the **custodian** function of the state for Evans (1995). Alford&Phillips emphasize that, when looking at the regulatory function, it is mostly possible to find a *de*-regulation strategy – the absence of regulatory governance – performed by the state (2018: 102f). For Horner, the states as regulators "seek to limit and restrict their [firms' of GPN] activities and shape the distributional consequences (thus including the distributive role)" (2017: 6). In contrast to that, Gereffi Mayer 2006 list the **distributive** role as an own category, emphasizing the particular effects on the market which distributive policies like taxes and insurance have. Consequently, Alford Phillips 2018 adopt the distributive role, but go further focusing on the actual distributional outcomes, and draw the connection to rents and gains within value chains, and their distribution.

The role of the **producer** (Horner 2017), based on the **demiurge** (Evans 1995), differs from the previous roles in sight of the direct involvement of the state in the economy or value chain, as opposed to setting a mere framework. Although frameworks still tend to exclude the state and its governmental bodies as "external actors" (Bolwig et al. 2010: 185) alongside organizations like advisers and NGOs, the active involvement of the state is undeniable: State-owned enterprises directly participate in value chains, e.g. as producers of strategic goods, either for security reasons, to secure supply to the population, or to promote certain sectors (Horner&Alford 2019: 12). Despite privatization trends and a general disapproval by the Bretton Woods Institutions, state-owned enterprises are frequent in developing countries, and increasingly participating in global trade (Menocal 2006: 773). They are therefore becoming, in a certain way, a manifestation of the global competition between states in the fight for market shares in global value chains, their contribution reaching up to 10% of the world's GDP (Dicken

2015: 183f, Peng et al. 2016: 294). Nevertheless, their role – and, therewith, the state's role as a producer – within value chains remains underexplored (Horner&Alford 2019: 13, Horner&Nadvi 2018: 225). Due to their differences to private actors regarding (often partly non-business) objectives, they may shape value chains in a different way or even establish new ones.

States can also occupy the other end of value chains by demanding goods as a **buyer**. Public procurement amounts to averagely 13% of the World's GDP (OECD 2014: 2) and can, this, have a great impact on certain value chains serving public services, e.g. in the health and defense sector. In the global context, it is important to acknowledge the traditional preference for local suppliers and opposing trends like non-discriminatory regulations in global and regional trade agreements when it comes to public procurement (Horner 2017: 9). While this perspective concentrates on own intrinsic demands of governmental bodies, Evan's corresponding concept of **husbandry** emphasizes the use of public investment and involvement to strengthen certain sectors, especially innovative or entrepreneurial ones challenged by global competition (1995: 14, 81). This can also happen by the establishment of state-owned firms complementing the sector where needed, e.g. in the area of research and development. This incentivizing role towards certain sectors or firms through direct involvement is, furthermore, acknowledged by current work on the buyer's concept by Horner&Alford (2019: 15), naming the protection and support of national champions through public procurement as an important example.

Labels and neighboring research directions

Further conceptualizations and typologies on the role of the state focus, for example, on business systems or the globalized context. Concerning the latter, Dicken distinguishes between "states as **containers**", "**collaborators**" and "**regulators**" (2015: 173). These are the result of a more distant perspective, concentrating on, respectively: cultural/political aspects, supranational connectivity, and, finally, the "attempt to control what happens within, and across, their boundaries" (ibid.: 183). This last function comes near to the active role the state can exercise regarding value chains, by, e.g. "[r]egulating and stimulating the economy", and "[j]ump-starting economic development" (ibid.: 188, 197).

The other approach, discussed by Whitley 2007, looks at state types influencing business system development. He sets the "**arm's length**" state type – comparable to the custodian role by Evans 1995 – in opposition to promotional states practicing developmental policies (Whitley 2007: 38). This promotional state manifests itself in three ways: Firstly, as the paternalist "**dominant developmental state**", characterized by high active involvement in economic development. Secondly, there is the type of the "**business corporatist**", which is a little less actively involved and instead promotes through encouragement of business associations. The third promotional state is the communitarian "**inclusive corporatist**", which differs from the previous type in its considerable encouragement of extra-firm representative organizations like unions (ibid.: 39-41).

These latter concepts are not focused on or constructed for value chain research, but certainly have impacts on value chains and their characteristics as described in ch. 3.1. Additionally, the recent branch in value chain research with its search for the state's role, produced some case studies that (1) use one of the value chain related typology presented before, and/or (2) try to identify and finally discuss the state's roles, resulting in new or similar concepts or mere labels, which remain little elaborated: Within this role, the state is seen as the "**container** of laws and practices" (ibid.: 118) for strategic coupling. Furthermore, the state acts as an active

"**constructor** of regional innovation systems" (ibid.: 120), especially concentrated at research and development. This set of roles played out successfully for strategic coupling in the South Korean light crystal display sector.

In contrast to that, in his work on the East Asian developmental state, Yeung describes a shift in state-firm relations (2014: 73). The husbandry role of the state like Taiwan, South Korea and Singapore is therefore reduced – instead, the new role of the state may be a "**catalyst**" (ibid.: 91) one, promoting new high-tech and high risk sectors. Nevertheless, he recognizes that for other countries, East Asian state-led industrialization is seen as a successful model, so that the state will most likely be playing a greater role in global value chain development. This role should, though, go beyond fostering national champions, but rather adapt to the new global context (ibid.: 92f). Ravenhill also emphasizes the evolving role of the state, which, in his opinion, is particularly evident in education, infrastructure and industry-specific institutes (2014: 269). Especially the establishment of research institutes is a state function also recognized in Evan's husbandry role of the state. Another role mentioned by Ravenhill is the **gatekeeper** function to encourage foreign firms to share technologies (2014: 270). In general, he sees the state as setting important regulatory frameworks, e.g. competition policies to discourage rent-seeking, or effective legal frameworks to attract foreign lead firms – whereas other promoting measures might be necessary to upgrade local companies (ibid.: 270f).

Comparable extensive work has been done on the role of the state and its consequences concerning the South African fruit sector (Alford 2016, Alford&Phillips 2018, Visser 2019, Alford et al. 2017). Alford Phillips 2018 apply the threefold typology by Gereffi&Mayer (2006), identifying **facilitative, regulatory and distributive governance** exercised by the state. They showcase the deficits in the regulatory governance especially regarding labor conditions and in opposition to vast facilitative measures, which exposed the producers to global competition and therefore immense price pressure. Interestingly, the regulatory and resulting distributive deficits are not caused by state retreat, but by inadequate regulations, namely minimum wage increases below food price developments. This ultimately led to protests and the South African labor crisis 2012/13 (Alford&Phillips 2018: 108, 113f, Visser 2019: 180). This example clearly shows that conflicting interests and measures are not only possible between different actors, like discussed in the 'antagonistic governance' approach by Alford 2018, but also within the state itself, its goals and different roles performed.

Except from this topic, studies on agri-food value chains lack the perspective on the state role. Research on agricultural chains in developing countries (especially regarding sub-Sahara Africa) rather concentrates on poverty reduction, smallholder participation or inclusion of disadvantaged groups like women (Ouma et al. 2013, Barrientos et al. 2003, Sahota et al. 2016, Lutz&Tadesse 2017, Dannenberg&Nduru 2013, Humphrey 2006, Gereffi&Fernandez-Stark 2018). In these studies on agricultural value chains, the state as a potential influencer is seldomly the center (the policy focus is rather on development agencies or private governance), but often acknowledged. It is though rarely seen as more than a static, distant regulator and provider of a promoting framework, let alone characterized regarding its diverse impacts. Policy related literature, in turn, often focuses on agricultural development, only centering around the production segment (without considering the downstream value chain) to address issues like food security and poverty reduction (Collier&Dercon 2014 2014, Hazell et al. 2010, Matshe 2009, Msangi 2014, Kapuya et al. 2013, Diao et al. 2010, Pingali 2010, Dorward et al. 2005).

3.4. Analytical framework and detailed research questions

As introduced in ch. 2, the regional focus of this study lies on the Zambezi region as an emerging, unconventional, and therefore interesting maize production area. In this special position, it may be exemplary for parallel and future developments of other and dormant maize regions, respectively. Through this study, the role of the state will be revealed, showing impacts

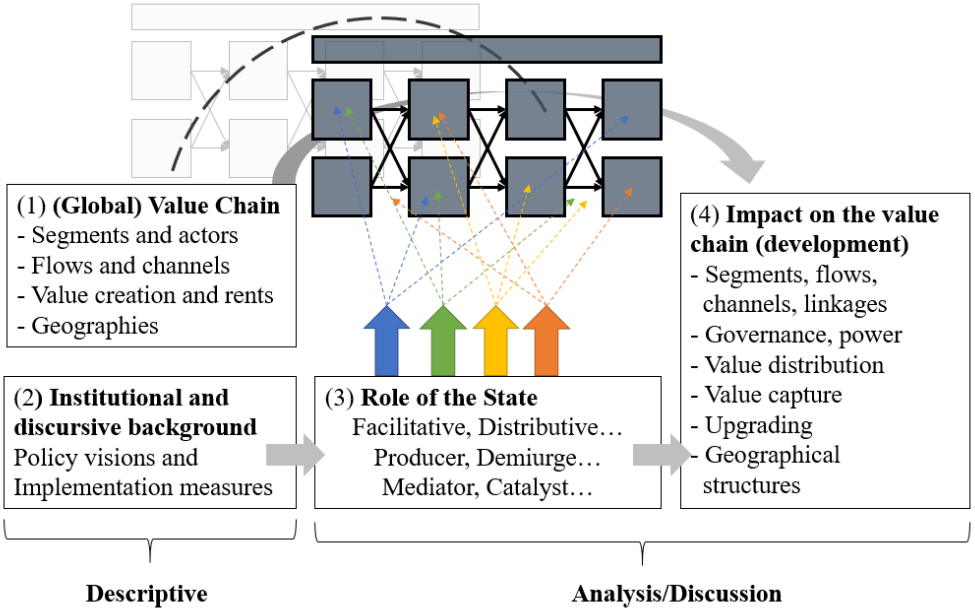

Figure 3: Analytical framework, based on 4 research questions. Own design.

which significantly shape the maize value chain. Fig. 3 shows the overall analytical framework. Therein, the two first descriptive foci prepare for the consecutive two parts aiming at identifying, analyzing and discussing the role of the state and the impact on the maize value chain and its development.

Since there is little documented on the functioning of the Namibian maize value chain, particularly in the Zambezi region, it is necessary to first map the characteristics of the Namibian maize sector, its actors and segments. The value chain can be split into an upstream side – beginning with inputs to the production of primary and raw materials –, and a downstream side – where these are traded, processed and again traded as the consumable product (Bolwig et al. 2010: 175, Kaplinsky&Morris 2001: 4). This study is limited to the downstream value chain, concentrating on the segments and connections between maize production and meal provision to the end consumer. All in all, the first research question to be answered is:

(1) What are the main characteristics of the downstream maize value chain in the Zambezi region concerning actors, channels, value addition and geographical structures?

With this question, the basic properties of the value chain as given in ch. 3.1 are to be presented: On the one hand, its general input-output structure (actors, segments, flows and channels, value addition and rents); and, on the other hand, the geographical extents and structures, including both the local and national scale.

Secondly, there is the need to explore the policy background to the maize sector to understand the institutional and discursive context and possible state involvement in the value chain:

(2) What are the policy visions regarding the Namibian maize sector and the launched implementation measures?

There are two levels to this question – one abstract, one concrete. The policy visions are abstract, rather imaginative and target desired incomes. They are often shaped by the public discourse and set the frame for policies (Lee 2013). These policies, in turn, are materialized in current implementation measures directly affecting the maize sector.

The two first questions are of rather descriptive nature and serve as the explanatory background for the following analyses. The second question, for one, lays the foundation to derive and analyze the role of the state: The role of the state is the result of the collection of policies through which the state influences industries and value chains – in different ways, as discussed in the previous ch. 3.3. The next question regarding the role of the state is therefore tightly related to the former policy-related one:

(3) What roles of the state for the maize value chain can be attributed to the Namibian state?

With this question, the role of the state moves to the center of attention, following the request discussed in ch. 3.2. Through its role, the state becomes more than a context or container, but an active player within the network that exists around commodity flows – following the relational perspective within the global production networks approach (Dicken et al. 2001: 91). Finding and labeling the state role in a new way is of great value for identifying and understanding state involvement patterns:

> Traditional ways of labelling the state roles make it too easy to slip back into the comfortable feeling that the parameters of state involvement are known and we need only worry about "how much." New words are flags, recurring reminders that the question should be "what kind". (Evans 1995: 13)

The policy visions and implementation measures are compared to the concepts of the role of the state given in the typologies by Gereffi&Mayer (2006), Alford&Phillips (2018), Horner (2017) and Evans (1995), and, when suitable, to other state roles or types discussed in ch. 3.3. Therewith, and as elaborated on in ch. 3.2, the integration into the global context and the uncertainties of the Post-Washington Consensus world have to be kept in mind (Gereffi 2014: 15, Kaplinsky&Morris 2016: 626). Thus, the aim is not to merely and simply fit the observed policies into corresponding role concepts, but to evolve and discuss the conceptual status quo – hence the use of the grounded theory approach, presented in the following ch. 4.

The role of the state is strongly intertwined with the impacts policies have on the actual industries and value chains: on the one hand, the state, in its particular role, influences the value chain; on the other hand, the impact on the value chain is what defines this exact role. Nevertheless, the next question must be asked:

(4) How does the state influence and shape the local maize value chain and its development? What side effects may arise?

The question aims at bundling the state's roles and impacts to identify far more overarching changes, shifts, and possible side effects for the maize sector and value chain. This may involve segments and actors, origins and amount of flows, channels, vertical and horizontal linkages, value capture and distribution, governance and power (also regarding lead firms), and upgrading trajectories (based on the analytical foci presented in ch. 3.1). In the discussion of this question, the descriptive results of the first two questions, in combination with the identified roles of the state, will be used.

4. Methodical approach

4.1. Theoretical approach: The Grounded Theory method

The analytical framework shows the need for an ambitious methodology: The needed methodological approach has to be, firstly, explorative and give room for research findings without being clouded by previous and limiting hypotheses or theories. This is especially important since assessment of the African agriculture sectors in the policy context should develop from a location-based analysis, thus starting with an inductive point of view rather than forcing case studies into preexisting exemplary models (Scoones et al. 2005: 10). Secondly, a dichotomous perspective has to be considered: on the one hand, looking at policies and the institutional context, the macro perspective, and, on the other hand, focusing on the value chain structure and functioning, in the sense of a micro perspective. This requires a methodological approach able to grasp conditional and causal networks beyond simple linear chains of effects. All in all, an exploratory, open-ended, qualitative research approach is needed to access information without prior restrictions on research foci or results.

The **Grounded Theory** approach offers an ideal methodological framework, as it does not start based on a specific type of data nor a concrete research question (Strauss 1987: 5). It combines inductive, that is, insights out of the data, and deductive, theoretical knowledge to develop the actual research questions and analysis. Based on this, new theories are to be "grounded" on data (Glaser&Strauss 2010: 52, Mattissek et al. 2013: 210f). The steps of the methodological process are iterative and reflexive, that is, they require going back and forth between collecting data, coding, analyzing, comparing (data to data, and data to theoretical background and state of the art) and systematically integrating the findings into a theory (Knigge&Cope 2006: 2024). This recursive procedure breaks with traditional ways of research which strictly separate the data collection from the interpretation phase in a temporal and analytical sense (Flick 2006: 295f). Therefore, the Grounded Theory approach enables systematic theory building, but "remains open to unexpected paths of questioning and discovery – to 'rhetorical' thinking" (Bailey et al. 1999: 173).

Grounded Theory was originally developed by sociologists Anselm Strauss and Barney Glaser in the 1960s (Glaser&Strauss 1967, Mattissek et al. 2013: 210), and has since then been refined and taken in different directions by many of their students and other scholars (cf. Corbin&Strauss 1990, Charmaz 2006, Clarke et al. 2016). It is not a method or set of methods, but rather a methodology or analysis style (Strauss 2011: 74). Hence, there is not the one and only way to obtain a grounded theory– there are, however, common stages to follow and important principles, rather "rules of thumb" (Strauss 1987: 7), to consider. For Strauss, the central aspects in the Grounded Theory methodology are **theoretical sampling**, **theoretical coding** and **constant comparison** for the processes of data collection, coding and analysis, respectively (2011: 74).

Theoretical sampling for data collection

Within the Grounded Theory approach, data collection does not aim at achieving a statistical and random sample representing a population or a specific group, but instead accompanies the building of the theory. In that sense, this **theoretical sampling** is focused on representativeness of concepts (phenomena, their characteristics and variations) rather than populations (Charmaz&Belgrave 2012: 358, Corbin&Strauss 1990: 8f, Glaser&Strauss 2010: 78). In order to make proper comparisons possible, it is important to look at a range of **groups** and their subgroups, which are analytically chosen regarding their theoretical significance. Only the first

contact point or group to the topic are known, the following data sources are chosen recursively based on the analysis of the first data. Any data type and collection method can be used to collect a high range of points of view and information (Glaser&Strauss 2010: 63, 80f). Data will be collected and handled according to usual method literature (see Ch. 4.2 for the data types in this study, Corbin&Strauss 1990: 5).

New data has to contribute to the generation of the theory rather than merely verifying facts, and is thus decided on by its relevance and purpose to theory building (G&S.: 64). The analysis of preceding data does not only determine the search for new data sources, but also the approach to the data, e.g. interview questions or leading questions for an observation or directed to a text, which will pick up on emerging topics (Corbin&Strauss 1990: 6). Additional data will help to explain, refine and extend coding categories (Charmaz&Belgrave 2012: 359). Data collection continues until **theoretical saturation** is reached, that is, when no knew knowledge serving the theory can be extracted (Charmaz 2006: 113).

Theoretical coding

Coding is the creation of "short labels that describe, dissect, and distill the data while preserving their essential properties" (Charmaz&Belgrave 2012: 356). It is a process of descriptive reduction, but, at the same time, involves abstraction and conceptualization of the examined contents (Glaser&Strauss 2010: 41). Fig. 4 (bottom row) shows the levels of abstraction within the coding process from the empirical data (detected indicators from incidents and phenomena) to the final grounded theory according to Strauss (1987: 25). At least two (iterative) coding steps are required to achieve this abstraction: open/initial coding and selective/focused coding (Charmaz&Belgrave 2012: 356).

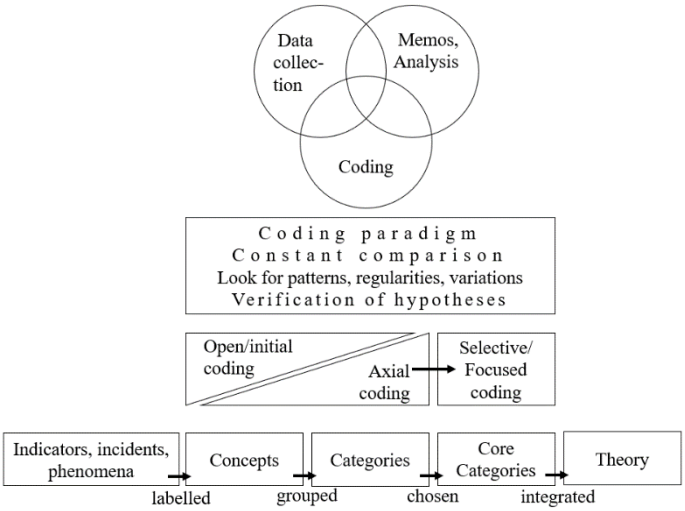

Figure 4: The methodological approach of Grounded Theory. Own design.

Through **open coding** (also **initial** coding following Charmaz (2006: 47-57)), conceptual labels are given to events, incidents, actions/interactions and further phenomena and grouped to (sub)categories. By conceptualization, data-near sequential labels evolve to generic, abstract categories that can be compared to each other (Berg&Milmeister 2011:308). In a continuous process of comparison, similarities and differences are assessed and systematically gathered to show the properties and dimensions of the categories (Corbin&Strauss 1990: 7f, 12). This process is open-ended, allowing and triggering new ideas and the collection of additional data, and provisional, as labels and categories can be summarized, changed and discarded in the course of analysis (ibid.: 7 *C&S*, Charmaz 2006: 48).

Categories developed in the coding process are the "'cornerstones' of a developing theory. They provide the means by which a theory can be integrated" (Corbin&Strauss 1990: 7). Ultimately, a few **core categories**, which appear frequently and seem significant, will be identified and can be used for the final grounded theory. These core categories are to be explored by **selective** or

focused coding (Charmaz&Belgrave 2012: 356, Strauss 1987: 69). The analysis aims at establishing linkages between categories in a systematical and concerted way (ibid.: 18, 69 *strauss87*). These linkages can be set according to some form of coding paradigm, e.g. regarding causal, conditional, intervening, contextual or consequential relationships (Strauss 1987: 27f, Flick 2006: 301).

Analysis and integration through constant comparison

Throughout the whole coding process, it is important to write provisional small reports, so called **(theoretical) memos**, on accompanying thoughts like e.g. explanations on the categories and their integration into the coding paradigm (Corbin&Strauss 1990: 10, Strauss 1987: 22). The writing, editing and sorting of those memos promotes decision-making regarding categories and their relations to one another, systematization and the display of contradictions (Strübing 2014: 33f). Hence, they assist in the process of theory building by accompanying the formulation and revision process of a theory and avoiding loss of conceptual detail (Corbin&Strauss 1990: 10).

An important analytical procedure of the Grounded Theory methodology is the one of **constant comparison** throughout the whole research process, which should also be displayed and elaborated on in memos. Groups, incidents, codes and categories are compared for conceptual density and theory building (Strauss 1987: 5, Glaser&Strauss 2010: 55): Uncovering similarities, patterns and differences helps categorizing, gaps in the coding paradigm will be identified, categories and their dimensions are systematized and integrated, and the theory is limited by abstraction and elimination of irrelevant categories (ibid.: 55, 127 *G&S*).

As in other methodological approaches, there are **hypotheses** and explanations on processes, categories and their relations to one another to be tested and verified to build a grounded theory (Bailey et al. 1999: 173). The assumptions for hypotheses are, though, coming out of the data and being continuously adapted accordingly. In contrast to other research, which is mostly based on verification of existing theories, Grounded Theory thusly begins with a strictly **inductive** focus (Glaser&Strauss 2010: 57). Only later, when revising the hypotheses, **deductive** procedures (literature review, comparison to existing theories) are increasingly used (Flick 2006: 306, Bailey et al. 1999: 173). Both induction and deduction serve **verification** by totally or partly qualifying, or negating a hypothesis (Strauss 1987: 11f). The hypotheses and the underlying coding system should become more and more abstract in the course of the analysis and therefore contribute to theory building by providing a core or frame of a theory (Glaser&Strauss 2010: 57).

The theory is expected to develop out of an **integration** process (Strauss 1987: 18, 22). The integration process evolves from linking categories, while always remaining open for new categories and relations, and deductively referencing existing theories, if needed (ibid.: 18 *Str87*, Glaser&Strauss 2010: 58). The resulting Grounded Theory sums up to a "collective story […] piecing together a theoretical narrative that has interpretive power" (Charmaz&Belgrave 2012: 361).

4.2. Practical implementation of the methodological approach: procedures and data

This chapter takes the former theoretical explanations to the practical level of this study. Herewith, the loose, flexible ground rules of the Grounded Theory approach are adapted and concretized regarding the discipline, the topic and the research conditions. The approach has

been used in neighboring studies, e.g. in urban and social geography (Elwood 2010, Knigge&Cope 2006), and supply chain management/logistics (e.g. Carter&Rogers 2008, Mello&Flint 2009). Since economic geography and the value chain concept often use relational and institutional perspectives and focus largely on networks, interactions and social constructions, and therefore being close to social research, it can fit this study easily after few adjustments explained throughout this chapter.

The research design following the Grounded Theory approach has two phases (see fig. 5): The first is dominated by data collection – the conduction of data collection is necessary at an early research stage, because the specific research direction will only be determined out of this data (Charmaz 2006: 187). Although some thoughts on the topic have to precede, data collection can be viewed as the first step for the generation of a Grounded Theory per se. In the second phase, the different steps of coding, further data collection and integration of the theory follow. In both phases, data collection, coding, and analysis are not sequential, but simultaneous, iterative and recursive procedures (Strauss 1987: 18)

Regarding data types and collection, the Grounded Theory methodology is open to a wide range of data types. Empirical data can be utilized (interviews, (non-)participatory observations, field notes) as well as existing documentary data, which allows insights into other perspectives and underlying structures and discourses (government/planning documents, newspaper articles, technical and non-technical literature such as research, archive material, brochures etc. (Corbin&Strauss 1990: 5, Bailey et al. 1999: 173, Knigge&Cope 2006: 2024). Beyond these rather qualitative data types, quantitative data is also seen in the Grounded Theory approach (Glaser&Strauss 2010: 199-203). In the interdisciplinary field of geography, the practice of combining multiple data types and analysis approaches is widely spread given the interdisciplinary nature of the field – in fact, those mixed methods approaches are increasingly becoming popular (Reuber&Gebhardt 2011: 91, Elwood 2010: 95, 109). This study focuses on interviews, field observations, government/policy documents (including brochures), considerations on statistical data and selected newspaper articles.

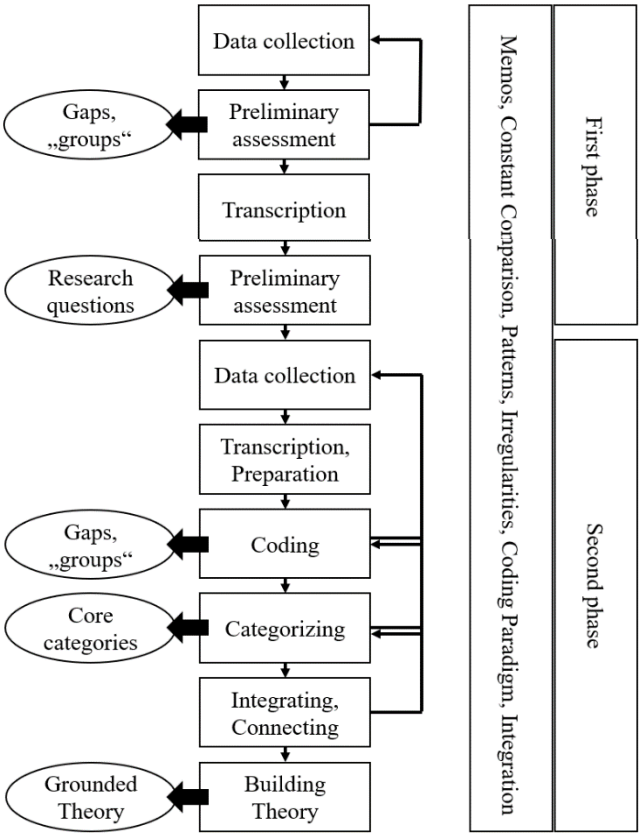

Figure 5: Research design for this study. Own design.

4.2.1. First phase: Interviews and the development of research questions

The first research phase mainly consisted of an iterative data collection and preliminary assessment process. Data collection happened in form of interviews with direct and related, accessible actors of the value chain to gain familiarization with the topic. The initial set of

interviewees belonged to the retail and processing sector which were either present online or directly accessible in Katima Mulilo. For the field phase, the following generative questions were used:

> (1) Which downstream segments and actors form the staple crop value chains and at which points is value added?
>
> (2) What are the roles, practices and influences of the different actors, i.e. producers, traders, processors, retailers, and the state with its development plans?
>
> (3) How did and will the value chains develop and why?
>
> (4) Which geographical – linear and punctual – patterns are used for or produced by the staple crop chains?

These rather unspecific questions are needed in the beginning of every research to have a basis when approaching the interviewees, which will successively developed into an interview guide (Charmaz&Belgrave 2012: 348). The interview questions are the basis for the semi-structured interviews undertaken, which are characterized by loosely drafted questions without a predefined order. They mainly include (1) open question allowing narrative to gain data on personal experiences, estimations about the chain and future developments, and not foreseen information; and (2) hypotheses-directed questions, which will increasingly come up in the course of research; and (3) confrontational questions to compare opinions on different topics within and between the groups (Flick 2006: 156f,).

Figure 6: Following the maize - grain transport to a depot, meal buyer at the urban retail store and a small urban shop selling meal. Own photograph 2018.

According to Charmaz&Belgrave,

> qualitative interviewing fits grounded theory methods particularly well. In-depth interviewing provides an open-ended, detailed exploration of an aspect of life in which the interviewee has substantial experience and, often, considerable insight (2012: 348).

The interviewees upgrade this study in particular, because they are experts within their segments, but also inhabitants of the Zambezi region aware of traditions, ways of living and external conditions.

Through the first interviews, the next interview partners – forming 'groups' as required in the Grounded Theory approach (Strauss 1987: 38, Glaser&Strauss 2010: 65) – were found mainly by combining two approaches: First, on the practical side, snowball sampling (Given 2008: 562, 815f, Charmaz 2006: 41), a sampling method in social sciences directed at finding new interview partners through recommendations made by the initial set of interviewees. Secondly, the field phase was marked by the principle of "following the thing" (Marcus 1995: 106), promoted in multi-sited ethnography: To identify and define the study objects, the

phenomenon has to be traced – be it the people, thing, metaphor, story or the conflict (ibid). 'Following the thing' was also implemented by economists and geographers, analysing the geographical trajectories of goods (Appadurai 1988, Rivoli 2015, Cook 2006). The technique is loosely based on the commodity chain idea by Wallerstein, showing its relevance for exploring any value chain (Marcus 1995: 107). Through these approaches, data collection was facilitated up- and downstream of the chain and within the segments. In addition to the interviews, various field visits within the study area provided valuable insights into the topic through observations while 'following the thing' (see fig. 6). An overview of the empirical data collected (in both the first and second research phase) and analyzed is given in fig. 7 and tab. 1.

For each interview and observation, detailed field notes were made including methodical reflections as well as analytical and critical thoughts regarding the contents (Dunn 2016: 173-175). This enabled a constant assessment of and reflection on the data and finally resulted in the identification of central issues within the maize value chain context in the Zambezi region: the environment (including climate and further natural conditions as well as wildlife conflicts), relations to Zambia (mainly smuggling), and the institutional framework (especially state intervention and (no) presence). These topics were relevant for all actors of the value chain, which had different opinions and points of view on each topic. The last, institutional, focus was found to be the most determining for the local value chain, since the state and its actions immensely influence the actors, flows and further characteristics of the chain. Throughout the data collection, this became apparent and the interview questions were adapted accordingly. A very important adjustment was also reducing the range of considered crops from staple crops in general to maize, since this is by far the most planted and relevant staple food.

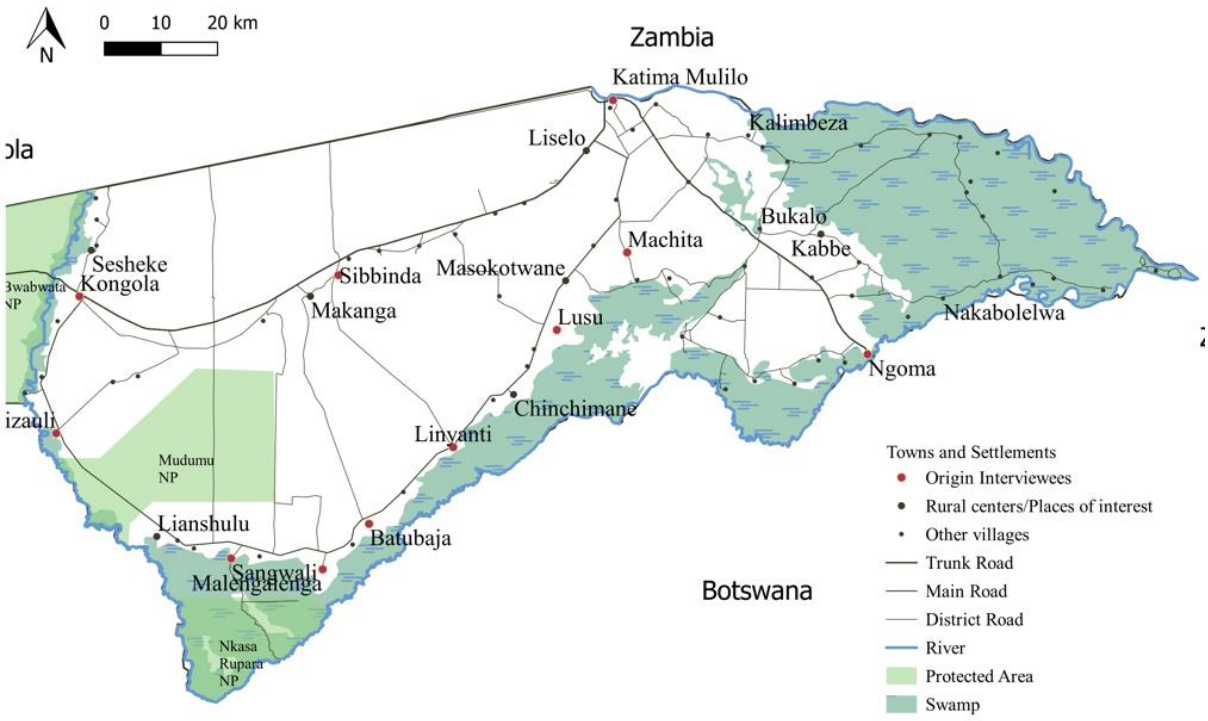

Figure 7: Origins of the interview partners in the Zambezi region. Own design.

	Source type	Function/Profession/ Institution/Topic	Location (origin)	Segments				
				Producing	Logistics, Marketing	Processing*	Retail	(Consumer)
1_1_Mill	1 Main sources	Manager Small Local Mill	Machita					
1_2_Farmer		Farmer	Katima Mulilo/Kongola					
1_3_Retail		Manager National Supermarket	Katima Mulilo					
1_4_Mill		Manager Big Local Mill, Wohlesale, Retail	Katima Mulilo					
1_5_Logistics		Farmer, Chairman Storage facility	Malengalenga, Dzoti Conservancy					
1_6_Transport		Transport service	Katima Mulilo					
1_7_Farmer		Transport service, farmer	Mahunga/Batubaja					
1_8_Mill		Manager Big National Mill/Depot	Katima Mulilo					
1_9_Retail		Manager Local Supermarket	Katima Mulilo					
1_10_Farmer		Farmer	Kongola					
1_11_Farmer		Farmer	Sibbinda					
1_12_Union		Farmer, Union representative	Lusu					
1_13_AMTA		Officer governmental agency AMTA	Katima Mulilo					
2_1_OpenMarket	2 Additional sources	Farmers and Traders, Open Market KM	Katima Mulilo					
2_2_FGDf		Farmers	Malengalenga, Dzoti Conservancy					
2_3_FGDm		Farmers	Malengalenga, Dzoti Conservancy					
2_4_FGDfm		Farmers	Malengalenga, Dzoti Conservancy					
2_5_Farmer		Farmer	Sangwali, Wuparu Conservancy					
2_6_Storage		Logistics	Sangwali, Wuparu Conservancy					
2_7_Road		Post harvest/Marketing	C49					
2_8_Village		Village person	Lisaule/Lizauli					
2_9_Retail		Owner Retail Shop	Kongola					
2_9_Retail		Manager Botswanan Supermarket	Katima Mulilo					
2_10_Village		Village person	Katima Mulilo/Ngoma					
2_11_Mill		Manager Big National Mill Gobabis	Gobabis					
3_1_Researcher	3 Background information	Agronomist UNAM	Windhoek					
3_2_OpenMarket		Manager of Open Market KM	Katima Mulilo					
3_3_DevCoop		Development worker GIZ	Katima Mulilo					
3_4_MAWF		MAWF	Katima Mulilo					

Primary information
Secondary information
Additional information

*All active actors of this segment were interviewed

The first phase was concluded with the consolidation of the final research questions which were presented through the analytical framework in the previous ch. 3.4.

4.2.2. Second phase: Documents, further written text analysis

The second phase is characterized by (1) diversifying the data types and (2) the analysis, namely coding, categorization, integration and finally building a grounded theory, resulting in the discussion in ch. 6. Theoretical sampling – based on the developed research questions and the constant assessment of the data already collected – led to further interviews and the inclusion of official documents to explore the state's influence on the value chain. These documents included policy papers, strategic and implementation plans as well as official and press releases. Furthermore, valuable information and discursive insights were found in numerous newspaper articles.

Official documents, e.g. policy papers or plans, are often only directed at a certain restricted audience, but serve, at the same time, to disclose governmental actions to a general public. They can "function as *institutionalized traces*, which means that they may legitimately be used to draw conclusions about the activities, intentions and ideas of their creators or the organizations they represented" (Wolff 2004: 284, highlight in original). The official documents used are listed in the ch. 8.3. Press releases and especially newspaper articles serve to understand the extend and brisance of a phenomenon or general governmental influence on the value chain due to its public diffusion and media coverage. They help understanding the public discourse which is not only formed by political actions, but, inversely, mostly shapes (acceptance and legitimation of) governmental undertakings (Calavita&Krumholz 2003: 400). It hence lays the basis for political visions affecting the value chain. The newspaper articles included in the analysis are given in ch. 8.4.

One comment has to be made on the vague concept of 'groups' (ch. 4.1.1) which are to be found and compared in the Grounded Theory approach, and originally related to societal groups in sociology: While, in the beginning of the research, these can be understood as actor groups within a segment of the value chain (commercial or subsistence farmers, small or supermarket retailers etc.), the term has to be seen more abstract in the following coding and analysis process. The focus on the governmental actions requires the adaptation of this term to the different measures and resulting state's roles – these can also be understood as groups that need to be explored. This contributes to theoretical sampling by looking for further influences the state may have had or will have in future, which adds to the role of the state and enriches insights into the resulting development of the value chain.

Eventually, the transcribed interviews and the text data are coded systematically as described in ch. 4.1. The initial coding (Charmaz (2006: 47-57) lays the basis for concrete analysis. It serves to consolidate the research focus on the state influence, to get an overview on the value chain segments and functioning, and also to identify a wide spectrum of state policies and involvement. The coding of both documents and interviews enables the comparison of the theoretical and practical sides, and also the intentions and actual impacts of the state's actions on the value chain. The following selective or focused coding concentrates on phenomena which are found to be particularly interesting and/or important. Overall coding as a process of conceptualization helps identify abstract roles the state can play, based on concrete governmental actions, functions and the discourses around it. These roles are the core categories described in ch. 6.1. They are then set in relation to the value chain through the influence on the diverse actors and segments, to ultimately integrate the singular aspects into an overarching theory.

Through the course of theoretical sampling and analyzing, deductive inputs increasingly find their way into the processes of categorization and establishing relationships between the different categories and phenomena. While the loose concept of value chains and their basic characteristics like segments and value added are present from the beginning on, other theoretical frameworks may be added at later stages of research. This includes aspects of upgrading, the overall institutional context of value chains (ch. 3.1 and 3.2), and the typology of the role of the state as given in ch. 3.3. A variety of preliminary hypotheses forms and guides not only the data sampling and collection, but also the conceptualization and choice of relevant topics. In the end, abstract, deductively influenced hypotheses lead to the discussion presented in ch. 6.2.

5. Results

5.1. The maize value chain in the Zambezi region

Between 2012 and 2018, an annual amount of averagely 4227 MT of maize was marketed in the Zambezi region. The share of the Zambezi maize production accounts for between 1,2 and 9,4% of overall Namibian production. The Zambezi region is a valuable dryland producer, with amounts, although far behind the 'maize triangle', comparable to those produced by dryland commercial farmers in the Central-East around Hochfeld and Summerdown (see fig. 8).

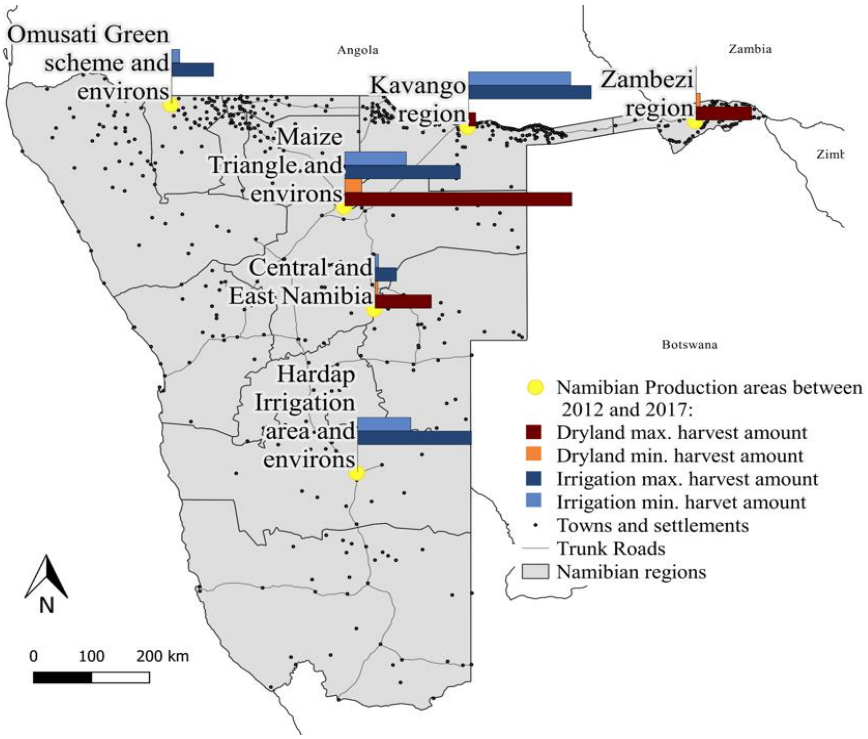

Figure 8: Maize production areas in Namibia, dryland and irrigated. Own design based on NAB 2013, 2014a, 2015, 2016a, 2017a, 2018a.

Seemingly fertile soils, higher precipitation rates and increasing amounts of marketed maize is promoting the reputation of the Zambezi region as the "bread", "food" or, more precisely, "grain basket" (Interview 1_1_Mill, NAB 2018c, New Era Live 2018e, Namibia Economist 2018b, Caprivi Freedom 2004). This image, which is also found for the 'maize triangle' and the Kavango region (New Era Live 2014a, The Namibian Sun 2017d) is closely connected to the political discourse on agricultural development described in the next chapter 5.2.1 Namibian Agricultural Policies.

5.1.1. The segments and actors of the local value chain

In the Zambezi region, maize is produced by communal small-scale farmers, which traditionally harvest for own consumption. The Namibian Census of Agriculture reveals that over 40% of overall harvest in Namibian communal areas were directly consumed by the producers (NSA 2015b: 56). Traditionally, this very short commodity chain based on **subsistence** farming, in which the producer is, at the same time, the end consumer, dominates in Namibian communal areas, as opposed to commercial farming areas (see ch. 2, fig. 2). Surplus production is mostly distributed as gifts, kept as seeds or traded within the village, whereof only under 10% of overall production is actually sold (processed or not). In the Zambezi region though, the share of surplus production (not being directly consumed), including sold amounts, is probably higher, given better harvests and the existence of a formal market.

The maize entering the formal value chain can be divided into (a) this surplus production from subsistence farmers and (b) maize intentionally produced for sale by market-oriented medium-

scale farmers. The latter invest in inputs for higher yields, and their harvest sales can amount up to 35 or 50 t per season (Interviews 1_7_Farmer, 1_10_Farmer), which is significantly higher than the 3 t of maize averagely produced by Namibian communal households (mostly for own consumption) (NSA 2015b: 25). The **production** in the whole Zambezi region is rain-fed, so the harvest and yields are strongly dependent on weather conditions, on which the farmers base their ploughing and planting decision on. The local marketing season begins in May/June and ends between August and November, depending on the time and amounts of rain in the preceding growing season between December and April.

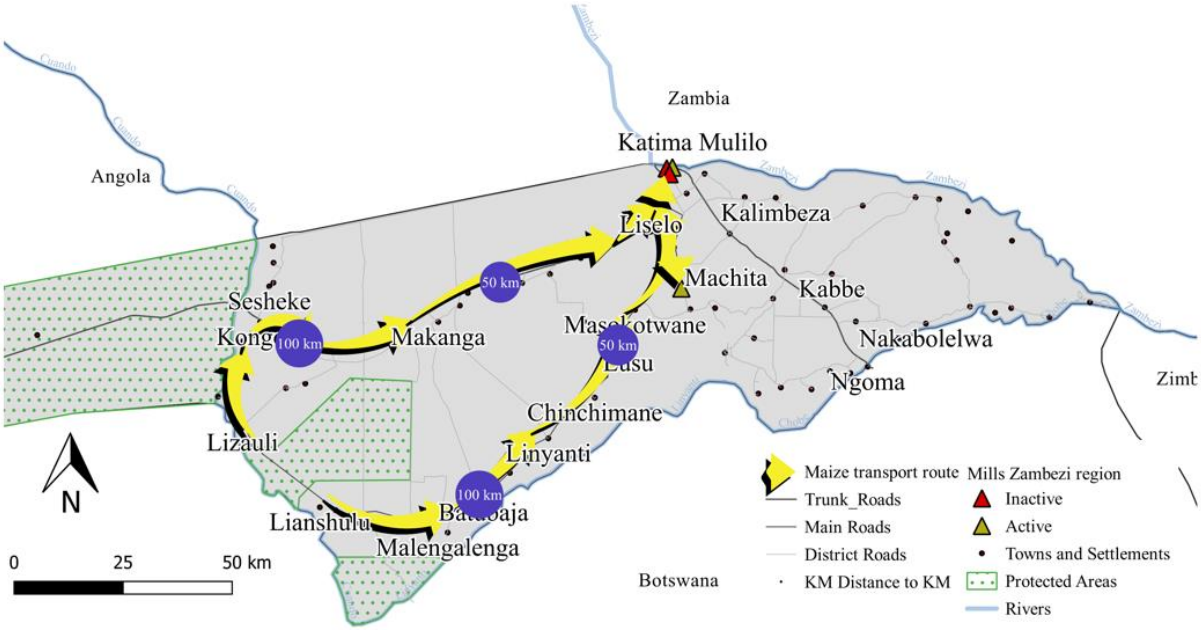

Figure 9: Maize transport system. Own design.

The bulk of the marketed maize in the Zambezi region comes from the Central-Western region – from the Cuando river in the West up to the regional urban center Katima Mulilo –, where over 60% of the households engages in crop farming activities (Interview 1_4_Mill, MLR 2015a: 66). While production by these farmers is usually rather threatened by drought and pests, farmers located in the basin of the Zambezi river (North-East) are frequently affected by floods. Although their maize is said to be of better quality because of the fertile and moist soils, they are not included in the maize transporting scheme by private transport businesses (Interviews 1_6_Transport, 1_7_Farmer, see fig. 9), probably also because of the poor connectivity and deficient gravel district roads. Instead, they need to rely on informal ways to get maize to the purchasers. In 2018, maize was transported to Katima Mulilo and, to a lesser extent, Machita, where the three actifve purchasers were situated. Regarding the transporting system in the Western region, the Mudumu National Park acts like a natural divisor between the two main routes which the transporting businesses use: From around Kongola using the highway B8, and from Lianshulu to Katima Mulilo on the C49, both paved roads kept in very good conditions, only limited by frequent cattle and wildlife crossing. The segments and actors of the value chain, as well as their connections through the commodity flow, as described here, are visualized in fig. 10.

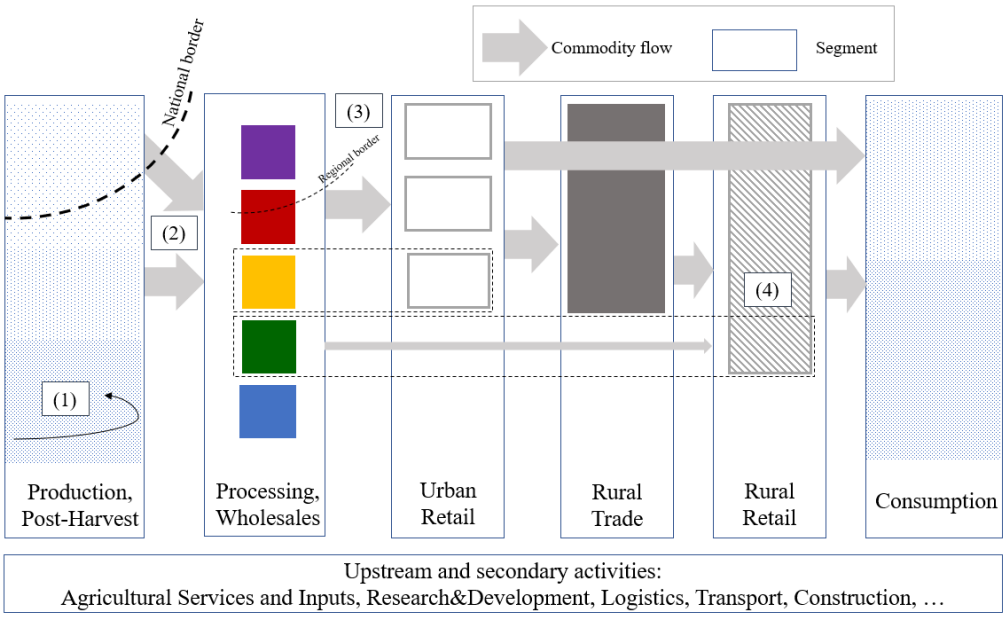

Figure 10: The schematic maize value chain in the Zambezi region. Own design.

The grain purchasers in the Zambezi region are mostly **processors**: Firstly, a big local miller and wholesale/retailer, absorbing between 50 and 70% of the local harvest, 56% in 2018 (Interviews 1_4_Mill, 1_13_AMTA, see fig. 11 below). Secondly, the biggest national player in the milling industry, which buys local maize to transport it outside of the region for processing. Thirdly, the governmental Agro-Marketing and Trade Agency (AMTA), stepping in to buy surpluses (no activity in 2018). And fourthly, there are small millers only purchasing small amounts irregularly (a currently active one in fig. 11 above). The processors do not only cover the milling process, but also do the packaging, branding and further marketing of the meal products directed to the end consumer, as well as wholesales to the retail sector.

Figure 11: Small local miller and big local miller's retail store. Own photographs.

Sales of maize meal in the Zambezi region can be differentiated into an **urban and a rural retail** sector. Seven big supermarkets in the regional center Katima Mulilo sell maize meal, out of which two are local supermarkets (the big one of them including a mill see fig. 11), three are South African chains, and the last two are a Namibian and a Botswanan chain. The rural retail sector is split in two channels as described below (channel (3)). Maize meal is the base for the everyday dish of the Zambezi people, namely pap and porridge, and there is a constant demand for it, increasing with population growth. The mostly **consumed**

type of maize meal is ‘special sifted’, a wholemeal said to be of inferior quality (more coarse) when compared to the ‘super’ maize meal primarily demanded in the rest of the country. Besides these basic meal products, maize is also sold in form of a flavored instant product for porridge.

5.1.2. Channels and values within the value chain

There are a range of (partial) channels the maize goes through before reaching the end consumer. The most important particularities are:

(1) The post-harvest channel in the Zambezi region is threefold. Apart from (a) the short subsistence value chain, there is (b) occasional trade at the village level: Maize is sometimes sold to neighbors or the like, but will then also remain in the village and be pounded at home by the purchasing households. This channel is characterized by high values, small amounts and based on opportunistic behavior. Subsistence farming and this informal form of trade are both **small-scale** channels in which the maize stays at the smallest geographical level. This is contrasted by (c) the formal channel on the regional scale as described earlier.

(2) The maize supply for the **formal** channel, in turn, consists of **local** production and **imports** from neighboring countries to complete the demand that is not locally met. This differentiation is essential to the Namibian maize sector and will be discussed in ch. 6.2.2.

(3) There are two co-existing, established urban retail channels. There is a **local** channel, which, even though it is geographically restricted to the Zambezi region and therefore consists of comparably small local players, meets a significant part of the local demand (over 60%, Interview 1_4_Mill). It centers around the meal produced by the big local miller, which is sold on-site at the miller’s wholesale/retail store and at another local supermarket. The other channel is a **national** retail system of supermarket chains selling the maize distributed by the big national milling companies. This channel distinction is a **geographical** one, given the different location of not only the meal production, but also of the controlling management behind the companies involved in each channel. These geographical channels also exist upstream, since up to half of the local harvest can be transported outside of the Zambezi region, while the maize bought by the local miller stays within the region.

(4) The rural retail sector is also divided into two channels (see fig. 12). The whole region is supplied by many small shops in the villages offering the most important food and non-

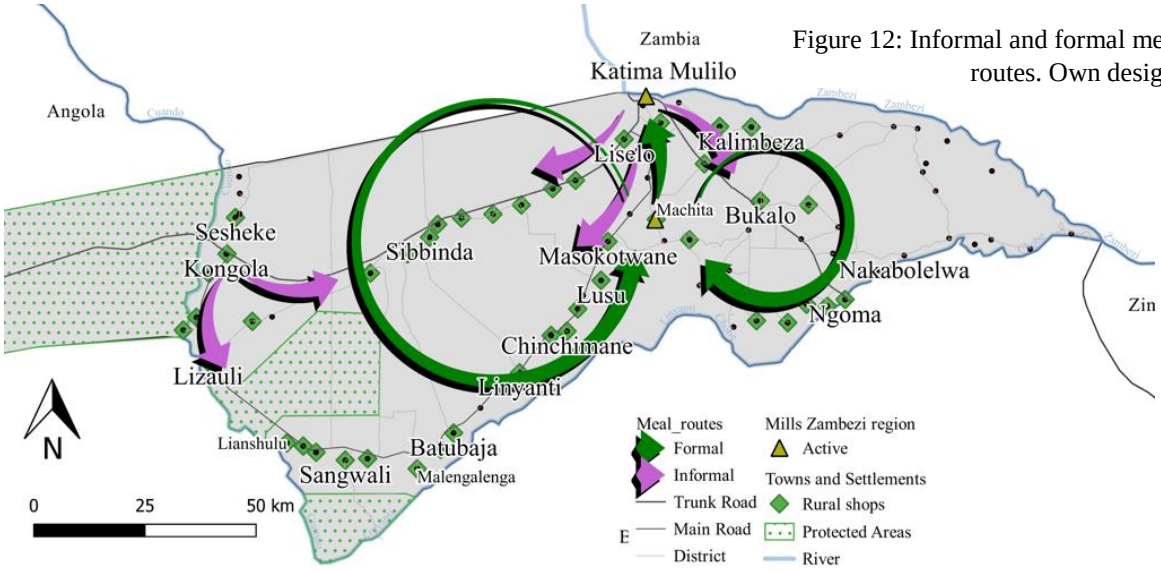

Figure 12: Informal and formal meal routes. Own design.

food items. Important hub villages include Kongola, Sangwali and Ngoma (Interviews 1_10_Farmer, 2_8_Village, 2_10_Village). Rural traders acquire meal in Katima Mulilo and Kongola, where the chain supermarkets (Katima Mulilo) and a relatively big shop (Kongola) are located. This rather **occasional** trade and retail system is difficult to grasp given its irregularity and informality and is opposed by a new **formalized** rural retail channel: The small local miller situated in Machita is building a rural branch system all over the Zambezi region, partly using existing shops, but also creating new retail spaces in the villages, to expand its market by directly accessing the (rural) customers. Distribution is done in two round routes of 300 and over 200 km to the West and East of Machita, respectively (Interview 1_1_Mill).

Value creation and addition can be displayed for the following segments of the chain: Farmers as the suppliers of the raw material (maize grain), the supporting activity of transporting the material, the processors including (transport and) retail, and finally rural trade and retail or distribution. As shown in fig. 13, the value added in the processing and retail segment varies strongly, resulting in a big price difference for end consumer. The most expensive maize product is the (flavoured) instant porridge meal. It shows the successful product upgrading by the big national miller. Nevertheless, the product has a limited market (wealthy consumers in the urban area), making the conventional maize meal the dominating and key maize product in the Zambezi region.

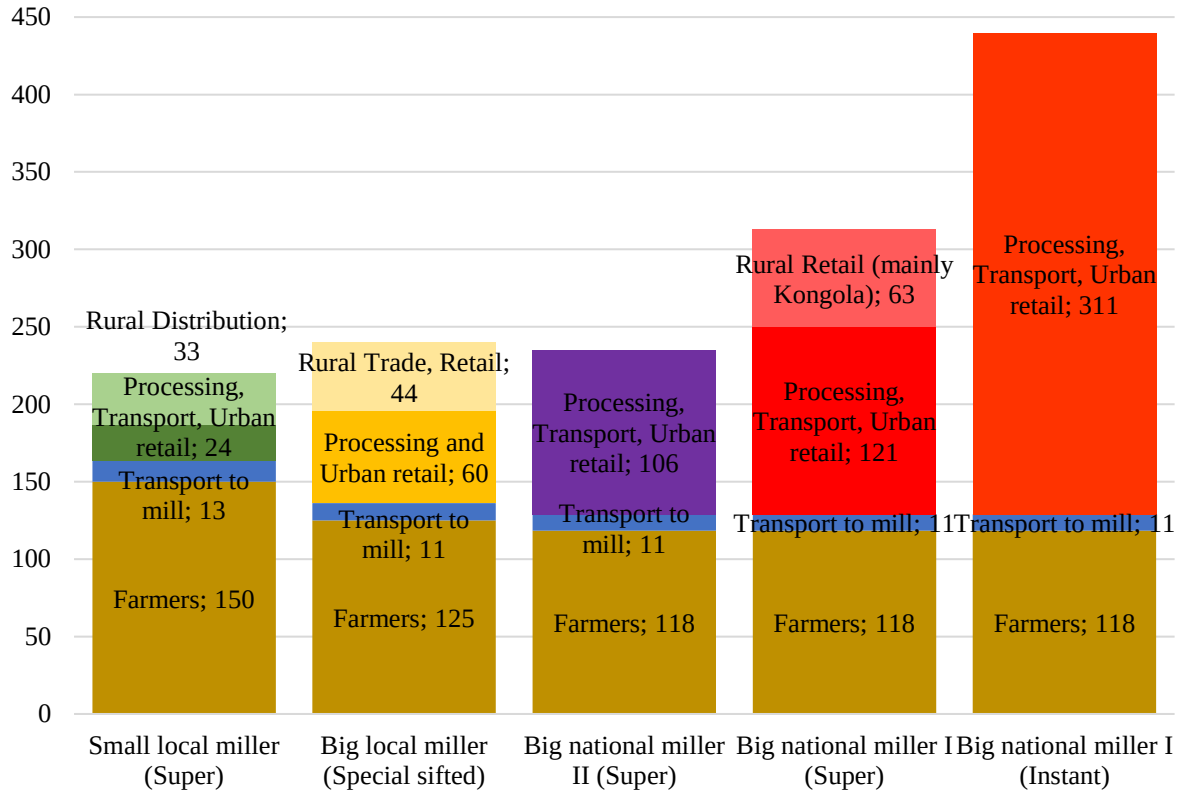

Figure 13: Value creation in different segments for 25kg of maize meal product by different millers (N$). Values for 10/2018. Own design.

There are several differences between the processors and their meal which lead to advantageous positions and economic rents. To begin with, there is the **local embeddedness** of the local players. They can benefit from inside knowledge on the consumer's needs, a rising demand for (local) meal as the main staple food, and an underdeveloped retail and distribution system in

the historically and geographically isolated Zambezi region. Their strategies of market development in the Zambezi region, especially by integrating both processing and (urban – big local mill, and rural – small local mill, see fig. 10)) retail in one company, result in **organizational rents** for the local players.

In contrast to that, the big national millers – which are less established in the local context – can rely on **relational rents** through long-term contractual arrangements with the big supermarket chains. The small local miller, though, has only been able to secure one contract with the Namibian supermarket chain to sell its meal (1_1_Mill, 1_3_Retail), while the other (foreign) chains show reluctance towards cooperating with a small local actor (2_9_Retail). This is further inhibited by the chains' centralized decision-making head offices in the capital Windhoek as the trading and administrative hub, which is out of reach for local actors. However, the big local miller is established in the local retail channel in such a strong way that connecting with retailers is not an advantageous option:

> So, our capacity is the one thing that hampers us at the moment as we are up to capacity with our machines right now, so keeping up with our own demand through our store has become a challenge. So, we have already a plan that is rolled now to increase capacity and that is the plan for the next 2 or 3 years so... Until then we are not entertaining anybody else, we will not be able to keep up with the supply. (Interview 1_4_Mill)

The overdemand of the 'special sifted' maize meal produced by this miller is also owed to the prominence of the local brand and appreciation towards the coarse quality of this 'special sifted' wholemeal (Interview 1_11_Farmer). This brand is so successful, it ended up driving the big national mill out of the local 'special sifted' market (mill closed down in 2015). This circumstance leads to an unrivalled market position and substantial **marketing rents** the big local processor benefits from. Nevertheless, regarding the 'super' meal type, the big national miller occupies a leading position in the whole country, including for the part of Zambezi people who prefer the 'super' meal, and also regarding the product differentiation of instant meal, which is marketed under the same brand. A last difference between the millers regards technical levels which influence the loss of material in the milling process and imply huge **technical rents** for the bigger processors, who have to buy less raw material to produce a certain amount of meal (see fig. 13).

Regarding the value created by the farmers, there is a big difference depending on the level of commercialization – mainly the use of inputs – which determine where the value ends up. For subsistence farmers selling a surplus, the revenue equals the net profit, because they have near to none (direct monetary!) expenses due to the use of unpaid family work, farm-own manure, and seeds from previous harvest (Interviews 1_10_Farmer, 1_11_Farmer). In contrast to that, the substantial input investments made by medium-scale farmers (hired work, ploughing equipment/service, fertilizers, (hybrid) seeds, land expansion)

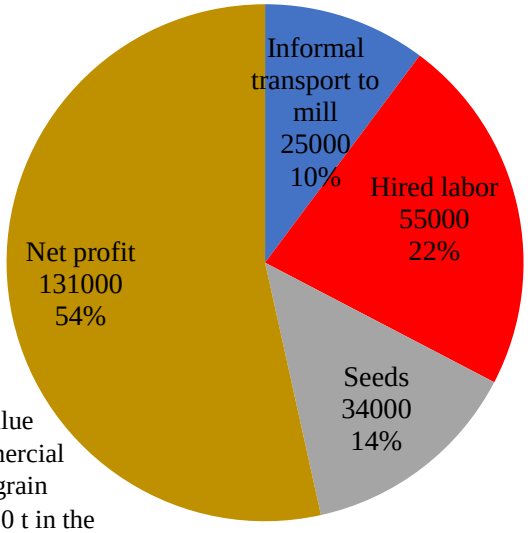

Figure 14: Example for value shares of commercial medium-scale grain production of 50 t in the Zambezi region, season 2017/18 (N$). Own design.

reduce the sales values (Interviews 1_5_Farmer, 1_10_Farmer). An example is given in fig. 14 – although it excludes risk factors (especially frequent crop failure), costs for farming equipment and the pay-off of those. Expenses all farmers participating in the formal channel have, are (1) a producer levy and (2) transportation cost to get the maize to the millers. Transport cost levels depend on the distance of the farmer's location to the purchaser, and vary between 4% (under 50km to the mill) to over 12% of the sales revenue (over 100km to the mill, 1_6_Transport, see fig. 9). The peripheral producers, like the disconnected ones in the Eastern regions, are therefore disadvantaged. This downside to selling to the formal market is not given in informal maize trade at the village level, where a maize bag yields 1,6 times the value compared to t he the formal channel (including deductions for the levy transport, 2_5_FGDfm).

All in all, the Zambezi region is important for the Namibian maize sector in three ways: Firstly, as a production area, supplying not only local mills, but also a national processor, secondly, as an industrial area with at least one established processor, and, lastly, as a sales market due to increasing numbers of maize consumers.

5.2.Namibian Agricultural Policies

5.2.1. Visions change in time, contradictions, plans and policies

There are different Namibian policy visions affecting the agricultural and maize sector, ranging from national overall development plans to sectoral policies and strategies for Namibian agriculture (see tab. XY in ch. ? bibliography). Lee et al. state correctly that "the strong role of civil society may drive the state's actions" (2014: 124), emphasizing the relation between overall discourse within the society, politics and the resulting concrete policies and implementation measures. Two topics are especially important for the maize sector: On the one hand, the vision of a food secure population through increased agricultural production, broadly discussed in the public discourse (media, government). And on the other hand, the establishment of value chains – dominant in the younger policy discourse promoted by policy makers.

Given the high number of poor and hunger-affected people, a primary policy focus lies on improving **food and nutrition security**. Namibian policy visions focus on "food security at both household and national levels" (HPP 2016: 39), that is, the individual households' capacity to produce or purchase those basic food stuff and the overall availability of staple crops in Namibia, respectively. Both are strongly related to the maize sector, as maize is the most important staple food in the Zambezi region: Most food insecure people rely on the agricultural sector either as subsistence farmers or as a source for income: "We should move and keep ourselves by ploughing. Because it's very giftful. To eat. Especially to us in Zambezi. Without ploughing, no food. No money." (1_11_Farmer).

The national public and political discourse is strongly focused on these dryland communal farmers that are particularly affected by floods and droughts – in 5 years of the last 8 seasons since 2012, the droughts were pronounced a national disaster and, multiple times, the president had to declare a state of emergency. There is a strong sense of identification with the farmers, mostly viewing them as an important, hard-working part of the population that needs support:

> [W]e tried to go in that [milling], so that we can maybe just help our farmers, and also to help the community. (Interview 1_1_Mill)
> 'We will assist the farmers as we do not want them to suffer because they have worked very hard to plough their fields all these months.' (The Namibian 2017)

On the one hand, **household food security** is to be strengthened by improved production for own consumption, and increasing purchasing power through surplus sales – which requires increased production and access to markets. Improving income possibilities through agriculture is, additionally, an important potential poverty alleviator. Given the low technological progress in the Zambezi agricultural sector, there is the general belief that the farmers are not able to achieve this on their own, but need the government's help:

> There is still scarcity. Like then I am sure, whatever is happening there, even when they are producing it, it's still not right, you know, the quality, somehow, is not the best quality you'd have expected, but at least if the government steps in, regardless of the quality of those products, they would still get their money. So, the government influence is always there. And I know also for sure if the government did not step in, these local farmers would not survive. (Interview 1_9_Retail)

National food security, on the other hand, is often set equal to food **self-sufficiency**, being promoted by the press as well as visual players like the Namibian Agronomic Board and the Ministry of Agriculture, Water and Forestry as the main goal for the maize sector. They lament that "Food self-sufficiency [is] still out of Namibia's reach" (The Namibian 2004b) and affirm that "the potential is high for us as a nation to maximise production […] so that we become self-sufficient in maize grains" (NAB 2018). This ignores the fact, that national food security, in its original meaning, can be (and indeed is in Namibia) simply achieved by complementing imports when national demand is not met by own production. However, in light of often recurring food insecurity at household level, this might not be clear to everyone – and the CEO of the biggest milling company in Namibia therefore needs to assure repeatedly he is "not worried that there will ever be a shortage of maize supply in Namibia, because the world produces 70 million tonnes and what Namibia consumes is but a 'drop in the bucket'" (The Namibian Sun 2017a). Nevertheless, national food security is seen to be best achieved through meeting the nation's demand "particularly for staple food crops from its own production rather than importing" (MAWF 2015a: vii).

Food self-sufficiency has, though, originally been opposed as an agricultural vision, first in the National Agricultural Policy following independency (MAWR 1995), and then in the long-term development plan 'Vision 2030', which criticizes the "[p]ressure to pursue food self-sufficiency over food security" (GRN 2004: 144). Although these political documents lay the basis for much of Namibia's development path, the dismissal of food self-sufficiency was ignored, and it became an overshadowing policy vision worked towards in agricultural and development plans and their implementations measures.

The call for an import substituting production follows a general discourse on autarky in the food sector, which consists of general calls for less imports, the explicit 'Growth at home' strategy (MTI 2013), and NGO initiatives like 'Team Namibia', which aims at increasing local agricultural production and consumer awareness for local products. This quest for **food sovereignty** (cf. Jarosz 2014), although barely explicitly mentioned, is not only pursued regarding product origin and actors involved, but also concerning food safety, as seen in the recurring discussion on genetically modified maize (The Villager 2015b, The Namibian 2019b).

Current policies and discourses concentrate on promoting increasing overall maize production, as well as improved **productivity**. Particularly the communal small scale, subsistence farmers are targeted to achieve an "increase [of] yields with the aim of reducing food imports and ensuring food security" (MAWF 2016: 15). In this sense, agricultural policies have largely concentrated on the communal areas since independence, not only to strengthen the disadvantaged, vulnerable population for food security and greater equality, but also because

of a supposedly great potential for agricultural development barely exploited. The promise of the Northern regions as a "bread basket" (see ch. 5.1) turns these farmers into important actors for general agricultural development and sectoral growth. Nevertheless, this intrinsic growth goal within agricultural policies is not necessarily supported by general policies like the current National Development Plan 5 (2017/18-2021/22), which aims at the **industrialization** of the country as opposed to the reliance on the primary sector (NDP5 2016: xiv). Although increased production and food security continue being a central part of the plan, this may be the first step away from the traditionally dominant position agriculture used to have.

Instead, new foci lay on downstream activities within **value chains** – vertical integration, value adding and upgrading as new goals for industrializing (the products of) the primary sector – and the actors providing those, e.g. agro-processors. This development can be seen in the new development indicator "[s]hare of value added in crop farming" (GRN 2017a: 20) in the 5th National Development Plan. Furthermore, the National Rural Development Strategy (GRN 2013a) and the latest short-term agricultural Strategic Plan (MAWF 2018) concentrate on value adding based on agricultural production, including post-harvest and processing segments instead of just agricultural production. The underlying new vision in the current National Agricultural Policy is thereby "sustainable agricultural production, marketing and agro-industry development in Namibia", while one of the central goals and objectives is to "[p]romote the development of the national agriculture sector across the value chain" (GRN 2015: 6). Current policies are, thus, increasingly making use of the value chain concept.

An important emerging theme is the new perspective on communal farmers, which are now not just seen as mere subsistence farmers, but also as actors that need to be included into the value chain. Therefore, policies concentrate on promoting **market-oriented structures and infrastructure**, e.g. aiming at the goal of "Integration of informal agriculture into the mainstream of national economy" (GRN 2015). Frameworks are laid in the Agriculture Marketing and Trade Policy and Strategy (2011) and the Strategic Plan of the MAWF (2018), which refer to livestock and horticultural production, but also to cereal production.

Overall, the dominance of food security and self-sufficiency related visions have to be emphasized as major policy impacts on the maize sector, which are only recently been complemented by new policies aiming at value chain development. The discourses are not homogeneous, but rather, at times, inconsistent, divergent or even contradictory – both in the public opinion, but also in the political discourse. Firstly, there is the debate around food self-sufficiency and food imports. Secondly, the concrete way and scale of envisioned farming remains unclear – traditional, subsistence, small-scale, low-value crops vs. innovative, commercialized, big-scale, high-value crops vs. combined forms. Thirdly, it has to be decided between agricultural growth or industrialization (which could be also achieved by an improved agricultural production base). Not all of these options necessarily have to be excluding or conflicting, they can coexist, and the choices are heavily dependent on the local context (Scoones et al. 2005: 9). Nevertheless, the directions and range of interventions currently undertaken, as shown in the next ch. 5.2.2, are very diverse and can lead to different outcomes regarding the maize value chain (discussed in ch. 6.2).

5.2.2. Visions change in time, contradictions, plans and policies

The Namibian maize sector is directly affected by different governmental actors, mainly ministries and state-owned enterprises (see tab. 3). Their actions through programs and projects influence the agricultural sector in a variety of ways and through different segments of the

maize value chain, especially since the establishment of the two parastatals AMTA (Agro Marketing and Trade Agency) and AgriBusDev (Agricultural Business Development Agency), both directed to post-harvest issues left unattended before. In contrast to the long-standing Namibian Agronomic Board which, centralized from Windhoek, sets nation-wide valid regulations for the agricultural sector, these agencies (and the Ministry of Agriculture, Water and Forestry) act and intervene locally and often decentralized. Within the Ministry, the two Directorates in tab. 3 affect crop value chains, whereby a lot of tasks regarding marketing – previously little pursued – were outsourced to AMTA in 2014.

The establishment of AMTA seems necessary given the characteristics of ministerial systems all over the world, vividly described by Kaplinsky&Morris:

> In most countries, policy responsibility is locked into ministerial silos such as the Ministry of Agriculture, the Ministry of Industry (and sometimes the Ministry of Trade and Industry, as if other sectors did not trade!), the Ministry of Transport, the Ministry of (Tele)Communications and so on. (2016: 641)

This also applies to Namibia with its diverse landscape of ministries (see especially the neighboring ministries at the end of tab. 3). The state's effort to implement value chain targeted policies, as described in the previous subchapter, demands measures which precisely focus on inter-ministerial or, even more difficult, parts of the economy, that are not (yet) covered by any governmental institution. Creating a state-owned enterprise as AMTA seems like a successful response to target agricultural value chains, and to diversify implementation to target the economy beyond one single sector of segment of value chain, e.g. production in the case of the Ministry of Agriculture, Water and Forestry.

Table 3: Governmental actors and state-owned enterprises impacting the Namibian maize sector. Own design.

Governmental body	**Description**
Ministry of Agriculture, Water and Forestry MAWF	Established in 2005 (formerly Ministry of Agriculture, Water and Rural Development) Mission: Promote and manage the sustainable utilisation and development of agricultural, water and forestry resources (MAWF 2017: 1)
MAWF – Department of Agricultural Development: Directorate of Agricultural Production, Extension and Engineering Services (DAPEES)	
MAWF – Department of Planning, Marketing and Administration: Directorate of Planning and Business Development (DPBD)	
Namibian Agronomic Board NAB	100% SOE established in 1992 General prohibition of sale of controlled products, Fixing of Prices, Restriction of importation and exportation of controlled products (Agronomic Industry Act 1992/Gov Gaz 465 1992)
Agro Marketing and Trade Agency AMTA	100% SOE established in 2014 Functions: Implementation of provisions on marketing, processing, handling and trade of agronomic products (Gov Gaz 247 2014)
Agricultural Business Development Agency AgriBusDev	100% SOE established in 2014 Functions: Implementation of provisions on production of agronomic products (Gov Gaz 247 2014)
Other actors affecting the value chain context:	
Agribank; Ministry of Land Reform (MLR); Ministry of Urban and Rural Development (MURD); Ministry of Industrialization, Trade and SME Development; Minister of Education, Arts and Culture (MoEAC); Office of the Prime Minister (OPM)	

Tab. 4 shows some of the most impacting programs and governmental actions from the aforementioned actors. They vary in geographical scope – some are only settled in a few localities, some are applied in the Northern Communal Areas (NCA) and some are valid country-wide – and are targeted at different stages of the maize value chain. Because of the

nature of the ministerial systems as described above, the segment of production is aimed at particularly often. A system of regional offices and contact persons in so-called Agricultural Development Centers (ADC) links the governmental institutions (mainly MAWF and AMTA) to the producers, especially facilitating the implementation of the DLCPP, dissemination of knowledge and general information, and for market access.

Table 4: State involvement in the maize sector. Own design.

Content/Name of Action, Programme or Framework	**Actor(s)**	**Targeted Segments**	**Geogr. Scope**
Dryland Crop Production Programme (DLCPP) since 2006	MAWF	Production	NCA
Dissemination of knowledge and technical training	MAWF, NAB	Production, Post-harvest	NCA
Support to Community based organizations	MAWF	Production, Post-harvest	NCA
Agricultural Trade and Marketing especially since 2014/15	AMTA, MAWF	Post-harvest, Processing	NCA
Green schemes officially since 2008	AgriBusDev, MAWF	Production, Post-harvest	Local spots all Namibia
National Strategic Food Reserves (NSFR)	AMTA, MAWF, OPM	Post-harvest/ Storage/ Trade, Processing	Local spots in NCA
Meal procurement	OPM, MoEAC, other	Processing, Distribution	National
Fixed floor maize price	NAB	Post-harvest, Processing	National
Temporal import restriction: maize	NAB	Processing	National
Import restriction: meal	NAB	Processing, Retail	National
Food safety regulations	MAWF, AMTA	Producers, Processors, Consumers	National
Taxes, Levies	diverse	Producers, Processors, Consumers	National
Financial support (loans etc.)	Agribank, MAWF	Production, throughout VC	National

Subsistence farmers in the Northern Communal areas including the Zambezi region, as shown in fig. 15, are provided with supporting structures. On the one hand, these are directed to **production** itself, be it subsistence or commercial small-scale farming: There are (1) subsidies of seeds and – although seldomly procured in the Zambezi region – fertilizers, which are subsidized up to 60% and occasionally distributed for free to subsistence farmers in the Zambezi as well as East and West Kavango regions (MAWF 2015b: 9f, NEWIS 2013). They are provided by private seed companies and retailers and through the Ministry of Agriculture, Water and Forestry from own governmental production, although this does only regard other

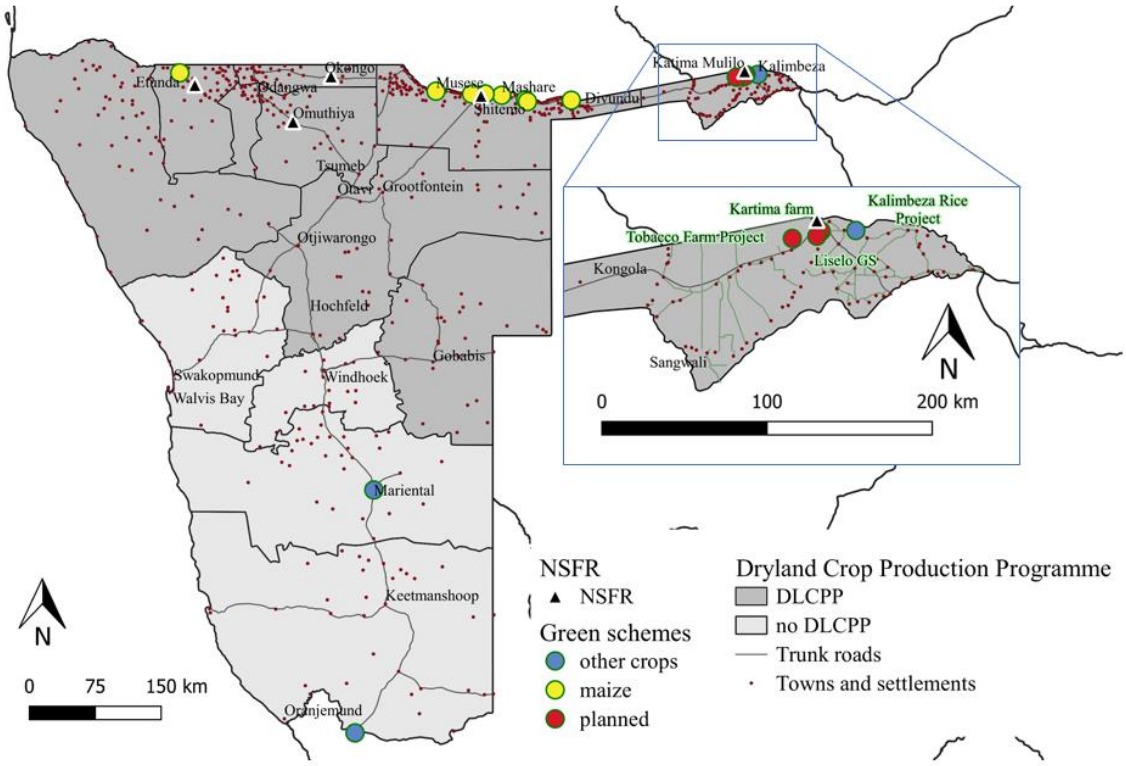

Figure 15: Governmental involvement in the maize sector, through Green Schemes, NSFR and DLCPP. Own design.

crops than maize (mainly mahangu, Namibia Economist 2013c). Then, there are (2) subsidies of extension services, namely ploughing and weeding services, which have a set price for the operation on up to three hectares (MAWF 2017b). These can be provided by private owners of tractors or draught animals, but also by the Namibian government who acquired a total of 137 tractors, out of which 19 are in use in the Zambezi region for that purpose.

Furthermore, the Ministry of Agriculture, Water and Forestry offers technical training on Conservation Agriculture for sustainable dryland production, and conducts on-farm trials and farm visits to increase farmers' capacities. Farming techniques and further knowledge are also discussed and disseminated in occasions like the Farmer's Days and the NAB awards event, honoring innovative farming techniques. On the other hand, the support centers around **marketing**. Besides further advisory services providing information regarding post-harvest handling and marketing, MAWF works on promoting communal organization by supporting projects of community-based organizations like farmer's unions. Of great importance is the extensive registration and marketing campaign, conducted anew every harvesting season by AMTA, which coordinates the sale of maize from local farmers to millers. The registration campaign was done in 2016/17 for the first time and is also being tested in other regions of the Northern Communal Areas. Additionally, in the Zambezi region, maize transport from storages at central points (Sangwali, Kongola etc.) is also irregularly subsidized or provided, as well as the transport from the national miller's depot to its mill in Otavi, which had previously been charged from the producers by the miller.

Few small-scale, but mainly commercial farmers are promoted through and within the so called 'Green Schemes', through which land is made available offering opportunities for irrigation production – for maize mainly in the Northern Communal Areas except the Zambezi region (see fig. 15). This **market-oriented production** is possible through a private or governmental

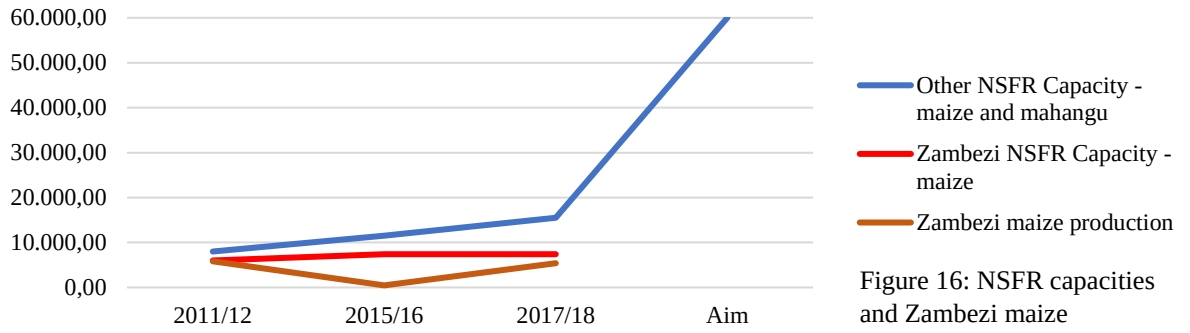

Figure 16: NSFR capacities and Zambezi maize production (MT). Own design based on AMTA 2018, MAWF 2018.

management system (the latter by AgriBusDev), through leasing, or through a contractual agreement with the government. It was officialized in 2008 through the 'Green Scheme Policy', which sets the legal framework for the management, lease or contractual use of the irrigable area. Three Green schemes are currently planned or being developed in the Zambezi region, but only one plantation for Chinese Tobacco export production is probable to start soon (Namibian Sun 2019), the others remaining on hold regarding size, tenure, legal arrangement and decision on what crop(s) will possibly be produced.

Debates around the agricultural plans in the course of the Green Schemes policies show, that large-scale land-use changes can be a future problem in the Zambezi region (Thiem&Muduva 2015, The Namibian 2019m, The Namibian Sun 2019a, b, c). Nevertheless, until now, resettlement and other land tenure policies do not seem particularly important for the Zambezi region, given the relatively stable and accepted land distribution and use as communal land (see ch. 2.) and protected areas (state forest and national parks). They rather come into place in the freehold areas outside of the Northern Communal Areas, leading to different developments discussed elsewhere.

The National Strategic Food Reserves (NSFR) are grain reserves for maize and mahangu situated in the North (see fig. 15), which are filled by AMTA with local maize and mahangu. The storage capacities of the NSFR is constantly expanding and envisioned to ultimately hold over 60 000 MT (MAWF 2012, see fig. 16). For the Zambezi region, the storage capacity (maize only) was also increased and currently surpasses the maximum local harvest by 23% – implying that any local overproduction, which cannot be bought by the private sector, can theoretically be absorbed by the state. The **grain reserves** are used as drought relief, whereby the government pays to get the grains milled by local processors and then distributes this and further procured meal to food insecure people. This happens especially when the President declares a state of emergency during and after droughts – which happened in 4 of the last 7 years (2013, 2015, 2016, 2019) – and up to 700 000 Namibians, that is, one third of overall population, are provided with food aid. The government also procures local meal for its continuous feeding programs and institutions (schools, prisons etc.). The grain reserves are also used as an instrument for **price stabilization** to counter the high price volatility agricultural production usually has (MAWF 2018: 21) – by not only absorbing oversupply, but also releasing maize into the market when needed.

The Namibian Agronomic Board influences the trade of maize and maize meal by imposing **import restrictions** and establishing a **fixed floor price** for maize grains, valid for local harvest traded during the marketing season from 1st May on, until all local harvest is sold. The price is based on the inflation adjusted, 5-year average of the South African Future Exchange (SAFEX)

spot price. It is negotiated by both trading sides – producers and processors –, and it contains an 8% GMO premium as well as a transport differential depending on the importing site (North or South from Otjiwarongo). The price is adjusted throughout the whole marketing period. When the SAFEX price spirals upwards beyond the 5-year average (which can be the case following heavy regional drought), it is based on the fortnight SAFEX spot price. Except for the first two weeks of the official marketing periods, no imports are allowed for maize within the marketing season. Outside of the period, import permits are issued to registered millers. For maize meal, import restrictions are in place continuously. For domestic trade, levies of twice 1,4% (for producers and processors, respectively) are imposed and serve to fund the NAB. The import restrictions are possible despite being active in (mainly regional) trade agreement – these often leave room for exceptions regarding key sectors in less developed countries (e.g. infant industries as given in the Southern African Customs Union (SACU) Agreement (SACU 2002)). Since its creation in 2014, AMTA is also the executing body of the regulations set by the NAB, replacing the (private) South African company, that formerly implemented the trade and food safety regulations (AMTA 2017, n.y.). **Food safety regulations** and related requirements come in place regarding inputs (limited amounts of chemicals), use of seeds (no genetically modified maize allowed in local production) and the fortification of maize with micronutrients, required since 2017 to be undertaken by all registered millers.

In the following ch. 6.1, these implementation measures will be analyzed according to their effects on the maize value chain in the Zambezi region and, therefore, which role can be ascribed to the state regarding its potential impact on the value chain.

6. Discussion

6.1. The Roles of the State for the Namibian maize sector

The role of the Namibian state for the maize sector and value chain is influenced by various policy visions and directions, as described in ch. 5.2.1. This policy mix results in concrete governmental actions, described in ch. 5.2.2, ultimately shaping the public governance for the maize value chain. There is therefore not the one, but multiple roles the state can play, as the exemplary typologies and labels for the state's role presented in ch. 3.3 show (see also Evans 1995: 14). Depending on the focus of the study, the perspective, under which the state is evaluated, may be different. Here, the value chain and its actors as the executors of the value chain are the central point for the determination of the role of the state. In the following, these different roles for the maize value chain in Namibia are presented and analyzed, preparing for a discussion of the impacts on the local value chain development in ch. 6.2.

The analysis of the policies and implementation measures led to the identification of seven roles of the state that shape the maize value chain, mainly in the Zambezi region, but also relevant for the overall Namibian maize sector. As fig. 17 shows, the governmental actions, and therefore the state's role, either apply to the whole country (regulator and mediator), have a special focus on the NCA, that is, the Northern Communal Areas (role of producer), or apply exclusively to the NCA (other roles). Moreover, they vary greatly in their level of involvement, ranging from passively setting a framework to the direct participation in the value chain.

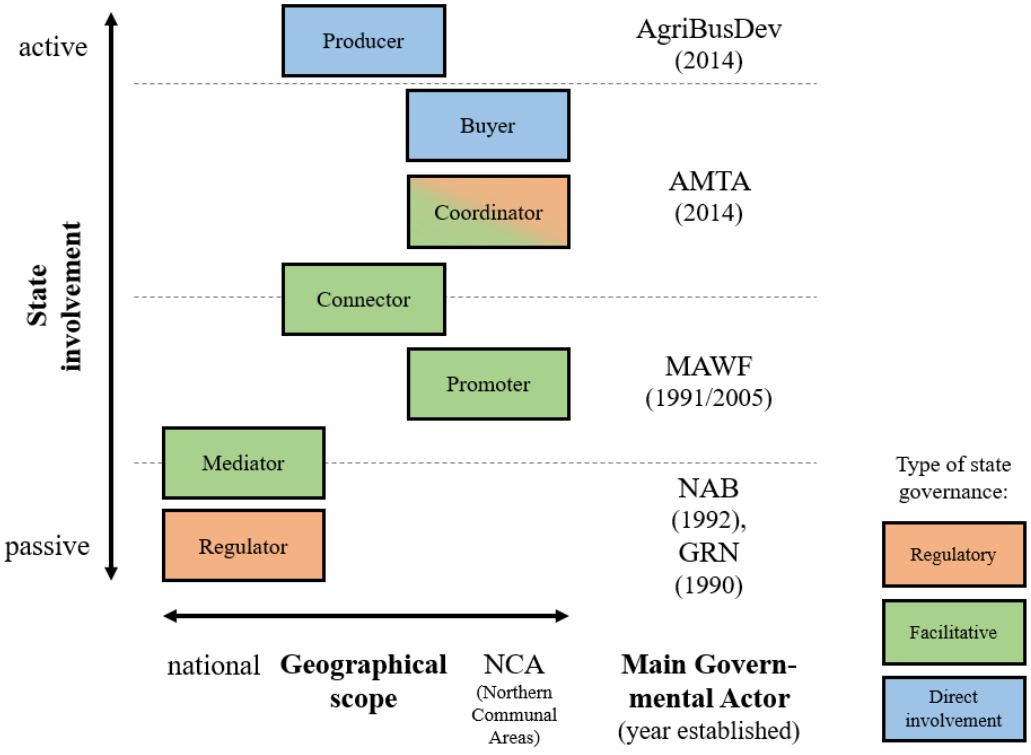

Figure 17: The concrete roles of the Namibian state impacting the maize sector. Own design.

6.1.1. Regulator, Mediator

There is a range of regulations imposed by the state on the Namibian maize sector. Especially food safety and trade policies impact different segments of the maize value chain. Putting health concerns over economic advantages, the state as a **regulator** prohibits the use of genetically modified maize seeds, and herewith limits the farmers to the use of traditional or hybrid seeds. Limiting regulations on the use of these and other inputs may restrict commercial farmer outside the communal areas, but are near to irrelevant for the Zambezi farmers which barely use inputs in their traditional subsistence farming. Nevertheless, it shows the strong commitment of the state to address health and environmental concerns – in opposition to, e.g. South Africa with a very liberal approach towards genetically modified crops including white maize to feed its population and promoting research (Falkner&Gupta 2009: 212), and policies promoting heavy input use towards a green revolution (Kerr 2012: 218). This proves that concerns regarding de-regulatory trends as expressed by Alford&Phillips (2018: 102f) are not entirely justified in the context of Namibian agriculture.

The strict regulations regarding maize trade have the biggest regulatory impact on the value chain, since local farmers are favored to the detriment of foreign production, which will be discussed in ch. 6.2.2. Consequently, the state as a regulator influences the chain not just in a restrictive way, but also exerts distributive governance. The same applies to the processing segment as a consequence from the meal import ban. Apart from this horizontally effective distributional impact, regulations also induce vertical distribution: The establishment of the fixed floor price for maize provokes a higher value allocation upstream along the chain, towards the production segment. These are both examples for the overlapping distributive and regulatory role of the state as seen by Horner (2017: 6).

Other value chain related work on public governance in general, and (de-)regulation in particular, often deals with labor regulations (Amengual 2010, Smith et al. 2018, Phillips 2016, Mosley 2017, Visser 2019, Mayer 2014). In contrast to other sectors and countries, labor laws and their implementation are of less importance for the maize value chain, especially in the Zambezi region: Due to the dominant subsistence farming system, the production segments is, for now, characterized by non-formalized labor in the sense of self-employment and unpaid family work, which are both not affected by traditional labor regulations. The processing sector, again, is a capital-intensive industry using milling machinery, and only employs less than a few dozen workers per mill (Interview 1_1_Mill and New Era Live 2015b).

Most of the regulations directly concerning the maize sector (import restrictions and the fixing of price) are set and implemented by the governmental Namibian Agronomic Board (NAB). The new Namibian government established it in 1992, little after independence, and follows therewith many countries in the region with their grain marketing boards, e.g. South Africa, Zimbabwe, and Zambia (Chabane 2002, Muir-Leresche&Muchopa 2006, Birner&Resnick 2010: 1444, Jayne&Jones 1997: 1511). With increasing deregulation and the abandonment of import substitution industrialization policies, many of these Boards where abolished (e.g. the South African Marketing Board in 1996), privatized, or their power considerably reduced, and price controls stopped in all Southern Africa (Chabane 2002: 1, Jaffee et al. 2003: 17, Jayne&Jones 1997: 5012). This shows how the deregulation prescriptions promoted in the Washington Consensus also found their way into African agricultural reform (Scoones et al. 2005: 4, in contrast to wealthier states (Dicken 2015: 437, Kaplinsky&Morris 2016: 633)). Namibia seems to be the exception: While first following the regional practices by establishing the Namibian Agronomic Board, Namibia afterwards chose her own path and, for the maize

sector, still sticks to the originally adopted policies: The Board continues to exercise its power unalteredly, heavily influencing the grain (maize, mahangu, wheat) and horticultural markets. This means that (also given their short history of barely 30 years under the same party) Namibian policies have not undergone too drastic changes – neither was there deregulation, nor the following re-establishment of the regulatory state in the sense of a regulatory renaissance or focusing back on the domestic industry – which is the case now for other (mainly large) developing countries like South Africa (Gereffi 2018: 446). What did occur though, was an evolvement of the regulations per se, in both quantity and quality, as new regulations were created, and old ones adapted and improved.

This path of protective trade regulations with their distributive effects which the NAB's actions can have, show that the regulatory aspect is in fact aimed at and beneficiary for the domestic maize sector. In this way, the regulatory role of the state cannot be seen as exclusively restrictive in a negative way, at least not from the perspective of the Namibian maize industry. There would therefore be the possibility to classify these regulations within a midwife role of the state, following Evans' concept, because the state uses "ostensibly custodial behavior […] to serve purposes of midwifery" and to construct a "greenhouse" (1995: 80). Nevertheless, this categorization is dismissed because of its narrowed view to the domestic sector and not the overall value chain. Nowadays, this value chain has to be seen in a globalized context – in which trade barriers are clearly a restrictive factor, even if there are promotional intentions behind it. The consequences of the state as a regulator for the maize value chain are further discussed in ch. 6.2.2.

Although these dominant interventions seem to represent a passive, distant state, they are not completely top-down and excluding participation, at least not for the establishment of the maize floor price: The NAB arranges for the affected players of the value chain, namely unions as representatives of the production and processing segments, to negotiate this maize price for the forthcoming marketing season: The processors are represented by the Namibian Grain Processors' Association (NGPA), while two organizations participate from the farmers' side: the Agronomy Producers Association (APA) (part of the Namibia Agricultural Union) for commercial grain producers, and the Likwama Farmers Union (part of the Namibian National Farmers Union) for small-scale and emerging farmers. The state therefore acts as a **mediator**, facilitating the communication between both actor groups. This is especially relevant for the Zambezi region with its many small-scale farmers, which (1) only market their maize irregularly and (2) individually have no leverage power. Their interests are expressed by the Likwama Farmers Union, through regional representatives: "So all of us, we are representing the region on the national level in the Agronomic Board. So, these others are doing for maize, other one for millets, other one for horticulture." (Interview 1_12_Union).

The creation of the Agro-Marketing and Trade Agency (AMTA) in 2014 deepened the mediating role, given its decentralized organization and closeness to the actors:

> So from time to time we do sit with the different bodies, […] so we have the officials from AMTA who sit together with the Ministry of Agriculture, from time to time the representatives of the NAB as well, not always, and then it's us, the millers, as well as the farmers' unions, and we sit together to always discuss marketing for that season: How we are going to go about it, what is required from our side, what is required from the side of AMTA, to make this thing as smooth as possible. So, the farmer's union does really help in that situation as well to get feedback and statistics and also give advice to farmers on how we are going to do things and the procedures involved. (Interview 1_4_Mill)

Restricted knowledge flows are often found to be a major constraint to value chain development. Hence, Humphrey&Navas-Alemán identify the improvement of these flows as one of four key interventions of international donors for better value chain performance and outcomes (2010: 20f). The mediator role of the Namibian state can be seen as the public policy counterpart to this non-state interventional role.

Through both roles as regulator and mediator, the state sets a framework for the value chain, which is only partly restrictive, but rather facilitates the actions of local actors. But the government's engagement goes beyond setting this framework and an environment for communication and exchange. As the following chapter shows, state interventions surpass this passive role as the governmental actors exert the roles of promoter, coordinator/supervisors and connector.

6.1.2. Promoter, Connector, Coordinator

As shown in ch. 5.2, the promotion of overall maize production (for national food self-sufficiency) and small-scale farming (for household food security) are two of the key aims for the Namibian government. The role of the state as a **promoter** to achieve this consists of a vast array of strategies and tools presented in the following.

A first, rather subtle, but notable instrument towards the key agricultural aims is to promote the image of farming in the Zambezi region and its importance for Namibia:

> Speaking at the event, Hon. Alfea Sampofu, Governor of the Zambezi region congratulated the winners [of the Dryland Maize Producer award] for the hard work that led to their recognition. […] "We need to stop relying on neighbouring countries to feed us, the Zambezi region has fertile soil and abundance of water that could potentially serve as one of the bread baskets of Namibia in providing food security for the country", he said. (NAB 2018c)

This coincide with Evan's notion that "[s]ignaling that the development of a particular sector is considered important can create a generalized expectation of support that has an effect well beyond specific incentives or protections" (1995: 80).

Further symbolic, but also monetary incentives to improve production are provided by the NAB hosting the Farmer's Days, in which both commercial and small-scale farmers are awarded for exceptional yields and innovative farming techniques. The high stand of agriculture is reflected in the public discourse:

> Namibia's Alpha and Omega sprawl within Agriculture sector. As Namibian leaders and general public alike, if we want to improve the already wilted economy of our country, we must pay attention to agriculture and invest massively in this sector. (New Era Live 2019f)
> I have seen a change, a trend, that today, a lot of people are involved into agriculture. I would say now, all the people I knew before, our teachers that have retired so far, they are more into agriculture now. So, everybody has already seen that: No, I think, there is better potential if one was investing into this. I just happen to be one of them also, I have started something small. […] from what I'm seeing, there is a shift in the minds of people rather to focus on agriculture than it was before. (Interview 1_9_Retail)

Furthermore, the Ministry of Agriculture, Water and Forestry actively promotes agricultural production by knowledge dissemination and subsidization. This direct support, in contrast to the NAB's national scope, is focused on the Northern Communal Areas and communal farmers, as are the subsidies. This selective support clearly shows not only facilitative, but also, again, distributive governance by the state as defined by Alford&Phillips (2018:103) – in this case it is a horizontal redistribution between commercial and communal farmers.

Generally, information and subsidies are an essential part of input policy, which can be seen as a classical key instrument for the state as a promoter in the sense of a facilitator or Midwife (see

ch. 3.3, Horner 2017: 6, Evans 1995: 13f). Traditionally, input policy consists of three aspects, namely (1) input price setting, (2) assuring availability or providing inputs, and (3) information on the best use (combination) of inputs (Ellis 1992: 148). The Ministry of Agriculture, Water and Forestry comply with all of these intervention dimensions, providing the information on inputs and their use through the Agricultural Development Centers, where the funds for subsidization are also accessible for the farmers. Seeds and the ploughing services are offered by the government through its own seed production and tractors. This shows the high level of active involvement of the state as a promoter, which clearly surpasses the monetary and informational dimension of input policies. Although excluded from this study, credit policies in favor of agricultural development are also an important aspect of this state role.

Another active involvement, although restricted to the Zambezi region, is the provision of a subsidized transport system by AMTA. Through this, the maize was (limited to the bumper harvest year 2017) transported from the rural area for a reduced price (10,50 N$ per maize bag, that is, almost half of the price charged by private businesses, 2_3_FGDf). This **connector** role of the state can also be found in the coupling between the communal producers in the Zambezi region and the big national miller through a private-public-partnership arrangement. This coupling and the consequences for the local value chain will be discussed in ch. 6.2.1.

Closely related to the connecting function is the role of the state as a **coordinator**. This rather organizational role is exerted by the state through AMTA, who coordinates the post-harvest management of horticultural and maize production in the Zambezi region. The core of this coordination is the registration campaign through which AMTA collects data on the estimated agricultural production by the small-scale farmers in the Zambezi region:

> In the beginning of the season, we have to register all those farmers that are expecting surplus. So we have some forms that we are giving them which they fill in, so we have already given away to the respective Agricultural Development Centers. These are the forms that we have given them. So, we expect them back and then capture the data and know how much we are expecting at the end of the day, for the purpose of budgeting and also to know what the way forward can be. (1_13_AMTA)

The meticulous registration includes all farmers of the Zambezi region and does not only collect data on the amounts for the respective ADC catchment area, but also the farmers' names and mobile phone numbers which is used as a personal identification number, and also passed on to the maize purchasers:

> Once AMTA is done with the registration, they then give the register to the millers. And we take the farmers' names off their registers to put in our registers and then we give them dates to say: Alright, Mrs. so and so, you can come and sell this date, and so and so, you can sell on that date. (1_4_Mill)

Alternatively, this organizational step can, once again, be covered by AMTA, which shows the deep involvement of the state in coordinating the value chain in the Zambezi region:

> AMTA does an announcement in the radio. They say who comes to sell on this date, who comes to sell on this date. When you come, you come and find the list [was given] to them already. You will come and find there your names, it's there already [at the mill]. Then you go and check in that list which they even get from AMTA. Then it's when you get your name, they are then registered yourself and say, I'm here. (Interview 1_11_Farmer)

This precise and personalized registration and marketing campaign is facilitated given the limited amount of farmers in the region – otherwise, such a complete survey would be nearly impossible. The complete capture also serves as a controlling instrument against smuggling, because each maize bag is traceable. Both border controls and the registration campaign are therefore essential aspects for the enforcement of the import restrictions, diminishing the import

of grains during the local marketing season. This adds an aspect of supervision into the coordinator AMTA performs.

The roles of connector as well as coordinator can be seen as subgroups of a facilitative promoter state role, as they also function facilitatively. There is, however, an important difference between an overall promotion of the maize sector and the other two groups, which especially focus on the link between the chain segments of production and processing. Insofar, they have very differing influences and impacts on the value chain development, as will be discussed in ch. 6.2.1.

6.1.3. Producer, Buyer

While the governmental influence through the NAB is completely centralized and very distant from the actual happenings, the involvement by the Ministry of Agriculture, Water and Forestry through the ADCs and AMTA is practically on-site, showing a high degree of activity towards the sector. Nevertheless, the state roles can go even further: With the establishment of the state-owned companies AMTA and AgriBusDev in 2014, the state's involvement evolved to direct participation in the chain, namely as a producer as well as a buyer and trader. These roles are consistent with the categories in Horner's typology (2017).

With its maize purchases for the National Strategic Food Reserves (NSFR), the state-owned enterprise AMTA acts as a **buyer** within the local maize value chain. The state buyer comes into play "as state-owned organisations need particular inputs in order to provide essential social services as well as for the operation of their own firms" (Horner 2017: 9) – in this case, to be able to provide food aid for food-insecure people in times of droughts. It can also provide help to farmers in another way:

> Let me say, for instance, grains are mainly supposed to be bought by millers, those who process the grains into whatever form of usable product. But then, there are times, when millers can no more absorb what is available. Then the government will now give AMTA money to buy the grains, just to release the farmers. And also keep up for future. (1_13_AMTA)

Using the NSFR as a tool for price stabilization, though, seems to be of theoretical nature: Until now, only small amounts have been sold to the private sector – in 2016, for example, only 639 mt, equaling less than 5% of that seasons NSFR procurement (Namibia Economist 2016a) –, and domestic undersupply is normally easily met by (cheap) imports.

The other aspect of the role of the state as a buyer is the purchase of meal by diverse ministries, the most known procurement program being the Namibian School Feeding Programme of the Ministry of Education, Arts and Culture. The dimension of the programme – feeding 330 000 children, that is, around 15% of Namibia's population (MoEAC 2017) –, shows the big impact on the meal industry this buyer role can have. It is, therefore, both state-owned enterprises and governmental bodies exercising the state's role of the buyer.

In the last decade, the Namibian state has also been actively involved in the production segment of the maize value chain, through the 'Green Schemes' projects. The government is here represented by the state-owned enterprise AgriBusDev, which was established 2014 alongside AMTA. Both state-owned companies are actively participating (as a buyer/trader and producer, respectively) in the value chain, showing the evolvement of the role of the state from a passive regulator through the NAB in the first decade since independence to increasingly active involvement and direct participation through the MAWF and its Green Schemes, which are now officially in hand of a governmental company. In the Zambezi region, some plans for Green Schemes including maize production were made, but are currently on hold – the only operating

Green Scheme is, thus, the Kalimbeza Rice project. Hence, the governments involvement as a **producer** of maize is not really given in the Zambezi region – yet. In general, the policy behind these projects also focus on inclusion of small-scale farmers. This can, yet again, be seen as an expression of distributive governance the state wants to exert – extending the distributive function from only the regulatory role of the state (as seen by Horner (2017: 6)) to the facilitative and now, also to the producer role.

6.1.4. The core roles

The seven roles of the state previously described are the result of a first analytical conceptualization of the state's actions regarding the maize value chain, especially in the Zambezi region. The concepts of these functional, concrete roles still remain close to the practical implementation they represent. Although they each have their own impact on the value chain, it is the mix that really leads to overall developments: "Most states combine several roles in the same sector. Sectoral outcomes depend on how roles are combined" (Evans 1995: 14). The analysis of the influence on the overall development lead to a new level of roles, which are, once more, more abstract than the previous ones (see fig, 18). These ultimate, impacting core roles are also based on considerations on the visions behind the actual measures, as described in ch. 5.2.1.

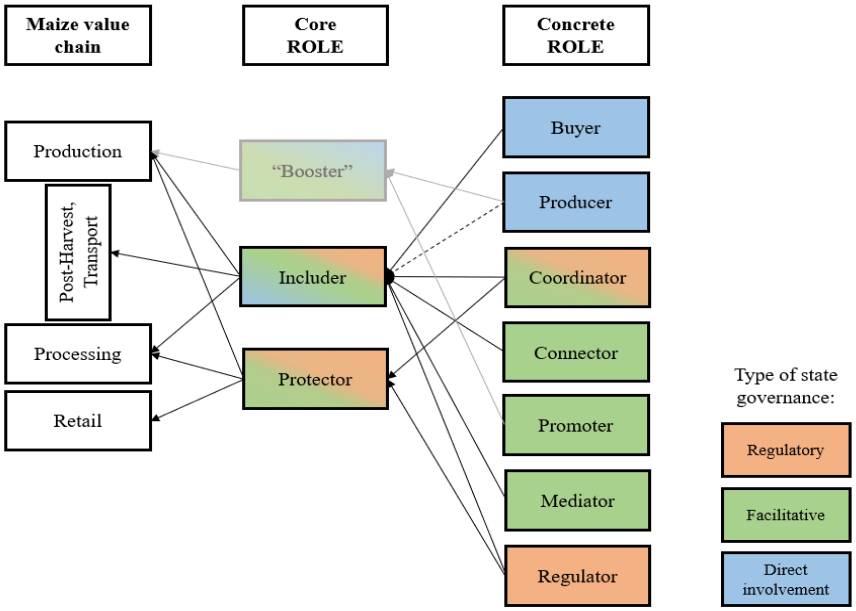

Figure 18: The concrete and the core role of the Namibian state, and their impact on the maize value chain. Own design.

The role of the booster is an expression of the vision of food security and self-sufficiency through increases in production and productivity, and only aims at the production segment of the value chain. Although it may also have important consequences for the Zambezi value chain in some distant future, the other two are more present and will therefore be discussed in the next chapter. The first role is the includer, which is closely linked to the goal of household security through income generation by subsistence farmers. It does, though, not only impact the production segment, but also the downstream processing segment and the connection to it – especially in the Zambezi region (ch. 6.2.1). The second one, the protector, stands for the strong protective state towards the key industry of the most important staple food in the country. This role affects all three main segments of the chain, shaping the status quo of the Namibian sector (ch. 6.2.2).

6.2. Impacts on local value chain development

6.2.1. The Includer Role: Going Small

A first remarkable development within the maize value chain is the inclusion of small-scale farmers into the chain. This inclusion is directly connected to the state's – mostly active – involvement in the value chain. The includer role of the state consists of the following concrete roles of the state:

(1) The coordinator to activate the participation of small-scale farmers and organize their sales of maize
(2) The regulator and mediator to set an attractive maize floor price to motivate their sales
(3) The connector to provide a buyer market for the maize supply by these small-scale farmers
(4) The buyer to cover the maize supply which the private actors cannot absorb.

Entering the market

Current pro-poor and pro-smallholder focused value chain research and policy trends/agendas (DFID/SDC 2008, Collier&Dercon 2014, Ortmann&King 2010, Dorward et al. 2005) see the integration of smallholders in value chains as an essential way to get the best of the globalized world and its possibilities to reduce poverty. Namibia with its focus on food security and communal farmers is not an exception to that, as shown in ch. 5.2. Although Gereffi&Fernandez-Stark do not explicitly focus on smallholders, they are certainly right to include 'enter the market' as an important upgrade option for value chains – "the first and one of the most challenging upgrading trajectories" (2018: 313). In the following, the role of the state towards this upgrading goal will be discussed, including the impact on the value chain development, arising problems throughout the implementation, and the sustainability of these developments.

The active involvement of the Namibian state to include small-scale farmers in the formal market reflects Evan's observation, that, at some point, setting a promoting framework (in the sense of a midwife, see ch. 3.3) is not enough, especially if burdens to enter a sector or market are high (1995: 80). Moreover, he adds the necessity for ongoing support after entering the sector through a 'husbandry' approach, since "[n]ew entrants are as vulnerable as seedlings or foundling stock" (ibid.: 81 *Evans*). By exercising the role of coordinator and buyer, the state is following this by being actively involved to make smallholder inclusion and continuous participation happen.

Value captured

This leads to value captured by a new supplier group – and this value capture is very high given the fixed floor price: Between 47 and 75% of the overall value of the conventional maize meal traded in Katima Mulilo goes to the production segment of the value chain (see fig. 19), benefitting both established market-oriented, but also newly participating small-scale communal farmers. Nevertheless, farmers are not happy about the price nor the fact that they have no say in determining or negotiating it:

> [S]ubsistence farmers are complaining AMTA is not offering them a competitive market-related price for their grain which they worked hard to produce. They complain that AMTA is offering them about N$4,680 per tonne of grain, which they say is way too little. Therefore, farmers in Zambezi have demanded that government increase the price charged per tonne to at least more than N$5,000. (New Era Live 2017d)

> [T]hen it's them again, they are the ones who give the price. It's not us. It was even supposed to be us, to put the price. So expensive, how we normally suffering by ploughing, take care, whatsoever. It could be more! But also, like, them, they are the ones who put the price for us. So they put the price which they want […] It is very, very, very cheap. It's only that we don't have any market unless them. (1_11_Farmer)

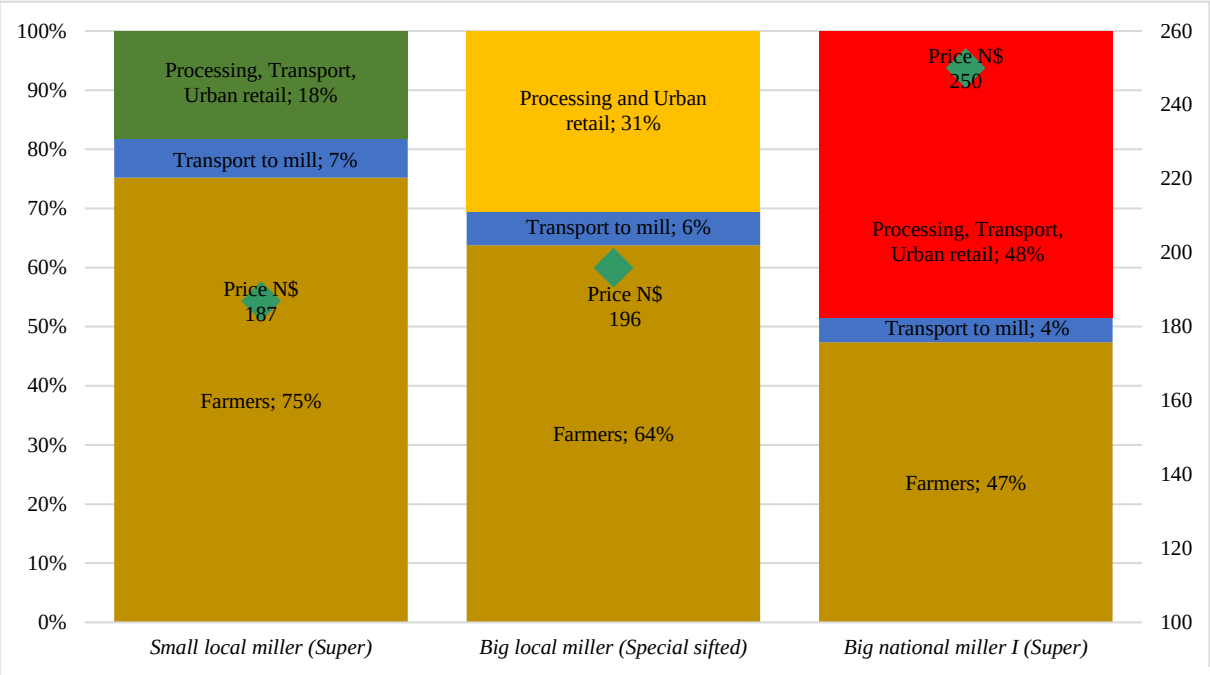

Figure 19: Value distribution (%) between segments for conventional maize meal by different millers (urban retail), and meal price (N$). Own design.

Although they are represented by the Likwama Farmer's Union (for communal farmers) to negotiate the price mediated by the Namibian Agronomic Board, the small-scale farmers feel like the price is unfairly dictated. It would be hasty to assume that the low price level is a consequence of unequal power relations in the negotiation process: In fact, the communal farmers' union has a strong partner fighting alongside for a high price, namely the powerful Agronomy Producers Association (APA), representing the commercial farmers. In monetary terms, commercial farmers require a high maize price to balance out input costs for hired labor, seeds, fertilizer, pesticides and, when given, irrigation. The small-scale farmers do not have any of these high costs, so that their net gains can be higher, even though they cannot profit from economies of scales and exceptional yields (no monetary costs stay no monetary costs, no matter the effectiveness of production). Additionally, as nicely put by the Namibia Economist: "Zambezi dryland maize growers have an unfair advantage – rain!" (2018b) – a fact that might be only true in non-drought years, but generally leads to overall natural rent advantages for the farmers in the Zambezi region when compared to the rest of Namibia.

Participation in the formal channels

Overall, the registration and market access campaign results in a higher participation of small-scale farmers in the formal value chain, which was formerly only occupied by market-oriented medium-scale farmers. This channel was not organized before the state took the role of the coordinator via AMTA:

> So before [AMTA tool over], we [the millers] used to register directly with the farmers: The farmers got maize, they come here to our store, they say: Alright, I've got so many bags of maize, we would register them. But at the end of the day we are just a business. (1_4_Mill)

Through the registration campaign, AMTA now connects every farmer to the mills. This elevates their sales system to what Trienekens calls the B system, characterized by middle to high value levels and a short connection to big players (2010: 53). It evolves from an informal locally restricted channel– or no market for small-scale farmers at all, which is mostly the case in the Zambezi region. Because of the fixed maize price which is paid at the mill gate, there are no traders or agents, making this part of the value chain comparably short. Instead, supporting transport services are needed.

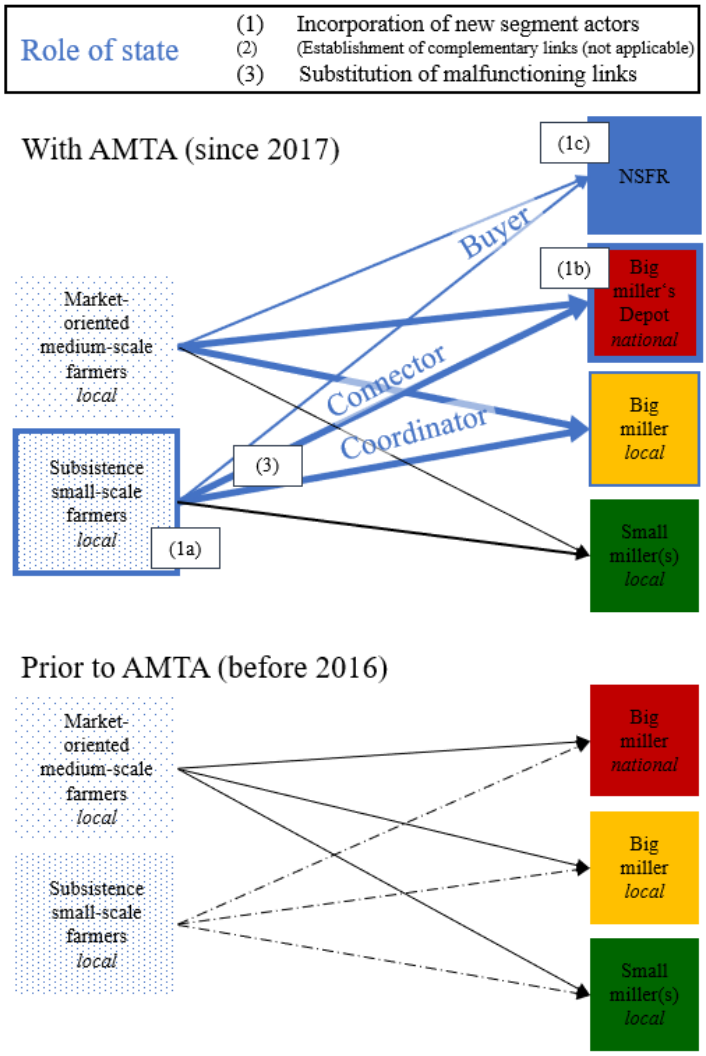

Figure 20: The includer role of the state and its impact on the local maize value chain. Own design.

This approach is comparable to key interventions often implemented by international donors, when creating alternative links in the chain (Humphrey&Navas-Alemán 2010: 21f). This can mean (1) the incorporation of new segment actors, (2) the establishment of complementary links or (3) the substitution of malfunctioning links. The latter, (3), is given here, since the former connection between farmers and millers was faulty. The new channel system is displayed in fig. 20. In donor practice, (1a) the inclusion of new suppliers often functions as a solution to shortage or quality problems with the aim to improve the overall chain. Contrastingly, in the case of the inclusion of the Namibian small-scale farmers, the value chain is inversely used as a tool to improve their status quo.

Providing a market

For the inclusion of small-scale farmers into a formal value chain, a proper buying market is needed. Fortunately, there are two stable purchasers in the Zambezi region: the big local and the leading national miller. In a certain sense, the registration campaign is coupling the farmers to the mills. In the case of the local miller, this campaign is an organizational relief (see quote above), by substituting an imperfect link (3). The other miller, in turn, has a special position, as it left the region in 2015, and is now only functioning as a depot, buying the oversupply the local miller is not able to absorb. This is determined by a practical agreement between the government and the miller (1b):

> You know, the maize and the mahangu, they are harvesting at the same time. So what happens now, AMTA is buying the mahangu, they are doing the intake of the mahangu […] And we handle the maize this side. So we help each other. (1_8_Mill)

> [T]hese farmers have to have a market for their maize. So where do they go. We are selling the maize meal after it was grinded whatever in Otavi and Windhoek, and they are buying it. So they have to have a market for their maize, we cannot let them plant and say sorry, we can't buy it. Because then there is a market here. (1_8_Mill)

Therefore, the engagement of the local miller follows the discourse in favor of providing a market to local farmers. But apart from these moral considerations, it becomes clear that the farmers are also seen as potential consumers that need to generate income to be able to buy the meal – preferably the meal produced by the miller they were happy to sell their maize to. In this sense, being present in the Zambezi region is of strategic value for the big national miller. A further misfit, the difficult organization of the maize sales, is also resolved by the state as a coordinator for both millers, once more enhancing the strategic coupling through overall "providing the complementary production factors and institutional structures at the local level" for the big national miller (Fold 2014: 781, Coe et al. 2004: 474).

An interesting development shows the lack of planning in this coupling situation: When AMTA started to connect the farmers to this millers, they were promised they would get paid the fixed floor price. But the miller was charging extra for transport costs to the actual mill in Otavi – because the floor price is supposed to be paid only at the mill gate, which they considered being in Otavi, even though the company is present in the region. This situation caused a lot of disapproval, so a new arrangement was made:

> It's quite expensive to transport the maize from Katima [to Otavi]. The fact is, because we are not milling. So, we have to get it there to Otavi. And you cannot take it from the farmers, it's not fair to take it from the farmers. That's why AMTA – I think it's a sub government institution –, that's why they are paying the transport for [the leading national miller] either to deduct it from the farmers. (1_8_Mill)
> It's better they all put same efforts, that all of them benefit equally. So hence, the government came up with NAB [to] give some money and that money was used to subsidize the farmers on transport. And given the exact price per kg [to the farmers]. (1_13_AMTA)

This shows the power of the big leading mill – that knows how important its presence as a buyer for the Zambezi farmers is –, and the commitment of the state to ensure that all farmers get the floor price for their maize, regardless of the additional costs.

While both national and local big millers are essential parts of AMTA's coordination process, the small local miller is not included. Instead, to get the maize supply needed, it is forced to hire transport services to keep the milling operations going (1_1_Mill, 2_7_Storage). Despite the big involvement of the state described throughout this whole study, the small miller complaints about the absence of governmental support:

> They only sit and take records, otherwise, to try and assist, to make sure that the millers are well taken care of, like, other unions or whatsoever, it's not really there. They only come to ask you: How many bags are you ready to buy? And which farmer sold to you? But now, for them to know how does that farmer produce and how did that farmer bring the produce here, and how do we get our products wherever we have to take it, they are not concerned, they don't care. All they want to know: Who did you buy from? How many bags did you buy? That's all. (1_1_Mill)

In fact, the AMTA's responsible regional officer was not even aware of the existence of this processor, referring only to the failure of another small milling business that failed due to sales difficulties. At the same time, the high floor price for the raw product is a big inhibiting factor for small millers with their limited financial resources and liquidity, leaving the processing segment in an oligopsony structure of a few powerful millers. Thus, in favoring the small-scale farming segment of the value chain and concentrating on the powerful lead millers, the state is putting the small-scale milling sector in a disadvantaged position. The disregard of smaller players is promoting the dualistic scenario of agribusiness, "where wealthy entrepreneurs,

linked to foreign capital and connections to political elites, are making money from agriculture, but others are languishing behind" (Scoones et al 2005: 4). This relates to the production sector, but can obviously also apply to the processing segment, to which Whitley refers. He emphasizes that the 'business corporatist' state type prefers working with large firms over small ones, whose potential for economic development is not acknowledged (2007: 52). This matches the current position of the state, despite overarching goals to promote small and medium enterprises and entrepreneurship especially in the rural area (GRN 2017a: 22f, GRN 2013a).

While the small miller struggled to meet its demand with local production, the general problem of the region is seasonal oversupply:

> When the farmers produce, they want their maize to be sold immediately, and that one is a challenge because you find that it's mainly [the big local miller] and [the big national miller] that buys in most cases, almost all of the tonnages. So, if we have many buyers then the farmers can actually have their maize sold on time. (1_13_AMTA)

Ironically, this issue could be solved by facilitating the development of the frequently emerging, but soon vanishing small milling initiatives. Instead, the state expanded its involvement in the chain one more time during a bumper harvest: It did not only act as a connector, but also added itself as a buyer through the NSFR plus a cheap transport service, establishing yet another parallel channel to the local value chain (see (1c) in fig. 20). The buyer role of the state to guarantee a market for small- and medium scale farmers is dictated within the current agricultural Strategic Plan (MAWF 2018: 13) and Development Programmes (GRN 2019b: 434) as the essential part of the 'Cereal Value Chain Development Scheme' In practice, exercising this function can be found to be accompanied by some reluctance, as visible in this note on the AMTA webpage on sales to the NSFR, and the statement by the managing director of AMTA:

> During the grain marketing season, you can contact us to sell your surplus maize (**commercial farms and green schemes only**) and mahangu (communal farmers only). (AMTA 2018, own emphasis)
> Lucas Lungameni, the managing director of Agro Marketing & Trade Agency said yesterday said [sic] that they will buy the maize to assist the local farmers. 'We will assist the farmers as we do not want them to suffer because they have worked very hard to plough their fields all these months. However, the millers should know that the more we keep buying, the more we will be driven to start our own mill and take their business from them,' Lungameni said. (The Namibian 2017a)

Future development

At the same time – although this may only be saber-rattling from the government's side – the government is proposing being even more active in the value chain than it already is. This opens the question to how far and for how long the government is planning on being actively involved in the Namibian maize value chain: Is the role of the coordinator only temporarily to activate the inclusion of small-scale farmers in the formal value chain, or is it foreseen to be a continuous part of the value chain ensuring the link? Is the former even possible or will the whole system collapse back to the channel of low smallholder participation? Is the buyer role foreseen to be the main guarantor to ensure a buying market in case of increasing production and marketing? The latter question is insofar interesting, as the NSFR policy stands in direct contradiction of drought relief policies:

> Unlike many other sub-Saharan African countries, Namibia has efficient food markets. In time of drought, the private sector imports food and it is readily available in retail outlets in most areas. […] It is therefore proposed that the distribution of free food to vulnerable groups be phased out as a method of supporting the food insecure during drought, except in those areas of the country where there are no food markets. It will be replaced, after pilot testing, by a system of food vouchers which vulnerable households may exchange in retail outlets for designated food items. (GRN 1997)

Further resistance against aid in form of direct food provision is grounded on (1) the fact that it may lead to decreasing demand to the detriment of the local markets and (2) the preference of receiving inputs for self-help over food aid (The Caprivi Freedom 2004, 2012). Furthermore, as the example of Zambia (Nkonde et al. 2011) shows, using public demand through strategic reserves to control the maize market and price absorbing surpluses can provide a small relief in the short run, but have devastating long-term consequences. Nevertheless, the policy of switching away from food aid was apparently abolished with the government's decision to establish and expand the contrary NSFR strategy instead (see ch. 5.2). This discussion around the NSFR shows the extent of contradictions and disconnections between different policy implementations and policy strategies.

Another future uncertainty refers to the strategic coupling between the big national miller and the local farmers. Is this coupling a "mutually dependent and constitutive process involving shared interests and cooperation between two or more groups of actors", as defined by Yeung (2009: 332)? The existing coupling is based on the private-public-partnership rather than a strong alignment of interests and needs/capacities between the actors (Lee et al. 2014: 106, Humphrey 2006: 589), so it can be feared that they "otherwise might not act in tandem for a common strategic objective" (Yeung 2009: 332). It might be more adequate to talk of a 'strategic linkage' situation characterized by weak embeddedness into the local context, aimed only at accessing local resources, rather than a long-term, reciprocal 'strategic embeddedness' or even 'strategic coupling', when defined as an inseparable connection and a complete network system (Fengru&Guitang 2018: 67f). This weak linkage has low levels of different embeddedness types (e.g. economic, social, cultural, cf. Fengru&Guitant 2018: 65-67) except for the institutional dimension through the involvement of the state, which is, though, not particularly stable and strong enough to elevate the overall connection of the firm to the region and the local firms. The continuation of the link beyond the state's involvement as connector and coordinator is therefore questionable.

An important aspect for value chain development is vertical coordination and collaboration. Gereffi&Fernandez-Stark emphasize the significance of dialogues and alliances to reduce information asymmetries between small-scale agri-food producers and purchasers and to increase sector development (2018: 319). The FAO indeed emphasizes the difficulties for Namibian farmers to access information regarding production technologies, post-harvest processes, market and prices (GRN&FAO 2014: 15). Nevertheless, the example of the Namibian maize sector shows that, although a plausible theoretical recommendation, vertical coordination and collaboration is difficult to put in real practice. Interactions, exchange of information and technology transfers are reduced because of the huge number of suppliers and the arm's length market governance structure of the Namibian maize sector (Gereffi et al. 2005: 80, Gereffi&Fernandez-Stark 2018: 318). The weak linkage to the national miller upholds this communicational distance (Fengru&Guitang 2018: 67). And since the takeover of the coordination process between farmers and millers by the state, these interactions are even weaker. The connector role of the state might therefore be inhibiting the passing of information, while the mediator role tries to establish a knowledge exchange between farmers' representatives and the millers – an unintentional collusion of state role impacts.

An important group of obstacles for smallholders to access formal markets are lack of scale, high transaction costs and the problem of self-organization (Gereffi& Fernandez-Stark 2018: 319), which can all be solved by organization and coordination through collective action like pooling through farmers organization (Ortmann&King 2010: 401, 408f, Pingali 2010: 3886,

McCullough et al. 2008: 29f). Despite being promoted by the Namibian government, the Likwama Farmer's Union as the only local collective actor is not successful at this, as it is not particularly aiming at inducing this kind of market organization and collaboration, beside its member coverage being considerably low (1_12_Union, 2_3_FGDf). Instead, the state is taking over this missing horizontal organization through its coordinator role.

Alternatives to the state's direct involvement would have been (1) the promotion of intermediary agents or horizontally coordinated partnerships (Pingali 2010: 3886, Krejci&Beamon 2015), led by de facto involved actors of the chain instead of external ones – e.g. medium-scale market-oriented farmers as 'lead farmers' (Meijer et al. 2008: 340): Some are already working towards economies of scales by obtaining trucks or other transport vehicles to transport their own and the surrounding's harvest to the urban area (1_7_Farmer). Another solution to this problem would be (2) the change of the fixed floor price from a mill door price to a farm gate price, leaving the collection problem to the resource-rich, organized millers. Both alternatives are not feasible due to (1) AMTA's commitment to ensure a short value chain without intermediaries in which the farmer is able to capture the floor price for maize and (2) the powerful stand of the milling lobby (see also ch. 6.2.2).

The Zambezi region with its numerous small-scale maize farmers differs notably from the big-scale farming system implemented by commercial farmers and through Green Schemes in the rest of the country. The latter facilitate the preferred, organized trading systems of today's (supermarkets and also) agro-processors, namely contractual arrangements with a limited number of big suppliers instead of using (spot) markets (Louw et al. 2008: 291f, McCullough et al. 2008: 17f). The lack of horizontal coordination in the Zambezi region is therefore not only a disadvantage for the farmers' general accessibility to formal markets regarding organization and transport, but also hinders the attractiveness as suppliers from the perspective of the processors. This shows, once again, that the coordinator and connector role have very limited lasting effects, since it is not promoting a better link between (small-scale) farmers and millers by addressing existing deficits, but simply building a new link which is completely dependent on the government's participation and presence.

The implementation of the coordinator role is only possible for the Namibia and the Zambezi region in particular because of the small population. Nevertheless, in sum, all the efforts made as coordinator, connector and buyer are a huge cost factor for the Ministry of Agriculture, Water and Forestry, which cannot be seen as one-time activating development costs, but operational ones that need to be borne every year anew, indefinitely. This is due to the fact that the employed system is not sustainable in the sense that it can one day be self-supporting, as shown by this discussion. Given the weak economic situation of the country, the public budget may not be able to support this, especially (but ironically) in the case of a bumper harvest. The budget shortfall is already visible in the governmental involvement in the value chain as producer, which it is currently struggling to implement (The Namibian 2019k). Furthermore, many aspects in the practical implementation are still faulty (but resolvable), e.g. the losses due to long waiting times and the problematic incorporation of costly intermediate governmental storages.

The State as the includer

As an advocate for low state involvement, Pingali recommends that

> public sector interventions are best left for public good provision and institutional reforms to correct incomplete or absent markets and improve the rural business climate. The reduction of transaction costs

> associated with particular commodity production and processing systems is best left in the hands of the private sector. (2010: 3887)

The coordinator and connector role of the Namibian state are extreme forms of reducing transaction costs for the farming sector – and despite the deficits, disadvantages and unsustainability of the actions, it proves to be a powerful tool for fast activation of small-scale farmer inclusion. One further consequence thereof is the probable increase of production and market participation responding to the creation of the guaranteed buying market – in this sense, the includer role is in fact a facilitative one for both agricultural sector and the downstream value chain. Nevertheless, it goes beyond a simple facilitative role as defined by Horner (2017: 6): On the one hand, because of the active involvement of the state, which is not only given in the buyer, but also in the role of the connector and therefore surpasses any state involvement Horner's typology offers. Evans' rather unspecific role of 'husbandry' could cover this. But, on the other hand, neither of them includes the perspective on the link between segments as opposed to only focusing on one segment. Exactly this is the core of research on strategic coupling as an important aspect of regional development policies – and even though Horner refers to it (2017: 5), he refrains from including this role in his typology. This analysis of the state as an includer, as well as Lee et al.'s identification of the 'inter-scalar mediator' (2014), are first examples for the need to incorporate this type of state involvement in the analysis of state roles for value chains. This role's involvement may range from a very passive frame-setting, as in the 'container of laws and practices' (Lee et al 2014: 118), which might only be a first step towards a much more active involvement to enable strategic coupling for value chain development, as given in this national, but nevertheless valid example of the Namibian maize value chain.

This chapter discussed the impact of the includer state role on the maize value chain, especially for the Zambezi region. It has been shown that the state establishes an effective, but not self-sustaining system for small-scale farmer inclusion, which is based on a creative, hands-on approach to the value chain. This strategy – independently from its exact implementation and outcomes – stands for a state role not yet discussed from the perspective of Value Chain research focused on the 'Role of the State', as does the connector role, as discussed above.

6.2.2. The Protector Role: Going Local

An important prerequisite for the previously described inclusion of the small-scale farmers is the state's role as the protector of the Namibian maize sector. The protection influences three main value chain segments, namely the farmer, processor and retailer segment, but also the consumers. This core state role is a rather passive one, which sums up the following two concrete roles of the chain:

(1) The regulator to protect both maize and meal production through temporal and permanent import restrictions, and the consumer through food safety regulations
(2) The coordinator to enable the actual compliance with the import regulations through supervision over

The establishment of the import restrictions has major impacts on the Namibian maize sector, as both production and processing sector are not competitive when open to the global (regional) market. Fig. 21 shows the channels that result from this regulatory framework, impacting the segments of producers, processors and retailers.

Between local, regional and illegal trade channels

Both commercial and small-scale farming systems are protected by the import restrictions. As the high floor price reflects, production in Namibia is less productive than its regional competitors. The restriction is therefore necessary to ensure a market for local production: "[L]ocal farmers will not stand a chance to sell at a good price if the borders are open"

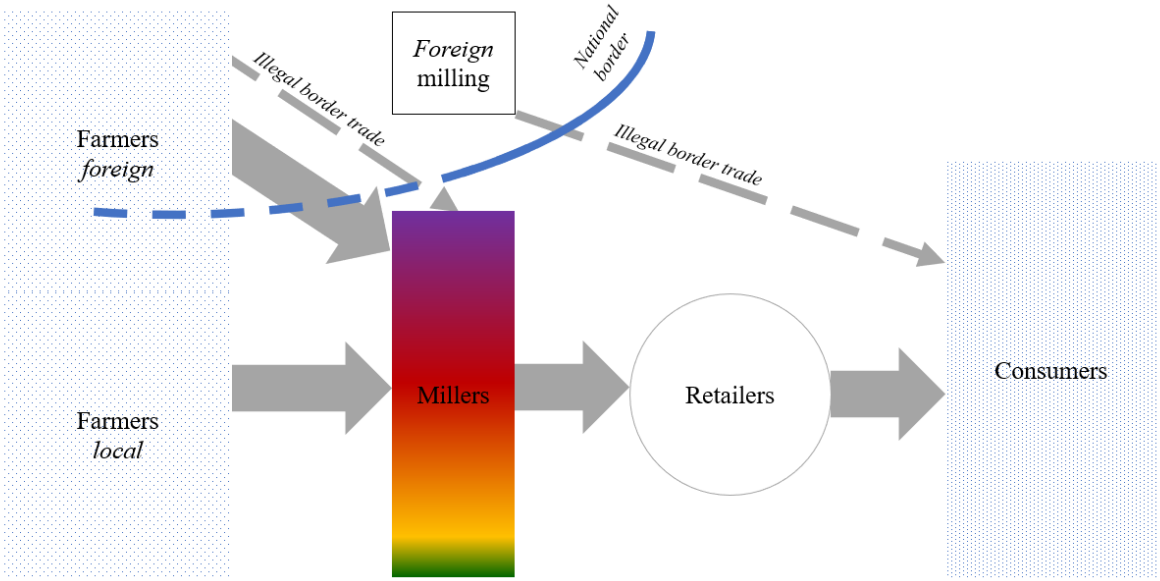

Figure 21: The protector role of the Namibian state and its impact on the maize value chain. Own design.

(Interview 1_9_Retail) – and the millers would otherwise only source the cheaper maize from outside of the country. Nevertheless, locally produced amounts are not enough to meet the millers' year-round demand, so that the millers have to rely on two major supply channels – the local and also the foreign one ((1) in fig. 21). For Namibia in general, the share of foreign maize amounts to averagely 60%, fluctuating between 45 and 80% (2006-2017, NAB 2017a). This share can be seen as the value captured by local actors instead of being drained to regional competitors, to which the 'markup' of the fixed floor price is added.

The constant import of maize has led to the establishment of stable relationships with the suppliers, mainly from South Africa, for the big national millers, while the big local mill

benefits from strong ties to South Africa through the owners' migration background. Importing from Zambia might appear of advantage particularly for millers in the Zambezi region, but this connection remains insignificant in amounts and frequency because of irregular export bans and faulty structures on the part of the Zambian supply chain (NAB 2013a). The historic connection between Namibia and South Africa as well as several trade arrangements (e.g. the SACU agreement) further facilitate the exchange – in opposition to the competing maize market in the Global North (mostly traded at the Chicago Board of trades), which is only needed in exceptional drought years affecting the whole Southern African region. Even in this case, South Africa handles the trade for the whole region:

> In normal years South Africa produces enough grain for its own needs as well as for export to neighbouring countries. Factored into the 1.1 million tonnes [South Africa has to import this drought year] is what South Africa will need to meet its own demand plus the demand from countries to which it normally exports. (New Era Live 2015a)

This is not a surprise given the rise of regional trade developments around emerging countries like China, Brazil and also South Africa, including shifts to and increasing reliance on South-South trade and regional value chains (Gereffi 2018: 446, Horner 2016, Gereffi&Sturgeon 2013: 22).

These formal supply channels are complemented by a third one, which consists of occasional smuggle of maize over the borders (2). The Zambezi region is affected by this in particular since it shares a long border with Zambia, the Zambezi river, which can easily be crossed by canoe or even foot at some places (see fig. 1 in ch. 2). Zambian maize farmers often do not have a market for their product, especially not for the high Namibian floor price, and try to sell their maize in unofficial ways to Namibia. But Zambezi residents engage in these activities, too:

> Zambia's price of maize sits at maybe 2 Dollars, 2 Dollar 20, Namibian Dollar a kg. Namibian price is sitting at 4 Dollar 80 a kg. Imports are restricted, right. But it does not restrict people from smuggling over the river. So you find farmers coming in with Namibian IDs buying maize at 2 Dollar a kilo that side, coming to sell it at 4 Dollar 80 a kilo this side, making a good profit on it. It becomes very difficult for us millers to identify because the guy is coming with a Namibian ID. So these type of things were hampering business, it was hampering the production of farmers. (1_4_Mill)

Nevertheless, through the establishment of the registration campaign, the state is now able to control this illegal trade, since every bag sold to the (included) millers is appointed to a particular farmer and his field.

This kind of control is not that easy for the processed product – meal is also smuggled into the country through an informal small-scale trading system directly to the end consumer (3), and is estimated to account for over 6% of overall informal cross border trade alone at the border post of Katima Mulilo (NSA 2014b: 17). The fact that imports for own consumption are allowed complicate this matter even more. The illegal maize trade is a side channel to the formal channels between millers and retail (see ch. 5.1), where the retailers are restricted to source their meal from the Namibian millers (4). This results in the local capture of the whole value for maize meal in Namibia, a value distribution attained by the regulator role of the state.

Intra-chain and functional upgrading

Value capture in both the farming and the milling sector can be understood as an expression of intra-chain upgrading. Intra-chain upgrading is mostly narrowed to the view on one and the same firm that is upgraded by expanding to other segments through vertical integration, moving to other segments of the chain, or by acquiring new functions previously undertaken outside of the chain as secondary/supporting activities (Gereffi et al. 2001: 5). In this view, the big national

milling companies are successfully upgrading through its in-house design and marketing functions: The incorporation of these high value functions has an important effect on the levels of value captured by the processing sector. Hence, it is not only the mere process of milling which is protected by the state, but also the high value functions which are integrated in the milling companies – a success regarding textbook 'functional upgrading' (Gereffi et al. 2001: 5), as these functions are normally covered by actors from developed countries (or South Africa in the Namibian case, Gereffi&Fernandez-Stark 2018: 314f).

But value capture through the upgrading incorporation of segments or functions can as well be seen from the perspective of local value chain evolution as regional development by waiving the firm-centric view (Murphy 2008: 568): The Namibian value chain is enriched by having the hold on two value adding segments of the chain and capturing the value created in these segments. The capture of the milling segment can be seen as a step towards transformation of the food system, from a traditional to a structured one as defined by McCullough et al. (2008: 12, 16). This transformation opens the opportunities for supplying the domestic and even export markets, for consolidation and for upgrading (ibid.: 16) – the latter is certainly happening in the Namibian case, given the functional upgrading and also product upgrading (to instant porridge products, see ch. 5.1).

Current research confirms that buyers like retailers or marketers are increasingly driving the value chain, as opposed to producer driven chains (Gibbon et al. 2008: 321, Humphrey 2006: 574, Gereffi 2014: 10). This is certainly valid for the retail sector in Southern Africa, which have come to be mainly dominated by South African supermarket chains and therefore hugely impacting the whole food sector (Emongor&Kirsten 2009: 62, Weatherspoon&Reardon 2003: 339). These retailers have strong links to the home economy and import most of their items from there (Barrientos et al. 2016: 1270). However, this system is inhibited by the Namibian import restrictions on maize meal, a low value product, but of great importance for supermarkets to get customers into the shop. It has to be sourced locally from the powerful Namibian processing companies. Since these companies already cover functions like product development and design, branding and marketing, they are the marketers of their meal brands, while retailers, although powerful in other Namibian agrisectors (e.g. horticulture, Emongor&Kristen 2009: 69), continue playing only a minor role as mere resellers. Hence, it is especially the two national millers which drive the Namibian meal chain supplying their meal products to the retailers under contractual arrangements: They are the lead firms of this producer-driven value chain. This circumstance is not too surprising given the similarity of the regulatory role of the Namibian state to the import substitution industrialization policies followed by many countries until the 1980s, which also promoted producer-driven value chains (Gereffi 2014: 17f, Gereffi 1994: 100).

When it comes to the Zambezi region, the initial establishment of the big local miller was greatly facilitated by the unexploited market situation for both retail and meal production (see ch. 5.1). The persistent prevalence in both segments is owed to the development of the prominent meal brand, and was certainly supported by protective measures of the state, which helped the local miller and retailer to stand up against the "rise of the supermarkets" (Weatherspoon& 2003: 333) in Africa, which reached the Zambezi region in the 2000s. Again, the local sector can capture high values through marketing of its product, and even more through the persistence within the retail segment.

The State as the protector

The protector role seems not particularly viable for **Global** Value Chain research, as it strongly restricts the geographical scope of the entire or essential parts of the value chain (this is only valid for the downstream value chain – inputs for agricultural production are often only available through imports). Nevertheless, as shown by the powerful stand of the Namibian milling industry, the protector role may be able to create a functioning industry which is – theoretically – competitive at home and even across borders, when allowed to rely on cheap imports. This means that, in the long run, the protector role may shape the value chain of a possibly far away future. Even when disregarding this, the protector role deserves more attention given the latest strong tendencies to protectionism in some developed countries, and the inward and regional focus of leading emerging countries with their 'return of the state' (Mayer 2014: 352, Gereffi 2018: 446). This is clearly a first sign of the increasing protective state role, which will have vast consequences for a lot of value chains all over the world.

The protector role for the Namibian maize is essential for Namibia's agricultural sector, income situation for many Namibians and prospects of rural development. Consequently, there are no signs that the protective measures will be lifted any time soon – on the contrary, through its supportive and inclusive roles (see ch. 6.1.4), the state is rather working towards increasing the share of locally produced maize. The participants of both production and processing segments of the value chain are generally benefitting from the protection – but to the detriment of the consumers, which have to bare the high maize price. Especially affected are deficit producers, thus net food buyers (farmers who have to complement their own production with purchases to meet their demands) and the poor urban population, whose food security therefore ends up being endangered (Ellis 1992: 87, World Bank 2008: 112). The only way to overcome this situation is an immense increase in productivity resulting in higher production and lower prices, whereby productivity increases need to get ahead (and then stay) above the price falls – a goal Namibia is tenaciously trying to reach through its role as a booster of agriculture.

6.3. Evaluation of methods: The quest for (code) labels and a grounded theory

Other than in quantitative research, there are no fixed, solely valid quality criteria to assess the methodological quality – they vary according to the research discipline and the type of qualitative method. For the Grounded Theory approach, Corbin&Strauss suggest evaluating data and theory, the research process, and the empirical grounding to the findings (1990: 16). A selection of these aspects will be presented in the following.

All the main data types used here – interviews, official documents, press – construct reality in their specific, biased way, which had to be considered to obtain **validity** (Flick 2006: 372). This was found in the occasional exaggerated self-presentation of interviewees, in the campaigning overtone in governmental publications, and in the incitement the media often aims at. When detected, these biased discourses were either tried to be cleared by verification of the claims, or analyzed as to their contribution to the theory. The latter led, for instance, to the discovery of the promotional measure of the agricultural image (see ch. 6.1.2). Many key elements of Grounded Theory – memo writing, constant comparison, etc. (see ch. 4.1) contribute to complying with the quality criteria of (procedural) **reliability** (Flick 2006: 369f). To additionally keep the reliability of data at a high level, the research process was documented and supported by a variety of means as described in ch. 4.2.

Despite its openness and diversity, the Grounded Theory approach has a variety of guidelines that make it easier to judge the **adequacy of research process** as an important evaluation

criterion (Corbin&Strauss 1990: 17f). Many elements have already been described in ch. 4.2, e.g. the theoretical sampling by using the 'follow the thing' approach (Marcus 1995). In this regard, it was crucial to follow the maize bags in opposition to policy measures, as the focus was on the overall local value chain and not only the parts affected by these measures – to adequately assess the influence of state presence and absence, not just minor impacts. Categories were developed from both sides – the policy visions and measures as described in planning documents and the experiences of value chain actors. The convergence of those led to the final decision on the two core categories: the state roles of the includer and the protector. The booster role, although interesting and polemic, had to be set back given its low overall influence in the study area (until now), and its little consequences on the overall value chain as opposed to only one (production) segment within.

The necessity of **empirically grounding the findings** is also included in the guidelines, as Grounded Theory must evolve inductively from the data. This happens through conceptualization, which was done in order to abstract the state's general policies (exemplary: 'PPP with big national mill to absorb maize' conceptualized to 'connect purchaser to supplier' implies the state role as a 'connector'). Then again, other inductively derived concepts are put in relation to it, leading to the base of an empirically grounded system of conceptual relations ('facilitating small scale farmer access to purchaser' as a consequence of 'connect purchaser to supplier', which implies the 'inclusion of small scale farmers in the formal market' as a consequence of the state 'connector' role). Some concepts may even evolve from the data without changing the initial code label – this was the case for the 'booster' role, which was the in-vivo code – "taken from or derived directly from the language of the substantive field" (Strauss 1987: 33) – used for the newspaper headline "Billions to **boost** agriculture" (Allgemeine Zeitung Namibia 2019d, in-vivo code in bold).

Coding as an essential part of Grounded Theory is a practical way to derive and identify the functional and conceptual roles of the state, which have often been categorized using conclusive or metaphorical labels (see ch. 3.3). Nevertheless, it is necessary to remain cautious not to stay at a descriptive level of creating more and more labels, but to focus on the meaning behind, and the relational network around it. For this study though, it was necessary to mention and go into detail with the abundant numbers of the subcategories (the seven concrete roles discussed in ch. 6.1) to lay the bases for understanding the dimensions of the core roles of the state.

Deductive elements are only allowed in later stages of Grounded Theory research – in this case especially value chain related theories regarding state roles, upgrading, smallholder participation, strategic coupling and governance. The only pre-given theoretical background was the concept of value chains per se, which served as the framework for initial theoretical sampling. Working with the open Grounded Theory approach can both be fruitful and challenging: While being confronted with an overwhelming, sometimes disorientating amount of ideas and hypotheses at the first moment, it then offers a great possibility to explore these nearly endless possibilities to structure and finally find the significant and satisfying research foci.

7. Conclusion and Outlook

Following the call for integrating the state in GVC research, some empirical work on the state's involvement in fostering value chains have emerged (Lee et al. 2014, Yeung 2014, Gereffi, 2014). Soon, some attempts to conceptualize the role of the state regarding value chains were undertaken (Smith 2015, Horner 2017, Alford&Phillips), but their application to actual case studies and therefore thickening this research branch is still beginning (Alford&Phillips, Mayer&Phillips, Smith et al 2018). This study picks up on the gap by exposing and analyzing the role of the state for the Namibian maize value chain, with a particular focus on the Zambezi region, an emerging promising region for the sector. Four research questions lead to the assessment of the roles of the Namibian state and their impact on the local value chain.

Firstly, the maize value chain in the Zambezi region consists of a huge production base of small and medium-scale farmers. A few processors dominate the milling business and supply meal to the retail sector (mostly chain supermarkets). Various channels – informal/formal, geographical and rural/urban –, coexisting throughout the whole chain, can be identified.

The second question explores the policies which affect the Namibian maize sector. These are especially aiming at agricultural development, with a strong focus on food security and self-sufficiency. Increasingly, the sector is also being targeted through a value chain approach. Implementing actors range from rather passive to active and even maximally involved governmental actors and state-owned enterprises, who intervene with regulations, subsidies, campaigns, etc.

Thirdly, the analysis of these policy measures led to the identification of seven concrete roles of the Namibian state regarding the maize value chain. They can be combined to three core roles which are each responsible for particular developments of the value chain. The (a) booster consists of the state promoting agricultural production, and the state's direct participation as a producer itself in the chain. Then, under the (b) includer, there is a variety of roles combined: The connector (between small-scale production and processing), the coordinator (of the connection between the two segments), the buyer (providing an additional market for small-scale farmers) and finally the mediator and regulator (setting a stimulating maize price). And, lastly, the (c) protector affects the whole value chain through the role as (trade) regulator and coordinator ensuring compliance with those regulations.

The fourth and last question discusses the impact of the state roles on local value chain development. Through the role of the includer, the local farmers are linked to the formal channel of the value chain. This can be seen as an upgrading of the region fully 'entering the market' (Gereffi&Fernandez-Stark 2018: 313). This formalization is achieved through the extensive organizational coordination of the sales from all producers in the region, to the local miller and through further connection: This connection is based on a pre-stage of strategic coupling, a weak strategic linkage (Fengru&Guitang 2018: 67f), between the local farmers and a national (not local) purchaser. Occasionally, the state itself also steps in as a buyer. The inclusion also happens regarding a high value share captured, as a consequence from the (mediated and regulated) high maize price. Although the state actions proof to be significantly enabling local and especially smallholder inclusion, they are not considered sustainable, since they do not lead to a self-sustaining inclusive system. The other development of the value chain is based on the state's protector role – impacting the segments of production, processing and retail. Strict protective measures benefit the Namibian maize producers, whose uncompetitive maize has to be entirely absorbed by the local processing segment, creating a second supplying channel

parallel to the imports of cheap regional maize. Equally, the retailers are required to buy the meal produced by the local millers. The value locally captured in both segments can be interpreted as the Namibian intra-chain upgrading within the maize sector. The establishment of a (nationally) strong milling sector resulted in the comparably low stand of the retailers as mere resellers – despite the current trend of buyer-driven (as well as massively dominating and value extracting) chains all over the world. In the Namibian case, even high value functions like branding and marketing are undertaken by the (functionally upgraded) milling companies. Despite this success story, the milling segment remains uncompetitive due to the low productivity farming. Through the role of the booster, the state is working towards solving this issue.

While some of the identified state roles nearly coincide with existing typologies and labels (the regulator, the facilitative promoter and booster, the buyer, the producer, the mediator), others are newly created. The protector, for one, will play an increasing role given the protectionist or region-directed developments in leading developed and emerging countries, changing to new trade structures and impacting various value chains (Mayer 2014: 352, Gereffi 2018: 446). Furthermore, the connector is an essential role for advancing value chain development through strategic coupling. Last, but not least, the includer is a functional role describing distributive governance by active involvement, which is not necessarily based on restrictive regulations (as opposed to Horner's view (2017: 6)) and focuses in particular on the linkage between (unequal) actors.

8. List of references

8.1. Bibliography

Alford, M., Phillips, N., 2018. The political economy of state governance in global production networks: change, crisis and contestation in the South African fruit sector. Review of International Political Economy 25 (1), 98-121.

Amengual, M., 2010. Complementary Labor Regulation: The Uncoordinated Combination of State and Private Regulators in the Dominican Republic. World Development 38 (3), 405-414.

Appadurai, A., 1988. The social life of things: Commodities in cultural perspective. Cambridge University Press, Cambridge.

Bailey, C., White, C., Pain, R., 1999. Evaluating qualitative research: dealing with the tension between 'science'and 'creativity'. Area 31 (2), 169-178.

Barrientos, S., Dolan, C., Tallontire, A., 2003. A gendered value chain approach to codes of conduct in African horticulture. World Development 31 (9), 1511-1526.

Barrientos, S., Knorringa, P., Evers, B., Visser, M., Opondo, M., 2016. Shifting regional dynamics of global value chains: Implications for economic and social upgrading in African horticulture. Environment and Planning A: Economy and Space 48 (7), 1266-1283.

Berg, C., Milmeister, M., 2011. Im Dialog mit den Daten das eigene Erzählen der Geschichte finden: Über die Kodierverfahren der Grounded-Theory-Methodologie. In: Mey, G., Mruck, K. (Eds.), Grounded Theory Reader. VS Verlag für Sozialwissenschaften, Wiesbaden, 303-332.

Birner, R., Resnick, D., 2010. The Political Economy of Policies for Smallholder Agriculture. World Development 38 (10), 1442-1452.

Botes, A., Metzger, D., 1990. Markets and Pricing Structures in the Caprivi and the Kavango Regions of Namibia. In: Csáki, C., Dams, T., Metzger, D., van Zyl, J. (Eds.), Agricultural Restructuring in Southern Africa. International Association of Agricultural Economists, Windhoek, 204-211.

Calavita, N., Krumholz, N., 2003. Capturing the Public Interest:Using Newspaper Op-Eds to Promote Planning in Conservative Times. Journal of Planning Education and Research 22 (4), 400-406.

Carter, C.R., Rogers, D.S., 2008. A framework of sustainable supply chain management: moving toward new theory. International journal of physical distribution & logistics management 38 (5), 360-387.

Chabane, N., 2002. An evaluation of the influences on price and production in the maize market following liberalisation. TIPS Forum, Mulersdrift, http://tips.org.za/files/566.pdf,

Charmaz, K., 2006. Constructing grounded theory: A practical guide through qualitative analysis. Sage, London.

Charmaz, K., Belgrave, L.L., 2012. Qualitative interviewing and grounded theory analysis. In: Jaber, F., Gubrium, J.A., Holstein, A.B., Marvasti, K.D. (Eds.), The SAGE handbook of interview research: The complexity of the craft. SAGE, Thousand Oaks, 347-365.

Clarke, A.E., Friese, C., Washburn, R., 2016. Situational analysis in practice: Mapping research with grounded theory. Routledge, London.

Coe, N.M., Hess, M., Yeung, H.W.-c., Dicken, P., Henderson, J., 2004. 'Globalizing' regional development: a global production networks perspective. Transactions of the Institute of British Geographers 29 (4), 468-484.

Coe, N.M., Hess, M., 2010. Local and regional development. In: Pike, A., Rodriguez-Pose, A., Tomaney, J. (Eds.), Handbook of local and regional development. Routledge, London, 128-138.

Collier, P., Dercon, S., 2014. African Agriculture in 50 Years: Smallholders in a Rapidly Changing World? World Development 63, 92-101.

Cook et al. [sic], I., 2006. Geographies of food: following. Progress in Human Geography 30 (5), 655-666.
Corbin, J.M., Strauss, A., 1990. Grounded theory research: Procedures, canons, and evaluative criteria. Qualitative sociology 13 (1), 3-21.
Dannenberg, P., Nduru, G.M., 2013. Practices in international value chains: the case of the Kenyan fruit and vegetable chain beyond the exclusion debate. Tijdschrift voor economische en sociale geografie 104 (1), 41-56.
Dannenberg, P., Diez, J.R., 2016. Socio-economic networks and value chains in the Global South – an institutional perspective. DIE ERDE – Journal of the Geographical Society of Berlin 147 (3), 169-172.
Department for International Development (DFID), Swiss Agency for Development and Cooperation (SDC), 2008. The operational guide for the making markets work for the poor (M4P) approach. https://www.enterprise-development.org/wp-content/uploads/m4pguide2015.pdf, 2019-01-10.
Diao, X., Hazell, P., Thurlow, J., 2010. The Role of Agriculture in African Development. World Development 38 (10), 1375-1383.
Dicken, P., 2015. Global Shift: Mapping the Changing Contours of the World Economy. Guilford, New York.
Dorward, A., Kydd, J., Poulton, C., 2005. Beyond liberalisation:"Developmental coordination" policies for African smallholder agriculture. IDS Bulletin 36 (2), 80-85.
Dunn, K., 2016. Interviewing. In: Hay, I. (Eds.), Qualitative research methods in human geography. Oxford University Press, Ontario, 149-188.
Elwood, S., 2010. Mixed methods: Thinking, doing, and asking in multiple ways. In: DeLyser, D., Herbert, S., Aitken, S., Crang, M., McDowell, L. (Eds.), The SAGE handbook of qualitative geography. Sage, Los Angeles, 94-113.
Emongor, R., Kirsten, J., 2009. The impact of South African supermarkets on agricultural development in the SADC: a case study in Zambia, Namibia and Botswana. Agrekon 48 (1), 60-84.
Evans, P.B., 1995. Embedded autonomy: States and industrial transformation. Princeton University Press, Princeton.
Falkner, R., Gupta, A., 2009. The limits of regulatory convergence: globalization and GMO politics in the south. International Environmental Agreements: Politics, Law and Economics 9 (2), 113-133.
Fengru, C., Guitang, L., 2018. Global Value Chains and Production Networks in China: Siemens and Huawei Case Studies. Elsevier Science & Technology, London.
Fitter, R., Kaplinksy, R., 2001. Who Gains from Product Rents as the Coffee Market Becomes More Differentiated? A Value-chain Analysis. IDS Bulletin 32 (3), 69-82.
Flick, U., 2006. An introduction to qualitative research. Sage Publications Limited, London.
Fold, N., 2014. Value chain dynamics, settlement trajectories and regional development. Regional Studies 48 (5), 778-790.
Frøystad, M., Hoffmann, J., Schade, K., 2008. Agriculture: Future Scenarios for Southern Africa Country Briefing – Namibia. https://www.iisd.org/sites/default/files/publications/ag_scenarios_south_africa_namibia.pdf, 2019-01-13.
Gereffi, G., 1994. The organization of buyer-driven global commodity

chains: How US retailers shape overseas production

networks. In: Gereffi, G., Korzeniewicz, M. (Eds.), Commodity

chains and global capitalism Greenwood Press, Westport, 95-122.
Gereffi, G., Humphrey, J., Kaplinsky, R., Sturgeon, T., 2001. Introduction: Globalisation, value chains and development. IDS bulletin 32 (3), 1-8.
Gereffi, G., Humphrey, J., Sturgeon, T., 2005. The governance of global value chains. Review of International Political Economy 12 (1), 78-104.

Gereffi, G., Mayer, F., 2006. Globalization and the Demand for Governance. The new offshoring of jobs and global development, 39-58.
Gereffi, G., 2014. Global value chains in a post-Washington Consensus world. Review of International Political Economy 21 (1), 9-37.
Gereffi, G., Lee, J., 2016. Economic and social upgrading in global value chains and industrial clusters: Why governance matters. Journal of Business Ethics 133 (1), 25-38.
Gereffi, G., 2018. Protectionism and Global Value Chains. In: Gereffi, G. (Eds.), Global Value Chains and Development: Redefining the Contours of 21st Century Capitalism. Cambridge University Press, Cambridge, 429-452.
Gereffi, G., Fernandez-Stark, K., 2018. Global Value Chain Analysis: A Primer (Second Edition). In: Gereffi, G. (Eds.), Global Value Chains and Development: Redefining the Contours of 21st Century Capitalism. Cambridge University Press, Cambridge, 305-342.
Gibbon, P., Ponte, S., 2005. Trading down: Africa, value chains, and the global economy. Temple University Press, Philadelphia.
Gibbon, P., Bair, J., Ponte, S., 2008. Governing global value chains: an introduction. Economy and Society 37 (3), 315-338.
Given, L.M., 2008. The Sage encyclopedia of qualitative research methods. Sage publications, Thousand Oaks.
Glaser, B.G., Strauss, A.L., 2010. Grounded theory: Strategien qualitativer Forschung. Huber, Bern.
GRN, 2017. Namibia Zero Hunger Road Map Strategic Review Report. http://un.org.na/home_htm_files/WFP%20ZERO%20STRATEGIC%20REVIEW%20REPORT.pdf, 2019-07-10.
Hazell, P., Poulton, C., Wiggins, S., Dorward, A., 2010. The Future of Small Farms: Trajectories and Policy Priorities. World Development 38 (10), 1349-1361.
Horner, R., 2017. Beyond facilitator? State roles in global value chains and global production networks. Geography Compass 11 (2), e12307.
Horner, R., Alford, M., 2019. The roles of the state in global value chains: an update and emerging agenda. https://ideas.repec.org/p/bwp/bwppap/362019.html, 2019-07-23.
Humphrey, J., Schmitz, H., 2001. Governance in global value chains. IDS Bulletin 32 (3), 19-29.
Humphrey, J., 2006. Policy implications of trends in agribusiness value chains. The European journal of development research 18 (4), 572-592.
Humphrey, J., Navas-Alemán, L., 2010. Value chains, donor interventions and poverty reduction: A review of donor practice. IDS Research Reports 63. doi: 10.1111/j.2040-0217.2010.00063_2.x, 2019-01-26.
Jackson, P., Ward, N., Russell, P., 2006. Mobilising the commodity chain concept in the politics of food and farming. Journal of Rural Studies 22, 129-141.
Jaffee, S., Kopicki, R., Labaste, P., Christie, I., 2003. Modernizing Africa's agro-food systems: analytical framework and implications for operations.
Jarosz, L., 2014. Comparing food security and food sovereignty discourses. Dialogues in Human Geography 4 (2), 168-181.
Jayne, T.S., Jones, S., 1997. Food marketing and pricing policy in Eastern and Southern Africa: A survey. World Development 25 (9), 1505-1527.
Kamwi, J.M., Chirwa, P.W., Manda, S.O., Graz, P.F., Kätsch, C., 2015. Livelihoods, land use and land cover change in the Zambezi Region, Namibia. Population and Environment 37 (2), 207-230.
Kangumu, B., 2011. Contesting Caprivi: A history of colonial isolation and regional nationalism in Namibia. Basler Afrika Bibliographien, Basel.
Kaplinsky, R., Morris, M., 2001. A handbook for value chain research. http://www.prism.uct.ac.za/Papers/VchNov01.pdf, 2019-01-13.
Kaplinsky, R., Morris, M., 2016. Thinning and thickening: Productive sector policies in the era of global value chains. The

European Journal of Development Research 28 (4), 625-645.
Kapuya, T., Meyer, F.H., Kirsten, J.F., 2013. Modelling the impact of the 'fast track' land reform policy on Zimbabwe's maize sector. Development Southern Africa 30 (3), 417-436.
Kerr, R.B., 2012. Lessons from the old Green Revolution for the new: Social, environmental and nutritional issues for agricultural change in Africa. Progress in Development Studies 12 (2-3), 213-229.
Knigge, L., Cope, M., 2006. Grounded visualization: integrating the analysis of qualitative and quantitative data through grounded theory and visualization. Environment and Planning A 38 (11), 2021-2037.
Krejci, C., Beamon, B., 2015. Impacts of Farmer Coordination Decisions on Food Supply Chain Structure. Journal of Artificial Societies and Social Simulation 18 (2), 19.
Lee, Y.-S., Heo, I., Kim, H., 2014. The role of the state as an inter-scalar mediator in globalizing liquid crystal display industry development in South Korea. Review of International Political Economy 21 (1), 102-129.
Louw, A., Jordaan, D., Ndanga, L., Kirsten, J.F., 2008. Alternative marketing options for small-scale farmers in the wake of changing agri-food supply chains in South Africa. Agrekon 47 (3), 287-308.
Lutz, C., Tadesse, G., 2017. African farmers' market organizations and global value chains: competitiveness versus inclusiveness. Review of Social Economy 75 (3), 318-338.
Marcus, G.E., 1995. Ethnography in/of the world system: The emergence of multi-sited ethnography. Annual review of anthropology 24 (1), 95-117.
Matshe, I., 2009. Boosting smallholder production for food security: some approaches and evidence from studies in sub-Saharan Africa. Agrekon 48 (4), 483-511.
Mattissek, A., Pfaffenbach, C., Reuber, P., 2013. Methoden der empirischen Humangeographie. Westermann, Braunschweig.
Mayer, F., 2014. Leveraging private governance for public purpose: Business, civil society and the state in labour regulation. Handbook of the international political economy of governance, 344-360.
Mayer, F.W., Phillips, N., Posthuma, A.C., 2017. The political economy of governance in a 'global value chain world'. New Political Economy 22 (2), 129-133.
McCullough, E.B., Pingali, P.L., Stamoulis, K.G., 2008. Small Farms and the Transformation of Food Systems: An Overview. In: McCullough, E.B., Pingali, P.L., Stamoulis, K.G. (Eds.), The transformation of agri-food systems: globalization, supply chains and smallholder farmers

earthscan, FAO, London,
Mello, J., Flint, D.J., 2009. A refined view of grounded theory and its application to logistics research. Journal of Business Logistics 30 (1), 107-125.
Mendelsohn, J., 2006. Farming systems in Namibia. Research & Information Services of Namibia, Windhoek.
Mosley, L., 2017. Workers' rights in global value chains: possibilities for protection and for peril. New Political Economy 22 (2), 153-168.
Msangi, J.P., 2014. Food security among small-scale agricultural producers in southern Africa. Springer, Cham.
Muir-Leresche, K., Muchopa, C., 2006. Agricultural marketing. In: Rukuni, M., Tawonezvi, P., Eicher, C., Munyuki-Hungwe, M., Matondi, P. (Eds.), Zimbabwe's Agricultural Revolution Revisited. University of Zimbabwe (UZ) Publications/Michigan State University (MSU), Harare, 299-319.
Murphy, J.T., 2008. Economic Geographies of the Global South: Missed Opportunities and Promising Intersections with Development Studies. Geography Compass 2 (3), 851-873.
Neilson, J., Pritchard, B., Yeung, H.W.-C., 2014. Global value chains and global production networks in the changing

international political economy: An introduction. Review of International Political Economy 21 (1), 1-8.
NSA, 2016. The Namibia Labour Force Survey 2016 Report. https://nsa.org.na/microdata1/index.php/catalog/25, 2019-07-05.
Öniş, Z., Şenses, F., 2005. Rethinking the Emerging Post-Washington Consensus. Development and Change 36 (2), 263-290.
Ortmann, G.F., King, R.P., 2010. Research on agri-food supply chains in Southern Africa involving small-scale farmers: Current status and future possibilities. Agrekon 49 (4), 397-417.
Ouma, S., Boeckler, M., Lindner, P., 2013. Extending the margins of marketization: Frontier regions and the making of agro-export markets in northern Ghana. Geoforum 48, 225-235.
Phillips, N., 2016. Labour in global production: reflections on Coxian insights in a world of global value chains. Globalizations 13 (5), 594-607.
Pingali, P., 2010. Agriculture Renaissance: Making "Agriculture for Development" Work in the 21st Century. In: Pingali, P., Evenson, R. (Eds.), Handbook of Agricultural Economics. Elsevier, Amsterdam, 3867-3894.
Ponte, S., Sturgeon, T., 2014. Explaining governance in global value chains: A modular theory-building effort. Review of International Political Economy 21 (1), 195-223.
Ravenhill, J., 2014. Global value chains and development. Review of International Political Economy 21 (1), 264-274.
Reuber, P., Gebhardt, H., 2011. Wissenschaftliches Arbeiten in der Geographie. Einführende Gedanken. In: Gebhardt, H., Glaser, R., Radtke, U., Reuber, P. (Eds.), Geographie: Physische Geographie und Humangeographie. Springer, Heidelberg, 89-101.
Riisgaard, L., Bolwig, S., Ponte, S., Du Toit, A., Halberg, N., Matose, F., 2010. Integrating poverty and environmental concerns into value-chain analysis: a strategic framework and practical guide. Development policy review 28 (2), 195-216.
Rivoli, P., 2015. The travels of a t-shirt in the global economy: An economist examines the markets, power, and politics of world trade. John Wiley & Sons, Hoboken, NJ.
Rodrik, D., 2006. Goodbye Washington Consensus, Hello Washington Confusion? A Review of the World Bank's Economic Growth in the 1990s: Learning from a Decade of Reform. Journal of Economic Literature 44 (4), 973-987.
Sahota, P.S., Lemon, M., Sarajevo, M., 2016. Transferable case-based lessons from value chain development in Kenya. Food Chain 6 (1), 1-21.
Schmitz, H., 2005. Value chain analysis for policy-makers and practitioners. https://www.researchgate.net/profile/Hubert_Schmitz/publication/252244466_Value_Chain_Analysis_for_Policy-Makers_and_Practitioners/links/56a75fdc08ae997e22bbd8e3/Value-Chain-Analysis-for-Policy-Makers-and-Practitioners.pdf, 2019-01-24.
Scoones, I., Devereux, S., Haddad, L., 2005. Introduction: New directions for African agriculture. IDS Bulletin 36 (2), 1-12.
Sehring, J., 2003. Post-Washington Consensus und PRSP-Wende in Der Weltbankpolitik? Inst. für Ethnologie und Afrikastudien, Mainz.
Smith, A., Barbu, M., Campling, L., Harrison, J., Richardson, B., 2018. Labor Regimes, Global Production Networks, and European Union Trade Policy: Labor Standards and Export Production in the Moldovan Clothing Industry. Eocnomic Geography, 1-25.
Strauss, A.L., 1987. Qualitative analysis for social scientists. Cambridge university press, Cambridge.
Strauss, A.L., 2011. „Forschung ist harte Arbeit, es ist immer ein Stück Leiden damit verbunden. Deshalb muss es auf der anderen Seite Spaß machen". In: Mey, G., Mruck, K. (Eds.), Grounded Theory Reader. VS Verlag für Sozialwissenschaften, Wiesbaden, 69-78.

Strübing, J., 2014. Grounded Theory: Zur sozialtheoretischen und epistemologischen Fundierung eines pragmatistischen Forschungsstils. VS Verlag für Sozialwissenschaften, Wiesbaden.
Trienekens, J.H., 2011. Agricultural value chains in developing countries; A framework for analysis. International Food Agribusiness Management Review 14 (2), 51-83.
Visser, M., 2019. Preparing the Ground for Unrest: Private and Public Regulation of Labour in the Fresh-Fruit Global Value Chain. In: Scholvin, S., Black, A., Revilla Diez, J., Turok, I. (Eds.), Value Chains in Sub-Saharan Africa: Challenges of Integration into the Global Economy. Springer International Publishing, Cham, 167-183.
Weatherspoon, D.D., Reardon, T., 2003. The Rise of Supermarkets in Africa: Implications for Agrifood Systems and the Rural Poor. Development Policy Review 21 (3), 333-355.
Werner, M., Bair, J., Fernández, V.R., 2014. Linking Up to Development? Global Value Chains and the Making of a Post-Washington Consensus. Development and Change 45 (6), 1219-1247.
Wolff, S., 2004. Analysis of Documents and Records. In: Jenner, B., Flick, U., von Kardoff, E., Steinke, I. (Eds.), A companion to qualitative research. Sage, London, 284-289.
Yeung, H.W.-c., 2009. Regional Development and the Competitive Dynamics of Global Production Networks: An East Asian Perspective. Regional Studies 43 (3), 325-351.

8.2. Sources: Official Documents and Press Releases

Topic ID	Topic	Institution/Author	Year	Title	Type of Docur
1	Agriculture	AgriBusDev	n.Y.	AGRIBUSDEV - Information Brochure	Brochure
1	Agriculture	Ministry of Agriculture, Water and Forestry	2008	Green Scheme Policy	Policy Paper
1	Agriculture	Ministry of Agriculture, Water and Forestry	2012	Annual Report 2011/12	Report
1	Agriculture	Ministry of Agriculture, Water and Forestry	2014	Strategic Plan 2012/13-2016/17	Implementati
1	Agriculture	Ministry of Agriculture, Water and Forestry	2015	Namibia Agricultural Policy	Policy paper
1	Agriculture	Ministry of Agriculture, Water and Forestry	2015	Annual Report 2014/15	Report
1	Agriculture	Ministry of Agriculture, Water and Forestry	2016	Annual Report 2015/16	Report
1	Agriculture	Ministry of Agriculture, Water and Forestry	2017	Annual Report 2016/17	Report
1	Agriculture	Ministry of Agriculture, Water and Forestry	2017	Dry Land Crop Production Program	PR
1	Agriculture	Ministry of Agriculture, Water and Forestry	2018	Strategic Plan 2017/18-2021/22	Implementati
1	Agriculture	Ministry of Agriculture, Water and Forestry	n.Y.	MAWF invites Agronomists Activist Group 11 to constructive dialogue	PR
1	Agriculture	Ministry of Agriculture, Water and Rural Development	1995	National Agricultural Policy	Policy paper
1	Agriculture	Namibian Agronomic Board	2013	The NAB awards grain producers in the Zambezi Region	PR
1	Agriculture	Namibian Agronomic Board	2013	Innovative Public Private Partnership announced in the agronomic sector	PR
1	Agriculture	Namibian Agronomic Board	2014	Fred Mwabi is the 2014 Zambezi Dryland Maize Champion	PR
1	Agriculture	Namibian Agronomic Board	2016	Namibia guarantees maize for ist citizens but at a price	PR
1	Agriculture	Namibian Agronomic Board	2017	NAB Master Agronomist 2017 Ebbi Fischer, Farm Okongeama near Hochfeld	PR
1	Agriculture	Namibian Agronomic Board	2017	Good Maize Harvest Predicted Despite Army Worms	PR
1	Agriculture	Namibian Agronomic Board	2017	The champion communal grain farmers in the Zambezi region honoured	PR
1	Agriculture	Namibian Agronomic Board	2017	NAB award: Mega Irrigation Food Producer: 2017	PR
1	Agriculture	Namibian Agronomic Board	2018	2018 Master Agronomist Crowned	PR
1	Agriculture	Namibian Agronomic Board	2018	2018 Dry-Land Maize Producers Awarded	PR
1	Agriculture	Namibian Agronomic Board	2019	2019 Master Agronomist Farmer Crowned	PR
1	Agriculture	Namibia Statistics Agency	2015	Namibia Census of Agriculture 2013/2014 Commercial, Leasehold and Resettlement Farms	Report
1	Agriculture	Namibia Statistics Agency	2015	Namibia Census of Agriculture 2013/2014 Communal Sector Report	Report
2	Agriculture, Trade	AMTA	2019	White maize purchased by millers in Zambezi -2018 (internal document)	Statistics
2	Agriculture, Trade	AMTA	n.Y.	AMTA Corporate Brochure	Brochure
2	Agriculture, Trade	Ministry of Agriculture, Water and Forestry	2011	Namibian Agriculture Marketing and Trade Policy and Strategy	Policy Paper/I
2	Agriculture, Trade	Namibian Agronomic Board	2013	NAB Annual report No. 26	Report
2	Agriculture, Trade	Namibian Agronomic Board	2014	Annual report	Report
2	Agriculture, Trade	Namibian Agronomic Board	2015	Annual report No. 28	Report
2	Agriculture, Trade	Namibian Agronomic Board	2016	Annual report 2015/16. no 29	Report
2	Agriculture, Trade	Namibian Agronomic Board	2017	Annual report 2016/17 No. 30	Report
2	Agriculture, Trade	Namibian Agronomic Board	2018	White maize statistics (Webpage)	Statistics
2	Agriculture, Trade	Government of the Republic of Namibia	1992	No. 465 Agronomic Industry Act 20 of 1992	Law
2	Agriculture, Trade	Government of the Republic of Namibia	2014	No. 5523/247 Appointment of agents to assist the Namibian Agronomic Board: Agronomic Ind	General Notic
3	Agriculture, Food Security	Southern African Development Community	2004	Dar-Es-Salaam Declaration on Agriculture and Food Security in the SADC Region	Declaration
4	Development	Government of the Republic of Namibia	2004	Namibia Vision 2030. Policy Framework for Long-Term National Development	Policy Paper
4	Development	Government of the Republic of Namibia	2012	NDP_4 Namibia's Fourth National Development Plan 2012/13-2016/17	Policy Paper
4	Development	Government of the Republic of Namibia	2016	HPP Harambee Prosperity Plan 2016/17-2019/20. Namibian Government's Action Plan toward	Implementati
4	Development	Government of the Republic of Namibia	2017	NDP5 Namibia's 5th National Development Plan. Working together towards prosperity	Policy Paper
4	Development	Government of the Republic of Namibia	2017	NDP5 Implementation Plan together towards prosperity	Implementati
5	Drought	Office of the Prime Minister	2019	Drought Response Plan - Disaster Risk Management	Action Plan
5	Drought	Government of the Republic of Namibia	1997	National Drought Policy & Strategy	Policy Paper/I
5	Drought	Government of the Republic of Namibia	2016	Declaration of State of Emergency: National Disaster (Drought): Namibian Constitution	Proclamation
6	Food Safety	Minister of Agriculture, Water and Forestry	2014	Namibia Food Safety Policy	Policy Paper
6	Food Safety	Government of the Republic of Namibia	1994	Regulations relating to Grading and Classification of Maize	Regulations
6	Food Safety	Government of the Republic of Namibia	2006	Biosafety Act 7 of 2006	Law
7	Food Security	Ministry of Agriculture, Water and Forestry	2012	Food Security Situation in Namibia	Report
7	Food Security	Namibian Agronomic Board	2016	Major step towards staple food fortification	PR
7	Food Security	National Early Warning and Food Information System	2013	Agricultural Inputs and Household Food Security Situation Report December 2013	Report
7	Food Security	Government of the Republic of Namibia	2013	Crop Prospect, Food Security and Drought Situation Report	Report
7	Food Security	Government of the Republic of Namibia	2016	Namibia Zero Hunger Road Map (2016-2020)	Implementati
7	Food Security	Government of the Republic of Namibia	2018	Crop Prospect, Food Security and Drought Situation Report	Report
7	Food Security	Government of the Republic of Namibia	2019	Crop Prospect, Food Security and Drought Situation Report	Report
8	Industrialisation	Ministry of Trade and Industry	2013	Growth at Home- Namibia's Execution Strategy for Industrialisation	Implementati
8	Industrialisation	Ministry of Trade and Industry	n.Y.	"Growth at Home" A strategy for industrial development	Brochure
9	Land-Use	Ministry of Lands and Resettlement	2015	Integrated Regional Land Use Plan for the Zambezi Region (Volume 2)	Implementati
9	Land-Use	Ministry of Lands and Resettlement	2015	Baseline Report (Volume 1) for the Zambezi Integrated Regional Land-use Plan	Report
10	Rural Development	Government of the Republic of Namibia	2013	National Rural Development Strategy 2013/14-2017/18	Implementati
11	Trade	AMTA - Standards and Trade Division	2017	Guidelines for Agronomic and Horticultural Trade Permits	Brochure
11	Trade	Namibia Statistics Agency	2014	Informal Cross Border Trade	Report
11	Trade	Namibia Statistics Agency	2016	Informal Cross Border Trade	Report
11	Tax	Government of the Republic of Namibia	2000	Value-Added Tax Act 10 of 2000	Law
11	Tax	Government of the Republic of Namibia	2003	No. 2990/116 Agronomic Industry Act, 1992: Imposition of general levy on certain categories (	Government N
11	Tax	Government of the Republic of Namibia	2014	No. 5645/268: Amendment of Government Notive No. 147 of 30 August 2002, relating to impo	Government N
11	Trade	WTO	2013	WT/TPR/S/324 - Namibia	Report
12	Other	Namibia Statistics Agency	2011	Namibia 2011 Population & Housing Census Main Report	Report
12	Other	Namibia Statistics Agency	2011	Population and Housing Census. Caprivi Regional Tables Based on 4th Delimination	Report
12	Other	Namibia Statistics Agency	2013	The Namibia Labour Force Survey 2013 Report	Report
12	Other	Namibia Statistics Agency	2014	The Namibia Labour Force Survey 2014 Report	Report
12	Other	Namibia Statistics Agency	2016	The Namibia Labour Force Survey 2016 Report	Report
12	Other	Namibia Statistics Agency	2018	The Namibia Labour Force Survey 2018 Report	Report
7	Food Security	Ministry of Education, Arts and Culture	2017	School Feeding Celebrated as an Investment In Namibia's Future	PR
7	Food Security	AMTA	2018	National Strategic Food Reserves	Information
7	Food Security	Government of the Republic of Namibia	2017	Namibia Zero Hunger Road Map Strategic Review Report	Report
2	Agriculture, Trade	Southern African Customs Union	2002	2002 Southern Union Customs Union (SACU) Agreement	Agreement
	Development	National Planning Committee	2019	Development Programmes. Estimates of Expenditure. Medium-term Expenditure Framework :	Implementati

8.3. Sources: Newspaper Articles

Newspaper	Date	Title	Author	Short form
Allgemeine Zeitung Namibia	2010-08-11	Gute Ernten - dennoch Hunger	N.N.	Allgemeine Zeitung Namibia 2010a
	2010-10-07	Reis und Mais werden billiger	N.N.	Allgemeine Zeitung Namibia 2010b
	2010-11-23	NAB begeht sein 25. Jubiläum	N.N.	Allgemeine Zeitung Namibia 2010c
	2011-03-07	Mehl, Nudeln teurer	N.N.	Allgemeine Zeitung Namibia 2011a
	2011-05-27	Teilweise hohe Vieh- und Ernteverluste im Norden	N.N.	Allgemeine Zeitung Namibia 2011b
	2011-09-05	Schlechte Böden bereiten Sorge	N.N.	Allgemeine Zeitung Namibia 2011c
	2011-12-12	Rekordernte an Mais eingefahren	N.N.	Allgemeine Zeitung Namibia 2011d
	2012-11-20	Gute Ernte lässt Preis sinken	N.N.	Allgemeine Zeitung Namibia 2012
	2013-04-24	Dürre nagt bereits am Haushalt	N.N.	Allgemeine Zeitung Namibia 2013a
	2013-06-21	Die Verschwendung von Kulturland	N.N.	Allgemeine Zeitung Namibia 2013b
	2013-07-30	Saat für Dürre- und Flutopfer	N.N.	Allgemeine Zeitung Namibia 2013c
	2015-06-22	Modifizierter Mais bald kontrolliert	N.N.	Allgemeine Zeitung Namibia 2015a
	2015-08-07	Verlängerte Dürrehilfe verlangt	N.N.	Allgemeine Zeitung Namibia 2015b
	2016-04-27	Trockenheit kostet Staat viel Geld	Clemens von Alten	Allgemeine Zeitung Namibia 2016a
	2016-06-13	Kabinett verlängert Dürrehilfe	N.N.	Allgemeine Zeitung Namibia 2016b
	2017-01-30	Mais- & Weizenmehl billiger	N.N.	Allgemeine Zeitung Namibia 2017a
	2017-03-06	Bokomo senkt viele Preise	N.N.	Allgemeine Zeitung Namibia 2017b
	2017-04-06	Gute Maisernte trotz Kommando-Raupe erwartet	N.N.	Allgemeine Zeitung Namibia 2017c
	2018-04-03	Vier verschiedene Saattypen, eine dreiteilige Serie	N.N.	Allgemeine Zeitung Namibia 2018
	2019-01-07	Protest begleitet GMO-Auflagen	Clemens von Alten	Allgemeine Zeitung Namibia 2019a
	2019-01-10	Nichts mit Verschwörung zu tun	Clemens von Alten	Allgemeine Zeitung Namibia 2019b
	2019-04-24	Dürre führt zu Missernte	N.N.	Allgemeine Zeitung Namibia 2019c
	2019-05-08	Premierministerin präzisiert Dürrehilfe - Notstand verlängert	N.N.	Allgemeine Zeitung Namibia 2019d
Namibia Economist	2012-02-24	Local industries ask for protection	N.N.	Namibia Economist 2012a
	2012-06-29	Controlled products boost economy	N.N.	Namibia Economist 2012b
	2012-07-27	Namib Mills downplays food price increases	N.N.	Namibia Economist 2012c
	2013-02-22	Agronomic Board condemns genetically modified maize in retail products	N.N.	Namibia Economist 2013a
	2013-04-26	Maize yields 11 tonnes per hectare under irrigation	N.N.	Namibia Economist 2013b
	2013-08-02	Ministry to supply free seeds to drought affected farmers	N.N.	Namibia Economist 2013c
	2013-12-13	Namibian maize test positive for GMO	N.N.	Namibia Economist 2013d
	2014-07-18	Agronomic Board registers second largest maize harvest	N.N.	Namibia Economist 2014e
	2015-01-16	Household food security weakens	N.N.	Namibia Economist 2015a
	2015-02-27	Maize meal price increase	N.N.	Namibia Economist 2015b
	2015-02-27	National maize stocks hit low	N.N.	Namibia Economist 2015c
	2015-02-27	Namib Mills	N.N.	Namibia Economist 2015d
	2015-04-10	Food security weakens at household level	N.N.	Namibia Economist 2015e
	2015-07-17	Millers urged to stop price increases	N.N.	Namibia Economist 2015f
	2015-07-31	Food security continues to weaken	N.N.	Namibia Economist 2015g
	2016-04-15	Drought and levies impact cereals	N.N.	Namibia Economist 2016a
	2016-08-05	Price relief expected on stronger Rand	N.N.	Namibia Economist 2016b
	2016-09-09	Major step to staple food fortification	Musa Carter	Namibia Economist 2016c
	2017-09-01	Namib Mills gives clarity on shortage of silo facilities	Donald Matthys	Namibia Economist 2017
	2018-07-20	Namib Mills announces price hike on majority products	Donald Matthys	Namibia Economist 2018a
	2018-08-24	Zambezi dryland maize growers have an unfair advantage - rain!	N.N.	Namibia Economist 2018b
	2018-08-31	SADC cereal stocks sufficient for now but outlook is precarious	N.N.	Namibia Economist 2018c
	2019-01-08	Online petition against Namib Mills to stop GMO maize imported into the country	Mandisa Rasmeni	Namibia Economist 2019a
	2019-05-27	Government to prioritise local producers for food supply tenders	Donald Matthys	Namibia Economist 2019b
New Era Live	2013-12-17	The worst drought in memory	Deon Schlechter	New Era Live 2013
	2014-06-25	Maize production doubles after drought	Deon Schlechter	New Era Live 2014a
	2014-11-18	NAB does not support GMOs products	Deon Schlechter	New Era Live 2014b
	2015-08-03	Drought: Namibia to import 210 000 tonnes of cereal	N.N.	New Era Live 2015a
	2015-08-12	Namib Mills to shut down Katima Mulilo plant	N.N.	New Era Live 2015b
	2015-10-12	More Zambezi land available for green schemes	N.N.	New Era Live 2015c
	2015-11-18	Green schemes ordered to cultivate 'all hectares'	N.N.	d
	2016-10-19	Namibia to harvest more than 40 000 tonnes of white maize	N.N.	New Era Live 2016a
	2016-12-14	Zambezi to determine drought impact after harvest	N.N.	New Era Live 2016b
	2017-06-06	Food prices likely to fall as RSA expects a record maize harvest	N.N.	New Era Live 2017a
	2017-08-08	Close to 30,000 needy people benefit from Namib Mills nutrition initiative	N.N.	New Era Live 2017b
	2017-08-16	Northern communal farmers sit with surplus grain	Albertina Nakale	New Era Live 2017c
	2017-09-04	Zambezi demands fair prices for maize	Albertina Nakale	New Era Live 2017d
	2017-10-17	Namibia must tackle food security challenges	N.N.	New Era Live 2017e
	2017-11-21	Government commits to crop subsidies	Nuusita Ashipala	New Era Live 2017f
	2018-01-09	Farmers stop ploughing due to lack of rains	Aaron Mushaukwa	New Era Live 2018a
	2018-01-10	Namibia bans food imports from Zambia	Aaron Mushaukwa	New Era Live 2018b
	2018-02-06	February rains critical for crop production	N.N.	New Era Live 2018c
	2018-02-09	Zambezi farmers re-cultivate fields	Aaron Mushaukwa	New Era Live 2018d
	2018-08-23	Agronomic board awards best farmers in Zambezi	Aaron Mushaukwa	New Era Live 2018e
	2018-11-13	Food imports remain sky-high	Kuzeeko Tjitemisa	New Era Live 2018f
	2018-12-03	Venaani vows to fight tribalism in Zambezi	Aaron Mushaukwa	New Era Live 2018g
	2019-01-15	Prospects for Rain Dwindle As Heat Stress Affect Crops and Livestock	N.N.	New Era Live 2019a
	2019-01-29	Heavy storm wreaks havoc in Zambezi	Albertina Nakale	New Era Live 2019b
	2019-02-13	San resort to wild fruits for survival	Albertina Nakale	New Era Live 2019c
	2019-02-19	Heavy rainfall pounds Zambezi region	Aaron Mushaukwa	New Era Live 2019d
	2019-02-26	Zambezi farmers face fall armyworm outbreak	John Muyamba	New Era Live 2019e
	2019-02-26	Agriculture is the Alpha and Omega of Namibian economy	Sioni Ikela	New Era Live 2019f

	2019-03-12	30% of land at Etunda Irrigation not under production	Nuusita Ashipala	New Era Live 2019g
	2019-03-18	Buy local' policy needed to curb high import bill	Kuzeeko Tjitemisa	New Era Live 2019h
	2019-03-19	Trouble looms in absence of March rains	Deon Schlechter	New Era Live 2019i
	2019-04-04	Ndong-Linena, ORIP, Kalimbeza to be leased out	John Muyamba	New Era Live 2019k
	2019-04-16	Farmers unions urge government to declare drought a national disaster	Deon Schlechter	New Era Live 2019l
	2019-05-07	President declares state of emergency over drought	Kuzeeko Tjitemisa	New Era Live 2019m
	2019-05-08	Namibia: N$573 Million Drought War Chest announced	Kuzeeko Tjitemisa	New Era Live 2019n
	2019-05-08	Shadikongoro Projects Bumper Harvest	John Muyamba	New Era Live 2019o
	2019-05-10	Save nation from hunger, governors told	Kuzeeko Tjitemisa	New Era Live 2019p

(Newspaper)	(Date)	(Title)	(Author)	(Short form)
The Namibian	2004-03-11	Maize farmers are smiling	Werner Menges	The Namibian 2004a
	2004-08-17	Food self-sufficiency still out of Namibia's reach	Lindsay Dentlinger	The Namibian 2004b
	2008-11-21	The State of Rural Development in Namibia	Alexactus T. Kaure	The Namibian 2008
	2015-05-06	Maize prices to remain under pressure	Chamwe Kaira	The Namibian 2015
	2016-04-12	Maize meal prices to rise	N.N.	The Namibian 2016a
	2016-04-13	Namibia, SA discuss maize shortage solution	N.N.	The Namibian 2016a
	2016-09-27	Zambezi residents prefer cheaper, smuggled maize meal from Zambia	N.N.	The Namibian 2016c
	2017-06-21	Zambezi farmers stuck with bumper maize harvest	Lugeretzia Kooper	The Namibian 2017a
	2017-08-28	Smuggling at Katima concerns police	N.N.	The Namibian 2017b
	2018-01-26	Zambezi farmers lose hope	Lugeretzia Kooper	The Namibian 2018a
	2018-04-18	Villagers refuse to leave flooded homes	Lugeretzia Kooper	The Namibian 2018a
	2018-05-18	Green schemes need N$111m	N.N.	The Namibian 2018b
	2019-01-25	Amta to buy surplus mahangu	Gabriel Erastus	The Namibian 2019a
	2019-02-05	Division over modified crops import	Nghinomenwa Erastus	The Namibian 2019b
	2019-02-12	Farmers must work together to remain profitable'	Denene Erasmus	The Namibian 2019c
	2019-02-26	Army worm outbreak hits Zambezi farmers hard	Lugeretzia Kooper	The Namibian 2019d
	2019-03-15	Food shortages to hit some households	Nghinomenwa Erastus, Adam Hartman, Luqman Cloete	The Namibian 2019e
	2019-04-08	Govt to lease out 7 green schemes	Nghinomenwa Erastus	The Namibian 2019f
	2019-04-17	Drought ravages crops in Zambezi	Lugeretzia Kooper	The Namibian 2019g
	2019-04-25	Poor rainfall impacts country's agricultural production	Luqman Cloete	The Namibian 2019h
	2019-05-06	White maize production takes a dip	Nghinomenwa Erastus	The Namibian 2019i
	2019-05-09	NORED cuts off power to five green schemes	Nghinomenwa Erastus	The Namibian 2019k
	2019-05-10	Worst Drought Ever - governors	Ndanki Kahiurika, Adam Hartman, Tuyeimo Haidula, Luqman Cloete	The Namibian 2019l
	2019-06-19	Tobacco plant approval draws criticism	Ndanki Kahiurika	The Namibian 2019m
The Namibian Sun	2014-01-29	The Ministry of Agriculture creates unfair competition	N.N.	The Namibian Sun 2014
	2015-02-24	Drought fears lead to maize price hike	N.N.	The Namibian Sun 2015a
	2015-04-01	No 'white elephants' für agri ministry	Ellanie Smit	The Namibian Sun 2015b
	2015-08-12	Namib Mills to close Katima Mulilo mill	Ellanie Smit	The Namibian Sun 2015c
	2016-07-28	Namibia's food security very bleak	Luqman Cloete	The Namibian Sun 2016
	2017-01-30	Maize meal drops by 12%	N.N.	The Namibian Sun 2017a
	2017-03-02	Logging at Zambezi Green scheme still on hold	N.N.	The Namibian Sun 2017b
	2017-06-06	Maize imports halted	Ellanie Smit	The Namibian Sun 2017c
	2017-09-06	Food Namibia ConfEx focus on food security	N.N.	The Namibian Sun 2017d
	2018-02-13	Farmer fills maize meal gap	N.N.	The Namibian Sun 2018a
	2018-05-21	Agribusdev guns for 4 000 jobs	Ellanie Smit	The Namibian Sun 2018b
	2018-12-04	Massive agri project launched	N.N.	The Namibian Sun 2018c
	2019-06-13	Green light for tobacco project	N.N.	The Namibian Sun 2019a
	2019-06-21	Chewing on the tobacco politics	N.N.	The Namibian Sun 2019b
	2019-06-21	Simaata sings tobacco praises	Catherine Sasman	The Namibian Sun 2019c
The Villager	2013-08-27	Drought: Sadc mislead Namibia on weather forecast	Linekela Halwoodi	The Villager 2013a
	2013-09-23	Increase green scheme to 32 000 ha	Linekela Halwoodi	The Villager 2013b
	2015-04-13	Poor harvest for commercial, communal farming	John Musheko	The Villager 2015a
	2015-08-31	NCT calls for ministerial council on GMOs	Donald Matthys	The Villager 2015b
	2017-04-13	Improvement noted in rainfall conditions	Kelvin Chiringa	The Villager 2017
	2018-10-30	Tobacco and Maize project not implmented - Shifeta	Rodney Pienaar	The Villager 2018
Caprivi Freedom	2004-10-04	Caprivi producers up in arms over maize prices	Risco Lumamezi	Caprivi Freedom 2004a
	2004-10-14	NAB close maize beyond boarders	Risco Lumamezi	Caprivi Freedom 2004b
Energy100fm	2016-04-01	No maize shortage but price worrisome	N.N.	Energy100fm 2016
Lelamobile	2015-03-09	Levy on import of certain grains negatively impacts agricultural	N.N.	Lelamobile 2015a
	2015-06-08	Zambezi Green Scheme decision to be made by September	N.N.	Lelamobile 2015b
	2019-02-18	Food security outlook stable: Agricultural report	N.N.	Lelamobile 2019
News24	2019-01-02	Maize production extremely critical	N.N.	News24 2019
The Caprivi Vision	2012-10-19	Farmers urged to work hard	N.N.	The Caprivi Vision 2012
	2017-08-03	Chinese timber cutting for green scheme under scrutiny	N.N.	The Caprivi Vision 2017
Victoria Falls 24	2011-08-03	Land available für Green Scheme in the Caprivi Strip, 5km from Zambezi River	Albertina Nakale	Victoria Falls 24 2011
Windhoek Observer	2017-09-08	Maize price stabilises	Chamwe Kaira	Windhoek Observer 2017
	2018-06-29	Agronomic Board rules out maize, wheat price increases	Chamwe Kaira	Windhoek Observer 2018

Versicherung an Eides statt

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Köln, 30.07.2019

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Carolina Kiesel