



1/2022: Transformation of smallholder agriculture in Africa - but how? Future-oriented lessons from six decades of moderately successful smallholder promotion

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A new departure with old instruments

Calls for a „modernisation“ or transformation of African smallholder¹ agriculture are currently becoming louder again. Their urgency is obvious. After all, it is necessary to feed a growing world population and at the same time stop the degradation of natural resources, defy climate change, and improve the precarious living conditions of the rural population. This can only be achieved if Africa's smallholder farmers produce more with the given limited natural resources. In other words, by increasing productivity in an ecologically sustainable way. Almost everyone agrees on this.

Now, such efforts are anything but new. A transformation of the subsistence economy into a „modern“ market-oriented agriculture was already the guiding principle for the promotion of rural development in most African countries in the 1960s - oriented towards the concept of the „Green Revolution“. In the 1970s/80s, the basic needs of farming families and their active participation in the processes of change came to the fore instead of a pure orientation towards production. After two decades of political neglect of rural regions, agricultural support experienced a renaissance during the 2008 hunger crisis. Since then, the focus of support has been on improving market access via value chains and involving the private sector. Not all these efforts have been in vain. After all, smallholder food production has kept pace with the growth of the African population. However, agriculture still does not provide sufficient and secure livelihoods for the majority of rural households. Production continues to increase at the expense of natural resources. And a

large proportion of producers are still unable to compete on the markets.

What went wrong that today, sixty years later, it seems necessary to put the same goal on the agenda again? Most international development organisations pay little attention to this question in their current concept papers. According to former Development Minister Müller, it is only because of the money and the lack of political will to make it available. A study published by the BMZ in 2021² states that all the necessary instruments and knowledge about their costs are available. All that is needed now is the willingness to finance them. However, anyone who - like the author of these lines - has worked and researched in the field of smallholder development in Africa over the decades will only discover the familiar funding instruments in the documents, but will find little about why these have often not contributed to a broad-based and sustainable improvement despite considerable funding.

In order to avoid the danger of repeating mistakes, this article will ask what went wrong and why, and what can be learned from it (chapter 3 of this article). It should also be taken into account, however, that the world has changed in the last 60 years. This raises the question of which current global conditions force, favour or hinder a transformation of African agriculture (chapter 4). Based on the answers to these questions, strategic guidelines for an experience-based and context-appropriate transformation of African agriculture are presented for discussion (Chapter 5). First, however, Chapter 2 briefly outlines the current

¹ In most African countries, „smallholder farms“ are defined as farms with up to 5ha of agricultural land.

² Ceres 2030: Sustainable Solutions to End Hunger (2020)



situation of smallholder agriculture in Sub-Saharan Africa³.

Characteristics of smallholder agriculture in Sub-Saharan Africa

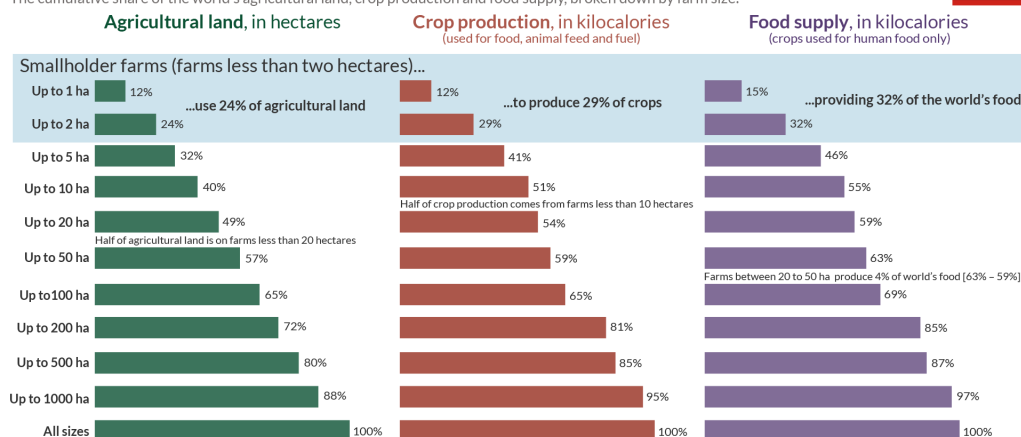
Smallholder agriculture is the basis for the livelihoods of about 60% of the African population. 76% of farms have less than 2 ha of land, which at the current average yield level is not enough for the majority of families to meet their basic needs. Almost all smallholder households, including the larger and more market-integrated ones, even those with good non-agricultural sources of income, still maintain subsistence production for security. However, the share of marketed production is increasing.

Exceptions are countries affected by armed conflicts and current drought disasters. Elsewhere, the dependence on food imports is mainly due to cheap (often subsidised) imports, to high transport costs for domestic food products from peripheral rural regions to urban centres, as well as to changes in the consumption habits of city dwellers (e.g. wheat bread).

The productivity of smallholder agricultural production is very low by international standards, although the trend is upwards. Average yields per hectare of cereals have doubled from 0.75 t/ha to 1.5 t/ha since 1960. However, this is still less than one third of the yield level in South Asia. Most of the increase in production results from an expansion of the cultivated area in line with

Smallholder farms produce one-third of the world's food

The cumulative share of the world's agricultural land, crop production and food supply, broken down by farm size.



Source: Vincent Ricciardi et al. (2018). How much of the world's food do smallholders produce? *Global Food Security*. OurWorldinData.org – Research and data to make progress against the world's largest problems.

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Figure 1: Global importance of smallholder farmers. In Africa, 76% of smallholder farms have less than 2ha.

Smallholder production forms the basis for supplying the urban population with basic food commodities. The share of domestic production in the food supply of the African population has fluctuated between 80 and 90 % over the decades since political independence, with an upward trend since 2005. In most countries, agricultural production has thus more or less adjusted to the growing demand going along with an increasing share of urban population.

the growth of the rural population, the smaller part from an increase in yields per unit of land. In many sparsely populated regions, there was still sufficient unused fertile arable land available for this purpose.⁴

Nowadays, the potential for land expansion has been exhausted in many African agricultural regions. Increases in production without

³ The analysis refers - due to the different agricultural structural conditions in other parts of the continent - to the countries south of the Sahara without South Africa.

⁴ Most of the data is taken from the Rural Structural Change in Sub-Saharan Africa study by the Seminar for Rural Development (Rauch et al 2016) and is based on data from FAOSTAT.



with products from North America and Europe. In many African regions, there is evidence of a clear positive correlation between the level of producer prices or subsidies for agricultural inputs on the one hand and the extent of smallholder surplus production on the other. For example, in Zambia at the end of the 1980s, an increase in agricultural producer and consumer prices due to exchange rate adjustment led to increased production by farmers and even to a return of urban migrants to agriculture, resulting in national food surpluses.⁵ In the last decade, government-guaranteed minimum prices for staple foods have also led to massive increases in production across the board.

There is thus clear evidence for the thesis that smallholder agriculture in Sub-Saharan Africa is not due to a lack of ability on the part of the farmers or to their tradition-rooted unwillingness to increase production and the sale of marketable surpluses, but that they only invest in the production of surpluses when it is profitable for them to do so, fully in line with the logic of the market economy.

Another factor determines whether - in situations with attractive market conditions - additional production is achieved through productivity increases or through land expansion: Where sufficient additional arable land is available, its utilisation by the available labour force is usually preferred to costly investments in increasing land productivity. The latter is only worthwhile in densely populated agricultural regions where land expansion is not an alternative.

Consequently, the crucial mistake of most smallholder support programmes was that they focused their efforts on enabling farmers to increase their productivity in situations with unattractive agricultural prices. They had mistakenly seen the core problem on the supply side, with smallholder farmers, and ignored the problem on the demand side or repressed its relevance. This applies both to advocates of „modern“ agriculture based on external inputs (mineral fertilisers, pesticides, high-yielding seeds, etc.) and to supporters of agro-ecological low-external-input agriculture.

Until today, agricultural experts and agricultural administrators have been of the opinion that smallholder households in Africa lack the necessary capacities, especially knowledge. While the need for innovative and locally adapted knowledge for a sustainable increase in agricultural production is undeniable, it can no longer be overlooked that the associated investments in the form of inputs or labour are only worthwhile if producer prices or net incomes are attractive. This applies not only to innovations in agricultural technology, but also to the institutional innovations required for efficient market access and associated with organisational costs. This applies equally to the marketing organisations necessary for good market access. These are only worthwhile from the point of view of farming households if they open up access to attractive markets.

The low-price constellation outlined here has changed since 2007. As a result of the global agricultural price boom (which has since been subject to massive fluctuations), the demand situation has tended to improve. Now it was the smallholders, who had been neglected in the previous two decades, who no longer had the capacity to adapt flexibly to the improved demand situation. In part, this was because their family members had left the agricultural sector in the face of market conditions that had been unattractive for a long time.

Four lessons from the limited success of previous smallholder development programmes deserve to be noted: 1) Always take into account the role of agricultural prices and the absorptive capacity of the markets! 2) Do not underestimate the potential of smallholder households (including those with fewer resources) to increase productivity and take advantage of market opportunities! 3) The investment costs associated with intensification are, however, only accepted by them where land and resource scarcity force them to do so. 4) Access to markets and necessary services can

⁵ SLE Discussion Paper 04/2017



only be achieved in a cost-efficient manner by smallholders through cooperation.

Current challenges for smallholder agriculture in Africa

The framework conditions for smallholder production and marketing have thus changed significantly over the past decades. A future-oriented smallholder promotion strategy must therefore not only learn from past experience, but also take account of the changed context. Of particular importance here are:

1. The **growing global demand for agricultural products** as a result of increasing urbanisation and the growing purchasing power of urban middle classes for higher-quality foods such as fruit, vegetables and animal products, as well as the rising demand for bio-energy. Although the resulting price increases have proved unstable over the past decade, there are good reasons to expect a long-term trend towards improved terms of trade for agricultural products. This will also make the valorisation of less favourably located African agricultural locations and the expansion of the corresponding infrastructure more attractive.

FAO FOOD PRICE INDEX, WORLD (2014-2016=100)



Figure 3: The development of food prices, 2000

2. The **global scarcity of natural resources** such as land, forests, biodiversity and water. This is exacerbated by the effects of climate change, which - despite all the differences in region-specific trends - is generally noticeable in

increased rainfall variability and consequently increasing yield uncertainty. For more than a decade, this scarcity has been accompanied by a privatisation of the resources concerned, combined with land acquisition by domestic and foreign investors („land grabbing“). About 10 million ha of arable land have been acquired for large-scale commercial land use in the past two decades, but are only partially used so far.

3. The macroeconomic context in most African countries is characterised by what is known as the phenomenon of „**job-less growth**“. Economic growth since 2005 was largely based on a commodity boom, which was accompanied by a boom in the trade and services sectors as well as in construction, but not by an increase in manufacturing employment. The latter mostly proved uncompetitive with imports from the old industrialised countries and East Asia under conditions of open markets. Since a large part of urban tertiary employment opportunities are informal and mostly precarious in nature, the non-agricultural sectors - unlike in the European and East Asian industrialisation process - do not offer sufficient absorption opportunities for job seekers released from the agricultural sector. Consequently, many people live in translocal families, as neither the rural-smallholder nor the urban-non-agricultural sources of income are sufficient for a secure livelihood for the family (Steinbrink 2017).

Where growing demand coincides with resource scarcity, there is pressure to intensify the use of the natural resources concerned. However, this pressure is also accompanied by an incentive to intensify: innovations combined with investments in increasing the productivity of resource use are worthwhile again for the first time after decades of neglect of Africa's rural areas. This also applies in principle to smallholder resource use. At the same time, there is still untapped scope for intensification in most rural regions of Sub-Saharan Africa. Average productivity per unit area is still far below that of comparable agricultural zones in South and Southeast Asia. But where non-agricultural livelihood opportunities are limited and where they are uncertain due to dependence on fluctuating world market prices for raw materials, increases in agricultural productivity cannot go hand



in hand with a massive release of agricultural labour. For most rural families, the smallholder sector remains indispensable for food security and livelihood.

These trends present both an opportunity and a threat to the development of smallholder productivity: the opportunity lies in the fact that smallholder surplus production, including the necessary investments, is finally worthwhile again. The threat is that agricultural production in Africa, and thus land acquisition, will also become attractive to large urban and foreign investors, and that smallholder households who do not know how to use this opportunity quickly will be forced off their land, water sources and forest resources, and thus their livelihoods, without finding sufficient livelihood opportunities in non-agricultural sectors. Only where they are supported in accessing the necessary inputs and services as well as sales markets are smallholder farmers able to mobilise their unused intensification potential.

Strategic Guidelines for a Socially Inclusive and Ecologically Sustainable Intensification of Smallholder Production in Sub-Saharan Africa

As with the efforts for socio-economic structural change in Europe and elsewhere in favour of a climate-neutral economy and way of life, the transformation of smallholder agriculture in Africa is about linking the goals of ecological sustainability, economic efficiency and social inclusion. In the case of African agriculture, this means linking the goal of eliminating hunger with the goals of preserving local, regional and global ecosystems and creating more secure livelihoods for all families dependent on the use of rural resources.

On the one hand, this linkage presupposes intensification in the sense of an increase in land or resource use productivity. Only in this way can a growing number of people be provided with food in a more secure, affordable and diversified way while at the same time preserving resources. On the other hand, this target triangulation presupposes a labour-intensive and thus employment-securing preservation of small-scale farming structures. This is the only way to prevent an increase in mass unemployment and



Figure 4: Target system of socially inclusive, ecologically sustainable and economically efficient smallholder intensification

precarious employment and the resulting forced migration.

The conception of concrete promotion strategies must be carried out locally by the responsible agricultural promotion organisations in cooperation with the relevant state, private sector and civil society actors and with the participation of the farmers concerned. **These local strategies need to be oriented towards general strategic guidelines**, however, in order to comply with the global sustainability goals and the overarching principle of „Leave no one behind“:

1. Wherever growing demand for agricultural products is accompanied by a situation of dwindling or unstable availability of the necessary natural resources, there is a need for sustainable, **agro-ecological intensification of resource use**. This implies an increase in land productivity, but also in water productivity, on the basis of agro-ecological diversification with the lowest possible use of external, commercial inputs („low-external input and sustainable agriculture“). This does not lead to peak yields, but according to previous experience, it is possible to roughly double the current average yield level. Which is enough to meet the



rising demand. This requires a locally adapted agricultural research.

2. Wherever labour is in surplus, i.e. where its release from agriculture would exacerbate the problem of food insecurity due to lack of access to land and purchasing power, **labour-intensive techniques** should be given preference over labour-saving forms of mechanisation. Appropriate forms of mechanisation, however, are those that help to overcome labour bottlenecks that often arise with more labour-intensive ecological farming methods. This means turning away from the „grow or vanish“ strategy often practised under the banner of modernisation, to the detriment of resource-poor smallholder families.

3. Wherever there are unmet **local and regional needs**, priority should be given to meeting them in line with the principle of sustainable food systems. Where production potentials exceed regional needs, however, promoting access to external markets on the basis of fair value chains can also be a necessary basis for diversified, site-appropriate farming systems as well as for a secure and seasonally balanced cash income for farmers. An - often postulated - antagonism between food and cash crops is not appropriate in the sense of ecologically diversified land management and increased resilience of a year-round secure food supply.

4. In addition to a more productive use of resources by small farmers, **more efficient supply chains** (including storage, processing and transport), including an appropriate transport and communication infrastructure, are important to keep the costs of food supply low and thus make attractive producer prices compatible with competitive consumer prices that are also affordable for poorer consumer groups. Food from the region must become more attractive to urban dwellers in terms of quality, price and availability compared to imported products.

5 The **institutional dimension** is the key to ensuring that the provision of more funding actually leads to the available instruments reaching the vast majority of smallholder households, including those with fewer resources. Since agricultural trade is organised

by private business in most regions, while a fair, stable, socially inclusive and ecologically sustainable organisation of agriculture and food systems are public tasks, it makes sense to shape agricultural markets and access to agro services **through public-private partnerships („PPP“)**. In this context, the **formation of smallholder marketing and service organisations** plays an important role, since it is only through these that micro-producers can be built up into viable market partners who are capable to secure access by own efforts and who are empowered negotiators at the same time. However, the label „PPP“ must not be misused for mere public subsidies to international agricultural enterprises. Instead, public funds are to be used to finance those ecological and social organisational costs that are necessary for a socio-ecological shaping of the agricultural and food sector. This also requires public monitoring of social and ecological impacts.

In view of the great diversity of agricultural regions in Sub-Saharan Africa, the concrete design of these guidelines in the form of national agricultural policies and in the form of concrete location- and target group-specific design of support programmes will vary. What they have in common is the insight into the necessity of not only making the necessary transformation process of smallholder agriculture agroecologically sustainable, but also of maintaining smallholder land use as a livelihood for all people who are dependent on agricultural production, whether for self-sufficiency in food or for earning money.

Conclusion: Hunger cannot be eradicated without including the poorer sections of African smallholder households

The plea in the outlined „strategic guidelines“ not to make poor smallholder households the victims of the necessary transformation of African agriculture is not - as is sometimes assumed - a case of „smallholder romanticism“. This is out of the question for anyone who is familiar with the hardship and insecurity of precarious smallholder livelihoods in Sub-Saharan Africa and knows that for many smallholder households, agricultural income alone is not enough to survive. Rather, the preservation of smallholder livelihoods is a sober realism that

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recognises that, on the one hand, smallholder access to land and water is a necessary - though usually not sufficient - precondition for food security. Whereas, seasonal wage labour in the context of more capital-intensive large-scale agriculture or in medium-sized farms is not a sufficient alternative for the majority.

Experiences with support programmes for resource-poor smallholder households, including those headed by women, show that these households also have potential for intensification, provided that products and techniques are adapted to their situation, the necessary services are made accessible and producers are enabled to manage access to these services and to markets jointly (see Chapter 3). While the necessary increase in productivity per unit area is also possible for very small farms, this is not the case on an individual farm-household basis for feasible⁶, low-cost access to inputs, knowledge and markets.

A situation without hunger in the smallholder farming regions of Africa is therefore not possible without broad-based inclusion of existing smallholder households in markets and service systems. However, this can only be achieved for their poorer segments if they are organised. A poverty-oriented promotion of agriculture-based value chains aimed at comprehensive food security must therefore not only meet the requirements of the markets, but also those of the livelihood systems of the people producing for them. And it must include their organisation as an indispensable part of the value-adding process.



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⁶ An IFAD study (2018) on „Farm Size and Productivity“ confirmed the finding that farm size has no influence on land productivity.