



# **DIRECTIONS FOR REFORM**

## **A COUNTRY ECONOMIC MEMORANDUM FOR RECOVERY AND RESILIENCE IN SOUTH SUDAN**



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Telephone: 202-473-1000. Internet: [www.worldbank.org](http://www.worldbank.org)

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A group of people, including men and women, are working in a field, likely planting rice seedlings. They are bent over, focused on their work. The background shows a vast field under a bright sky. The image is overlaid with a semi-transparent white layer.

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# ACROYNMS AND ABBREVIATIONS

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<b>ACC</b>	Anti-Corruption Commission	<b>FSNMS</b>	Food Security and Nutrition Monitoring Survey
<b>ACFTA</b>	African Continental Free Trade Area	<b>FX</b>	Foreign Exchange
<b>ADB</b>	African Development Bank	<b>GDP</b>	Gross Domestic Product
<b>AML</b>	Anti-Money Laundering	<b>GNPOC</b>	Greater Nile Petroleum Operating Company
<b>ARCSS</b>	Agreement on the Resolution of the Conflict in the Republic of South Sudan	<b>GPOC</b>	Greater Pioneer Operating Company
<b>BOP</b>	Balance of Payments	<b>GRADE</b>	Global Rapid Post Disaster Damage Estimation
<b>bpd</b>	barrels per day	<b>HCI</b>	Human Capital Index
<b>BSS</b>	Bank of South Sudan	<b>HDDS</b>	Household Dietary and Diversity Score
<b>CAMP</b>	Comprehensive Agriculture Master Plan	<b>HDI</b>	Human Development Index
<b>CES</b>	Central Equatoria State	<b>HFO</b>	Heavy Fuel Oil
<b>CFT</b>	Combating the Financing of Terrorism	<b>IBES</b>	Integrated Business Enterprise Survey
<b>CNPC</b>	China National Petroleum Corporation	<b>IBRD</b>	International Bank for Reconstruction and Development
<b>CPA</b>	Comprehensive Peace Agreement	<b>IDP</b>	Internally Displaced Person
<b>CPI</b>	Consumer Price Index	<b>IMF</b>	International Monetary Fund
<b>CSO</b>	Central Statistical Organization	<b>IOM</b>	International Organization for Migration
<b>DAC</b>	Development Assistance Committee	<b>IPC</b>	Integrated Phase Classification
<b>DDR</b>	Disarmament Demobilization and Reintegration	<b>IPIS</b>	International Peace Information Service
<b>DIIS</b>	Danish Institute for International Studies	<b>JOC</b>	Joint Operating Company
<b>DPOC</b>	Dar Petroleum Operating Company	<b>MPM</b>	Ministry of Petroleum and Mining
<b>DSGE</b>	Dynamic Stochastic General Equilibrium	<b>MT</b>	Metric Tons
<b>EAC</b>	East African Community	<b>NAP</b>	National Adaptation Plan
<b>ECF</b>	Extended Credit Facility	<b>NBS</b>	National Bureau of Statistics
<b>EITI</b>	Extractive Industries Transparency Initiative	<b>NDC</b>	Nationally Determined Contribution
<b>EOR</b>	Enhanced Oil Recovery	<b>NDS</b>	National Development Strategy
<b>EPSA</b>	Exploration and Production Sharing Agreement	<b>NOC</b>	National Oil Company
<b>FAO</b>	Food and Agriculture Organization (UN)	<b>NPGC</b>	National Petroleum and Gas Corporation
<b>FCDO</b>	Foreign and Commonwealth Development Office	<b>OCHA</b>	Office for the Coordination of Humanitarian Affairs
<b>FCS</b>	Food Consumption Score	<b>ODA</b>	Official Development Assistance
<b>FFAMC</b>	Fiscal and Financial Allocation Monitoring Commission	<b>OECD</b>	Organization for Economic Co-operation and Development
<b>FGF</b>	Future Generation Fund	<b>ORSA</b>	Oil Revenue Stabilization Account

<b>P/PET</b>	Precipitation (P) to Potential Evapotranspiration (PET)	<b>SCM</b>	Synthetic Control Methodology
<b>PA</b>	Petroleum Act	<b>SMP</b>	Staff Monitored Program
<b>PFM</b>	Public Financial Management	<b>SPF</b>	State and Peacebuilding Fund
<b>PoC</b>	Protection of Civilians	<b>SPOC</b>	Sudd Petroleum Operating Company
<b>PPADA</b>	Public Procurement and Asset Disposal Authority	<b>SSHS</b>	Southern Sudan Household Survey
<b>PPP</b>	Purchasing Power Parity	<b>SSP</b>	South Sudan Pound
<b>PRA</b>	Petroleum Reserve Account	<b>TA</b>	Technical Assistance
<b>PRMA</b>	Petroleum Revenue Management Authority	<b>TFA</b>	Transitional Financial Agreement
<b>PSA</b>	Production Sharing Agreement	<b>TNLA</b>	Transitional National Legislative Assembly
<b>R-ARCSS</b>	Revitalized Agreement on the Resolution of the Conflict in the Republic of South Sudan	<b>TSA</b>	Treasury Single Account
<b>RSS</b>	Republic Southern Sudan	<b>UN</b>	United Nations
		<b>UNHCR</b>	United Nations High Commissioner for Refugees
		<b>WASH</b>	Water, Sanitation, and Hygiene



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# EXECUTIVE SUMMARY

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## **South Sudan is at a crossroads in its efforts toward recovery, reconstruction, and development.**

South Sudan gained independence in 2011, in what was expected to be a new dawn for the conflict-torn country. At the time, optimism was high, given high commodity prices, the country's abundant natural resources, and international goodwill. However, weak institutions and recurring cycles of conflict have curtailed progress, and often reversed gains. Initial peace efforts proved futile, and the country relapsed into conflict in 2013 and again in 2016 as successive peace agreements collapsed. These conflicts precipitated a macroeconomic crisis and economic decline with widening fiscal deficits, high and persistent inflation, and spiraling foreign exchange rate spreads. Poverty is ubiquitous and has been reinforced by displacement and recurring climatic shocks. Consequently, a decade after gaining independence, South Sudan remains caught in a web of fragility and economic stagnation. While recent efforts to integrate the military command structure should be commended, the peace process has progressed slowly, and continued subnational conflicts continue to threaten a peaceful transition. Instability, a non-diversified economy, corruption, and poor delivery of services remain among the most important risks to the country's long-term growth prospects.

## **This Country Economic Memorandum (CEM) discusses South Sudan's economic performance since independence, with a focus on leveraging the country's natural capital to support recovery and resilience.**

Oil and agriculture dominate South Sudan's economy, with oil contributing 90 percent of revenue and almost all exports, while agriculture remains the primary source of livelihood for more than four in five households. However, the potential gains from oil have been limited by governance challenges, with misappropriation of oil revenue facilitated by opacity and lack of accountability in the sector. At the same time, food security has deteriorated consistently since independence, often reaching crisis levels in some subnational jurisdictions. Thus, a focus on the country's use of its main endowments of natural capital--oil and arable land--is warranted in the early stages of recovery. While severe data limitations have

made it difficult to complete a full-blown CEM, this report nevertheless shows what South Sudan can do to recover, improve resilience, and sustain future growth by leveraging its resources.

## **The cost of the conflict has been immense, with South Sudan's real GDP per capita in 2018 estimated at being one third of the counterfactual estimated for a nonconflict scenario.**

Conflict has affected virtually all sectors of the economy, with output contracting for consecutive years during 2015 – 2018. At the same time, the conflict has sustained an economy in which illicit flows thrived, reflecting systemic misappropriation of public resources and failed attempts at state building. Overall, the conflict resulted in an estimated 65 percent contraction in real per capita GDP between 2013 and 2018, and is estimated to have cost South Sudan an accumulated loss in aggregate GDP of some \$81 billion from 2012 – 2018, equivalent to \$11.6 billion per year on average (80 percent of the 2010 GDP). Consequently, the country's estimated real per capita GDP in 2018 (\$608) was about a third of the counterfactual estimated for a scenario without conflict (\$1,880).

## **The adverse impacts of conflict have meant that South Sudan remains among the least developed countries in the world.**

Real household disposable income declined by an estimated 70 percent from 2011 to 2018 (IMF 2019b) as the country struggled to establish the governance conditions necessary for stable and sound economic development. Consequently, despite its considerable natural wealth in the form of oil and arable land, South Sudan is now one of the poorest countries in the world, with more than 3 out of 4 people living under the international poverty line. At the same time, conflict-related destruction of the physical infrastructure and the collapse of service delivery have meant that there has been no improvement in already low levels of access to social services. Consequently, South Sudan's development indicators are also some of the lowest in the world.<sup>1</sup> A child born in South Sudan today will only be 31 percent as productive when they grow up as they could be if they enjoyed access to a complete education and total health.

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1. South Sudan ranks 185th out of 189 countries in the UN's Human Development Index (HDI) and 172nd out of 174 countries in the World Bank's 2020 Human Capital Index (HCI).



This is lower than the average for Sub-Saharan Africa (40 percent) and for lower-income countries overall (37 percent).

**The conflict dynamics remain fluid despite the peace agreement.** The signing of the latest truce in September 2018, and the subsequent formation of a unity government in February 2020 has reopened a window for the country to follow toward stability and sustainable development. While the levels of violence have declined since the signing of the 2018 peace accord, recent events point to the persistent risk of a reversal of this trend, with escalating localized violence and incidents of roadside ambushes and attacks in 2021. While the authorities have taken commendable steps to integrate the military command structure, cantonment and training sites for combatants are underfunded and they lack food and shelter; unified forces have yet to graduate; and the disarmament, demobilization, and reintegration (DDR) program pledged by the Revitalized Agreement for the Resolution of Conflict in South Sudan (R-ARCSS) has stalled. While it is prudent to expect that the peace process will take time, the remaining aspects must be prioritized. These efforts should go hand in hand with the strengthening of state and county institutions.

**Following the 2018 peace deal, the economy had started recovering but recent shocks, including the COVID-19 pandemic, subnational conflict, and flooding have stalled progress.** The economy grew by an estimated 3.2 percent in FY2018/19, following the signing of the peace agreement, ending a period of four successive years of GDP contraction. Growth in FY2019/20 accelerated to an estimated 9.5 percent as the economy benefitted from the resumption of oil production in some of the oilfields that had been damaged during conflict, as well as positive developments in agriculture as returnees brought more land under cultivation. However, the COVID-19 pandemic precipitated a large terms of trade shock for South Sudan, with low oil export revenues exposing the country's vulnerability to external shocks. At the same time, jobs were lost due to Covid-19 restrictions, with one in eight households (13 percent) reporting the loss of all income from their main job activity at some point since the onset of the pandemic in

early April 2020 (World Bank 2020a). Together with concurrent shocks that have included flooding, locust infestations, and intermittent flareups of conflict in parts of the country, these developments have upended the recovery, with the economy contracting by an estimated 5.1 percent in FY2020/21.

**The broad-based rise in commodity prices due to the war in Ukraine have on balance affected South Sudan adversely.** Ukraine and Russia are major exporters of agricultural, energy, and mineral commodities, and the initial impact of the war is primarily through higher world prices of these commodities. Although higher oil prices have improved budget revenues and strengthened the external position for South Sudan, these benefits can be sustained only if more robust mechanisms can be put in place to improve accountability and reduce the misuse of oil revenues. On the other hand, as in the rest of the region, South Sudan has experienced an unprecedented increase in the prices of food and basic household commodities, with high-frequency data indicating that in Juba, market prices of selected cereals rose by 10 - 25 percent from December 2021 to March 2022. Rising food prices also reflect the fall in domestic cereal production due to adverse climatic conditions, and the resumption of localized conflict in 2021. With more than 60 percent of the population (7.7 million people) facing acute food insecurity in 2022, an already dire food insecurity situation will be worsened if food prices continue to rise.

**The authorities have initiated an economic and fiscal management reform program aimed at macroeconomic stabilization and improved public financial management (PFM).** The reform program prioritizes the modernization of the country's public financial and economic management systems. More broadly, these reforms are intended to create the conditions for strong and inclusive growth by restoring fiscal discipline; ensuring transparency in economic management; implementing a rules-based monetary policy framework; and addressing distortions in the foreign exchange market. In support of this effort, the IMF approved a nine-month Staff Monitored Program (SMP) for the period

from March 31 to December 31, 2021. Performance under the SMP has been satisfactory. All but one of the quantitative targets were met, with the clearance of arrears being the only exception.

**Getting South Sudan to realize its potential will require steps aimed at consolidating peace and strengthening institutions, as well as targeted reforms tailored at harnessing its rich natural capital for development impact.** Addressing the drivers of fragility and ending conflict should go hand in hand with strengthening institutions as first-order prerequisites for inclusive economic recovery. South Sudan's natural capital has the potential to sustain future growth by managing the use of its renewable resources (arable land) as well as its nonrenewable (oil and mineral) resources. However, the oil sector is faced with numerous governance challenges, including off-budget revenue and expenditure practices. In addition, production has peaked in some blocks, requiring new investment to ramp up output. In agriculture, the country's potential has not been realized as a result of years of conflict, displacement, and climate shocks that have sustained high levels of food insecurity.

**With the gradual return of peace, the agricultural sector could provide the impetus for economic recovery, while also supporting diversification.** Outside of the oil sector, South Sudan has a diversity of low-hanging fruits that could potentially lead to diversification. A reconstruction of the country's mirror trade data shows that its exports were estimated at \$1.6 billion in 2019, with oil accounting for 96 percent of total exports. However, among its official non-oil exports, the following products could potentially play an important role in driving diversification: live animals, meats, hides, edible vegetables and fruit, oil seeds, wood and wood products, cotton, and non-oil minerals. In 2019, South Sudan

exported live animals worth \$107,000; oil seeds worth \$294,000; and wood products worth \$9.6 million. Other exports included fish, dairy, apparel, and textile articles. With a comparative advantage in agriculture, these products can be seized upon to build a diversified and competitive export sector that could provide opportunities for many South Sudanese.

**South Sudan faces significant data challenges that impede credible economic monitoring.** Despite efforts to establish an independent central statistics agency, only limited official statistics have been compiled in South Sudan since 2015, which has hampered effective monitoring and analysis of the country's socioeconomic conditions (see Box 2). While a few macroeconomic data are produced by the National Bureau of Statistics and the Bank of South Sudan, these are usually delivered with significant delays and are of poor quality. The most recent nationally representative household survey was completed before independence in 2009. At the same time, a lack of budget transparency affects the quality of fiscal data. Current efforts by various institutions to monitor humanitarian conditions are helping to fill important data gaps to some degree, but they are neither harmonized nor geographically representative.

**The rest of this CEM is structured as follows:** Key messages and a summary of recommendations follow this executive summary. **Chapter One** reviews South Sudan's economic developments through the independence-conflict-recovery transitions. **Chapter Two** discusses governance challenges in the oil sector and opportunities for reform. **Chapter Three** discusses pathways for building resilience in agriculture and escaping the food insecurity trap. And **Chapter Four** concludes with directions for reform.

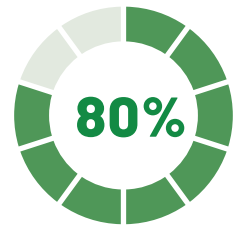
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Despite efforts to establish an independent central statistics agency, only limited official statistics have been compiled in South Sudan since 2015, which has hampered effective monitoring and analysis of the country's socioeconomic conditions.

Oil accounts for revenue and almost all exports



Agriculture remains the primary source of livelihoods for households.





# KEY MESSAGES

## 01

Addressing the drivers of fragility, ending all forms of conflict, and ensuring peace and stability in all parts of the country are prerequisites for an inclusive economic recovery. Conflict has affected all sectors of the country's economy, disrupted livelihoods and jobs, and precipitated a debilitating humanitarian crisis. While the signing of the September 2018 peace agreement brought an end to many years of conflict and the formation of a unity government in February 2020 started a three-year transitional period, the dynamics on the ground remain fluid, with the persistence of localized violence in some parts of the country. Recent efforts to integrate the military command structure should be commended. Nevertheless, progress has been slow on key aspects of the peace process. Addressing the

underlying causes of the conflict and restoring peace and stability in line with the provisions in the R-ARCSS must be prioritized, building on key milestones already achieved as part of the peace process.

- Provide adequate resources for cantonment and training of combatants to facilitate timely graduation of a professionalized and unified defense force.
- Fast-track the disarmament, demobilization, and reintegration (DDR) program outlined in the R-ARCSS.
- Fast-track the transitional justice, accountability, reconciliation, and healing provisions outlined in Chapter 5 of the R-ARCSS.

## 02

Stay the course on macroeconomic reforms and continue on a stabilization path, building on the key milestones already achieved in unifying the exchange rate and taming inflation. South Sudan has endured a protracted macroeconomic crisis, with high inflation and an overvalued exchange rate. These challenges have been reinforced by low institutional capacities for economic management and reform. More recently, although the COVID-19 pandemic disrupted the nascent economic recovery, the authorities have embarked on a reform program. The ongoing public financial management (PFM) reform process, and commitments under the IMF Staff Monitored Program (SPM) have yielded some initial positive results leading to Lower inflation and exchange rate stabilization. In addition, these reforms are providing opportunities and the building blocks for a stronger, inclusive, and more resilient recovery. It is therefore critical that the authorities stay the course on these reforms as the country attempts to take advantage of the peace dividend to rebuild a diversified economy capable of creating jobs and reducing poverty.

- **Continue on a stabilization path** so as to provide the basis for a sustainable and inclusive economic recovery. (In this respect, the authorities are making commendable progress and are encouraged to stay the course.)
- **Ensure independence of the central bank** and continue to avoid monetization of budget deficits.
- **Take steps to improve budgetary transparency and resource allocation** to help restore credibility.
- **Eliminate off-budget revenue and expenditure practices and align resource allocation with the National Development Strategy** so as to improve service delivery and the effectiveness of fiscal policy.
- Over the medium term, **leverage comparative advantages** to diversify the economy so as to achieve multiple objectives that include creating jobs, broadening the tax base, and achieving sustainable and inclusive growth.
- **Invest in the production of quality and timely statistics** to support evidence-based policy processes.



# 03

## Improve oil-sector governance

South Sudan's economy is one of the least diversified economies in the world, with the oil sector contributing 90 percent of public revenue and almost all exports. However, governance challenges in the sector are limiting its contribution to improving living standards for the people, and sustaining development. At the same time, in the absence of strong fiscal rules, the country is vulnerable to terms-of-trade shocks and budget volatility. There are opportunities to improve the contribution of the oil sector to national development in the short term, while the authorities go about formulating and implementing a robust investment and diversification program to anchor long-term growth and development prospects.

- **Ensure that all oil revenues and expenditures are on budget and used effectively** to achieve national development goals.
- **Ensure a comprehensive audit of the activities of Nilepet** in line with the provisions of the law.
- **Consider joining the Extractive Industries Transparency Initiative (EITI)** to leverage best practices for the management of natural resource revenue.
- **Strengthen institutions for oil revenue management and environmental protection.**
- **Ensure consistent implementation of oil sector revenue management policies and regulatory frameworks** to ensure transparent and prudent use of oil revenue.
- **Develop strong fiscal rules** to support the country's stabilization and investment objectives.

# 04

## Support the resilience of the agricultural sector in order to reverse the food crisis and achieve food security for all households.

Despite the country's significant potential for agricultural production, South Sudan's food security has been consistently worsening since independence, leading to one of the world's worst food crises. Reform in the agricultural sector will benefit from a transition from a humanitarian to a development-oriented response that leverages the country's agricultural potential. This will require investment in human and social capital, and rebuilding trust among communities that have been eroded through years of conflict and government failures. Such investment is necessary in order to support productivity increases and diversification.

- **Improve preparedness** to better respond to food security early warning systems; and link the early warning systems with extension and advisory services so that farmers may better respond to the challenges, thereby building resilience.
- **Stabilize smallholder agriculture** by ensuring public safety so as to allow for the voluntary return of internally displaced persons (IDPs) and refugees. Part of the challenge of voluntary returns will surround land claims, and land ownership and tenure will require support as returnees reclaim previously occupied or held property.
- **Improve agricultural sector production and productivity by investing in access to inputs, post-harvest handling, storage infrastructure, extension services, and animal health.**
- **Foster community resilience and strengthen social capital through community-based approaches** so as to improve resilience to shocks, social cohesion, and human capital development, while closing important gender gaps.

Table 1: Overview of Policy Options

General Policy Directions	Short -Term Policy Options	Medium -Term Policy Options	Longer-Term Policy Options
<p><b>01</b></p> <p>Focus on getting the basics right, with particular attention paid to peace, macroeconomic stabilization, and institutional strengthening.</p>	<ul style="list-style-type: none"> <li>Facilitate timely and orderly graduation of a professionalized, and unified defense force.</li> <li>Improve budgetary transparency.</li> <li>Align resource allocation to the National Development Strategy.</li> <li>Ensure coordination and credibility of fiscal, exchange rate, and monetary policies.</li> </ul>	<ul style="list-style-type: none"> <li>Fast-track transitional justice, accountability, reconciliation, and healing provisions.</li> <li>Increase investment in basic infrastructure, and eliminate restraints on domestic and regional trade.</li> <li>Facilitate production of timely and quality national statistics.</li> </ul>	<ul style="list-style-type: none"> <li>Embark on a disarmament, demobilization, and reintegration (DDR) program.</li> <li>Take advantage of South Sudan's comparative advantage in agriculture to diversify the economy.</li> <li>Close critical technical capacity and governance gaps in key government functions.</li> </ul>
<p><b>02</b></p> <p>Improve oil sector governance to strengthen the sector's contribution to the economy.</p>	<ul style="list-style-type: none"> <li>Audit Nilepet activities.</li> <li>Ensure that oil revenues and expenditures are on budget.</li> <li>Provide quarterly oil sector performance reports.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure consistent implementation of oil sector policy, legal, and regulatory frameworks.</li> <li>Consider joining the Extractive Industries Transparency Initiative (EITI), and begin implementing its provisions.</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen institutions for oil revenue management and environmental protection.</li> <li>Operationalize the oil revenue stabilization and future generation funds.</li> </ul>
<p><b>03</b></p> <p>Support agriculture sector resilience in order to exit the food insecurity trap.</p>	<ul style="list-style-type: none"> <li>Allocate resources to improving access to inputs.</li> <li>Ensure safety along corridors linking agricultural production to markets.</li> </ul>	<ul style="list-style-type: none"> <li>Invest in appropriate climate adaptation measures.</li> <li>Invest in extension services and post-harvest handling infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen farmers' social and human capital.</li> <li>Streamline land ownership and land tenure systems to deal with land claims by returnees.</li> </ul>



# Chapter 1



SOUTH SUDAN'S  
ECONOMY

## 1.1 Pre-Independence (2005 - 2010)

**Despite vast wealth in natural resources and considerable foreign aid inflows, when South Sudan gained independence in 2011 it was one of the poorest countries in the world.**

South Sudan's development was undermined by years of conflict and neglect that can be traced to the pre-independence period. At independence the size of the country's economy was estimated at \$35.3 billion, with a GDP per capita estimated at \$3,374 (in PPP 2011 international dollars) (IMF 2019a). Yet the country was also faced with large gaps in human development, ubiquitous material deprivation, and an acute lack of services. The oil sector dominated the economy and accounted for an estimated 61 percent of GDP, while the service and agricultural sectors contributed 34 percent and 5 percent respectively. Agriculture was the primary source of employment and livelihood for 69 percent of the South Sudanese. Wage employment was the main source of livelihood for 12 percent of the population, with an additional 4 percent relying on business enterprises (NBS 2009a). Decades of conflict had affected livelihoods, settlement patterns, and farm production, resulting in relatively high levels of market dependence for most household consumption in the country (Thomas 2019). In this respect, the structure of South Sudan's economy and employment was unlike that of many countries at similar levels of development.

**The return of relative peace, high oil prices, and goodwill from the international community sustained optimism in the years leading to independence.**

The signing of the 2005 Comprehensive Peace Agreement (CPA) brought an end to an era that included two civil wars, and laid the groundwork for independence in 2011. Economic growth averaged 5.3 percent in the two years that preceded independence, with activities in the retail trade, real estate, and construction subsectors driving growth in the non-oil sectors. During this time, the non-oil economy benefitted from peace dividends and donor aid inflows as the economy quickly established itself as the most important destination for East Africa's exports (World Bank 2013). In the five years from 2006 to 2010, oil production averaged 338,700 barrels per day, and the price of oil hovered around the \$100 mark, allowing South

Sudan to earn substantial revenues that averaged 18 percent of GDP. (Table 2 provides a snapshot of South Sudan's key macroeconomic indicators 2009 – 2011)

**South Sudan enjoyed a period of macroeconomic stability immediately before independence, with low inflation and a fixed exchange rate policy.**

Inflation was low and stable in the two years preceding independence, and averaged 5.1 percent in 2009, before declining to 1.3 percent in 2010. In the two years between 2009 and 2010, core and food inflation averaged 5.4 percent and 3.0 percent respectively. At independence, South Sudan's exchange rate was fixed at 2.95 South Sudanese pounds to the US dollar - the rate that prevailed at the time of secession from Sudan in 2011. At that time, a fixed exchange rate regime was possible because the oil sector was booming, and South Sudan enjoyed a healthy balance-of-payments position that allowed for the accumulation of international reserves. Abundant windfalls from oil exports resulted in successive budget surpluses in the four years from 2008 to 2011, the cumulative value of which amounted to nearly \$500 million, or about 4 percent of the country's 2010 GDP.

**However, while South Sudan's government earned significant oil revenue, most of these resources went toward payroll expenses, and did not contribute to long-term development.**

In 2010, oil accounted for 98 percent of government revenue, underlining the country's dependence on the sector. During this time, the country earned around \$2 billion in budgetary revenues from the oil sector. While capital spending accounted for about 20 percent of expenditures (3.2 percent of GDP), the wage bill accounted for about 40 percent of expenditures (6.6 percent of GDP) in 2010, similar to the amount for operating expenses (6.8 percent of GDP). In this respect, wage expenses as a proportion of the budget were higher in South Sudan than in Uganda (18 percent) and Kenya (24 percent).

**The public sector has played an important role in South Sudan and has often served as a form of patronage,**

but it has also played an important redistributive function. Outside of the military, the public service employed about



44,000 people in 2011, including some 20,000 personnel attached to the rule of law functions (police and prisons). At the same time, the South Sudanese armed forces employed about 90,000 personnel in 2005; but this number grew quickly to about 200,000 in 2015 and 330,000 in 2018, corresponding to the period with the highest intensity of conflict. Consequently, the share of military salaries in total

government expenditure was immense, increasing from 7.7 percent in 2005 to an average of 38 percent from 2006 to 2011. These large outlays on security-related salaries squeezed out expenditures on the provision of general services, including in the education and health sectors. Average spending in these two sectors averaged 7.8 percent from 2006-2011.

**Table 2: Key Macroeconomic Indicators 2009 - 2011**

	2009	2010	2011
<b>Real GDP Growth</b>	5.0	5.5	-4.6
Oil	3.5	6.7	-2.7
Non-Oil	6.8	4.2	-6.9
<b>Revenue (SSP millions)</b>	<b>4,240</b>	<b>5,757</b>	<b>4,889</b>
(% GDP)	(15.0)	(17.1)	(11.0)
o/w oil	4,121	5,630	4,782
(% GDP)	(14.6)	(16.7)	(10.7)
<b>Expenditure (SSP millions)</b>	<b>4,235</b>	<b>5,576</b>	<b>4,424</b>
(% GDP)	(15.0)	(16.6)	(9.9)
o/w salaries	1,977	2,206	1,335
(% GDP)	(7.0)	(6.6)	(3.0)
o/w operating expenses	1,256	2,280	2,146
(% GDP)	(4.4)	(6.8)	(4.8)
o/w capital	1,002	1,091	943
(% GDP)	(3.5)	(3.2)	(2.1)
Fiscal Balance (SSP millions)	5	181	465
(% GDP)	(0.0)	(0.5)	(1.0)
<b>Inflation, annual average</b>	<b>5.1</b>	<b>1.3</b>	<b>46.6</b>
<b>Exchange rate</b>	<b>2.95</b>	<b>2.95</b>	<b>2.95</b>
<b>Nominal GDP (SSP millions)</b>	<b>28,252</b>	<b>33,656</b>	<b>44,558</b>

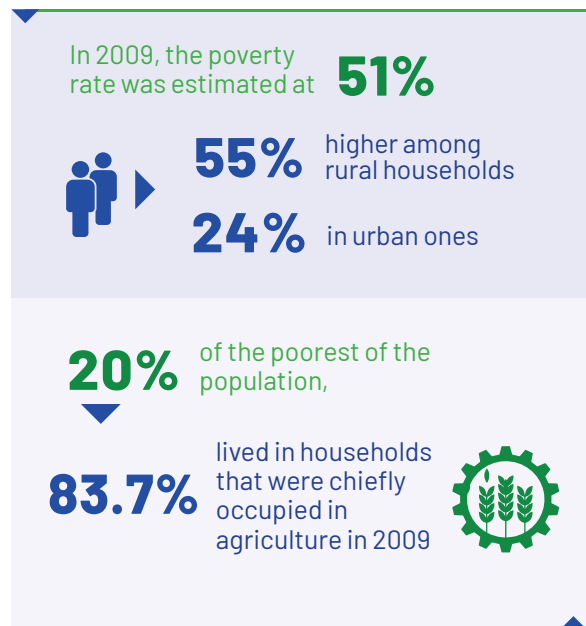
Source: South Sudan authorities; World Bank staff estimates

**Burdened by huge state and peacebuilding challenges, as well as extreme institutional and socioeconomic deficits, South Sudan has struggled to leverage its natural resources to develop a modern economy.** With a long history of conflict, South Sudan has never had an extended window of opportunity in which to develop its institutional structures and capacities. Consequently, the country has struggled to establish the governance conditions necessary for stable and sound economic development. While South Sudan was the recipient of substantial international support in the six-year interim period from 2005- 2011, it was beset with corruption, insecurity, and political instability – some of the age-old pitfalls that have plagued other post-conflict, resource-rich developing countries. At the same time, weak institutions were exploited by bureaucratic elites to siphon off large amounts of the country’s resources. These conditions produced a country that is currently one of the poorest in the world, known more for its humanitarian crises than its unexploited potential and wealth.

**Private sector development was hampered by a difficult business environment, with constraints on access to finance and informal taxation being particularly burdensome.** The business sector was largely informal, characterized by self-employed individuals, or small privately owned firms producing services or simple, consumable products. Businesses were also typically young and included a sizeable foreign presence among medium and large establishments. While there is little information on the business environment during the CPA period, it is generally known that businesses have faced significant challenges on many fronts. For example, with an underdeveloped financial sector, access to finance emerged as a serious issue, especially for microenterprises (NBS 2009b). In addition, informal taxation at checkpoints across transportation routes was pervasive and continued to stifle economic activities.

### Poor human development outcomes reflected limited social service delivery.

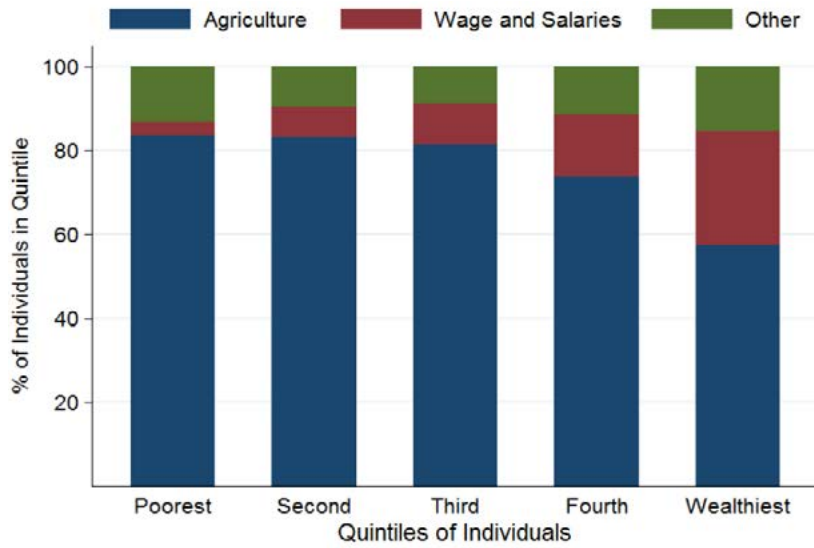
**Poverty was driven by a lack of services and reinforced by a low level of educational achievement.** In 2009, the poverty rate was estimated at 51 percent, and was even higher among rural households (55 percent) than urban ones (24 percent), reflecting differences in human capital and access to services. In homes where the head of household had no education, or only some primary education, there were higher levels of poverty. Educational attendance and



completion rates were generally low, especially among girls, children in rural communities, and in the poorest quintiles. The adult literacy rate was estimated at 27 percent, and 30 percent of the population did not have access to basic health services. In rural areas, where a majority of the poor live, only 30 percent of the population could read and write, compared to around 50 percent among urban populations. Only 55 percent of the population had access to an improved drinking water source, and 20 percent to an improved sanitation facility.

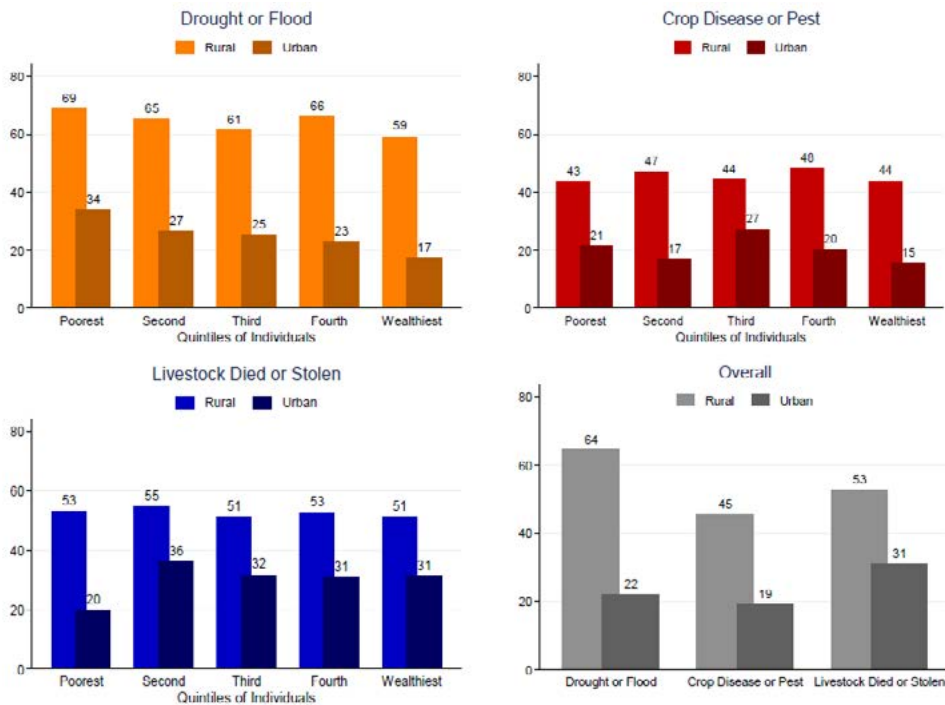
**Shocks had a disproportionate impact on different groups within the population.** Although households across the economic spectrum derived their livelihoods from three main sets of activities: agriculture (including crop farming and animal husbandry); wages and salaries; and “other” (including business enterprises, property income, remittances, pension, and aid), the significance of each of these activities varied by economic class. In the poorest 20 percent of the population, 83.7 percent lived in households that were chiefly occupied in agriculture. The household activities of the wealthiest 20 percent were more diverse: 57.4 percent worked chiefly in agriculture, and 27 percent lived mostly on wages and salaries. With a large dependence on agriculture, the most common threats to livelihoods were related to climate, pests, and loss of livestock assets (Figure 2). While there were no striking differences by wealth quintiles, individuals living in rural areas were more likely to experience these shocks, particularly those caused by drought or flooding.

Figure 1: Livelihood Sources by Quintiles 2009



Source: World Bank 2011

Figure 2: Individuals Living in Households Affected by Shocks (by Quintile of Consumption, %)



Source: World Bank 2011

**A weak health care system contributed to poor health outcomes, with endemic diseases contributing the most to mortality and morbidity indicators.**

Child mortality rates were estimated at 106 per 1000 live births in 2010, an improvement from 135 per 1000 live births in 2006 (RSS 2010). Infant mortality was estimated to be 75 per 1000 live births in 2010 (SSHS 2010), lower than 102 per 1000 live births in 2006 (2006 SSHS). At the same time, childhood nutritional outcomes improved somewhat, with the prevalence of underweight children declining to 28 percent in 2010 from 33 percent in 2006. However, further improvements on childhood health outcomes were constrained by low immunization coverage (17 percent),

sustaining high rates of infant and child mortality. The maternal mortality ratio was also among the highest in the world, estimated to be 2,054 per 100,000 live births (2006 SSHS), flowing in part from poor access to health care services prior to delivery. Skilled health personnel attended too few women during labor (10 percent) and most deliveries occurred at home. South Sudan has also experienced a heavy burden of malaria, which was estimated to account for 20-40 percent of all health care facility visits and 30 percent of hospitalizations in 2010. In addition, a number of preventable or treatable Neglected Tropical Diseases (NTDs), including Bilharzia and Trachoma, are endemic to South Sudan.

## 1.2 Conflict Economy (2011- 2018)

### Counting the cost: The toll of conflict on the economy.

**The economic fallout from the conflict has been immense.**

After independence in 2011, South Sudan descended into conflict in December 2013, following disagreements within the top governing elites; these altercations quickly escalated into full-scale civil war. Initial peace efforts proved futile, and the country descended into conflict again in 2016 soon after signing a peace agreement, formally referred to as the Agreement on the Resolution of the Conflict in South Sudan (ARCSS). The conflict caused severe damages to infrastructure and assets, led to loss of lives, and disrupted livelihoods. At the same time, the conflict precipitated a humanitarian crisis, driving displacement and food insecurity. To date, 2 million people remain internally displaced and 2.3 million South Sudanese refugees are still residing in neighboring countries (UNHCR 2022). Overall, the conflict is estimated to have cost South Sudan an accumulated loss in aggregate GDP of \$81 billion from 2012 to 2018 (see Box 1). Consequently, South Sudan's estimated real per capita GDP in 2018 (\$608) was a third of what it is estimated to have been in the absence of conflict (\$1,880).

**The conflict was preceded by a total shutdown of oil production for six months after independence.**

The government of South Sudan decided to shut down its entire national oil production in January 2012, following a dispute over the terms of export arrangements with the government of Sudan. These developments triggered the country's first economic crisis, with output contracting by an estimated 46 percent. While oil production resumed on a small scale in April 2013, precrisis production levels were not reached again, since critical production infrastructure was

destroyed when the country descended into full-scale conflict in December 2013. To date, oil production is estimated at about 156,000 bpd in FY2021/22 is less than one half of its pre-crisis level.

**The structure of the economy changed significantly due to the decrease in oil production and the toll taken by the ensuing macroeconomic crisis, as well as the effect of conflict on the non-oil economy.**

The relative contribution of the non-oil economy expanded as the country experienced conflict and upheaval, and oil production was suspended. Consequently, the share of the oil sector declined, from about 60 percent in 2011 to about 32 percent in 2019. While the economy recovered briefly in 2014--with the oil and mining sector growing by 18 percent--the non-oil economy continued to struggle, and the cumulative effects of conflict and a difficult macroeconomic environment weighed heavily on private sector activity. From 2012-2018, the non-oil sector contracted by a cumulative 37 percent as conflict and macroeconomic instability exerted a large toll on economic activity (Maweje 2020).

**With decreasing oil revenues, the fiscal deficit widened as the government struggled to replace lost revenue.**

Following the shutdown of oil production, the fiscal situation worsened: it went from a surplus of 1.0 percent of GDP in 2011 to a deficit of 16.3 percent of GDP in 2012. The government responded to the crisis in a number of ways. Initially, anticipating that the shutdown would last only a few months, the authorities relied on foreign reserves, eventually reducing them to critically low levels. Then the authorities started accepting advance payments from international



oil traders for future oil deliveries; the Ministry of Finance accumulated arrears to civil servants, a practice that has persisted to date,<sup>2</sup> and the authorities resorted to monetary financing of the deficit with net advances from the central bank amounting to 11.2 percent of GDP in FY2011/2012. With decreasing revenue, high inflation, and expenditure pressures, financial controls were circumvented. As a result, control of the payroll was lost. Payment decisions became ad hoc and were based on nontransparent criteria; expenditure arrears grew; and the use of the budget as a policy instrument was undermined by significant spending occurring outside the budget.

**Monetization of the fiscal deficit, supply-side constraints, and unsound exchange rate policies led to runaway inflation.** Coupled with economic mismanagement, the dire fiscal situation precipitated an economic crisis, with rising inflation and the development of a parallel exchange rate market. In the context of limited access to external financing, fiscal deficits were financed partly by printing money. Consequently, the country experienced a surge in inflation that rose from 1.7 percent in FY2013/14 to 480 percent in FY2015/16, resulting in a near collapse of macroeconomic conditions. Exchange rate depreciation, market disruptions, and conflict-induced domestic supply constraints contributed to this accelerated inflation. In a bid to reduce the country's huge macroeconomic imbalances and to create the conditions needed to build a stable macroeconomic environment, the government adopted a floating exchange rate regime in December 2015. Monetization of the fiscal deficit, however, led to a sharp depreciation of the local currency which, coupled with loss of confidence in the economy, resulted in the development of a parallel foreign exchange market.

**Accumulation of government arrears affected morale and productivity in the public service, further weakening the government's ability to deliver services.** Not only did the government finance itself through accumulated arrears to civil servants—many of whom were not paid for months—but it accumulated large contingent liabilities on its balance sheet. By FY2015/16 arrears were estimated at 23.3 percent of GDP. In addition, unrealized budgetary allocations meant that many public sector departments were barely meeting their minimum running costs, paralyzing government services. With these challenges, many public servants, particularly the

professionals, left their roles to find employment elsewhere, bleeding the public service of much-needed technical capacity. Those who stayed significantly scaled back on their efforts, compounding an already alarming public service situation. Consequently, the public service was burdened by limited capacity and gross inefficiency, with limited motivation to deliver services.

**Exchange rate policy was undermined by vested interests, with persistent foreign exchange shortages exerting pressure on the exchange rate.** From independence in 2011 until December 2015, the South Sudanese pound (SSP) was pegged to the US dollar at 2.95 SSP/US\$. This official exchange rate, however, became increasingly unrealistic as oil revenues and foreign exchange receipts fell, initially during the 2012 government shutdown of oil production, and again when oil prices and production fell in 2014. From mid-2014, the parallel market rate rose from about 4 SSP/US\$ to 17 SSP/US\$ by late 2015. The widening gap between the official and parallel exchange rates discouraged investment and spurred further rent seeking. Initial attempts to reform the system were undercut by resistance from those who benefitted from the parallel market. In December 2015, the authorities officially switched to a de jure floating exchange rate system, with a view toward eliminating the parallel exchange rate market. Under the new regime, the Bank of South Sudan (BSS) supplied foreign exchange through market-based auctions.

While initially successful, the reform was undermined by excessive monetary expansion and a shortage of foreign exchange that exerted downward pressure on the exchange rate and delayed convergence of the official and parallel rates.

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The government of the Republic of South Sudan decided to shutdown its national oil production in January 2012, following a dispute over export arrangements with the government of Sudan.

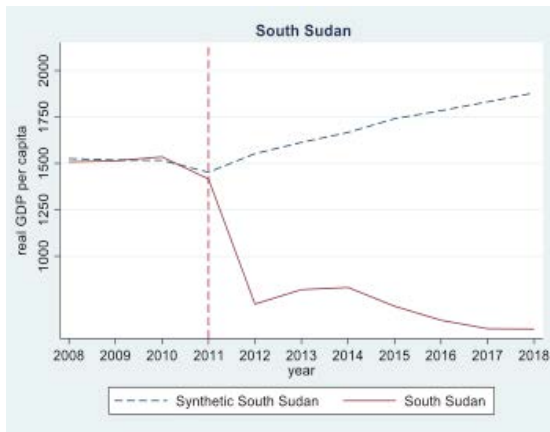
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*2. While the authorities made efforts to address this issue using resources secured from IMF under the RCF in November 2020 and March 2021, salary arrears have once again built up, and were estimated at 5 months at the end of March 2022.*

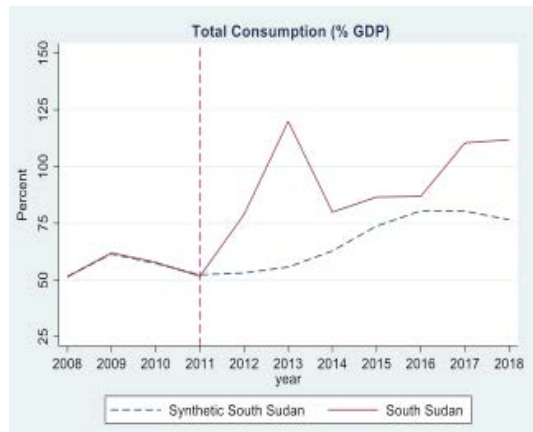
### Box 1: The Economic Cost of Conflict in South Sudan

The economic cost of South Sudan’s conflict was estimated by modelling a counterfactual non-conflict scenario (Box 1: Figures 1–4), using the synthetic control methodology (SCM). The SCM creates a counterfactual (synthetic control) as a weighted average of other control units (in this case, countries) that were not affected by the treatment (in this case, the South Sudan conflict), such that the outcome and characteristics of the treated unit and its counterfactual are as similar as possible during the pre-shock period. “Synthetic South Sudan,” which is our counterfactual for South Sudan in the absence of conflict, was constructed using data between 2008 and 2011. The effect of the conflict was then estimated by comparing data for actual and synthetic South Sudan in the period 2012–18. If the conflict had not occurred, the accumulated per-capita real GDP in the period 2012–2018 would have been \$7,070 higher (measured in constant 2010 dollars per person), which amounts to \$1,010 per person-year on average. Moreover, in aggregate terms, the accumulated real GDP in that period would have been \$81 billion higher (measured in constant 2010 dollars), equivalent to \$11.6 billion per year on average, or about 80 percent of the 2010 GDP. Net exports and investment were the main channels through which conflict affected the economy. These two components declined dramatically in the post-treatment period. By contrast, consumption increased as the government increased expenditure on security and peacekeeping operations. (Refer to Mawejje and McSharry (2021) for a detailed discussion of the methodology and analysis.)

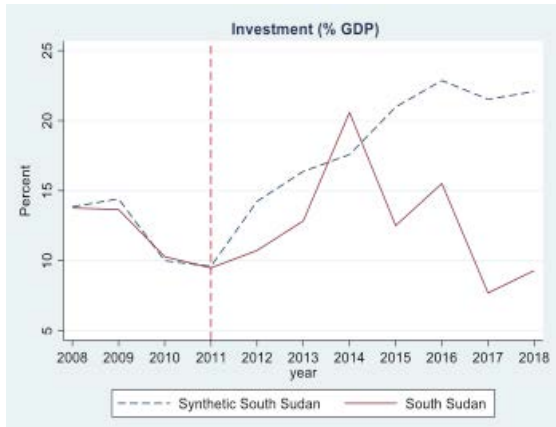
Box 1 Figure 1: GDP Per Capita: Actual vs Synthetic South Sudan



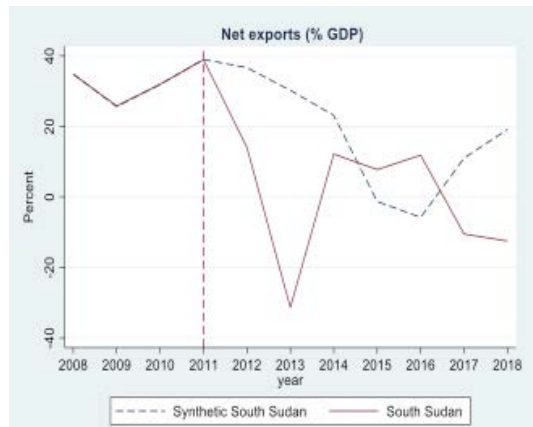
Box 1 Figure 2: Total Consumption: Actual vs Synthetic South Sudan



Box 1 Figure 3: Total Investment: Actual vs Synthetic South Sudan



Box 1 Figure 4: Net Exports: Actual vs Synthetic South Sudan



**With dwindling oil resources flowing into the budget, development assistance has played a major role in South Sudan.**

Relative to its size, South Sudan is a major recipient of bilateral and multilateral aid; humanitarian interventions constitute the bulk of aid flows into the country, in line with its massive needs. According to estimates from the International Monetary Fund (IMF) and the Organization of Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC) database, official development aid (ODA) amounted to approximately one-third of the budget between 2011 and 2015. According to the United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA), South Sudan's humanitarian needs increased from US\$ 0.9 billion in 2013 to \$2 billion in 2014, and averaged \$1.5 billion from 2015-17. By contrast, its budgetary expenditures were estimated to have averaged \$1.4 billion from 2016-17.

**While business optimism remained high, the destruction wrought by the conflict weighed heavily on business performance.**

The conflict decimated an already fragile business environment: many firms scaled down operations or exited altogether. Real annual sales growth declined by

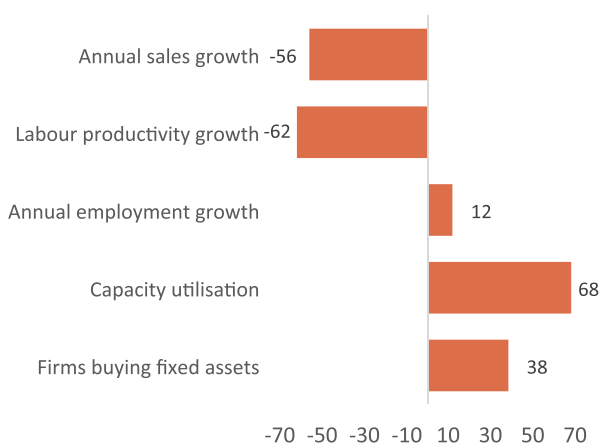
56 percent in 2014, reflecting lower demand. At the same time, real annual labor productivity growth plummeted by 62 percent, despite a positive employment growth rate of 12 percent (Figure 7). While business entry was closely linked to political developments and conflict dynamics, a few businesses were able to survive. Nearly half (47 percent) of the businesses included in the 2014 World Bank Enterprise Survey were started in the short period between 2010 and 2012, taking advantage of the peace dividend. Then, as South Sudan gravitated toward renewed conflict in 2013, the number of new businesses started to decline (Figure 8). However, a small but significant number of businesses included in the survey (7 percent) started operations before the CPA; 3 percent of them had started their operations before the year 2000, exhibiting a high degree of resilience. Despite the adverse business environment at the time, the optimism of firms was reflected in more forward-looking decisions, with 38 percent of businesses buying fixed assets, a rate similar to the African average. Since the enterprise surveys were carried out early in the conflict, this result likely reflected optimism in anticipation of a quick resolution of the conflict.

Table 3: Key Macroeconomic Indicators 2012 – 2017

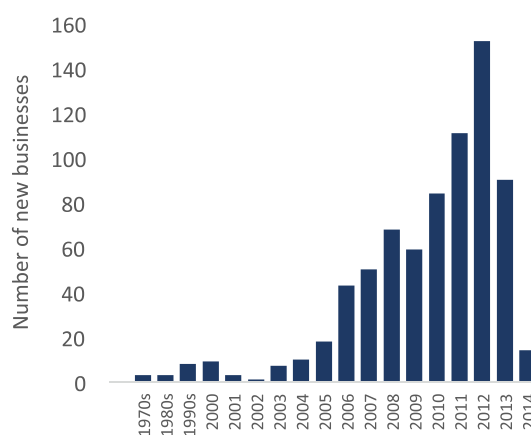
	2012	2013	2014	2015	2016	2017
Real GDP Growth	-46.1	13.1	3.4	-10.8	-11.2	-6.9
Oil	-59.0	-81.0	442	-52.3	-17.3	18.4
Non-Oil	-30.0	78.8	-29.1	12.7	-9.7	-12.4
Revenue (% GDP)	34.4	7.7	27.9	16.2	45.7	34.8
o/w oil	28.4	1.5	23.1	13.2	35.9	31.4
Expenditure (% GDP)	34.7	16.9	31.1	27.1	50.6	35.2
o/w salaries	10.8	5.3	8.7	13.4	14.4	4.7
General Government Balance % GDP	-0.3	-9.2	-3.2	-10.9	-4.9	-0.3
Current Account Balance %GDP	-20.6	8.7	-4.8	-6.1	-7.5	-12.5
Gross foreign reserves, \$ millions	..	..	363	282	73	50
Inflation, annual average	45.1	0.0	1.7	153	410	125
Nominal Exchange rate (official)	2.95	2.95	2.95	2.95	18.5	88.3
Nominal Exchange rate (market)	4.0	4.3	4.3	6.9	25.2	109.0
Nominal GDP in SSP millions	35,198	54,358	41,188	43,242	63,274	289,279

Source: World Bank staff estimates

**Figure 3: Business Performance Indicator in Percentages**



**Figure 4: Business Entry Timeline**



Source: World Bank Enterprise Surveys, 2014

### The conflict worsened poverty and deepened an already dire humanitarian crisis.

**The conflict, and the protracted macroeconomic crisis it spawned, disrupted livelihoods and drove poverty rates to unprecedented levels in both rural and urban areas.**

Between 2009 and 2016 the poverty headcount increased by 4.5 percentage points per year, or 32 percentage points overall. While data limitations do not allow for more granular analysis of the poverty dynamics during this period, suggestive evidence points to a large surge in poverty occurring between 2015-16, which could account for about 50 percent of the overall increase in the period 2009-2016. During this period, poverty levels increased to 76.4 percent in 2016, with the percentage of poor rural households increasing from 55 percent in 2009 to 80 percent in 2016, and the number of poor urban households from 24 percent to 54 percent. The sharp increase in poverty coincided with the escalation and spread of the conflict starting in 2013; the macroeconomic crisis that was driven by the depreciation of the local currency; the onset of near hyperinflation; and lack of service delivery. The very high levels of welfare deprivation observed in South Sudan translated into widespread hunger and food insecurity, leading to large-scale child malnutrition and stunting.

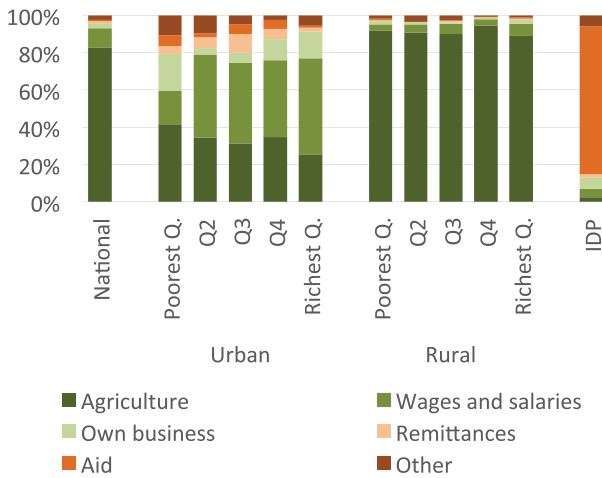
**The increase in poverty was accompanied by a collapse of service delivery, exacerbating already dire living conditions for a majority of the South Sudanese.** The conflict deprived a large portion of the population from

receiving public services, especially in the rural areas. It also caused extensive damage to the educational and health care infrastructure, with an estimated 31 percent of schools across the country having suffered some form of attack since 2013, and many others occupied by IDPs or armed forces. Many schools were therefore shut down across the country. Out of the schools that remained open at any point since 2013, one in four were nonfunctional by the end of 2016. In 2016, teacher attendance fell by almost a third, primarily due to the governments' continuing failure to pay teacher salaries. Furthermore, inflation had reduced the ability of households to pay school fees. By 2017, about 4 in 10 children in urban areas were not going to school, and were unable to do so because of a lack of financial resources.

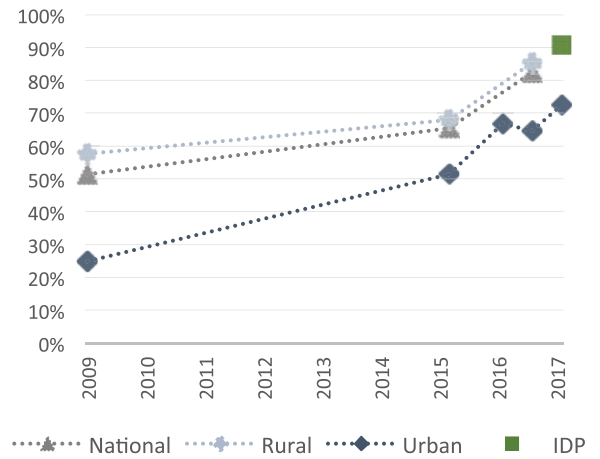
**Infrastructure provision was extremely poor and almost exclusive to urban households.** Access to modern sources of energy for lighting and cooking was low: in 2016 only 3 percent of households were lighting their homes with electricity, and virtually none were using electricity as a source of cooking (Figure 11). Electrical connections were more common in urban areas, but virtually nonexistent in rural areas (14 and 1 percent respectively). The poorest 40 percent of households according to a measure of consumption expenditure did not have access to electricity at all. In 2016, about 78 percent of the population lived in traditional mud huts with grass thatched roofs (tukul/gottiya) (Figure 12). The water, sanitation, and hygiene (WASH) infrastructure was destroyed, constraining access to these services for many households, especially in the rural areas (Figures 13 and 14).



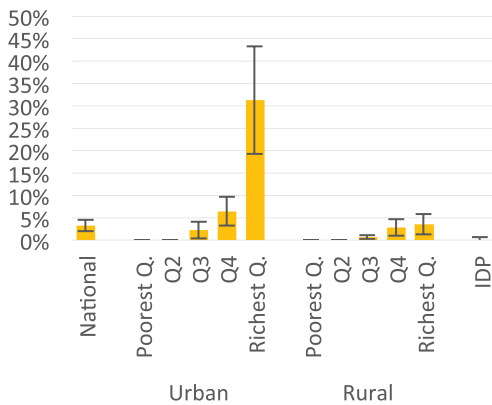
**Figure 5: Primary Source of Livelihood in 2016**



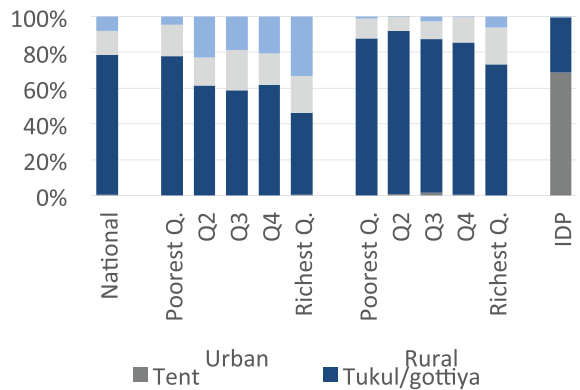
**Figure 6: Poverty Headcount in 2016**



**Figure 7: Access to Electricity in 2016**

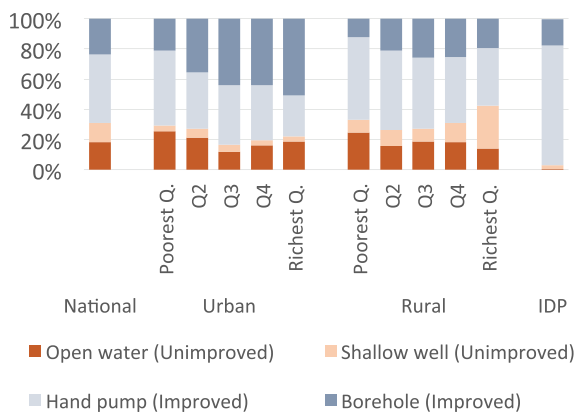


**Figure 8: Quality of Housing in 2016**

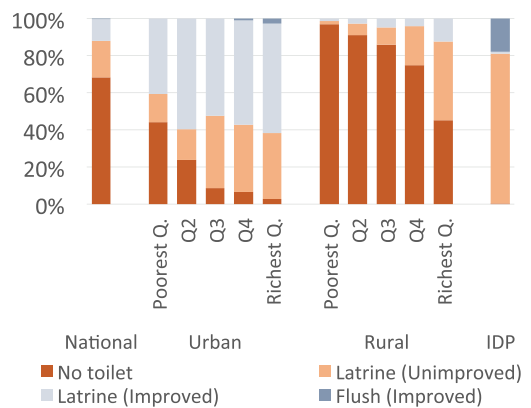


Source: World Bank 2017

**Figure 9: Access to Water Sources in 2016**



**Figure 10: Access to Sanitation Facilities in 2016**



Source: World Bank 2017

The conflict drove displacement, resulting in a high proportion of the poor and IDPs relying on humanitarian aid. Conflict led many South Sudanese to flee their homes: in 2020 there were nearly 1.6 million IDPs, and some 2.2 million refugees in six neighboring countries. In a country with an extremely high prevalence of poverty, IDPs were faced with particularly dire humanitarian needs. About 91 percent of them lived below the international poverty line of \$1.90 PPP per capita

per day, compared with 86 percent of rural, and 75 percent of urban residents. Along with a higher incidence of poverty, IDPs also had deeper poverty (that is, larger poverty gaps) than residents and refugees, with IDPs living on less than half the income threshold of \$1.90 PPP per capita per day. Overall, 4 out of 5 IDPs in the poorest quintile depended on aid as their primary source of livelihood.

## Box 2: South Sudan: Significant Data Challenges

***In South Sudan, capacity for data generation is weak, and data gaps are challenging the ability to perform credible economic monitoring.*** Years of instability have affected the ability of the country to develop reliable systems. The Central Statistical Organization's (CSO's) capacity to produce statistics has been severely eroded due to conflict-driven damage to infrastructure and office equipment; disruption of staff salary payments; and cessation of donor projects and training opportunities. Deteriorating security conditions and geographical divisions have also crippled the CSO's ability to collect statistical information to cover all activities and all parts of the country. As a result, since 2015 only limited official statistics—including, but not limited to national accounts (NA), price indices, and poverty data—have been compiled, which has hampered effective monitoring and analysis of the country's socioeconomic conditions.

***The National Bureau of Statistics and Bank of South Sudan produce a limited range of data.*** While the National Bureau of Statistics (NBS) produces monthly Consumer Price Index (CPI) data, these are usually delivered with significant delays and are of poor quality. GDP data are also produced, but neither the government nor partners use them because of underlying weaknesses in the quality of the data. The Bank of South Sudan maintains a monthly database of key indicators, but important data, including the balance of payments, are not fully developed. Fiscal data are affected by lack of transparency on revenues, expenditures, arrears, and debt.

***Updated and nationally representative data for welfare and poverty measures are dated.*** The most recent nationally representative household survey was conducted before the country's independence, in 2009. Post-independence, the World Bank, through the UK Department for International Development funding, conducted four rounds of high-frequency surveys between 2015 and 2017. The 2016 data have been extensively used, along with other secondary data sources (spatial and otherwise) to impute poverty at the subnational level in South Sudan. However, these poverty numbers can only provide a ranking of counties in terms of welfare levels. They cannot estimate the exact number of poor people, or the poverty headcount in each county in South Sudan. While various socioeconomic information (food prices, WASH, humanitarian needs, cereal production) is being collected by various agencies to monitor humanitarian conditions, it is usually neither harmonized nor geographically representative.

## 1.3 Economy During a Fragile Peace Transition (2018-2021)

Multiple shocks have derailed economic recovery.

**Following the signing of the peace agreement in 2018, supported by developments in the oil and agricultural sectors, the economy started showing signs of recovery.**

After many years of conflict, the relative calm that followed the signing of the 2018 peace deal have contributed to greater levels of confidence in the economy. The optimism is anchored around expected investment in the oil sector, the resumption of oil production, and spin-off economic activity in the oil supply sectors. Oil production has increased following rehabilitation of some of the oil fields damaged during the conflict, but it is not expected to reach precrisis levels in the short term. However, with these developments, real GDP growth did rebound to 3.2 percent in FY2018/19, and rose to 9.5 percent in FY2019/20. Trade with the region rebounded strongly, with imports from Uganda growing by an average of 15 percent over a two-year period during FY2018 and FY2019 compared to an average contraction of 11 percent for FY2016 and FY2017. In the agriculture sector, cropped land area has increased as the relative peace has allowed farming households to work their land.

**However, this nascent economic recovery has been disrupted by the COVID-19 pandemic, localized conflict, and climate shocks.**

South Sudan faced significant economic headwinds in FY2020/21, with the pandemic, floods, and flareups of violence all affecting economic activities. Consequently, the economy is estimated to have contracted by 5.1 percent in FY2020/21. The oil sector contracted by 0.3 percent as the COVID-19 pandemic delayed new investments, and there was a decline in oil production due to floods as well as aging oil wells and lack of maintenance investments. In the agriculture sector, cereal production declined by 4 percent as flooding led to estimated losses of 38,000 tons of cereals and 800,000 livestock in 2021 (FAO 2021). These developments significantly reduced household welfare, since income from farming had already fallen for 38 percent of households and had stopped entirely for 11 percent during the COVID-19 pandemic in 2020 (World Bank 2020a).

Table 4: Key Macroeconomic Indicators 2018-2021

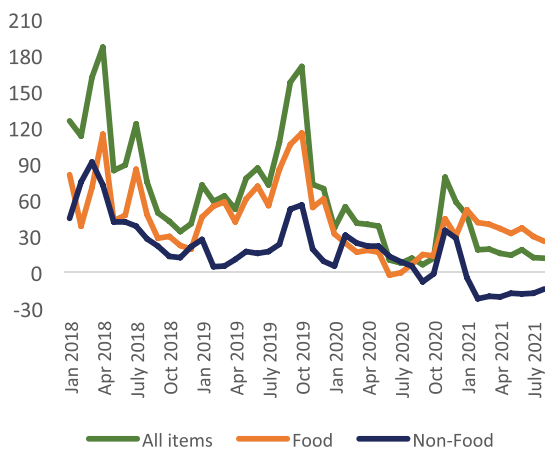
	FY2017/18	FY2018/19	FY2019/20	FY2020/21
<b>Real GDP Growth</b>	-3.5	3.2	9.5	-5.1
Oil	27.9	10.7	27.5	-0.3
Non-Oil	-12.8	0.0	0.8	-8.0
<b>Revenue (% GDP)</b>	34.1	31.8	29.5	30.9
o/w oil	29.2	27.9	25.5	26.0
<b>Expenditure (% GDP)</b>	37.5	32.8	39.3	37.7
o/w salaries	5.6	3.4	4.6	7.8
<b>General Government Balance % GDP</b>	-3.4	-1.0	-9.8	-6.9
<b>Current Account Balance %GDP</b>	-9.8	-6.3	-20.3	-5.5
<b>Gross foreign reserves in \$ millions</b>	33	31	48	173
Inflation, annual average	121.6	63.6	33.3	43.1
Nominal Exchange rate (official)	128	152	161	191
Nominal Exchange rate (market)	220	251	308	523
<b>Nominal GDP SSP millions</b>	446,115	711,063	789,041	946,569

Source: World Bank staff estimates

**Inflation has been declining since 2018, but nevertheless remains high owing to structural drivers and exchange rate pass-through to domestic prices.** The overall rate of inflation declined to 11.3 percent in August 2021, from 123 percent in July 2018 (Figure 15). The decline in inflation has been supported by a significant decline in money growth showing the close link between monetary financing and inflation. While food price inflation has been declining since the 2018 peace deal, intermittent shocks related to localized insecurity and supply bottlenecks are continuing to create periodic food inflation spikes. At the same time, past events have shown a very high correlation between inflation and parallel exchange rate depreciation.

**Unification of the exchange rate has contributed to declining inflation.** The gap between the market and official exchange rates declined from 250 percent in January 2021 to

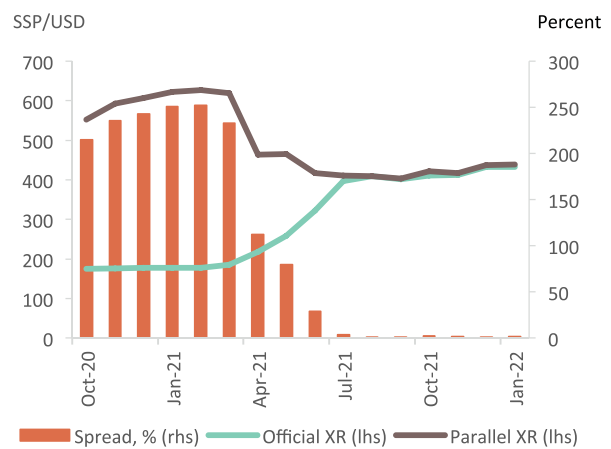
Figure 11: Inflation Developments



**Fiscal policy has been procyclical and is undermined by a lack of budgetary discipline and transparency.** South Sudan’s fiscal policy is procyclical, with expenditures in the national budget almost entirely funded by oil revenue receipts. Therefore, budget expansions and contractions closely follow oil revenue receipts. Budget allocations have been only loosely related to actual spending, with recent budget execution reports indicating large discrepancies between budgets and actual spending. For instance, while security forces had been allocated 19 percent in the FY2018/19 budget, actual expenditure exceeded 40 percent of total resources in the first nine months of the fiscal year, while spending on health and education was significantly less

than what was budgeted (World Bank 2020b). In addition, budgets are opaque, with significant off-budget revenue and expenditure practices. Extra-budgetary expenditures and financing shortfalls due to unaccounted-for advance oil sales have precipitated a continuous accumulation arrears and complicated budget and debt management. Such difficulties undermine budget credibility: in the past this has impeded efforts to reorient spending toward investment, and is putting the government’s current plans at risk.

Figure 12: Exchange Rate Developments



than what was budgeted (World Bank 2020b). In addition, budgets are opaque, with significant off-budget revenue and expenditure practices. Extra-budgetary expenditures and financing shortfalls due to unaccounted-for advance oil sales have precipitated a continuous accumulation arrears and complicated budget and debt management. Such difficulties undermine budget credibility: in the past this has impeded efforts to reorient spending toward investment, and is putting the government’s current plans at risk.

**Despite greater optimism about the business environment, the private sector continues to face a multitude of constraints.** Greater security is the single most important



condition for increased business activity in South Sudan. In addition to closing many businesses, conflict has affected virtually all of the businesses that still survive in South Sudan, through the loss of customers (80 percent), loss of assets (50 percent), periodic business closure (43 percent), and inability to invest (37 percent) (Finn and von der Goltz 2020). The relative peace enjoyed after September 2018 has increased business optimism despite the continued existence of numerous constraints. In a 2019 Integrated Business Establishments Survey (IBES), four constraints emerged with unusual clarity and consistency as being important, among a broad range of other obstacles. Insecurity was still the leading issue cited in 2019 as a “serious” or “very serious” problem (40 percent), in line with the nearly universal experience of how conflict impacts businesses. Nearly as many firms complain about a lack of market access (39 percent), and there are similar numbers affected by poor access to finance (37 percent) and electricity (36 percent). These factors are followed by a set of concerns related to infrastructure (roads, transport facilities, working space, water) that are important to many firms, but mentioned substantially less frequently (15-20 percent). Businesses continue to be burdened by informal and multiple taxation at checkpoints along major trade routes (Schouten et al. 2021). The cost of such payments is huge and has been estimated to be as high as 8 percent of the value of goods (Pape et al. 2017).

**Several basic public financial management (PFM) reforms have been initiated.** The authorities have taken advantage of the economic fallout from the COVID-19 pandemic to undertake critical macroeconomic and fiscal reforms, building on key milestones that have already been achieved as part of the peace process. The authorities have approved the Public Financial Management Reform Strategy and taken steps to operationalize the PFM Reform Governance Structure and PFM Oversight Committee, to provide coordination, direction, and oversight to accelerate the implementation and effectiveness of PFM reforms. The authorities have identified a number of PFM priorities and are working with a wide range of stakeholders from the government, development partners, and civil society to implement the targeted reforms. With this reform process, the authorities have committed to a macroeconomic and fiscal reform program that is intended to facilitate macroeconomic stabilization and improved public financial management. More broadly, these reforms have sought to modernize the country’s systems for debt, arrears, procurement, payroll,

audit, and budget management. In addition, the reforms aim to strengthen the country’s macro-fiscal frameworks. The authorities have also committed to discontinuing the use of off-budget oil advances, which is expected to improve budget transparency and the management of oil resources.

The government’s reform program is anchored by an IMF staff-monitored program (SMP). The approval of the program in March 2021 aims to provide a strong basis for the macroeconomic reform agenda of the government by facilitating the conditions for strong, inclusive growth through restoring fiscal discipline; implementing a rules-based monetary policy framework; and addressing distortions in the foreign exchange market (Box 3). The SMP focuses on four critical areas: (i) restoring fiscal discipline; (ii) monetary and exchange rate reform; (iii) debt management; and (iv) strengthening governance. In addition, it establishes a credible PFM reform monitoring and review process.

**Transmission of the impacts of the war in Ukraine have dampened the global economic outlook and have on balance affected South Sudan adversely.** The Russia/Ukraine crisis is impacting South Sudan through four major transmission channels: (i) food security; (ii) budget revenue; (iii) trade balance; and (iv) growth. The war in Ukraine has affected global recovery from Covid-19, and has elevated global inflation and supply chain risks, with the latter leading to persistent shortages of key items. Ukraine and Russia are major exporters of agricultural, energy, and mineral commodities, and the initial global impact of the war is primarily through higher prices of these commodities. In South Sudan, higher oil prices have improved budget revenues and strengthened its external position, but stronger mechanisms will be required in order to improve accountability and reduce the misuse of oil revenues. As elsewhere in the region, South Sudan has started experiencing rising prices of food and basic household commodities, with high-frequency data indicating that in Juba, market food prices of selected cereals rose by 10-25 percent from December 2021 to March 2022. These rising food prices also reflect the decline in domestic cereal production due to significant climate and conflict events in 2021; this has led to a 4 percent reduction in cereal production, resulting in a 16 percent increase in the domestic cereal deficit to 540,000 MT in 2022. With more than 60 percent of the population (7.7 million) facing severe acute food insecurity in 2022, rising food prices will exacerbate an already dire food insecurity situation.

## The post-conflict economic recovery did not improve living standards.

**Even during the post-conflict economic recovery, improvements in living standards were limited, since oil revenues were not used to improve service delivery.**

While the formal oil-dependent economy recovered in the two years following the signing of the 2018 peace agreement, people's living standards lagged, and in some instances even deteriorated, since relatively little oil revenue was spent on basic service delivery. In 2021, more than two-thirds of the population, some 8.3 million people, were estimated to be in dire need of humanitarian assistance and protection. Despite increased agricultural production, crisis-level food insecurity persists, with exceptionally high food prices constraining access to food for large segments of population. A resurgence in internal conflict and climate-related shocks during 2020-21 disrupted humanitarian activities on the ground and exacerbated already impoverished living standards, with nearly half of the total population (about 5.8 million people) facing severe food insecurity in the period from December 2020 to March 2021.

**With the economic decline in FY2020/21, living conditions deteriorated further, with many of South Sudan's people urgently requiring humanitarian assistance.**

The effects of the COVID-19 pandemic have been exacerbated by concurrent shocks, leading to a deterioration in the living standards of a large proportion of the population. Despite improvements to the security situation, severe flooding in parts of South Sudan exacerbated already high levels of poverty and food insecurity, leading to a further deterioration in living standards. The floods, which killed livestock, destroyed food stocks, and damaged crops ahead of the main harvest season, have aggravated an already dire humanitarian situation. More than 6 million people are facing crisis-level food insecurity, with almost 1.4 million children under the age of 5 years expected to experience acute malnutrition in 2022 (OCHA 2022).

**COVID-19 and other concurrent shocks have taken a toll on households' coping strategies, which are already stretched very thin.**

Many households experienced the pandemic as a series of shocks that affected health, business activities, jobs, and prices. Floods, crime, and violence have added additional challenges for households struggling to maintain a livelihood. The most frequently reported shocks were food price increases and the loss of income-generating activities, both in line with the economic impact of the COVID-19 pandemic. Around half of the households throughout

the country reported that food prices had risen (World Bank 2020a). Among those affected by the crisis, most took action to try to mitigate the shocks, usually through new income-generating activities, or by getting help from friends and family. However, despite these efforts, food insecurity remains very high. While it is at worrisome levels even among those households that reported no losses due to the pandemic, it is even more pronounced among those who have suffered adverse effects.

**In South Sudan, conflict has significantly affected the food production and distribution systems, and thereby the nutritional status of most households.**

Analysis based on the 2020 Food Security and Nutrition Monitoring Survey (FSNMS) data shows that only about 30 percent of households in South Sudan rank in the highest category of the household dietary diversity score (HDDS), indicating that almost 70 percent of the households have access to less than five food groups, and hence are consuming a suboptimal diversity of food. The states with the lowest food consumption score (FCS) also perform poorly in HDDS in terms of the Integrated Food Security Phase Classifications (IPC). For instance, Central Equatorial State (CES) had the second-lowest FCS and also has the lowest HDDS ranking (Phase 4+), with 46 percent of households in the state consuming less than three (0-2) food categories. Other states, such as Jonglei, Unity, and Upper Nile, also have more than 30 percent of their households in the Phase 4+ HDDS category. It should be noted that food intake in terms of food security indicators (FCS and HDDS) is relatively poor in the states that were most affected by the civil war (including Unity, Jonglei, and Upper Nile State), suggesting that the conflict has significantly affected food production and distribution systems in these states.

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Many households experienced the pandemic as a series of shocks that affected health, business activities, jobs, and prices. Floods, crime, and violence have added additional challenges for households struggling to maintain a livelihood.

### Box 3: The IMF Staff-Monitored Program

**The IMF approved a nine-month Staff Monitored Program (SMP) on March 30, 2021.** The SMP was combined with a disbursement under the Rapid Credit Facility (RCF) of \$174 million (50 percent of quota) to address urgent balance of payments (BOP) challenges and build a track record toward an upper credit tranche financial arrangement. This followed a disbursement under the RCF in November 2020 of \$52 million (15 percent of quota), the first-ever financial disbursement from IMF to the Republic of South Sudan.

**The SMP supports implementation of the government's current reform program.** The authorities are committed to a reform program that prioritizes modernization of the country's economic and public financial management (PFM) systems. It aims to foster greater transparency within government operations; strengthen governance; and reduce vulnerabilities. Specifically, the SMP includes a package of measures with a focus on strengthening governance and helping to create the conditions for strong and inclusive growth by restoring fiscal discipline, reducing debt vulnerabilities, implementing a rules-based monetary policy framework, and eliminating distortions in the foreign exchange market.

**Performance under the SMP has been broadly satisfactory.** IMF completed and approved the first review of the SMP on October 18, 2021. The review focused on reforms aimed at sustaining recent gains in macroeconomic stability and exchange rate unification, and continuing governance reforms. The economic reforms implemented under the SMP, supported by RCF disbursements and the strong recovery of oil prices, have helped to ease the adverse impact of the pandemic and address a history of weak macroeconomic governance: the exchange rate has stabilized, price levels have started to decline, and the government has substantially reduced salary arrears. The authorities had implemented the reforms targeted under the structural benchmarks. However, two quantitative targets were missed: the ceiling on the cash deficit of the central government, and the ceiling on contracting or guaranteeing non-concessional borrowing.

**The economic reforms supported by the SMP are laying the groundwork for a potential extended credit facility (ECF) request at the end of the SMP.** The SMP's strong track record so far—especially in stabilizing the economy, reducing distortions in the FX market, and initiating governance reforms—is promising. Nevertheless, significant steps still need to be taken. These include (i) sustaining fiscal and monetary discipline to consolidate gains in macroeconomic stabilization; (ii) consolidating FX market liberalization reforms by bolstering reserves and expanding the set of available monetary instruments; (iii) strengthening debt management and oversight; (iv) deepening PFM reforms; and (v) strengthening the anticorruption and AML/CFT frameworks. Continued implementation of reforms in these areas will help build credibility with donors and unlock concessional financing.

Source: IMF 2021

**Rapid household surveys show that food insecurity remains high among rural and poor households.** More than nine out of ten (90.5 percent) households from the poor group reported having to skip meals due to lack of money or resources, and around 83 percent of households from the non-poor group also reported having to do so (see Table 5). At the same time, close to four in five households (78.6 percent) from the poor group reported having gone

without eating for whole days, around 7 percentage points higher than the figure for the non-poor group. The rural poor experienced more severe food insecurity situation than the urban poor: for all eight food insecurity indicators, their rates were higher (see Table 5). For five out of the eight indicators, these indicators were in excess of 90 percent among the rural poor.

**Table 5: Food Insecurity: Comparison by Poverty Status**

	October 2020		June 2020	
	Non-Poor (%)	Poor (%)	Non-Poor (%)	Poor (%)
Worried about not having enough food to eat	86.5	89.4	81.8	84.3
Unable to eat healthy and nutritious/preferred foods	87.4	92.1	86.9	89.4
Ate only a few kinds of foods	89.8	93.4	87.7	90.6
Had to skip a meal	83.1	90.5	87.3	89.2
Ate less than you thought you should	84.9	90.6	88.8	90.5
Ran out of food	77.5	83.3	80.9	84.6
Were hungry but did not eat	79.8	86.2	79.3	83.5
Went without eating for a whole day	71.4	78.6	74.7	79.1

Source: Finn et al. 2020

**Table 6: Food Insecurity: Comparison of Urban Poor and Rural Poor**

	October 2020	
	Urban Poor (%)	Rural Poor (%)
Worried about not having enough food to eat	87.8	90.2
Unable to eat healthy and nutritious/preferred foods	89.5	93.3
Ate only a few kinds of foods	90.0	95.1
Had to skip a meal	88.7	91.4
Ate less than you thought you should	87.2	92.3
Ran out of food	79.2	85.3
Were hungry but did not eat	83.9	87.3
Went without eating for a whole day	77.6	79.0

Source: Finn et al. 2020

**Widespread poverty and limited investment in the delivery of social services have compounded substandard living standards, with many households facing a combination of covariate and idiosyncratic shocks.** According to analysis based on the November 2020 FAO/WFP Food Security and Nutrition Monitoring Survey (FSNMS) data, around two out of three households (65 percent) experienced a series of events that affected their health, business activities, jobs, and/or prices. In the context of the COVID-19 pandemic, floods, crime, and violence created additional challenges for households already struggling to maintain a livelihood. Almost four in five of the households in the states of Warrap and Lakes experienced such shocks, as did nearly two in three (65 percent) of the households in other states, with the exception of Unity and Upper Nile, where less than 50 percent of the

households experienced these shocks. The most common shock experienced by households in all of the states related to unusually high food prices and reduced income, with more than one third (34 percent) and nearly two-fifths (18 percent) of households in the country reporting these two types of shocks. Other shocks experienced by households across the states related to high fuel prices, illness of household members, drought and irregular rains, floods in some states, crop pests and diseases, and insecurity.

**Most households have adopted unsustainable emergency coping strategies in response to these shocks.** Households are increasingly resorting to measures outside of the household to cope with their lack of resources to buy food. At the national level, more than 50 percent of households have adopted emergency and crisis coping strategies such as reducing essential nonfood expenditure



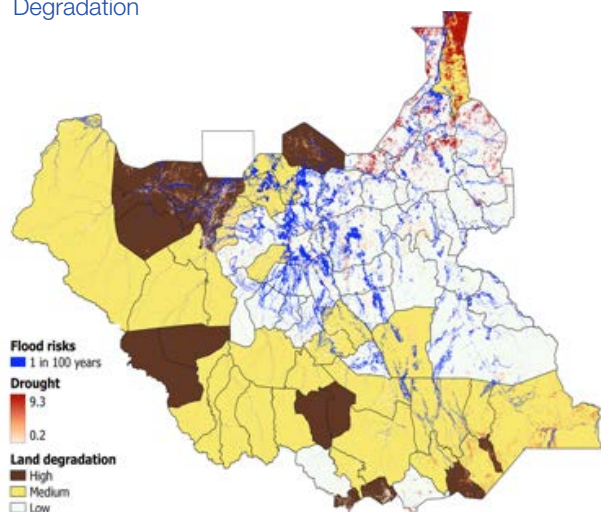
and accepting high-risk jobs.<sup>3</sup> In some states, more than 50 percent of households have adopted such emergency strategies.<sup>4</sup> The strategies adopted indicate high levels of vulnerability across the country. To cope with increases in food prices, 25 percent of the households that were affected have engaged in additional income-generating activities, which could be part of the reason for the increase in the employment rate. Reducing food consumption is another strategy commonly adopted by households to cope with food price increases, with 24.5 percent of households reporting doing so. More than one in five households (21.3 percent) were not able to take reasonable action to cushion shocks (World Bank 2021b).

**Climate change has increased the natural risks related to floods, droughts, and land degradation.** According to the Climate Change Vulnerability Index, South Sudan was ranked among the five most affected countries in the world in 2017. Climate change has increased the natural risks related to floods, droughts, and land degradation (Figure 13). In 2021, the country experienced the worst flooding events recorded in more than half a century (Box 4), which led to the loss of 38,000 tons of cereals (4 percent of 2020 production) and 800,000 livestock, and affected 835,000 people (Figure 14). At the same time, decreasing rainfall combined with an

increase in temperature in the eastern and southern parts of the country could reduce water availability for agriculture and impact crop production. In addition, land degradation is jeopardizing the productivity of the most cropped areas of the country. These climate risks require farmers to adapt to changing conditions, which in turn requires the provision of support for water management and crop adaptation initiatives.

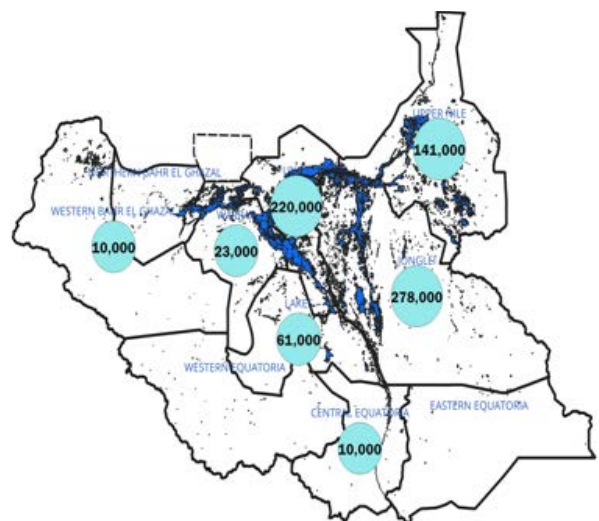
**Climate change impacts on agriculture, infrastructure, and assets are substantial.** The adverse climate events have taken a significant toll on South Sudan. Recent estimates by the World Bank showed that the flooding events across the country in 2021 resulted in total losses of \$671 million (13 percent of GDP), of which \$125.4 million (19 percent of the total) was estimated infrastructure losses, \$233.5 million (35 percent of the total) were agricultural losses, and \$312 million (46 percent of the total) was estimated losses due to damaged buildings (World Bank 2022). The oil sector was also impacted, with flooding leading to a 7.4 percent contraction in oil production. With losses of such magnitudes, given South Sudan's immense development needs, the cost of inaction is very high and would be borne disproportionately by the most vulnerable populations.

**Figure 13: Natural Risks: Floods, Drought, and Land Degradation**



Source: World Bank and FAO (2022)

**Figure 14: Flood-Related Displacement**



Source: Authors, based on OCHA (2021)

3. Stress coping mechanisms include measures such as spending savings, buying food on credit, and selling household goods. Crisis coping strategies include reducing essential non-food expenditure, and sale of productive assets; while emergency coping strategies include accepting high risky jobs, sending adults to beg, and sending children to beg (UNHCR, 2019).

4. For example Jonglei, Upper Nile, Unity, and Lakes, these being the states with relatively high levels of food insecurity.

#### **Box 4: Toward a Climate Change Adaptation Agenda for South Sudan**

**Seasonal climate patterns have become increasingly erratic in recent years.** As a result, flooding is a regular occurrence and droughts have become more intense. South Sudan has been affected by three consecutive years of severe flooding starting in 2019, with devastating impacts on physical assets, agriculture, and on peoples' lives and livelihoods. In some areas, the extent of the population affected and the destruction and damage experienced is reportedly the worst since 1962. In 2021, nine out of ten states in the country were affected by floods, with the greatest impacts recorded in Jonglei, Unity, Northern Bahr el Ghazal, and Upper Nile. At the same time, decreasing rainfall combined with temperature increases in the Greater Equatorial regions have increased the risk of hunger and displacement in affected areas (Wote 2022).

**Trend analysis suggests that in coming years, growing seasons across South Sudan will start earlier, last longer, and have more days with more than 5 millimeters (mm) of rain.** In South Sudan, climate change is negatively impacting environmental health, food security, and human habitat and shelter. While climate change may bring longer and more intense rainfall, the impacts on agriculture will be negative as farmers may struggle to adjust and adapt to changing conditions. Climate adaptation will require institutional resources including water management support (for example, building water storage facilities and providing pumping and irrigation equipment) and crop adaptation (through research and the provision of seeds for crops that best fit the changing ecology of the country).

**Increased climate risks have sustained a dire humanitarian situation, reflecting evolving displacement and food insecurity dynamics.** Climate change continues to impact living standards, with an estimated 835,000 people affected by flooding in 2021. Natural disasters were the main causes for displacement in 2020, with floods accounting for the largest share (54 percent), followed by communal violence (32 percent), and conflict (13 percent) (IOM 2022). At the same time, climate risks have affected crop production, with the 2021 flooding leading to a 4 percent reduction of cereal production, widening the food deficit by 16 percent, and sustaining a dire food insecurity outlook. Climate change is also associated with higher risks of conflict (Tiitmamer et al. 2018), compounding the existing challenges for South Sudan.

**The Republic of South Sudan published its first National Adaptation Plan (NAP) for climate change and its second Nationally Determined Contribution (NDC) in 2021.** The NAP takes a first step toward establishing a coherent and effective process for South Sudan, providing a comprehensive framework for mainstreaming climate adaptation within the country's development planning processes. NAP consists of three priority pillars: i) building climate resilient communities; ii) building a climate resilient economy; and iii) building climate-resilient ecosystems. Similarly, the NDC identifies key sectors, climate actions (mitigation and adaptation), strategies, and plans that are aimed at contributing to ambitious international long-term goals of limiting global warming and building resilience to climate impacts. To improve effectiveness in implementation, NAP and NDC have been closely linked to existing planning frameworks, including Vision 2040 (the Country's long term development strategy), the National Development Strategy (NDS), and the Comprehensive Agriculture Masterplan (CAMP), among others. However, achieving the objectives of both the NAP and NDC will require a coordinated approach, and the commitment of both state and non-state actors.

The background features a central circular image of a landscape with a body of water, a horizon line, and birds in flight. This central image is overlaid with several semi-transparent circles of varying shades of gray and white. Some of these circles have decorative patterns like diagonal lines or concentric circles. The overall design is modern and abstract.

# Chapter 2



REPOSITIONING  
THE OIL SECTOR

## 2.1 Overview of South Sudan's Oil Sector

**The history of oil exploration and production in South Sudan is directly linked to the development of the oil sector in Sudan.** The development of South Sudan's production, transport, and processing, as well as its export infrastructure has naturally been linked to the development of the oil infrastructure in Sudan. Oil exploration in Sudan began in the early 1970s, with substantial reserves confirmed in the early 1980s. However, the production of commercial quantities only began in 1995 (from Unity State), and in 2004 from Upper Nile State. Commercial exports of crude oil began in 1999 following completion of a 1610 kilometer (km) pipeline from Heglig in Unity State to Port Sudan. Figure 15 provides an overview of South Sudan's oil concession blocks. Except for the pipeline linking the fields in Thar Jath (Block 5A) with those in Heglig (Blocks 1 & 4), the rest of the major infrastructure was planned and implemented prior to 2005. Key to the exports of oil from South Sudan are two export pipelines: the Greater Nile Petroleum Operating Company (GNPOC) pipeline from Heglig to Port Sudan (1610 km); and the Petrodar pipeline from Paloich to Port Sudan (1367 km).

**South Sudan's unexploited oil reserves have the potential to make the country one of the largest oil producers in Sub-Saharan Africa.** 2014 estimates in the Oil and Gas Journal put South Sudan's oil resources at 3.5 billion barrels, which could potentially make it the third largest oil producer in Sub-Saharan Africa. However, according to the Ministry of Petroleum, 90 percent of the country's oil and gas reserves remain unexplored. The crude oil that is produced in Unity is called "Nile blend" and that from Upper Nile is called "Dar blend." While both sell at a discount from world "Brent" oil prices due to their quality, most of the Nile blend is of a better quality than the Dar blend. However, the quantities of Nile blend produced have been much smaller than those of Dar Blend. Between 2013 and 2019, nearly all the oil produced and exported from South Sudan was Dar Blend. More recently, lower sulfur cap regulations for global maritime shipping fuels pushed South Sudan's oil, which has low sulfur content and high fuel-oil yield, into premium category. Consequently, price differentials for South Sudan's Dar Blend crude grade flipped into premiums starting in the first half of 2020.

Prior to the country's secession from Sudan, oil revenue sharing was governed by the CPA, much to the disadvantage of South Sudan. With respect to revenues from producing fields in Southern Sudan, the agreement required that, after 2 percent of the government share of production was paid to the producing states, the remainder was split on a 50/50 basis between Sudan and Southern Sudan, and Sudan controlled the processing and export facilities. Tensions and feelings of mistrust arose when Southern Sudan could not verify that the oil figures published by the Khartoum government were correct. Escalation of these tensions later led to a total shutdown of oil production by South Sudan in 2012.

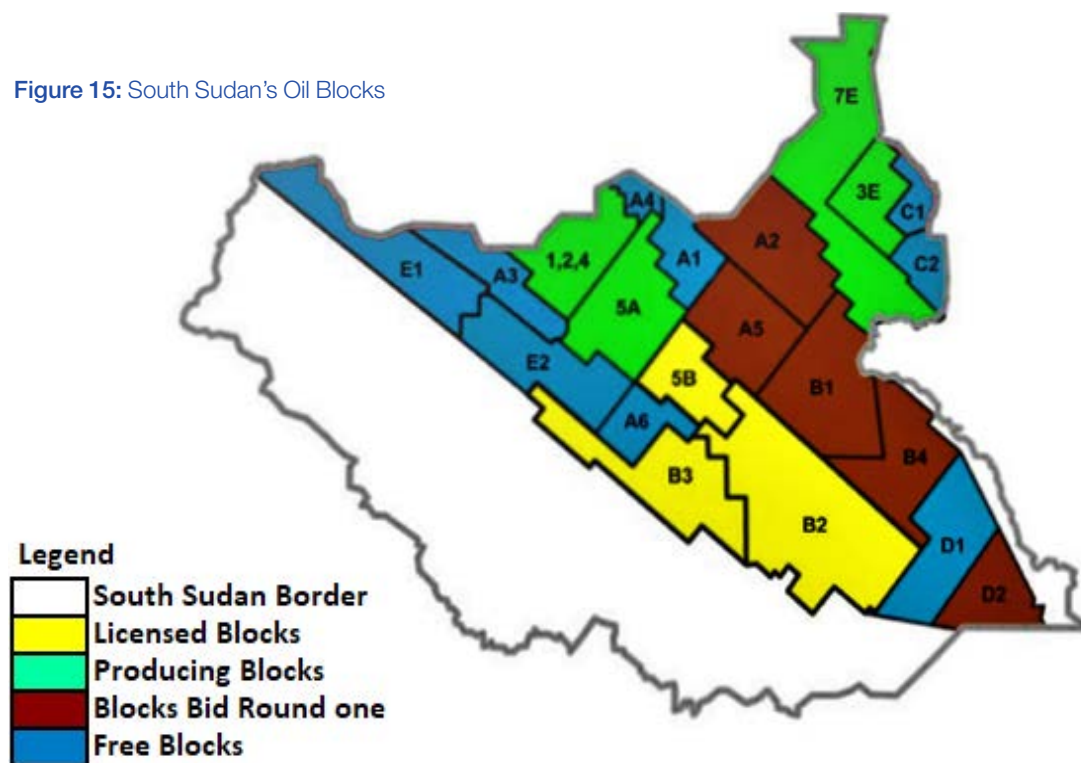
**As a result of secession, 70 percent of the commercial reserves and 80 percent of the pre-independence production were transferred to South Sudan.** Until the time of independence the exploration and production-sharing agreements (EPSAs) for the oil producing areas in South Sudan were between the government of Sudan and the contractors. The contractors consisted of foreign stakeholders and the state-owned oil company of Sudan, Sudapet. Each EPSA provided for a Sudanese Joint Operating Company (JOC) that was designated as the operator. The Sudanese JOCs continued to operate the fields in South Sudan until the government of South Sudan entered into new agreements with respect to those fields and had the contractors incorporate new JOCs for operating the fields in South Sudan.

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Estimates in the Oil and Gas Journal put South Sudan's oil resources at 3.5 billion barrels in 2014, which could potentially make it the third largest oil producer in Sub-Saharan Africa.



Figure 15: South Sudan's Oil Blocks



Source: Ministry of Petroleum, Government of South Sudan, 2021

Table 7: Shareholders of Operating Companies in South Sudan

Operator	Shareholder	Percent	Blocks
GPOC	CNPC	40	1, 2, 4
	PETRONAS	30	-
	ONGC VIDESH	25	-
	NILEPET	5	-
SPOC	PETRONAS	67.8	5A
	ONGC VIDESH	24.2	-
	NILEPET	8	-
DPOC	CNPC	41	3D, 3E, 7E
	PETRONAS	40	-
	NILEPET	8	-
	SINOPEC	6	-
	TRIOCEAN	5	-

Notes: CNPC and SINOPEC are both state-owned companies of China; PETRONAS is the state-owned oil company of Malaysia; ONGC is the state-owned oil company of India; NILEPET is the state-owned oil company of South Sudan; and Triocean is Egyptian in origin.

Source: Authors using information from the Ministry of Petroleum, Republic of South Sudan, 2021

**South Sudan's share of oil revenue is determined by EPSAs with the operating companies.**

EPSAs define the cost and profit-sharing arrangement between the government of South Sudan and the shareholders in the operating company. This is commonly referred to as “cost oil” and “profit oil,” with “cost oil” being the share of production that is used to meet operating costs, while “profit oil” is the share of production that accrues to the government. By way of example, the SPOC EPSA was signed in February 1997 and transitioned into an agreement with the independent Government of South Sudan in 2012; a revised and extended EPSA was signed in 2017. However, when South Sudan became independent, the operating companies restructured the EPSAs by replacing the Sudanese Government’s parastatal (Sudapet) with that of the government of South Sudan (Nilepet). Under the EPSAs, the Nile Petroleum Company (Nilepet) receives a fixed percentage of the crude oil that is exported, which corresponds to the percentage shareholding in each consortium, as shown in Table 7. At current production levels, South Sudan’s share of oil revenue is estimated at about 42 percent of the total.

**After independence, the government of South Sudan entered into new transitional agreements (TAs) in January 2012.**

These agreements incorporated all the terms and conditions of the previous EPSAs, except where amended. The new contractors were comprised of the same foreign stakeholders that were in the EPSAs with Sudan prior to the secession, and their interest in the agreements remained the same. In November 2011, the Nilepet Decree transferred the Sudapet interest in the EPSAs to Nilepet by presidential order. The Nilepet interest in the TAs consists of 8 percent in blocks 3 and 7; 5 percent in blocks 1, 2, and 4; and 8 percent in block 5A. Although the TAs were signed on January 13, 2012 and new JOCs were incorporated in April 2012, the TAs are, according to the agreements, “deemed to have effect from the date of secession.”

**Nilepet manages the commercial and operational aspects of petroleum activities on behalf of the state.**

Nilepet was established through Section 13 of the Petroleum Act 2012 and the Nilepet Act 2019. As a fully operational national oil company (NOC), Nilepet participates in the upstream, midstream, and downstream activities on behalf of the government of the Republic of South Sudan. Currently under the Office of the President, Nilepet has a share in each of the three operating companies (see Table 7), and a significant presence in the midstream and downstream

sectors. Nilepet’s commercial operations are opaque, and the company has repeatedly resisted calls to complete audits of its financial records (Global Witness 2018). In 2020, the company announced plans to take full control of the Greater Pioneer Oil Company (DPOC) oil fields when the EPSAs expire in 2027,<sup>5</sup> in a move that is intended to enable South Sudan to “maximize revenue” according to the South Sudan authorities (Okot 2020). While these developments may negate South Sudan’s quest to scale up investment and production, since international oil companies may scale down investment in preparation for exiting the country, Nilepet will have to mobilize the resources and expertise necessary to assume full control of the DPOC oil fields, which currently account for about two-thirds of oil production in South Sudan.

**South Sudan started refining oil on a small scale.**

Construction of two refineries, one in Bentiu, Unity State (by the Russian company Safinat) and another in Upper Nile State (by the US Frontiers Resources Group) were delayed due to the recent conflict in these areas. The Bentiu oil refinery in Unity State started producing refined oil products – understood to be diesel and heavy fuel oil--in March 2021. According to the authorities, the refinery is currently producing 3,000 barrels of refined oil a day, with the aim of scaling up capacity to 10,000 barrels per day over the medium term. However, their plans and timelines for scaling up refinery capacity are unclear. The Bentiu refinery is a joint venture between Russia’s Safinat and Nilepet. The refinery, which was reportedly built at a cost of \$100 million, is the first of the five planned facilities, with a plan to reach a total capacity of 127,000 barrels per day. It is understood that the refined products will initially be used to satisfy domestic demand for the heavy fuel oil (HFO) that is used to generate electricity.

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The Bentiu oil refinery in Unity State started producing refined oil products – understood to be diesel and heavy fuel oil--in March 2021. According to the authorities, the refinery is currently producing 3,000 barrels of refined oil a day.

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5. The current GPOC and SPOC EPSAs will expire in 2033 and 2037 respectively.

## 2.2 Estimates of Oil production and Revenues

**Oil production peaked in 2009, two years before independence; it has since declined due to lack of investment.** Peak production in 2010 (by a combination of Sudan and South Sudan) was 500,000+ barrels/day, while peak production in South Sudan was in 2009 (381,000 barrels/day). Unilateral stoppage of oil production in South Sudan took place in January 2012; it was resumed in April 2013, but only in Upper Nile. Conflict in the oil fields further reduced oil production in 2014 and 2015. Oil production from GPOC resumed in late 2018, but production from SPOC (Block 5A) did not restart until mid-2021. However, exports from SPOC Block 5A are constrained by its poor quality; Sudan is only able to accept 5,000 barrels a day from Block 5A to be mixed with its own oil production.

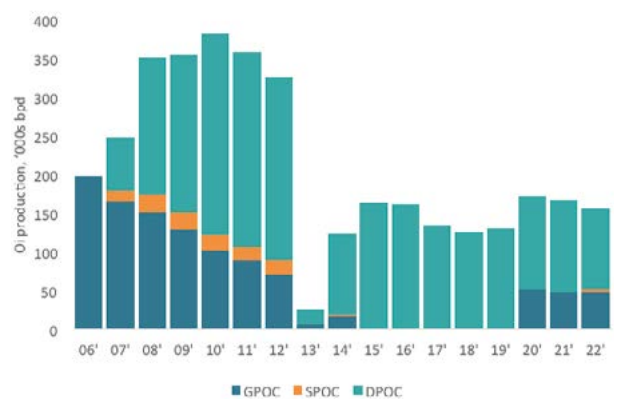
**South Sudan's oil production has fluctuated since independence, reflecting the impact of conflict and policy decisions over time.** Oil production capacity is low compared to the sizable unexploited oil reserves already discovered in the country. Since 2012, the performance of the oil sector has been buffeted by political and security challenges and low oil prices in international markets. Disagreements with Sudan in 2012, and the outbreak of the civil war in 2013 led to the closure of oil production in the states of Upper Nile and Unity. These problems caused a precipitous decline in oil production, from about 350,000 barrels per day (bpd) in 2011 to about 110,000 in 2017. While the shareholders of the operating companies have rehabilitated and relaunched oil production in some of the fields that were damaged during conflict, current oil production, estimated at about 170,000 bpd in FY2020/21 is still less than half of its pre-conflict level.

**Increasing oil production to prewar levels will require new investments, and possibly the use of enhanced oil recovery (EOR) techniques in the existing oil wells, as well as new oil discoveries.** Oil production has peaked in some blocks, requiring new investment to ramp up production. Consequently, it is estimated that total oil production in FY2021/22 will decline to about 156,000 bpd, with the output from Blocks 3 and 7 being reduced from 120,000 to 103,000 bpd; Blocks 1, 2, and 4 decreasing from 53,000 to 48,000 bpd; and Block 5A producing an additional 5,000

bpd. To sustain high levels of production and extend the life of the mature oil wells, oil companies need to invest in new producing and injection wells to maintain the reservoir pressure; ultimately, they will also have to consider costly and challenging EOR techniques.

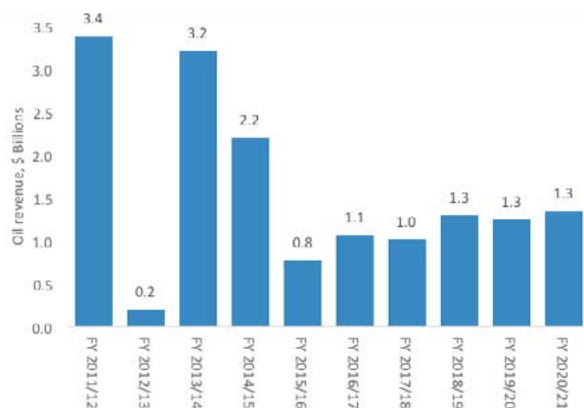
**Oil revenues declined substantially during the post-independence period, reflecting unfavorable production and price dynamics.** During the period immediately following independence, South Sudan oil revenues benefitted from high oil prices, which averaged \$97.3 per barrel from FY2012-FY2014. The government's share of oil exports amounted to \$3.4 billion in FY2011, but dropped to just over \$0.2 billion in FY2013 as a result of the almost total shutdown of production during that year. Oil revenues did not recover in subsequent years: prices crashed in 2014, and did not regain their previous highs. Moreover, the intensification of conflict affected both production and new investments, and the maturing/aging of the oil wells meant that production could not quickly recover. In addition to changing global dynamics, these circumstances affected oil production and new investments in the subsequent years. Consequently, the government's share of oil exports has averaged only \$1.3 billion in the three years following the signing of the 2018 peace deal (FY2019-FY2021), barely two-fifths of its value at independence in 2011.

Figure 16: Oil Production Estimates



Source: South Sudan authorities; World Bank

**Figure 17: South Sudan's Oil Export Revenues**



Source: South Sudan authorities; World Bank

**Large portions of oil revenues are absorbed through compensation agreements, external oil-backed prefinancing loans, oil-backed public investments, and transfers and subsidies to public institutions.**

While the transitional Financial Arrangement (TFA) with Sudan put significant pressure on South Sudan's budget, the agreement ended in 2022, opening considerable fiscal space. Financial transfers to Sudan are estimated to absorb about 11 percent of South Sudan's share of oil revenue (\$160 million) in the FY2021/22 budget. At the same time, pressures from oil collateralized loans and subsidies, and transfers to public enterprises are putting additional pressure on the budget and complicating fiscal management. Debt service, including repayments, is budgeted to absorb 24 percent of the gross oil revenue (\$358 million) in FY2021/22, while the authorities are allocating 10,000 barrels per day toward the financing of an infrastructure program that is not part of the sector's budget ceiling. It is estimated that this "oil

for roads" arrangement will absorb about 31 percent of gross oil revenue (\$460 million). With these arrangements, very little oil revenue entering the budget will be used to finance the delivery of basic services and to maintain government functions (Table 8).

**Insecurity in oil producing areas and regulatory uncertainty have affected South Sudan's ability to attract new investment in the sector.**

The authorities are seeking new investments, and the Ministry of Petroleum recently launched its first oil licensing round in 2021, placing up to 14 blocks up for exploration. In addition, there are three blocks that have been awarded for exploration as follows: Block B3 (Oranto Petroleum); Block 5B (Ascom); and Block B2 (Strategic Fuel Fund), with Nilepet holding a 10 percent stake in each. However, investors need to be confident that the state can provide the necessary security for the private sector to work in the contract area without disruption. Furthermore, investors still face risks arising from changes in the regulatory and legal framework.

**Another disincentive to investment is that the only available export infrastructure is under monopolistic control, requiring new alternative routes for exportation.**

In addition to moderately high oil prices, discoveries of oil must be large enough to justify the construction of alternative export routes. However, recent discoveries and development decisions made in the north of Uganda, not far from the new exploration licenses granted in South Sudan now open the way for starting to consider alternative export routes toward the Indian Ocean. Since Sudan needs to continue receiving the tariffs paid for the exportation of South Sudan's oil in order to maintain its export facilities toward the Red Sea, these opportunistic new routes should help authorities negotiate and agree on a balanced transport, processing, and lifting service agreement with the Sudanese authorities over the long term.

**Table 8: Distribution of the Government's Oil Revenue**

	SSP Billions (budget)	USD Millions (Budget)	% of GDP
<b>Gross Oil Revenue</b>	<b>589.1</b>	<b>1,473</b>	<b>26.3</b>
<b>Less Direct/Mandatory Transfers</b>			
Financial transfer to Sudan	63.8	159.5	2.8
Transfer to Ministry of Petroleum (3%)	15.8	39.5	0.7
Oil for Roads	184.0	460	8.2
Debt service (including repayment of oil advances)	143.2	358	6.4
<b>Net Oil Revenue to the Treasury</b>	<b>182.3</b>	<b>456</b>	<b>8.1</b>

Source: Ministry of Finance, FY2021/22 National Budget



## 2.3 Oil Sector Regulation and Oversight

**At independence, the authorities in South Sudan developed a robust legal and regulatory framework to govern the oil sector.** The government of South Sudan inherited an oil industry with a preexisting infrastructure and production sharing agreements (PSAs) with international oil companies. The authorities embarked on a process of enacting legal frameworks for regulating oil activities and providing a transparent, equitable, and sustainable industry. The Transitional Constitution (2011) provided the guiding principles for the development and management of petroleum and gas, including in relation to the requisite institutions. The Petroleum Act (2012) was enacted for the purpose of providing a regulatory framework for the development and management of activities related to the petroleum sector. This Act also provides for the establishment of a National Petroleum and Gas Commission. The Petroleum Revenue Management Act (2013) established a formalized structure for the distribution of petroleum revenues for immediate budgetary needs, savings and revenue stabilization, and direct transfers to petroleum-producing states and affected communities. Within this legal framework, the National Petroleum and Gas Commission approves exploration licenses and sets policy; the Ministry of Petroleum and Mining negotiates contracts and regulates the sector; and the Ministry of Finance and Planning collects oil revenues and transfers them to the Treasury.

**The Ministry of Petroleum is responsible for the overall policy framework, strategies, and development of the petroleum sector.** It is mandated to provide policy guidance in the development of the oil sector. Specifically, it is responsible for the overall policy framework, strategies, and development of the petroleum sector – and is authorized “to act on behalf of the Government of the Republic of South Sudan to formulate policy and set strategies, plans and programs for the development and management of the petroleum sector, and propose legislations and develop regulations.” The management of petroleum and gas is based on two legal frameworks: The National Petroleum Act (2012), and the Petroleum Revenue Management Act (2013).

**South Sudan’s legal frameworks for oil and gas management are poorly implemented and partially absent.** The absence of a permanent constitution leads to uncertainty with respect to the legal framework related to the oil and gas sector. Currently, the management of petroleum is based on two legal frameworks. The National Petroleum Act (PA) governs the management of petroleum resources while the Petroleum Revenue Management Act (PRMA) governs the allocation and accounting for the proceeds of the government’s share of production (Box 5). Although these frameworks exist, implementation is very limited. Furthermore, the downstream sector (refining, exporting, and product pricing) is currently not regulated. But of course it would be useful to establish the principles that will apply to investment in the sector before contracts are signed. The ongoing process for the drafting of a permanent constitution will provide opportunities to strengthen legal frameworks in South Sudan’s oil sector.

**Operationalization of the PRMA has been faced with challenges that limit its application in streamlining revenue management.** Petroleum revenues are insufficiently monitored. The last publicly released audit (in 2008) pointed to serious deficiencies in the accounting and documentation of transactions. Furthermore, oil revenue documents, which made up almost 98 percent of the total revenue were inaccessible. Institutions such as the National Audit Chamber will require major capacity-building efforts in order to improve national accounting. Better-managed revenues could then be channeled into social protection programs that target marginalized and vulnerable groups. Such measures would add to the legitimacy of the government and help to create a favorable consensus concerning oil production. In general, the country’s public financial management (PFM) requires a stronger transparency component in sector reforms. This will involve introducing and strengthening accountability measures within government systems, while introducing more public scrutiny of oil revenues. Information dissemination initiatives by the government concerning oil wealth distribution to the state and local communities will generate public support for government efforts to further develop the sector.

## Box 5: South Sudan's Oil Sector Governance Frameworks

***The National Petroleum Act (NPA) provides for the governance and management of petroleum resources.*** It provides a regulatory framework for the development and management of petroleum activities and other ancillary matters in South Sudan, and for the establishment of a National Petroleum and Gas Commission. This Act provides the legal framework for regulation of the sector in relation to granting exploration rights, production, and the fiscal terms that govern production sharing between the contractor and the government. It also includes the subsequent sale of the government's share of the operating companies and the government. Importantly, the Petroleum Act requires Nilepet to conduct its business with the highest degree of transparency "in accordance with international standards", including making available to the public its audited annual accounts, production share, marketing procedures, sales price, fees paid or received for petroleum activity and transportation, and petroleum agreements and sub-contracts.

***The Petroleum Revenue Management Act (PRMA) establishes the distribution of petroleum revenues after the petroleum-producing states and communities are paid.*** Two percent of net revenues must be transferred to the petroleum-producing states to be allocated to state development programs, as approved by the State Legislative Assembly. Three percent of net revenues must be transferred to the local communities in the petroleum-producing states, with specific rules regarding the allocation of funds between the producing and nonproducing counties. The Consolidated Funds receive 75 percent, the Petroleum Stabilization Account 15 percent, and the Future Generation Fund 10 percent. PRMA requires the minister who is responsible for finance and economic planning to establish a Petroleum Revenue Stabilization Account and the Future Generation Fund. Specific rules are provided for the management of these funds, and the purposes for which transfers out of the Savings Funds may be made. The PRMA requires the minister to submit quarterly reports to the national legislature on investment performance related to the funds. The use of the funds, or of unexploited petroleum reserves as collateral is expressly prohibited except in cases of national emergency, and even then only with the consent of the national legislature.

***The legal framework requires the minister responsible for finance and economic planning to publish records of petroleum revenues.*** According to the PRMA, the publication of records shall happen no later than six weeks after the end of each quarter, and the records published shall include transfers to the savings funds as well as the producing states and communities. The minister is also required to submit to the national legislature an annual report that includes audited financial statements for the Petroleum Revenue Account and the Petroleum Revenue Savings Funds, as well as transfers to the petroleum-producing states and communities, no later than six months after the end of the year. The annual report is then required to be published within 15 days of submission to the legislature. In addition, the PRMA places an obligation on contractors and subcontractors to annually disclose information on all payments to the government. The PRMA also places an obligation on the National Audit Chamber to conduct the necessary audits by contracting with an external audit firm.

**While the Petroleum Act provides the framework for world-class management of the exploration and production components of the oil and gas sector, implementation has been limited, with adverse impacts on investment decisions.**

To date, the National Petroleum and Gas Corporation (NPGC) has not developed policies and guidelines regarding the development and management of the petroleum and gas sector, despite having a mandate to do so. This has caused difficulties for the professionals who are responsible for implementing the Petroleum Act to consistently deal with the conflicting priorities they face (for example, maximizing production vs. maximizing ultimate recovery; or maximizing production vs. ensuring the proper disposal of produced water). Furthermore, establishing such policies and guidelines would also be a first step in estimating reasonable long-term fees for transportation and processing using alternative export routes as a reference. This would strengthen the government's position in negotiating export facilities and the associated fees. Successful negotiation for reasonable and long-term transit fees would increase certainty around moving products to tidewater, making long-term investment more attractive.

**Limited transparency and accountability in the oil sector undermines public confidence.**

The Ministry of Petroleum does not disclose data on oil production, bidding, or tender information, although it is mandated to do so by law. The 2005 CPA, as well as the Transitional Constitution (2011) and the Petroleum Revenue Management Act (2013) stipulated that 2 percent of oil revenue should be allocated to the oil-producing states/regions, and 3 percent to the local communities. To date, limited data is available on the implementation of the revenue sharing arrangement (Reng and Tiitmamer 2018). Systematic corruption has been documented in every Auditor General report issued since 2006, and billions of dollars of oil revenue cannot be traced at all. The R-ARCSS has called for the government's full implementation of the revenue-sharing arrangement. However, for the public to be able to participate in the discussion related to the use of oil resource revenues, they would also need to have access to information regarding the amount of revenues received and their current distribution. A transparent, fair, and public use of funds would add to the credibility of the government,

and could thus contribute to stability and peace in South Sudan, and eventually attract foreign petroleum investors to explore, develop their discoveries, and stabilize the country's revenues over the long term.

**South Sudan's oil production has been associated with breaches of environmental safeguards, leading to pollution, health risks, and the destruction of ecosystems.**

Oil operations in South Sudan have resulted in soil and water being polluted with toxic chemicals and heavy metals that have serious consequences on the health of residents in oil-rich regions. Significant environmental damage results from inadequate treatment of water stored in evaporation ponds that periodically overflow their banks and are not adequately lined. Inadequate facilities for processing water are a bottleneck that limits production, and there is inadequate investment in injection facilities to dispose of the water into underground reservoirs. Policy decisions regarding remediation and how the associated costs will be treated (recoverable, or sole costs) and the extent to which the Ministry of Petroleum and Mining will tolerate the disposing of produced water into evaporation ponds that overflow in the rainy season will have an effect on the production costs of the contractors. While no environmental audits of oilfields have been completed to date, significant environmental damages in the oil-producing areas have negatively impacted livelihoods, and in some instances have led to localized social unrest.

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South Sudan's legal frameworks for oil and gas management are poorly implemented. The ongoing process for the drafting of a permanent constitution will provide opportunities to strengthen legal frameworks in South Sudan's oil sector.

## 2.4 Oil Revenue Investment Options

### **Oil revenues could significantly improve living standards and support economic growth if invested prudently.**

South Sudan has proven oil reserves that will provide the government with considerable revenues; if they are used prudently, these revenues could help to improve living standards for the people. However, they should be seen as only a temporary stream of flows into the national treasury, which can be used as a catalyst or springboard for creating permanent wealth. Considering South Sudan's need to bounce back from years of conflict and economic stagnation, oil revenues can be repositioned to support growth and diversification. Various investment options for oil revenues under different scenarios are presented in Box 6.

### **South Sudan's legal framework provides the necessary fiscal rules that would underpin a prudent oil revenue investment strategy.**

The Petroleum Revenue Management Act provides for the establishment of mechanisms to ensure stabilization and intergenerational equity in the use of oil resources. Specifically, the Oil Revenue Stabilization Account (ORSA) could help cushion budget revenue volatility and finance any unexpected shortfall in petroleum revenue during a given financial year. The Future Generation Fund (FGF) will ensure savings for the long term and support the welfare of future generations. These provisions provide the basis for the development of robust fiscal rules to support the country's stabilization, investment, and savings objectives. However, both ORSA and FGF remain unimplemented at this time.

### **Reforms in the oil sector should be accompanied by the transparent use of funds to benefit the people of South Sudan.**

An important aspect in the management of South Sudan's resources is ensuring that oil revenues are consistently used to improve the living standards of the South Sudanese, as required by the Transitional Constitution. As a step in this direction, the authorities could create a social protection program using oil funds to make periodic payments to specific categories of vulnerable citizens. However, in order for the public to be able to participate in

discussions related to the use of resource revenues, they would also need to have access to information regarding the amount of revenues received and their current distribution. A transparent, fair, and public use of funds would add to the credibility of the government, and thus could contribute to stability and peace in South Sudan.

### **Scaling up public investment in agriculture, basic infrastructure, and human capital development provides the best investment scenario.**

The ideal allocation of oil revenues requires that a significant part of the oil proceeds is invested domestically. Agriculture is the main source of livelihoods and employment, with more than two thirds of the South Sudanese people dependent on this sector. Yet, the sector faces numerous production bottlenecks that precipitate recurring cycles of food insecurity. The investments needed to improve agricultural sector outcomes are discussed in the following section. Such investments would have to go hand in hand with a renewed focus on basic infrastructure, including transport and energy infrastructure, and human capital development. With South Sudan's low capital base and large infrastructural and human capital deficits, domestic investment will generate higher returns compared to investments abroad, and can help to alleviate "Dutch disease"<sup>6</sup> effects, and promote macroeconomic stability.



The optimal investing rule would guide a significant portion of oil revenues toward public capital, and the remainder would be saved in the country's sovereign oil fund.



*6 Dutch Disease is a condition in which a sudden increase of resource wealth from an extractive sector (such as oil, gas, coal, or mining) undermines other areas of the economy (such as agriculture, manufacturing, or tradeable services), shrinking them while spurring an appreciation in the real exchange rate.*



## Box 6: Investment Options for Oil Revenues Under Various Scenarios

***Simulations of consumption, investment, and savings from oil revenues under various scenarios can help to assess the sustainable use of the country's limited remaining oil resources.***<sup>1</sup> A Dynamic Stochastic General Equilibrium (DSGE) model was used to generate the simulation for a small open oil-producing economy framework, and study the resulting impact on macroeconomic indicators. Four options were considered for optimal allocation of the oil windfall: the “all investing” rule; the “all consumption” rule; the “full savings” rule; and the “optimal investing” rule. The model also introduced a temporary 5 percent increase in the oil price in the economy as a “positive oil shock,” with the price eventually returning to its normal level and trajectory over the long term.

***Investing oil windfalls entirely on public capital (the all-investing rule) would yield the highest response in GDP growth, but also result in more pronounced Dutch disease effects and macroeconomic instability.*** This scenario boosts the non-tradable production more than the other scenarios, given the high share of nontraded goods in public spending (consumption and investment), which increases more under this scenario. The non-tradable sector expands as public investment results in a higher public capital stock. However, the private consumption, labor, wage and non-oil revenues, as well as the real interest rate are higher, and more volatile, under this rule than under the others (particularly under the full saving rule). In the medium term, the channeling of the entire oil windfall into public spending would result in a more pronounced Dutch disease effect than in the other scenarios. This would be caused by the reallocation of resources from the tradable to the non-tradable sector - which would then expand considerably. A relative decrease in the tradable sector would restrict trade balance expansion, and this in turn would limit the real exchange rate appreciation. Therefore, under this scenario, there would be economic growth in the short run, but the conditions would also generate macroeconomic instability.

***Government transfers of oil revenues directly to households, who would then spend the money on consumption would increase the purchasing power of agents regarding the consumption and investment of imported goods.*** This would have the effect of boosting the real exchange rate appreciation due to the increased demand for non-traded goods. The tradable sector would experience a decline, as it would be affected by Dutch disease. The total GDP itself would increase, since the decrease in the tradable sector would be insufficient to balance the increase in both oil and non-tradable sectors. Private investment would fall as private consumption rose, and there would also be a rise in real interest rates. The Consumer Price Index (CPI) inflation would also increase in response to a high consumer demand for goods.

***The optimal Investing rule would guide a significant portion of oil revenues toward infrastructure, and the remainder would be saved in the country's sovereign oil fund.*** The “optimal” investment scenario would provide the maximum welfare to the country. This scenario is a combination of the “all investing” and “full saving” rules. Under the optimal investment decision, the government would place a share of oil windfalls in a wealth fund for the nation, while the rest would be spent on public infrastructure. In this scenario, both medium and long-term benefits would be gained, since the disadvantages of public investment are limited, while private spending benefits would be facilitated through transfers to households from the sovereign fund.







# Chapter 3

BUILDING RESILIENCE  
FOR FOOD SECURITY



## 3.1 Food Production and Consumption Dynamics

**Despite the country's significant potential for agricultural production, South Sudan's food security has consistently worsened since independence.**

Cereals, primarily sorghum, maize, millet, and rice are the dominant staple crops. Underinvestment in agriculture, the economic and market impacts of conflict, population displacement, low crop yields, climate shocks, and lack of access to inputs are some of the key factors for worsening food insecurity in South Sudan. As a result, the country's need for food imports has grown. As the conflict receded in intensity, pre-pandemic data suggested that recovery in net cereal production was underway, with a 9.9 percent growth in 2019 (818,500 MT) followed by an estimated 7 percent growth (874,400 MT) in 2020 (Figure 22). However, when the pandemic hit, the country had not yet recovered its pre-conflict production levels. More recently, cereal production has been affected by climate shocks and a resurgence of subnational conflict, with total production falling by 4 percent in 2021.

**Years of conflict have significantly affected the agricultural production and distribution systems.**

With the intensification of conflict, agricultural production further collapsed as many farmers fled their villages for towns, where they gave up farming, or had to compete for scarce land in safe areas around the towns. Among those who have stayed in rural areas, many have been unable to access enough land to go much beyond subsistence farming, and because of conflict, they are afraid to travel to town for inputs and sales. Consequently, net cereal production declined from an estimated 1,022 MT in 2014 to about 745 MT in 2018. While some of this effect has begun to reverse since 2019, following the signing of the latest peace agreement in September 2018, conflict remains a potent force in reducing farmers from being market-linked producers to subsistence farmers, exposing them to greater climate risk as they farm more marginal land, and ultimately creating the conditions

for a heightened risk of famine. The cereal production deficit remained at 36 percent of consumption needs in 2020.

**The food deficit has widened significantly in recent years, reflecting higher food requirements amidst stagnant productivity in the sector.**

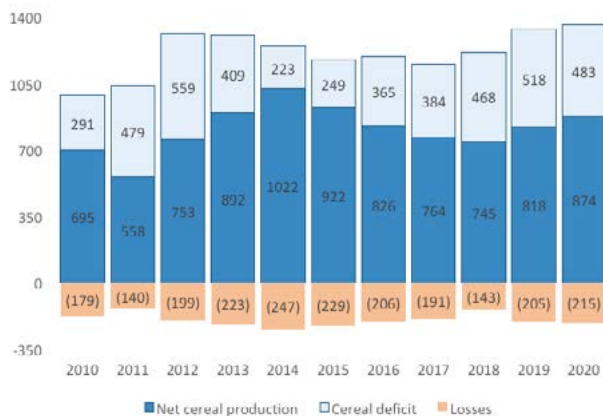
Disrupted by flooding and conflict, cereal production declined by 4 percent in 2021, and the cereal gap (which measures the difference between domestic cereal production and needs) widened by 16 percent to 540,000 MT in 2022. An estimated 8.3 million people (more than 60 percent of the population) are expected to experience severe food insecurity in 2022, an increase of 7 percent from 2021. Recent shocks have had detrimental effects on household welfare, since income from farming was already reduced for 38 percent of households and had stopped entirely for 11 percent of them during the COVID-19 pandemic in 2020. Consequently, only about 30 percent of the households in South Sudan ranked in the highest category of the household dietary diversity score (HDDS)<sup>7</sup> in 2020, indicating that almost 70 percent of the households have access to less than five food groups and hence are consuming a suboptimal diversity of food. The states with the lowest food consumption scores (FCS) also perform poorly in HDDS in terms of the Integrated Food Security Phase Classifications (IPC).<sup>8</sup> For instance, Central Equatorial State (CES) had the second-lowest FCS, and also has the lowest HDDS ranking (Phase 4+), with 46 percent of households in the state consuming less than three food categories. Other states, such as Jonglei, Unity, and Upper Nile State, also have more than 30 percent of their households in the Phase 4+ HDDS category. It should be noted that food intake in terms of food security indicators (FCS and HDDS) is relatively poor in those states that were most affected by the civil war (including Unity, Jonglei, and Upper Nile State), suggesting that the conflict has significantly affected food production and distribution systems in these states.

7. Household dietary diversity can be described as the number of food groups consumed by a household over a given reference period; it is an important indicator of food security.

8. IPC is a set of standardized tools that aim to provide a common measure for classifying the severity and magnitude of food insecurity.



**Figure 18: Cereal Production, in thousands of MTs**

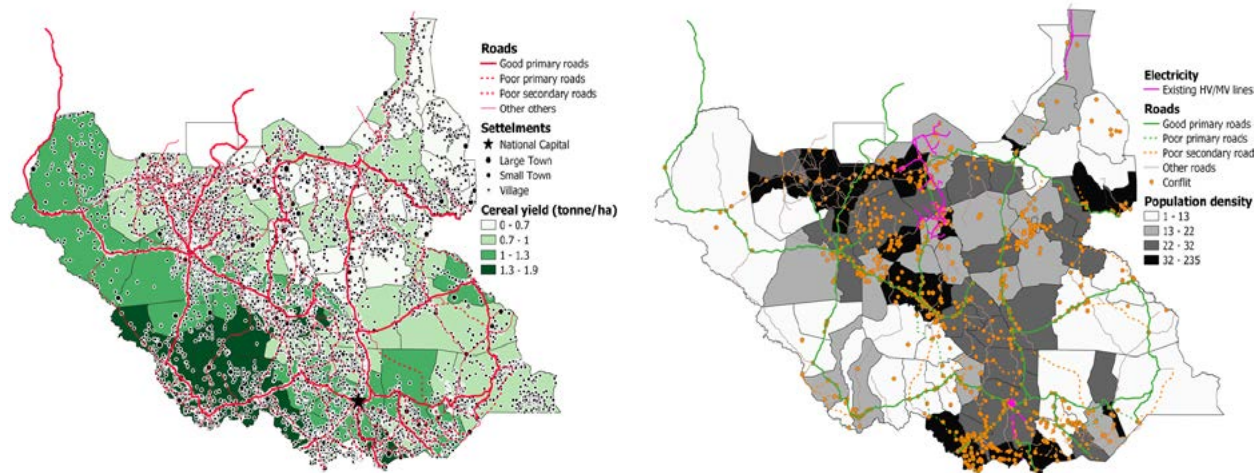


Source: CLIMIS and FAO

**South Sudan’s food deficit is partly met through humanitarian provisions and food imported from neighboring countries.** While some regions of the country are reported to have surplus production, weak market

integration means that the deficit markets cannot be supplied through internal trade, because there is no connectivity infrastructure (Figure 19). In the areas hardest hit by the conflict, South Sudan’s food deficit is being met through humanitarian provisions, and to some extent through trade from neighboring countries. In 2019, South Sudan imported 89.6 million MT of unmilled cereals, making it the tenth largest importer globally. At the same time, it was the third largest recipient of humanitarian aid, after Yemen and Syria. The country received \$1.6 billion in gross official development aid (ODA) in 2018, with the United States accounting for 41 percent of the total amount. Most of the support (71 percent) took the form of food aid and other forms of humanitarian assistance. Among the largest humanitarian initiatives, in 2020, the World Food Programme (WFP) assisted 5 million people in South Sudan through food assistance, cash transfers, school meals, and nutritional outreach (WFP 2021). Food assistance comprises about 13 percent of the cereals and roots consumed nationally during lean seasons, and is the main source of staples for about 13 percent of households (7-8 percent around harvest time).

**Figure 19: Crop Production, Settlements, and Infrastructure**



Source: World Bank & FAO 2022

**The return of relative peace in parts of the country since 2018 has supported recovery of the cultivated areas and productivity, albeit starting from a low base.**

In 2019, cultivated area increased by 5.3 percent to 929,000 hectares, and an additional 6.3 percent, to 987,497 in 2020. Despite this, land under cultivation is still below the 2016 level. Agricultural productivity, defined as yield per hectare, increased by more than 4 percent as the country benefitted from favorable rainfall conditions that aided better yields per unit of cultivated land area. The use of modern inputs is still very low, but the importance of using animal manure for fertilizer is increasing, with its application largely performed by keeping large herds of cattle for a certain number of days over crop fields. Productivity per hectare of cultivated area increased from 0.84 metric tons of cereals in 2018 to 0.88 in 2019. Yet despite this increase, productivity has still been lower than average for the past five years, at 0.9 metric tons per hectare.

**South Sudan loses substantial quantities of agricultural produce due to gaps in post-harvest handling, storage, and limited opportunity for value addition.**

Production and consumption have been affected by a lack of post-harvest handling, storage, and agro-processing facilities. The FAO estimates that more than 20 percent of the country's agricultural produce is lost due to the absence of storage facilities, contributing to food insecurity. Consequently,

farmers often have no option other than to sell their produce when prices are low. To put these challenges in perspective, eliminating the cereal losses in 2020 would reduce the cereal deficit by as much as 45 percent. Efforts to develop a warehouse receipt system and an associated warehouse receipt policy need to be pursued, along with interventions to facilitate low-cost storage options at the individual farmer and farmer group levels.

**In the long term, sustaining food production will require the end of conflict as well as the provision of basic farm inputs and extension services.**

A multifaceted approach is necessary in order to address South Sudan's large food production gaps. Stabilization of smallholder agriculture will benefit greatly from stability arising out of the cessation of all forms of conflict, which would enable the voluntary return of IDPs and refugees. However, subnational conflict is still hampering farm production, even as the country is making progress with the peace agreement. In addition, interventions must start gradually implementing a shift away from humanitarian assistance to self-reliance by promoting knowledge, skills, access to inputs, post-harvest handling, and solutions for enhancing production and resilience at the farm level. Finally, interventions in agriculture should seek to reduce farmers' climate vulnerability, enhance their resilience, and ensure that smallholder farming becomes and remains a financially viable economic activity.

## 3.2 South Sudan's Agricultural Potential and Constraints

**South Sudan's agricultural potential is high, but it is also at risk of remaining unexploited for the foreseeable future.**

The diversity of the agroclimatic zones, fertile soil, and plentiful rainwater create ideal conditions for meeting the nation's dietary needs, plus a surplus for the market. South Sudan has about five times the area of agricultural land per capita compared to Ethiopia, Kenya, and Uganda; it should be able to feed itself and several other countries. Agriculture plays a central role in the lives of the South Sudanese people: in 2018 it accounted for over 69 percent of female employment and more than one-third of male employment. Out of the total land area of approximately 64 million hectares, 50 percent is prime agricultural land; the remaining 50 percent includes marginal arable land, forests, mountains, rivers, and wetlands. However, only a small proportion of the land is cultivated. While the southern

region of the country has plentiful water resources, the main crops being cultivated are sorghum (70 percent of the cereal-cultivated area in 2019), maize (22 percent of the area planted in cereals), cassava, groundnuts, sesame, pearl and finger millets, beans, peas, sweet potatoes, and rice. While vegetables, peas, beans, and fruits are grown primarily for home consumption, most of the marketable fresh vegetables are imported from Kenya, Sudan, and Uganda (Government of South Sudan 2016).

**Agricultural productivity and production in South Sudan remain low.**

Agriculture is rainfed; most farmers are smallholders in subsistence agriculture, but there is significant potential for raising production in a diverse range of crops. In 2018, the average cereal yield (in kilograms per hectare) was about 18 percent that of South Africa, and about a third

(31-41 percent) that of Ethiopia, Kenya, or Uganda. Most farmers are operating at a subsistence level with an average farm size of 1.8 hectares (FAO and WFP 2015). Cultivation is mostly by hand, and is often carried out by women, which limits the size of the area households can cultivate. Farmers usually do not use any synthetic fertilizers, quality seeds, herbicides, or pesticides, nor do they use improved soil and water management practices: this in part accounts for the low yields. Other challenges include knowledge erosion, loss of diversification, poor production practices, destruction of tree crops, the high cost of production (particularly for labor and inputs), and an underdeveloped infrastructure for transportation, irrigation, storage, and processing. According to FAO and WFP data, only 2.6 percent of the country's agricultural land was under cereal production in 2017, and the cereal-producing area has not exceeded 3.6 percent of agricultural area since 2010.

**In the medium term, a stronger agricultural sector will be necessary for South Sudan's transformation to a diversified and food-secure economy.** Agriculture already constitutes a substantial share of South Sudan's economy: it is the largest source of employment in the country, with two out of three households reliant on agriculture as the main source of their livelihood. Of the more than 12 million South Sudanese, about 23 percent of households are classified as urban, and about 5 percent are in the rural animal husbandry area. Although South Sudan has tremendous potential for agricultural production, which could provide resilience-critical livelihood opportunities, it remains underdeveloped as the country remains heavily reliant on oil. Agricultural production, food processing, and support services in logistics, finance, manufacturing, and technology have great potential for expansion. Despite the abundance of natural resources and the enormous agricultural potential, with 70 percent of the land area suitable for crop production, only less than 4 percent (about 2.7 million hectares) is under cultivation. Outside of the crop and animal segments, fishing is a primary source of livelihood for about 12 to 15 percent of the population.

**Investing in the agricultural productivity of smallholder farmers will have a direct impact on jobs, poverty reduction, and post-conflict recovery.** Reviving agriculture

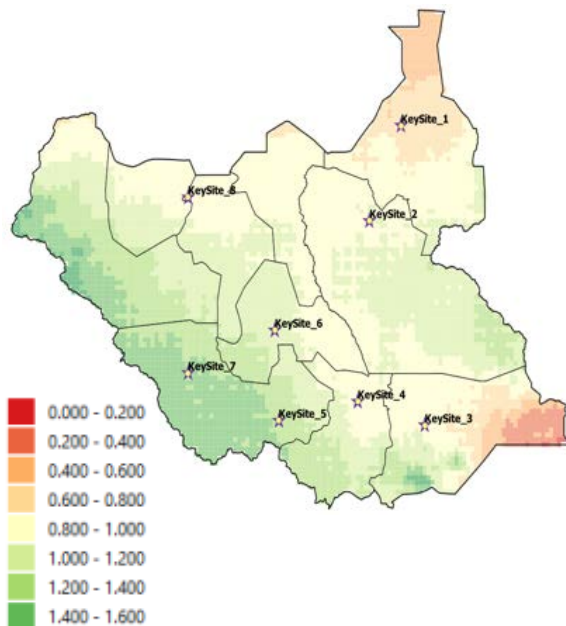
is an important strategy for post- conflict stabilization and recovery, and also a key pathway for overall job creation in South Sudan. As in most conflicts, large numbers of the people have been displaced and have had their agricultural livelihoods disrupted in recent years. Agriculture is well suited to improving livelihoods in the rural areas and strengthening overall food security and reducing poverty. Improved food security is also necessary in order to increase resilience to conflict (FAO 2016).

**Trend analysis of the 2006-2019 historical rainfall data finds that rainy seasons are becoming longer and more intense, and contributing to flooding.** Farmers have found it challenging to adjust and adapt to the changing conditions given the lack of institutional resources for water management (for example, building water storage facilities and providing pumping and irrigation equipment); crop adaptation (for research, and for the provision of seeds for the crops that are most suitable in the context of the changing ecology of South Sudan's regions); and food storage facilities. This has caused disruptions due to the increased likelihood of flooding, potentially further exacerbating the risk of food insecurity outcomes.

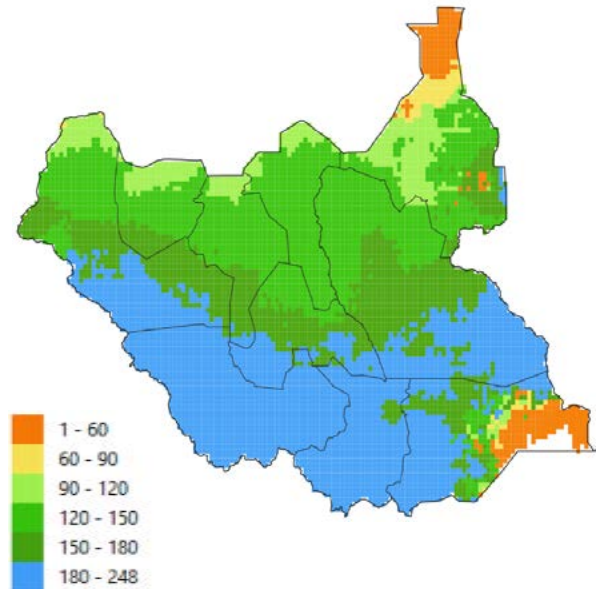
**South Sudan's agroclimatic diversity allows for a wide range of crop and livestock production systems.** The widely diverse climatic zones, fertile soil, and plentiful rainwater create the ideal conditions for raising a vast diversity of food products. South Sudan's tropical climate, with its wet and dry seasons, ensures that most of the country receives 750-1,000 millimeters (mm) of rain annually.<sup>9</sup> Seven broad agroecological zones are recognized (Figure 27). There may also be opportunities for a broad range of other potential value chains, including high-value commodities such as pulses, nuts and seeds (sesame, sunflower); horticultural products (bananas, mangoes, lemons, pineapples, onions, okra, tomatoes, eggplants, sweet potatoes, cabbage); coffee, tea, sugar, gum Arabic, shea butter, etc. Beekeeping and the honey value chains are thriving with potential for expanding production and improving quality. Most livestock production, especially cattle, is undertaken in the more arid and semiarid zones such as East Equatoria and Northern Bahr El Gazal within either nomadic pastoralist or mixed crop/livestock systems.

9. The south and west receive slightly more rain (1,000-1,500 mm); areas of the northern and southeastern regions less (500- 750 mm); it is less than 500 mm in the extreme southeast

**Figure 20:** Agricultural potential (14-year mean P/PET during the rainy season, May-Sept, 2006-2019



**Figure 21:** Length of the rainy season in days



**The livestock subsector plays an important role, but is poorly understood, and is a source of local violence. Cattle, goats, sheep, and poultry play a central role in subsistence livelihoods and trade.** Despite a lack of recent field data, FAO estimates the livestock population of South Sudan at 36.2 million animals (three times the number of human inhabitants). Cattle-based pastoralism is the customary livelihood of many groups in the targeted areas. Cattle are central to the country's economy and to the sociocultural life of many communities. Pastoralism, which is based on seasonal migration in pursuit of pasture and water, is usually combined with small-scale rainfed cultivation of staple crops, including sorghum. The 2013 and 2016 crises have taken a toll on pastoral communities, and cattle raiding is becoming a large source of local conflict.

**Provided that the “no-harm” principle is carefully followed so as not to further ignite conflict, investing in the livestock value chain and better integration between the raising of crops and livestock could bring important benefits.** With the large number of cattle in the country, there is enormous potential for animal traction that could be harnessed to achieve an increased area under crop production and

productivity. This could also provide a significant amount of animal manure that could help increase crop yields. Significant economic benefits could be gained from addressing the challenges facing the livestock subsector: inadequate access to pasture and water (sometimes as a result of the violent conflict, such as cattle raiding); widespread animal diseases (including transboundary ones); and the consequences of the increasing frequency and scale of floods.

**The fisheries subsector has unexplored potential.** South Sudan has abundant fishery resources, with an estimated total area of 80,000 square kilometers of fishing ground that is centered along the White Nile river system, which encompasses the largest permanent wetland in Africa. It is one of the few countries in Sub-Saharan Africa without evidence of overfishing. The current per capita consumption offers potential for growth given its nutritional value. The main bottleneck for the development of this subsector is lack of post-harvest processing facilities and difficult transportation to consumption centers. Yet, fishing is considered to be a relatively more resilient source of livelihoods: unlike livestock it is not subject to looting, nor is it sensitive to flooding, locusts, and other pests.



Figure 22: Main Agricultural Production Zones and Their Contexts in South Sudan



Source: World Bank 2022

**Agriculture and food security in South Sudan are extremely vulnerable to climate shocks.** According to the Climate Change Vulnerability Index, South Sudan was ranked among the five most affected countries in the world in 2017. Key climate change factors include unpredictable rainfall patterns, and recurrent droughts, floods, and excessive heat resulting in crop failures, causing the loss of livelihoods, food insecurity, and famine. Rainfall is one of the main climatic determinants of food production in South Sudan; some analyses suggest that due to climate change there has been a shift in the starting and cessation of rainfall, leading to more erratic and unpredictable rainfall patterns. Climate and

disaster risk screening indicates that a combination of warmer and drier weather may exacerbate evapotranspiration and droughts, while projected increases in rainfall intensity may increase the risk of floods in South Sudan.

**Changes in climate will also affect pest infestation patterns, damage crops and infrastructure, and increase disease vectors.** The impact of climate change on food production is already being felt and is predicted to worsen. The country was hit by three large flood events in 2019, 2020, and 2021, with the extent of seasonally flooded areas hitting record levels. In 2021 alone, the FAO estimates the

loss at 37,600 tons of cereals, with about 65,100 hectares of cultivated land damaged in affected regions. At the same time about 10 million livestock were affected, with a threefold increase in livestock diseases and limited availability of forage, leading to decreased livestock productivity and the death of 800,000 cattle. Ongoing flooding in 2021 is estimated to have displaced close to one million people in the affected areas and is estimated to be the worst on record.

**Farm production is hampered by the limited availability of and access to quality seeds and planting materials.**

A recent assessment showed that the informal seed sector contributed almost 85 percent of the overall seed sources used by farmers in 2018, including seeds saved by farmers (51 percent), local market (21 percent), and social network (13 percent). Despite the existence of about 13 local seed companies and a few agro-input dealers, their direct supply of seed to farm households is insignificant. Local production by seed companies could only meet about 15 percent of the demand for quality seeds of adapted varieties in 2018. In general, seed aid remains the primary supply channel of quality seeds to farmers, and it contributes to about 14 percent of seed source use.

**Agricultural mechanization remains low in South Sudan.**

Limited mechanization has resulted in the absence of production at scale, and poor yields of the country's main crops. Large-scale agricultural mechanization is predominantly limited to some areas of the upper Nile states, with production of sorghum and sesame the major crops grown for export to Sudan and other countries. Over the years, the government has provided over 400 tractors across the country to mechanize agriculture for increased food production and productivity (African Development Bank 2013). This, however, has not significantly changed traditional farming practices due to a lack of well-trained technicians

and tractor operators, spare parts and service centers, and associated equipment and implements. While use of animal traction has been on the increase, limited supplies of plows, spare parts, and technical skill, in addition to cultural perceptions about the use of cattle for animal traction have hindered wide adaptation and use across the country. The primary objective of the Agricultural Mechanization Policy Framework (2012-17) was to improve the efficiency and effectiveness of agricultural production and related operations in order to sustainably increase crop production and productivity, household incomes, food security, and rural economic development.

**Current food production remains significantly below pre-conflict levels as the lingering impact of the prolonged conflict and flooding continue to affect agricultural activities.**

Decades of conflict and displacement of the people have had a large toll on agricultural activities: both the number of farming households and the amount of area harvested have declined. At the same time, recent flood events have constrained the pace of the recovery of food production in affected states. The country is now a significant net food importer and it is dependent upon massive humanitarian food aid. Recent improvements in the security situation in some parts of the country, and the ongoing peace process give hope that South Sudan will be able to gradually improve its food security and nutrition situation. But this will require continued support for the government's efforts to move from humanitarian aid dependency toward development-oriented agricultural growth. Although South Sudan will continue to need humanitarian aid for the foreseeable future, the shift from a humanitarian to a more development-oriented focus recognizes that gains are possible even in the areas that are affected by conflict if implementation strategies are customized to fit the specific contexts.

### 3.3 South Sudan's Food Insecurity Trap

**Food insecurity has steadily increased in recent years, leading to South Sudan becoming one of the most food-insecure countries in the world.**

As a consequence, several geographical areas are regularly at high risk of famine (Figure 26). The number of people living in the crisis, emergency, and catastrophe phases of food insecurity has tripled between 2014 and 2020, reaching an estimated 6.5 million (55 percent of the population). The level of food insecurity varies in different parts of the country, with the highest concentration

in the northeast and east. For example Jonglei (particularly the counties of Akobo, Duk, and Ayod) is currently affected by violence worsened by floods, as well as extremely low levels of rural accessibility in some counties. Food insecurity appears to be mostly driven by the economic impact of conflict, as well as displacement of the population, low crop yields, climatic shocks, and the difficulty of humanitarian access, rather than the violence itself (World Bank 2021b). Displacement and insecurity have disrupted all elements

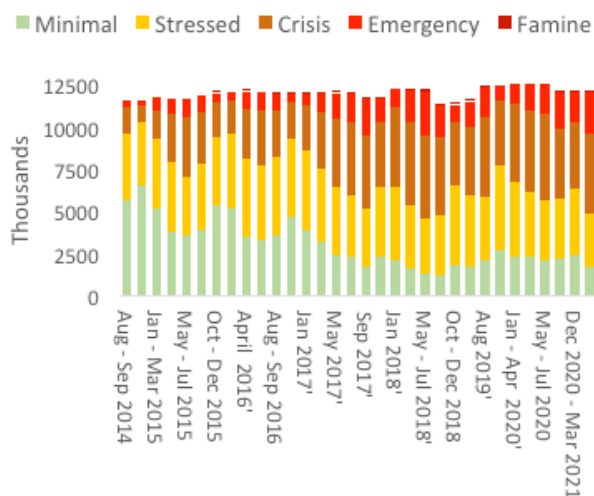
of the markets that the South Sudanese rely on for their livelihoods, from agricultural production to the transformation of produce, trade networks, and demand (von der Goltz and Harborne 2021).

**The factors influencing food insecurity have shifted dramatically since pre-independence, and are becoming structural.** South Sudan's food security situation has been deeply affected by the impacts of war; at the same time, the impact of the conflict on the economy and on markets has turned market disruptions into a major driver of food insecurity. Conflict-induced instability affects the ability of people to grow, buy, and sell food, ensuring a persistent cycle of food insecurity. Millions have been displaced from their homes due to conflict, further constraining access to food. Before the COVID-19 crisis, critical aspects of market dynamics as well as weather and climate patterns already played important but often overlooked or underestimated roles in this situation. Indeed, the influence of market prices on modeled food insecurity has skyrocketed since late 2015, coinciding with the outbreak of conflict and politically induced economic collapse (Figure 25).

**Decades of war have resulted in a shift toward market dependence that is now closely tied to food insecurity.**

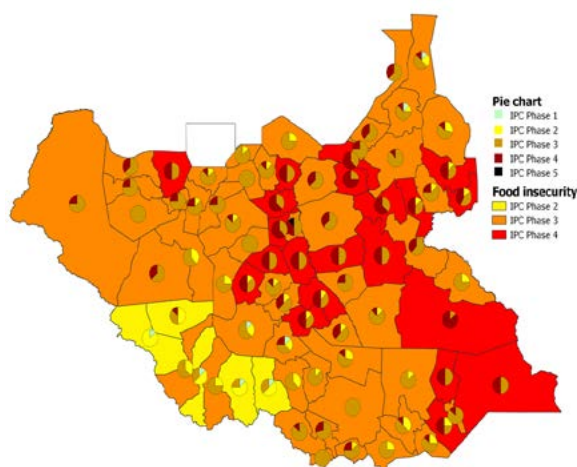
While there is widespread regional and seasonal variation, South Sudanese households depend on markets for most of the grains they consume. The shift from subsistence farming to market dependence has happened because of the long conflicts that have distorted many aspects of everyday life for most South Sudanese. More than one third (35 percent) of household food consumption in 2020 was linked to market purchases, while less than one half (about 45 percent) was from farmers' own production (WFP, FAO, and UNICEF 2020). The states that had high levels of market dependence, such as Northern Bahr al-Ghazal (51 percent) and Upper Nile (49 percent), also had high levels of food insecurity, while in conflict-affected, highly food-insecure states, such as Jonglei and Unity, food aid had become the most important food source. According to Thomas (2019), one possible explanation for the correlation between hunger and markets is displacement. When people are displaced, they lose many of their assets, and are pushed towards markets to survive. Another possible explanation is that markets have developed in areas with a historical grain gap, such as Jonglei, in order to complement local production.

**Figure 23:** Evolution of Food Insecurity 2014-2021

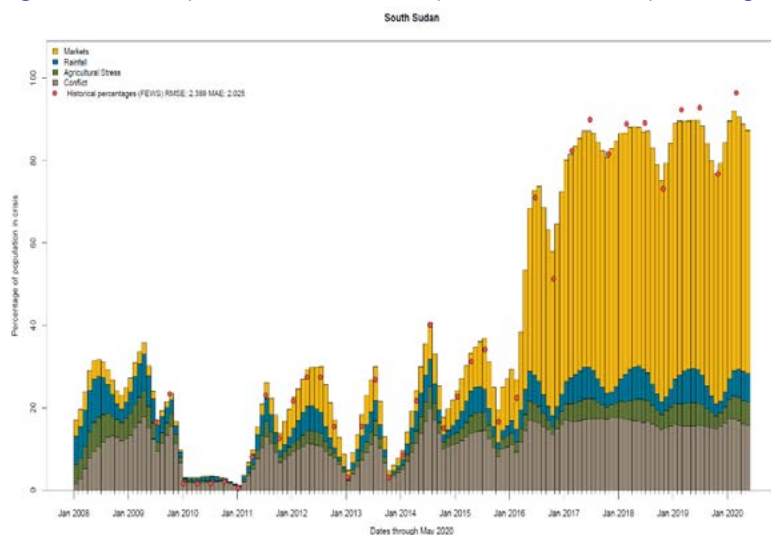


Source: World Bank and FAO 2022

**Figure 24:** Most Frequent Food Insecurity Phase Per County 2017-2020



**Figure 25: Decomposition of Estimated Populations in Areas Experiencing Critical Food Insecurity**



**At the national level, market prices are the most significant factor driving the recent food security situation in South Sudan.** Market influences on food security appear relatively independent of local agricultural supply; this became especially evident following the depreciation of the South

Sudanese pound (SSP) in December 2015 and the subsequent spike in inflation. Before that time, market prices were a relatively insignificant factor in explaining food insecurity. Instead, conflict was the most prominent explanatory factor (see Figure 30). The FAO and the World Food Programme (WFP) found that during the 2018 lean season, more than 40 percent of cereals and roots consumed by households nationally were acquired from markets. However, this market dependence varies considerably from region to region. The FAO and WFP note that the 2018 figures, which indicated a decrease in market dependence relative to 2017, are unlikely to signal increased crop production. Rather, they suggest excessive difficulty in obtaining market goods due to inadequate market supplies and/or extreme prices (FAO & World Food Programme 2019).

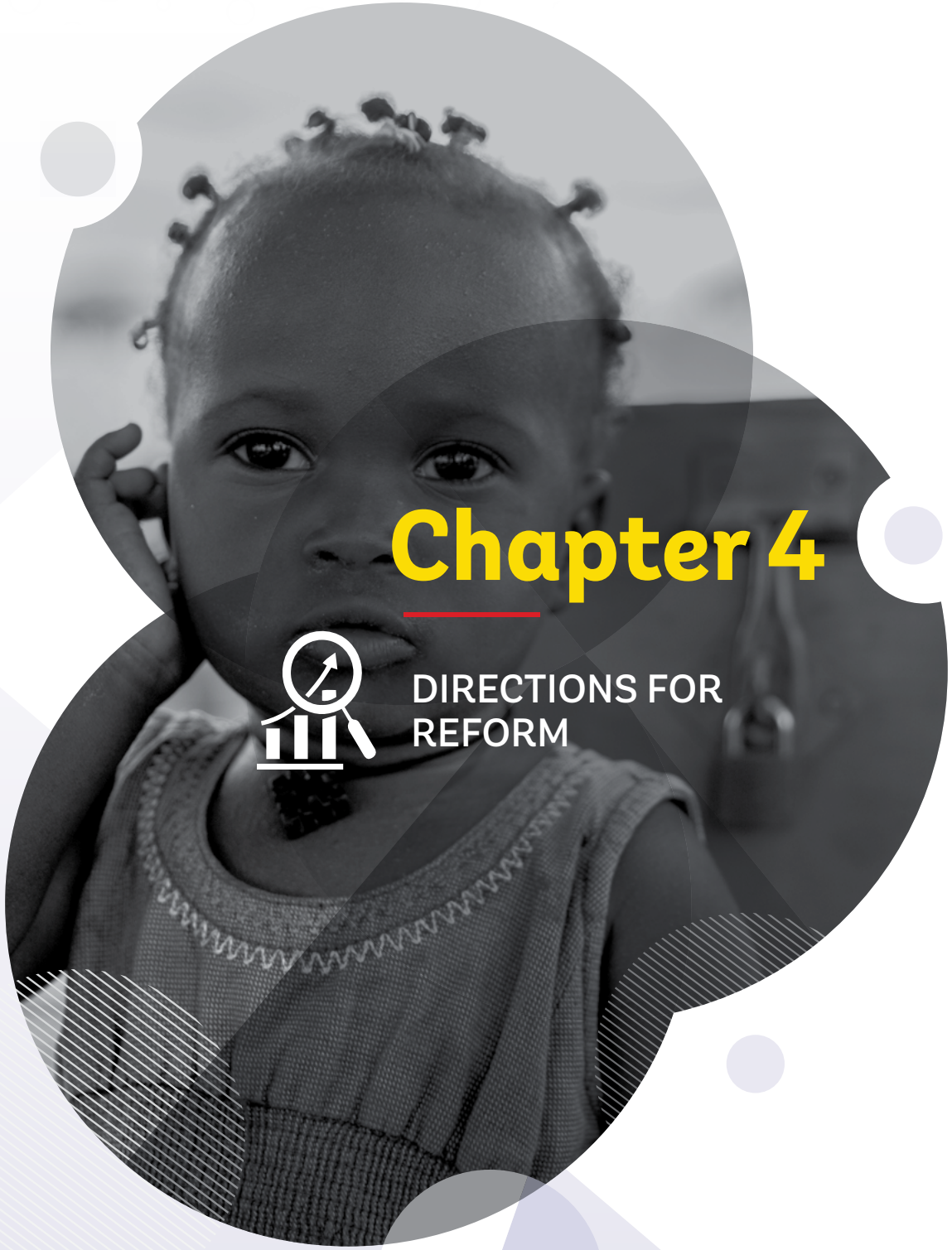
**Figure 26: Factors Influencing Food Insecurity**



**Food security has become more dependent on environmental factors in recent years, during which period an increase in rainfall and longer growing seasons have been recorded across the country.** Environmental variables related to rainfall and agricultural stress shift cyclically, coinciding with growing seasons and the varying supply of food available during harvest and lean times. These influences have grown during times of greater levels of violence and market shocks, despite violence and market disruptions being attributed to nonenvironmental causes.

An agricultural shock of similar magnitude may have more destructive impacts on livelihoods when the economic system is weak, so the overall impact of agricultural shocks on food insecurity can increase despite positive environmental developments. Moreover, increases in rainfall do not guarantee greater crop output. In fact, increased volatility and a lack of water management capacity can threaten farmers' livelihoods. The 2021 floods, for example, are estimated to have caused a loss of 38,000 tons of cereals and 800,000 livestock in the affected areas (FAO 2021).





# Chapter 4



DIRECTIONS FOR  
REFORM

## 4.1 Getting the Basics Right: Peace, Stabilization, and Institutions

**Addressing the underlying causes of the conflict, and restoring peace and stability in line with the provisions in the Revitalized Agreement for the Resolution of Conflict in South Sudan (R-ARCSS) is an absolute prerequisite for recovery, resilience, and long-term growth.** The protracted conflict has had a devastating effect on the economy; it has undermined the capacity of institutions to deliver basic services, and compromised self-reliance, leading to a debilitating humanitarian crisis. The toll of conflict on South Sudan's economy has been huge, with estimates indicating a 65 percent contraction in real per capita GDP between 2013 and 2018, driving poverty to unprecedented levels. At the same time, conflict has affected virtually all sectors of the economy, consistent with the nearly universal experience of impacts on businesses. While rebuilding the economy in a way that provides inclusive economic opportunities will be a slow process, what is important at this stage is to make every effort to break the cycle of conflict and to usher in a new era of sustained stability.

**Addressing the drivers of fragility, ending all forms of conflict, and preserving the gains already achieved will require a renewed political will to implement critical aspects of the peace deal.** At the national level, political tensions within the government and among signatories to R-ARCSS raise concerns about the continued commitment to the agreement and its sustainability. At the community level, localized incidents have been on the rise due to factors including militarized cattle raiding and contestation over natural resources. While R-ARCSS has largely held, the risk of political instability and localized incidents of violence continue to pose threats to the stability of the country. At the same time, the highly sensitive security arrangements of the accord remain largely unimplemented. Cantonment and training sites for combatants are underfunded and lack food and shelter; unified forces have yet to graduate; and the disarmament, demobilization, and reintegration (DDR) program pledged by R-ARCSS has stalled. Violence across the country remains high and is worsening as political and military elites have instrumentalized long-simmering ethnic tensions at the local level to weaken social cohesion and

mobilize violent activity to advance personal interests. In this regard, graduation of a professionalized and unified military force, and fast-tracking the DDR program and the transitional justice, accountability, reconciliation, and healing provisions outlined in Chapter 5 of R-ARCSS should be prioritized.

**Reforms envisioned in the R-ARCSS provide the foundational blueprint for South Sudan's institutional building and economic reform agenda.** South Sudan's peace agreement provides a layout of the economic and public financial management (PFM) architecture necessary to ensure that the requisite economic, governance, legal, institutional, and policy frameworks are functional. Consequently, the authorities have commenced a reform process that prioritizes modernization of the country's PFM systems. With this process, they have committed to a macroeconomic and fiscal reform program that is intended to facilitate macroeconomic stabilization and improve public financial management. While recognizing that the reform process is likely to be long, these steps are commendable, and need to be built upon.

**Restoring basic institutional functionality will require closing critical technical capacity gaps as a pre-requisite for building effectiveness and efficiency in policy preparation and implementation.** State capacity is historically low in South Sudan, and has been further eroded by years of conflict. While the country has commenced this process with its nascent reform program, these efforts will have to be complemented with improving public service capacities at the national and state levels. Recognizing these challenges, the authorities have requested technical assistance, and are working with a wide range of stakeholders from development partners and civil society to implement the targeted reforms. Such an agenda may benefit from in-depth assessments of institutional and capacity gaps to inform capacity-building priorities in the medium and long run.

**Deepening macroeconomic stabilization is critical for a sustainable and inclusive economic recovery.** The ongoing PFM reform process and commitments under the IMF Staff Monitored Program (SMP) have yielded some

initial positive results that may lead to inflation and exchange stabilization. In addition, these reforms provide opportunities and building blocks for a stronger, inclusive, and resilient recovery. However, more will need to be done, and it is critical that the authorities stay the course on this path as the country tries to take advantage of the peace dividend to rebuild a diversified economy capable of creating jobs and reducing poverty. In this respect, the authorities are encouraged to build on the key milestones already achieved in taming inflation and unifying the exchange rate. In the longer term, however, the control of inflation is complicated by the inadequacy of the central bank's capacity to influence the transmission mechanism. This should be strengthened as the financial sector develops and the treasury bills market becomes fully operational. On the supply side, greater peace and stability would help a resurgence in food production and allow for a gradual return of confidence in future economic prospects, and hence less pressure on the exchange rate, and the prospect of lower inflation.

**Taking steps to improve budgetary transparency and accountability are important in order to restore credibility and the effectiveness of fiscal policy.** In the past, nontransparent oil advances, oil-backed loans, and off-budget transactions have often undermined the country's fiscal discipline and budgetary integrity, and have led to extensive corruption, and to loss of credibility with the international community. In the short term, restoring fiscal discipline and strengthening the management of expenditures would benefit from improving cash management and the

introduction of short-term notes for cashflow management purposes. Efforts to improve the government's audit and anti-corruption functions, as well as streamlining procurement and the payroll--including management of the wage bill and arrears--will be necessary in order to safeguard public resources. Over the longer term, fiscal policy management could be strengthened by the adoption of an indicative reference multiyear expenditure framework, consistent with the national development plan/strategy.

**Over the medium term, South Sudan needs to diversify its economy in order to achieve sustainable and inclusive growth.** South Sudan's reliance on oil has often acted to stifle rather than facilitate economic transformation. Going forward, the authorities should take advantage of the peace dividend and an improved oil price outlook to diversify the economy by prioritizing an investment strategy that will unlock key growth constraints and unleash the vast untapped economic potential in non-oil sectors such as commercial agriculture, fisheries, and livestock; natural resource extraction; and light manufacturing. To fully harness the potential of these sectors, there is a need to foster human capital development and close the infrastructure gap, which is a key constraint to production and trade. Improving the business environment and deepening regional integration, including through participation in the African Continental Free Trade Area (ACTFA), the East African Community (EAC), and the Horn of Africa Initiative offer South Sudan opportunities for diversification and growth (Box 7).

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Deepening regional initiatives, including with the EAC, the Horn of Africa Initiative, and ACFTA, would support the achievement of greater diversification, job creation, and improved resilience, thus sustaining future growth.

## **Box 7: The African Continental Free Trade Area (ACFTA) and Other Regional Initiatives: Opportunities for Diversification and Growth**

***The African Continental Free Trade Area (ACFTA) was launched in May 2019, with a corresponding agreement providing a framework for the liberalization of trade in goods and services.*** Once it is fully implemented, it is expected to cover all 55 African countries, which together account for a GDP of an estimated \$3.4 trillion, and a population of more than 1.3 billion. In terms of the population it serves, ACFTA will be the largest free-trade area in the world. Trade under ACFTA commenced on January 1, 2021.

***The scope of ACFTA is large, and it offers the potential to lift 30 million people out of extreme poverty (World Bank 2020c).*** The agreement will reduce tariffs between member countries and cover policy areas such as trade facilitation and services, as well as regulatory measures regarding Sanitary and phytosanitary (SPS) standards and technical barriers to trade. The full implementation of ACFTA will reshape markets and economies across the region and boost output in the services, manufacturing, and natural resource sectors. Increased intraregional trade will add about \$60 billion to African exports and will support ongoing diversification efforts (IMF 2020). With the disruptions to the global economy resulting from the COVID-19 pandemic, the creation of this regional market is a major opportunity for African countries to diversify their exports, attract foreign direct investment, and accelerate economic growth.

***As of June 2022, South Sudan is one of a few African countries that have not yet ratified the protocol for the establishment of ACFTA; this could result in the country missing out on some of the expected benefits of increased trade liberalization.*** While South Sudan is already a member of the East African Community (EAC), ratifying ACFTA would facilitate its access to larger, more diversified, and more sophisticated markets, thereby promoting its own diversification efforts and increasing its resilience to terms of trade and global supply-chain shocks.

***Outside the oil sector, South Sudan has a limited range of readily-exploitable assets that could enable it to achieve greater diversification.*** A reconstruction of the country's trade data shows that in 2019 the total estimated value of its exports stood at \$1.6 billion, with oil accounting for 96 percent of this value. Consequently, it is one of the least diversified and most oil-dependent countries in the world. However, among South Sudan's official non-oil exports, a number of commodities and products stand out as having the potential to play a strong role in the achievement of diversification, particularly live animals, meats, hides, edible vegetables and fruit, oil seeds, wood and wood products, cotton, and non-oil minerals. In 2019, South Sudan exported live animals worth \$107,000; oil seeds (\$294,000); and wood products (\$9.6 million). Other exports include meats, fish, dairy, and articles of apparel and textiles. The government could promote these products to build a more diversified and competitive export sector.

***Deepening regional initiatives, including with the EAC, the Horn of Africa Initiative, and ACFTA,*** would support the achievement of greater diversification, job creation, and improved resilience, thus sustaining future growth. However, to realize these benefits, reforms are needed to improve the business environment, reduce bureaucratic barriers, and strengthen regulations in key sectors.



## 4.2 Improving Oil Sector Governance

**Harnessing South Sudan's oil resources requires strengthening institutional and policy frameworks for oil revenue management.** While the oil sector accounts for a sizeable part of the economy, it has so far failed to provide the spark needed for economic transformation of the country. Getting more from oil and repositioning the sector for development impact will require, first and foremost, improving transparency around oil revenue management. The oil sector is shrouded in secrecy, and there are key challenges in its governance and accountability. While the authorities are committed to reforming PFM systems in the country, complete and credible data on production and export volumes are not publicly available. At the same time, the current practice of contracting oil-backed advances or prepayments is nontransparent; this encourages misuse, and complicates accounting and monitoring. Contract terms are often unknown and in-kind repayments are unpredictable; this makes the management of expenditures difficult. Moreover, the advances are costly (interest costs and fees amounted to \$11 million in 2017/18); they have affected transfers to the oil revenue stabilization account; and they serve no good purpose in most cases. Improving transparency will need to go hand in hand with PFM reforms, completing a long-overdue audit of Nilepet transactions and functions; quarterly sector performance reports; and taking steps to join the Extractive Industries Transparency Initiative (EITI).

**Strong PFM systems are an important part of revenue management in resource-rich countries. Oil revenue is usually associated with volatility arising from short-term movements in prices and volumes.** The government will be expected to formulate a long-term fiscal strategy that adequately addresses expenditure and savings options. It is crucial that controlled, smoothed expenditure patterns are strictly followed in order to avoid excessive public spending that could result in distortions in the form of Dutch disease effects and rent-seeking. It is therefore imperative to strengthen the country's PFM procedures to ensure that resources are not being misappropriated by the accounting authorities.

**Operationalization of an oil revenue stabilization fund can ensure budget predictability, while avoiding procyclicality of fiscal policy.** Consistent with international practice, South Sudan's Petroleum Revenue Management Policy (PRMP) provides for the creation of a Stabilization Fund at the Bank of South Sudan, under the control of the Ministry of Finance and Planning. In theory, such funds play a triple role of fiscal smoothing, macroeconomic stabilization, and saving for future generations. In the case of South Sudan, the

Stabilization Fund was envisioned to perform the duties of financing the budget and cushioning the budget from short term volatility. However, payments into the Stabilization Fund have not been realized because a large proportion of revenue from the government share has been spent off-budget. Going forward, the authorities should start making payments into the Stabilization Fund since oil production is now ramped up and financial transfer to Sudan has been completed, freeing significant resources. At the same time, it is important that management of the Stabilization Fund be strictly subjected to effective oversight in order to minimize embezzlement, malfeasance, and corruption.

**Implementation of existing policy and regulatory frameworks needs to be strengthened, along with the enactment of new regulations to maximize benefits from the sector.** Although basic frameworks for oil revenue management exist, their implementation is weak. Furthermore, the downstream sector (refining, exporting, and product pricing) is currently not regulated. Thus, it would be useful to establish the principles that will apply to investment in the sector before contracts are signed. To ensure that the country's oil wealth is contributing to national development, it is critical that these resources are managed in a way that maximizes benefits to both present and future generations. While the absence of a permanent constitution has led to regulatory uncertainty, the ongoing process for the drafting one provides the opportunity to strengthen legal frameworks in South Sudan's oil sector. Over the medium term, the authorities may consider the possibility of investing funds in a sovereign wealth fund as more technical capacity is built and domestic structural constraints are addressed.

**Oil sector governance and oversight frameworks must be strengthened.** The Petroleum Act does not govern the "downstream" of the oil trade (that is, refining, export pipelines, and product pricing). This area is bound to become more important with time as the country seeks to develop alternative oil trade routes, and legal principles will be required in crucial areas such as refining. The Petroleum Act has also laid down rules regarding transparency and public access to information. These laws require disclosure of information linked to contractor and subcontractor payments. The Ministry of Petroleum and Mining (MPM) is also required to disclose all key oil sector production, revenue, and expenditure data, as well as petroleum agreements and licenses. Modest steps are being taken in this regard; for example, an annual marketing report summarizing oil sale revenues received by the government is now being prepared.

**Developments in the oil sector should consider the likely environmental impacts that would require strengthening relevant institutional capacities as well as quality standards for environmental protection.** Oil and gas activities have significant implications for environmental sustainability and land productivity. First, there is the land degradation challenge that is associated with excavation activities; second, there is a waste management challenge. South Sudan's oil sector poses grave long-term environmental risks, since serious environmental damage could result from any of the activities along the entire oil and gas value chain—

from exploration, extraction, and processing to marketing and distribution. South Sudan's endorsement of the Zero-Routine-Flaring-by-2030 World Bank initiative confirms the authorities' willingness to provide a legal, regulatory, investment, and operating environment that is conducive to upstream investments and to the development of viable markets for the use of gas, including the infrastructure necessary to safely deliver gas to these markets. While the authorities are planning a comprehensive environmental audit of all of South Sudan's active oilfields, the required air, water, and soil quality standards do not yet exist. Given these constraints, it is unlikely that environmental audits and impact assessments can meet the expected high standards.

**Ensuring that the oil sector delivers development to the people of South Sudan will require an investment rule that guides a significant portion of oil revenues toward closing the substantial human capital and infrastructure deficits in the country.** Oil revenues should be seen as a temporary stream of resources flowing into the national

treasury, which can be used as a catalyst or springboard for strategic investments that can unlock constraints to accelerating growth and permanent wealth creation. In this regard, fiscal policy (that is, public spending) should be mindful of any potential Dutch disease consequences. With prudent fiscal and macroeconomic policies, such consequences may be offset by ameliorating South Sudan's huge infrastructural and human capital deficits and structural constraints in the productive sectors, while ensuring that the remainder is saved in the country's sovereign oil fund.

**Prospects for increasing oil production to prewar levels will require new investments and the possible use of enhanced oil recovery (EOR) techniques in the existing oil wells, as well as new oil discoveries.** The 2013 conflict had a large impact on the oil sector; consequently, large new investments are needed to return production to pre-conflict levels. While the shareholders of the operating companies have rehabilitated and relaunched oil production in some of the fields that were damaged during conflict, oil production, estimated at about 156,000 barrels per day (bpd) in FY2021/21 is still less than half of its pre-conflict level. A peaceful environment is necessary in order to attract investment: to sustain high levels of production and extend the life of the mature oil wells, oil companies will need to invest in new wells and in injection wells to maintain the reservoir pressure; and ultimately they will need to consider costly and challenging EOR techniques. However, reaping the full peace dividend, where new exploration opens for new oil flows, production could reach a peak of 350,000 barrels/day in about 10 years.

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## 4.3 Escaping the Food Insecurity Trap

**Ending all forms of conflict and violence is necessary in order to end the food crisis, and provide the basis for improved agricultural production and livelihoods.** While agricultural activity has shown signs of improvement following the signing of R-ARCSS in 2018, the range of crops has remained limited since the risk of insecurity remains high. Conflict-related displacement continues to force farmers from their fields during key times in the cropping season, and many farms remain abandoned, which has led to a breakdown in agricultural supply chains. Agricultural markets and value chains have disintegrated due to protracted conflict and violence, insecurity, looting, loss of assets and tools, a significant decline in production, and depressed market demand.

**Stabilizing the macroeconomic environment will be necessary in order to provide an enabling environment**

**for improved agricultural productivity and food security.** Market failures (essentially due to high inflation) have increasingly played a central role in the agricultural and food security outcomes across South Sudan as the country transitioned through conflict situations that distorted most aspects of the economy. To date, market failures attributed to excessive inflation have had the greatest direct impact on food insecurity since late 2015, surpassing previously dominant conflict-related factors. Since 2013, while South Sudan's food security situation has been deeply affected by the impacts of war, it is the impact of the conflict on the economy and markets that has become the most significant driver of food insecurity, rather than the violence itself. At the same time, inflation and exchange rate misalignments have ravaged production by increasing the cost of critical inputs, including seeds, fertilizer, and basic farm implements.

**Resolving issues around land governance and control would facilitate returns, improve incentives for agricultural production, and support the resilience of farmers.**

Land disputes arising out of contested user rights are a critical bottleneck for South Sudan's stability and agricultural transformation. These usually involve allegations of land grabbing by security personnel; competing claims over ownership; double allotment of plots during the formalization process; and contestations involving IDPs and returnees. While R-ARCSS provides a concrete mechanism for land reform, including reviews of the Land Act (2009) and the draft National Land Policy (2013), these should be expedited following formation of the Transitional National Legislative Assembly (TNLA), which had slowed down government business. Stabilizing smallholder agriculture will require a greater degree of public safety in order to allow for the voluntary return of IDPs and refugees. Part of the challenge of voluntary returns will involve land claims, and land ownership and tenure issues will require support as returnees reclaim previously occupied or held property. Land issues related to conflict—for example, between the cattle-owning Dinka and sedentary farmers--will likely pose additional challenges if Equatorian farmers return from Ugandan Protection of Civilian (PoC) camps. Conflict avoidance measures may be necessary, and could require formal agreements by community leaders. Women account for 60.2 percent of agricultural labor and play an important role in farming, but their access to productive assets is limited. Because of their low literacy rates and the lack of female agricultural extension workers, women also have limited opportunities to benefit from extension services. Furthermore, traditional laws that do not recognize women's rights to land ownership and inheritance make it hard for them to access productive assets and knowledge. Landholding reform, including allowing women to own land individually, could increase shared prosperity and social inclusion.

**In the medium term, managing the increasingly volatile climate shocks and facilitating the achievement of a year-round agricultural cycle could improve agricultural production and productivity.**

As recent events have highlighted, South Sudan's agriculture is particularly vulnerable to weather-related shocks. Trend analysis suggests that in the coming years, growing seasons across South Sudan will commence earlier, last longer, and have more days with more than 5 mm of rain. This could be positive for agricultural production on the whole if farmers are able to adjust and adapt to changing conditions. However, this adaptation will be difficult given the lack of institutional resources, including water management support (such as

building water storage facilities and providing pumping and irrigation equipment); crop adaptation (for research, and for the provision of seeds for the crops that are most suitable in the context of the changing ecology of South Sudan's regions); and food storage facilities. Consequently, these changes will likely cause disruptions due to the increased likelihood of flooding, potentially increasing the risks for poor agricultural and food security outcomes. Thus, a renewed focus on building resilience, including through measures to support better water management, climate-smart farming practices, and the use of more resilient seed varieties, is vitally necessary.

**In the longer term, investing in farmer access to quality inputs as well as supportive post-harvest handling and storage infrastructure will be critical for agriculture sector development and food security in South Sudan.**

The intensification and diversification of agriculture requires better access to quality inputs and equipment as a means for enhancing the productivity and resilience of family farms, which remain largely manual. Two areas that warrant urgent attention are access to seeds and the basic means of production. Limited storage and agro-processing facilities have affected food security in the country, especially in the Green Belt, which is exclusively dependent on agriculture. Between 15 and 50 percent of crop harvests of cereals and pulses are lost due to inappropriate storage and a lack of processing facilities. In this case, the lack of power is cited as a major barrier to agribusiness development.

**Fostering resilience in the agricultural sector will require a multisector approach that recognizes that developments in other sectors are critical for creating the right conditions for increased productivity.**

Given the complexity of the political economy considerations and the fragility and vulnerability of South Sudan's developmental trajectory, the challenges faced by agricultural production and agribusinesses are multisectoral in nature. At the same time, the low levels of infrastructural development, including in the transport, energy, digital, and water sectors, are placing large constraints on the economy. Therefore, the path towards development-oriented agricultural growth in South Sudan is not only embedded in productivity, but also in social and human capital, conflict resolution, community development, capacity building, financial services, road, energy and telecommunication network developments, as well as regulations, institutions and state-building. Thus, investing in alleviating these constraints, reconnecting as many producers and aggregators as possible with markets, and facilitating processing and value addition is a priority for early recovery of agricultural productivity in South Sudan.

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