

Agricultural growth corridors in Sub-Saharan Africa - New hope for territorial rural development or another non-starter?

The case of the Southern Agricultural Growth Corridor of Tanzania

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1. Agricultural growth corridors in Sub-Sahara Africa

Agricultural growth corridors (AGC) – larger stretches of land along a central transport line flagged for intensified efforts to invest in agriculture - are a relatively recent approach to agricultural and broader economic development in Sub-Saharan Africa (SSA) (Gálvez-Nogales 2014) but are following older approach of spatial development initiatives (SDI) (World Bank 2009). Broader economic development is highlighted here because most African AGCs do not simply focus on agricultural production but on fostering backward (services and input supply) and forward (processing, packaging) linkages within the corridor, even if it is not a definitional requirement of AGC. Many AGCs are also planned as appendixes of other types of corridor, often for mineral transport from mine to port (Weng et al. 2013). This is important to note for the distinction of AGC from some similar approaches (e.g. transport corridors or agro-processing parks) or AGCs in other world regions (Brazil, South-East Asia) and for some findings, conclusions and recommendations.

AGC have gained prominence and international support *inter alia* through the United Nations awarding of Yara's (the world's biggest fertilizer company) corridor concept (UN 2008), the World Economic Forum since 2008 (Kaarhus 2011, WEF 2012), the African Union's "New Partnership for Africa's Development" (NEPAD) and the G7's New Alliance for Food Security and Nutrition (NAFSNA 2015). They figure now prominently in several national development strategies on the continent.

AGC of the type proliferating in SSA usually combine agricultural policies with agrobusiness and infrastructure investments and pursue 1) agricultural growth, 2) poverty alleviation, 3) opening up of enclaved areas, and, in many instances, 4) regional integration between coastal and land-locked countries (Byiers et al 2014, Gálvez-Nogales 2014, Reeg 2017). They promise to bring together expertise, funding and coordination that are usually dispersed and aim to benefit from multiple synergies that arise and trigger economies of scale and agglomeration. Important aspects that typically cannot be covered or fully exploited by any single sector strategy or infrastructure measure but which may be coupled in an AGC include: Infrastructure development at both national (railway, highway, pipeline) and local level (feeder roads, local electricity supply, larger irrigation systems), agriculture (research, extension, marketing), industry and trade (processing and marketing, trade facilitation), foreign direct investment (investor incentives, one-stop-shops), normal business support (small and medium enterprises in forward and backward sectors to large agro-industries and smallholders), water (water supply and watershed management), and environment (natural parks, natural resources management, forest management and plantation by private sector). In SSA, AGCs are very often planned and managed as strategic private-public-partnerships (that is not a definitional requirement of AGCs) and have large scale land-based enterprises in production (plantations) as their backbone (again this is not a definitional requirement but very

important for their public perception). This full programme may not materialize in every case, depending on region, problem, ambitions, available funding and type of agro-businesses and agricultural value chains involved.

As big as ambitions are, there are, however, huge pitfalls to be overcome in planning and implementing AGCs (Paul and Steinbrecher 2013, Byiers et al 2014). At the impact level, it is contested whether they lead to more or less poverty and food security. Even if on average the impacts may be positive, it is argued that there are risks of minorities being neglected, dispossessed and their human rights violated, particularly through loss of land, water and access to natural resources. In addition, environmental risks such as over-extraction of water, water pollution, biodiversity loss on fields through more intensive modern agricultural practices and in the corridor as a whole through excessive land cultivation are perceived as risks. These risks are perceived in particular as coming along with the large scale agricultural production units which are central to AGCs in SSA, and through a conventional agricultural intensification model with intensive use of mineral fertilizers and pesticides that is usually pursued of these units and propagated for smallholder farmers. Factors which increase these risks and reduce the possible positive effects are said to include: generally weak land rights and territorial planning tools; top-down planning and lack of participation of the local communities, particularly neglect of minorities and vulnerable populations; the disrespect of agro-ecology principles by the private and public partners; lack of policy coherence; and a general environment of corruption which favors the imposition of the stronger interest groups, in this case the (international) private sector participants, policy makers and elites, over the weaker ones.

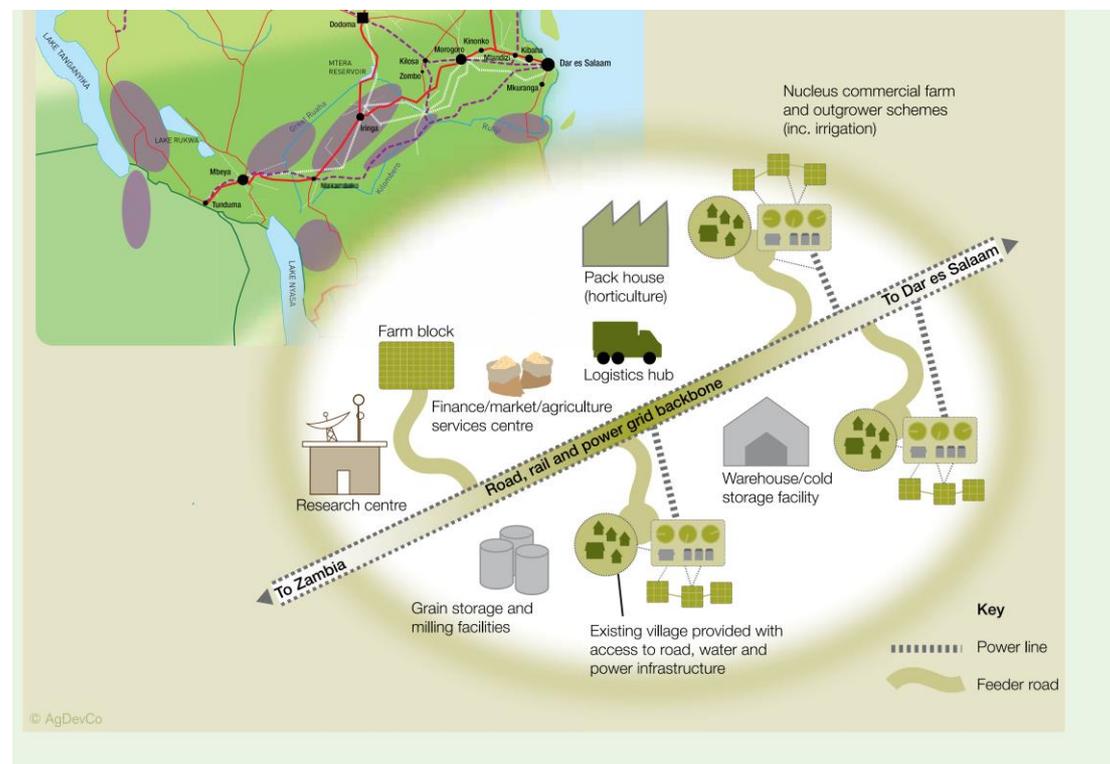
A stringent evaluation of impacts of AGC in SSA is not yet possible. As will be seen for the case study corridor, which together with the Beira corridor in Mozambique is among the oldest AGCs, this has different reasons: the approach is young, ambitious, and complex, it is thought to bring together very different types of actors, it requires new tools of cooperation, it cuts across different sectors and levels of governance, it comprises elements with a very long implementation time, and it is contested as a model and sometimes even (almost) abandoned. As will be shown, the moment the concept of AGCs is still more of a battle field of thinking and ambition about the future of agricultural and rural development in Africa than an observable object.

2. The Southern Agricultural Growth Corridor of Tanzania – an overview

The Southern Agricultural Growth Corridor of Tanzania (SAGCOT) is one of the first and maybe the most prominent of the African AGCs. “The success of the SAGCOT project will not only help to modernize agriculture in Tanzania, but also provide lessons for other countries which have large untapped potential to improve their agricultural productivity and lift large populations from living in poverty” (World Bank 2016: 6). The SAGCOT initiative was launched during a World Economic Forum (WEF) meeting in Dar Es Salaam in 2010 (WEF 2016). The corridor stretches from the capital to Malawi and Zambia along already existing road and rail transport infrastructure (Figure 1). The quickly produced initial (and still promoted) blueprint targets to invest 2,1 billion USD of private investment along with 1,3 billion of public sector grants within 20 years to bring 350,000 hectares under “profitable production” creating at least 420,000 new employment opportunities and lifting more than two

million people out of poverty while assuring regional food security (SAGCOT 2011). The initial ideas foresaw 6 regional clusters with several nucleus-outgrower schemes (NOSs) in which large-scale land-based investments (plantations and processing factories, the nuclei) were to be combined with smallholders who receive inputs and services from the nuclei and deliver products to them (the contract farmers or outgrowers, here both terms used synonymous) (see Figure 1).

Figure 1 Map of the SAGCOT corridor and schematic organization of clusters



source: SAGCOT Centre (2011)

The implementation of SAGCOT is far from being on track compared to the initial plans. The SAGCOT homepage tracker lists 0,456 billion USD private investments and 38,500 hectares of land under improved technology, with 96,000 farmers, and 1221 jobs created (these are the same numbers as reported for 2017, SAGCOT 2018). However, interviews with many stakeholders and direct observation during surveys and SAGCOT field days lend some doubt about what is actually attributable to SAGCOT and what is business as usual, since most of the investors and investments advertised by SAGCOT had been in the region before SAGCOT was invented. In the most prominent case, the potato value chain, an AGRA potato project has been leading the work (SAGCOT 2015, SAGCOT 2018).

It must be acknowledged that the initial phase was extremely difficult, although the Government of Tanzania was very supportive at least initially. The SAGCOT Centre, the main steering unit, was created in 2011 as a public-private partnership by the Agricultural Council of Tanzania, the Confederation of Tanzania Industries (CTI) and the Rufiji Basin Development Authority (RUBADA, a philanthropic Government authority tasked with water resource management and multi-sectoral development in the Rufiji basin which covers a wider part of the SAGCOT), and with about 20 partners from private and public sector. The Centre does not implement itself, its main tasks are promoting shared vision, sharing

information, and mobilization. The Tanzanian Government launched and supported the initiative including by designating high level staff but did not spend much funding directly (less than 5% over 5 years of 22 million USD, SAGCOT 2018). In general, agricultural policy is guided by the Agriculture Sector Development Strategy and since 2009 by Kilimo Kwanza (Agriculture first), the pro-private sector agriculture policy by the former president, and implemented by the 10-years Agricultural Sector Development Programmes (ASDL). The second programme, valid during the SAGCOT era (URT 2015), mentions SAGCOT 22 times and is full of ideas to support it. In contrast, some have labelled it “an old-style, smallholder-oriented, programme with only a marginal role for the 'private sector’” (Africa Confidential 2019, compare Cooksey 2012). A clearer sign of support to the ideas of SAGCOT was the Big Results Now! (BRN) presidential initiative of 2013 which aimed at fast-tracking some sector programmes, among which agriculture (URT 2015). The three modules prioritized were warehouse building, commercial rice irrigation schemes and 25 NOSs deals in the SAGCOT region. The targeted crops, sugar, rice and maize, were also basically in line with SAGCOT. However, the BRN was executed as a solely public programme, with no coordination with SAGCOT.

Still in 2013, SAGCOT had only two employees and a minimal budget since the new and unusual organizational form did not allow for much external funding, in particular from large donors such as the World Bank. Some donors (inter alia USAID, Norway, DFID) did provide early funding, sometime for specific sub-projects. The number of mostly private partners grew to more than 50 in 2015 (Bergius et al 2018). In late 2016 a strongly contested 70 million SAGCOT Investment Project by the World Bank was approved in support of key entities (SAGCOT Centre and Tanzania Investment Centre) and matching grants for the private sector. In combination with the very and increasingly complex approach and partnership, delays in implementation should thus not be judged too critical *per se*. However, as will be argued later, in Tanzania it seems that the delay was too long, so that the project entered into the era of a new government that is not supportive of backbone ideas before being firmly embedded in the economic culture of the country and thus irreversible. In the following, some of the issues about SAGCOT implementation in terms of (supposed) impact and causing delay will be addressed, and it will be discussed in how far these are inherent to the approach and/or can be alleviated.

The paper is structured as follows: It starts with a short overview of socio-economic (positive and negative) impacts of “typical” SAGCOT-promoted large-scale land-based investments, acknowledging that these are mostly measured on pre-SAGCOT investments and far from exhaustive. Follows a literature-derived set of four dimensions under which the factors can be subsumed which influence the effectiveness and the development impacts of AGCs. Then it discusses the features of SAGCOT with regards to these dimensions. Finally, conclusions are drawn for SAGCOT and for AGCs in general.

The paper brings together three sources of evidence from three perspectives: a) Quantitative impact studies with large number of farm-households (>600) for two older existing large scale nucleus-outgrower complexes which are officially promoted role models for SAGCOT (Herrmann 2017); b) an extensive qualitative study with more than 280 interviews of a wide array of stakeholders (farmers and farmer groups, farmer and civil society organizations, local and national authorities, investors, researchers, donors) on a larger number (10) of NOSs case studies in three subsectors

(tea, sugar, rice) (Brüntrup et al 2018) plus several short-term visits to selected stakeholders and sites as well as participation in the 2017 SAGCOT field day; and c) the literature-based systematic analysis of Reeg (2017) about the lessons learned from various types of spatial development initiatives (SDIs) in developing countries for AGCs. The findings of these sources are sometimes complemented by selected pieces of literature, for more comprehensive literature reviews see the three cited texts.

3. Impacts of individual investments

The SAGCOT blueprint very much relies on the concept of nucleus-outgrower schemes (NOSs). Nucleus and outgrowers are linked through one or several of the following ties: farm output purchases, information, technology and input supply (including water for irrigation), and various non-commercial services such as health, school, security, infrastructure. The links can be very diverse: product sales and contract details, in particular prices and quality, can be contractually pre-arranged or not. Information as well as technology and input supply can be completely integrated between both parties (in some cases irrigation water and in one case even land is provided by the nucleus (i.e. real outgrowers in difference to contract farmers who cultivate their own land), or combined with external providers (e.g. extension services or credit). Additional social services and infrastructure can be contractually fixed and/or voluntarily granted as Corporate Social Responsibility (CSR). For some reasons why so different arrangements are used in the NOS, see sub-chapter “soft infrastructure” below.

There is mixed evidence as to the success and local development impacts of NOSs. A distinction is to be made between short and long term impacts. For the long term, the two formal studies of a rice and a sugar NOS (Hermann 2017) show significant and important average positive impacts for directly involved people: Sugarcane outgrowers gained 120-150% higher per capita incomes than the matching control households (depending on the matching method and specification), sugarcane workers 84 to 99% more, and rice workers (there were no rice outgrowers at that time) around 50%. Poverty rates were about 30-40% lower for all groups. The qualitative surveys of Bruentrup et al (2017) mostly support these positive findings. In particular, people directly affected by tea and sugar NOSs (workers, outgrowers) were found to be better off, as also indicated by long queues to get jobs and in-migration of workers from other places. Indirect effects on the surrounding populations are also quite large, proven by general in-migration to the small urban centres near larger NOSs and their vibrant development. All investors engage in some form of social infrastructure and services, in more recent NOSs they are often contractually agreed upon.

However, there are also (smaller) groups of people who are affected negatively, for instance when in isolated markets local food prices increase due to strong increase of local demand and/or (to a lesser degree) lower local food production. In the short term, it is mainly land transfers which cause negative effects, as well as distributional conflicts. In the case studies of the qualitative study, there were a few instances where land grabbing was an issue, or when displaced people were not well compensated or used their monetary compensations unwisely, or where access to some resources and service points was cut off. This was more a problem in recent investments, although land grabbing problems accompany the country since colonial times, by colonial settlers, by the state and its development agencies after independence, and by the

expansion of national parks which cover about a fifth of the country. The literature provides more case studies where land grabbing was a risk in (mainly foreign) land-based investments (e.g. Mwami and Kamata 2011; Action Aid 2015; Greco 2016, Oakland Institute et al (2015), Oxfam 2014, Twomey et al (2015)). It should also be stressed that in some cases research findings are contradictory, for instance the strongly negative judgement in Oakland Institute et al (2015) on the rice investment project which was also object of Herrmann's (2017) study or of Twomey et al (2015) on older investments on employment and local development compared to Brüntrup et al (2017). The high number and complexity of impacts in various dimensions, different mostly qualitative methodologies used, different valuation set-ups and priorities as well as a highly emotional and sometimes ideological attitude towards industrial and large-scale agriculture may explain these differences.

There are many factors explaining and potentially influencing the outcomes of individual NOSs. Some influencing factors are beyond national influence such as international markets, some are national but extremely difficult to change such as customary land rights and local social habits. Of particular importance at national level and sensitive to national politics are trade policies (import, export) and the wider business environment (taxation, freedom of business, local to national regulations of all type). Many influences are strongly driven by local forces: local monopoly situation, size and duration of the investment; role of government as shareholder, mitigator and/or arbitrator; irrigation (as strongly corresponding to (additional) value of crop production to be distributed), the (type of) crop, its market and trade policy, (quality of) seeds available, sophistication of production and integration into farming systems as well as the type of interplay between investors, administrations and smallholders; value addition and package of support services and inputs available. Not at least the individual attitude of the investors and the management are important factor for the local impacts, and they are well advised to care for them since there is strong evidence that only those investments survive in the long run which provide important advantages to the local communities (Brüntrup et al 2017).

4. Assessing SAGCOT by the SDI dimensions:

The factors affecting individual investments are obviously often those that also affect the success of the whole SAGCOT approach and will be therefore analyzed in the following section more systematically, particularly with regards of the role that SAGCOT can play. The literature study (Reeg 2017) looked a) at the factors driving private investments, exports and employment in SDIs and economic zones as well as potential constraints, b) the conditions under which economic upgrading, technology and knowledge diffusion and contribution to more structural transformation processes with the national territory took place, c) the conditions under which economic performance within SDIs lead to improvements in job quality and the integration of local stakeholders, in particular small businesses and farmers, d) which negative social and environmental externalities arise and how they can be minimized, e) what it takes to warrant the interests of local, in particular rural, communities, and f) what the policy lessons and implications for AGCs are. The major dimensions identified which determine success of SDIs are: 1) **Physical and economic geography**, that is location, market access and available (natural) resources. Rather than political decisions it is market-driven dynamics that open up possibilities for successful

economic concentrations. 2) **Complementarity, quality and maintenance of infrastructure investments** including regulatory infrastructure regimes and social infrastructure investments, that is investments in hospitals, schools, recreational facilities, childcare and other social services if SDIs and economic zones rely on labour-intensive production or wish to economically upgrade and therefore need to attract (skilled) workers. 3) **Soft infrastructure** including technology, extension, finance and other services, and complementarity of SDI specific with generally available services. 4) **Regulatory environment, including national and SDI-level.** The national environment involves a national regulatory business environment including custom clearance, tariffs and non-tariff trade barriers, bureaucratic procedures, taxes and other levies, incentives, investment promotion and employment- and environment-related regulations. The SDI-level environment includes strategic planning and management, size, quality and stability of operating budgets, institutional and administrative structures of the SDI regulatory authority, private sector involvement and local stakeholder participation, and monitoring and evaluation (M&E) to make informed planning and management decisions. Importantly, long-term success needs long breath and continued institutional support, policy alignment and flexibility.

In the following, the SAGCOT is roughly assessed in these dimensions.

a. Geography and natural resources:

The choice of SAGCOT and the clusters is not much disputed. The backbone infrastructure exists and is in acceptable shape. Dar Es Salaam is an important market for food and has the most important national port up to now, though its congestion is an issue. The international dimension of SAGCOT could also be compelling with land-locked and densely populated Malawi being an interesting market, too, at least in the future when and if the market demand grows there. In contrast, the rural parts of Zambia and DRC touched by the corridor are not too attractive for agricultural trade, but may be important for stabilizing local markets and thus increasing food security resilience against climate variability of the entire area.

As to natural resources, the corridor zone has a production potential with many areas providing few constraints to agricultural intensification (SNAPP 2016) in various agro-ecological zones, from tropical to temperate. Options for crops and related value chains are manifold. The choice of priority commodities has changed substantially from the initial blueprint (rice, other grains, livestock / beef, sugar, citrus, banana and other horticulture) to the first phase of implementation which concentrated on one cluster (Ihemi) (tomatoes, dairy, soya, tea and potatoes). Of course, also the composition of active private sector partners plays a role in the selection. In any case, the change of crop involves a change in many parameters (partners, knowledge, markets, inputs and services, etc.) and can therefore be source of important delays.

For the NOS model of an AGC as chosen for SAGCOT, access to land has shown to be the single most important constraint. However, it is not land availability per se that is a problem. While the usual narrative that there is ample free land available in Tanzania, (Deininger and Byerlee 2011; URT 2015) is not correct, there are ample non-cropped land reserves which are not completely unused but used in the frame of shifting cultivation, pastoralism and agro-pastoralism or collection of forest and bush products. Such land reserves could be labelled as 'underused' and are still widely available – for instance in the Ihemi cluster more land went out of agriculture than

was newly cultivated in the past 20 years, though in future more land is projected to be newly cultivated (SNAPP 2016). However, for obtaining land in large, unsegmented portions reallocation and negotiation with present users and rural communities is indispensable, as well as developing alternatives so that they can live better on the remaining, reduced amount of land. This process is extremely sensitive and risky for all sides, and particularly dangerous for the poor. They must be protected against land grabbing, must be able to say no to a land deal, and obtain good compensation if ceasing the land. However, without getting land in an acceptable time frame, with high security of tenure and acceptable transaction costs, investors are not willing to invest in land, and on the land, and the NOS model would be unachievable. Thus, while land is available, making it useable for the NOS model is a question of governance which is further discussed below.

An additional issue is water. While water reserves are still sufficient in general, there is strong seasonal fluctuation and some erratic fluctuation over longer periods with important droughts and irrigation water scarcity, and there is competition between water needs for energy and agriculture (SNAPP 2016). Some private investors opt for the construction of smaller dams which can attenuate seasonal fluctuation, but for larger drought periods this is not sufficient. With a massive increase in irrigation area, there would be a need for integrated management of the whole basin to carefully provide water withdrawal licenses which not only respect the competition between human users but also leaves a minimal base stream for nature. Also some erosion protection and water infiltration improving measures could be designed or coordinated via SAGCOT. SAGCOT is well placed to organize such integrated water resource management with the responsible government body for that task, RUBADA, being one of its founding members, while SAGCOT should be able bring in higher, member-based acceptance for coordination efforts.

b. Hard infrastructure

Infrastructure is a cornerstone of any SDI and should be one of AGCs. While the main infrastructural backbone of SAGCOT, the main transport axis, exists already (in difference to other corridors and corridor approaches), additional infrastructure is required: feeder roads to open up the lands further away from the main road, irrigation systems (larger and smaller dams, canals), electricity, and warehouses for storage and cooling, just to name the most important ones. In the SAGCOT model, some of the small and medium size and cost infrastructure is expected to and can be provided by its private partners for their own nuclei, and partially also for contract farmers or more generally for organizing local transport and logistics. Partially, such provision of local infrastructure can already be observed in existing NOSs: Around sugar factories feeder roads are built and maintained to transport bulky sugarcane from outgrowers to the mill; some tea estates have constructed small dams; tea estates have to pay local levies for road maintenance; tea companies support smallholders in constructing small collection centres from where the tea is collectively transported to the factories. In several other cases, interviewed investors were ready to invest in and provide public services in a profit model charging service fees, particularly electricity by the sugar and tea estates which mostly have to generate their own power anyway, but regulatory hurdles impeded such business models (see governance).

A tricky question is who pays, owns, funds, uses and maintains the different types of infrastructure around an individual NOS. The initial SAGCOT blueprint proposed the

following idea: a revolving catalytic fund was to provide social venture capital (for low cost debt and equity funding) to kick-start NOSs; then a patient capital fund would provide long-term subordinated debt to fund agriculture-supporting infrastructure (like irrigation or feeder roads); and a credit enhancement facility was to increase access and reduce cost for NOSs of borrowing from local banking institutions. In any case no grants were to be given to private entities, just start-up revolving and cost-lowering funds with subsidy elements. Some of these investments by private entities was infrastructure, but even then cannot always be considered as public goods, some are club, some are purely private goods. Beyond the initial investment payments, it is even more complicated who pays and cares for maintenance of hard infrastructure (see governance, next point). Experience in Tanzania tells that public entities (and unfortunately also farmer groups e.g. in irrigation) do not have a good track record in doing so (URT 2015). However, simply handing over infrastructure to private actors creates other problems of access, democratic governance of public goods etc.

How ambivalent the term “infrastructure” can be seen became clear when the new government of Tanzania started to question the use of the World Bank’s private sector funding mechanism of the SAGCOT investment project. 80% were foreseen at funding investments of small and medium enterprises through a matching grant facility for (SAGCOT 2019). According to Africa Confidential (2019), “in 2018 it became clear, according to Thomas Herlehy, team leader of the matching grant facility, that 'the government does not want to make matching grants to private sector agribusinesses.' The Government wanted to change the matching grant facility from a grant scheme to a loan-based scheme, and ... that any fixed assets which investors would purchase would, at some future date, be transferred to local rural district councils, which would somehow hold the property on behalf of smallholders. This was never possible because the proposed changes fell outside the terms of the financing agreement the government signed with the Bank in June 2016. When the Bank pointed this out, the government requested the project's cancellation, which is unprecedented in this field.“ The project closed end January 2019 (World Bank 2019a).

In any case, larger infrastructure (longer feeder roads covering several NOSs and whole sub-regions within the clusters, and corridor main infrastructure) is too expensive even for the large private agro-industry partners to be paid at commercial rates, in difference to for instance the mining sector. Since again the regional and central governments are usually unable to fund such infrastructure, it is large donors who step in. The World Bank’s Tanzania country strategy (World Bank 2018) lists several initiatives which can support SAGCOT infrastructure needs, but they are mostly outside of the SAGCOT investment project and would need additional negotiations and coordination with (other parts of) the Government, possibly not committed to SAGCOT but with their own priorities. A comprehensive AGC approach is something different.

Finally, social infrastructure investments, that is investments in hospitals, schools, recreational facilities, childcare and other social services, in SAGCOT are left to negotiations between investors and the local population. There does not seem to be a provision of public funding for these structures beyond the normal public and donor programmes. Often, investors promise a range of different services and consider these to be paid out of profits, thus not (all) up-front) and depending on successful running

business. This creates high expectations by people which, since investors cannot comply with all of them at once, particularly in the early periods of the investments and when profitability is hampered, also often generates deception, as is the case of job creation. For the attraction of highly qualified staff, the lack of local quality infrastructure for them and their families is also a problem. Investors have to pay high salaries and additional benefits for this kind of staff which is rare anyhow in Tanzania. At the level of clusters, possibly common solutions could be found, but no such plans are known. It is a general problem of rural areas in Tanzania.

In conclusion, infrastructure investment is an important stone of contention and misunderstanding in SAGCOT. There is few public commitment to fund infrastructure, and while it is expected that the private sector invests in infrastructure with public spill-over, grants for private assets, even if having important spill-overs to smallholders and the public, are not supported. To the contrary, a reemergence of public productive asset holding is visible in SAGCOT and also observed elsewhere in Tanzania. In fact, the more costlier the infrastructural needs, the more distant from the factory, the smaller the private sector enterprises, the more public good character the infrastructure and its services have, the less there is a conducive environment to charge cost-covering fees for provide public infrastructure and services, the more public money must be made available to fund infrastructural needs in the AGC.

c. Soft infrastructure

As with hard infrastructure, the provision of technology, knowledge, extension, finance, quality control and certification, and various other services is generally deficient in poor countries and especially in rural areas, and Tanzania is not different. This is particularly true for finance and for more sophisticated services necessary for upgraded value chains which are able to serve higher consumer segments and export markets. The tea and sugar subsectors are examples that the private sector is able to provide these specialized services while public research, extension and other services are overstretched. It is the very idea of SAGCOT to mobilise the private sector for such tasks, too. However, investors will not be ready to fund services which also serve not-contributing, freeriding competitors and may even weaken their own position. Thus, as in the case of hard infrastructure, there are difficult and detailed trade-offs to negotiate and sort out what can be provided and funded by whom.

The research on the three sub-sectors rice, tea and sugar (Brüntrup et al. 2017) shows that complicated arrangements must and can be designed to balance public and private interests, reduce free-riding and incite or oblige enterprises to contribute, depending on the special structure, needs and partners of each sub-sector. Very much depends on the sub-sector, its structure, its markets with quality, certification and traceability demands, existing (or not) public and private service providers and their funding, etc. In the sugar sub-sector, with very few very large NOSs, high technology and capital requirements in production and processing, very high dependency between nucleus and outgrowers, and strong competition between local production and imports (trade policy tries but cannot protect the local sector), much of the specific soft infrastructure is left to the private sector. In rice sub-sector, dependency between nucleus and outgrowers is lower, competition is high because the product is easily transportable, research is mainly in the hand of international and national public entities. In the tea sub-sector, where technology and capital requirements are also high but size of the NOSs is smaller, where competition on the international markets is

very high while there is also some local competition between processors for outgrower supply (due to easier transport of the product compared to sugar), on with a long tradition of government intervention, the organization is particularly complicated – research is done by private sector sponsored public institute, extension is dual but high quality extension needs to be provided through special agents specifically trained by private sector, and complemented by private extension agents. Access to the national market is regulated in favour of national processors, while international market access is regulated by a compulsory auction system (to protect the national reputation) while the quality control system is dominated by the private sector.

Finance for smallholders and SMEs is difficult but key to many aspects of intensification and upgrading. Even for agro-ecological approaches where mineral fertilisers and agro-pesticides are not used, there are some financial needs, for instance for irrigation and mechanization, hired labour, marketing and certification, etc. The entire rural financial sector is weak, even if – or because – the government created a very large network of savings and credit cooperatives, which are however often dysfunctional. In the SAGCOT concept, value chain finance (from processor in advance to producers) is the expected way out, but it has to be noted that each value chain has its own specific challenges. For instance in sugar where the dependency of smallholders of their nucleus is almost 100% and therefore the risk of side-selling and non-recovery of credit through the nucleus is low, value chain finance is relatively easy to organize through the nucleus or by an independent financial organization relying on recovery of credit at the source (factory) when farmers are paid out. The remaining risks are mainly production (which can be influenced by the nucleus through extension and quality input, and even providing agronomic services such as ploughing, weeding or harvest), and price (which strongly depends on trade policy, see governance). In tea, there is some risk of side-selling, but at least the cash flow of farmers is easy to anticipate, and usually ties between factory and smallholder are stable. In addition, the strong regulatory authority is trying to prevent side-selling. Production and price remain risks, and governance has less options to influence these due to lesser direct influence in production technology and price setting. In the end, finance agencies are relatively ready to provide credit for tea, provided there is a functioning value chain set-up in place. Lowest is readiness to finance rice, where capital for technology and infrastructure in processing is relatively low and thus competition high, quality does not play a key role, marketing options are manifold, and thus side-selling is easy while cash flows are difficult to control since the product is easily storable on-farm. Production technology is hardly controllable by nucleus, while prices are highly volatile including through erratic trade policies (see governance below).

The examples show that, though SAGCOT can provide a platform for organizing soft infrastructure and finance, specific solutions have mostly to be found in the specific value chains organisations or by national legislation if public solutions are to be found. Very much depends on the governance of the sub-sectors and on general governance of the national business environment as well as local specific organizational solutions to the many challenges with which NOSs are confronted.

d. Governance

As already pointed out, the formal regulatory environment of the economic activities supported by SAGCOT is almost entirely identical with that of the entire economy and territory. A corridor of one third of the national territory is simply too big to draw borders and create specific regulations. Even the clusters are much bigger than typical other SDIs. This is an important distinction from other SDIs which are usually confined to smaller areas but have some special supportive regulation, such as tax reductions or waivers, eases in importing investment goods or exporting final goods, and other eased doing business conditions (Gálvez-Nogales 2014, Reeg 2017).

On another page, there are informal governance issues which are typical for rural areas or specific to a site – for instance informal land and water regulations and the implementation of the formal regulations, power distribution between the various public and private stakeholders involved in a NOS such as district and village headmen, commissions, decentralized services (for instance extension), rich and influential businessmen or traditional leaders, historical tensions and narratives for instance about older (failed or unsuccessful) investments, etc. These all have to be managed by communication, building trust, organizing debates, finding or facilitating solutions, and this is one of SAGCOT's important tasks which it can only achieve if strongly present at the local level.

The biggest impediment to implement the SAGCOT strategy is access to large tracks of land, often also for smaller tracks of construction land, particularly for foreign investors. On village land, communities have a right to be informed and consulted about an investment and its potential impacts on their lives, while the transfer itself is executed by and through the Tanzania Investment Centre which obtains formal land rights and transfers them to investors. This proved to be extremely difficult. Even on old government farms which have often been abandoned and partially occupied by settlers, the government had problems of evacuating these settlers. No single large track of land could be cleared under SAGCOT and the BRN-initiative, although the latter at least had the strong support of the presidency. For domestic investors, direct access to village land informally or (semi-) formally owned by individuals and families may be a viable alternative to formal land acquisition via TIC for moderate sizes of a few hundred hectares which are sufficient for some types of plantation crop (tea, rice). However, that informal way may create difficulties in the longer run, and it is hardly an option for international investors in Tanzania.

Other hurdles of the national investment climate for the private NOS investments envisioned by SAGCOT are rampant, too, both for investors as for smallholders. Since long, Tanzania ranges very low in international investment climate rankings, 2019 it was 144 among 190 economies (World Bank 2019b). Investors generally and in rural areas in particular complain about the regulatory environment and particularly about inconsistent, erratic and slow implementation, and the government itself has stated this (URT 2015). Specific sub-sector regulations add to that burden, which affect both the investors as well as smallholders as soon as they leave the informal sector. Tea for instance knows very specific regulation and often compulsory levies in all aspects of the value chain from research to extension, roads, quality, prices, to marketing. Much has been done to increase the participation of smallholders in the chain, to strengthen their position vis-à-vis factories, and to support nationals against international investors. While successful in increasing the share of smallholders, the national production is stagnating while neighboring countries (Kenya, Rwanda) are expanding. While during the last presidency there was some laxism or slackness in

the system, under the new president rigorous tax collection has highest priority, often for many years back in the past.

There is, however, widespread consensus that several agricultural subsectors in Tanzania still need to be protected because local producers cannot compete with prices on the international market, sometimes subsidized or of low quality. Some SAGCOT products, i.e. rice and sugar are indeed protected, mostly at the common level of the Eastern African Community, and the government uses the argument to lure investors. However, protection is sometimes arbitrarily set aside or breached, and high-level corruption brings large quantities of smuggled goods into the country. The problem is regularly tabled for instance for rice and sugar. Corruption, influential importers, and difficult to control borders are some of the factors explaining these problems. In addition, irregular (district or national) export bans destroy export options for staple crops and depress their prices, regularly noted for maize. In these cases, food security concerns but also political considerations of politicians wanting to show support for the strong urban low and middle classes are leading motivations. The producer-damaging trade policies lead to losses, discouragement to invest, depression of production and finally to more reasons to allow imports in a country which more than many others is predestined to not only feed its own population but use export agriculture as a motor of growth.

As mentioned before, the Government and the SAGCOT Centre are aware of these problems. SAGCOT has established many formats and working groups to collect complaints and discuss them with the administration and policy makers. A Land Use Dialogue Forum in partnership with Sustain Africa Program, a Robust Policy Network, Strategic Policy Partnerships, Focal Persons, Parliamentary Excursions, National and Regional Field Days and Strategic Learning Journeys are some of the formats invented (SAGCOT 2018). SAGCOT claims to have contributed to some changes of the governance around agribusiness, for instance the abolition of Value Added Tax on feed for livestock to improve the competition of homemade against imported feed. However, for many other issues there is few progress, as has been shown above. Thus, although SAGCOT obviously is in a better position to lobby for better regulation than individual partners, it is still only one voice in the overall scenery. Other formal and informal groups (e.g. import traders, consumers, regional commissioners in care of poor but politically highly relevant urban consumers, other line ministries, actors outside SAGCOT, etc.) often have different interests and (obviously) often more power. The need to be present at the local level has also brought SAGCOT quickly to the limits of its capacities. A single cluster, Ihemi, could be permanently staffed, and only some years after launch, until in 2017 a second cluster, Mbarali, followed.

What has long time neglected, or better under-estimated, was the resistance not only of some adverse interest groups and of actors outside the corridor, but also of civil society worried about social and environmental harm of an agricultural development model including the (large-scale) private sector. Among the social concerns land grabbing was of particular importance, but also dependency from particular actors or from the market per se. Others questioned SAGCOT on ecological grounds, the model of intensification including fertilizer and pesticides, credit, large scale land cultivation and irrigation. SAGCOT tried to embrace the critics already in the blueprint document by labelling its model “green growth” agriculture, by highlighting its principles, by creating an Environmental and a Social Feeder Group, by

collaborating with scientific bodies. However, some important resistance has remained, for instance the large smallholder farmer association MVIWATA (MVIWATA w.d.), the land rights organization Haki Ardi and several NGOs (Various CSO w.d.) as well as some very influential international ones (Oxfam 2014, Action Aid 2015, or Caritas/Misereor (Twomey et al. 2015)). While there is some growth of common understanding, it is obvious that the visions are still far apart particularly with regards to the nuclei, the role of large agro-industries and to conventional agriculture (Various CSO w.d.).

5. Conclusions and recommendations:

AGC are a relatively new phenomenon in SSA, though corridor approaches in general are known in Africa as well as in other world regions for a long time. The striking particularity of African AGCs, as least of the type represented by SAGCOT, is the strong role for the private sector in the design of the corridors, their priorities and in implementation, in particular in the form of NOSs.

The SAGCOT is one of the earliest and arguably the most prominent case of an AGC in SSA. It is now in the 9th year after its launch. Thus an assessment should expect some results. However, the reported results can hardly be already described as a success at least if judged against its own plans. Not a single new NOS has been established under the SAGCOT label. SAGCOT claims a number of other investments, jobs and production increases as success, but these are usually, and as far as available data allow to judge, based on elder agro-investments and other types of structures and special projects. SAGCOT has certainly achieved a lot in organizing the private sector, orchestrating its interests and voice, and shaping the conception of public private partnerships in Tanzania. Yet, there are obviously many obstacles, the most important of which are access to land for investors, the regulatory environment in general and specific sub-sector organizations is particular, erratic decisions and inconsistent implementation of agricultural trade and other policies, the lack of local infrastructure and of agricultural value chain services (notably finance) beyond the means of individual investors, the diverging interests, and more recently seemingly a (re)turn of the government towards more state-driven and smallholder-only oriented type of agricultural development. The end of the SAGCOT Investment Project is a serious backlash.

However, the territorial approach with large private sector participation remains appealing since it seems at least theoretically be able to solve the various parallel and interdependent weaknesses of agricultural value chain development in poor countries such as Tanzania. What can be learned from SAGCOT for AGC development?

The complex approach takes much time, especially if it is pioneering new partnerships. For such a longer time span, it needs continued policy support from highest level, particularly in agriculture, industry and infrastructure issues. In order to gain that broad support and to survive government change which is likely over a long time span, reliance on broad private sector and farmer support, as is the case in SAGCOT, is the right way. A high degree of participation and transparency is needed, in particular the involvement of smallholder farmer organisations and local level actors, for gaining credibility, for finding the right partners and solutions, and also for involving at least some of the large (including international) civil society organisations so important for international support building. Yet, authoritative coordination and implementation is needed. A private or public-private partnership entity such as the SAGCOT Centre may be an indispensable element, but it is not

strong enough to quickly trigger important changes, this can only be achieved by a high level government authority which accepts to be guided by the partnership.

Although the belief in large agro-industry in general and NOSs in particular may be justified, an AGC should not count exclusively on models with these elements. NOSs in particular are not viable if it is not yet sur that land can be made available and if strong opposition in the country is to be faced. Also, not all value chains are equally suitable for a NOS. A multi-pronged model approach which also works towards other models (such as the potato example in SAGCOT) is more appropriate, more flexible and politically more easily justifiable. For individual investments, NOSs, clusters or the whole AGC, prudent expectation management is extremely important. More important than a certain model is the creation of early success stories. Under many conditions in SSA, this will be more easily achieved without the need for large scale land acquisitions. For efforts towards involving large scale land acquisitions, the land transfer regulation and procedures must be in place and proven to be operational while respecting the principles for responsible land tenure based on human rights. More generally, AGCs and even smaller agricultural clusters are dependent on the external (national) governance frameworks, they cannot create their own regulatory environments and it cannot be expected that important aspects of national governance change within a few (first) years even with highest political support (at least under non-dictatorial rules).

There is a need for catalytic flexible funding of sufficient dimension to kickstart projects while organizing the longer-term networking, to build capacities of some stakeholders and around some investments, to create early success stories and to keep up and enhance support and credibility. For each agricultural value chain, a careful analysis of its particularities is necessary, blueprints are not adequate for the multiplicity of different constellations of stakeholders, technology, soft and hard infrastructure and regulation (needs). Finally, more high-quality, independent and fastly-available research is necessary to credibly document successes and failures, also in comparison to alternative smallholder and cooperative approaches.

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