



CHAD

SELECTED ISSUES

December 2024

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CHAD

SELECTED ISSUES

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ANCHORING FISCAL POLICY IN CHAD – TOWARDS A MEDIUM-TERM FISCAL FRAMEWORK¹

This paper reviews the impact of Chad's procyclical fiscal policies on fiscal sustainability and macroeconomic outcomes and proposes a fiscal framework to anchor fiscal policy over the medium term. This framework combines a debt target aimed at ensuring that Chad's risk of debt distress remains moderate and a financial asset floor to maximize its economic stabilization and shock insurance properties, while maintaining feasibility and flexibility to mobilize critical development spending. The proposed anchor could be monitored through a net debt target set at 28 percent of GDP, to ensure that debt does not exceed a maximum threshold set at 42 percent of GDP even in the face of significant shocks, while the floor on liquid financial assets could be set at 5 percent of GDP. Staff propose a gradual convergence path—which balances prudence and mobilizing critical development spending—aimed at ensuring net debt remains at the target by 2029. The successful implementation of this framework will require accelerated progress on structural reforms and commitment from the Chadian authorities at the highest level.

A. Introduction

1. Chad's dependence on the volatile oil sector coupled with its procyclical fiscal policy stance poses a risk to growth and fiscal sustainability. The oil sector's contribution to the country's output and government revenues is substantial and has fluctuated significantly over the years. Fiscal policy has been closely linked to oil price changes, with a high positive correlation between oil prices and both government revenues and expenditures. However, lower fiscal adjustment during oil price slumps than the magnitude of spending increases during booms has led to asymmetric impacts on fiscal balances and resulted in increased public debt and reduced fiscal buffers. These procyclical fiscal policies, including boom-bust cycles in public investment, have contributed to suboptimal economic and development outcomes, notably lower economic growth, and slower progress on social indicators relative to peer countries.

2. Reducing the procyclicality of fiscal policy while sustainably funding Chad's development needs requires the implementation of a fiscal framework to anchor fiscal policy over the medium term. A suitable framework for Chad should aim to delink fiscal policy from oil price fluctuations, provide insurance from oil price shocks, and allow for the gradual utilization of oil revenues to fund critical investments at a pace commensurate with absorption capacity. This paper proposes a fiscal framework aimed at achieving these objectives.

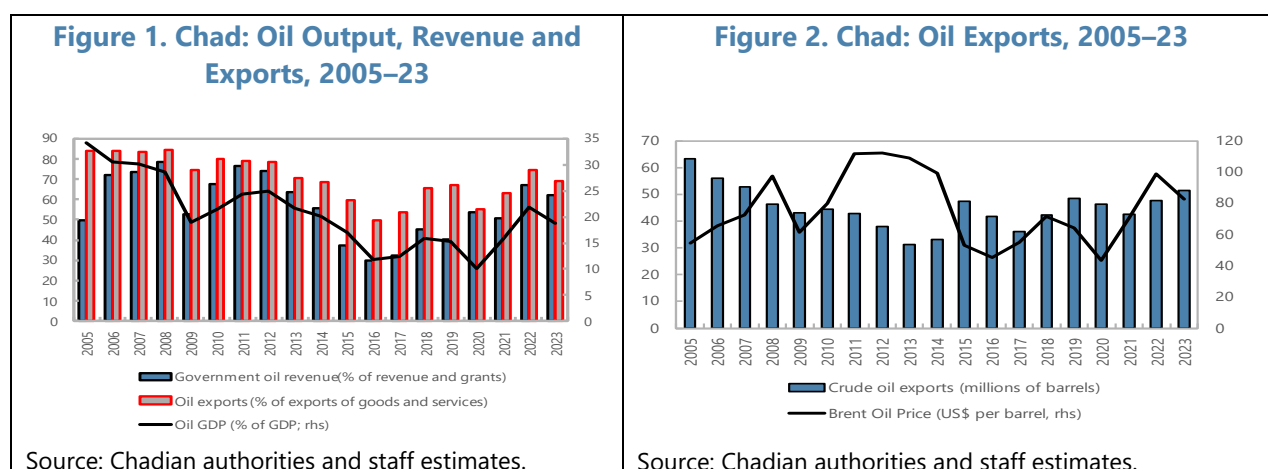
3. The paper is structured as follows. Section B presents the impact of oil price volatility on fiscal policy in Chad and the impact of the resulting procyclical fiscal policies on fiscal sustainability, as well as on economic and development outcomes. Section C discusses the design of a medium-term fiscal framework—composed of a debt target and a financial assets floor—that is tailored to

¹ Prepared by Jorge Retana de la Peza (AFR) and Thomas Benninger (FAD). We are extremely grateful for the guidance and comments provided by Luc Eyraud, William Gbohoui, and Peter Wankuru, and voluntary comments from both FAD and SPR.

Chad's policy objectives, as well as its capacity and political constraints. Section D undertakes the calibration of the debt target, and the financial assets floor and section E discusses the operationalization of the anchor. Section F concludes and makes policy recommendations.

B. Fiscal Policy and Oil Dependence in Chad

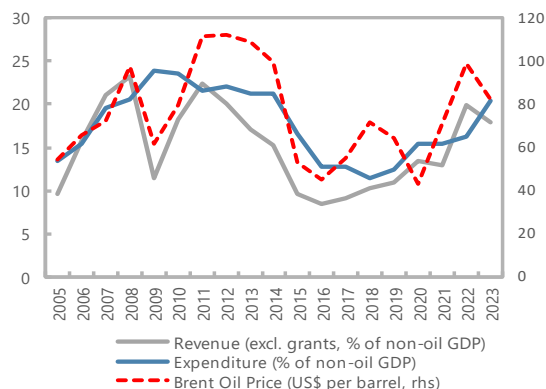
4. Chad is highly dependent on the volatile oil sector. The share of the oil sector in total nominal output has oscillated between 10 and 34 percent since oil production began in 2003 and has averaged 16 percent over the last 5 years. The percentage of government revenues from the oil sector has also varied wildly, with a high of 79 percent in 2008 and a low of 30 percent in 2016 and has averaged 55 percent over the last 5 years. Oil exports also represent the lion share of exports of goods and services, peaking at close to 85 percent in 2008 and averaging 65 percent over the last 5 years. While both oil prices and export volumes have fluctuated significantly since 2005, prices have been more volatile and are more highly correlated with the share of the oil sector in output, government revenues, and exports.



5. This is also the case for fiscal policy, which has closely tracked the evolution of oil prices and revenues, heightening Chad's vulnerability to shocks. Both government revenues and expenditure are highly positively correlated with oil prices ($p=0.84$ and $p=0.67$, respectively, for the 2005–23 period). From 2006–23 government spending was 5.6 percent of non-oil GDP (or about 37 percent) higher on average during years when the average Brent oil price exceeded the period's median price (US\$72.1 per barrel) than during years when it was below this level. In contrast, non-oil revenues have been on average just 0.1 percent of non-oil GDP lower in years with subdued oil prices relative to years with oil prices above the median. As a result, the non-oil primary deficit was more than double on average (12 percent vs. 5.8 percent) during years with oil prices above the median, driven entirely by higher spending. The fiscal stance has not tracked oil prices symmetrically, as fiscal buffers have been depleted much faster during periods of subdued oil prices (with public debt increasing by 2 percent per year on average), than the pace of buffer accumulation during periods of elevated oil prices (1 percent average annual decrease in public debt). This has led to a substantial increase in public debt over time—from 20 percent of GDP in 2006 to 30.3 percent in 2023—persistently low fiscal buffers (Figures 6 and 7), limited contribution to the accumulation of regional reserves (Figure 8), vulnerability to shocks, and chronic debt sustainability issues, most recently following the negative oil-price shock starting in 2014–15 and the subsequent COVID-19

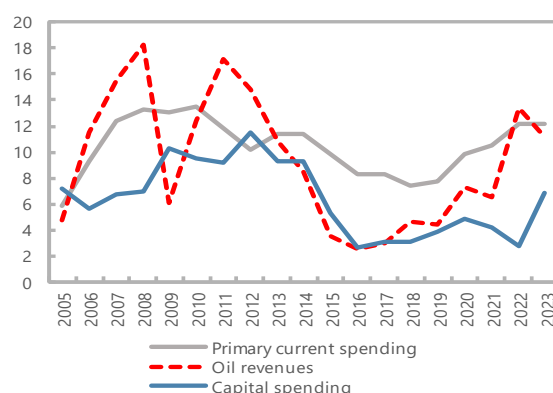
pandemic. The continuation of procyclical fiscal policies would risk a repeat of this boom-bust cycle.

Figure 3. Chad: Oil Prices and Fiscal Performance, 2005-23



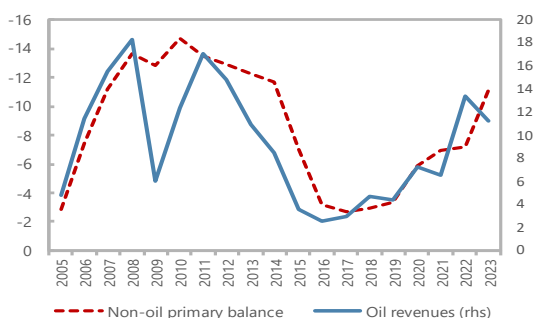
Source: Chadian authorities and staff estimates.

Figure 4. Chad: Oil Revenue and Government Spending, 2005-23
(Percent of non-oil GDP)



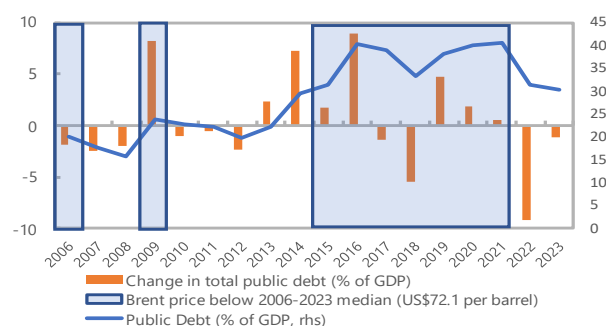
Source: Chadian authorities and staff estimates.

Figure 5. Chad: Oil Revenue and the Fiscal Balance, 2005-23
(Percent of non-oil GDP)



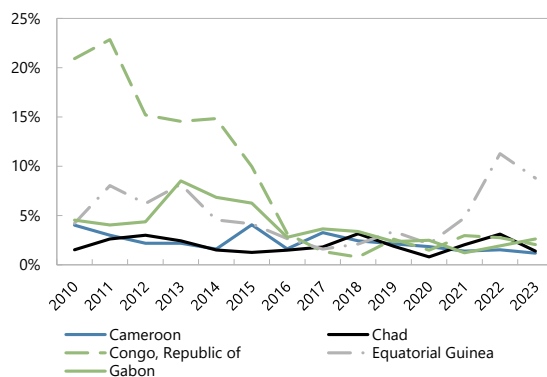
Source: Chadian authorities and staff estimates.

Figure 6. Chad: Changes in Total Public Debt, 2006-23



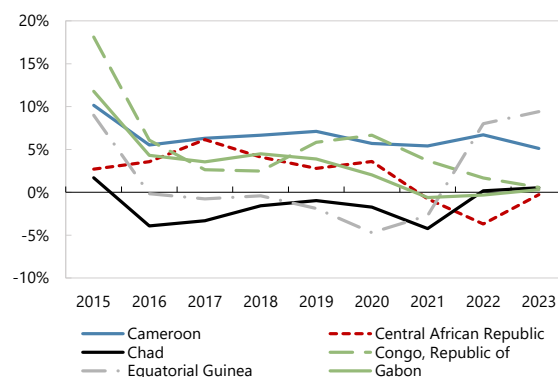
Source: Chadian authorities and staff estimates.

Figure 7. CEMAC Countries: Government Deposits, 2010-23
(Percent of GDP)



Source: BEAC and staff estimates.

Figure 8. CEMAC Countries: Net Foreign Assets, 2015-23
(Percent of GDP)



Source: BEAC and staff estimates.

6. Such a procyclical fiscal policy stance has resulted in suboptimal economic and development outcomes. One of the most evident signs of this procyclicality has been the boom-bust cycles in public investment, as the composition of fiscal adjustments during oil busts has been dominated by cuts to capital spending. Capital spending was 40 percent lower on average (as a share of non-oil GDP) during years with subdued oil prices than during years with elevated ones (in contrast with primary current spending, which was 18 percent lower). This, coupled with weak public investment management (Leost & Ibrahim, 2016), budgeting, public procurement and spending controls, has hampered the efficiency of public investment (Box 1)—and public expenditure more broadly—and led to slow progress in poverty reduction (Mabali & Mantobaye, 2017), human capital formation (Fonchamayo & Sama, 2016), and economic growth. More broadly, the procyclicality of fiscal policy—notably the need for sharp fiscal adjustments and the accumulation of domestic arrears during downturns—has exacerbated the impact of oil price volatility on economic performance and contributed to Chad lagging peer countries on economic and social indicators (Ben Hassine & Delepierre, 2019).

Box 1. The Impact of Boom-Bust Cycles on the Quality and Efficiency of Public Investment

Volatile allocations to public investment, typical in economies experiencing boom-bust cycles, especially in commodity-exporting countries, can significantly affect the quality and efficiency of these investments in several ways:

1. **Project selection and planning:** funding volatility can lead to poor project selection and planning. During boom periods, there might be a rush to initiate multiple projects without adequate assessment of their long-term viability or alignment with development priorities. Conversely, during busts, important projects may be deferred or cancelled, even if they are crucial for long-term development.
2. **Cost overruns and delays:** during a boom, the sudden influx of funds and the rush to spend can lead to inadequate oversight and inefficient use of resources. During a bust, lack of funds can stall projects, leading to delays and increased costs over time.
3. **Maintenance and sustainability:** volatile investment often neglects the maintenance and sustainability of infrastructure projects. When budgets are tight, maintenance is often one of the first areas to experience cuts, which can lead to a deterioration of existing infrastructure and higher long-term costs.
4. **Inefficient resource allocation:** boom periods may see a concentration of investments in certain areas, often leading to oversupply or underutilization, while other critical sectors may be underfunded. Moreover, boom-driven investment often overlooks long-term investment priorities, including in areas such as education and health, which are critical to sustainable and inclusive development. In Chad, the extensive use of emergency spending procedures (DAOs) to execute investment spending during booms points to an inefficient approach to resource allocation.
5. **Governance risks:** periods of increased spending, especially during booms, can lead to heightened risks of corruption and mismanagement. The urgency to spend and the availability of large funds—coupled with weak institutions—can create opportunities for corruption. In Chad, the extensive use of DAOs further exacerbates this risk.
6. **Capacity constraints:** sudden increases in public investment in the context of constrained productive capacity in the economy can lead to lower quality investment delivery, as well as inflationary pressures.
7. **Macroeconomic distortions:** during boom periods, excessive spending on public projects can overheat the economy, leading to inflationary pressures. Conversely, sharp cutbacks during busts can exacerbate economic downturns.
8. **Policy uncertainty:** frequent changes in public investment levels and direction can create policy uncertainty, deterring private sector investment and participation in public projects.

7. Putting Chad on a path towards sustainable and inclusive development will therefore require a robust fiscal framework, and critically, the political commitment to implement it. A

non-procyclical fiscal stance would mitigate risks to fiscal sustainability from fluctuations in oil prices and revenues, ensure that fiscal policy can play a stabilizing role instead of exacerbating shocks, and could set the basis for a more gradual and sustainable increase in spending—commensurate with absorptive capacity—that enhances the quality and efficiency of public investment, and public expenditure more broadly. The implementation of a sound medium-term fiscal framework is critical to address the procyclicality of fiscal policy in Chad. Its successful implementation will ultimately depend on the authorities' political commitment to less procyclical fiscal policies, and specifically to resist pressures to increase spending during oil price booms. This will likely necessitate addressing political economy constraints that lead to a prioritization of short-term gains over medium- and long-term development goals, for which advancing structural reforms to strengthen public finance management and governance will be vital.

C. Designing a Fiscal Framework for Chad

8. Such a framework should delink fiscal policy from short-term oil revenue fluctuations and align it with longer-term policy objectives. While large commodity revenues can allow countries like Chad to scale up critical investments and fast-track development, they also pose significant economic challenges, including: (i) fiscal procyclicality and macroeconomic instability due to volatile commodity prices; (ii) long-term fiscal sustainability risks and intergenerational equity considerations linked to natural resource exhaustibility; and (iii) negative impact on growth due to Dutch Disease, lower public spending efficiency, as well as heightened governance and political economy risks. To address these challenges, resource-rich countries must put in place fiscal frameworks that delink fiscal policy from short-term commodity price and revenue fluctuations and instead anchor fiscal policy on policy objectives over a longer time horizon. Such frameworks generally include fiscal rules that constrain fiscal policy through numerical targets on budgetary aggregates to align policy decisions with long-term fiscal policy objectives.

9. Given Chad's challenges and development priorities, the proposed fiscal framework should prioritize economic stabilization and providing insurance against large and persistent shocks. Fiscal frameworks in resource-rich countries aim to leverage fiscal policy as a tool for inclusive economic growth and development through four main objectives: (i) economic stabilization; (ii) insurance against large and persistent shocks; (iii) fiscal sustainability and intergenerational equity; and (iv) mitigating Dutch disease (Eyraud, et al., 2023). Given that no fiscal rule can achieve all four objectives simultaneously the design of a fiscal framework for Chad requires a tailoring to its specific circumstances and policy preferences. Given Chad's history of procyclical fiscal policy and boom-bust public investment cycles—and the resulting suboptimal outcomes—as well as its relatively long oil reserve horizon (as highlighted by recent increases in production and the discovery and development of new oil fields), economic stabilization and insurance against shocks appear as primary priorities (IMF, 2012). At the same time, Chad's relatively long oil reserve horizon, as well as its sizeable short-term financing needs, mean that exhaustibility (and very long-term sustainability) and intergenerational equity are lower priority objectives relative to stabilization and insurance against shocks. Finally, past research has found limited impact of Dutch Disease in Chad because of oil windfalls (Kablan & Loening, 2012; Mien, 2022).

10. To achieve these objectives, the framework should set a top-down constraint on fiscal policy through a medium-term fiscal target. A quantified target (generally linked to stock

variables like debt or assets) would provide a medium-term direction for fiscal policy and create an upper limit for repeated fiscal slippages (David, et al., 2022). It should be consistent with policy goals and fiscal sustainability and be achieved over the medium term but is not expected to be achieved in every annual budget cycle. To promote economic stabilization and provide insurance from shocks, the fiscal target could shield the economy from oil price volatility by either: (i) limiting government consumption from oil to the returns on resource wealth such that net wealth stays constant over time (the Permanent Income Hypothesis approach); or (ii) incentivizing the accumulation of buffers—either through asset accumulation or debt reduction—during boom periods, and their use during busts to protect spending. While an approach based on the Permanent Income Hypothesis is theoretically robust, its focus on intergenerational equity and its practical limitations makes it unsuited to Chad’s current context (see Box 2). Thus, a fiscal target focused on net debt, envisaging a buffer accumulation, is deemed more suitable.

Box 2. Challenges to Using a Permanent Income Hypothesis Approach in Chad

While appealing, an approach based on the Permanent Income Hypothesis (PIH) is likely not feasible or adequate in Chad’s current context, for the following reasons:

- **It is politically unfeasible and likely economically suboptimal to accumulate large financial assets in a low-income country faced with pressing developing needs like Chad.** In Chad’s political economy context, the accumulation of substantial financial assets by the government, could further heighten pressures from interest groups to access public resources, with potential consequences for political stability and security. Moreover, there is evidence that the average returns on investment in human capital and infrastructure in the context of low-income countries exceed those on financial investments and can lead to more intergenerational wealth transfer while benefitting the current generation (Addison & Lebdioui, 2022).
- **Using estimates of underground oil wealth to calibrate fiscal rules is impractical as they are highly dependent on oil price projections,** which are very hard to predict and very volatile (since they are based on current observed prices). As per Eyraud, et al., 2023, “this problem is compounded by the fact that there is a nonlinear relationship between resource wealth and prices” so the estimated value of wealth can change abruptly over time when prices are revised. For illustrative purposes, based on October 2023 WEO assumptions Brent oil prices were projected to be \$61 in 2032 and \$44 by 2042. In the WEO assumptions from a year before (October 2022) prices were projected to be \$80 in 2032 and \$93 in 2042. An estimate of oil wealth in November 2023 would be very different from an estimate in November 2022.
- **Chad is projected to have a relatively long oil reserve horizon.** A long-projected decline in production has not materialized, with oil production increasing in recent years. Oil companies operating in the country have indicated to staff that Chad’s oil fields still hold significant reserves. They have continued exploration activities and have indicated that they expect to increase production in the medium term.
- **A PIH approach would require a more complex institutional set-up and could be hampered by low capacity and weak governance.** Such an approach would require a mechanism to manage financial wealth from oil (usually a sovereign wealth fund (SWF)), which if poorly managed could see low returns, further increasing opportunity costs, as well as heighten risks of rent-seeking activities and corruption. Previous experiences in Chad and other countries, highlight the challenges and potential pitfalls. In 2003, Chad—with World Bank support—established a “Future Generations Fund” to manage financial wealth from oil for with intergenerational equity purposes. However, the authorities quickly sought to redirect the funds away from their initially intended purposes (Winters & Gould, 2011), and, despite World Bank resistance, by 2006 the fund had been closed and the assets were transferred to the Treasury to finance the budget. Experiences of SWFs linked to oil revenues in Sub-Saharan Africa have also been mired in mismanagement, notably in Angola and Equatorial Guinea (Addison & Lebdioui, 2022).

11. To balance feasibility, costs, and the level of insurance provided, staff propose a fiscal target combining a net debt target with a liquid financial assets floor. A fiscal anchor focused purely on asset accumulation is likely to offer a higher degree of insurance against shocks, given

that access to debt financing can become more limited and/or expensive during shocks (Eyraud, et al., 2023). However, substantial and pressing investment needs, and the political economy constraints and high opportunity costs associated, make it politically non-feasible in the current context. Moreover, Chad's likely ability to access concessional debt financing during shocks further increases the relative costs of insurance through asset accumulation. In light of this, staff therefore propose that the fiscal framework be anchored by a net debt target—defined as the difference between the stocks of gross public debt and liquid financial assets (in the form of government deposits at BEAC). This approach provides more flexibility to optimize asset and liability management than a gross debt target by allowing for both the accumulation of liquid financial assets and debt reduction (rather than just the latter) to meet the target. To enhance the shock insurance effectiveness, the net debt target would be complemented with a floor on liquid financial assets (which could be smaller than under a pure asset accumulation approach), to ensure short and medium-term liquidity during shocks, therefore giving Chad the time to mobilize concessional financing, and eventually implement any necessary fiscal consolidation, to sustainably address additional financing needs. This approach would provide significant protection from shocks and reduce the procyclicality of fiscal policy while being more feasible both practically and politically. If this approach is implemented successfully, it could also set the basis—by delinking fiscal policy from oil revenues and building a track record for financial asset accumulation—for the implementation of a fiscal framework with higher asset accumulation targets in the future.

12. Staff propose that the net debt target be implemented through a non-oil primary balance operational rule. After defining and calibrating the net debt target, it could be implemented through an operational rule which links the anchor to flow variables, such as the fiscal balance or the expenditure envelope, and constrains annual fiscal plans to ensure they are consistent with the fiscal anchor and medium- and long-term fiscal policy objectives (Eyraud, et al., 2023). Staff propose the non-oil primary balance (NOPB) for the operational rule as it delinks fiscal policy from fluctuations in commodity prices revenues and can greatly reduce the procyclicality of fiscal policy. Using the NOPB has the following attractive properties: (i) it is the fiscal aggregate which the authorities have the most control upon, having oil revenue and interest payment stripped out of the fiscal balance; and (ii) it allows the authorities to undertake counter-cyclical fiscal policy in response to oil price or production shocks. Staff also deem that the NOPB is more adequate for the context than an expenditure rule, as: (i) it allows for a larger expenditure envelope if non-oil revenue increases, which provides a key incentive for continued progress on critical non-oil revenue mobilization reforms; and (ii) the NOPB is already integrated in the authorities' fiscal framework and has been used to monitor Fund-support programs, which will facilitate buy-in and implementation. Finally, the NOPB rule should be specified so as to ensure convergence towards the net debt target, and once convergence is achieved, it should be set at a level that stabilizes net debt over the medium-term to safeguard continued compliance with the net debt target. The NOPB rule should be recalibrated every 3-5 years (but not sooner) to ensure it continues to stabilize net debt given updated oil price and revenue projections (similar to structural balance rules based on price smoothing proposed in IMF, 2012).

D. Calibrating the Debt Target and Financial Assets Floor

13. The first step to calibrate the debt target is to estimate the maximum debt limit. In line with the methodology presented in Baum, et al. 2018 the debt target is computed in three stages:

(i) first, an estimate of the maximum debt limit is obtained; (ii) then, we proceed to estimate the required safety margin; and finally (iii) the debt target is inferred as the debt limit minus the safety margin (see Box 3). While this approach was originally designed for gross debt target, we use a net debt target and complement it with a floor on liquid financial assets for the reasons discussed in paragraph 11.

Box 3. Maximum Debt Limit vs Debt Target

Maximum debt limit. The limit can be envisaged in terms of the economy's maximum fiscal capacity. It is a level of debt that should not be exceeded in almost all circumstances. In general, it should reflect considerations about the economic costs of bearing excessive debt. For example, the debt dynamic could spiral out of control when debt surpasses a certain level. Other considerations such as the negative impact of debt on growth and financing conditions also motivate the choice of a maximum debt limit. Specific maximum debt limits vary significantly across countries, often at a range between 30 and 70 percent of GDP.

Debt target. This is the level—or a range—at which debt should be kept at, on average, to ensure that debt remains well below the maximum debt limit even under large shocks, allowing policy makers to have sufficient time and space to take corrective actions. These shocks could go beyond the standard macro-fiscal impacts that drive the debt accumulation to include the impact of the contingent liability realizations. This requires the setting of a sufficiently large safety buffer to arrive at a prudent debt target below the maximum debt limit.

14. The underpinning of the debt target is a maximum debt limit of 42 percent of GDP in nominal terms, broadly consistent with moving toward and maintaining Chad at moderate risk of debt distress. Determining this limit entails a trade-off between not setting it too high so that it increases

vulnerability to shocks and heightens the risk of fiscal distress, and not setting it too low so as to prevent much-needed debt-financed investment and hamper growth. While Chad has enormous investment needs, notably in infrastructure and human capital, limited absorptive capacity and the availability

of significant—and currently underutilized—grant investment financing from development partners, warrant a prudent and gradual approach to mobilizing debt financing for public investment in the medium term. Thus, staff propose a “safe” debt approach that prioritizes debt sustainability, while providing adequate space for critical investments commensurate with absorptive capacity. Under this approach, we define the debt limit as the level of debt as a share of GDP beyond which a debt distress episode is likely to happen with increased probability. The IMF-World Bank's Debt Sustainability Framework (DSF) for low-income countries sets this threshold for low debt carrying capacity countries—such as Chad—at total public debt equivalent to 35 percent of GDP on a present value basis (PV) (IMF and World Bank, 2018). Given that the average ratio of debt in nominal terms over debt in PV terms over a 10-year horizon is about 1.2 for Chad, we infer a maximum debt limit of just over 42 percent of GDP in nominal terms.

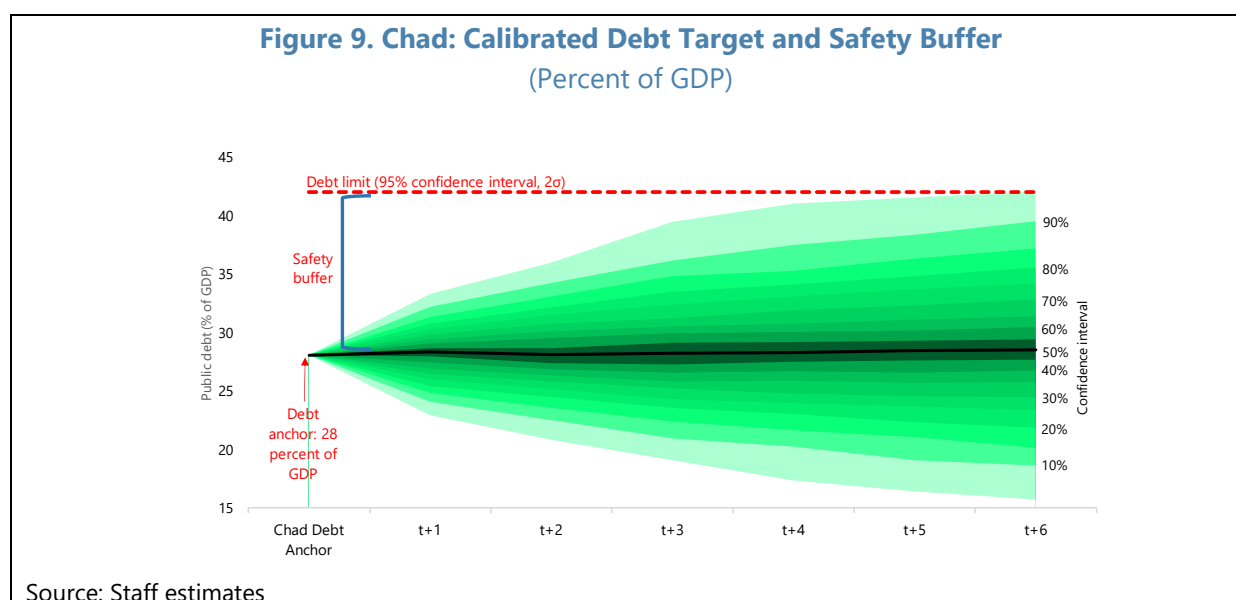
Text Table 1. IMF-World Bank DSF LIC Debt Burden Thresholds and Benchmarks

	PV of PPG external debt in percent of		PPG external debt service in percent of		PV of total public debt in percent of
	GDP	Exports	Exports	Revenue	GDP
Weak	30	240	10	14	35
Medium	40	180	15	18	55
Strong	55	240	21	23	70

Source: IMF staff estimates

15. The safety buffer necessary to ensure that debt remains under the maximum debt limit is calibrated based on past shocks. In line with the methodology presented in Baum, et al. (2018), this process involves estimating the joint distribution of macroeconomic and fiscal shocks experienced by Chad using data on real GDP growth, real effective interest rates, real exchange rates, terms of trade gaps, and external loan disbursements for the period 2000-21. The distribution of these shocks is then used to carry out stochastic simulations of future debt trajectories over a 6-year horizon using a system of simultaneous equations formed by the debt accumulation equation and a fiscal reaction function in which the level of the primary balance responds to realizations of macroeconomic variables. The simulated debt trajectories are then summarized in a fan chart which serves to visualize the probability that debt would breach the defined maximum debt limit starting from a specific debt level. This is then used to determine the adequate debt target for a given level of risk tolerance. We use a specification of the methodology presented in Eyraud, et al. (2023) as it is tailored to commodity producers, including through:

- Computing the terms of trade gaps using a commodity-based terms of trade instead of the overall goods and services terms of trade to make it more pertinent for commodity exporters;
- Assuming an asymmetric reaction of the primary balance to terms of trade gaps to account for the procyclicality of government spending;
- Using estimates for the fiscal reaction function specific to commodity producers to improve the representativeness of the fiscal policy response.



16. With a risk tolerance of 5 percent, the calibrated debt target is around 28 percent of GDP. Another key parameter to calibrate the debt target is the likelihood of exceeding the debt limit, which is set at the country's risk tolerance level, or their willingness to accept a certain probability of breaching the maximum debt limit. A higher risk tolerance translates into a higher debt target. In this case, we assume a low risk tolerance level of 5 percent (2 standard deviations), given the very high level of dependence on oil revenues, which, coupled with downside risks to oil production and prices—stemming from likely lower global demand as a result of the green transition and significant uncertainty about existing reserves—call for a prudent approach given

heightened vulnerability to shocks and long-term sustainability risks. Assuming the materialization of contingent liabilities of 1 percent of GDP per year², the required safety buffer to prevent (with a risk tolerance of 5 percent) surpassing the nominal maximum debt limit of 42 percent of GDP over a 6-year period is approximately 14 percent of GDP, corresponding to a debt target of 28 percent of GDP. By bringing debt to this level, Chad should be able, with 95 percent certainty, to handle typical adverse macroeconomic shocks without exceeding the maximum debt limit over the medium term.

17. A sensitivity analysis of the proposed debt target shows that its calibration parameters strike a balance between prudence and providing fiscal space for critical development spending.

The scenarios presented in Text Table 2 below show how the debt target increases under higher levels of risk tolerance but decreases under higher assumed realization of contingent liabilities and over a longer horizon. Given risks of sustained oil price and production shocks over the medium and long terms and contingent liability risks in the energy sector—which could call for higher assumed contingent liabilities and a longer horizon—the selected anchor calibration strikes a balance between prudence and flexibility.

Text Table 2. Chad: Sensitivity Analysis of Proposed Debt Target
(In percent of GDP, unless indicated otherwise)

	Scenarios					
	1	2	3	4	5	6
Parameters						
Maximum debt limit	42.0	42.0	42.0	42.0	42.0	42.0
Contingent liabilities per year	1.0	1.0	1.5	1.0	1.0	1.5
Risk tolerance (%)	5.0	10.0	5.0	5.0	10.0	10.0
Horizon (years)	6.0	6.0	6.0	8.0	8.0	6.0
Calibrated results						
Debt target	28.0	32.5	22.9	22.3	28.6	28.0
Median debt at end of horizon	28.5	31.3	27.5	26.0	28.8	31.0
<i>Range of the fan chart</i>						
P75-P25	34.1-23.3	37.2-25.9	33.4-22.4	32.2-20.1	35.1-23.1	36.7-25.9
P95-P5	42.1-15.7	46.6-18.6	42.2-15.2	42.2-12.0	46.6-14.8	45.1-18.0
P80-P20	35.5-21.8	38.5-24.5	35.1-21.3	33.8-18.4	36.7-21.6	38.2-24.2

Source: IMF staff estimates

18. The financial assets floor is calibrated at around 5 percent of GDP based on projected oil revenue shortfalls under oil price shock scenarios. The level of minimum liquid financial assets that Chad should hold for insurance purposes is determined by the potential liquidity needs which could arise from a shortfall in oil revenues due to an oil price shock. The oil price shock is simulated based on scenarios of the distribution of future oil prices. Projected oil revenues are estimated for each scenario for the 2025-2027 period. The cumulative shortfalls for each scenario are then estimated relative to a scenario with a debt-stabilizing oil price level assuming a non-oil primary balance of -5 percent of non-oil GDP, estimated at around US\$70 per barrel (Text Table 3). Given

² This is in line with evidence presented in Bova, et al. (2019).

that the accumulated financial assets are complementary to the safety buffer provided by the debt anchor and are not intended to provide buffers against the whole shock, staff propose a financial assets floor of around 5 percent of GDP, which should be sufficient to cover the cumulative revenue shortfall of a 2-year oil price shock with an 86 percent confidence level. This should provide time and flexibility to cover any additional revenue shortfall by mobilizing concessional financing, and if necessary, through fiscal adjustment.

Text Table 3. Chad: Cumulative Oil Revenue Shortfall in Oil Price Shock Scenarios, 2024–26
(In percent of GDP)

Scenarios		2025	2026	2027
Oil prices (Brent, US\$/bbl)	Breakeven oil at 5% NOPD	70.0	70.0	70.0
	86% confidence	54.7	33.2	23.6
	68% confidence	58.7	43.7	35.0
Oil revenues	Breakeven oil at 5% NOPD	7.8	5.2	5.8
	86% confidence	6.8	1.6	0.8
	68% confidence	7.0	2.3	1.6
Oil revenue shortfall	86% confidence	-1.0	-3.6	-4.9
	68% confidence	-0.8	-2.9	-4.2
Cumulative oil revenue shortfall	86% confidence	-1.0	-4.6	-9.6
	68% confidence	-0.8	-3.7	-7.9

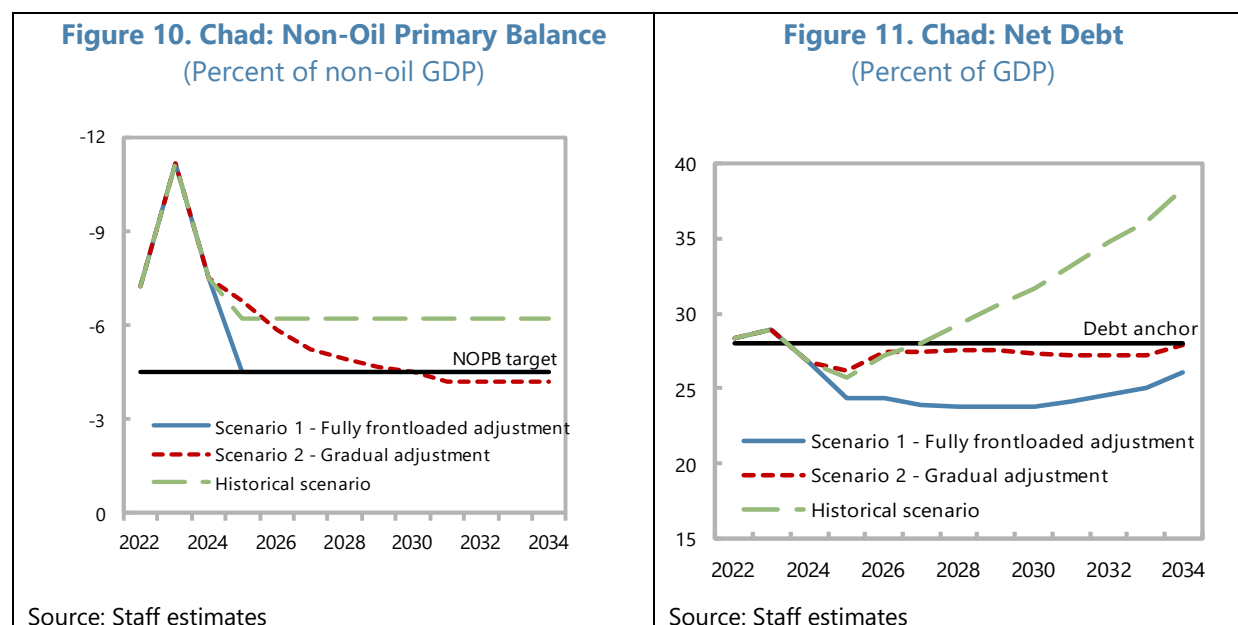
Source: Staff estimates

E. Operationalizing the Fiscal Anchor

19. Based on the calibrated net debt target and the financial assets floor, convergence towards the target would require reducing gross public debt to under 33 percent of GDP while accumulating liquid financial assets of at least 5 percent of GDP. The proposed fiscal anchor is based on net debt, which is calculated as the difference between gross debt and liquid financial assets. The net debt target of 28 percent of GDP provides flexibility between financial asset accumulation and debt reduction, as long as net debt remains under 28 percent of GDP and financial assets remain at or above 5 percent of GDP. At end-2024, gross debt is projected to be 29.5 percent of GDP, with liquid financial assets projected to be 2.7 percent of GDP, meaning net debt is projected to stand at 26.8 percent of GDP, or 1.2 percent of GDP below the fiscal target. However, with oil revenues projected to fall by nearly 40 percent, from 9.3 percent of non-oil GDP to 5.8 percent of non-oil GDP between 2024 and 2029, significant fiscal consolidation will be required to ensure net debt remains in line with the target, while accumulating an additional 2.3 percent of GDP in liquid financial assets.

20. For net debt to remain in line with the target, an operational rule targeting an NOPB of between -4 and -5 percent of non-oil GDP could be implemented. Given long-term average oil revenue projections of 4 percent of non-oil GDP (and debt reduction from automatic debt dynamics of around 1 percent of non-oil GDP), targeting a non-oil primary deficit of between 4 and 5 percent of non-oil GDP, should stabilize net debt over the oil-price cycle (assuming the current WEO oil prices). Thus, with this rule, a windfall in oil revenue—that is oil revenue exceeding the long-term average projections of 4 percent of non-oil GDP—is de facto saved (either by paying back debt or by increasing deposits) while a shortfall in oil revenue (when oil revenues fall under 4

percent of non-oil GDP) is met by issuing new debt or drawing down deposits. This rule is also compatible with CEMAC convergence criteria, as it is projected to keep the overall budget deficit below 3 percent of GDP and it will keep public debt as a share of GDP well below the 70 percent limit.



21. Staff recommends a gradual consolidation to converge towards the NOPB target and remain in line with the net debt target by 2029, as this balances prudence with mobilizing the necessary resources to fund the authorities' socioeconomic development agenda. We have used a standard debt dynamic equation to plot three different convergence scenarios: (i) a scenario with a fully frontloaded adjustment to the NOPB target; (ii) a scenario with a gradual adjustment to the target; and (iii) a historical scenario for illustrative purposes.³ The first scenario would see NOPB target met in 2025, but would require an adjustment of 3 percent of non-oil GDP in 2025, on top of an already large adjustment of 3.9 percent of non-oil GDP projected in 2024. Such a large adjustment in 2025 seems both politically and practically non-feasible, as it would likely require an increase in taxes as well as significant additional cuts to current spending and/or domestically-financed public investment. Such large fiscal consolidation measures would be difficult to implement in 2025 as they could hurt growth, heighten social tensions, and undermine the new government's pledge to invest heavily in socioeconomic development, particularly after already large tax increases and spending cuts in 2024. A more gradual convergence to the NOPB target, with an average adjustment of 0.8 percent of non-oil GDP per year in 2025-27 and 0.3 percent of non-oil GDP per year in 2028-2029, would see the net debt stay on target in 2029. Such a consolidation could be achieved primarily through incremental improvements in tax administration, as well as budgeting and expenditure controls, rather than a sharp policy adjustment. This would safeguard growth and provide the authorities with the necessary fiscal space to implement their socioeconomic development agenda.

³ The historical scenario assumes a non-oil primary deficit of -6.4 percent of non-oil GDP, which is equivalent to the average between 2014 and 2023.

22. The proposed operational rule should be recalibrated every 3-5 years (not before) to ensure its continued validity. Given the high degree of uncertainty about projections of key macroeconomic variables, future debt stock characteristics and the outlook of the oil sector, it is critical to re-assess the validity of the anchor on a regular basis. However, this should not be done too frequently as it could lead to interference and undermine the credibility of the framework. A transparent timeline for its assessment and review should be defined to ensure it remains relevant and credible. The anchor should only be recalibrated sooner if downside tail risks to oil prices—beyond the parameters used to calibrate the anchor—were to materialize heightening risks to fiscal sustainability.

F. Conclusion and Policy Recommendations

23. Ending Chad's recurrent boom-bust cycles is critical for its long-term development prospects and the end of the political transition presents an opportunity for a fiscal policy anchored in the medium and long term. The end of the political transition in 2024 and the ongoing preparation of a new national development plan present an opportunity to establish a robust medium-term fiscal framework that balances prudence with mobilizing critical development financing. This will require strong political commitment to move away from policymaking focused on short-term political considerations to a focus on medium- and long-term development objectives. With oil prices projected to fall gradually over the medium-term, it will be key to double down on fiscal consolidation efforts started in 2024, in order to reconstitute fiscal buffers and continue making progress towards converging with the proposed fiscal anchor. This will not only greatly mitigate fiscal sustainability risks, but also likely crowd-in significant donor support to fund the authorities' socioeconomic development agenda sustainably and underpin continued policy momentum.

24. Strong political commitment and effective institutions are a precondition for the successful implementation—and credibility—of a medium-term fiscal framework. In this regard there are four areas that would be critical for the successful implementation of the proposed fiscal framework in Chad:

- (i) Strengthening medium-term fiscal planning with a focus on enhanced macroeconomic forecasting and improved budget preparation including medium-term spending plans;
- (ii) Curtailing the use of extra-budgetary and emergency spending procedures (DAO) through the full implementation of the presidential decree limiting the use of DAOs, ensuring all expenditures are executed through SIGFIP and follow the budget execution chain, preparing and adopting annual expenditure execution and treasury plans, and adopting an expenditure execution manual.
- (iii) Strengthening public investment management, including through the implementation of a multi-year investment plan, improving project selection, appraisal and execution, finalizing the implementation of public investment managements in SIGFIP, approving a public investment management procedures manual, and strengthening public procurement.

The Fund's ongoing capacity development support in these areas will be key to their successful implementation.

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CLIMATE CHANGE IN CHAD: CHALLENGES AND OPPORTUNITIES¹

Despite having contributed minimally to global greenhouse gas emissions, Chad is highly vulnerable to climate change, which is already affecting the country. With most people depending on agriculture and livestock, urgent adaptation measures are needed to build resilience. Additionally, Chad's reliance on oil for revenue and exports means global mitigation efforts will require a push toward economic diversification and a shift to a low-carbon economy. Given limited fiscal space and high reform costs, pragmatic short-term prioritization, search for synergies, and increased financing from domestic, international, and private sources are essential. Strengthened and better targeting social protection will help safeguard the most vulnerable.

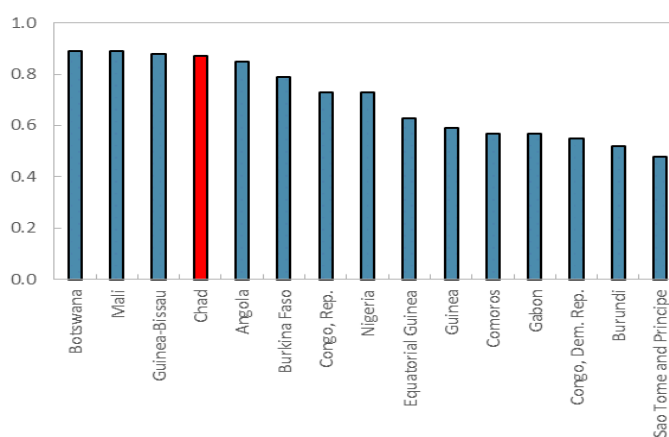
A. Climate and Socio-Economic Context in Chad

1. Chad, the fifth largest country in Africa, spans around 1.3 million km² and includes three bioclimatic zones. The Saharan zone in the north, a largely uninhabited desert, covers 47 percent of the territory. The Sahelian zone, in the central region, makes up 43 percent of the land and hosts 51 percent of the population, featuring poor soil and scrubland. The Sudanian zone in the south, with 10 percent of the territory and 47 percent of the population, exhibits more abundant vegetation.

2. Chad's economy is poorly diversified, relying heavily on natural resources, with agriculture, livestock, and oil production at its core. Agriculture and livestock collectively contribute about 40 percent of GDP and employ roughly 75 percent of the population. Agriculture is mainly rainfed and subsistence-based, while livestock production relies on natural pastures and crop residues, with live cattle as a key export. Chad is also a significant oil producer, holding Africa's 10th largest oil reserves, estimated at 1.5 billion barrels (Uneca, 2016). In 2022, oil contributed 28 percent of GDP, 78 percent of exports, and 67 percent of government revenues.

Text Figure 1. Chad: Export Concentration Index (ECI), 2021

(15 countries with the highest ECI in SSA)

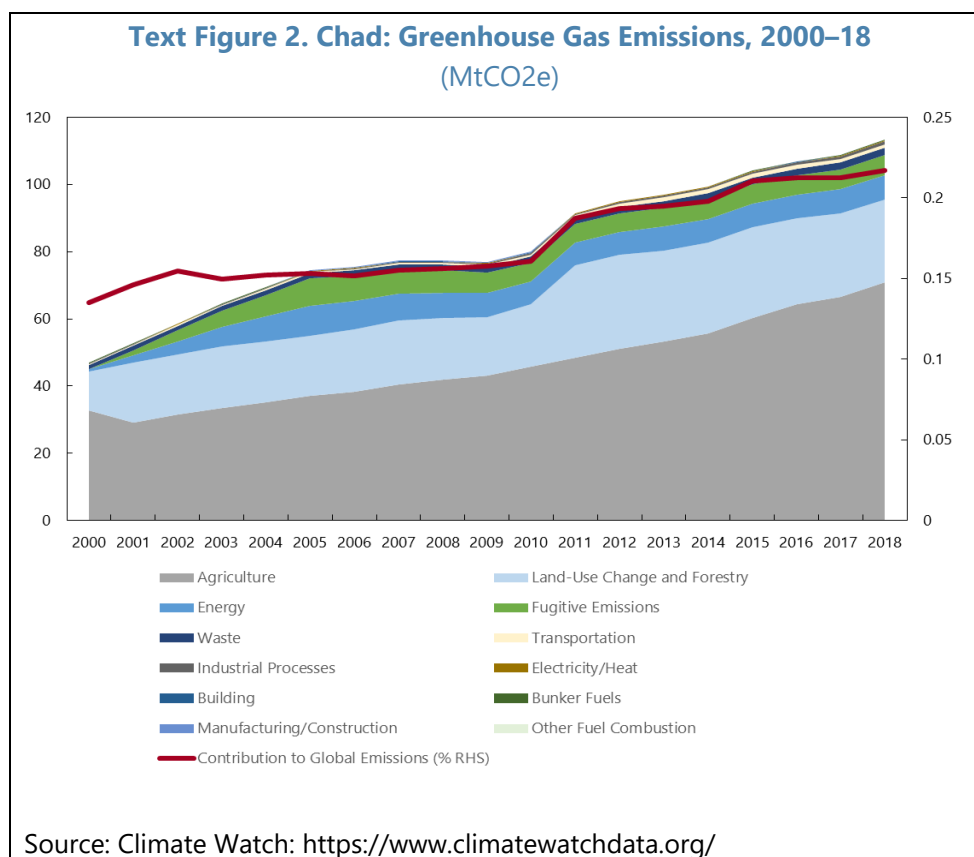


Source: UNCTAD

Notes: Index ranges from 0 (Homogeneously distributed) to 1 (Highly concentrated on a few products).

¹ Prepared by Ljubica Dordevic (AFR). Topeur Beguerang (local office), Felix Vardy (AFR), and Maria Chiara Cavalleri (FAD) contributed to the preparation of the analytical boxes. Canghao Chen (AFR) assisted with the preparation of the charts. We are grateful to the authorities for their valuable comments and suggestions.

3. While Chad contributes very little to global greenhouse gas emissions in absolute terms, climate change poses major challenges to its development. Although Chad's greenhouse gas emissions are minimal, at just 0.2 percent of the global total, climate change poses significant development challenges.² With 76 percent living in rural areas, agriculture, land use change, and forestry contribute 96 percent of Chad's emissions. The country ranks low on development indicators, with 35 percent of the population living in extreme poverty. Inequalities are exacerbated by limited infrastructure: only 12 percent of the population has electricity access (just 1.3 percent in rural areas). Heavy reliance on charcoal and wood further impacts health and the environment through deforestation and pollution (World Bank, 2023).

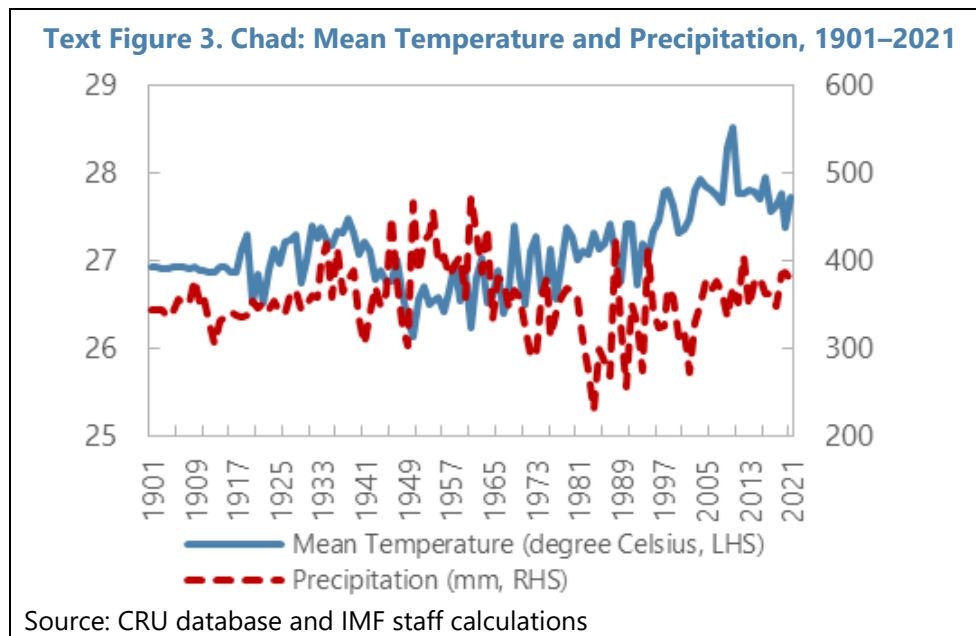


B. Vulnerability to Climate Shocks

4. Chad is among the most vulnerable countries to climate change, with impacts already evident (G5 Sahel Country Climate and Development Report, 2022). According to the [IMF-Adapted ND-GAIN Index](#) 2021, Chad ranks the second lowest globally in vulnerability and among the lowest in preparedness. Its vulnerability stems from a hot climate and an economy heavily dependent on agriculture and livestock, coupled with inadequate means for adaptation. Chad is one of the hottest countries in the world, and average annual temperatures in Chad have risen by over 0.5 degrees

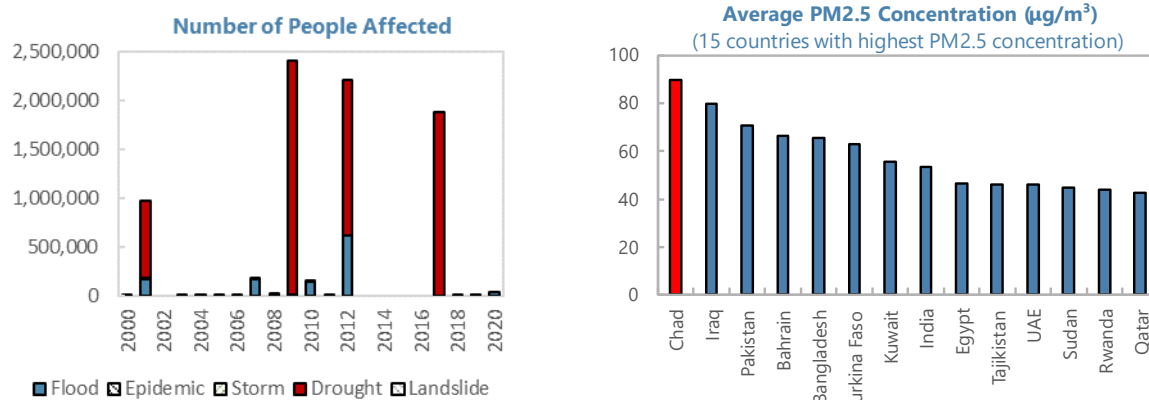
² Emissions from the oil industry are not included in this estimate. They will be incorporated in the upcoming revision of Chad's Nationally Determined Contributions (NDC), which may considerably increase emission estimates.

Celsius since the 1990s, nearly double the global average (Chad National Adaptation Plan, 2021; World Bank Environmental Diagnostic Report for Chad, 2022). Meanwhile, rainfall has become more irregular. Without decisive action, global temperatures could increase by an additional 2.2 degrees Celsius by 2100 (World Bank, 2021).



5. The detrimental effects of climate change include desertification, water resource loss, and soil and habitat degradation. Natural resource depletion in Chad is nearly three times the Sub-Saharan average (World Bank, 2022b). Climate-related damages were estimated at 12 percent of GDP in 2019 (World Bank, 2022b), while projected annual losses reach more than 10 percent of GDP by 2050 under a pessimistic dry-climate scenario (G5 Sahel CCDD, 2022).

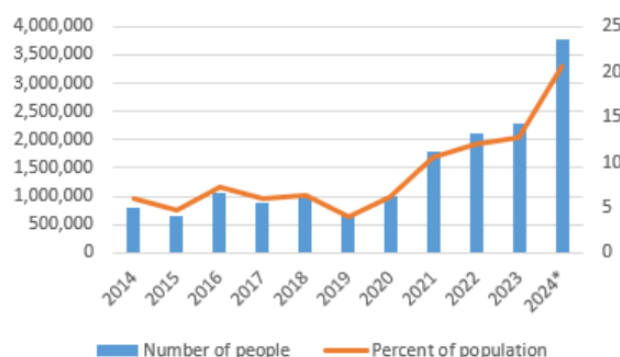
6. Chad faces frequent natural disasters and severe air pollution, impacting much of the population. Floods and droughts are common; in 2022, pluvial and fluvial floods affected 1.3 million people (over 7 percent of the population), while 2024 floods impacted as many as 1.7 million. Without mitigation, disaster frequency in the Sahel is expected to rise (G5 Sahel CCDD, 2022). Nearly all Chadians are exposed to PM_{2.5} levels above WHO guidelines, with air pollution ranking as the third leading cause of premature death. Major contributors include energy and transport sectors, and open waste burning (State of Global Air, 2019).

Text Figure 5. Chad: Natural Disasters and Air Pollution

Source: EMDAT and IQAir

Notes: [The World Health Organization updated Air Quality Guidelines](#) (WHO, 2021) recommend annual mean concentrations of PM2.5 not exceeding 5 micrograms per cubic meter.

7. Climate change has worsened food security and intensified inter-communal conflicts over scarce natural resources. Key crops like millet, maize, rice, and sorghum are highly climate-sensitive, impacting yields and labor productivity (G5 Sahel CCDD, 2022). Volatile rainfall and severe floods in 2022 and 2024 have disrupted agricultural production, pushing food insecurity from 2.1 million people in 2022 to unprecedented 3.8 million in 2024 (projected under Cadre Harmonisé). Rapid population growth (3.1 percent in 2023) and stagnant crop yields strain resources, while climate-driven land and water shortages exacerbate conflicts between farmers and pastoralists.

Text Figure 6. Chad: Food Security, Lean Season
(2014-2024)

Source: Cadre Harmonisé (March 2024), WEO and IMF staff calculations.

Note: The numbers refer to the population experiencing food crisis, emergency, or famine (phases 3-5). Lean season refers to June-August.

8. Poor households, women, and youth are most impacted by climate change. These segments of the population are concentrated in climate-sensitive activities but have limited resources and low education, hindering adaptation. Disadvantaged households also tend to have fewer coping strategies for food insecurity (Box 1), in the face of climate change.

Box 1. Chad: Climate Change and Food Security

Food insecurity is a structural issue in Chad, influenced by its geographic and climatic conditions and farming practices. The country has three distinct rainfall zones: the Saharan north (100 mm/year), the Sahelian center (100 to 800 mm/year), and the Sudanese south (over 800 mm/year). Agriculture, reliant on basic technology, is the main source of food, with low and stagnant crop yields. Dependence on irregular rainfall during 3 to 4 months each year makes agriculture vulnerable. Lake Chad, which has already shrunk dramatically, is forecasted to disappear in the next 20 years at its current rate of use (NASA, 2017). Climate variability, especially in the Sahelian zone, leads to recurrent food insecurity.¹ Increasing desertification is causing the low rainfall line to move southward by 60 km each decade, exacerbating food insecurity across the Sahel, where climate change has resulted in environmental degradation and famine.

A recent study by Topeur (2023) highlights the relationship between climate factors and food insecurity in Chad, while identifying households' coping strategies. Using food consumption data from the World Food Program's annual National Food Security Assessment (2015-2019) alongside climate data, the study reveals that climate conditions—both objective (rainfall) and subjective (self-reported disasters)—significantly correlate with food security, even after accounting for various socio-economic factors.^{2, 3} Increased rainfall typically reduces food insecurity, while living in drier regions or experiencing drought raises its likelihood.⁴

The study also finds that certain economic factors enhance food security, suggesting people draw on their skills and resources to cope: higher literacy rates among household heads, access to communication and transportation equipment, and ownership of livestock or valuables all make it less likely to be food insecure. Other coping mechanisms include reducing food quantity and quality, limiting meal frequency, and borrowing food or money, which can be thought of as last resort measures. Consequently, food insecurity disproportionately impacts disadvantaged and vulnerable populations.

¹ According to Thomas and Nigam (2018), Chad, is among the countries most affected by the expansion of the Sahara Desert.

² Food insecurity is assessed through the food security index, which is a combination of food consumption, economic vulnerability, and asset depletion.

³ This survey data by WFP is representative at the country and province level.

⁴ Floods (self-reported), however, do not exhibit a statistically significant econometric relationship with food insecurity, albeit in some years there is a simple bivariate association.

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C. Climate Change Policies in Chad

9. The government's climate action strategy is outlined in its Nationally Determined Contributions (NDC, 2021) and National Adaptation Plan (NAP, 2021). These documents communicate Chad's climate efforts internationally and align with its "Vision 30: The Chad that we want" strategy, developed in 2017 to reflect the government's commitment to achieving development objectives by 2030, including to improve living conditions, reduce inequalities, conserve resources, and adapt to climate change.

10. Given its minimal greenhouse gas (GHG) emissions and high climate vulnerability, adaptation is an urgent priority for Chad, requiring acceleration of the NAP implementation process. As global temperature containment efforts remain limited, climate anomalies are likely to worsen. Authorities should accelerate NAP implementation, prioritizing it at the highest decision-making level, intensify financing efforts, and develop a more comprehensive NAP to address gaps in

data, cost-benefit analysis, governance weaknesses, build capacity for green budgeting, and include a gender dimension.

11. Consistent with its Paris Accord commitments, Chad must prepare for a transition to a greener, more diversified economy. While global climate efforts may eventually reduce Chad's climate risk, the shift away from oil will challenge its oil-dependent economy and public finances. Global oil demand is expected to decline from 2040 (Republic of Congo, Selected issues, 2021), with Chad's oil production forecasted to peak in 2028 and decrease by 1 percent annually thereafter. Rapidly developing green growth sectors would help dampen the impact of reduced oil production and support the country's climate mitigation goals.

Box 2. Chad: Government Framework for Climate Action

The National Determined Contributions (NDC) aim to implement adaptation measures and mitigate GHG emissions, aligning with the Paris Agreement's goals for a low-GHG economy. Chad's NDC, revised in 2021, targets a 19.3-percent reduction in GHG emissions by 2030, based on 2010-2018 data. It estimates a total cost of US\$11.7 billion for 2021-2030—US\$5 billion for adaptation and US\$6.7 billion for mitigation—with domestic financing of approximately US\$1.7 billion. The upcoming NDC revision will include the oil sector's climate impact, likely increasing funding needs.

The National Adaptation Plan (NAP) from 2021 integrates climate change adaptation into planning and budgeting for climate-sensitive sectors. Its priority areas are: 1) Agriculture and livestock; 2) Environment and forestry; 3) Water, hygiene, and sanitation; 4) Renewable energy; 5) Gender and social protection; 6) Education and communication; 7) Risk and extreme weather management; and 8) Aquaculture and fisheries.

Priority adaptation options for these areas were identified based on effectiveness, feasibility, cost/benefit ratios, and stakeholder consultations at national and regional levels.

D. Policy Recommendations

Climate Change Policies in Chad Should be Guided by the Following Considerations

12. With limited financing and low climate preparedness, Chad urgently needs effective, targeted adaptation measures, seeking synergies with mitigation and transition where possible. Energy policies are crucial not only for transitioning to a low-carbon economy but also for adaptation. Energy reform underpins other actions; for instance, improving irrigation requires reliable electricity access, necessitating a new energy plan that includes renewable sources to meet rising demand.

13. Climate action in Chad requires substantial public investment, which must be fully integrated into its public investment management framework. The NDC outlines key projects to achieve mitigation and adaptation goals, including renewable power generation, energy-efficient infrastructure, waste treatment plants, railroads, and public transport improvements. However, scaling up such investments is costly and risky, making an effective, transparent, and efficient public investment management system essential for building a low-carbon, climate-resilient economy.

14. With high climate action costs and limited resources, financing is critical for Chad.

Adaptation and mitigation costs are estimated at \$11.7 billion for 2021–30 (NDC, 2021), and expected to rise further as more granular data becomes available and the oil sector’s climate impact is properly accounted for. Limited fiscal space and debt concerns, compounded by declining oil revenues amid a shift to cleaner energy, make it essential to attract donor and private sector support.

15. Social protection must be strengthened to support those most affected by climate change. Most of Chad’s population depends on climate-vulnerable agriculture and livestock for subsistence, sectors that are also major GHG contributors. This dual role complicates mitigation efforts, which may have regressive effects.

These Considerations Inform the Following Policy Recommendations**E. Prioritization and Search for Synergies**

16. One important adaptation priority is improving the quality, accessibility, and utilization of weather information to enhance preparedness and support disaster risk management. Promoting sustainable and efficient agricultural land use can also help reduce emissions. It is essential to develop a weather monitoring and forecasting system that delivers timely data to farmers and herders, informing production decisions and minimizing climate-related losses. Enhancing early warning systems is critical for mitigating damage from climate shocks. A comprehensive approach is necessary to tackle threats to agriculture, water, and the environment. This includes preserving natural capital, increasing productivity, and supporting mitigation efforts through carbon capture. For instance, agroforestry incorporates trees into agricultural landscapes, which enhances biodiversity, improves water quality and soil health, and sequesters GHG. Additionally, it provides shade and wind protection, bolstering crop resilience to extreme heat, thereby reducing irrigation needs and lowering energy consumption.

17. Inefficient energy subsidies should be phased out to redirect resources toward targeted climate policies and investments in renewable energy, such as solar power. These subsidies represent a significant fiscal burden, estimated at 1.6 percent of GDP in 2022 (IMF FAD technical assistance mission). Eliminating them would help fund the necessary investments in resilient infrastructure and renewable energy, addressing the climate impact of fossil fuels and reducing fiscal impact of fuel use for power production. This shift could also modernize the agricultural sector, as improved electricity access is essential for irrigation in rural areas. Additionally, expanding access to clean cooking options would benefit both mitigation efforts and overall development.³

³ To meet the clean cooking targets set out in the NDC 2021, a total investment of around US\$36.3 million—of which US\$8.6 mill publicly funded, while US\$27.7 mill funded by the households—is needed each year in Chad (World Bank 2022a).

18. Enhancing governance and transparency of the energy sector will boost efficiency, reduce tax vulnerabilities, and improve the business environment. Encouraging private sector development alongside increased public investment can create new growth engines to mitigate the impacts of the global transition away from oil. Conducting environmental impact assessments for new projects will also help minimize emissions.

F. Public Investment Management

19. The IMF's C-PIMA technical assistance in 2022 provided policy recommendations to enhance public investment management in relation to climate change. At the request of the authorities, the IMF conducted a public investment management assessment (PIMA), using a diagnostic tool to evaluate institutional readiness and identify gaps in governance concerning climate change.

Box 3. Chad: C-PIMA 2022

The IMF's C-PIMA technical assistance mission in 2022 assessed Chad's public investment management (PIM) system, identifying strengths and weaknesses.

- Strengths include:
 - i. Establishment of the Directorate of Environmental Education and the Fight against Climate Change (DEELCC) to raise awareness about climate among ministries.
 - ii. Integration of some actions from the 2021 National Determined Contribution (NDC) into sectoral strategies.
 - iii. Requirement to analyze the environmental impact of investment projects.
- Weaknesses include:
 - i. Lack of methodologies for the ex-ante assessment of climate impacts and risks on infrastructure.
 - ii. Absence of financing mechanisms for managing infrastructure climate risk.
 - iii. A disaster risk reduction strategy developed but not formally approved.

Three urgent IMF recommendations for Chad's PIM system include:

- i. Develop a better three-year public investment program, prepared by the Ministry of Finance, Budget, Economy and Plan (MFBEP), and the National Commission for the Management of Public Investments (CONAGIP).
- ii. Provide guidelines for assessing infrastructure maintenance requirements that incorporate the impact of climate change,
- iii. Standardize project appraisal methodologies, including climate impact assessments.

Additional recommendations aim to enhance the link between planning and budgeting for capital expenditures, improve infrastructure financing supervision, and strengthen the management cycle of public investments, essential for climate change adaptation.

Contributor: Maria Chiara Cavalleri

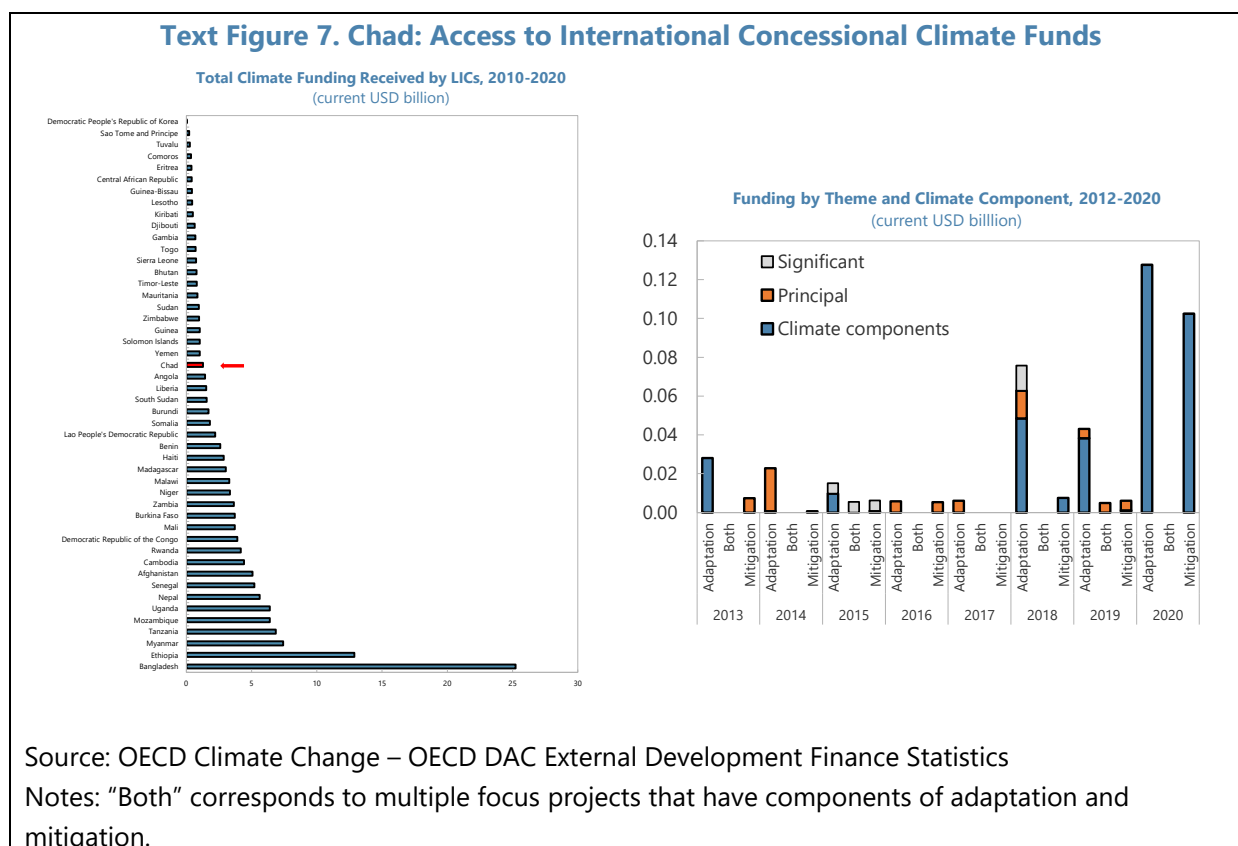
G. Financing

20. Chad must secure financing to address climate change risks, requiring increased national budget allocations, external financing from donors and climate funds, and private sector investment. While important, enhancing public resources through revenue mobilization, improving spending efficiency, and cutting energy subsidies—backed by IMF technical assistance—will not suffice, even with donor support. Additional climate finance and private sector involvement are essential. For a discussion of potential climate financing sources, see Box 4.

21. The government should create fiscal space for climate investments while ensuring debt sustainability. It could reprioritize climate spending, currently under 1 percent of the budget (CCDR 2022), and broader development policies to foster inclusive and resilient growth. Additionally, exploring carbon credits and climate-linked debt instruments, along with potentially utilizing the IMF's Resilience and Sustainability Trust (RST) for regulatory reforms, could enhance resilience to climate change.

22. Access to international climate funds is crucial given limited fiscal space. From 2010 to 2020, Chad received a total of US\$1.3 billion in climate funds, with recent increases mainly aimed at financing adaptation. An order of magnitude more is needed during the current decade.

Text Figure 7. Chad: Access to International Concessional Climate Funds



23. As a low-income, fragile country with weak capacity and governance, Chad faces significant challenges in accessing foreign financing, including international climate funds. Key areas of concern for financing providers include data quality, governance, debt, and public financial management (PFM). These weaknesses hinder Chad's ability to apply for direct access to climate funds, which would improve project control, stakeholder engagement, and technology transfer. For the time being, indirect access may be the only option due to limited time and capacity for accreditation and project management. Issuing climate-linked debt instruments may require greater creditworthiness than Chad possesses. Additionally, implementing debt-for-nature swaps is

complicated by the need for thorough preparation, strong government engagement, and management capacity. Accessing international carbon credit schemes is also challenging due to the need for substantial investments in emissions monitoring. Lastly, obtaining climate-related insurance is difficult due to a lack of reliable data on climate risks and an underdeveloped insurance sector.

24. Chad should implement policies to mobilize climate finance, foreign direct investment, and private investment. Key reform areas to attract financial resources include:

- Improving the quality, availability, and timeliness of data.
- Enhancing the effectiveness of laws, governance, debt management, and PFM to support project preparation for climate finance.
- Utilizing the new multi-year public investment plan (2023-2026) to mandate the integration of sustainability objectives in investment and infrastructure development.
- Developing a well-structured climate investment plan, as outlined in the NDC, to prioritize and outline financing for specific reforms.

Box 4. Chad: Financing Climate Action in Chad

In principle, Chad could tap into four key sources for financing climate action, alongside domestic revenue mobilization: (1) concessional financing; (2) climate-linked debt instruments; (3) international carbon credit schemes; and (4) climate-related insurance schemes (see IMF Staff Climate Notes, 2022).

- i. **Concessional financing** includes grants or loans at low-interest rates. International climate funds like the Green Climate Fund (GCF) and the Global Environment Facility (GEF) offer such financing, accessible directly through accredited national or subnational entities or indirectly via institutions like the UNEP or UNDP.
- ii. **Climate-linked debt instruments** would enable Chad to raise funds at lower interest rates by issuing debt tied to environmentally friendly projects. The reduction in interest rates for these “green” bonds is known as the Greenium. Debt-for-nature swaps are another option, though challenging to implement.
- iii. **International carbon credit schemes** could allow Chad or its companies to earn credits for greenhouse gas reductions, which can be sold internationally. However, their effectiveness is debated, and they require substantial investments in emissions monitoring and verification.
- iv. **Climate-related insurance schemes** offer protection against losses from extreme weather or climate risks. For instance, crop insurance can shield farmers from droughts or floods.

While these financing sources present opportunities for Chad to combat climate change, accessing them will likely require significant improvements in administrative capacity, governance, and data provision.

H. Social Protection

25. The development of a robust social protection framework should complement climate policies with well-targeted support. The poorest, particularly women in agriculture, are most vulnerable to climate change due to limited access to land and resources. To enhance the effectiveness of social support, efforts must focus on promoting digitalization and establishing a unified social register to identify vulnerable populations. Additionally, the authorities could explore developing a climate risk insurance market by subsidizing premiums within the social protection framework.

I. Summary and Conclusions

26. Given Chad's acute vulnerability to climate change, it is imperative that the government accelerates the implementation of policy measures for adaptation, as well as mitigation and transition. Authorities should prioritize immediate adaptation measures, such as enhancing weather information systems and improving disaster risk management. With agriculture being the backbone of Chad's economy, addressing climate-related challenges through sustainable practices, including agroforestry, is crucial to maintaining food security and promoting resilience among vulnerable populations. The integration of climate considerations into national policies and planning frameworks will be essential to mitigate the adverse impacts of climate change on both natural and human systems.

27. Furthermore, achieving meaningful progress requires a comprehensive approach to financing. Chad must unlock diverse funding sources, including national budget allocations, bilateral donor funding, international climate funds, and private sector investments. Strengthening governance and transparency in public investment management will facilitate effective use of these funds, while fostering inclusive strategies that engage local communities in decision-making processes. Creating a financing window dedicated to the most vulnerable, fragile, low-income countries should be considered, combined with technical assistance to increase Chad's capacity to prepare its financing requests. This would pave the way for a more resilient and sustainable future, ultimately contributing to a diversified Chadian economy that mitigates reliance on fossil fuels.

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ASSESSING THE NATURE AND SEVERITY OF GOVERNANCE VULNERABILITIES IN CHAD¹

A. Introduction

1. Governance and corruption vulnerabilities weaken institutions, undermine the effectiveness of reforms, and distort transparency and accountability mechanisms. Corruption poses a significant obstacle to achieving peace, security, sustainable development, and human rights. It weakens government institutions, erodes trust, jeopardizes justice and the rule of law, and negatively impacts the security and stability of countries. Sectors such as natural resources, public procurement, access to public services, tax exemptions and tax administration are highly vulnerable to corruption, while bribery and nepotism distorts the delivery of public services.

2. Studies show that poor governance and corruption can severely affect inclusive economic growth. Empirical studies show that poor governance and corruption are associated with lower investment and lower tax revenue and economic performance (Faruq 2017, Hammadi and others, 2019, Ondo, 2019). Poor governance and corruption also affect how equitably the benefits of growth are shared. Ivanyina and Salerno (2021) summarize the main impacts of bad governance on inclusive growth: (i) impaired provisions of public goods and services; (ii) distorted allocation of resources; (iii) eroded trust; (iv) adverse business climate; (v) rent-seeking; and (vi) state capture.

3. This paper examines the nature and severity of corruption in Chad, assessing governance and corruption vulnerabilities using the IMF Governance Framework. This framework is designed to promote a more systematic, effective and candid assessment of associated systemic governance weaknesses and corruption vulnerabilities in Chad. It examines the nature and severity of governance vulnerabilities in the key institutional functions that are most relevant to a country's economic activity, including: (i) fiscal governance; (ii) the quality of market regulation; (iii) the anti-corruption framework; (iv) rule of law; and (v) anti-money laundering and combating the financing of terrorism (AML/CFT).²

4. The rest of the paper is organized as follows. The subsequent sections examine the governance vulnerabilities in each of the aforementioned key institutional functions. The last section concludes with policy recommendations.

B. Fiscal Governance

5. Strong fiscal governance is a key institutional function for economic activities and has three main components. Strong fiscal governance is particularly important in a natural resource dependent country, often prone to resource rents, and includes practices in: (i) revenue administration; (ii) public financial management; and (iii) fiscal transparency.

¹ Prepared by Arina Viseth (AFR), with thanks to Nusula Nassuna (LEG) Maria Cavalleri, Sylvain Ngeba, Jean-Pierre Nguenang, and Serge Ramangalahy (all FAD) for their inputs.

² The IMF governance framework also examines central bank governance and operations as well as oversight of the financial sector. However, those two areas have been excluded from the analysis given that their assessments are taking place more broadly at the CEMAC region.

C. Revenue Administration

6. The authorities have adopted reforms aiming at improving revenue mobilization while innovating in the digitalization of public services, making Chad the first CEMAC country to use standardized electronic invoicing. In 2022, the authorities adopted a tax administration reform strategy that aims at promoting transparent rules and digitalization. The strategy included the following: (i) assessment and publication of tax expenditures within the framework of the annual finance law; (ii) improvement of the communication with taxpayers and exchange of information between revenue collection agencies; and (iii) modernization and strengthening of tax administration through digitalization and improved staff training and working conditions.

7. While digitalization has enabled significant progress in revenue collection in a short period of time, further progress in digitalizing public services is important to fully reap its benefits. A lot has already been accomplished in terms of: (i) detecting potential taxpayers; (ii) gathering information on rights and obligations of taxpayers; (iii) establishing an advance withholding tax system; and (iv) setting a progressive system of administrative and judicial appeal. However, more needs to be done as weaknesses still exist, including with regard to: (i) low rates of filling tax returns and paying on time; (ii) the identification, recovery, and penalization of defaulters that are not yet automated; (iii) a lack of consultation between parties implying limited room for service improvement; (iv) an unreliable and incomplete taxpayer register and ineffective management of operational and institutional risks; and (v) a weak accountability and transparency framework which results in the weakness of the audit function.

8. In this context, the authorities should pursue their efforts to strengthen revenue administration, including through:

- Continuing the deployment of digitalization and implement digital solutions to facilitate tax declaration and payments, which will help increase convenience and reduce costs for taxpayers.
- Improving tax collection, notably by:
 - Broadening the tax base, by developing strategies targeting the taxpayer registry and by encouraging registration within the tax administration, increasing overall tax revenues.
 - Leveraging the analysis of data to foster operational efficiency and improving risk management capacity in tax collection.
 - Investing in training and resources for tax administration officials to improve skills in tax collection and control.
 - Conducting a thorough review of existing tax and customs exemptions to ensure they are effectively targeted and do not erode the tax base.
- Promoting organizational efficiency, notably by
 - Promoting peer-to-peer learning especially in terms of change management. The authorities could notably share their experience with their Cameroonian counterparts, who introduced the e-tax system in 2016.
 - Investing more forcefully in training the human resources department and provide the department with the means to be operational and effective in monitoring tax official's activities and enforcing penalties when needed.

- Promoting the enforcement of tax and customs law and enhancing capacity to fight tax evasion and avoidance, coupled with clear penalties for non-compliance.

D. Public Financial Management and Fiscal Transparency

9. Digitalization has also contributed to significant improvements in public financial management (PFM). The 2022-2027 PFM Reform Strategy includes measures aiming at addressing fiscal governance challenges, based on three pillars: the modernization, the digitalization, and the territorialization of PFM and public services. The computerized and integrated public finance management system (SIGFiP), which became operational in mid-2022, is contributing to the modernization of the process of maintaining and producing public accounts. SIGFiP's onboard controls, coupled with the gradual establishment of an internal control system, is also contributing to improving the quality of public accounts and their timely production. The territorialization of financial services is underway with the deployment of equipped containers in the provinces allowing the local deployment of the services of the Ministry of Finances. The adoption in February 2024 of a strategy and a roadmap for the implementation of the Single Treasury Account (STA) represents a significant step forward in the modernization of treasury management and its articulation with debt management.

10. Notwithstanding this progress, and based on a June 2023 IMF technical assistance mission, further efforts to improve the country's PFM remain necessary:

- ***The PFM framework remains weak, especially its implementation.*** Although the PFM legal framework is aligned with regional standards, it is fragmented at the level of implementing texts and does not constitute a comprehensive framework.
- ***Internal control is the most significant vulnerability.*** While important initiatives and efforts took place and implementation may take time to see the results, the current internal control system has shortcomings in risk management, with inaccurately or unreported expenditures and the quality of general accounting, including budgetary accounting, needs to be improved.
 - Although annual finance laws are regularly drafted, annual budget laws are not exhaustive and not detailed enough, and while a circular establishing the general State budget is adopted annually, it is done with delay.
 - There have been efforts in the creation of control structures, but implementation is yet to be seen. For example, the internal audit function was recently entrusted to the General Inspectorate of Finance (IGF). However, it has not yet been implemented. Both the Chamber of Auditors, which regained its powers as a Court of Auditors through the Constitutional reform of December 2023 and the organic law of February 26, 2024, and the IGF in its audit function do not yet fulfill their missions of ensuring that public funds are used appropriately due to limited resources and lack of independence.
 - Budget execution, which is carried out through SIGFiP, has been subject to excessive recourse to emergency expenditure procedures (DAO) for several years. The authorities adopted a decree in November 2023 that specifies the terms of the payment of DAO and the deadlines for their regularizations. Since the adoption of the decree the recourse to DAOs has been somewhat reduced but efforts need to continue.

- **Public access to key and current information on government service delivery performance remains limited.** Budget documents do not yet include all the revenues and expenditures of major state-owned enterprises, nor show the allocations of their earnings or information on their debts. Basic information on natural resource extraction awards was publicly available, and the authorities specified in law or regulation the criteria and procedures for awarding natural resource extraction contracts and licenses, but implementation of those regulations is weak. In addition, quarterly budget execution reports and annual accounting statements are produced and forwarded to the Chamber of Auditors within the Supreme Court, but delays remain. The adoption of the settlement laws for fiscal years 2014 to 2020 by the CNT in December 2023, the review of the settlement laws for 2021 and 2022 in October 2024, and the restoration of the Court of Auditors in its full attributions could provide opportunities for future improvement.

11. The authorities should therefore continue their efforts aimed at strengthening PFM, including through:

- **Improving budget processes**, including by: (i) including all revenues and expenditure in the budget documents, including information on the major state-owned enterprises; (ii) limiting further the use of DAO (notably by continuing to forcefully implement the provisions of Decree 3361 of November 26, 2023 concerning the DAOS) and strengthening expenditure programming; (iii) preparing quarterly commitment plans harmonized with the cash flow plans and communicating them to the sectoral ministries. Those plans should be executed and monitored through SIGFiP; (iv) strengthening the realism of the budget by basing budget projections on previous outturns; (v) reducing the long delays in the production of budget review laws, annual reports on the execution of the budget to strengthen accountability in PFM; (vi) improving and publishing within 30-45 days quarterly budget execution reports; (vi) creating a pivot account and defining the relevant sub-accounts (budgetary support accounts, new onshore oil royalties account) based on the AMS/X system with a view to start consolidating resources for the operationalization of the Treasury Single Account (TSA) at the BEAC; and (vii) implementing the Strategy and the roadmap for the implementation of the TSA in compliance with the order no. 026 of February 20, 2024.
- **Strengthening the governance of SOEs and of the mining sector, including by:** (i) disclosing the debt holdings of major state-owned enterprises and implementing the new legal framework for public establishments, state companies, public enterprises and independent administrative authorities that was adopted in September 2024; and (ii) enhancing implementation of the natural resource extraction laws and regulations.
- **Improving internal controls** by developing a strategy to gradually strengthen the internal audit function, within which the role of the IGF is clarified and strengthened.

- **Enhancing fiscal transparency**, including by: (i) continuing the deployment of digitalization; (ii) setting mechanisms to monitor budget implementation; (iii) expanding mechanisms during budget formulation to engage civil society organizations or any member of the public who wishes to participate; (iv) actively engaging with vulnerable and underrepresented communities directly or through civil society organizations representing them; (v) allowing civil society organizations to testify during public hearings on the budget proposal prior to its approval as well as on the Audit Report; and (vi) establishing formal mechanisms for the public to assist in developing its audit program and to contribute to relevant audit investigations.

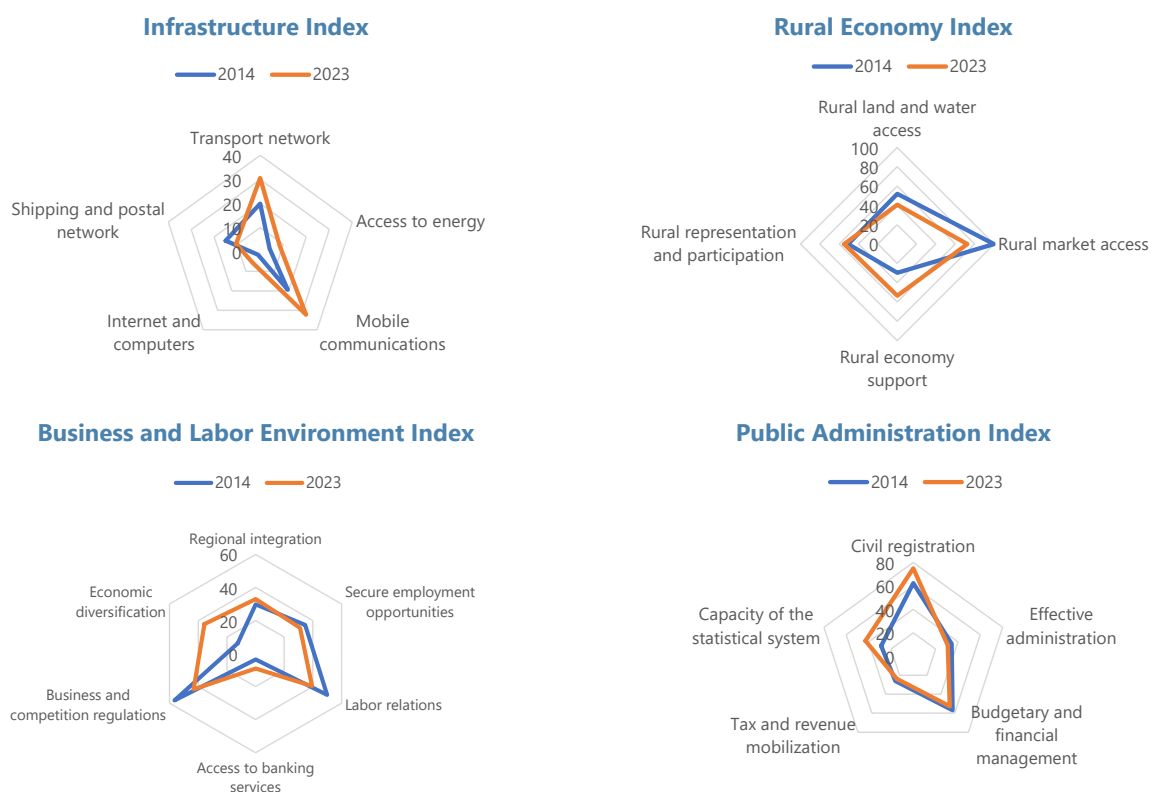
E. Quality of Market Regulation

12. Recent efforts have been undertaken to improve the quality of market regulation. In June 2024, the authorities launched the standardized electronic invoice, which marks a step forward in the modernization of economic practices, aiming at facilitating trade, improving tax transparency, and fighting fraud. It is expected to simplify administrative procedures, making businesses more efficient in managing their transactions. The ongoing digitalization of public services should also significantly improve public sector performance. In June 2024, the authorities and the World Bank launched a project aiming at deploying digitalization in all ministries, with implementation being monitored by a committee presided by the Prime Minister. Since June 2024, the authorities also multiplied cooperation with development partners such as the World Bank, the African Development Bank and the Islamic Bank to improve access to electricity and infrastructure (roads, schools).³ The authorities also launched in September a project “one drill one village” that aims at improving access to water in all villages.

13. But barriers to market entry still exist. Based on the Mo Ibrahim Foundation indicators, progress has been made from 2014–23 in terms of infrastructure (transport network, access to energy, mobile communication and internet and computer subindices show improvement).⁴ But barriers to market entry persist. In particular, there has been a deterioration over this period in terms of: (i) shipping and postal networks, (ii) rural land and water access; (iii) rural market access; (iv) business and competition regulations; (v) labor relations; and (vi) secure employment opportunities.

³ Following the May 2024 presidential elections, President Déby set as priorities improving access to basic services (water, electricity, education, and health), strengthening governance, and enhancing the business environment.

⁴ The Mo Ibrahim Foundation defines governance as “the provision of political, social, economic and environmental goods that a citizen has the right to expect from their state, and that a state has the responsibility to deliver to its citizens.” The Mo Ibrahim foundation indicators—which are data-based, not perception-based—cover several governance dimensions, from security to justice to rights and economic opportunity to health, currently providing the most comprehensive dataset measuring African governance.

Figure 1. Chad: Barriers to Market Entry

Source: Mo Ibrahim Foundation.

14. The authorities are therefore encouraged to adopt measures aimed at improving market access, including though: the promotion of partnerships with cargo airlines, creating a basic postal network accessible to all, and measures aiming at improving access to water, through water drillings initiatives “forages” and measures promoting purifying water techniques. These initiatives would facilitate commercial activities within the country but also across borders.

F. Anti-Corruption Legal and Institutional Framework

15. Over the last few years, the authorities have focused on strengthening the anti-corruption framework. In 2012, they launched an anti-corruption campaign resulting in the dismissal and arrest of several high-level officials and recovery of stolen assets. In 2018, Chad acceded to the United Nations Convention against Corruption (UNCAC). By doing so, the authorities committed to take measures to step up their efforts in their fight against corruption, including legal reforms, such as aligning the Penal Code with the Convention and to strengthen the fight against corruption. Moreover, legal and institutional steps to fight corruption have also been taken, including with regard to: (i) the judiciary; (ii) the Cour des Comptes, which sits with the Supreme Court and is responsible for supporting the implementation of the finance law; (iii) an audit office in the Office of the President, which conducts inspections, audits and investigations to ensure the sound and transparent management of public finances; (iv) the new independent Anti-Corruption Authority created in November 2023; and (v) finally, Articles 72 and 104 of Chad’s Constitution

require several categories of public figures and State agents, including the president and members of the parliament, to be subject to financial disclosure and declare assets when they take up and leave their post.⁵

16. Based on the Mo Ibrahim Anti-corruption Index, while implementation of the anti-corruption framework broadly improved between 2014 and 2023 there was a setback in the implementation of anti-corruption mechanisms (see text table). The Ibrahim anti-corruption

Index provides quantifiable measures of governance performance drawn from several independent sources. It is composed of sub-indices that assess: (i) anti-corruption mechanisms; (ii) absence of corruption in state institutions; (iii) absence of corruption in the public sector; (iv) public procurement

	2014	2023	Change
Anti-Corruption Index	15.4	22.7	7.3
Anti-Corruption Mechanisms	9.8	3.6	-6.2
Anti-Corruption Investigation	25	0	-25
Anti-Corruption Policy	14.3	14.3	0
Anti-Corruption Bodies	0	0	0
Absence of Corruption in State Institutions	10.5	11.4	0.9
Absence of Corruption in the Public Sector	3.7	12.5	8.8
Public Procurement Procedures	37.5	62.5	25
Absence of Corruption in the Private Sector	15.8	23.8	8

Source: Mo Ibrahim Foundation.

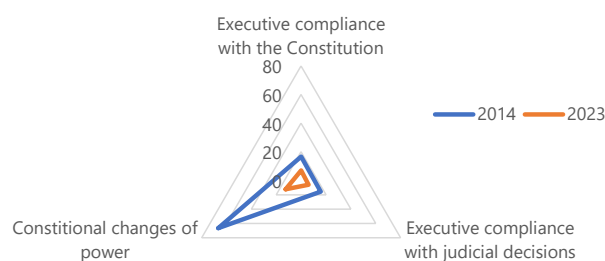
procedures; and (v) absence of corruption in the private sector. Each sub-index is itself based on several sub-categories that provide quantifiable measures of output and outcome of policy rather than declaration of intent, or de jure statutes. More particularly, the setback in the implementation of anti-corruption mechanisms was driven by setback in the implementation of anti-corruption investigation.

17. The implementation of the anti-corruption framework has not been effective due to deficiencies, inadequate resources, and personnel constraints. According to the World Bank's 2023 country private sector diagnostic, the legal anti-corruption framework suffers from several deficiencies, including anti-corruption initiatives being perceived as politically motivated. Also, the institutional framework around which anti-corruption efforts have been undertaken includes several bodies that are yet to be assessed. As with other state bodies, these anti-corruption bodies face considerable resource and personnel constraints in meeting their objectives and challenges of independence. It is still early to determine the impact of the new anti-corruption framework.

⁵ The responsibilities of the new Anti-Corruption Authority include preventing and punishing acts of corruption while strengthening ethics within the public sphere.

18. An effective asset declarations system is yet to be implemented. Asset disclosures can promote transparency and high ethical standards in public service, hence developing and maintaining public trust and confidence in government and public institutions. However, the asset declaration regime in Chad remains largely unenforced. According to the World Bank 2023 country private sector diagnostic, the enforcement of the legal requirement has met several challenges including resource constraints and the absence of a well-equipped and independent agency to implement this requirement.

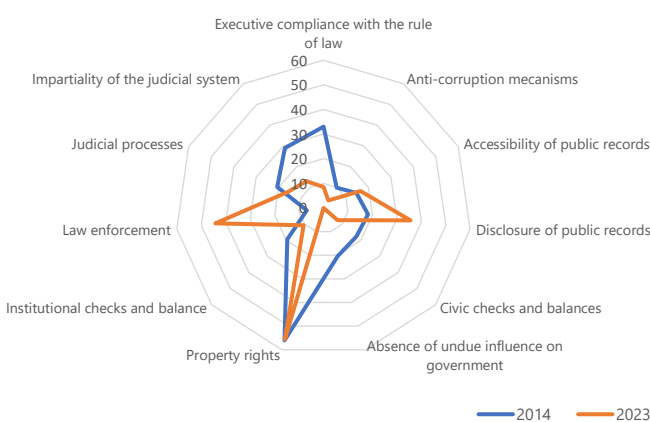
Executive Compliance with the Rule of Law Index



Source: Mo Ibrahim Foundation.

19. The authorities need to intensify their efforts to strengthen further the anti-corruption framework and its implementation, including through: (i) aligning, with the support of the UN, the Penal Code with the UN Convention; (ii) implementing an asset declaration regime in line with applicable international good practices; (iii) developing an implementing legislation and establishing a well-equipped agency to ensure the application and assessment of anti-corruption measures to combat corruption in public institutions; and lastly (iv) forcefully implementing the anti-corruption framework.

Security and Rule of Law Index



Source: Mo Ibrahim Foundation.

G. Rule of Law

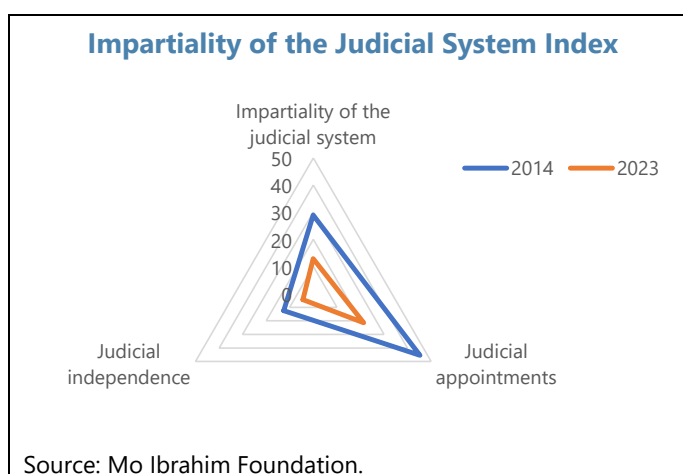
20. Based on Mo Ibrahim governance indicators, the impartiality of Chad's judiciary system deteriorated over the last ten years both in terms of impartiality and independence.

The Mo Ibrahim Security and Rule of Law index shows that between 2014 and 2023, impartiality of the judicial system, judicial processes, and executive compliance with the rule of law deteriorated (text figure). In particular, while separation of power exists institutionally, the Mo Ibrahim Impartiality of the Judicial System index indicates that judicial independence and judicial appointments deteriorated between 2014 and 2023 (text figure).

21. Property rights protection needs to be strengthened. According to the 2023 World Bank country private sector diagnostic, land conflicts and instances of land expropriation are facilitated by

a lack of formal land titles across much of rural Chad and by widespread corruption in the court system and land administration.

22. Stronger efforts are therefore needed to ensure the upholding of the Rule of Law, include through: (i) the forceful implementation of the legal framework to enable the independence and impartiality of the judiciary; and (ii) the creation of digital public platforms such as a land register, to facilitate the implementation of property rights and increase transparency, hence reducing the risks of corruption.



H. AML/CFT Framework

23. The country underwent an evaluation of its AML/CFT framework against the AML/CFT standards in 2023⁶. The evaluation, conducted by GABAC (Action Group against Money Laundering in Central Africa), assessed the country's level of compliance with the internationally recognized AML/CFT standard - namely the Financial Action Task Force (FATF) 40 FATF recommendations – and the effectiveness of Chad's AML/CFT regime. Results of the evaluation were summarized in a report that is publicly available.

24. The GABAC evaluation report points out that while Chad has taken some steps to update its legal and regulatory framework to combat money laundering and terrorist financing (ML/TF), important shortcomings remain. In particular, the current framework does not designate a competent authority or authorities to supervise designated nonfinancial businesses and professions (DNFBPs) for AML/CFT purposes, and the effectiveness of the country's AML/CFT system was low. This was due to some strategic shortcomings, as indicated in the GABAC report:

- The understanding of ML/TF risks is still low in Chad, and the country does not have a national AML/CFT strategy nor an AML/CFT coordination authority or mechanism.
- The capacity for financial intelligence gathering and financial investigation is also limited. The country's financial intelligence unit, the ANIF (National Agency for Financial Investigation), receives a relatively low number of suspicious transaction reports. These reports are mainly filed by financial sector reporting entities. As a result, very little information is transmitted by other reporting entities (namely the DNFBPs, and virtual asset service providers- VASPs). Most financial investigations result from complaints filed by the General State Inspectorate (IGE) on embezzlement of public funds. However, the ML component of these activities is not looked into

⁶ The mission took place in May 2022. The evaluation was conducted by GABAC ("Groupe d'Action contre le Blanchiment d'argent en Afrique Centrale") and published in July 2023 by GABAC, which is the FATF style regional body for Central Africa. The report can be found at <https://www.fatfgafi.org/en/publications/Mutualevaluations/Mer-Chad-2023.html>

by the investigating authorities which are not familiar with the conduct of parallel investigations. This is due to a lack of training in the conduct of ML/TF investigations as well as insufficient physical, financial and logistic resources, such as computer hardware and systems.

- Seizure of the proceeds and instrumentalities of predicate offenses is effective, but their ultimate confiscation less so. Statistics on seizures and confiscations are not regularly kept, and when they are kept this is done manually and in a dispersed manner. The government agency responsible for administering seized and confiscated property has not yet been set up. As a result, property seized is not properly administered and is often diverted during the procedure.
- While the country has been experiencing acts of terrorism since 2015⁷ and has proceeded to the prosecution of their perpetrators, there has been no conviction for TF so far, due to difficulties in identifying, investigating, and prosecuting cases of TF. The staff of existing specialized services are not sufficiently trained and equipped for CTF purposes and are not familiar with the conduct of parallel financial investigations.
- Financial institutions, in particular banking institutions, have a better understanding of their ML/TF risks and their AML/CFT obligations than other reporting entities but need to strengthen the implementation of AML/CFT preventive measures. Customer due diligence (CDD) obligations are not satisfactorily implemented by financial institutions owing to difficulties faced in collecting information on beneficial owners of their customers. DNFBPs have limited knowledge of their AML/CFT obligations and do not implement CDD measures.

25. Moreover, Chad does not yet have mechanisms to identify and collect information on BOs of legal persons in the company register. The country has an appropriate legal framework for mutual legal assistance and extradition. However, the level of cooperation remains insufficient in practice, as the country has not granted nor requested mutual legal assistance or extradition in relation to ML/TF. Only ANIF has been able to document a few cooperation actions among which those specific to ML/TF were limited. Chad does not also have clear procedures for the prioritization, timely treatment and monitoring of international cooperation requests.

26. Further efforts are therefore needed to ensure that the country is able to fight money laundering and terrorism financing, including money laundering related to corruption offenses, in an effective way. Policy recommendations include making public procurement more transparent, which implies identifying and collecting information on the beneficial owners of these markets and publishing this information. Upstream, it will be important to fully digitalize public procurement procedures through the effective implementation of the e-procurement project, currently being developed with the support of development partners. The authorities should also ensure the implementation of the main recommended actions made by the GABAC evaluators in their 2023 report.

⁷ The most recent ones took place in October and November 2024.

I. Conclusion

27. The analysis of governance challenges in Chad across the several areas identified by the Governance framework underscores the need for a comprehensive set of economic governance reforms and strong anti-corruption measures. While a lot of positive advancements have been noted, notably in terms of fiscal governance, much remains to be done and deployment efforts need to continue to fully reap the benefits of digitalization. Moreover, improving market regulation, making effective the implementation of the anti-corruption framework, upholding the rule of law, and combating money laundering and terrorism financing will also be necessary to support and promote a private sector led economic growth. The analysis also encourages the authorities to deepen and expand the assessment of vulnerabilities and recommendations through the conduct of an IMF governance diagnostic mission.

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ASSESSING THE MACRO-CRITICALITY OF GENDER GAPS IN CHAD¹

This paper takes stock of gender gaps in Chad, providing a comparison across different countries and regions, and illustrates their macro-criticality in Chad. The paper also estimates the potential cost of child marriage in terms of lost real GDP growth (2.8 percent a year). Core policy advice aims at reducing gender-based violence and early marriage, while promoting women's economic empowerment. Key policy measures include the promotion of schools dedicated to girls, school feeding programs, and more particularly in remote and rural areas, literacy centers with vocational trainings.

A. Introduction

1. **Despite the authorities' efforts over recent years, gender disparity in Chad remains elevated.** Important causes of gender inequality include early and forced marriage, limited access to education and employment, and gender-based violence. The country's heightened vulnerability to climate change exacerbates pre-existing disparities, and economic factors, such as the lack of financial resources and social protection, inadequate healthcare infrastructure and the overrepresentation of women in the informal sector, further and exacerbate gender disparities.
2. **This paper takes stock of gender gaps in Chad and empirically assesses their macroeconomic impact.** It establishes the macro-criticality of gender disparities by evaluating gender gaps in key indicators and compares gender gaps across different countries. Using analytical tools recently developed by the IMF, the paper estimates the potential GDP cost of child marriage.
3. **The paper is organized as follows.** Section B provides a brief summary of the existing literature on the macro impact of gender gaps. Section C gives an overview of the gender disparities in Chad and recent efforts by the authorities to address them. Section D assesses the macroeconomic impact of gender disparities in Chad by estimating the GDP costs of child marriage. Section E concludes with policy recommendations.

B. Literature Review

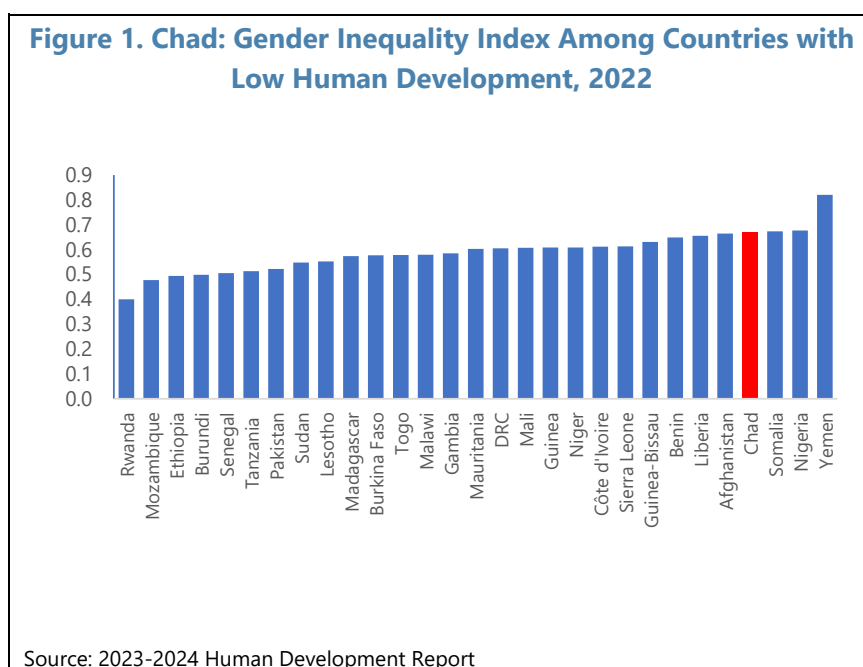
4. **Recent studies have highlighted the far-reaching economic impact of gender disparities on labor force participation, economic growth, and diversification.**
 - Ostry et al (2018) find that with an initial Female Labor Force Participation (FLFP) rate of 25 percent, and an elasticity of substitution between males and females of 0.75, closing gender gaps in LFP increases GDP by 80 percent. When the initial FLFP is 60 percent, and an elasticity of substitution between males and females of 2, closing LFP gender gaps increases GDP by 10 percent.
 - Kazandijan et al (2016) show that gender inequality decreases the variety of goods countries produce and export, especially in low-income and developing countries.

¹ Prepared by Arina Viseth (AFR).

- Mishra et al (2020) have quantified the relationship between child marriage and economic growth. Applying a simultaneous equations model, the analysis shows that if child marriage were eliminated, long-term annual per capita real GDP growth in emerging and developing countries would increase by 1.05 percentage points.
- Frabrizio et al (2020) find that, in low-income countries, education policies and cash transfers increase female labor force participation and growth.²
- The literature has also explored the impact of: (i) reducing gender gaps and financial inclusion on growth (Cihak and Sahay, 2020); (ii) reducing gender gaps on instability and fragility, and poor governance (Caprioli, 2005; Branisa and others, 2013; Sahay, Cihak et al, 2018); and (iii) the economic costs associated with violence against women (Ouedraogo and Stenzel, 2021).

C. Taking Stock of Gender Gaps in Chad

5. Gender gaps in Chad are estimated to be among the highest in SSA. This is reflected in two indicators measuring gender gaps: the Gender Inequality Index (Figure 1) and the Gender Gap Index (Table 1).^{3,4}



² It is also worth noting that many studies have found a negative impact of child marriage on educational attainment and literacy (Field and Ambrus, 2008; Nguyen and Wodon, 2015a; Nguyen and Wodon, 2015b; Wodon, Nguyen and Tsimo 2015)

³ UNDP's Gender Inequality Index (GII) is a composite metric of gender inequality using three dimensions: (i) reproductive health, (ii) empowerment, and (iii) the labor market. It ranges from 0, when women and men fare equally, to 1, when one gender fares as poorly as possible in the three dimensions.

⁴ The World Economic Forum's Global Gender Gap Index measures gender inequality based on the relative gaps between women and men across 4 key areas: health, education, economy, and politics. It ranges from 0 to 100 and can be interpreted the percentage of the gender gap that has been closed.

Table 1. Chad: Gender Gap Index and Subcomponents, 2024

	Overall Gender Gap Index	Subindexes			
		Educational attainment	Economic participation and opportunity	Health and survival	Political empowerment
SSA	68.4%	88.9%	68.1%	97.1%	22.6%
Chad	57.6%	66.7%	50.6%	97.0%	16.1%

Source: Global Gender Gap Report 2024.

6. Gender gaps exist in opportunities and in outcomes. Gender disparities exist in opportunities, which include access to education, health, protection from violence, finance, and legal rights, as well as in outcomes, such as labor force participation, entrepreneurship, and employment and decision-making. Using the gender gap subindexes and other data sources, we examine those different angles below.

Gender Gaps in Opportunities

- **Access to education.** According to the 2024 Global Gender Gap report, Chad is the country with the lowest educational attainment scores in the world, with low performance across all dimensions (Table 2). These findings align with data from the World Bank indicating a literacy rate of only 20 percent among women ages 15 and above.
- **Health and survival.** Health indicators show that a significant share of women have experienced violence in their lifetime, and early marriage rates are much higher in Chad than in SSA (Table 3).

Table 2. Chad: Gender Gap Indicators – Education, 2024

	Rank	Score
Educational attainment	146th	0.667
Literacy rate (percent)	143rd	0.527
Enrolment in primary education (percent)	126th	0.831
Enrolment in secondary education (percent)	141th	0.597
Enrolment in tertiary education (percent)	135th	0.394

Source: Global Gender Gap Report, 2024.

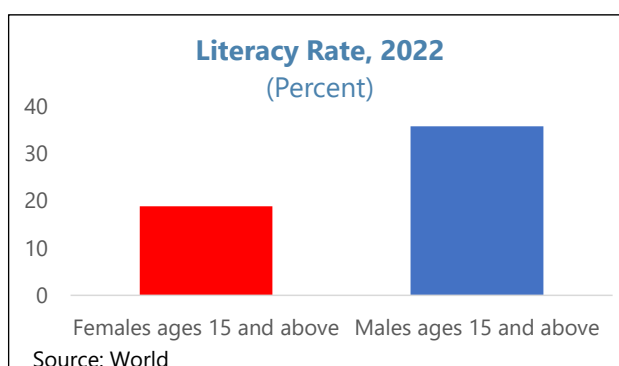
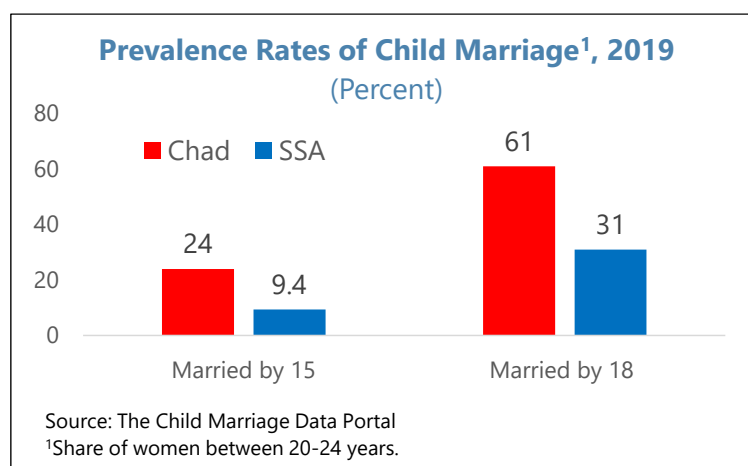


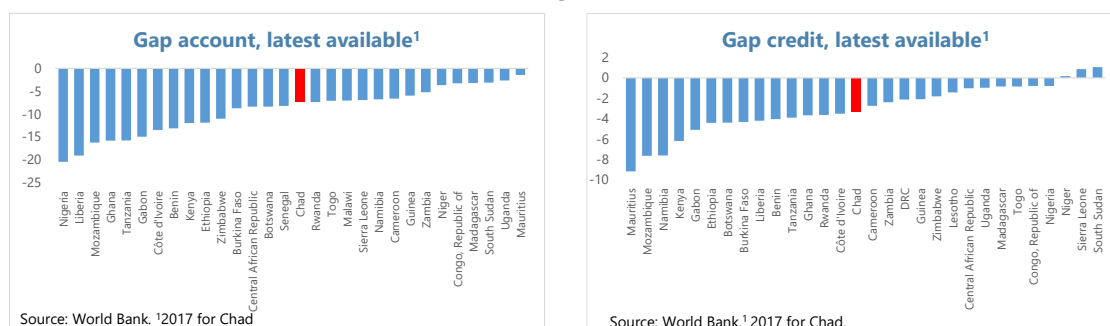
Table 3. Chad: Gender Gap Indicators – Health, 2024

Health	2024 Value
Prevalence of gender violence in lifetime (percent women)	16
Births attended by skilled personnel (percent live births)	38.8
Maternal mortality (deaths per 100,000 live births)	1.06
Total fertility rate (births per women)	6.26

Source: Global Gender Gap Report, 2024.



- **Access to finance.** Data shows that more men than women own a bank account in Chad, and that the gender gap is among the largest in SSA (Table 4).

Table 4. Chad: Gender Gap Indicators – Access to Finance

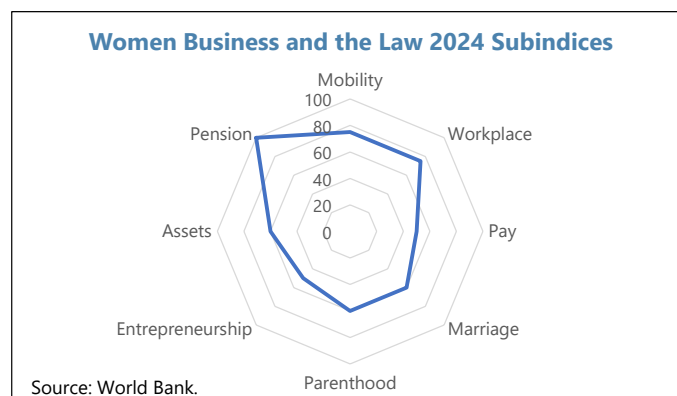
- **Access to legal rights.** The Women Business and the Law (WBL) index score in Chad stands at 66.3, below the SSA regional average of 72.6 (Table 5).⁵ Low scores are observed in WBL

⁵ Several questions were scored across eight indicators, which are mobility, workplace, pay, marriage, parenthood, entrepreneurship, assets, pensions. Overall scores are calculated by taking the average of each indicator, with 100 representing the highest possible score.

subindexes, reflecting constraints on freedom of movement, in laws influencing women's decisions to work, laws impacting women's pay, constraints related to marriage, regulations affecting women's work after having children, limitations on women starting and managing businesses, as well as gender gaps in property and inheritance.

Table 5. Chad: Gender Gap Indicators – Access to Legal Rights

Women Business and the Law Index, 2024 (0-100 best)	
Chad	66.3
SSA	72.6
Source: World Bank.	



Gender Gaps in Outcomes

- Economic participation.** Based on the Economic Participation and Opportunity Index, Chad achieves about 50 percent gender parity, which is comparable to Mali but lower than Niger where the Economic Participation and Opportunity Index stands at 66.4 percent (Table 6). The labor force participation gaps and employment gaps are in fact among the highest in SSA. When women work, they mostly do so in the informal sector, in subsistence agriculture, where they are over-represented. Income gaps reflect the undervaluation of women's work, with almost half of the overall earned income gap yet to close. Moreover, only 22 percent of the gender gap in Chad has been closed in professional and technical professions, and only 12 percent of firms have women among their top managers.

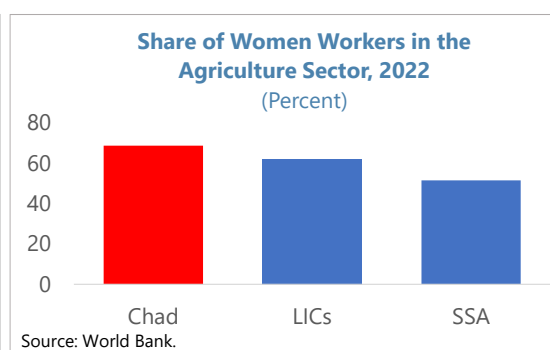
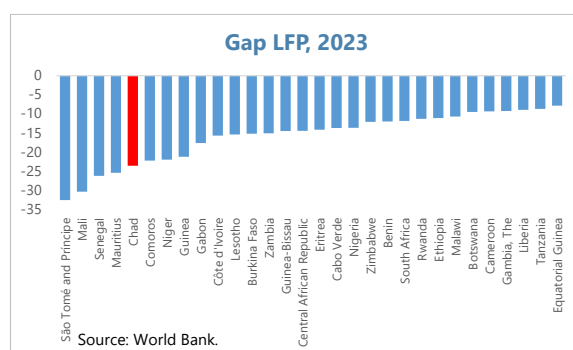
Table 6. Chad: Gender Gap Indicators – Economic Participation, 2024

	Chad, 2024		Niger, 2024		Mali, 2024	
	Rank	Score	Rank	Score	Rank	Score
Economic participation an opportunity	134th	0.506	91st	0.664	135th	0.495
Labor force participation rate (percent)	106th	0.677	94th	0.712	117th	0.625
Wage equality for similar work (percent)	123rd	0.478	n.a.	n.a.	55th	0.672
Estimated earned income (international \$1000)	105th	0.551	104th	0.555	122nd	0.451
Professional and technical workers (percent)	140th	0.217	131st	0.406	137th	0.258

Source: Global Gender Gap Report, 2024.

	Chad 2024	Niger 2024	Mali 2024
Work participation and leadership			
Firms with female majority ownership (percent firms)	7.7	8.9	9.1
Firms with female top managers (percent firms)	12	10.6	11.6
Share of workers in informal sector (percent firms)	96.92	73.57	94.03
Advancement of women to leadership roles (1-7, best)	3.54	n.a.	4.27

Source: Global Gender Gap Report, 2024.



- **Women in decision-making positions.** Based on the political empowerment index, about 35.3 percent of the gender gap in parliament has been closed.⁶ The gender gap in ministerial positions is higher, with a parity score of 20.8.

Table 7. Chad: Gender Gap Indicators – Decision-Making Positions, 2024

	Rank	Score
Political empowerment	99th	0.161
Women in parliament (percent)	77th	0.353
Women in ministerial positions (percent)	96th	0.208
Years with female / male head of state (last 50)	80th	0

Source: Global Gender Gap Report, 2024.

Some Recent Efforts but Stronger Implementation is Needed

⁶ This index measures the gap between men and women at the highest level of political decision-making. It is assessed based on the ratios of women to men in ministerial positions, in parliamentary position, and in terms of years in executive office (prime minister or president) over the last 50 years. Differences between the participation of women and men at local levels of government are not yet captured.

7. In recent years, the authorities, together with development partners, have taken several policy measures and initiatives aimed at addressing gender inequality. These policies and programs promote gender-sensitive approaches, seek to empower women and girls, and increase their economic participation in various sectors.

- **Gender quotas in politics.** Chad adopted in March 2021 a gender quota, which reserves 30 percent of seats in the National Assembly and local councils for women, aiming at increasing women's representation in political decision-making bodies. While there has been some improvement in the recent governments that took place during the transition period, quotas have yet to be fully met and will be closely examined in the coming legislative elections, expected at the end of 2024.
- **National Gender Policy.** Chad adopted a National Gender Policy in September 2017. The National Gender Policy outlines strategies and actions to promote gender equality and women's empowerment across various sectors, including education, health, and economic development. In 2023, Chad adopted its first National Action Plan for the period 2023-2027, which aims at reinforcing the role of women in peacekeeping processes and the prevention and resolution of conflicts.⁷ Implementation of the national gender policy and action plan are however constrained by limited resources as well as social and cultural impediments.
- **Education Initiatives.** The authorities, with support from development partners, launched several initiatives to improve girls' access to education. For example, the World Food Program (WFP) helps the authorities provide a nutritious daily meal. This program has shown excellent results in strengthening the retention of girls in school, especially adolescent girls, preventing early marriage and delaying the age of the first pregnancy. However, the WFP needs more financial resources to continue and expand this program across the entire country.
- **Economic Empowerment Programs.** Programs and projects have been established to support women's economic participation, such as vocational training, microfinance initiatives, and small-scale entrepreneurship opportunities. For example, in 2020, the Ministry of Finance created a credit guarantee fund of CFAF 30 billion (or about US\$50 million) providing guarantees for entrepreneurship loans for women and youth in key economic sectors, such as agriculture and new technologies. While the loans also benefit from tax exemptions for five years, only a few have been granted so far. This reflects banks' risk aversion, a lack of awareness of the population regarding the existence of those funds, lack of support along the entrepreneurship process, and weak financial literacy, which makes applying for those funds very challenging, especially for those who need them the most.
- **Healthcare Services.** The authorities and development partners work to improve women's access to healthcare services, particularly maternal and reproductive health. For example, UNFPA's current programs target reducing the maternal mortality rate, and aim at strengthening

⁷ The National Action Plan development process began in 2019 and built on proposals made by over 200 women leaders. It was drafted and validated by various ministries and stakeholders.

capacity at the Ministry of Public Health, including through the provision of technical skills, medical equipment, and reproductive health commodities. Moreover, in December 2023, the Islamic Development Bank and the Lives and Livelihoods Fund, in partnership with the Ministry of Health and UNICEF, launched a US\$48.4 million health initiative, aiming at making health services more accessible in areas that have been the most excluded.

- **Legal Reforms.** Efforts have been made to improve women's legal rights, by addressing inheritance rights and the legal age of marriage in the civil code, by introducing paid leave for women and banning the dismissal of pregnant workers in the labor code, and by ensuring that women entrepreneurs can sign a contract and can register their business in the same way as men. However, those laws remain to be enforced effectively. In practice, women still face discrimination when looking to rent a house, when requesting a divorce, or when qualifying for credit.
- **Gender-Based Violence (GBV) Prevention.** The authorities have put in place a national legal framework that criminalizes domestic violence and sexual harassment. A national campaign aiming at preventing gender-based violence, including early marriages, started in 2015, and in 2016 the Ministry for Women adopted a roadmap against gender-based violence including early marriages. Initiatives to combat gender-based violence include awareness campaigns, legal assistance for survivors, and dialogues with religious and traditional authorities which started to partake. However, gender-based violence still exists across all provinces, which resulted in a revision of the roadmap. On January 31, 2024, UNICEF in partnership with the Ministry of Women opened a workshop validating a revised roadmap for the period 2024-2026.
- **Rural Development.** Rural development programs aim to address gender gaps in rural areas, where many women are engaged in agriculture. These initiatives provide support for women farmers, access to agricultural inputs, and training on sustainable farming practices. For example, SWISSAID is promoting the full involvement of women in their rural communities in several provinces to improve agricultural production and income, through literacy courses, and information about their rights. These types of activities would need to be expanded.
- **Women's Empowerment Centers.** Women's Empowerment Centers have been established in various regions of Chad to provide skills training, literacy programs, and resources for women. These centers help women to develop income-generating skills and build self-confidence. For example, UNESCO through its Capacity Development for Education Program (CapED), is supporting women, and youth through literacy and vocational trainings. UNFPA, together with the World Bank, is currently leading the Sahel Women's Empowerment and Demographic Dividend Project (SWEDD) which aims at empowering women through education.
- **Data Collection and Research.** Efforts are being made to improve data collection and research on gender-related issues. In 2022, the authorities, together with the UNFPA created the Observatory for the Promotion of Equality and Gender Equity (OPEG), which aims at collecting, producing, centralizing, and disseminating its analyses to the government and other development partners. However, OPEG is yet to be fully operational.

D. Empirical Analysis

8. Section C highlighted that gender gaps in Chad are very significant in many aspects. It is notably worth noting that child marriage in Chad is particularly high compared to the region and to the world.

9. This section uses the recently developed IMF gender tool to assess the macro-criticality of gender gaps in Chad by estimating the GDP cost of child marriage. The tools use indicators consistent with the growth literature as described in, e.g., Sala-i-Martin et al., 2004. The model follows Mitra et al. (2020), which was the first paper to empirically examine the impact of child marriages. Based on this approach, this section examines how the persistently high rate of child marriage in Chad is impacting the country's per capita growth. The analysis considers various channels through which this influence could occur. These channels, identified by Wodon et al. (2017), include health, education, fertility, labor force participation, and decision making.

10. The results below indicate that eliminating child marriage in Chad could lead to a 2.8-percentage points increase in economic growth. Child marriage is therefore a significant impediment to economic growth in Chad. Merely reducing child marriage rates to the SSA average level could increase GDP growth by 1.2 percentage points. These findings underscore the significant economic consequences of child marriage in Chad and highlight the potential benefits of addressing this issue for the country's economic growth and development.

Table 8. Chad: Regression Results

Variable Label	Coefficient	*	Value	Comparison	Baseline	Model Result	Impact of Change
Child marriage (t)	-0.04	**	70.00	41.03	-2.80	-1.64	1.16
East Asia dummy	0.42		0.00	0.00	0.00	0.00	0.00
Fraction of tropical area	-0.36		1.00	0.97	-0.36	-0.35	0.01
Human Capital Index (t)	0.07			1.36		0.10	
Life expectancy at birth (t)	0.02		48.00	50.32	0.96	1.01	0.05
Log of the per capita GDP (t)	-1.63	***	3.00	3.06	-4.89	-4.99	-0.10
Relative price of investment (t)	-0.08		2.00	1.61	-0.16	-0.13	0.03
Share of extractable commodities in total exports	0.00		5.00	14.97	0.00	0.00	0.00
Share of government consumption (t)	-0.02	**	24.00	13.97	-0.48	-0.28	0.20
Trade openness (t)	0.00		31.00	51.85	0.00	0.00	0.00

Source: IMF Staff Calculations.

E. Addressing Gender Gaps

11. Addressing gender gaps in Chad would require a multi-faceted approach involving policy measures as much as awareness campaigns. Policy recommendations include the following:

- **Establish gender budgeting across all the ministries.** The legal framework, reforms and diverse national strategies are facing implementation challenges partly due to the lack of financial resources. Gender budgeting would therefore help ensure resources are collected and spent in the areas that are most relevant and needed for promoting gender parity.
- **Intensify efforts to promote girls' access to education, or at least literacy, especially in rural and remote areas.** This requires developing and implementing policies and programs aiming at promoting girls' enrolment and retention in schools, and more particularly in remote and rural areas, the creation and expansion of literacy centers supported by vocational trainings. In remote and rural areas, literacy centers allow basic education and combined with some vocational trainings, would help ensure girls are equipped with the skills for future income-generating activities. The creation of primary, middle, and high schools specifically dedicated to girls supported by school feeding programs would also greatly benefit girls' education, as they help retain children at schools, reduce early marriages and domestic violence.⁸ Other practical measures include ensuring girls' bathroom in schools, hiring women teacher to promote mentoring, and financial incentives through targeted cash transfers or conditional scholarships.
- **Promote women's and girls' access to health care and improve maternal health.** Better health outcomes matter in terms of increasing education levels and returns to education. For example, a hungry child will not have the same performance at school than a child that had a meal. A child's health is also linked to her mother's health. Policy recommendations includes continuous work with development partners, such as UNFPA, in order to (i) ensure infrastructure in rural and underserved areas; (ii) improve the quality of health care services; and (iii) more awareness campaigns to promote maternal health.
- **Pursue efforts to promote women economic empowerment.** Activities aiming at women's empowerment could be reflected explicitly in the National Development Plan, which could promote: (i) agricultural and artisanal activities, especially in rural areas; and (ii) activities in the environment's exploitation, conservation, and preservation. This would imply: (i) more decision making from women in these sectors; (ii) greater access to water; (iii) greater access to agricultural inputs; (iv) more vocational trainings that would help women, especially in rural areas, feel and be empowered (basic trainings such as sewing activities for women sanitary towels can go a long way); and (v) the implementation of various sustainable development strategies, a national environmental action plan, and the adoption of a national environmental policy. Those measures would support the participation of women in income generating

⁸ Including boarding schools.

activities aiming at removing women from subsistence activities and extreme poverty, regardless of their marital status.

- **Continue to promote at the national level, women in decision-making roles.** Improving women's representation in decision making calls for the continuing application of quotas, in addition to giving real opportunities to women to enter leadership positions. This requires more training and capacity-building programs for women interested in pursuing political careers and/or positions of leadership but also a stronger willingness within male leaders to delegate tasks to female colleagues and provide them with real work opportunities.
- **Organize awareness campaigns and strengthen implementation of the legal framework and diverse national strategies and programs.** Reducing gender gaps in Chad is inevitably conditional on a strong and continuous engagement with traditional and community leaders to ensure: (i) more awareness of the importance of girls' education, and as such, more sanctions to be taken in case of violations related to early marriages, genital mutilations and domestic violences, and (ii) more recognition of women leaders within those communities. Engagement with these leaders would support and ensure the implementation of existing national strategies and development partners' various programs, in areas such as maternal health and the prevention of domestic violence. Preventive measures to avoid potential conflicts resulting from those changes in norms, such as a mediation mechanism at the community level, in close collaboration with traditional leaders and village chiefs could also help. Finally, strong interaction and communication with traditional leaders call for development partners to adapt their approach. For example, promoting women economic empowerment can be threatening and interpreted as a questioning of traditional values; hence, finding a way to communicate and convince traditional leaders requires diplomatic skills but also greater knowledge of those traditions and the context.
- **Establish a social registry to better target social transfers.** A digital social protection system would be more effective at targeting the most vulnerable, i.e., often women in areas most vulnerable to climate change or in areas where a humanitarian crisis takes place (women refugees or in areas hosting refugees resulting from the Sudan crisis). This would imply the continuation and expansion of current initiatives aiming at the deployment of biometric IDs for all, which is an initiative already undertaken by partners such as UNICEF and UNHCR (particularly in refugees receiving areas) and digitally incorporate this data in the unique social registry, already set up by INSEED.

12. While the Chadian authorities have undertaken various initiatives and collaborations with international partners in these areas in recent years, much remains to be done, including in terms of effective implementation. Continuous efforts, collaboration with international organizations and NGOs, and strong commitment from the authorities, civil society, and especially from all the traditional and religious leaders across the country, are essential to advance toward gender parity.

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