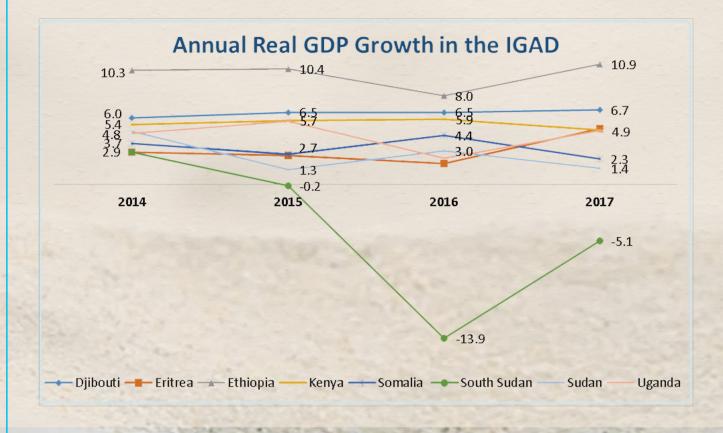


The Horn Economic and Social Policy Institute

Annual HESPI Report on IGAD Economies

Macroeconomic Developments, Climatic Shocks, and the State of Food Security in IGAD 2018



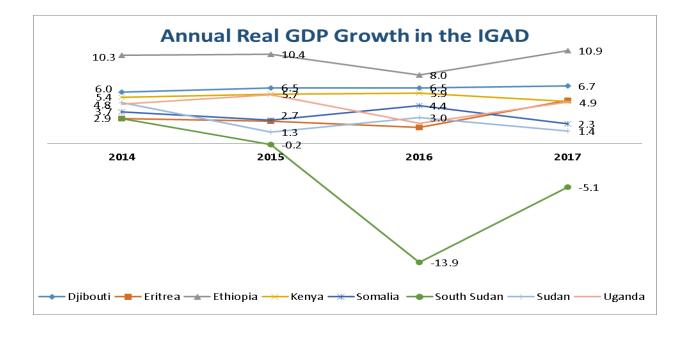
January 2019 Addis Ababa, Ethiopia



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List of Acronyms

ACP-EU	African, Caribbean, and Pacific Region- European Commission
ACF-EU AEO	African Economic Outlook
AQUASTAT	Statistical Database of the Food and Agriculture Organization
ASALs	Arid and Semi-Arid Areas
BMG	Broad money to GDP ratio
BSS	Bank of South Sudan
CAADP	Comprehensive Africa Agriculture Development Program
EAC	East African Community
-	5
EIU	Economists Intelligence Unit of the Economist
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GWPEA	Global Water Partnership Eastern Africa
HOA	Horn of Africa
ICPAC	IGAD Climate Prediction and Applications Centre
IDDRS	IGAD Drought Disaster Resilience and Sustainability Initiative
IDDRSI	IGAD Drought Disaster Resilience and Sustainability Initiative
IDMP-HOA	Integrated Drought Management Program in the Horn of Africa
IDRF	IGAD Disaster Response Fund
IGAD	Intergovernmental Authority for Development
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
NBE	National Bank of Ethiopia
NEPAD	New Partnership for Africa's Development
NPL	Non-Performing Loan
ODA	Official Development Assistance
PSNP	Productive Safety Net Program
SDG	Sustainable Development Goals
SSA	Sub-Saharan Africa
UN OCHA	United States Office for Coordination of Humanitarian Affairs
UN	United Nations
USD	United States Dollar
WDI	World Bank World Development Indicators,
WEO	IMF's World Economic Outlook
WEG	World Resources Institute
VV IXI	

Preface

The Intergovernmental Authority for Development (IGAD) is a regional bloc formed by eight countries in the horn of Africa region (Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan, South Sudan, and Uganda). The region is highly vulnerable to recurrent climatic and human-made shocks. Historically, social crisis and loss of lives from such shocks have been massive. Recent experiences, however, are promising in that joint efforts of governments, regional institutions, development partners, humanitarian organizations, donor communities, have managed to curtail the climatic shocks from causing excessive damage to the Region. This is only a marginal improvement. Addressing the root causes and ensuring institutional capabilities within the region is among the top policy agendas of the IGAD region. Building resilience, improving early warning systems and response mechanisms are prime institutional deficits in the Region. The IGAD member governments, the IGAD Secretariat, and development partners are joining hands in the process of building regional and country-specific institutional frameworks, devising sustainable financing, and improving disaster early warning systems and responses.

This report on IGAD Economies has, thus, picked the state of climatic shocks and food security as a timely thematic topic worth reviewing. The report also provides an overview of the macroeconomic landscape of the Region. The first part of the report highlights key developments in the IGAD economies.

The macroeconomic review covers selected indicators that help observe developments through time and comparisons across countries. In the year 2017, economic growth in the IGAD was uneven that some countries continued their positive growth trajectory, while a few others registered either low or negative growth. Inflation was less of a problem for the year, and most of the countries contained their respective monetary growths at a non- inflationary level. Inflation in the Region has generally been structural in nature. Current account and fiscal deficits and the associated accumulation of debt arrears remain a challenge. The foreign reserve positions are low for most of the countries that foreign currency crunches have been a hindrance to exchange rate stabilization. The sluggish growth in the manufacturing sub-sector, and more broadly the industrial sector is another long term challenge for the region.

The second part of the report summarizes the state of climatic shocks, the prevailing response mechanisms, and progresses so far in coordinating efforts of several stakeholders. The findings highlighted increased stakeholders' commitments and commendable results so far achieved in emergency responses, with all its shortcomings. The pervasive nature of the problems (climatic shocks, mainly drought and flood), however, necessitates deepening of efforts to ensure robust developments that enhance countries capabilities in preventing and efficiently responding to climatic disasters.

Part I: The State of IGAD Economies

1.1 Economic Growth

In 2017, the IGAD countries with the exception of South Sudan registered positive GDP growth, though the rates vary across countries. Ethiopia, Djibouti, and Kenya experienced relatively stable growth, while Eritrea, Somalia, South Sudan, Sudan, and Uganda witnessed some growth swings. Uganda's and Eritrea's growth in 2017 was an unpredictable positive turnaround. South Sudan made a big stride in its growth, yet the country still remained in a negative growth trap. Somalia maintained a positive growth with a little decline from its 2016 level. Overall, the 2017 IGAD region GDP growth performance was encouraging, with some caveat. The growth performances of each of the IGAD countries are presented as below.

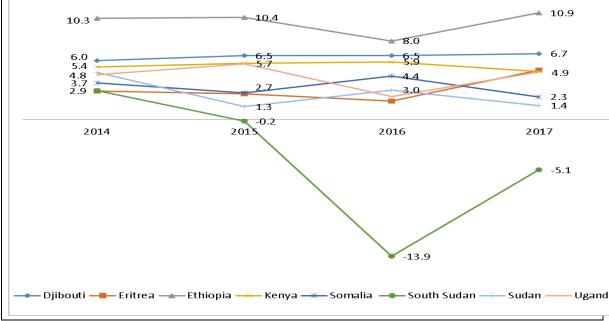


Figure 1 Real GDP Growth in the IGAD

Source: Trading Economics.com (for Somalia's 2014 and 2015 data and World Bank's report for Somalia's 2016 and 2017 growth data). IMF's International Financial Statistics (for the rest of the countries)

Djibouti's economy grew by 6.7 % in 2017 and the African Economic Outlook (2018) projected growth to reach 6.9 % in 2018 and 2019. Djibouti's growth was led by Public sector investments, particularly the construction of the railroad to Ethiopia, several new ports and a water pipeline from Ethiopia contributed to this growth. Unfortunately, the growth has not been pro-poor as poverty and unemployment remained high. IMF (2016) staff report indicated 23 percent of Djiboutian lived in extreme poverty in 2015, and the unemployment rate by then reached 39 percent.

Eritrea's Real GDP growth declined to an estimated 3.4% in 2017, from 3.8% in 2016; and is estimated at 2.3% in 2018. Bad weather that affected agricultural production is one of the reasons for the decline while GDP growth in 2016-17 was driven largely by investment in mining. Low commodity prices for gold and copper exports remain a current challenge for Eritrea. The border conflict with Ethiopia that led to two decades of the no-war-no-peace situation between the two countries was resolved following the signing of the peace agreement after the political reforms in Ethiopia in 2018. The UN Security Council lifted sanctions against Eritrea that had been imposed since 2009 for claims that Eritrea supported al-Shabab militants in Somalia after the governments of the two countries signed a

cooperation agreement. Eritrea is also in discussions with Djibouti to resolve their border conflict. The country's unattractive business environment, with a ranking of 189 out of 190 in the World Bank's 2018 Doing Business report, is expected to improve as the peace and security challenges of doing business in the country are addressed.

Ethiopia's Real GDP growth for 2017/18 was at 7.7 percent driven primarily by favorable harvests and rapid growth in air transport and manufacturing exports. However, political uncertainty, foreign exchange shortages, and adverse terms-of-trade trends slowed its economic activity.

Kenya's GDP growth fell to 4.9 percent in 2017 (from 5.9 percent in 2016) owing to contracted agricultural growth following the late 2016/early-2017 drought; limited available capital for the central bank placed caps on commercial banks' lending rates; and prolonged political turmoil over the presidential election (IMF, 2017). Kenya is a leading regional hub for information and communication technology, financial, and transportation services. Recent investment in rail and roads construction and planned investment at Jomo Kenyatta International Airport are potential pro-growth public investments.

Somalia's economy was hard hit by the drought that started in 2015/2016. Somalia's real GDP growth declined from 3.4% in 2016 to 2.4% in 2017. The economy, however, is projected to recover to 3.5% in 2018 and 2019. The construction, telecommunications, and financial services are the economic drivers. The government's drafting of the first National Development Plan 2017–19, that articulated economic reconstruction and development priorities of the country, is considered a good step forward (IMF, 2018).

South Sudan's economy has been mired in negative growth for the past couple of years; with a growth rate of -5.1, the economy showed improvement in 2017 compared to -13.9 in 2016. The underlying causes are the unstable global oil prices and the reduction in oil production coupled with the sporadic civil war the country endured. South Sudan is highly dependent on oil that accounts for the bulk of its exports, reaching about 60% of GDP and over 95% of government revenues.

The economy of Sudan has been unstable since the secession of South Sudan in 2011, which has been a source of significant macroeconomic challenge. One of the setbacks has been the sharp decline in oil production and exports as the majority of the oil resources were in the South. Sudan's economy grew by an estimated rate of 3.5% in 2017. The removal of energy subsidies and the falling imports due to the depreciation of the exchange rate have suppressed domestic demand. The unfavorable external environment has had a considerable impact following the US sanction against the country, in lieu of the allegation that the country sponsors of terrorism. The permanent revocation of the US sanctions on trade and financial flows on October 12, 2017, has brought relief for the country. The repeal was expected to lead to reductions in the cost of imports and international financial services and also open new import sources and export destinations. Medium-term growth in 2018–19 was projected to average 3.7%, driven by private and public consumption and reforms induced by the removal of sanctions (IMF, 2017.

Economic Growth in Uganda ascended to 4.8 percent in 2017 from its level at 2.3 percent in 2016. Growth is being driven mainly by public infrastructure investment; recovery in manufacturing and construction; and improvements in the services sector, predominantly financial and banking, trade, transport, and information and communication technology services.

1.2 Economic Structure

With regard to the structure of the IGAD economies, despite the recent marginally declining trend in the share of service value added, the sector is still dominant in the Region. Efforts are underway to promote the manufacturing value added, yet the progress so far has been weak. Growth in overall industrial value added has not been promising.

The standard indicator of economic structure is the sectoral share of GDP. According to this indicator, the service and agricultural sectors take big shares in most of the IGAD economies. For instance, the service sector accounted for 72 percent of Djibouti's GDP in 2017, with port service being the lead contributor. In Eritrea, according to AEO (2018), agriculture with a share of 17.2% of GDP provides most of the population with a livelihood, the sector accounts for about 80% of employment and 44% of commodity exports. In Ethiopia, on the other hand, the service and agricultural sectors have a comparable contribution to GDP. In 2016/17, the service sector value added was 39.3% driven by trade, transport, and communications. Industry's share of GDP in the Ethiopian economy increased from 16.7% in 2015/16 to 25.6% in 2016/17, driven by construction, electricity, and manufacturing. The secession of South Sudan from former Sudan has led to a sudden fall in the share of the industrial sector in Sudan's economy, and the service sector's share has risen slightly. For instance between 2000 and 2010, the share of the industry for Sudan increase from 20 percent to 27 percent, and fell to 2 percent between 2010 and 2017. Table 1 provides the sectoral value added to the IGAD economies.

Country	Series	2000	2010	2017
Djibouti	Services			72
	Industry			16
Eritrea	Services			
	Industry			
Ethiopia	Services	37	42	37
	Industry	11	9	23
Kenya	Services	45	48	45
	Industry	15	19	17
Sudan	Services	36	44	47
	Industry	20	27	2
Uganda	Services	45	48	47
	Industry	21	18	20
Somalia	Services			
	Industry			
South Sudan	Services			
	Industry			

 Table 1 Economic Structure/Sectoral contributions to GDP in the IGAD (% GDP)

Source: World Development Indicators (World Bank, 2018)

The industrial sector is stagnant in the IGAD countries. In 2017, the highest was for Ethiopia with a 23 percent share of GDP followed by Uganda and Kenya with 20 percent and 17 percent share, respectively. Excluding construction and mining sub-sectors would give a disappointing picture. The manufacturing value added is performing poorly in the IGAD and the main drivers of growth in the share of the industry are construction and mining sub-sectors. Table 2 provides a summary of the manufacturing value added in the IGAD.

	Manufacturing, value added (% of GDP) 2002 2009 2017					
Country						
Eritrea	9.1	5.5				
Ethiopia	5.8	3.9	5.6			
Djibouti			4.1			
Uganda	7.4	8.4	8.2			
Kenya	9.8	12.0	8.4			
Sub-Saharan Africa (excluding high income)	14.0	11.4	9.9			

Table 2 Manufacturing Value Added in the IGAD

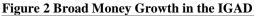
Source: World Development Indicators (World Bank, 2018)

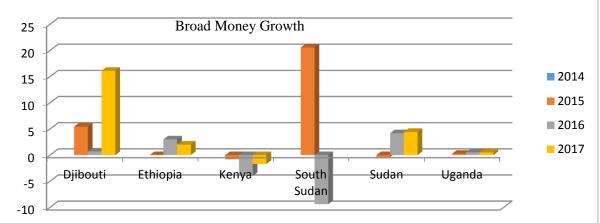
The manufacturing value added for the IGAD counties for which data is available indicates that all of them performed below the sub-Saharan average of nearly 10 percent in 2017. For instance, the manufacturing share of GDP for Djibouti and Ethiopia are 4 percent and 5.6 percent, respectively. Kenya and Uganda are relatively better with about 8 percent share of GDP.

1.3 Money and Prices

Most of the IGAD countries contained their monetary growth below five percent for most of the recent years. The outliers in this regard are South Sudan in 2016 with large negative monetary growth and Djibouti in 2017 with a growth of around 15 percent. There has been only moderate inflation in the IGAD countries in recent years, except for South Sudan which has been marked by instability and insecurity and to a certain extent Sudan. The inflation rate in South Sudan reached 380 percent in 2016 and was at 188 percent in 2017. Sudan's annual inflation soared from 17.8 % in 2016 to 32.4 % in 2017 on account of expansionary monetary policy to accommodate growing fiscal financing needs. The rest of the countries in IGAD managed to keep inflation in single digits since 2016. The IMF projects inflation to be less of a problem in 2018 and 2019.

Djibouti with close to 0.6 inflation rate is the lowest for the Region. .Eritrea's inflation remained at an estimated 9% in 2017, driven by insufficient food supply and scarce foreign currency to finance imports of essential goods. Kenya's inflation is back within the authorities target range (5 ± 2.5 percent) after a sharp rise in food prices pushed headline inflation above the target range starting in February 2017. Somalia's annual inflation trended up from 0.7 % in 2015 to 5.6 % in 2017. Inflation was contained by dollarization of the economy and the lower oil prices, and the projected inflation for 2018 was 2.6 %. Uganda's macroeconomic policy stance remained focused on containing inflationary pressures, enhancing exchange rate stability, and stepping up domestic resource mobilization growth by 0.5 percentage point of GDP (AEO, 2018). Inflation remained well under control for Uganda. Please refer figures 2 and 3 below for monetary and price developments in the IGAD, respectively.





Source: World Bank's World Development Indicators, WDI. Ethiopia's data is from the National Bank of Ethiopia International Financial Statistics

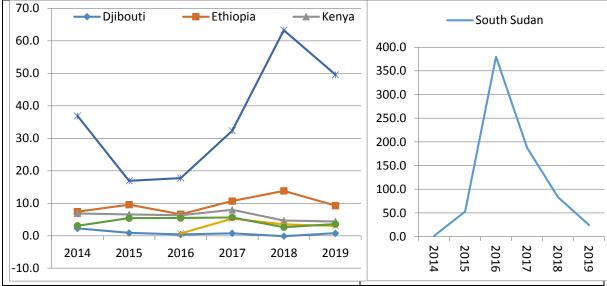


Figure 3 Annual average CPI inflation in the IGAD

Source: IMF's World Economic Outlook Data Base. (data for Somalia is from World Bank's report)

In sum, the prices have been stable for most of the IGAD countries. Even those countries with higher inflation have managed to revert price growth down. The IMF's projection for 2018 and 2019 is a downward trend in prices, the exception being Sudan.

1.4 Government Finance and Debt

The budget stances in the IGAD has been so diverse across countries. Djibouti's budget deficit, which rose sharply from 5.9% of GDP in 2013 to 15.7% in 2015, had widened to 18.2% in 2016 and reverted again to an estimated 15.5% in 2017. Ethiopia is running a moderate deficit, and its budget structure is skewed towards capital expenditure. Capital expenditure accounted for a large share of the budget, though it decreased from 51% in 2015/16 to 46% in 2016/17. Eritrea's overall budget deficit (after grants) continued its downward trend. The budget deficit declined to an estimated 13.8% of GDP in 2017, from 14% in 2016, and is projected to drop to 12.4% in 2019. Kenya's budget deficit remained high, at an estimated 7.8% of GDP in 2017. Uganda pursued a cautious expansionary fiscal policy stance to support critical infrastructure projects in transport and energy while keeping recurrent expenditure under control. The overall budget deficit was slightly high in 2016, improved in 2017, and

is projected to increase in 2018 and 2019. Figure 4 depicts the budget deficits over the years, projection starts in 2018.

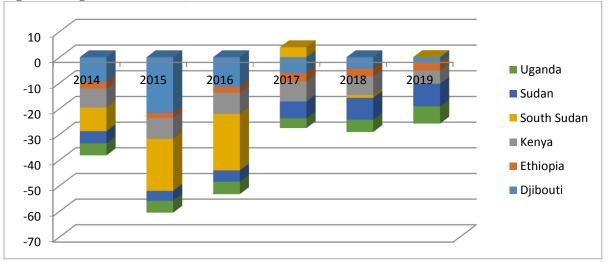
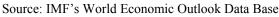


Figure 4 Budget deficit (%GDP)



General government revenue was much bigger for South Sudan and Djibouti compared to the rest of the IGAD countries. Government revenue as a share of GDP was over 40 percent for South Sudan and about 30 percent for Djibouti in 2017. It is less surprising to see Djibouti and South Sudan as outliers as they rely on Port service revenue and oil revenue, respectively. The other countries registered below 20 percent share, the least being Somalia below five percent revenue share of GDP for all of the years. Figure 5 shows the trend in general government revenue for the Region, the values for 2018 and 2019 are projections.

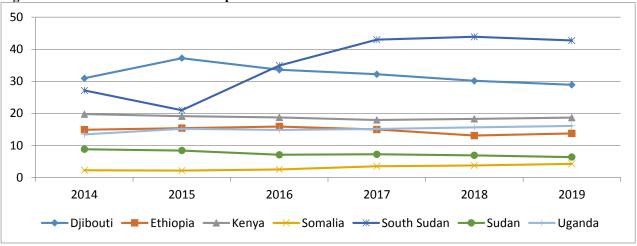


Figure 5 General Government revenue percent of GDP

Source: IMF's World Economic Outlook Data Base

Somalia's domestic revenue increased from 0.6% of GDP in 2012 to 1.8% in 2016 due to better tax administration and greater engagement with the private sector. Government capacity to generate sufficient revenues and stabilize the macroeconomic environment continues to be constrained by the small size of the formal economy and limited ability to collect taxes due to widespread insecurity and

institutional constraints. The government continues to rely on Official Development Assistance, which was 21% of GDP in 2016 and is expected to drop marginally through 2018 (AEO, 2018).

In South Sudan, falling government revenue and rising security-related spending caused the fiscal deficit to increase rapidly, which exacerbated the economic instability. Monetization of the fiscal deficit led to strong money growth, high inflation, and sharp exchange rate depreciation. The Bank of South Sudan (BSS) financing of the deficit grew five-fold from June 2013 to June 2016. This credit expansion led to strong money growth which was exacerbated by the exchange rate depreciation. Broad money grew by 219 percent in 2016 (IMF, 2017).

1.5 Investment and Savings

The IGAD region is highly capital deficit region and boosting greenfield investments has been a policy priority. Ethiopia, with 39 percent investment share of GDP in 2017, performs better than the rest of the IGAD economies. Ethiopia's investment is highly dependent on external financing, which is shown by the big resource gap (difference of investment and domestic savings, see Table 3 below). Ethiopia has prioritized industrialization through the development of industrial parks and other growth drivers, such as the 656 km Addis Ababa–Djibouti electric railway, to ease the cost of doing business. Investment in energy, such as the 6,450 megawatt Grand Ethiopian Renaissance Dam, is expected to boost energy exports. Fixed investment in Somalia is the lowest for the region. Somalia's private sector, however, demonstrated remarkable resilience in telecommunications, financial services, and construction. Table 3 presents gross investment and saving in the IGAD.

Country	Gross domes savings (% o		Gross fixed investment (% of GDP)		
	2016	2017	2016	2017	
Djibouti	12	10	27	25	
Ethiopia	22	24	38	39	
Kenya	8	5	17	19	
Somalia	-38	-41	9	10	
South Sudan	10		17		
Sudan	20	21	19	18	
Uganda	15	17	25	24	
Sub-Saharan Africa (excluding high income)	16	17	20	20	
Least developed countries: UN classification	16	18	23	24	
Low & middle income	30	32	29	29	

Table 3 Gross Investment and saving in the IGAD (%GDP)

Source: World Bank World Development Indicators

Almost all IGAD countries run substantial resource deficits. Djibouti and Ethiopia the two highest resource deficit countries in the region, for they have high investment demands. The countries noted for remarkable economic progress, Ethiopia and Kenya, have experienced no growth in investment between 2014 and 2017. For instance, gross investment in Kenya that was 22 percent of GDP in 2014 dropped to 19 percent in 2017. Ethiopia's gross investment share of GDP increased only by a percentage point between 2014 and 2017, (38 percent in 2014 and 39 percent in 2017). Among the IGAD countries with data, Sudan had a positive resource gap in 2017 as the investment in Sudan was low. In a cautionary note, such gloomy picture does not mean divestment in the region rather it means the investment was not growing as much as growth in the blend of other GDP components.

1.6 Sources of External Financing to Bridge Resource Deficit

Foreign direct investment plays a key role in Djibouti, but less so in the other IGAD countries. In 2014 and 2016, FDI accounted for over 30 percent of the total investment of Djibouti. However, the flow was uneven for Djibouti oscillating between 17 and 31 percent over the years. Ethiopia and Uganda had a little over 10 percent FDI share while the rest of the IGAD countries recorded well below 10 percent share.

Country/Indicators	2015	2016	2017
D	jibouti		
Foreign direct investment, net inflows	17.0	31.4	17.8
Net ODA provided	23.3	36.8	14.4
Personal remittances received	8.7	11.4	6.3
E	thiopia		
Foreign direct investment, net inflows	10.0	14.4	12.8
Net ODA provided	12.3	14.7	13.1
Personal remittances received	4.1	2.8	1.3
]	Kenya		
Foreign direct investment, net inflows	4.5	3.2	4.6
Net ODA provided	17.9	17.8	17.1
Personal remittances received	11.4	14.2	13.6
Sou	th Sudan		
Foreign direct investment, net inflows	0.0	(1.6)	
Net ODA provided	105.7	316.7	
Personal remittances received	71.9	216.1	
	Sudan		
Foreign direct investment, net inflows	10.7	5.7	4.8
Net ODA provided	5.6	4.3	3.8
Personal remittances received	0.9	0.8	1.0
t	Iganda		
Foreign direct investment, net inflows	11.1	10.2	11.4
Net ODA provided	24.4	28.6	32.6
Personal remittances received	13.5	18.7	20.1

Source: World Development Indicators, World Bank (2018)

The other form of external financing for the region is the Official Development Assistance (ODA). For Djibouti, the flow seems unpredictable as it swings quite significantly. For instance, ODA as a share of Djibouti's investment was 36.8 percent in 2016; it then dropped to 14.4 percent in 2017. Uganda has had a steady high share of ODA that showed only marginal fluctuations over the years. Sudan was the least recipient of ODA, the bad relationship Sudan had with the western world may have contributed to this low figure. The rest of the countries have had a mediocre share of ODA as a percent of total investment, the share being steady around 10 percent. Again, the ODA share for South Sudan was unusually higher reaching 316.7 percent in 2016.

Looking at personal remittances, Uganda has had the highest (of course Somalia has not been compared for data unavailability), followed by Kenya. Remittance played a bigger role compared to FDI inflows

to Ethiopia. The figure for South Sudan's remittance inflows has also been unusually high reaching 216 percent in 2016. During the last three years, since 2015, remittances flow to Sudan has been under 1 percent to imply that personal remittances have a limited role in financing Sudan's foreign capital need. Table 4 below presents the sources of external financing for the IGAD countries

1.7 Financial Developments

In regards to Broad money to GDP ratio (BMG), which is a proxy for financial development of a country, Djibouti had the highest BMG while the rest of the economies had low such ratio. Djibouti's BMG for 2016 of 97 percent was nowhere comparable to the rest of the countries in the list. Uganda had 22 percent in 2015, and for the same year, Kenya's BMG was 42 percent. Kenya's financial sector policy environment had evolved from a period of direct controls in the 1970s to full liberalization in the 1990s, thereby paving the way for market-determined interest rates. However, Kenya introduced a new interest rate cap in September 2016 following concerns raised by the public regarding the high cost of capital in Kenya. The cap limits on lending and deposit rates. It sets the maximum lending rate at no more than 4 percent above the Central Bank base rate; and the minimum interest rate granted on a deposit held in an interest-earning account to at least 70 percent of the same bank rate (Central Bank of Kenya, 2018).

Domestic Credit to the private sector was also another indicator of financial development. The IGAD countries had done little to extend such financial flows to the private sector. Table 5 below presents not such improvement in the IGAD region.

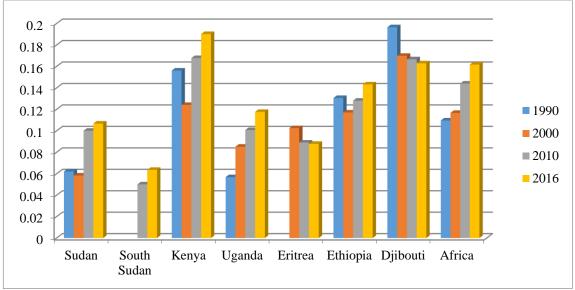
Country Name	Domestic credit to the private sector (% of GDP)				
	2015	2016	2017		
Djibouti	32.2	30.2	31.7		
South Sudan	2.2	2.0			
Sudan	7.1	8.9			
Uganda	15.6	15.6	15.0		
Kenya	34.2	32.7	31.0		
Sub-Saharan Africa (excluding high income)	45.6	45.4			
Least developed countries: UN classification	26.1	27.8			
Low income	19.2	21.0			

Table 5 Domestic Credit to the private sector

Source: World Bank World Development Indicators

Another standard measurement of financial advancement is the financial development index formulated by the IMF. According to this index, financial development in the IGAD region follows a mixed trend. Between 1990 and 2016, Sudan and Uganda experienced modest progress. Djibouti that had the highest index in 1990 experienced a declining trend from 1990 through 2016. In 2016, Kenya led the region with only a slight improvement from its 1990 index. Ethiopia seemed to stagnate, and Eritrea had a deteriorating trend. Generally, the indices for most of the IGAD countries are comparable to the African continental average that improved only slightly from its level of a little over 0.1 in 1990 to 0.16 in 2016 (see Figure 6 below).

Figure 6 Financial Development Index



Source: IMF Financial Development Index

1.8 Developments in the External Sector

1.8.1 International trade

Generally, most of the IGAD countries external balance on goods and services was much worse than the sub-Saharan average which was below 5 percent for all the recent years (see Table 6). The only country approaching a trade balance was Sudan with only 2 percent trade deficit in 2017 (World Bank-WDI, 2018).

Ethiopia's external balance on goods and services improved only slightly between 2015 and 2016 (a 1 percentage point rise), but the rise was 4 percent between 2016 and 2017. The key driver of Ethiopia's external balance on good and services is its imports since the export share remained stagnant at 8 to 9 percent for years. In absolute terms, the external balance on products and services of Ethiopia (-16 percent of GDP) in 2017) is considerably lower than Kenya and Uganda (-7 and -8 percent respectively) for the same period. According to AEO (2018), exports accounted below 20% of imports, leading to persistent trade and foreign exchange deficits in Ethiopia. Much worse than Ethiopia are that of Somalia and Djibouti, which were absolute outliers on this indicator. Somalia had a weak external balance attributable to the over two decades of state collapse that led to dependence on imports financed mainly by remittances.

Country/Region	-	rts of ervices	0	Impor and s GDP)	ervices	goods (% of	External Goods an of GDP)	Balano d Servio	
	2015	2016	2017	2015	2016	2017	2015	2016	2017
Ethiopia	9	8	8	30	28	24	-21	-20	-16
Djibouti	39	34	34	69	51	74	-30	-17	-40
South Sudan	21	55		29	62		-8	-7	
Somalia	16	15	13	61	62	64	-45	-47	-51
Sudan	8	10	10	11	13	12	-3	-3	-2
Uganda	18	19	19	29	29	26	-11	-10	-7
Kenya	17	14	14	28	23	25	-11	-9	-12
Sub-Saharan Africa (excluding high income)	25	24	28	30	28	31	-5	-4	-3
Least developed countries: UN classification	22	21	22	33	31	31	-11	-10	-8
Low income	20	20		37	38		-17	-18	

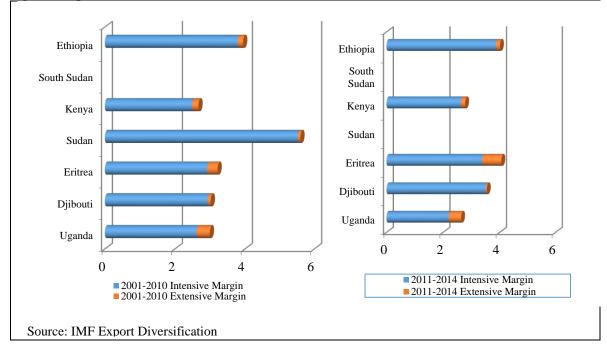
Table 6 Trade Balance in the IGAD

Source: World Development Indicators, World Bank (2018)

The export structure of IGAD countries shows higher dependence on few exportables suggesting exports are less diversified. The IMF's Export Diversification Database that scores three leading indicators of export diversification (i.e. the Export Diversification Index (overall diversification), the Extensive Margin, and the Intensive Margin) reveal the poor performance of IGAD countries for all the indicators. Higher values for the three indices indicate lower diversification. The global picture is that the commodity-dependent countries are often less diversified. For instance, the majority of the countries in Africa have an overall diversification index of 3.5 and above. The IGAD region also performs poorly on these indicators. The region's export structure was better during the first decade of the millennium than in the second. Kenya and Uganda are relatively better diversified than others.

The source of diversification is split into intensive and extensive margins. The intensive margin measures the diversity in the share of traditional exports (lower intensive margin suggests better diversification). On the other hand, extensive margin marks the introduction of new exportable items, besides the traditional export items. Generally, the IGAD economies are worse in their intensive margin than in their extensive margin (see figure 7).

Figure 7 Export diversification indices



1.8.2 Current account balance

Although all the IGAD countries performed poorly in narrowing their current account balance, comparing within the region, Uganda did better. Kenya followed Uganda in this indicator. Note however that both Uganda and Kenya are also running significant deficits. Kenya's current account increased to 6.8 percent of GDP in 2017 (from 5.2 percent in 2016) primarily due to growth in food and fuel imports in lieu of the drought and rising global oil prices. Table 7 shows a worsening current account balance as a share of GDP in IGAD countries. For almost all the years and countries in the sample, we see negative current account balances. The average trend for 2000-2004 was way better than the trend for 2005-2009. The pattern for Ethiopia and South Sudan has always been erratic. For instance, the average balance for 2000-2004 for Ethiopia was a deficit of 2.9 percent, and further deteriorated to an average of 4.6 percent for 2010-2014, 10.2 percent for 2015, and 9 percent for 2016. The primary cause for Ethiopia's worsening balance is the surge in its importations linked to grand public investments on mega projects and the inert export sector.

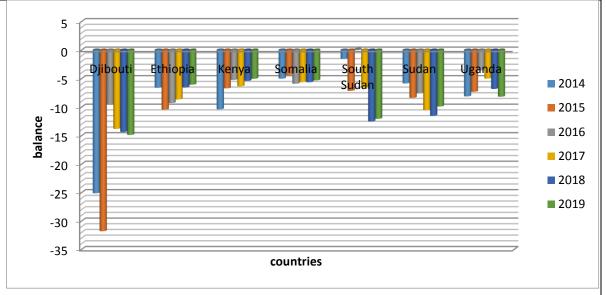
Country	2000-2004	2005-2009	2010-2014	2015	2016	2017 ^{est}	2018 est
Ethiopia	average -2.9	average -8.4	average -4.6	-10.2	-9.0	-8.1	-6.5
Etinopia	-2.9	-0.4	-4.0	-10.2	-9.0	-0.1	-0.5
Kenya	-0.9	-3.3	-8.5	-6.7	-5.2	-6.4	-6.2
Somalia			-4.4	-4.7	-6.3	-6.7	-7.2
South Sudan			-0.8	-7.2	1.8	-6.0	-6.1
Sudan	-3.4	-5.8	-5.8	-10.2	-8.9	-5.5	-6.2
Uganda	-2.7	-3.8	-7.9	-6.7	-3.4	-4.5	-6.9

Table 7 Curren	t account balance	share of GDP ¹
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Source: IMF's World Economic Outlook Database (2018).

¹ A current account is all transactions other than those in financial and capital items. The major classifications are goods and services, income and current transfers. The focus of the BOP is on transactions (between an economy and the rest of the world) in products, services, and income.

Figure 8 Current account balance (% GDP)



Source: IMF's World Economic Outlook Data Base. The data for 2018 is estimated and for 2019 is projected. For Somalia, the estimation is for 2017 and projections are for 2018 and 2019. For South Sudan, estimation is for 2015 and the rest are projections

Ethiopia devaluated its domestic currency by 15% in October 2017 to improve the terms of trade. However, the nominal depreciation of the currency was followed by a price surge that canceled the policy effect out (the improvement in the real exchange rate from nominal devaluation is countered by an equal, if not more, price growth to cancel the policy effect). Ethiopia's export performance, besides its structural limitations, has been exacerbated by the slow entry to the market of export-oriented ongoing public and private ventures and the heightened political turmoil since 2015. Imports, on the other hand, are on the rise, partly due to import oriented public projects. As a result, the trade deficit rose to USD 13.8 billion in 2016, before it declined to USD 11.8 billion in 2017 for a shortage of financing for importation (HESPI, 2018). Authorities in Ethiopia succeeded in narrowing the external current account deficit to 6.4 percent of GDP in 2017/18. Despite significant falls in public sector imports, overall Imports of goods and services remained unchanged while exports rose by 13.2 percent. Commodity exports were affected by weak prices for coffee and other traditional exports, while oil prices rose in the first half of 2018— leading the terms of trade to deteriorate (IMF, 2018).

Djibouti's current account deficit remained large at 29 percent of GDP, financed mainly by borrowing and foreign direct investment. Investment-related imports are principal escalators of the current account deficit, i.e. increase in imports of investment goods, despite healthy export growth (IMF, 2016). South Sudan's current account balances swung between negative and positive values. The erratic nature of South Sudan's balance is due to its heavy reliance on oil exports and global oil price fluctuations coupled with the recurrent civil wars the country endured in recent past. Sudan's balance has always been the worst and showing steady deterioration. The case of Sudan could primarily be political, linked to the bad relationship that it had with the Western world, with the lifting of the sanctions things are expected to change for positive, though the impact of the recent change in government remains to be seen. The narrowing current account in recent years in Sudan is a reflection of the reduction in imports.

1.8.3 Exchange rate

The exchange regimes in the region are mixed. Djibouti has pegged its domestic currency against the USD since its independence in 1973. Ethiopia devalued its currency by 15% in October 2017 to promote

exports. The Central Bank of Somalia has not issued any bank notes since 1999. The government of Somalia had recently announced its plan to issue a new currency. According to the Central Bank of Somalia, Somalia's economy is highly dollarized with little confidence in the domestic currency (Somali shilling). Somali shilling continues to depreciate in nominal terms. The Central Bank does not have control over the exchange rate or the supply of the currency, which is printed by private players. South Sudan liberalized its Pound (SSP) in December 2014. Between October of 2014 and October of 2017, the SSP exchange rate depreciated from 2.95 to 170 per unit of USD (AEO, 2018).

1.8.4 Foreign reserve position

The foreign reserve position of the IGAD has been generally low and unpredictable. Availability of foreign currencies restricts most of the countries' importations and other overseas payments. Kenya and Uganda did better while Ethiopia faced a massive limitation that it constantly rations the available foreign currency for priority uses. Importers in Ethiopia have to wait for months to get foreign currency from the official market. It is less surprising that Ethiopia is among the leaders in terms of illicit financial flows, primarily money laundering. Mainly the over and under-invoicing are commonplace in Ethiopia. South Sudan had the lowest reserve in the IGAD region (see Table 8).

	Total	reserves in	months	of
	import	s		
Country Name	2015	2016	2017	
Ethiopia	2.3	1.8		
Djibouti	3.9	5.2		
South Sudan	0.5	0.2		
Uganda	4.5			
Kenya	4.9	5.4	4.4	
Sub-Saharan Africa (excluding high income)	4.9	6.1	6.4	
Least developed countries: UN classification	6.3	7.5		
Low income	6.4	7.5	9.2	

Table 8 1	Fotal reserv	ves in mo	onths of	imports

Source: World Bank World Development Indicators

1.8.5 External debt

The external debt stock of the IGAD economies has a huge concessional component. Sudan is the least externally indebted and Somalia has the highest share of external debt (See table 9). Vision Djibouti 2035 that aims to stage the country to middle-income status and to make it a logistics and commercial hub for the whole of East Africa has led to an increase in external debt of the country. Ongoing large-scale investment programs are hugely financed by external debt that lifted public external debt from 52.5% of GDP in 2014 to 65.7% in 2015 to 78.3% in 2016 to more than 79% in 2017. Djibouti's debt had been primarily government-guaranteed public enterprise debt (IMF, 2016). The concessional, external, and general governments debt levels in the IGAD are summarized in Table 9 and Figure 9.

Table 9 Debt levels in the IGAD

	Concessional debt (% external debt)	% of total	External debt stocks (% of GNI)		
	2016	2015	2016	2015	
Djibouti					
Ethiopia	69	65	32	31	
Eritrea					
Kenya	57	56	32	31	
Somalia	49	53	46	53	
Sudan	41	41	24	24	
Uganda	54	48	40	36	
Sub-Saharan Africa (excluding high income)	33	30	32	28	
Low income	65	63	33	32	

Source: World Bank World Development Indicators

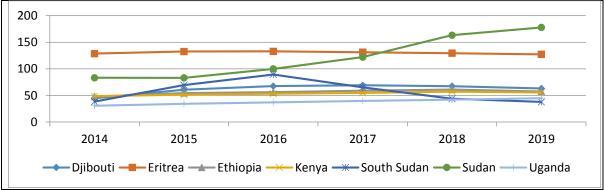


Figure 9 General Government Debt (%GDP)

Source: IMF's World Economic Outlook Data Base

Eritrea's estimated public debt at 105.8% of GDP in 2015 was three percentage points lower than its level in 2013. External debt to official creditors, which declined from 41% of GDP in 2010 to 21.9% in 2014, remained above the Sub-Saharan Africa average of 10.5%. Uganda continues to have a low risk of debt distress. However, the debt to GDP ratio is increasing and is projected to reach 45% by 2020 from 34.1% in 2014. At these growth rates, the debt burden is growing faster than government resources; the revenue-to-GDP ratio stands at only 13.4%. South Sudan's Government gross debts increased from zero in 2011 to an estimated 15.5% of GDP in 2017.

The National Bank of Ethiopia (NBE) bill that required all commercial banks to allocate at least 27 percent of their gross credit to buying the Bill ended up in the accumulation of Non-Performing Loans (NPL) at the Development Bank of Ethiopia (which received about 75 percent of these funds collected through the Bill). Development Bank of Ethiopia's NPL ratio has steadily increased to 39 percent. NBE bills represented 30–40 percent of private commercial banks' loans outstanding, and although the nominal interest rate on them has grown, it remains negative in real terms. The Bill, however, has been instrumental in reducing banks' excess liquidity (IMF, 2017) and possibly inflationary pressure.

In recent years, Kenya's debt and debt service have increased as a result of the government's public investment drive and revenue shortfalls. The fiscal deficit in 2016/17 was 9.2 percent of GDP, compared to a program target of 6.9 percent. This deficit reflected mainly a combination of higher-than-programmed foreign-financed investment and lower tax revenues. The higher level of debt, together with rising reliance on non-concessional borrowing, have raised fiscal vulnerabilities and increased interest payments on public debt to nearly one-fifth of revenue, placing Kenya in the top quartile among its peers (IMF, 2018).

Part II: Climatic Shocks and Food Security in the IGAD

2.1 Climatic shocks and responses

2.1.1 An overview

The IGAD region is predominantly Arid and Semi-Arid Areas (ASALs). About 70% of the Region's land mass receives below 600 mm of annual rainfall. The livelihood in the arid and semi-arid areas is for the most part pastoral and agro-pastoral production. The pastoralists move, within and outside their national boundaries, in search of pasture and freshwater resources. Recurrent drought is a frequent leading cause of natural crisis for the Region. Some other factors that worsen the vulnerability to drought risk include high dependency on climate-sensitive livelihoods, fragile and rapidly degraded physical environment, inadequate extension services and high incidences of conflict (GWPEA, 2015).

The IGAD countries responses to such disasters, thus far, have been mostly reactive and firefighting, i.e. most of the work done is on an emergency response basis. The Region is characterized by weak institutional capacity, limited infrastructure, inadequate preparedness and equipment for disaster management, limited financial resources, and heavy reliance on rain-fed agriculture (GWPEA, 2015).

Recently efforts are being deepened to strengthen the Region's institutional capabilities to implement integrated management of such risks proactively through preparedness, drought mitigation, and early warning mechanisms. The IGAD member states consultative meeting (31 March 2017, in Nairobi, Kenya) praised the ongoing efforts the IGAD members have put forth. These efforts included the Joint East Africa Summit held in September 2011 in Nairobi that resolved to enhance resilience, promote long-term solutions and boost disaster risk management capacities in the Region; the establishment of the IGAD Disaster Response Fund (IDRF) following a decision of an IGAD ministerial meeting held in April 2013 in Khartoum, which is yet to be operationalized. In addition, the IGAD Climate Prediction and Applications Centre (ICPAC) was established for provision of improved, timely and actionable climate early warning information; and the efforts of IGAD Member States enhanced in implementing the IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI). Table below presents Specific exemplary responses in the IGAD countries for the 2015/16 El Nino.

	elect good responses to El Nino 2015/16
Country	Responses
Ethiopia	The National Government allocated more than USD 380 million for El Niño preparedness and
	response, while donors in Ethiopia advanced funding meant for 2016 projects to the current
	drought response activities. Productive safety-net programs helped 7.8 million people, and the
	Government launched a logistics plan to ensure food aid delivery
Kenya	A task force on El Niño communication, led by the Office of the Deputy President, produced
	daily press statements on the hotspot areas and information on where to direct assistance.
	Emergency telephone lines, a What's App platform and Twitter account managed by the Kenya
	Red Cross provided daily situation updates
Djibouti	WFP established a new humanitarian logistics base in Djibouti, which facilitated preparedness
	and early action throughout the whole region
Somalia	Early prepositioning of aid supplies was undertaken in flood-prone areas. Local authorities and
	community leaders were involved in awareness raising and preparedness such as enforcing
	embankments and climate monitoring
Sudan	The Government set aside 700,000 metric tons of sorghum - within its National Strategic Grain
	Reserve in 2016. An inter-ministerial technical working group representing all affected sectors
	was formed in Sudan and played the role of overall national coordination of El Niño mitigation
	and response

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Source: Author's summary from OCHA, 2016a

2.1.2 Historical trends and the impact of climate shock

Drought is a recurrent phenomenon in the Region, and El Niño had a variable impact on the Region, ranging from drought to floods. While flooding is nowhere comparable to drought it has a varying direct consequence: the 1988 floods affected 2.5 million people, the 1999 drought impacted 31.5 million people, and the 2011 drought affected 14 million people (see figure 3 and Table 15 for the historical trend and impacts).

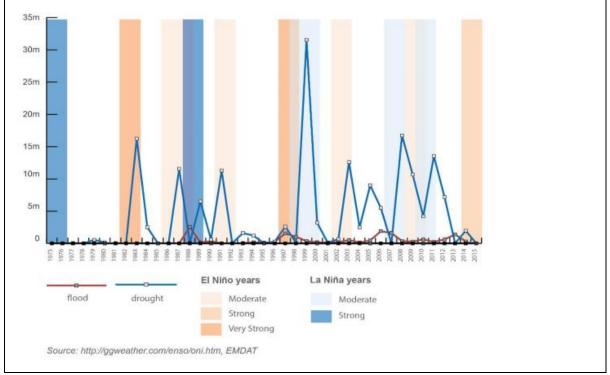


Figure 10 Drought and Flood Affected People in the Horn of Africa (millions of people)

Source: OCHA, 2016a

Table 11 Frequency of drought occurrence and impact

Country	Frequency of Drought occurrence	Impact
Djibouti	Severe drought over the years 1980, 1996,2001,2005,2008	Since 2007, agriculture and rural livelihoods of nearly 50 percent of the rural population (120,000 people, which is about 15 percent of the total population) had been affected
Ethiopia	At least five major national droughts since 1980	About 11% of the total population exposed to droughts, mainly in pastoral areas
Kenya	Major droughts every ten years and minor ones almost every 3-4 years	Between 1983 and 1993, droughts in the ASALs have become longer and more frequent resulting in significant loss of agricultural production
Somalia	Devastating droughts happened during 1963-64 and 1974, and in 2011	Between 2010 and 2012, over 258,000 people died, half of the victims were under 5 years children
South Sudan	The worst drought hit during 1980-1984 and 2011	Widespread displacement and localized famines in some parts of the country
Sudan	Most series drought incidents were in 1970, 1983-1985, 1991-1992, and 2010-2011	The 1983-1985 and the 2010-2011 droughts resulted in mass deaths of human and livestock
Uganda	Drought problem had recurred 7 times between 1991 and 2000 with increased frequency. And in 2008 and 2013	Karamoja region in 1991-2007 had severe droughts leading to depletion of pasture and severe lack of water for livestock, which intensified conflicts

Source: (GWPEA, 2015)

2.1.3 Climate Variability and the 2015/16 El Nino

The 2015/16 El Nino (associated with warmer-than-normal water temperatures) impacted about 24 million people, as of June 2016 that faced critical food insecurity in the IGAD (OCHA, 2016a). Rainfall patterns varied between above- and below historical averages in Ethiopia, Somalia and Sudan, which were among the worst affected countries by the El Niño. The humanitarian situation in Djibouti worsened due to a combination of the impact of El Niño and drought conditions spanning for over two decades. In 2016, Some 159,000 Djiboutian experienced food security crisis due to drought (please put what % of the population this is, to give context). Similarly, for the same period, about 1.2 million people in Kenya faced crisis and emergency food insecurity (OCHA, 2016b). Also, continued drought

in 2016/17 hindered agricultural productivity in Kenya and resulted in high inflation for food prices. The immediate impact of the recent drought was low food supply from poor harvests, increased malnutrition, and lack of employment in the agricultural sector, livestock deaths, and increased market prices for food, lower prices for livestock, and depleted pasture and water resources.

The 2015 drought worsened by El Niño, and climate change hit hard the Horn of African region. Rainfall during the more critical "long rains" declined over the last few decades in some of the region's countries. There are two rainy seasons in most of East Africa, the "long rains," which run from March until June and the "short rains" run from October to November. While both rains are essential, the long showers are more critical. The Horn of Africa region is estimated to have lost over \$1.9 billion between the second half of 2015 and April 2017 (Climate Signals, December 4, 2018). In Djibouti, long-rains (March-June) precipitation has declined over the last three decades. Average monthly rainfall has also declined, from 67 mm (2.6 in) in 2008 to 43.2 mm (1.7 in) in 2014. The country has been in a state of chronic drought since 2008.

The Ethiopian highlands experienced severe drought in 2015-16 that was attributed to ocean warming in the Pacific due to El Niño. In 2017, the drought had hard hit the lowland region, this time linked to warming temperatures in the Indian Ocean. Ethiopia differs from the rest of the Horn of Africa as its primary rainy season runs from June to September and as of early August 2017, 8.5 million people were food insecure (Climate Signals, 2018).

The World Weather Attribution (WWA) partnership study of the northwest and southeast Kenya, found patterns such as La Niña to be the dominant influence on drought. While the analysis did not find a trend in rainfall, the drought was determined to be hotter than it would have been in the absence of climate change. The National Geographic reports that rain has been below-average in many areas of Kenya for the past few years, and in particular the March to May rainy season was "very poor" in the northern part of the country, with some places receiving only 25 percent of their usual amount of precipitation. As of April 2017, 2.6 million people in Kenya were severely food insecure (Climate Signals, 2018).

Somalia fell into drought in 2016 when both of its rainy seasons brought below-normal amounts of precipitation. The 2017 spring drops of rain brought little relief; but not as such in the southern part of the country. According to an analysis by the World Weather Attribution (WWA) partnership, the 2016 spring drops of rain were roughly 20 percent below average in Somalia as a whole, but slightly above average in the northwest. The autumn rains, however, brought only about 50 percent of normal second-half-of the-year rainfall, leading to crop failures and severe food shortages. In most of Somalia this was a rare event; in Somaliland, a 1-in-100 year event in the northwest. The two rainy seasons generally run from April to May and from October to November in central and southern Somalia, whereas further north they start in March and August. Estimated damages from the drought in Somalia alone are \$825 million. As of April 2017, 16.2 million people in the country were categorized as severely food insecure (Climate Signals, 2018).

Climatic variability is expected to continue, and average temperatures in the IGAD Region is expected to rise by up to 1.5°C in the next two decades and up to 4.3°C by 2080 (IPCC, 2014). Changes in both rainfall and temperature are likely to have a significant impact on water resources, food security, natural resource management, human health, settlements, and infrastructure. The current climate changes have resulted in droughts, erratic floods, and untimely rainfall patterns. Prolonged and widespread drought

is a recurrent feature that is exacerbated by climate change phenomena, advancing desertification and ecological degradation.

	Djibout i	Eritre a	Ethiopi a	Keny a	Somali a	South Sudan		Suda n	Ugand a
Seasonal variability	2.0	3.8	3.3	1.9	1.7		2.5	3.5	1.6

Table 12 Seasona	l variability for the year	2013 (WRI) (-)
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Source: Climate Signals, 2018)

Seasonal variability is a normalized indicator of the variation in water supply between months of the year. Seasonal variability (as the World Resources Institute (WRI) defines it) is the ratio of the standard deviation and arithmetic mean of monthly total blue water. The indicator ranges from 0-5, where zero is the lowest, and five is the highest. Values represent the "All-sector" indicator and have been rounded to the nearest tenth by AQUASTAT. In WRI's analysis, 'water supply' refers to 'total blue water', which approximates naturalized river discharge (water from rivers, lakes, and groundwater).

2.2 Nutrition and Food Security

Half of the global severely food insecure people reside in the SSA region, and this makes 31 percent of the Region's population (FAO, 2017). Adverse climatic conditions and conflict, often occurring concurrently, are key drivers of food insecurity in the Region. In SSA, the majority of the undernourished population lives in countries affected by conflict. The prevalence of undernourishment is about twice as high in conflict-affected countries with a protracted crisis than in countries not affected by conflict, and nutrition outcomes are also generally worse in these countries. Prevalence of undernourishment, however, is on the decline in both SSA and IGAD.

For SSA, the prevalence of undernutrition in 1999-2001 was 28.2 percent and steadily declined to 20.7 percent by 2009-11 before it rose to 21.3 percent in 2014-2016. The IGAD region has made significant progress compared to the SSA. In 1999-2001, the prevalence of undernutrition in the IGAD countries was almost double that of SSA average. Where data are available, Ethiopia had the highest at 51.9 percent followed by Djibouti (48.1 percent), Kenya (32.2 percent), and Uganda (27.9 percent). For the same period, of the four countries in the IGAD (Table 18), only Uganda had prevalence lower than the then SSA average of 28.2 percent. Fifteen years later, in 2014-16, Djibouti, Ethiopia, and Kenya managed to reduce their respective prevalence to 12.8 percent, 28.8 percent, and 19.1 percent. Uganda however, followed a worsening trend by having a prevalence of 39 percent, which is much higher than that of SSA Africa average of 2014-16 and the 27.9 percent prevalence for Uganda in1999-2001.

Region/country	Р		oer of und nillions of					
	1999 -2001	2004-06	2009-11	2014-16	1999 -2001	2004-06	2009-11	2014-16
SSA	28.2	23.7	20.7	21.3	179.1	171.9	171.8	205.2
Djibouti	48.1	32.5	22.3	12.8	0.3	0.3	0.2	0.1
Ethiopia	51.9	39.7	32.1	28.8	34.5	30.4	28.1	28.6
Kenya	32.2	28.7	23.7	19.1	10	10.2	9.5	8.8
Uganda	27.9	24.3	31.0	39.0	6.6	6.8	10.3	15.2

Table 13 Prevalence of Under-Nutrition in the IGAD and SSA

Source FAO, 2017

Despite the commendable progress in reducing the prevalence of undernutrition in SSA, the overall absolute number of malnourished people is in the rise. Between 2015 and 2016 alone, the number of undernourished for SSA rose from 200 to 224 million, accounting for 25 percent of the 815 million undernourished people globally by then. SSA had 43.1 million more undernourished people in 2016 than in 2010. Two of the four IGAD countries have shown a stable or declining trend in both prevalence and absolute numbers except for Uganda that increased from 10.3 million to 15.2 million people between 2009 and 2016 (Table 18).

South Sudan has suffered from extended internal conflicts and big external economic shocks. The conflict that prevailed since 2013 and heightened in 2016 led to many life costs and severe food insecurity for nearly half of the population, as well as a substantial flight of refugees to neighboring countries (IMF, 2017). In South Sudan, 15.8 million people are severely food insecure and thousands were in the brink of famine. According to African Economic Outlook (2018), although 70% of South Sudan's land is suitable for agriculture, only about 4.5% is cultivated. Lack of investment in high-yielding farming technology and inputs are the main constraints to increasing agricultural productivity in South Sudan and hence food insecurity becomes a burgeoning challenge (AEO, 2018).

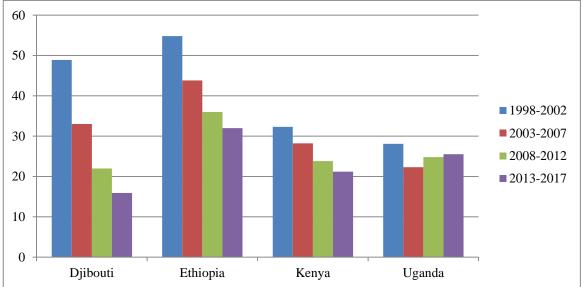


Figure 11 Prevalence of undernourishment (3-year average) (%)

Source: Author's graph using FAO Aquastat database

The 1996 World Food Summit defines food security as a state in which people at all times have physical, social and economic access to sufficient and nutritious food that meets their dietary needs for a healthy and active life. Consistent with this definition the Economists Intelligence Unit (EIU) has produced an index that captures the core issues of affordability, availability, and quality across countries. The index (the Global Food Security Index) is a dynamic quantitative and qualitative scoring model. According to the EIU (2017), affordability – measures the ability of consumers to purchase food, their vulnerability to price shocks and the presence of programs and policies to support customers when shocks occur. Availability – measures the sufficiency of the national food supply, the risk of supply disruption, the national capacity to disseminate food and research efforts to expand agricultural output. Quality & safety – measures the variety and nutritional quality of average diets, as well as the safety of food (EIU, 2017).

In 2017, the four IGAD countries included in the global food security database had an overall food security index of well under the average for 113 countries (57.3). The score for Uganda (43.3) followed by Kenya (42.2). Ethiopia and Sudan scores were about half the global average.

Looking into the components of overall food security, Ethiopia's challenge is more on the affordability and to some degree also on the quality and safety components. Of the 113 countries, only four countries performed below Ethiopia on Affordability. In fact, affordability remains to be the biggest challenge for all of the IGAD countries in the database. Sudan, although performed poorly in affordability score, has registered the highest score in terms of food quality and safety in 2017.

Table 14 Overall all 1000 Seeu	able 14 Overall an rood security and the major subcomponents for rOAD countries								
	Score					Rank			
Category	Uganda	Sudan	Ethiopia	Kenya	All countries (average)	Uganda	Sudan	Ethiopia	Kenya
OVERALL FOOD INSECURITY	43.3	34.8	33.3	42.2	57.3	83	96	99	86
(1) AFFORDABILITY	36.3	24.1	16.9	37.6	54.8	83	100	109	80
(2) AVAILABILITY	48.5	39.4	47.6	46.5	59.0	85	105	88	92
(3) QUALITY AND SAFETY	46.3	49.2	34.9	41.8	58.7	83	77	97	88

Table 14 Overall all food security and the major sub	bcomponents for IGAD countries

Source: Exported from 2017 Global Food Security Index; Score 0-100 where 100=best; Rank= Rank in 2017 out of 113 countries, 1=best

	Score					Rank			
Category	Uganda	Sudan	Ethiopia	Kenya	All countries (average)	Uganda	Sudan	Ethiopia	Keny
(1) AFFORDABILITY	36.3	24.1	16.9	37.6	54.8	83	100	109	80
(1.1) Food consumption as a share of household expenditure	60.5	16.4	13.0	46.8	58.6	58	105	107	75
(1.2) Proportion of population under global poverty line	29.5	57.8	22.7	36.2	73.0	94	82	98	91
(1.3) Gross domestic product per capita (US\$ PPP)	0.9	3.9	0.7	1.8	14.5	99	75	102	90
(1.4) Agricultural import tariffs	67.7	50.8	64.6	67.8	76.4	94	105	98	92
(1.5) Presence of food safety net programs	50.0	0.0	0.0	50.0	65.5	66	103	103	66
(1.6) Access to financing for farmers	25.0	25.0	25.0	50.0	61.3	82	82	82	59
(2) AVAILABILITY	48.5	39.4	47.6	46.5	59.0	85	105	88	92
(2.1) Sufficiency of supply	29.1	36.4	29.2	31.8	56.5	102	86	101	94
(2.2) Public expenditure on agricultural R&D	12.5	0.0	0.0	12.5	15.0	32	62	62	32
(2.3) Agricultural infrastructure	41.7	31.5	50.9	31.5	57.6	78	99	62	99
(2.4) Volatility of agricultural production	96.4	66.2	92.1	93.9	86.2	15	106	46	33
(2.5) Political stability risk	23.5	23.5	17.6	35.3	46.8	93	93	102	69
(2.6) Corruption	25.0	0.0	25.0	0.0	37.4	48	90	48	90
(2.7) Urban absorption capacity	63.9	65.5	69.1	69.4	66.6	83	71	45	40
(2.8) Food loss	89.3	72.1	85.8	87.4	84.9	54	95	73	66
(3) QUALITY AND SAFETY	46.3	49.2	34.9	41.8	58.7	83	77	97	88
(3.1) Diet diversification	62.5	58.9	7.1	42.9	56.4	49	55	111	76
(3.2) Nutritional standards	65.4	65.4	100.0	65.4	79.1	65	65	1	65
(3.3) Micronutrient availability	34.4	38.9	19.1	33.3	43.9	75	62	103	79
(3.4) Protein quality	26.5	51.0	35.3	26.1	49.4	88	52	78	89
(3.5) Food safety	57.4	37.6	39.1	56.6	80.5	91	103	101	93

2.3 Institutional Frameworks for Food Security, and Climate shock Resilience

(i) Global and Africa's continental frameworks

Food and agriculture fall among the key drivers of the Sustainable Development Goals. The SDG 2 envisions to "End hunger, achieve food security and improved nutrition and promote sustainable agriculture" by 2030.

The urgency of meeting this goal is so evident in sub-Saharan Africa with a reported 224 million undernourished people in 2016 (FAO, 2017). The New Partnership for Africa's Development (NEPAD) recognizes the need for strengthening agricultural policies in sub-Saharan Africa. NEPAD formulated the Comprehensive Africa Agriculture Development Program (CAADP), an initiative to achieve sustainable agricultural growth and poverty reduction. CAADP, envisaged as a strategic framework for agrarian sector transformation, was ratified by AU Heads of State and Government in 2003 in Maputo, Mozambique. CAADP set two targets: (1) to achieve 6 percent annual growth in agricultural productivity by 2015, and (2) to increase the allocation of national budgets directed to the agricultural sector to at least 10 percent on the table. The AU's Agenda 2063 also sets the continent's development vision for the next 50 years, towards a prosperous Africa based on inclusive growth and sustainable development, among other goals. The Agenda's first ten-year implementation plan, covering 2015 to 2025, provided the basis for the Malabo Declaration of 2014, which reaffirmed the principles and values of the CAADP process and recommitted to the two targets established by the Maputo Declaration, notwithstanding the continuous debate regarding the appropriateness of the 10 percent level relevant resource.

At the African Union Summit in Malabo, Equatorial Guinea in June 2014, Heads of State and Government adopted a remarkable set of concrete agriculture goals to be attained by 2025. Here are the core issues stipulated in the declaration:

- Commitment to Enhancing Investment Finance in Agriculture: for instance, among others, to uphold our earlier commitment to allocate at least 10% of public expenditure to agriculture, and to ensure its efficiency and effectiveness;
- Commitment to Ending Hunger in Africa by 2025: Through, for instance, accelerating agricultural growth by at least doubling current agricultural productivity levels, by the year 2025.
- Commitment to Halving Poverty by the year 2025, through Inclusive Agricultural Growth and Transformation
- Commitment to Boosting Intra-African Trade in Agricultural products and services: for instance, to triple, by the year 2025, intra-African trade in agricultural commodities and services;
- Commitment to Enhancing Resilience of Livelihoods and Production Systems to Climate Variability and other related risks

According to FAO's (2017) overview of food security and nutrition in Africa, policies and programs are aligned with the Malabo Declaration and achieving SDG 2 Across the board, countries have developed and are developing policy frameworks and investment plans that are aligned, or efforts are

being made to align them, with the goals of the Malabo Declaration and SDG 2. Through CAADP, policy processes are coherent, and this initiative has raised the profile of agriculture and highly influenced agricultural policy at regional and national levels. For example, Ethiopia, which has experienced several large-scale humanitarian disasters, established the Productive Safety Net Program (PSNP) in 2005 intending to help the rural poor to resist shocks, create assets and become food self-sufficient. The PSNP is a public works program that also includes cash transfers to poor, labor-constrained households. The program, which covers about 8 million individuals and is one of the most extensive safety-net programs in sub-Saharan Africa, outside of South Africa, is credited with having reduced the national poverty rate by two percentage points (OCHA, 2017a, World Bank, 2015).

This momentum needs to be sustained through effective implementation and delivery on the goals of the Malabo Declaration on agriculture, integrating it with the 2030 Agenda on Sustainable Development and the Decade of Action on Nutrition. Effective implementation and delivery of policies and investment plans aligned with the Malabo Declaration require adequate funding, setting the right priorities and strengthening institutional capacities.

(ii) The IGAD Framework and Food Security Strategy

IGAD secretariat has been developing food security strategies that would facilitate food security and poverty reduction interventions. Food security has been the issues of the IGAD secretariat from its inception in 1986. The Food Security Strategy of 1990 had been a commendable first step. It served for over 15 years. The IGAD countries included food security as an integral part of their respective particularly since the Poverty Reduction Strategy Papers that mainstreamed food security in national planning.

A study meant to serve as input to the reformulation the IGAD food security strategy has examined the food security policies and ongoing interventions in the IGAD countries. The study identified areas of regional cooperation and suggested actions to enhance regional food security, and specified the role of the IGAD Secretariat and the member states in implementing the strategy. Some of the international and regional initiatives to address found security issues in the IGAD are the IGAD's own food security strategy, President Clinton's Greater Horn of Africa Initiative, UN Secretary General's Horn of Africa Initiative, the FAO Special Program for Food Security, the ACP-EU Cotonou Agreement, and the NEPAD Comprehensive African Agricultural Development Program. However, these initiatives did little to reduce food insecurity in the region for many reasons; mainly they were initiated from the top with little appreciation of the constraints, needs, and priorities of the target beneficiaries but perhaps most importantly most of these initiatives lacked secure sources of funding.

In 2003, IGAD adopted an overall strategy for the Secretariat whose overriding objective is to "to assist member states in ensuring that the people of the region have access to sufficient and nutritious food at all times while protecting the natural resource base and the environment". In line with the overall strategy, the IGAD had developed a food security strategy "IGAD Food Security Strategy 2005 – 2008". This strategy identified four regional strategic outputs as harmonized policies, information, capacity building, and science and technology. Its overall plan was to enhance the "capacity of IGAD member states to achieve food security through closer regional action proposed in this food security strategy cover the three stages of the food chain, i.e. production, marketing, and consumption.

(iii) IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI)

The IGAD Drought Resilience and Sustainability Initiative (IDDRSI) Strategy, 2013, is aimed at addressing the effects of drought and related shocks in the IGAD region sustainably and holistically. The IGAD and the East African Community (EAC) Heads of State and Government pledged to end drought emergencies, at a Summit convened in Nairobi on 9 September 2011, following the severe drought that devastated the region in 2010/2011. The Summit took the bold decision to address the effects of recurring droughts on vulnerable communities in the IGAD region, calling for increased commitment by affected countries and Development Partners to support investments in sustainable development especially in the Arid and Semiarid Lands (ASALs).

The IDDRSI is intended to link peacebuilding, development, and disaster risk management efforts to building a holistic approach to drought responses across the IGAD region working through national, regional, and international actors and forums, and includes explicitly cross-border programming. The second IDDRSI Summit on Drought Resilience and Sustainability took place in Kampala, Uganda from 24-27 March 2014, where participants stressed the importance of putting resilience at the heart of development and relief efforts. Participants also adopted regional and country programming papers to mainstream IDDRSI policies (Nansen Initiative Secretariat, 2014). (specific source are required for all issues including page numbers for quoted material)

The Nairobi Summit called for the urgent introduction of strategies, policies, and programs that involve the strengthening of investment plans at member states' and regional levels with the principal objective of building resilience to future climatic and economic shocks. Known as the Nairobi Strategy, the Summit urged all concerned to do things differently and recommended the use of preventive and holistic approaches, combining relief with development interventions in dealing with drought and related emergencies in the HOA.

The Nairobi Summit assigned the IGAD Secretariat the role of leading and coordinating the implementation of the decision; and urged all countries to work together as a region and all concerned to do things differently, working concertedly and holistically, combining relief and development interventions, aimed at building resilience to future shocks.

The Strategy identifies the following 7 priority intervention areas: (i) ensuring equitable access and sustainable use of natural resources, while improving environmental management; (ii) enhancing market access, facilitating trade and availing versatile financial services; (iii) providing equitable access to livelihood support and basic social services; (iv) improving disaster risk management capabilities and preparedness for effective response; (v) enhancing the generation and use of research, knowledge, technology and innovations in the IGAD region; (vi) promoting conflict prevention and resolution and peace building; and (vii) strengthening coordination mechanisms and institutional arrangements for more organized, collaborative and synergistic action as well as improving partnerships to increase the commitment and support necessary to execute the objectives of the initiative. The Strategy serves as a common framework for developing national and regional programs that will be designed to enhance drought resilience through building sustainability in the IGAD region.

In 2010/2011, the IGAD region was hit by a severe drought that affected more than 13 million people and exacerbated chronic food insecurity to famine levels in several areas. This drought crisis highlighted the importance of focusing on sustainable development and the urgent need to invest in resilience building as a means to end drought emergencies in the region. In the past efforts in ASALs were more concentrated in managing the drought disasters and related humanitarian emergencies.

The new approach is to focus on the underlying causes of the need for humanitarian aid and approach disaster management through pro-active, preventive and structural development-oriented solutions. The Nairobi Summit recommended doing things differently. Some of the recommendations are for countries to work together as a region; to link emergency response to recovery and long-term development; to focus on priority intervention areas as identified by target communities and member states; to ensure that the design, development, and implementation of the interventions are people-centered; and to take into account all aspects of human development to ensure drought resilience and food security.

Most national development or poverty reduction strategies of the HOA countries reflect the issue of drought. Almost all the member countries of IGAD, have national institutions and policies on disaster risk management as summarized in annexes 1 - 3.

2.4 Opportunities and Capacity Imperatives for Building Resilience

Global Water Partnership Eastern Africa (GWPEA), through the Integrated Drought Management Program in the Horn of Africa (IDMP HOA), facilitated country drought resilience assessments in the region2. The assessments identified the following opportunities for promoting drought resilience in the region:

- Availability of the IDDRSI framework which supports drought resilience and sustainable development with political support and commitment at a regional and national level;
- Availability of relevant national policies, plans, and strategies;
- Existence of national implementing and coordination structures;
- Availability of accumulated experiences in implementing related programs, projects and initiatives; and
- The observed interest of donors to support national and regional efforts to enhance drought resilience.

The priority intervention areas for consideration by the IDMP HOA in support of building drought resilience in the HOA Region include (GWPEA, 2015). Some of the capacity imperative for building resilience and early warning system in the IGAD are listed below.

- Capacity development of institutions and key actors in drought management and resilience building;
- Promoting partnership for Integrated Drought Management;
- Facilitating regional cooperation/collaboration for drought management in the HOA region;

² Global Water Partnership Eastern Africa (GWPEA) is coordinating the implementation of the Integrated Drought Management Program in the Horn of Africa (IDMP HOA). The IDMP HOA is a regional program targeting eight countries namely Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda .The primary purpose of the program is to promote drought resilience of countries, communities and ecosystems in the Horn of Africa with key partners following an Integrated Water Resource Management (IWRM) approach

- Facilitating policy development for integrated drought management;
- Mainstreaming drought mitigation and adaptation strategies in relevant government sector ministries and agencies;
- Strengthening Early Warning Systems. The country assessments clearly showed that countries are at different stages of establishing national frameworks and developing appropriate policies of building drought resilience. The response by the IDMP HOA needs, therefore, to consider the specific priorities and existing national frameworks while implementing its planned activities.

2.5 The Way forward

The response to climatic shocks in the IGAD has been promising. Yet there are delays in responses and the cost of a shock increases as problems take routs. For instance, health and nutrition issues that can be addressed with little resources could grow to critical levels to cause human and financial costs. The region and the continent at large needs to put sustainable development at the forefront devising appropriate humanitarian policy framework, water management policy, climate adaptation strategies, disaster risk management and so on. It is advisable to simultaneously support social safety net mechanisms to help minimize any deterioration in livelihoods and address critical gaps in basic social services and social protection that complement disaster risk reduction, recovery and development initiatives. Climatic shocks often take regional shape and hence the IGAD region should continue with a regional mindset as the countries are experiencing similar shocks all at the same time and the burden is shared. The IGAD secretariat needs to coordinate this effort to the fullest. Strengthen collective action in the search of durable solutions to give the millions of people better life with dignity and self-reliance

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National Institutions for Disaster Risk Management

Countries	National Institutions for DRM
Djibouti	 Executive Secretariat for DRM which coordinates natural disasters technical matters as well as prevention, mitigation and response activities, including adaptation to climate change Ministry of Agriculture, Water, Livestock, and Fisheries (focal point for IDRSI)
Ethiopia	 Disaster Risk Management and Food Security Sector of the Ministry of Agriculture The negative effects of climate change have led to interventions to build resilience by focusing on drought-prone regions, in line with the Growth Transformation Plan II (2015/16–2019/20) and Climate Resilient Green Economy Strategy. (extracted from AEO,2017)
Kenya	 Disaster Risk Management Authority
Somalia	 Steering Committee (coordinating body) appointed by the Prime Minister and comprising several ministers
South Sudan	 Ministry of Humanitarian Affairs and Disaster Risk Management and Ministry of Environment
Sudan	
Uganda	 The Department for Disaster Preparedness and Management in the Office of the Prime Minister coordinates and responds to drought-related emergencies including supporting a number of community-based programs District Disaster Management Committees established and coordinated by the Office of the Prime Minister
Sources (CWDEA	0015

Source: (GWPEA, 2015).

Countries	National Policies, strategies, plans related to drought	Major priority areas
	management	
Djibouti	 National Program for Food Security The public Investment Plan National Plan for Climate Change Adaptation 	 Investments in food security in the country
Ethiopia	 National Policy on Disaster Risk Management Strategic Program and Investment framework Pastoral Development Policy and Strategy Framework Early Warning and Emergency Coordination Center (under formation) Climate Resilient Green Economy Strategy and Framework (2011) 	 Voluntary settlement Provision of suitable social services and expansion of infrastructure Emergency response and coordination Early warning systems Climate resilience building
Kenya	 Disaster management policy and strategy Vision 2030 has mainstreamed DRM in all its key pillars The Second Medium Term Plan (2013-17) National Climate Response Strategy (2010) and Action Plan (2013) 	 Disaster risk management Climate change adaptation
Somalia	 Following the establishment of the Federal Government of Somalia in August 2012 – a fresh momentum and steady progress is being made on the coordination of drought interventions and livelihood programs 	 Applying an integrated water resource management Promoting alternative renewable source of energy Develop capacity for Geo-information management and services for early warning of hazard, environment impact assessments and monitoring of water resources
South Sudan	 Five Year Strategic Plan (2013-2018) on disaster management 	 Disaster risk management
Sudan	 There are a number of sectoral policies, laws, strategies, and programs related to drought but they are yet to be properly coordinated 	 Coordinated implementation of IDDRSI at country and regional level is a major priority based on the national drought management policy
Uganda	 The constitutions 1995 provides for drought risk management The National Climate Change Policy, 2013; Disaster Management and Preparedness Policy, 2010 The Rangeland Management Policy, 2001 National Water Policy, 1999 	 Disaster risk management Climate change adaptation

National Policies, strategies, plans related to drought management

Source: (GWPEA, 2015)

Country	Major Programs with relevance to drought resilience	Area(s) of focus		
Djibouti	Adaptation fund	 Improvements in the resilience of the pastoral population Use of natural resource in a sustainable manner and reduction of risks through integrated planning and targeted response to emergency situations 		
	Program of Strengthening Resilience to Drought and Sustainable Development	 reduction of risks through integrated planning and targeted response to emergency situations Improvement of the living conditions of rural communities by enhancing the availability and access to water Enhancement of farm incomes by increasing resilience of vulnerable groups to drought 		
	Djibouti Dry land project	 Financing activities to support the farming, livestock and 		
	Regional Food Security and Risk Management Program	 Implementation, monitoring, and evaluation as well as overall coordination of the regional food security and risk management 		
(PCDP) Household Asset Building Program (HAB Community Complementary Investment Program (CCIP)	Productive Safety Net Program (PSNP)	 Labor-intensive public works like soil and water conservation Integrated watershed management in chronically food insecure households 		
	Pastoral Community Development Project (PCDP)	 Natural resources management Development of water, animal health services, infrastructure, and basic services Voluntary resettlement of pastoralists through the development of irrigation facilities 		
	Household Asset Building Program (HABP)	Protection of household assets in times of drought		
		 Support to the construction of roads, irrigation and social infrastructure in the ASAL regions 		
	Voluntary Resettlement and Risk Financing	 A contingent funding mechanism for transitory food insecurity in response to shocks 		
		 Watershed management and rural land certification and administration 		
		 Water resources development, rangelands management, livestock marketing, animal health infrastructure, capacity building, and alternative livelihood initiatives 		
Kenya	ASAL Based Livestock and Rural Livelihoods Support project	 Livestock-based livelihood improvement 		
	Arid Lands Resource Management Project	 Environmental rehabilitation Asset recovery 		
	Kenya Drylands Livestock Development Program	 Livestock development, pasture/rangeland development 		
	Enhancement of food security through water harvesting project	• Water harvesting		
	Kenya adaptation to climate change in arid and semi-arid lands	 Local climate change adaptations 		
Somalia	Drought management initiative to enhance community livelihood	 Strengthening food and nutrition security enhancing resilience 		
South Sudan	Government and donor support initiatives	 Water supply initiative for the production Early warning systems Conflict management Livestock development 		
Sudan	Water harvesting, small dams construction, area development schemes	Enhancement of agricultural productivity		
Uganda	Northern Uganda Agricultural Livelihoods Recovery program and the Karamoja livelihood program	 Rebuilding the lives and resilience of conflict-affected people Restoration of the productive capacity of farmers, and strengthening the linkages to agriculture service provision 		

Major Programs with relevance to drought resilience

Source: (GWPEA, 2015)