

WORKING PAPER #1

How Open is the Data for the Africa Agricultural Transformation Scorecard?

A look at the data used for the framework's indicators

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Introduction

Open data and access to information advocacy has gained momentum in the last decade and has seen governments, international institutions, private sector, Civil Society Organizations, among others advocate for this initiative. The sustained push for is seen in African countries ratification of both regional and global charters. The African(Banjul) Charter on Human and People's Right (2005), Article 9 states that every citizen has a right to receive information from its government. This is a binding agreement that demand governments to ensure that information is made available to the citizens and the public in general. According to African Charter on Statistics (2009), any African statistics shall not be made inaccessible in any way whatsoever. This guarantees the right to information access for all users without restriction and be guaranteed by domestic law. Finally, Sustainable Development Goal (SDG) 16 on Peace, Justice and Strong Institutions, target 10 aims to ensure that public access to information and protect fundamental freedoms in accordance with national legislations and international agreements (United Nations,2019). These are some of the agreements that are pushing for open data and public access to information by governments.

Open data initiatives are also important to enhance public participation in all aspects of development. Public participation is defined by Holdar and Zakharchenko as a “process in which a community-based process, where citizens organize themselves and their goals at the grassroots level and work together to influence the decision-making process” (pg.15, 2002)”. One of the key resources to effective participation is access to information. Information should be availed on time and in formats easy to understand and machine-readable. SDG 16.7 seeks to ensure provision of responsive, inclusive, participatory and representative decision-making at all levels (United Nations,2019). Data openness therefore becomes a prerequisite for deliberations between government, private sector, Civil Society Organizations, citizens' participation for development forums among other key economic, political and social aspects. Governments should therefore commit to ensure that everyone has access to, understands and is able to use and share information without restrictions. For citizens whose concerns are to be addressed by different development programs and projects, there is a need for them to have more information in their hands (Open Data Charter,2015). This is stressed by African Charter on Statistics stating that dialogue with users must be held to ensure that statistical information matches with users' needs. This will enhance their capacity to actively and meaningfully participate in implementation of development programs. Without access to information citizen participation is unattainable (Holdar and Zakharchenko, 2002).

Comprehensive Africa Agriculture Development Programme (CAADP)

Themes and Performance Categories

Theme 2: Investment Finance in Agriculture

- » Performance Category 2.1: Public Expenditures to Agriculture
- » Performance Category 2.2: Domestic Private Sector Investment in Agriculture.
- » Performance Category 2.3: Foreign Private Sector Direct Investment in Agriculture.
- » Performance Category 2.4: Access to Finance.

Theme 3: Ending Hunger.

- » Performance Category 3.1: Access to Agriculture inputs and technologies.
- » Performance Category 3.2: Agricultural Productivity.
- » Performance Category 3.3: Post-Harvest Loss.
- » Performance Category 3.4: Social Protection.
- » Performance Category 3.5: Food security and Nutrition.

Theme 4: Eradicating Poverty through Agriculture.

- » Performance Category 4.1: Agricultural GDP and Poverty Reduction.
- » Performance Category 4.2: Inclusive PPPs for commodity value chains.
- » Performance Category 4.3: Youth job in agriculture.
- » Performance Category 4.4: Women participation in Agriculture.

Theme 5: Intra-African Trade in Agriculture Commodities.

- » Performance Category 5.1: Intra-African Trade in agriculture commodities and services.
- » Performance Category 5.2: Intra-African Trade Policies and institutional conditions.

Theme 6: Resilience to Climate Variability.

- » Performance Category 6.1: Resilience to climate related risks.
- » Performance Category 6.2: Investment in resilience building.

Background

Agriculture growth is important not only due to high demand for food projected to at least double by 2050, but is also a key economic sustainability venture for both the first and third world countries. Close to 60% of the population in Africa, are involved in agriculture practice either for commercial or domestic purposes. As such, agriculture remains Africa's unquestionable investment for growing inclusive economies and creating decent jobs mainly for the youth. Despite rapid urbanization, agriculture remains one of the most important sectors in the continent. The sector provides livelihood for about 60% of the continent's labor force, it is also a major contributor to Africa's Gross Domestic Product (GDP) and accounts for about 40% of its foreign earnings (UN, 2004).

Despite the great economic development potential that the continent has through agriculture, the sector has been stagnating for the last two decades. Its agricultural production remains very low and value addition of these agriculture products remains unexplored with very few value added products. The stagnation in agriculture yield is blamed on low investments by African governments on agriculture. This is despite the sector being a major contributor to countries' GDP. In addition, change in weather patterns has seen prolonged dry seasons and rainfall uncertainty. Other reasons include: low usage of fertilizers making soils infertile, instability and decline in demand for Africa's agricultural products in the international market, lack of rural access roads, neglect to some women needs who play a huge role in agriculture production, and lack of proper organization among farmers (UN,2004; AGRA,2018)

It is with this regard that African Heads of State and Government signed a declaration on Agriculture and Food Security in Maputo, Mozambique in July 2003 during the African Union conference. The Maputo Declaration (2003) called for a Pan-African flagship program to enhance agriculture production and bring about food security on the continent. The heads of states further called for action by member countries to develop mechanisms that enhance capacity for knowledge and data generation and management to strengthen evidence-based planning and implementation.

Through the Maputo declaration, the Comprehensive Africa Agriculture Development Program (CAADP) was born with the aim to increase public investment in agriculture by a minimum of 10% of national budgets and to raise agricultural productivity by at least 6% annually in its member countries. CAADP is a Pan-African framework developed to improve food security, nutrition and increase income in Africa's largely agriculture based economies

that provides a set of principles and broadly defined strategies to help African countries. The focus is to critically review their own situations and identify investment opportunities with optimal impact and returns. CAADP champions reform in the agricultural sector, setting broad targets.

Following the need to amend and reaffirm the Maputo declaration structural policies, implementation and commitment strategies, the Malabo declaration was adopted during the 2014 AU Year of Agriculture and Food Security conference held in Equatorial Guinea in June 2014. This happened at the 10 years' anniversary of the CAADP. The Malabo Declaration (2014) notes progress toward the goals set within the Maputo Declaration. It stresses concerns over Africa's growing dependence on foreign markets for food security, arguably due to changes in consumption patterns such as population demand and climate changes. African leaders first re-committed to the principles and values of the CAADP process. In addition, they committed to increasing agriculture growth and transformation for shared prosperity and improved livelihoods to end hunger and halve poverty by 2025. Other commitments include enhancing resilience of livelihoods in the wake of climate variability, enhancing mutual accountability to action and results, boosting intra-African trade of agricultural goods and services and enhancing investment finance in agriculture (NEPAD, 2014).

Findings

This section critically evaluates the data availability, data openness with its terms / conditions for use per country and discussions segments respectively. Data availability looked at data that was found online in government ministries, departments and agencies. The CAADP Results Framework has seven themes under which there are 43 performance indicators and 177 datasets (data required). The 43 indicators require 178 datasets because under many indicators there are several data required and they have thus been categorized as datasets on their own. However, this study focused on 5 themes (2 to 6) consisting of 43 performance indicators and 150 datasets (data required). These 5 themes are the main areas of concern where African governments' have to work on to ensure the goals of agricultural transformation and improved livelihoods are achieved.

Theme 1 - Commitment to CAADP Process

Theme 2 - Investment Finance in Agriculture

Theme 3 - Ending Hunger

Theme 4 - Eradicating Poverty through Agriculture

Theme 5: Intra-African Trade in Agriculture Commodities

Theme 6: Resilience to Climate Variability

Theme 7: Mutual Accountability for Actions and Results

Openness looks at whether data available is open to access, use, and share by users. Attaching terms of use to the data, give users the opportunity to know what to do with the data. In this assessment we use the following four levels to evaluate openness of available data:

- » Non-restrictive: means that data users are free to use, reuse and redistributed,
- » Semi-restrictive: means users can use, reuse and redistributed data but on conditions set by the owner,
- » Restrictive: means that users are prohibited from using, reusing and redistributing data, and
- » Unavailable: means that there are no terms of data use.

Semi-restrictive terms of use remain the most popular among the four with, restrictive terms of use being the least popular. It is important to note that no government ministries' website has any terms of use for data attached to them. The semi-restrictive terms of use have been attached mainly to data availed by the National Statistics Office.

OPEN DATA PUBLISHED



81

Out of 150

POSSIBLE DATASETS THAT HAVE BEEN PUBLISHED

as of November 2018

DATA GAPS

9

INDICATORS UNAVAILABLE

COVERAGE

15

INDICATORS THAT HAVE COMPLETE DATA
AVAILABLE

FORMAT



PUBLISHERS

9

Out of 24

INSTITUTIONS THAT HAVE PUBLISHED THEIR
DATA AS OPEN DATA

Kenya

In the 2018 Biennial Report, Kenya received an average score of 4.77, which is above the benchmark minimum of 3.97. This means that the country is on track to attaining the targets set (RESAKSS, 2018).

Data Availability

Out of the 150 datasets for themes 2-6, Kenya has 81 data points that have information readily accessible online. Themes 3, 4 and 5 have above average data points with available information, whereas themes 2 and 6 have below average data points with information availability. A closer look at the different indicators shows that indicators under the five themes have little or no information readily accessible online. While some indicators have information available for all the respective data points, some have little or no information at all. Indicators without online accessible information include:

- 2.1iii ODA disbursed to agriculture as % of commitment (ODA),
- 2.2 Ratio of domestic private sector investment to public investment in agriculture
- 4.3 Percentage of youth that is engaged in new job opportunities in agriculture value chains.
- 4.4 Proportion of rural women that are empowered in agriculture,
- 5.1 Growth rate of the value of trade of agricultural commodities and services within Africa, in constant US dollars
- 3.1v Total Agricultural Research Spending as a share of AgGDP.
- 6.1i Percentage of farm, pastoral, and fisher households that are resilient to climate and weather related shocks,
- 6.1ii Share of agriculture land under sustainable land management practice
- 6.2 Existence of government budget-lines to respond to spending needs on resilience building initiatives.

A look at the indicators doing poorly about having information readily available online, theme six has all the three indicators red flagged. This can be attributed to generally having no data available or collected. Data on women and youth in agriculture is also unavailable despite women and youth being two of the most important groups that require a lot of investment for agriculture transformation. Data on spending in total agricultural research is accessible from international organizations websites but none in government agencies' websites.

Openness

Of 82 datasets with data available for Kenya, 42 datasets had semi-restrictive terms of use, six had unrestricted terms, one was restricted and 32 did not have any information on terms of use.

OPEN DATA PUBLISHED



98

Out of 150

POSSIBLE DATASETS THAT HAVE BEEN PUBLISHED

as of November 2018

DATA GAPS

4

INDICATORS UNAVAILABLE

COVERAGE

19

INDICATORS THAT HAVE COMPLETE DATA
AVAILABLE

FORMAT



PUBLISHERS

8

Out of 22

INSTITUTIONS THAT HAVE PUBLISHED THEIR
DATA AS OPEN DATA

Rwanda

Rwanda ranks the best in the continent as per the 2018 biennial review scorecard. With a score of 6.1, Rwanda is on track to meeting the set targets for the CAADP framework(RESAKSS,2018).

Data Availability

Out of 150 datasets, Rwanda has 98 datasets that have their information readily accessible online. This is approximately 64%. Theme 2, 3 and 4 have performed well with data available averaging over 50%.

However, themes 5 and 6 have indicators that have little or no data available in websites of government ministries, departments and agencies.

Indicator: 5.2i on Trade facilitation index that looks at border administration and ease of trading across borders has nine datasets but only two datasets have information available in ministries' websites. Under this indicator, the parameter under border administration that looks at the ease of doing business in Rwanda has (CV) seven datasets of which none of them has data available in government's websites. Indicator 5.2ii Domestic Food Price Volatility Index which focuses on monthly food indices has two data sets both of which have no data available on government's website.

Theme six on Resilience to Climate Variability performed the worst on data availability compared to the other four themes with just 3 out of 18 datasets having information accessible in MDAs websites. A deeper analysis on the three indicators under this theme shows that: performance indicator 6.1i Percentage of farm, pastoral, and fisher households that are resilient to climate and weather related shocks, has 13 datasets but only 2 have data present in government and government agencies' websites. Performance indicator 6.1ii Share of agriculture land under sustainable land management practices (SSLM) which looks at agricultural land under Sustainable Land Management(SLM) has two datasets of which none has data available. Finally, indicator 6.2 on Existence of government budget-lines to respond to spending needs on resilience building initiatives which focuses on government investment in disaster preparedness and early warning systems has three datasets but only one has data available.

Openness

Of the 98 datasets that have their data available online, 57 do not have any terms of use while 41 have semi-restrictive terms of use attached to them. None has unrestrictive or restrictive terms of use. Government ministries and agencies do not have any terms of use guiding the use of data on their websites. On the other hand, the National Statistics Office in Rwanda has the semi-restrictive terms of use for the data found on its website.

OPEN DATA PUBLISHED



86

Out of 150

POSSIBLE DATASETS THAT HAVE BEEN PUBLISHED

as of November 2018

DATA GAPS

10

INDICATORS UNAVAILABLE

COVERAGE

14

INDICATORS THAT HAVE COMPLETE DATA
AVAILABLE

FORMAT



PUBLISHERS

7

Out of 13

INSTITUTIONS THAT HAVE PUBLISHED THEIR
DATA AS OPEN DATA

Tanzania

Tanzania received a low score of 3.1 in the CAADP 2018 biennial report. This is below the set benchmark of 3.9 meaning the country is not on track to meet the targets as set in the CAADP Framework. However, the country scores above average on data availability in MDAs' for different datasets.

Data Availability

Tanzania performed above average with 86 out of 150 datasets available on government's websites which is 57% availability. Themes 2, 3 and 5 had more than half of its datasets available in government websites. Under theme 2 on Investment Finance in Agriculture, it is important to note that indicator 2.1iii ODA disbursed to agriculture as percentage of commitment (ODA) which has two datasets on Official Development Assistance (ODA) for agriculture, forestry, and fishing gross disbursements, does not have data present in MDAs' websites. Theme 4 on Eradicating Poverty through Agriculture performance on basis of data available is below the average of 50%. Specifically, indicator 4.2 Number of priority agricultural commodity value chains for which a PPP is established with strong linkage to smallholder agriculture, does not have any data available in government's websites for its six datasets.

Theme 6 performed dismally as has been the case in the other three countries under study. In Tanzania under theme 6, 1 out of 18 datasets has information present in government websites.

Openness

Of the 86 datasets, available online only 31 had terms of use available. This is the semi-restrictive terms of use. 55 datasets do not have any terms of use attached to them. There is no dataset with restrictive or nonrestrictive terms of use

OPEN DATA PUBLISHED



100

Out of 150

POSSIBLE DATASETS THAT HAVE BEEN PUBLISHED

as of November 2018

DATA GAPS

6

INDICATORS UNAVAILABLE

COVERAGE

21

INDICATORS THAT HAVE COMPLETE DATA
AVAILABLE

FORMAT



PUBLISHERS

10

Out of 26

INSTITUTIONS THAT HAVE PUBLISHED THEIR
DATA AS OPEN DATA

Uganda

According to the 2018 biennial report, Uganda is among the countries with a score above the benchmark of 3.9. The country scored 4.4, which means it is on track to meet its targets. However, it is important to look at the data used to calculate these scores and find out whether this data is available in government's websites.

Data Availability

In terms of data availability, Uganda performed best among the four countries studied. Out of 150 datasets, Uganda has 100 datasets that have their information readily accessible online. All except theme 4 and 6 performed above average with theme two having information online for most of its data sets.

However, under theme 4 on Eradicating Poverty through Agriculture, indicator 4.1i Growth rate of the agriculture value added, in constant US dollars has four datasets none of which has its data available on any government website. Indicator 4.2 Number of priority agricultural commodity value chains for which a PPP is established with strong linkage to smallholder agriculture, has just 1 out of 5 datasets with data available in MDAs' websites.

As is the case of Kenya and Rwanda, a big data gap exists in theme six on Resilience and Climate Variability with just three datasets out of 18 having its information accessible in government websites. Indicator 6.1i Percentage of farm, pastoral, and fisher households that are resilient to climate and weather related shocks with 13 datasets has only one dataset whose information is available on any government website. Finally, indicator 6.2 on Existence of government budget-lines to respond to spending needs on resilience building initiatives has none of its three datasets with information available in any government website.

Openness

Of the 100 datasets that have their data available in Ugandans MDAs' websites, 72 datasets have semi-restrictive terms of use allowing using and reusing of data but on condition. 29 datasets, however, do not have any term of use attached to them.

Discussion

Agriculture remains a key contributor to Gross Domestic Product (GDP) for the four East African countries discussed above. In Kenya as per the 2018 Economic Survey, agriculture contributes 31.8% to the GDP. In Uganda, according to Uganda National Household Survey 2016/2017, agriculture's contribution to GDP is 24.9% and 70% of the working population are employed in agriculture. In Tanzania, agriculture contributes 29.1% to the GDP and 65.5% of the total working population according to the Agricultural Sector Development Program II (ASDP II) of 2018. In Rwanda, agriculture contributed 31% to the GDP and 70% of the working population work in agriculture (National Institute of Statistics of Rwanda- NISR (2017)).

The Malabo Declaration on transforming agriculture for improved livelihoods notes that agriculture sector plays a key role not only for the GDP but also in improving livelihoods and alleviating poverty. With targets, set and countries expected to show progress every two years, data availability and openness becomes crucial to help track this progress. The study opted to explore the state of the data availability and openness used for the different indicators used in Kenya, Uganda, Tanzania and Rwanda in the 2018 biennial report. The concentration was on government sources as it is the responsibilities of individual governments to provide the data to the personnel working on scoring for different countries. Below is a discussion on some issues arising from the findings:

Women and youth are two important population groups to a country's economy. Women labor force in agriculture in Sub-Saharan Africa is estimated to be about 50% (FAO, 2011). Though mostly for subsistence purposes, women play a key role in agriculture for both livestock and crop production, which therefore calls for better investment for women in agriculture to help fight poverty and enhance food security. With the young population in the four countries, youth participation in agriculture provides an opportunity to transform agricultural productivity. Additionally, encouraging youth in agriculture goes a long way in fighting youth unemployment, which goes up every year as more youth are released into the job market (AGRA, 2015). The sustained push for women and youth investment in agriculture is presented in the Malabo Declaration. One of the commitments is that, women, youth and other disadvantaged groups must participate and directly benefit from the growth and transformation opportunities to improve their lives and livelihoods (2014)

Rwanda got a highest score (10 / 10) on data availability indicator of women participation in agribusiness and this boils down to the fact that data on women in agriculture was readily available and accessible in governments data. The rest of the countries scored zero and it becomes difficult to track progress when there is no data available. Gaps are noted only in cases where information is available for scrutiny.

In a region grappling with rising youth unemployment, agriculture presents an opportunity to have more youth

taking part in the agriculture value chain as a main source of livelihood. Agriculture and more specifically farming has been dominated by older population and has remained unattractive to the youths most of whom do not see it as a source of income and unprofitable (AGRA,2015). The governments need to invest in the entire agriculture value chain to encourage for youth participation in the sector. However, investment can be successful once information is available on the number of youth participating in the agriculture value chain. That way, it is possible to make evidence based decisions and policies on how to encourage more youth engagement in agriculture.

Theme 6 on Resilience and Climate Variability scored poorly across all the four countries with scanty data availability only in Rwanda. With an exception for Rwanda, the rest of the East African countries have been labelled Not on Track from the scorecard on progress (NEPAD,2018). Despite Rwanda scoring high on this theme, very little information is available for minimal datasets. Climate change has continued to affect countries negatively and agriculture remains one of the most affected as land becomes no longer suitable for agricultural practice in cases of adverse and prolonged drought or swamped up areas.

Data availability and openness becomes important because, it not only provides opportunity to access, use and share information but also form collaborations with different stakeholders working in different sectors (Open Data Charter,2015). Countries therefore should increase investments in resilience building to climate change, to alleviate the negative effects of climate variability on agriculture in farming, pastoralism and fisheries. Investment will help strengthen household's resilience to climate variability to prevent negative effects on agriculture reducing risks of food insecurity and households further dive into poverty. However, investment can only be done once information exists on the state of resilience for these different sub-sectors. Governments therefore must strengthen data collection systems especially for Sustainable Land Management (SLM), which will increase the size of arable land enhancing food security.

Open data advocates for not only data availability but also openness. Openness implying that apart from data being available, it should have terms of use attached, that allows to access, use and share data. Data can be in the public domain but not sharable because of existing restrictions or lack of any terms of use. Openness also implies that the data should be in machine readable formats. However, this study focused on presence of terms of use. Semi-restrictive and unavailability of terms of use are common in the study. 47% of the data for the four countries did not have any terms of use while 51% had restrictive terms of use. Restrictive and Nonrestrictive terms of use was only attached to 2% of the data available in the four countries. It is also important to note that, semi-restrictive terms of use were on websites of National Statistics Agencies, ministries, departments and most agencies did not have any terms of use in their websites. Government should strive to have terms of use that will guide users on how to use the data. Secondly, unrestricting data use will go a long way in ensuring that users can access, use and share data.

Conclusion

With agriculture contributing to an average of 30% to the GDP of the four countries in this study, there is the need to invest more in the sector. Moreover, the sector provides to majority of the population especially in the rural areas. This informed the decision to have agriculture driven policies that would lead to transformation of agriculture in Africa. The Malabo Declaration (2014) on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods set agriculture goals to be achieved by 2025. One of the main commitments was that 10% of total public expenditure be allocated to agriculture. The sector remains very important for African countries' economic growth and poverty reduction. The 2018 biennial report shows that Kenya, Uganda and Rwanda are on track to meet the CAADP targets while Tanzania is off-track as per the data provided to The African Union by individual governments. However, going by the study done, none of the four countries has published all its data for the CAADP indicators on their ministries, departments and agencies websites.

Data availability and accessibility gives way for policy makers to make evidence based decisions on different aspects of development and specifically on this case, agricultural formation. Secondly, it is easier to track progress on different indicators and data sets when data is available. Thirdly, development programs implementers know what the baseline for different projects is when data is available on where the starting point is. In addition, having data open can assist in creating collaborations and cooperation with stakeholders and donors working in different sectors, in implementation of certain projects. For data that was used to calculate the scores for the 2018 report, governments should not only ensure that it is readily available in their websites but also have non-restrictive terms of use that will allow users namely citizens, private or public sector players to access, use and distribute this data to enhance evidence based decision making. Some indicators did not have any data and thus governments need to strengthen data collection strategies to ensure that everything works as a unit towards attaining all the set targets of the CAADP Framework by 2025. No sector should lag behind owing to data unavailability.

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