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BLIND SPOTS

The Green Transition and the IMF's Economic Surveillance

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EXECUTIVE SUMMARY

The IMF has increasingly acknowledged the necessity of countries pursuing effective climate change adaptation and mitigation policies, which not only make environmental good sense but are also necessary conditions for macroeconomic stability in the medium- and long run. To aid countries in developing such policies, the organization conducts regular surveillance missions that evaluate economic policy environments and—per recent organizational decisions—are meant to include climate considerations. Analysis of 2023 IMF surveillance reports for Colombia and Indonesia finds evidence for concern. First, environmentally damaging austerity measures are prioritized even when key climate risks are recognized by the IMF. Second, green industrial policies, even though a key element of the green transition, are not given meaningful consideration in the IMF's analyses. Finally, coverage of climate risks receives only a highly cursory examination.

To address these shortcomings, Recourse calls for urgent changes at the IMF in five directions: pursuing more systematic coverage of climate issues in the development of policy recommendations; appropriately sequencing the IMF's engagement, so that fiscal policies are not designed before the organization has ascertained the level of financing needs for climate change adaptation and mitigation; expanding the policy horizons of economic recommendations, so that its proposals are simultaneously economically sound, aligned with climate change adaptation and mitigation goals, and socially just; reviewing its toolkit's appropriateness to tackle long-term challenges; ensuring wider engagement with CSOs working on 'macro-critical' issues.

INTRODUCTION

Extreme climate events the world over have prompted countries to scale up their climate change adaptation and mitigation efforts. Recognizing the profound economic implications of environmental degradation and the green transition, the International Monetary Fund (IMF) has tried to position itself as part of the solution to this policy problem in different ways. In the context of its lending activities, the IMF sought to take into account climate vulnerabilities in the design of reforms for borrowing countries—these are issues covered in depth in a separate recent report by Recourse (Stubbs and Kentikelenis 2023). But beyond lending, the IMF also has a key role in shaping the economic policy environments of countries in the Global South by monitoring their economic policies and advancing policy recommendations. The ensuing 'Article IV reports' are centrally important for countries, as they give signals to international capital markets on whether their economic policies are 'credible' and this—in turn—affects the availability and cost of credit for cash-strapped developing countries.

The IMF's economic surveillance offers a key instrument for countries to evaluate preparedness for climate shocks and for anticipating and pre-empting the adverse economic implications of a warming planet and the associated mitigation efforts. Through regular consultations between government authorities and IMF staff, countries can take stock of whether their economic policy environments are aligned with the principles of a just green transition and identify what types of reforms are needed in order to make that happen. In particular, the IMF has been explicitly prioritizing the 'modernization' of its surveillance modalities in light of climate risks (IMF 2021b, 2021c, 2022d). In practice, this has also meant a proliferation of instruments to deliver on climate issues, as the IMF's climate analyses also draw on the Country Climate and Development Reports (CCDRs) of the World Bank, which in turn collectively feed into the IMF's design of policies for countries that turn to it for support from its new Resilience and Sustainability Facility. This active engagement by the IMF also reflects an acceptance that failure to act on climate change adaptation and mitigation will generate medium- and long-term balance of payments problems, which the organization has a core mandate to help countries alleviate.

These developments at the IMF could hold momentous implications for developing countries. At best, climate-sensitive economic surveillance can help countries devise appropriate macro-economic policies to reach Paris Agreement targets(UNEP 2022)[1]. In addition, following the IMF's recent emphasis on social spending and gender inclusion issues (IMF 2019a, 2022g), these recommendations can become part of holistic approaches to ensuring that the green transition is also socially just.

The promise of the IMF's climate-sensitive economic surveillance is clear, but what does the most recent evidence reveal? A previous analysis undertaken by Recourse in 2022 found reason for 'cautious optimism' on how the IMF had started to incorporate climate considerations into its surveillance apparatus (Stubbs and Kentikelenis 2022b). That study revealed sophisticated work underpinning the IMF's treatment of climate, which fed into a more foregrounded analysis of how climate risks intersect with economic policies. Even so, the IMF staff's analyses appeared mostly ad hoc, rather than emanating from a systematic framework that deals with different types of economic risks (physical, transition, and spillover). Relatedly, inherent trade-offs in countries' pathways towards the green transition were given only short shrift. Finally, the IMF's main policy advice vis-à-vis climate mitigation centered primarily around carbon taxes, without giving adequate consideration to other policies—like public investment in renewables or incentives for the renewable energy market—that could bring about a shift away from fossil fuels and a phase-in of renewables.

This report tackles the same questions on the IMF's engagement with climate risks in its surveillance activities but with more up-to-date evidence. The analytical focus is on Article IV consultations and Financial Sector Assessment Programs of Colombia and Indonesia in 2023. These countries were selected given the importance of fossil fuels and extractive industries for their economic development models. In addition, they stand out for their extensive climate vulnerabilities, ranking 97th and 98th in global rankings (University of Notre Dame 2023). Thus, Colombia and Indonesia serve as appropriate testing grounds to evaluate whether the IMF's revamped surveillance apparatus has lived up to its promise.

[1] Nationally Determined Contributions and long-term low greenhouse gas emission development strategies (LT-LEDS) in many cases fall short of being fully Paris-aligned .

PROMISE AND PERFORMANCE OF RECENT CLIMATE-RELATED IMF SURVEILLANCE

Fiscal policy between austerity and climate concerns

Both Colombia and Indonesia have followed the IMF's recommendations closely on fiscal policy. Indeed, Colombia reduced public expenditure more than required in its own fiscal rules, which the IMF itself helped design in the past. In addition, Indonesia met its spending targets one year earlier than expected, partly because of windfalls due to high global commodity prices, yielding approximately 1% of GDP from oil, gas, and mining. Such revenue sources are, on the one hand, conducive to meeting budgetary targets, but they are also implicit endorsements of fossil fuels and extractive industries as a means for attaining fiscal stability, while muting their long-term damaging environmental consequences.

The IMF also remains a staunch advocate for overhauls of energy subsidies, a policy it has promoted for decades (Kentikelenis and Stubbs 2023), and prescribed the realignment of domestic fuel prices with those on international markets. The wholesale removal of such subsidies might present a step towards reducing the consumption of fossil fuels, but it can also have a range of adverse consequences. First, there is a distinction between consumer and producer subsidies, as the latter can be a boon to industry and delay its decarbonization efforts (Saalbrink and Amerasinghe 2021). In particular, agreements by Indonesia with private energy producers to compensate them to the tune of $1.2 billion per year for their excess energy capacity is a de facto producer subsidy draining the public budget with no social or environmental benefits (Prasetiyo et al. 2023).

Second, such an approach directly undermines the likelihood that the green transition will also be a just one. This is because these measures disproportionately affect poorer households, whose energy spending accounts for a high proportion of their outlays, and neglect concerns about energy access

for many households in the Global South, which could be addressed through renewable energy. Distributionally regressive measures like wholesale consumer subsidy removal often generate public discontent against rising prices, which may prompt governments to abandon such policies altogether. To be sure, the IMF has long pointed out that energy subsidy removal frees up public resources that can then be used on targeted redistributive measures. While this is a possibility, there is no guarantee that low-income households will necessarily gain access to such social assistance measures, given complex eligibility rules and bureaucratic hurdles.

In other words, the IMF's rationale is predominantly focused on pricing mechanisms that would prompt decreased reliance on fossil fuels. Pricing mechanisms are certainly important, but they alone are unlikely to help countries meet just transition objectives. This has been acknowledged by the IMF itself: recent research has highlighted the importance of 'increas[ing] domestic capabilities in low-carbon manufacturing' (Prasad et al. 2022a) and the role of non-market policies (like research and development subsidies) in this process (Bettarelli et al. 2023)

Further, any energy market interventions—precisely because of their direct impact on the income distribution and their potential for political destabilization—need to be accompanied by distributional impact assessments. The IMF has employed such a tool in the recent past. For example, it quantified how different economic policies would impact each income decile in the case of Ecuador (IMF 2022c). Yet, such an analysis was altogether absent from the recommendations to Colombia and Indonesia.

Overall, it appears that the IMF restricts its understanding of fiscal policy dimensions of climate issues to a short-term perspective. That is, it considers as climate-friendly those measures, like energy subsidy removal, that may also have a positive immediate impact on a country's balance of payments stability. However, there is no attempt at scrutinizing how different fiscal policies may affect longer-term balance of payments stability, which the IMF—through its resilience and sustainability facility—considers as part of its job.

The untapped potential of green industrial policies

In the IMF's analysis of both Colombian and Indonesian economies, the role of export diversification is explicitly recognized and foregrounded. In the case of the former, this would entail reduced dependence on its oil, gas, and coal exports, which currently account for over half the country's exports. Similarly,

Indonesia is advised to reduce reliance on its coal exports. These are appropriate recommendations and reflect the underlying reality that over-reliance on fossil fuel exports is unlikely to provide a reliable source of export earnings in the future, thus contributing to the balance of payments instability. This is because industrialized countries—key export markets—are shifting towards renewable energy sources and are planning or considering carbon border taxes, which would decrease demand.

Given that export diversification is considered desirable by the IMF, how is it to be achieved? One obvious solution is through reliance on green industrial policies. Such policies have already been successfully employed by high-income countries in recent years. For example, the Inflation Reduction Act in the United States and the Green Deal in the European Union both seek to foster domestic manufacturing in renewable energy and a host of other green technologies. This approach is also fully in line with the arguments by IMF staff who recognize the central importance of industrial policies to increase domestic renewable energy manufacturing capacities (Prasad et al. 2022).

However, the promise of green industrial policies remains a blind spot in the IMF's economic surveillance activities. Colombia is explicitly cautioned against pursuing import substitution measures or other protectionist policies, instead urged to pursue a 'market-oriented strategy' (IMF 2023).

Yet, this neglects Colombia's underwhelming experience with the role of private companies in the energy transition, which encounters strong opposition from local communities. Instead, industrial policies developed by the government in consultation with the relevant stakeholders can offer a more sustainable and equitable path forward. For example, the Ministry of Environment and Sustainable Development in Colombia is working on a *comunidades energéticas locales* project to enhance community participation in energy projects and to share in its revenues.

Green industrial policies have been adopted by Indonesia. As the world's largest nickel ore producer, the country sought to move up the value chain to higher value-added activities and therefore imposed an export ban on raw nickel. This policy effectively imposed a domestic processing requirement, and soon bore fruit: foreign direct investment in nickel smelters shot up, quadrupling nickel export earnings in just three years and providing formal sector jobs. However, the IMF was skeptical of this approach and called for phasing out export restrictions and not employing them for other commodities. In other words, notwithstanding evidence of the early success of Indonesia's industrial policy, the IMF remains wedded to the notion that the green transition should rely on market mechanisms.

To be sure, there are tensions inherent in these policies: while Indonesia's experience with nickel extraction may provide a promising template for the development and funding of some industrial policies that can help feed into the green transition, the country has also suffered extensive socioecological impacts through this process, not least because of their reliance on captive coal (Recourse 2023; Trend Asia 2023b, 2023a). The social and environmental impacts related to large-scale mining may limit the prospects of this option for industrial development of Southern countries and must be assessed in the institution's analysis.

Cursory treatment of climate risks

The IMF's treatment of climate risks in its economic surveillance missions was limited. In Colombia, in the context of the country's Financial Sector Assessment Program the primary focus was on stress-testing for the financial sector related to transition and physical risks. This approach fed into recommendations for introducing a risk-focused analysis into financial sector supervision. Yet, further coverage of climate issues was very limited. It is worth noting that the modelling exercise on fossil fuel phaseout is a good step forward in the institution providing sound evidence for countries to design green and just transition pathways, but efforts should further concentrate on developing costing projections for climate-related investments or conducting model simulations of the likely impact of climate change adaptation and mitigation policies

In the case of Indonesia, climate change was primarily discussed in relation to mitigation issues, while a modelling exercise quantified the macroeconomic costs of meeting the country's different climate commitments. In this context, the organization recognized the limited climate budget allocation, yet failed to join the dots between this and the highly cautious fiscal stance that it advised the country to pursue, as we saw above. Beyond this discussion, there was very limited coverage of climate adaptation measures and spillover transition risks. For example, while the IMF acknowledged the risks emanating from failing to pursue adaptation policies, these were not properly quantified and integrated into the analysis.

CONCLUSIONS AND RECOMMENDATIONS

In sum, the findings point to important progress in the IMF's coverage of climate issues, but also three persistent blind spots. First, fiscal policy recommendations—like the fiscal and environmental merits of phasing out energy subsidies—view climate issues through the lens of pricing mechanisms. This approach is inadequate on two levels: it neglects non-pricing mechanisms and energy market interventions that also hold promise to decrease reliance on extractive industries; and it does not foreground just transition objectives, which may be undermined by crude fiscal policy tools. Second, the role of green industrial policies is underappreciated in the IMF's advice. Notwithstanding IMF research documenting the significance of such policies to complement more market-driven approaches, the IMF's recommendations continue to favour market solutions to climate problems—even though they have been shown deficient in Colombia and even though active government intervention in Indonesia generated favourable economic outcomes. Finally, the physical, transition, and spillover risks associated with climate change receive only cursory coverage. While the importance of climate-sensitive financial regulation is acknowledged, there are few efforts to properly quantify necessary investments or the cost of inaction on adaptation and the green transition.

These blind spots suggest much room for progress in the IMF's treatment of climate issues in economic surveillance missions. Progress on this front can start in three directions:

1. **Systematizing coverage of climate issues:** The IMF should make faster progress towards integrating coverage of climate change adaptation and mitigation issues in its treatment of climate change, including by developing a template for these operations and appropriate guidelines. These changes should be pursued following wide consultations with countries and civil society and should envisage wide consultations during the surveillance missions. In doing so, the role of Article IV report is to elaborate on the wide range of policy options and their trade-offs, rather than propose narrow policy agendas. Trade-offs to be analysed should not be limited to

environmental ones, but also take the just transition seriously, thus integrating discussions of economic policy, climate change adaptation and mitigation, and multidimensional inequalities.

2. **Sequencing of the IMF's engagement:** Before proposing fiscal policy recommendations, the IMF needs to undertake a thorough review of climate issues. This process requires integrating the evidence and recommendations from the Climate Macroeconomic Assessment Programs (CMAPs), which are currently being reviewed by the organization. Only once a CMAP has quantified financing needs for climate change adaptation and mitigation, can the IMF proceed to promote certain fiscal policies accordingly.
3. **Expanding policy horizons:** The IMF's role in its surveillance missions should be that of a trusted, impartial advisor, aiding countries to develop policies that are simultaneously economically sound and aligned with climate change adaptation and mitigation goals. In doing so, the organization has a responsibility to consider a wide range of policy options. For example, developing green industrial policies that have energy access at its heart is a key step for building sustainable and prosperous futures. In addition, structural interventions in markets can create the right incentives for moving away from fossil fuel consumption without the adverse distributional consequences of energy subsidy removals for consumers. Failure to consider these types of policy options is a disservice to the countries under surveillance.
4. **Review of the toolkit appropriateness to tackle long-term challenges:** As the IMF expanded its work to longer-term challenges, it must review the effectiveness of its technical toolkit to provide policy advice. Ensuring longer-term horizons, the use of longer-term risk modules in DSAs, and proper analysis of trade-offs between short- and long-term needs must be clearly stated and approached with evidence-based recommendations.
5. **Ensuring wider engagement with CSO:** As the IMF gets more involved in 'macro-critical' issues, it must ensure public consultation so that CSOs can provide feedback into how the institution should work on these new issues. As the work expands to longer-term challenges, this should be an opportunity to engage with a wider CSO community.

CASE STUDY I:
COLOMBIA

Economic Context

Colombia is an upper-middle income country of 52 million people. Its $344 billion economy—or $6,630 in per capita terms—is the fifth largest in Latin America and the Caribbean (World Bank 2023e). Prior to the Covid-19 pandemic, Colombia had experienced stable economic growth averaging 3.8% per year for two decades. This performance was underpinned by the diversification of its domestic industrial base with the rise to prominence of shipbuilding, electronics, tourism, textiles, construction, and mining sectors. Nonetheless, externally the Colombian economy remains commodity dependent. Its crude oil and coal exports represented 55% of all exports in 2022, which was 17 percentage points higher than in 2006; agricultural products like coffee, cut flowers, bananas, and palm oil composed 15% of all exports in 2022; and coal contributed about (IMF 2023c). Economic gains have also been heavily concentrated in large cities like Bogotá, Medellín, Cali, and Barranquilla, whereas most rural regions remain severely underdeveloped. Indeed, Colombia remains one of the most unequal countries in the world, with a Gini coefficient of 51.5 (World Bank 2023d), and still faces high levels of poverty, at 39.3% of the population based on the national poverty line (World Bank 2023e).

Colombia has an economic policy framework anchored on inflation targeting, a flexible exchange rate, and rule-based fiscal management—and has received consistent approval from the IMF and World Bank for its track record of prudent macroeconomic management. The country's' reputation for strong economic fundamentals is also evidenced by its qualification for the IMF's premium Flexible Credit Line, a precautionary one-to-two year non-ex post-conditionality loan facility reserved only for countries with a sustained track record of implementing IMF-sanctioned policies and continued commitment to maintain such policies in the future (IMF 2015). Colombia has entered into nine consecutive such programs since 2009, effectively participating in them for over 14 consecutive years. Nonetheless, a sticking point for the IMF has been the amount of fiscal resources the government has dedicated to fuel subsidies, estimated at about 2.6% of GDP in 2022 (World Bank 2023a).

The Covid-19 pandemic stalled economic progress in the country, with the economy shrinking by 7.3% in 2020, the largest recession on record. The national poverty rate also increased from 35.7% in 2019 to 42.5% in 2020, wiping out over a decade of progress (World Bank 2022). The government at the time responded with a 7.5% fiscal stimulus (3.6% in 2020 and 3.9% in 2021), temporarily suspending central and local government fiscal rules to accommodate emergency spending and support to vulnerable households and firms (IMF 2021a). As a result, the primary budget balance deteriorated from a 0.4% surplus in 2019 to a 5.0% deficit in 2020. But the economy has since

rebounded, reaching 11.0% growth in 2021 and 7.5% in 2022. The primary budget deficit has also declined, driven by higher tax collections (due to stronger-than-expected economic growth), oil-related revenues, and reductions in fuel subsidies (World Bank 2023d).

Table 1. Key economic indicators for Colombia

				Estimate	Forecasts	
	2019	2020	2021	2022	2023	2024
Economic growth / Real gross domestic product growth (%)	3.2	-7.3	11.0	7.5	1.0	1.9
Balance of payments: Current account balance (% of GDP)	-4.6	-3.5	-5.6	-6.2	-5.1	-4.6
Foreign exchange reserves (months of imports)	12.3	9.9	7.8	8.2	8.4	8.6
Public debt (% of GDP)	52.4	65.7	64.0	63.6	62.0	61.1
Primary budget balance (% of GDP)	0.4	-5.0	-4.8	-1.1	0.6	0.4
Inflation (% of consumer price index, period average)	3.8	1.6	5.6	13.1	8.4	3.5

Sources: IMF (2023b).

However, the Colombian economy is not without issues. The country is currently suffering from a high debt-to-GDP ratio, at 62%, which acts as a drain on fiscal resources in order to service the debt Public debt repayments represented 7.3% of GDP in 2022 and are projected to increase to 8.8% by 2026. A substantial portion of this debt service are repayments to the IMF itself—0.2% of GDP in 2023, rising to 1.1% by 2027—following government drawings of $5.4 billion from the Flexible Credit Line in December 2020 to provide support for the budgetary response to the Covid-19 pandemic (IMF 2023b). Figures for external debt service as a share of exports of goods and services is 63.8% in 2022, reaching 91.9% by 2027.

Inflation also reached 13.1% in 2022, driven by strong aggregate demand, crop losses due to heavy rains, and currency depreciation (World Bank 2023d). In turn, inflation—especially for food—has eroded labour income gains and is offsetting reductions in poverty from economic growth. In order to control inflation, the central bank has also increased the monetary policy rate to 13.25% (incrementally from 1.75% in September 2021), which is forecast to repress economic growth (Bocanegra and Vargas 2023).

Nonetheless, there is still reason for much optimism in Colombia. The presidential elections in June 2022 resulted in victory for Gustavo Petro of the

socially leftist coalition Pacto Historico—and is the first leftist presidency in Colombia's history. Upon taking office, the new administration signalled its high ambitions for an energy transition by prioritizing the diversification of exports to reduce the country's dependence on oil, gas, and coal (Bocanegra 2022). In November 2022, Congress then approved a progressive tax reform law worth around 1.3% of 2023 GDP that included—inter alia—an annual wealth tax, higher duties on oil and coal exports, a windfall tax for oil and gas companies, and an increase and broadening of the scope of the carbon tax, which came into force from January 2023 (Deloitte 2022; Vargas 2022; World Bank 2023d). These new tax revenues are slated to fund anti-poverty efforts, free public university, and other social welfare programs (Janetsky 2022).

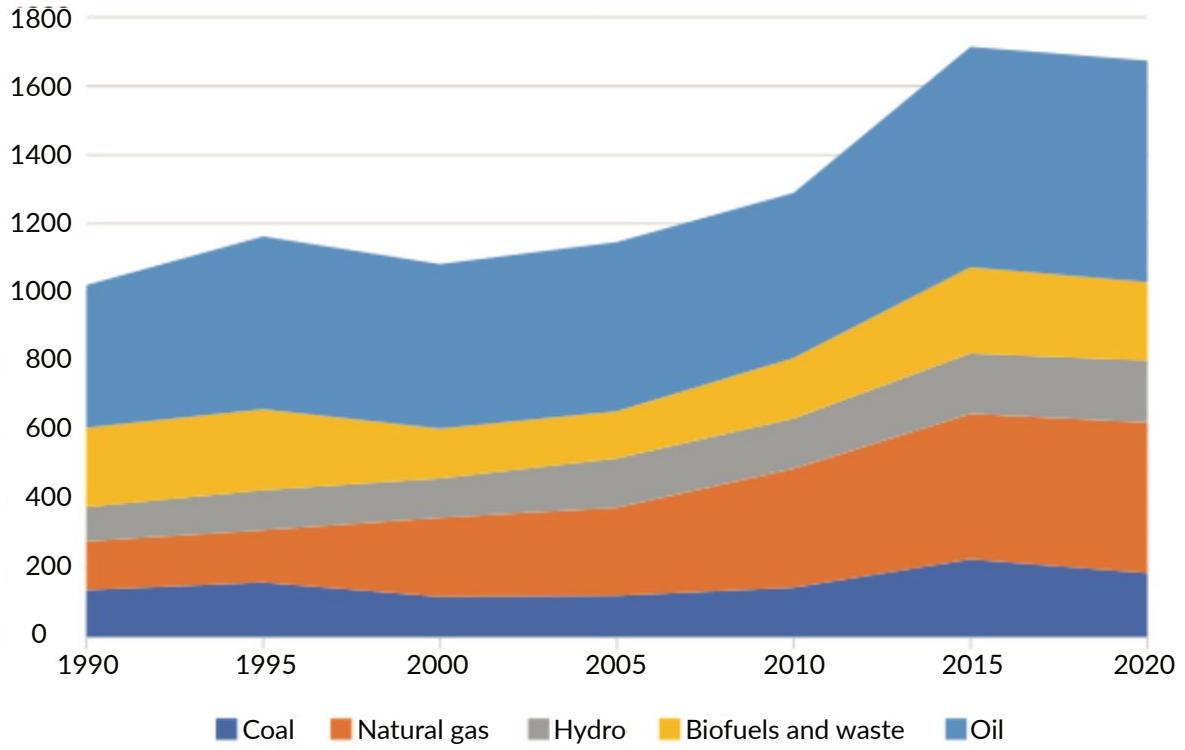
Climate Mitigation

Colombia has developed a strong set of institutional arrangements to mitigate greenhouse gas emissions, foremost of which is the National Climate Change Policy (Government of Colombia 2017b). Under this framework, a portfolio of projects with a financing envelop of about 1.5% of GDP is dedicated to sustainable infrastructure, nature-based solutions, and bioeconomy (IMF 2022a). The policy also laid out a planning cycle for its proposed actions, including the formulation of long-term national strategies such as the Low Carbon Development Strategy, National Strategy for the Reduction of Emissions Due to Deforestation and Forest Degradation, and the Strategy for Climate Financing (Government of Colombia 2017a, 2019a, 2019b). The government also introduced a carbon tax through Law 1819 in December 2016, set at about $5 per ton of carbon dioxide, but it had only a marginal effect on both emission reductions and revenue collection prior to its 2022 reform—reducing emissions by an estimated 1/100th of Colombia's annual greenhouse gas emissions and raising about 0.03% of GDP annually since its inception (World Bank 2023a). In 2018, Law 1931 was enacted that required all ministries to generate Comprehensive Sectoral Climate Change Management Plans, which should identify and evaluate measures to mitigate greenhouse gases and adapt to climate change in the policies and regulations of the respective ministry's sector. For example, the Ministry of Mines and Energy committed through its plan to reach maximum emissions in 2023 and to achieve lower emissions in 2030 than those in 2015 (IMF 2022a). Colombia also submitted its updated Nationally Determined Contribution to the Paris Agreement in 2020, pledging to reduce emissions by 51% below the business-as-usual emissions by 2030 (Government of Colombia 2020a). More recently, in December 2021 the country enacted Law 2169 that—inter alia—enshrines a net zero emissions by 2050 target into law and proposes reductions in deforestation to zero and in black carbon emissions by

40%. And in August 2022, the newly elected president Gustavo Petro pledged to put climate change at the top of his political agenda, already moving to ban fracking (Climate Action Tracker 2023).

To put these ambitions in context, Colombia is the world's 35th largest emitter, contributing 0.54% of global greenhouse emissions in 2020 (the most recent year for which data is available) (World Resources Institute 2023a). But compared to the size of its economy, Colombia's emissions are relatively low—indeed, emissions per output are lower than 69% of countries—largely on account of its extensive use of hydropower for power generation and limited carbon-intensive manufacturing (Sever and Perez-Archila 2021). By sector, energy comprises the greatest proportion of emissions, at 32.6%, followed by land-use change and forestry (30.8%), agriculture (25.3%), waste (6.6%), and industrial processes (4.7%). Land-use emissions in particular are driven by deforestation to clear space for livestock rearing, palm oil plantations, and illegal coca plantations (World Bank 2021). Agricultural emissions are linked to enteric fermentation, livestock manure, and the use of synthetic fertilisers (Climate Transparency 2021a).

Figure 1. Total energy supply in Colombia, by source



Sources: IEA (2023a).

IIn terms of the energy mix, Figure 1 shows that 76% of Colombia's energy needs are currently being met by fossil fuels, primarily from oil (38%) and gas (26%) (IEA 2023a). Particularly notable is the rapid growth in the use of fossil gas, which has

increased by over 12 percentage points since 1990, when it composed only 14% of the energy supply. Despite this, the overall share of fossil fuels in the total energy supply has stagnated at about 75% since 2000, with the increase in gas counterbalanced by slight declines in coal and oil shares in the energy matrix. Non-fossil fuel energy sources include 10% from hydropower and 14% from biofuels and waste, which has declined significantly from its 23% share in 1990. Not pictured is wind and solar energy sources, which combined make up less than 0.5% of the energy mix.

Colombia's power sector is dominated by hydro sources, at 71%, followed by fossil gas (14%), coal (9%), oil (4%) and biomass (2%) (Climate Transparency 2021a). However, heavy reliance on hydro renders the power system vulnerable to the El Niño Southern Oscillation. For instance, droughts during the 2015-2016 El Niño caused severe stress to Colombia's electricity system, resulting in hydropower generation being replaced by coal, gas, and oil sources. To address this issue, Colombia launched its Energy Plan 2050 in 2016, which aims to diversify the country's electricity mix to include wind power plants, solar photovoltaic, and geothermal energy (Government of Colombia 2016a; World Bank 2021). But after holding successful renewable energy auctions for new wind and solar parks since 2019, some of these projects have been delayed due, in part, to concerns expressed by indigenous communities over land rights (Climate Action Tracker 2023). This presents a challenge that is not exclusive to the renewable energy sector, as fossil fuel projects have also encountered resistance from local communities (Democracia Abierta 2021).

It remains to be seen whether the scaling-up of renewable energy can offer both a green and economically viable pathway, especially when pitched against the potential foreign exchange and revenue opportunities available to the government by exporting largely untapped oil and fossil gas reserves—or indeed whether a renewable energy industry would be attractive enough to local communities such that they would forego the economic opportunities available to them in the cocaine supply chain. To this end, the Ministry of Environment and Sustainable Development is working on a comunidades energéticas locales project to enhance community participation in energy projects and to share in its revenues.

Climate Adaptation

Colombia ranks 97th of 185 countries in the ND-GAIN index, which measures exposure, sensitivity, and ability to adapt to the impact of climate change (Notre Dame Global Adaptation Initiative 2023). While the country routinely experiences extreme weather events linked to El Niño Southern Oscillation

phases (i.e., droughts during El Niño and floods during La Niña), such events are occurring with greater frequency and intensity due to climate change.

The country is especially vulnerable to the physical risks of climate change and variability due to its dependence on agriculture. The sector represents an important source of income for many Colombian households, as 17% of the labour force is engaged in agriculture either for domestic consumption or export (Portafolio 2020), yet is facing a significant increase in droughts—an estimated 2.2 times more frequent than in previous years—leading to water supply shortages (World Bank 2021). Indeed, coffee crop farms are already moving to higher elevation areas due to increased heat and reduced precipitation, and may become unviable under future climate change scenarios (Wight 2021). In addition, water provision is heavily reliant on glacial melt, which under rising temperatures are projected to continue to recede (World Bank 2021). Water shortages will also threaten domestic energy supplies, as the country relies on a consistent supply of water for hydroelectric power.

The 2015-2016 drought, for example, left the Magdalena river—a major power source for the country—with its lowest ever recorded flows; and the Colombian government earmarked over $1 billion (4.2 billion pesos) to combat the drought, dedicating half to delivering potable water to affected areas and the other half to containing forest fires (World Bank 2021). The greater frequency of and intensity of floods and landslides are also affecting millions of households and infrastructure in highland areas, where the majority of the country's (predominantly urban) inhabitants lie, due to increased surface run-off from snow melt and rainfall on degraded forest ecosystems (World Bank 2021). Economic damages from floods have been substantial. For example, the heavy rains in 2010-2011 caused over $6 billion in damages to crops and infrastructure (World Bank 2021).

Colombia's National Climate Change Policy of 2017 serves as the country's overarching policy instrument in which adaptation objectives are articulated across all sectors of the economy (Government of Colombia 2017b), building on principles developed in the country's landmark National Adaptation Plan of 2012 (and the updated 2016 Plan) and the National Plan of Disaster Risk Management Strategy (Government of Colombia 2012, 2016b, 2020c, 2022). In relation to adaptation, the National Climate Change Policy essentially aims to incorporate climate change and disaster risk management into both public and private decision-making, and to advance a climate-resilient development path that reduces the physical and transition risks of climate change. This institutional framework for adaptation explicitly recognizes the need to integrate disaster, climate, and land use management challenges as a way to safeguard the welfare and sustainable development of the country, and ensures it is implemented

through a decentralized system of intergovernmental councils and committees under the National Risk Disaster System (World Bank 2021). Reflecting these policies, the Colombian Nationally Determined Contribution prioritises adaptation efforts in water resource management, climate-smart agriculture, economic planning, ecosystem conservation and restoration, and climate change governance, but does not identify financial needs for implementing these priorities (Government of Colombia 2020a, 2020b). Most recently, the new government now has plans to accelerate implementation of climate adaptation commitments, particularly water management.

Almost 40% of Colombia's population lives in poverty and 30% suffers from food insecurity and malnutrition (UN World Food Programme 2023; World Bank 2023e), issues that are likely to be exacerbated by the impact of climate change. These communities will be disproportionately affected by climate risks such as rising temperatures, more variable rainfall, and more frequent extreme weather events, since they are both more exposed to such impacts and have fewer resources with which to adapt. They will also be most prone to the altered range, seasonality, and distribution of water-borne illnesses such as cholera and diarrheal disease and vector-borne diseases such as malaria, zika, and chikungunya (World Bank 2021).

To facilitate a just transition, the government announced in November 2022 that it would publish a roadmap in May 2023 for a just energy transition centred on principles of equity and democratisation (in practice defined as universal and affordable access), gradualness, sovereignty and reliability, binding social participation, and knowledge intensiveness—but this has since been postponed until February 2024 (Ambiente 2023). Moreover, a key target area for solar parks will be in current coal mining areas, in order to circumvent job losses in the coal industry occurring as a result of mitigation measures (Climate Action Tracker 2023) .

IMF Surveillance and Recommendations

To what extent is the policy advice in IMF bilateral surveillance consistent with enabling Colombia to transition away from dependence on fossil fuels? How are policy challenges related to transition management and cross-border risks addressed in the context of the country's highly ambitious climate agenda? And is such advice aligned with a just transition that safeguards the rights and needs of the poorest in society? We examine these questions based on analysis of the most recent staff report for the Article IV consultation and background documentation (IMF 2023b, 2023c), focusing on key climate-related policy areas.

Fiscal policy

IMF advice on fiscal policy has the potential to impact Colombia's progress on achieving climate commitments and addressing transition risks. The IMF endorses a major fiscal consolidation in 2023 that would see the central government primary balance shift from a -1.1% of GDP deficit in 2022 to a 0.6% of GDP surplus in 2023 (or -5.5% to -3.8% of GDP for the overall balance), following on from the narrowing of the primary deficit in the previous year by 3.7 percentage points as Covid-related spending was rolled back. Adjustments in both years are much larger than is required for the central government to remain within limits prescribed by the country's fiscal rule.

This rule was revised in the 2021 in Law 2155 (the Social Investment Law), which linked structural fiscal deficit targets to debt levels, as suggested by the IMF during a series of technical assistance missions. Regardless, the IMF also recommends that further improvements to the fiscal balance should be made up to 2026 in order to reduce public debt, but the Colombian government disagreed with the need to tighten beyond the fiscal rule in the medium term—and have decided not to pursue this path. The 2023 adjustment is to be achieved primarily by measures on the revenue side.

Progressive tax reforms introduced in November 2022—including an annual wealth tax, higher duties on oil and coal exports, an increase and broadening of the scope of the carbon tax, an oil and gas windfall tax, and changes that stop fossil fuel companies from deducting royalties or dividends from taxes—are expected to yield up to 1.3% of GDP. Revenues will also be supported by dividends and taxes from the majority state-owned energy company Ecopetrol, providing around 3% of GDP, on account of the high oil prices in 2022, and will allow for an expansion in social spending by around 2% of GDP.

At a time when expenditure on climate adaptation and mitigation measures needs to be scaled up, fiscal consolidation represents a threat to Colombia transitioning away from fossil fuel dependence and achieving their climate commitments—which the IMF fails to explicitly recognize. The IMF stated in the previous year's Article IV report that "the introduction of new environmental taxes can support the government's green recovery plans by creating room for continued investment in key climate-related areas" (IMF 2022a, 19), but the impact of new revenue sources is nullified when the IMF supports fiscal consolidation beyond what the country's fiscal rule necessitates—and is all the more perplexing given the organisation helped design the rule.

Furthermore, while the 2022 tax reform earmarked 80% of carbon tax proceeds for climate action to be allocated through *Fondo para la Sustentabilidad y la Resiliencia Climática* (FONSUREC), the World Bank estimates that with the current tax design revenues will increase by only 0.04% of GDP by 2028 (World Bank 2023a). The IMF fails to mention FONSUREC or the underwhelming revenue implications of the carbon tax in both the 2022 and 2023 Article IV reports, representing a major omission. According to the World Bank (2023a, 57), "much of FONSUREC's impact will therefore depend not only on the design of the carbon pricing regime, but also on its ability to efficiently allocate its resources to where the impact is highest, its ability to leverage private investment, and its capacity to create a pipeline of investable projects." Assessing such impact via modelling of various scenarios is where the IMF could fruitfully employ its expertise.

Given the IMF's positive assessment of the Colombian economy as one with "very strong fundamentals and policy frameworks … and capacity to respond to shocks" (IMF 2023b, 17 our emphasis), as well as the fact that the country has access to a precautionary two-year IMF Flexible Credit Line in case of external shocks (about $US8.9 billion), there is clearly a broader issue surrounding the IMF's interpretation of sound macroeconomic policy if one of their model students is in the position of being unable to finance their climate policy. For instance, the World Bank estimates that the Colombian government will need to spend an additional 0.4% of GDP per year between 2023 and 2030 to fund its transition, based on the highly optimistic assumption that the private sector is able to provide another 1.1% of GDP (World Bank 2023a). To fulfil its own ambitions of mainstreaming the climate agenda, the IMF needs to explicitly examine the implications of fiscal targets for climate initiatives. For example, the IMF could conduct forecasts on the impact of various fiscal scenarios upon the fulfilment of climate objectives, which is well within the organization's remit. Indeed, analysing through a climate lens the narrow fiscal scope currently endorsed by the IMF is certain to lessen its appeal.

Reducing poverty and increasing climate resilience among poorer households will require expanding the coverage and adaptiveness of Colombia's social security system—and will be crucial to ensuring a just transition, as the current administration recognizes. On the one hand, IMF endorsement of sustained austerity—expenditures are set to decline year-on-year from 24.3% of GDP in 2023 to 21.9% in 2028 (the latest year of projections)—could undermine the capacity of poorer households to respond and adapt to the effects of climate change, especially where fiscal tightening threatens the viability of major public adaptation projects. On the other hand, the boost in revenues that the short-term fiscal consolidation provides will allow the government to expand social spending by about 2% of GDP in 2023. The IMF also recognizes that "additional efforts may be necessary to protect the most vulnerable, while respecting the limits prescribed by the fiscal rule" (IMF 2023b, 10), fomenting a sense that their fiscal advice is acting at cross-purposes.

Another key fiscal measure discussed in the Article IV consultation is the energy subsidy reform, which the IMF advised on during the course of its technical assistance missions (IMF 2019b). Gasoline and diesel price smoothing occurs in Colombia through a fuel price stabilization fund, the *fondo de estabilización de precios del combustible* (FEPC), effectively acting as an untargeted fuel subsidy. The FEPC is not part of the central government accounts described above; rather, it is included in the consolidated public sector balance and receives transfers from the central government, which amounted to 1% of GDP in 2022. As domestic fuel prices have been kept below international prices following price freezes during the first half of 2022, the FEPC accrued a deficit of around 2.6% of GDP by end-2022. The IMF commended the current government's planned gradual cutback of fuel subsidies, which will allow domestic gasoline prices to be even higher than international prices while focusing subsidies on diesel products that are typically consumed by poorer households (Government of Colombia 2023), and also recommended that the government move away from the price smoothing mechanism to increase fiscal transparency and lower the need for financing operations by the central government.

In the IMF's rationale, these energy sector reforms support climate objectives by raising the price of fossil fuels to the end-user, thereby reducing demand and offering greater incentives to invest in energy efficient transport solutions. But the IMF should accompany its advice on market-based pricing mechanisms with macroeconomic expertise on non-pricing climate instruments, such as laws, technology and performance standards, product bans, and non-tradeable pollution permits (Asian Development Bank 2023). In order to ensure energy access, the IMF could also offer macroeconomic advice on how Colombia can source the finances needed for a sustainable renewable energy system to replace the current fossil fuel and hydro-based one.

Export diversification

The Colombian government plans to reduce its dependence on oil, gas, and coal—which represents 55% of total exports and 6% of GDP—by expanding the production of renewable energy and diversifying exports. Although there was limited engagement on energy sector policy in the Article IV report itself, the IMF directly considered it in a chapter of the background documentation (IMF 2023c, 12–21). Here, the IMF provides an overview of the composition and historical trajectory of Colombia's exports, an account of the factors affecting export diversification (e.g., market proximity), a discussion on the role of the exchange rate, and its implications for the energy transition strategy. In so doing, the IMF identifies the importance of fuel-related revenue to safeguarding foreign exchange-generating capacity and fiscal revenues. The IMF also recognizes that dependence on fossil fuels is likely to increase in coming years as a result of the 2022 tax reform, as more than half of the reform's total yield comes from taxes on the oil and coal sector.

The IMF then provides economic analysis using simulations based on a no-replacement of oil/coal production scenario, which shows that oil production declines of about 90% by 2033 would result in GDP dropping by 1.3%, a current account deficit ratio of around 6% of GDP, and a fall in fiscal revenue by 2% of GDP. Using an alternative modelling approach, they show even greater deterioration of the economy. Based on these results the IMF recommends that "an energy transition strategy, which involves developing alternative sources of energy and new export sectors must be carefully calibrated and implemented in a gradual manner" (IMF 2023c, 21). They further qualify that "a fast reduction in domestic production [of oil] could generate external gaps" and caution that "strengthening of policy fundamentals to boost export diversification … would take time" (IMF 2023c, 21).

This represents prudent advice. But what is missing in the chapter is analyses of the investment and mobilisation of external financing required to undergo a successful export diversification strategy, as well as needs related to managing the job transition—especially if job opportunities linked to new export sectors do not geographically correspond with oil and mining areas. The World Bank does provide an assessment of these and related climate transition costs (World Bank 2023a), which the IMF could fruitfully incorporate and build upon in the next Article IV report.

Indeed, where the IMF could offer clearest value-added is in scrutinizing whether the expectations of private finance are realistic. The World Bank estimates a transition pathway costing 1.5% of GDP in additional financing needs between 2023 and 2030, of which 1.1% would be funded by the private sector. The IMF

could also offer further scenarios indicating level of external financing required for Colombia to engage in a more rapid export diversification and energy transition strategy—a rate of change that may in fact be necessary if the world is to avoid a climate catastrophe.

In the main Article IV report, the IMF dedicates a paragraph to describing the energy transition and export diversification plan. Here, the IMF states that "diversifying the economy and developing new export sectors would take time and require a *market-oriented* strategy to sustain the strong dynamism of non-traditional exports of recent years. *Import substitution and protectionist measures should be avoided*" (IMF 2023b, 16 our emphasis). Such advice is at odds with a recent IMF staff climate note that recognized the need for private climate financing in emerging markets to occur in combination with industrial policies to increase domestic renewable energy manufacturing capacities (Prasad et al. 2022b). Ultimately, the IMF needs to underpin their advice by a climate assessment of existing free trade agreements, in terms of whether they provide Colombia with sufficient policy space to implement the requisite export diversification strategies.

There is also domestic scepticism around the growing role of private companies in the energy transition, such as the Windpeshi Wind Farm project in La Guajira being developed by Enel Green Power (Italy), which is delayed due to protests by local communities relating to land displacement, compensation, and consultation over the projects (González 2023; Reuters 2023). The underwhelming track record of market-oriented energy transitions around the world reinforces the need for an alternative model the IMF could support, such as a state-led policy regime organised around green industrial policy objectives (e.g., Kedward, Gabor, and Ryan-Collins 2022).

The IMF also recommends a tight monetary stance beyond 2023, including further hikes to interest rates. While this advice is plausibly appropriate (especially as inflation can place a disproportionate burden on poorer households), the IMF fails to consider how raising international interest rates can impede a green energy transition—for example, by conducting simulations of how such increases will affect investment in renewable energy. Economists have recently shown that higher interest rates can slow the renewable energy transition and shield oil and gas producers from competition by low-carbon producers (Ferguson and Storm 2023). This happens because newly applied renewable energy technologies have relatively large front-loaded costs compared to already-installed fossil fuel technologies. When borrowing costs are raised even further by higher interest rates, renewable energy technologies becomes less profitable for investors than other business opportunities, and so investors forego such ventures entirely.

Climate risk and green transition

If IMF surveillance is to facilitate green transition and just recovery priorities, it will need to consider the physical risks of climate change and transition risks associated with a low-carbon future. An area where the IMF offered value in this regard was through the recommendations of its 2022 Financial Sector Assessment Program (FSAP) (IMF 2022b), which were also included as an annex to the 2023 Article IV report. The FSAP aims to identify financial sector vulnerabilities as well as opportunities for the sector to contribute to broader development objectives.

The FSAP report contained extensive engagement with climate issues. A transition risk stress-testing exercise assessed the effects of a higher carbon tax on the banking sector at both a granular and aggregate level, based on increases of $10, $15, $20, and $70 per ton of carbon. It found that transition risks driven by a higher carbon tax are more concentrated in the agriculture, manufacturing, electricity, and wholesale and retail trade, and transportation sectors. A physical risk stress testing was performed at the municipal level to investigate banks' vulnerability to riverine floods, using scenarios based on the 2010-2011 floods and two more severe floods. It found that three banks are substantially more vulnerable to flood hazards than most others, owing to high exposures in rural areas or relatively large sovereign exposures. Based on the FSAP findings, the IMF recommended that the government "adopt a risk-based approach in supervision for climate-related risks and continuously improve information disclosures (both by nonfinancial corporates and by financial institutions) and data availability" (IMF 2023b, 48).

Beyond what has already been mentioned above, the Article IV report contained only negligible coverage of climate risks. In the external sector assessment, the IMF incorporated weather effects from La Niña that affected agricultural production and exports into model estimates of the current account. The IMF also included it as an entry in its risk assessment matrix for a disorderly cleaner energy transition.

The IMF failed to consider global spillover transition risks linked to the Colombian economy's external dependence on fossil fuels and on environmentally unsound extractive sectors such as oil palm production—where potential trade partners may impose carbon border taxes, impacting the potential earnings from such exports (Ramos et al. 2022). The development of renewables and the global drive towards decarbonisation may also risk leaving Colombia with stranded assets in the oil and mining sector (Climate Action Tracker 2023). Overall, the World Bank estimates that by 2050 lower global demand for oil and coal could cost Colombia 10% of export receipts, 6% of

government revenues, and 8.2% of GDP (World Bank 2023a). Such economic losses are not accounted for in the IMF's general fiscal and external economic projections or in its export diversification analyses. Furthermore, the debt sustainability analyses does not include any climate-related stress tests, even though the IMF has the expertise to undertake them (e.g., IMF 2021f), thereby failing to quantify the benefits of environmental policy measures (or the drawbacks of not enacting such measures) vis-à-vis the country's debt profile (Maldonado and Gallagher 2022).

While the 2023 report failed to include any dedicated discussion around climate, the 2022 report did provide such coverage (IMF 2022a). But even here, less than five pages was devoted to the issue, most of which was a cursory description the Colombian climate context and the government's national commitments. Absent was any information on the total costings of climate-related investment required under various domestic plans, or the overall financing gap in renewables. There was also no model simulations of the macro-fiscal implications of climate change policies such as the commitments under the Nationally Determined Contribution, despite the fact that the IMF is capable of delivering them (e.g., IMF 2023a).

CASE STUDY II:
INDONESIA

Economic Context

Indonesia stands as the fourth most populous nation globally, housing 275 million inhabitants, and boasting the largest economy in Southeast Asia, at $1,139 billion or $4,788 in per capita terms (World Bank 2023e). Leading up to the Covid-19 outbreak, the country experienced sustained economic expansion following its recovery from the late-1990s Asian financial crisis, achieving the distinction of an upper-middle income nation by 2019. The foundation for this growth trajectory rested upon a substantial export sector, underpinned by coal (13.3% of 2018 exports), oil and gas (9.6%), and palm oil (9.2%) (IMF 2019c). Indonesia also made significant strides in reducing poverty, diminishing the percentage of the national population living below the poverty line to 9% in 2019, a notable drop from 19% in 2000 (World Bank 2023e).

Indonesia holds the ignominious distinction of being the world's fourth largest coal producer and the largest gas supplier in Southeast Asia (IEA 2023b). The country's substantial mineral reserves encompass coal, gas, lignite, nickel, cobalt, iron, copper, bauxite, tin, gold, and crude oil. The coal mining and production sector, in particular, plays a pivotal role in foreign trade balance, serving as the nation's leading export industry. Furthermore, it contributes significantly to local economic growth by generating domestic employment opportunities and catalysing additional economic activity, as reflected in downstream national policies (Tenggara Strategics 2023).

The construction of new coal plants remains a prominent element of the nation's medium-term economic strategy and is codified in its electricity business plan (Government of Indonesia 2021b): a dozen coal plants are under construction and several coal plants in the pipeline (Global Energy Monitor 2023), while captive coal for industrial parks is expected to increase to deploy in the mineral processing industry, including for nickel used in electric vehicle batteries (Jong 2022). The fossil fuel industry also constitutes a substantial portion of the Indonesian government's revenue stream, contributing over 10% of total revenues over the last decade (Braithwaite and Gerasimchuk 2019; IMF 2023d).

But the fossil fuel industry also represents a substantial drain to the public purse as it receives a series of subsidies and governmental assistance measures (Arinaldo and Adiatma 2019). In total, Indonesia spent 15.4% of GDP on fossil fuel subsidies in 2022 (Black et al. 2023); but the distribution of these subsidies between producers and consumers is difficult to quantify because they are intertwined in price stabilisation mechanisms, state-owned enterprise investment, and other public sector arrangements (Gençsü 2019). The government also faces unnecessary capacity charges in Indonesia's energy system linked to overcapacity from coal-fired power plants, which exceeds

national electricity reserve margin standards by over 30% and costs $1.2 billion annually in operating and maintenance expenses (Prasetiyo et al. 2023).

The Indonesian economy has since recovered from the pandemic, with GDP growth reaching 5.3% in 2022 and forecast at 5.0% for the next two years. This revival was propelled by expanding commodity exports and the fiscal stimulus of the Covid-19 response (World Bank 2023b). The general government budget balance also improved since the pandemic, from -6.1% of GDP in 2020 to -2.4% in 2022, as a result of strong economic growth, windfall commodity revenues, and cuts to energy subsidies (World Bank 2023c). These lower fiscal financing needs are helping to bring down public debt as a share of GDP, forecast to decline to 39% by 2024. And while inflation is above the ceiling of Bank Indonesia's target band, and is placing stress on household purchasing power especially for the poorest, it is expected to be short lived and is certainly less severe than that experienced in many other countries (World Bank 2023b).

Table 1. Key economic indicators for Indonesia

				Estimate	Forecasts	
	2019	2020	2021	2022	2023	2024
Economic growth / Real gross domestic product growth (%)	5.0	-2.1	3.7	5.3	5.0	5.0
Balance of payments: Current account balance (% of GDP)	-2.7	-0.4	0.3	1.0	-0.3	-0.7
Foreign exchange reserves (months of imports)	9.7	7.5	6.4	5.9	5.5	5.3
Public debt (% of GDP)	30.6	39.7	41.1	40.1	39.3	39.0
Primary budget balance (% of GDP)	-2.2	-6.1	-4.6	-2.4	-2.6	-2.5
Inflation (% of consumer price index, period average)	2.8	2.0	1.6	4.2	4.4	3.0

Sources: IMF (2022c, 2023d).

However, the Covid-19 crisis adversely affected Indonesia's economic momentum. The country slipped to lower-middle income status by mid-2021. The pandemic also eroded some of the progress made in poverty reduction, which rose to 10% of the population in 2020 (World Bank 2023e). In response, the Indonesian government launched a comprehensive fiscal policy response to the pandemic, amounting to 5% of the GDP in total or 3.5% after accounting for budget reallocation (IMF 2021d).

Indonesia's strategies to tackle the Covid-19 shock primarily encompassed support for healthcare, social assistance, and small businesses. Yet, while

essential for safeguarding vulnerable populations, the redistribution of budget resources during the pandemic curtailed the financial capabilities of local governments in Indonesia to finance long-term climate objectives (Climate Transparency 2021b).

The government's Covid-19 economic response package also encompassed approximately $6.5 billion in financial aid directed towards the fossil fuel sector. This support included rescue packages aimed at assisting Pertamina (the state-owned oil and gas enterprise), Perusahaan Listrik Negara (or PLN, the state-owned electric power generation and distribution company), Garuda Indonesia (the national airline company), along with initiatives to lower gas prices for industrial use and a three-month waiver on electricity charges for vulnerable consumers (Climate Transparency 2021b).

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Climate Mitigation

The Indonesian government has established a series of institutional frameworks aimed at mitigating the country's greenhouse gas emissions. In 2007, Indonesia formulated its inaugural national climate change strategy, which laid the foundation for subsequent actions (Government of Indonesia 2007). This momentum carried into the 2011 National Action Plan for Reducing Greenhouse Gas Emissions, whereby Indonesia committed to independently lowering emissions by 26% by 2020 in comparison to the business-as-usual scenario, and could potentially reach 41% with international assistance (Government of Indonesia 2011). The 2014 National Energy Policy further solidified goals for renewable energy adoption, aiming for a minimum reliance of 23% by 2025 and 31% by 2050 (Government of Indonesia 2014b); concurrently, the policy aimed to diminish oil dependence to below 25% by 2025 and under 20% by 2050. In 2016, Indonesia submitted its initial Nationally Determined Contribution,

pledging to reduce emissions by 29% below the business-as-usual scenario using domestic resources, with potential to reach a 41% reduction with international collaboration, by 2030 (Government of Indonesia 2016). A subsequent update in 2021 maintained these emission-reduction targets without substantive changes (Government of Indonesia 2021c).

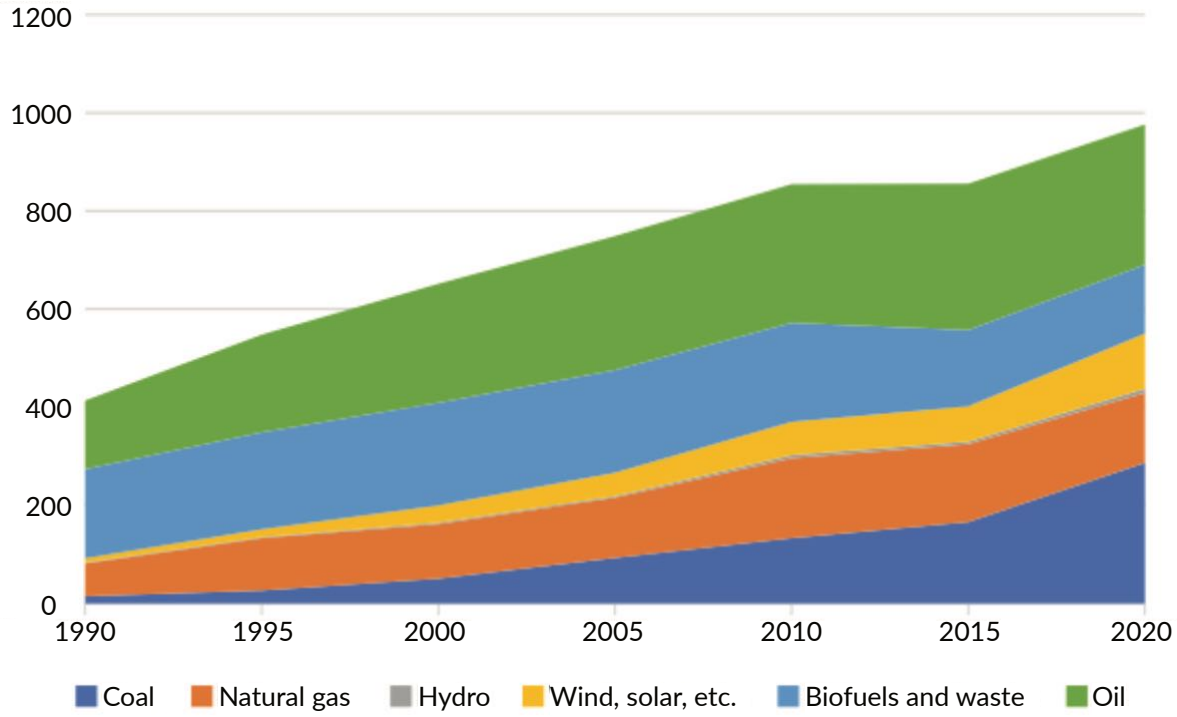
Most recently, Indonesia committed to achieving net zero by 2060 or sooner, bringing forward its previously announced target year of 2070 (Government of Indonesia 2021a). The country also released an enhanced Nationally Determined Contribution, increasing the unconditional emissions reduction target to 32% below its business-as-usual scenario, and its conditional target to 43% with international support, by 2030 (Government of Indonesia 2022a). And in March 2023, the government unveiled a subsidy program for manufacturers and retailers to incentivize the domestic sale of electric vehicles (Strangio 2023). However, it is worth noting that commitments included in Indonesia's Nationally Determined Contribution fail to deliver on the Paris Agreement goals as they are not aligned with a 1.5°C pathway (Climate Action Tracker 2022).

Crucial domains in which the nation aims to drive progress involve integrating climate considerations into its development strategy (including augmented budget allocations for climate change adaptation, detailed below) and revising its energy utilization policy to align with the 2014 objectives. Bolstering these endeavours is the recent Sustainable Finance Roadmap, which was formulated by Indonesia's financial services authority (Otoritas Jasa Keuangan 2021). This strategy encompasses the establishment of a green classification system for categorizing sustainable investments, adjustments to risk management within the financial sector to incorporate and mitigate environmental risks, and innovative approaches to financial products with the explicit goal of enhancing sustainability.

In 2021, the government also announced a moratorium on constructing new coal plants from 2023 onwards and to work toward a coal phase-out by 2040 (conditional on international financial and technical support); and the state-owned electricity company, PLN, disclosed its intentions to channel investments into renewable sources with the overarching objective of achieving carbon neutrality by 2050 (Husaini 2021). It is worth noting, however, that these commitments exclude the premature decommissioning of existing plants, with several new plants slated for construction before these policies take effect (Global Energy Monitor 2023; Jong 2021). In November 2022, the Indonesian government then came to an agreement with the G7 group over a $20 billion financing package to facilitate Indonesia's transition from coal to renewable energy, known as the Just Energy Transition Partnership (JETP). A detailed investment plan—such as its composition of grants, concessional loans, and

market-rate loans, and private investments—is still to be hashed out, but the timeline for its publication has been delayed, prompting speculation that the deal may be on the brink of collapse (Fickling 2023; Jong 2022).

Figure 1. Total energy supply in Indonesia, by source



Sources: IEA (2023b).

As a backdrop to these aspirations, Indonesia emitted 1,476 million tonnes of CO2 equivalent in 2020 (the most recent year in which data is available), representing 3.9% of global greenhouse gas emissions and placing the country in the inauspicious position of fifth largest emitter in the world (World Resources Institute 2023b). These emissions were primarily attributed to energy at 44.1% and land-use change and forestry at 33.8%, followed by agriculture (10.5%), waste (9.4%), and industrial processes (2.3%). Indonesia's standing as one of the planet's largest emitters of land-use related emissions is a direct outcome of activities such as deforestation and peatland fires, which are undertaken to facilitate the expansion of oil palm plantations (World Bank and Asian Development Bank 2021).

As shown in Figure 1, fossil fuels hold a prominent position in Indonesia's energy composition. About 73% of Indonesia's energy needs are being met by fossil fuels, primarily from oil (29%), coal (29%), and gas (15%) (IEA 2023b). Since 1990, the country increased energy production by 143% to become a major global energy producer. While the share of oil and gas consumption in the total energy supply remained stable, the country rapidly scaled up reliance on coal. Among the non-fossil fuel energy sources, approximately 14% originates from biofuels and waste. However, this segment's contribution to the total energy supply

dwindled considerably over the past three decades. In contrast, renewable energy from wind and solar sources have experienced substantial growth since 1990, now constituting an 11% share of the energy mix (Government of Indonesia 2023). However, this still represents utilisation of only 3% of the country's total renewable energy potential, estimated at 3,685 gigawatts (Government of Indonesia 2022b).

Indonesia's power sector is also underpinned by fossil fuels, with coal claiming the largest share in electricity generation, at 62%, fossil gas accounting for 18%, and oil 2% (Climate Transparency 2022). While there are efforts such as feed-in tariffs and tax incentives aimed at bolstering renewable energy initiatives (Assegaf Hamzah & Partners 2022), coal power still receives subsidies and coal capacity continues to expand, despite the moratorium on new coal plant construction from 2023 onward (Climate Transparency 2022).

The government's most recent ten-year electricity procurement plan shows that Indonesia will add more coal capacity by 2030 than it plans to retire (Gourdel, Monasterolo, and Gallagher 2022). The procurement plan foresees renewable energy rising to at least 48% of the power supply, up from 30% in the previous plan covering 2019 to 2028 (Government of Indonesia 2021b). But without an augmentation of subsidies for renewables (or a decrease in coal subsidies), it may be difficult for renewables to compete with coal on cost. In 2020 alone, Indonesia spent $16 billion on fossil fuel subsidies: 45% on petroleum, 24% on coal, and 21% on electricity, the latter of which is also primarily a fossil fuel subsidy given the power mix (Climate Transparency 2022).

New regulations also continue to favour coal expansion: the Mineral and Coal Mining Law in 2020 made it easier for coal mining companies to extend the length of mine operating permits; and the Omnibus Law in 2020 contained investment simplification, land management, and an exclusive economic zone all favourable to mining interests (Atsari and Brent 2022; Bershikan Indonesia 2020).

Climate Adaptation

Indonesia ranks 98th of 185 countries in the ND-GAIN index, which measures exposure, sensitivity, and ability to adapt to the impact of climate change (Notre Dame Global Adaptation Initiative 2023). The country is highly vulnerable to the impact of climate change, including from extreme weather events like floods and droughts, rising sea levels, shifts in rainfall patterns, and increasing temperature (World Bank and Asian Development Bank 2021). Given Indonesia's extensive 95,000 kilometre coastline and 42 million inhabitants residing in areas less than

10 meters above sea level, the vulnerability to sea level increases of the country's coastal dwellers, infrastructure, and ecological systems ranks among the world's highest (USAID 2017). Natural disasters are also a recurring phenomenon in Indonesia, with the year 2019 alone witnessing 3,622 incidents—of which nearly 90% were hydro-meteorological events like floods and landslides that are projected to increase as a result of climate change (World Bank and Asian Development Bank 2021). Additionally, the country contends with drought occurrences that have played a role in aggravating anthropogenic fires.

The severity of this issue was evident during the forest and peatland fires of 2015, which inflicted a $16 billion blow to the economy through diminished productivity and an estimated 90,000 excess fatalities (Koplitz et al. 2016).

Given such vulnerabilities, the country has prepared periodic national action plans for climate change adaptation (Government of Indonesia 2007, 2014a, 2019). The most recent plan to reduce risks from climate change on all development sectors by 2030, primarily including agriculture, water, energy security, forestry, maritime and fisheries, health, infrastructure, and urban systems. The country's Enhanced Nationally Determined Contribution also commits to reduce impacts of climate change, envisaged through several programs to raise economic resilience (e.g., development of biomass energy and development and implementation of climate adaptive technologies), social resilience (e.g., development of information systems on vulnerability and improvement of human settlements), and ecosystem resilience (e.g., integrated watershed management and ecosystem restoration) (Government of Indonesia 2022a).

Overall, it is estimated that by 2100, the physical impact of climate change will cost up to 7% of the country's GDP, with the poorest bearing the brunt of this burden (Raitzer et al. 2015). Particularly susceptible are the country's urban poor, concentrated in the outskirts of cities where resilient infrastructure is scarce and of subpar quality. Rapid urban population growth, currently at 2.2% annually, has led to spontaneous settlements in coastal zones prone to flooding and landslides, encompassing an estimated 19% of the urban populace residing in slums (World Bank 2023e).

Females are another highly vulnerable group because of their comparatively limited access to assets, services, and financial resources—as was evident during the 2004 tsunami which led to a disproportionate number of deaths among women (World Bank 2023b).

The agricultural sector is also highly vulnerable. It supports the livelihoods of 42% of the working population, who typically operate with less than one hectare of land and includes more than half of the country's poor households (USAID

2017; World Bank and Asian Development Bank 2021). Rice production is particularly prone to the effects of climate change, as it will lead to higher temperatures and impact the onset and length of the wet season, reducing rice crop yields (World Bank and Asian Development Bank 2021). Such shifts pose a threat to food security as rice stands as Indonesia's staple crop, constituting nearly half of the national caloric intake (USAID 2017). In addition, the fisheries sector, a crucial employer within the Indonesian economy, confronts the impact of escalating ocean temperatures, which could result in a 29% decrease in catch potential by 2050 (World Bank and Asian Development Bank 2021). Given that fish constitutes the primary source of protein in the national diet, the decline in catches poses dual challenges, impacting both the sustenance of Indonesian livelihoods and diets.

Global efforts to address climate change will have potentially catastrophic implications on Indonesia in the absence of policies and investments to smooth the low-carbon transition (Gourdel, Monasterolo, and Gallagher 2022). Other countries' responses to climate change, such as an accelerated phase-out of coal, are especially problematic because they will fundamentally alter the economic prospects and livelihoods of Indonesians. For example, the imposition of carbon border taxes by major fossil fuel importers could result in a balance of payments crisis, reductions in government and business revenues, and the devaluing of financial assets. In this context, there is an imminent risk that Indonesia's export coal mines will become stranded assets, potentially undermining the stability of the entire banking sector (Prasojo, Marciano, and Adiatma 2021).

Safeguarding a just transition in such a context represents a significant challenge, as many communities depend on fossil fuel industries for employment—the coal industry alone directly employs about 100,000 people (Climate Transparency 2022)—and on fossil fuel consumption subsidies to maintain their livelihoods. However, it is worth pointing out that the industry has also exacted significant social, economic, and environmental damage by displacing people, decimating mangroves and rainforests, polluting the sea, and destroying the livelihoods of communities living nearby (Recourse 2022).

IMF Surveillance and Recommendations

To what extent is the policy advice in IMF bilateral surveillance consistent with enabling Indonesia to transition away from dependence on fossil fuels? Does such advice adequately address transition risks and financing needs arising from the country's shift to renewable energy? And is such advice aligned with a just transition that safeguards the rights and needs of the poorest in society? We examine these questions based on an analysis of the most recent staff report for the Article IV consultation and background documentation (IMF 2023d, 2023e), focusing on key climate-related policy areas.

Fiscal policy

Indonesia's progress on achieving its climate commitments and addressing transition risks will be affected by recommendations aimed at limiting the fiscal deficit. Following the temporary suspension of a clause that meant the government could not have a budget deficit larger than 3% of GDP to address the economic and social fallout of the Covid-19 pandemic, the IMF advocated in the 2022 Article IV consultation a restoration of the fiscal deficit clause by 2023 (IMF 2022e). The Indonesian government reached that target in 2022, one year earlier than expected, with the deficit narrowing to 2.4% of GDP (well below the target of 4.4% of GDP). The IMF commended the fiscal consolidation, which was achieved on the back of higher revenues primarily due to windfalls from higher global commodity prices—about 1% of GDP from oil, gas, and mining. However, by failing to acknowledge the perverse climate implications of these windfall revenues, the IMF implicitly encourages further reliance upon fossil fuels as a means to balance the budget. On the expenditure side, Covid-related savings were offset by higher energy subsidies due to oil price surges.

The IMF recommends continued fiscal prudence by maintaining the budget deficit below the 3% ceiling for 2023 and beyond (the last projection is for 2025). Given the IMF's positive assessment of the Indonesian economy as one with "ample policy space, strong financial buffers, and favourable initial conditions to respond to adverse shocks" (IMF 2023d, 20) and a "public debt-to-GDP [that] is lower than peers" (IMF 2023d, 38)—which includes ASEAN nations, countries with a BBB sovereign rating, and emerging market economies on average—there is clearly room for greater ambition by the IMF vis-à-vis the coming climate crisis.

In order to mainstream the climate agenda, the IMF needs to model scenarios showing the impact of various fiscal targets against upon the fulfilment of climate objectives. An unduly cautious fiscal approach may undermine the ability

of the government to invest in or augment subsidies for renewable energy—which will be needed if the government is to reach its target of renewable energy fulfilling at least 48% of the country's power supply by 2030, especially given the current uncertainty surrounding the JETP funding.

As a medium-term fiscal strategy, the IMF endorses revenue mobilisation and cuts to energy subsidies, with savings used to expand social protection. Revenue mobilisation is based on the 2021 tax reform law and includes an increase of the standard value-added tax rate along with a reduction of exempted goods and services, a new personal income tax bracket for high-income earners, an increase in the corporate income tax rate, and the broadening of excise taxes to include plastics and sweetened beverages. However, the IMF missed an opportunity to mainstream climate considerations in their assessment of revenue mobilisation measures, which could potentially ultimately alter their appeal. For instance, changes to personal income and corporate tax represent progressive and equitable options to raise revenues for climate commitments, whereas the value-added tax places a greater burden on poorer households (Stiglitz 2010), which could hinder their adaptive capacity in the face of climate change.

With regard to energy subsidy reform, the government sets the price for fuel and electricity for consumers below market rates, thereby acting as a subsidy, and then compensates producers for the difference. As global oil prices surged in 2022, spending on consumer subsidies and compensation for producers tripled (an increase of about 2 percentage points of GDP). The IMF thus recommends changes to the pricing formula that would align electricity and fossil fuel prices with the market price, ultimately reducing government spending. The IMF views such reform as "essential to change incentives in the energy sector and help achieve climate objectives" (IMF 2023d, 12), as it will force energy end-users to internalize the full cost of fossil fuels, thereby providing an incentive to transition to renewable energy or achieve greater energy efficiency.

While the IMF's advice on energy sector reforms demonstrates genuine concern for climate mitigation, it can have detrimental repercussions for a just transition. Increases in energy prices disproportionately impact poorer households and women because they spend a larger share of their budget on these items (Nasruddin 2022). A 30% hike in administered fuel prices in September 2022, while limiting further increases in government subsidies, fuelled public anger and protest among workers and the urban poor already reeling from the effects of the Covid-19 pandemic and rising food costs (Al Jazeera 2022). Such an increase can also cause second-round inflation effects, where rising energy prices trigger a subsequent round of price increases throughout the economy, which—again—place a disproportionate burden on poorer households.

In response, the government increased social assistance for vulnerable families in order to sustain the purchasing power of those affected by fuel price increases, reallocated from the budget for energy subsidies (Associated Press 2022). Notably, the IMF explicitly recognizes the need to enhance social protection in order to facilitate energy subsidy reform and calls for an expansion of social assistance benefits and coverage. This recommendation is bolstered by an IMF analysis showing the composition of social assistance expenditure of Indonesia compared against the means of other emerging Asian countries and all emerging market economies—which shows government social assistance expenditure is low compared to peers, more discretionary, and predominantly in-kind.

Export diversification

The Indonesian government plans to encourage diversification away from the export of raw commodities such as coal by boosting the economy's share of manufacturing and services to GDP, seen as crucial to achieving the objective of becoming a high-income economy. To this end, the government plans to extend its diversification strategy that involves developing downstream activities—that is, adding value to raw materials by manufacturing, marketing, packing, and/or retailing them before reaching export, the goal being to optimize the entire value chain to enhance economic growth.

Over the last decade, the Indonesia government focused on nickel ore, of which Indonesia is the world's largest producer—accounting for nearly half of the global output in 2022—and holds the largest reserves (IMF 2023d). The government promoted investment in nickel smelter capacity through tax holidays in the 2020 Omnibus Law and the (re-)introduction of an export ban on all raw nickel in 2020 that, in effect, imposed a domestic processing requirement. The strategy has proved an economic success but environmentally pernicious, as described below).

Foreign direct investment from China and Hong Kong led to the number of nickel smelters increased from 3 in 2014 to 11 in 2023 (with a further 19 expected to be built); exports of nickel have surged from $4.5 billion in 2019 to $19.6 billion in 2022; and formal sector jobs are being created in regions that have relatively lower levels of income, such as Central Sulawesi and North Maluku. Following the experience with nickel ore, the government intends to extend their downstreaming policies to other minerals such as copper, bauxite, cobalt, and tin, with the aim to develop domestic manufacturing capacity of batteries for electric vehicles.

When weighing in on the costs and benefits of extending the downstreaming policy to other commodities, the IMF does not mention the environmental costs of locking-in these inherently pollutive activities. The IMF describes the main costs as "foregone fiscal revenues, the unintended consequences of export restrictions at home (such as potential resource misallocation and rent seeking), and those that spillover across borders (such as price effects in the global commodity markets), which could potentially be met by retaliation from trade partners" (IMF 2023d, 27). Yet, new coal power plants are already being constructed to power nickel industrial parks and other metal smelters, which could threaten the achievement of climate change goals (Civillini 2023; Simon 2023). Failure of the IMF to analyse the environmental costs at even a cursory level, or to probe the government to include such costs in their own cost-benefits assessments, represents a fundamental omission.

Indonesia's downstreaming strategy represents a state-led policy regime organized around green industrial policy objectives for renewable energy technologies—the development in this case of an electric vehicle battery industry. The IMF is generally supportive of the strategy, though with some caveats. For instance, the IMF Executive Board "welcomed Indonesia's ambitions to increase value added in exports, attract foreign direct investment, and facilitate transfer of skills and technology" (IMF 2023d, 2). However, they were less enthusiastic about the nickel export ban, with the IMF calling on authorities to "consider phasing out export restriction and not extending the restrictions to other commodities" (IMF 2023d, 2).

The IMF's suggestion to phase out export restrictions has implications for a just transition, as it effectively represents a "kicking away the ladder" from Indonesia. Such advise is not restricted to Indonesia, as the IMF has been advising all members to avoid trade restrictions in order to avoid geo-economic fragmentation and trade retaliation. Nonetheless, if countries from the Global South are to prosper in a green transition, they must be able to protect their infant renewable energy technology industries until they have matured to a point where they are competitive with more advanced players from the Global North. Indeed, these are strategies countries in the Global North used in the development of their industries (Chang 2002).

Climate risk and green transition

If IMF surveillance is to facilitate green transition and just recovery priorities, it will need to consider the physical risks of climate change and transition risks associated with a low-carbon future. The IMF's coverage of climate-related issues was largely confined to a three-page section on "Climate Change Policies"

(IMF 2023d, 28–30). This section provided cursory coverage of four components.

First, a paragraph is dedicated to describing the government's steps toward climate change mitigation, by way of reference to the country's Enhanced Nationally Determined Contribution and Long-Term Strategy for Low Carbon and Climate Resilience (Government of Indonesia 2021a, 2022a). In doing so, the IMF also references background documentation to its 2020 Article IV consultation (IMF 2021e), which provided a thorough analysis on the macro-criticality of climate change for Indonesia and potential transition risks the country faces; an assessment of the shortcomings of this analysis is available elsewhere (Kentikelenis and Stubbs 2021).

Second, the IMF gives an assessment of the climate change mitigation strategy, describing it as "appropriately focused on land-use regulation" but noting that "progress on energy subsidy reform and carbon pricing is essential to gradually change incentives in the energy sector and reach net zero" (IMF 2023d, 28). A carbon tax was scheduled to come into effect in 2022 at a price of 30,000 Indonesian Rupiah (about $2) per ton of carbon dioxide equivalent for coal-fired power plants, but is currently facing delays. In background documentation for the 2022 Article IV consultation, the IMF provided extensive analysis of the limitations of the carbon pricing scheme, and recommended a gradually widening of its base and raising the carbon price (IMF 2022f); an assessment of this coverage is also available elsewhere (Stubbs and Kentikelenis 2022a).

Third, the IMF offered a single paragraph discussing the financing needs for Indonesia to be able to achieve its mitigation and adaptation plans, stating that "mobilizing private and international financing will be vital to achieve Indonesia's mitigation and adaptation plans [because] climate budget allocation remain limited, averaging 3.7% of total expenditures per year over 2016-2021" (IMF 2023d, 29). The IMF's recognition of the limited climate budget allocation is promising, yet it fails to recognize how its own cautious fiscal stance may exacerbate the issue.

Finally, the IMF presents a one-page economic analysis using model-based scenarios to illustrate the macroeconomic costs for Indonesia of meeting its climate change commitments, and uses the evidence to bolster its call for Indonesia to undertake energy subsidy reform and carbon pricing. The exercise is underpinned by the global IMF-ENV model, which captures detailed sectoral, trade, and employment consequences of mitigation policies to address climate change (Chateau, Jaumotte, and Schwerhoff 2022). This represents a welcome inclusion, but also highlights some weaknesses in the IMF's broader analyses. Specifically, the model incorporates consumer subsidies to fuel and electricity

prices calibrated to match the ratio of total subsidies to GDP in 2022, but a detailed breakdown on the division of consumer and producer subsidies (e.g., disaggregated by implicit verses explicit subsidies and/or by fossil fuel type) is never provided in the broader documentation. The distinction between producer and consumer subsidies is especially important because the latter has greater distributional implications when reduced, so is important for assessing whether the green transition is just. It is also unclear what assumptions are being made in the model vis-à-vis overcapacity from coal-fired power plants.

As was the case in previous year's Article IV report (Stubbs and Kentikelenis 2022a), coverage of climate adaptation measures and spillover transition risks was again limited. In the debt sustainability analysis, the IMF included an adaptation module that assessed long-term risks from climate change adaptation needs—namely, investments in strengthening physical assets and coastal protection to the tune of 0.8% of GDP per year—to the total public debt-to-GDP ratio and to the gross financing needs-to-GDP ratio, offering an unhelpful final assessment of "n.a" and a supplementary comment that "over the longer run, reforms should continue to tackle risks from climate change" (IMF 2023d, 63). This disappointing standard of analysis fails to quantify and effectively convey the benefits of adaptation policy measures vis-à-vis the country's debt profile.

In addition, the IMF failed to consider the significant global spillover transition risks linked to trade partners committing to decarbonization through the imposition of carbon border taxes or related measures, thereby impacting the potential earning from fossil fuel exports and environmentally unsound extractive sectors like palm oil. China, for instance, is the main importer of Indonesian coal and has already introduced a national carbon pricing mechanism (Nogrady 2021), which could plausibly decrease the country's demand for coal from Indonesia. A shock on coal demand from China would significantly impact Indonesia's trade balance, with negative implications on public finances through lower revenue intake and follow-on effects on bond spreads and debt sustainability; lower profitability of coal enterprises would also affect the economy in the form of lower investment, higher unemployment, and lower economic growth, which would also have a negative feedback effect on government revenues (Gourdel, Monasterolo, and Gallagher 2022).

More ambitious reforms to the energy sector also appeared to be overlooked by the IMF, despite their significant macroeconomic implications. For instance, the possibility of more affordable renewable energy sources could offer a financially sustainable, enduring remedy for the power sector's ongoing overcapacity issue from coal-fired power plants, which is costing the government $1.2 billion annually in operating and maintenance expenses (Prasetiyo et al. 2023). The IMF should therefore endorse the phasing out of coal power plants to reduce overcapacity, which would improve the fiscal balance.

Overall, the IMF's coverage of climate change was compartmentalized into the "Climate Change Policies" section rather than being integrated into the general analysis. This fallacy is evident on several occasions where there were obvious omissions of climate-related considerations: the IMF did not consider the impact of the 2021 tax law on a green and just transition, which would have altered the appeal of various tax options; the IMF neglected the environmental costs of Indonesia's economic diversification policy, including the construction of new coal power plants to power the smelters; and the IMF failed to recognize how Indonesia's economic rebound hinged on the surge in prices for carbon-intensive sectors, like coal, oil and gas, and palm oil. Recognizing these perverse climate implications throughout the Article IV report would constitute climate mainstreaming, even if it may have dampened the—at times—celebratory tone.

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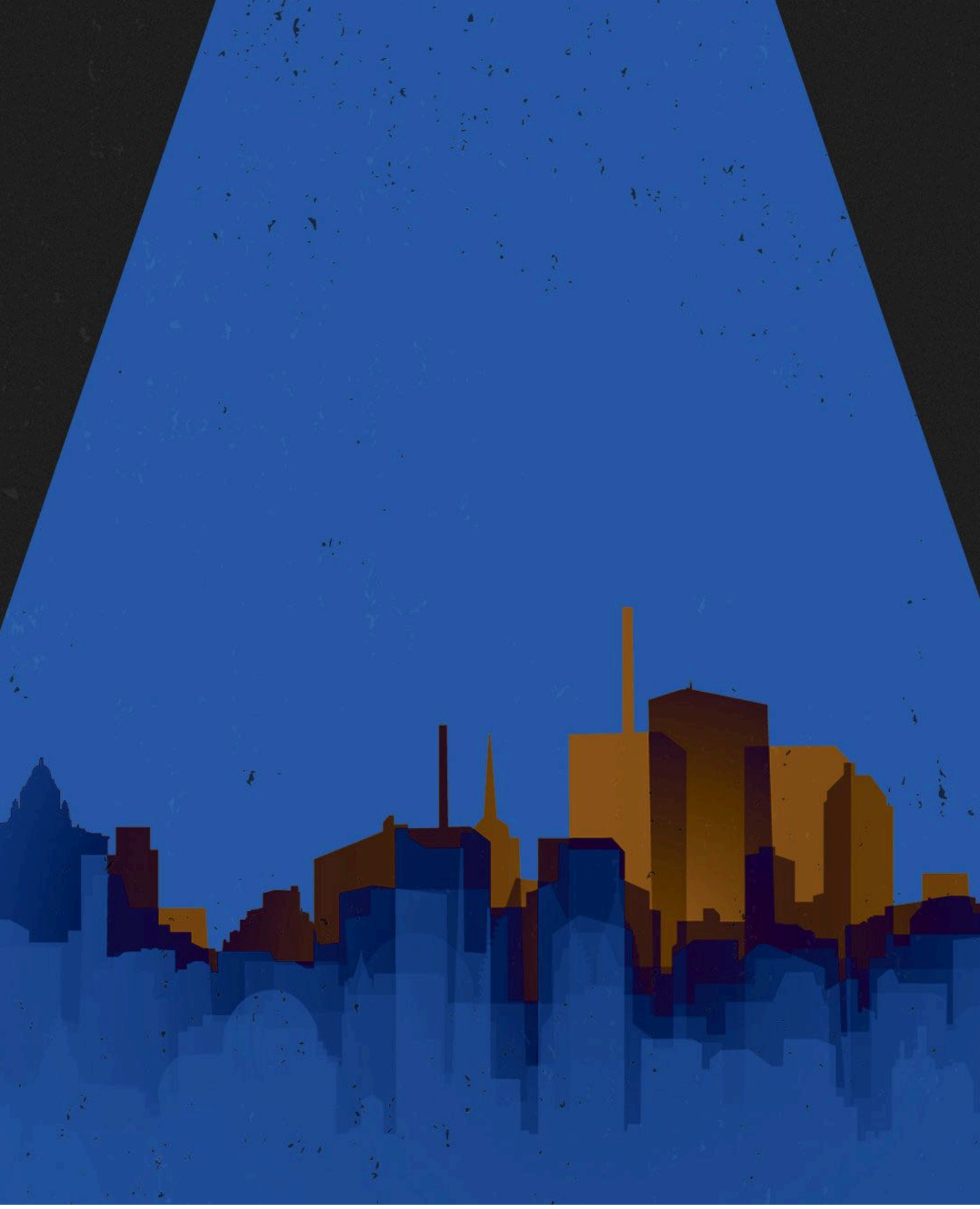

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