

Green rhetoric, grey reality: IMF surveillance and climate action 2022–2025



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Acronyms

CBAM	Carbon Border Adjustment Mechanism
CBDR	Common but differentiated responsibilities
CPAT	Climate Policy Assessment Tool
CR	Country Report (IMF Article IV reference code)
CSR	Comprehensive Surveillance Review
DIGNAD	Dynamic Integrated Growth and Natural Disasters model
EBA	External Balance Assessment
ECA	Europe and Central Asia
ETS	Emissions Trading System
EU	European Union
FSAP	Financial Sector Assessment Program
GDP	Gross Domestic Product
IEO	Independent Evaluation Office (of the IMF)
IMF	International Monetary Fund
IMF-ENV	IMF Environmental Mitigation Model
IPCC	Intergovernmental Panel on Climate Change
IV	Article IV (IMF surveillance consultations)
LAC	Latin America and the Caribbean
LIC-DSA	Low-Income Country Debt Sustainability Analysis
LTS	Long-Term Strategy
MAC-DSA	Market Access Country Debt Sustainability Analysis
MENASA	Middle East, North Africa, and South Asia
NAP	National Adaptation Plan
NDC	Nationally Determined Contribution
RAM	Risk Assessment Matrix
RSF	Resilience and Sustainability Facility
SIDS	Small Island Developing States
SOE	State owned enterprises
SSA	Sub-Saharan Africa
TCD-IMF	Task Force on Climate and Development / IMF
UCT	Upper Credit Tranche
UN	United Nations
US	United States
USD	United States Dollar

Executive summary

In 2021, the International Monetary Fund (IMF) published its Climate Strategy, focused mostly on the coverage of climate-related policy challenges in its surveillance activities. Acknowledging the impact of climate change on macroeconomic and financial stability, the strategy proposed ambitious targets, including the coverage of challenges around transition management, adaptation, and mitigation, where relevant to the IMF's mandate.

This report assesses how the IMF integrated climate change into its core surveillance activities — namely, the country-level economic evaluations known as Article IV consultations — between 2022 and mid-2025. Drawing on a systematic review of 60 reports across a representative set of countries, we evaluate the scope, framing, and coherence of the Fund's climate-related advice.

While progress has been slow, as key findings below show, the ongoing Comprehensive Surveillance Review (CSR) risks stopping this crucial work. This review should be the opportunity to identify the shortcomings in the integration of climate in the Fund's surveillance work, including its fiscal, financial, monetary and exchange rate policy advice.

With climate scientists warning of the irreversible damage to ecosystems and human systems that breaching 1.5 degrees Celsius of warming would entail, it is clear that, more than ever, climate change should be central to the IMF's mandate of macroeconomic and financial stability.

Key findings:

➔ **Strong but declining climate coverage.**

52 of the 60 Article IVs analysed explicitly mention nationally agreed climate strategies and 9 out of 12 Financial Sector Assessment Programs (FSAPs) covered climate. While the IMF has made high-level commitments to integrate climate into surveillance, references to climate in Article IV reports have steadily declined over the last three years. Coverage is concentrated in advanced economies, while low- and middle-income countries receive the least attention.¹

➔ **Austerity bias continues to undermine climate action.**

Fiscal austerity undermines climate action by reducing the fiscal space for investment in adaptation, mitigation, and social protection. In nearly two-thirds of countries sampled, the IMF projected fiscal contraction in the year following the Article IV consultation. This imbalance reflects a persistent pattern: too much weight on spending efficiency and fiscal consolidation, and too little precedence given to environmental objectives and just transition concerns.

➔ **Market-based instruments dominate.**

The IMF continues to prioritise carbon pricing and fossil fuel subsidy reform as the centrepiece of climate policy. Such recommendations are framed simultaneously as fiscal and environmental measures, reflecting the Fund's emphasis on efficiency and price signals. The IMF recommended reductions to electricity, gas or fuel subsidies in nearly three-quarters of the countries in our sample, more often in low- and middle-income countries than in advanced economies, raising concerns about evenhandedness.

¹ This marks a reversal of the upward trend observed between 2015 and 2022 (IEO 2024, 34), a retreat that may reflect a waning of attention as staff face competing priorities, resource constraints, and the perception that climate concerns are better addressed through specialised facilities such as the RSF.

➔ **Support for green industrial policy remains rare and uneven.** Among the 60 Article IV reports analysed, only a quarter contained recommendations that clearly reflect green industrial policy thinking — such as public investment in renewables, industrial coordination or technology development. Strikingly, such recommendations were heavily concentrated in advanced economies.

➔ **Decreasing explicit support for fossil fuel expansion, but lack of public finance support for renewables.** Only 7 out of 60 reports explicitly support fossil fuel expansion for the sake of macroeconomic stability.² Recommendations towards diversification of energy systems are superficial, and only 13 out of 60 Article IVs promote the public sector involvement in expanding renewables.

➔ **Partial uptake of climate diagnostics.** The IMF has developed new tools — such as CPAT, DIGNAD, and IMF-ENV — to assess the macroeconomic impacts of climate risks and policies. Yet these have been applied only sparingly, especially outside of advanced economies and Resilience and Sustainability Facility (RSF) programmes. Distributional analysis has been particularly limited, with few cases modelling the inequality impacts of carbon pricing or energy reforms.

Our research finds a widening gap between the Fund's original ambition in its 2021 Climate Strategy and operational practice. On the one hand, the Fund's Climate Strategy recognises climate change as a 'macro-critical' issue, and has developed tools and frameworks to incorporate it into surveillance.

On the other hand, the practical application of these commitments remains uneven, narrow in scope, and constrained by legacy frameworks of fiscal conservatism and market liberalisation.

This divergence undermines the IMF's stated goal of supporting an inclusive and just green transition, while also threatening its ability to fulfil its core mandate of safeguarding the macroeconomic stability of its members, particularly as climate impacts intensify around the world. It also raises critical questions about the alignment of IMF surveillance with the Paris Agreement: Incremental, market-centred reforms are insufficient to deliver the scale of systemic change required to keep warming below 1.5°C.

Most notably, the IMF's climate advice risks reproducing a two-track system:

Wealthier economies receive recommendations on innovation, industrial policy, and long-term green investment; while

Lower-income countries are steered toward efficiency measures, energy subsidy removal without ensuring accompanying social safeguards, and fiscal retrenchment. Such measures may generate near-term savings but undermine their long-term capacity for climate action.

Addressing these gaps requires a more robust and less fragmented approach to climate at the IMF: Building internal capacity and diversity of expertise, engaging with external specialists in climate finance and industrial policy, and working more constructively with climate-vulnerable countries. Without such steps, the Fund will remain reactive, unable to credibly support its members in navigating climate risks that are already macro-critical.

2 These include Namibia, Guyana, Equatorial Guinea, Trinidad and Tobago, Albania, Côte d'Ivoire, and Kyrgyz Republic.

Recommendations

- **Climate change should be treated as a core macro-financial risk, and be integrated into the IMF's core policy advice.** Every Article IV report should state whether the IMF's core policy advice (fiscal, monetary, financial, exchange rate) enables or undermines countries' climate mitigation and adaptation plans. If not, staff must present alternatives.
- **Climate surveillance coverage must follow Paris Agreement principles, including equity and common but differentiated responsibilities, while supporting sustainable development and poverty eradication.** This means advanced economies must take the lead, and recognise spillover effects from their fiscal, monetary, financial and climate policies onto low- and middle-income countries.
- **Upgrade analytics:** Science-based recommendations on the impact of the climate crisis on macroeconomic and financial stability should be acknowledged and tipping-points properly incorporated in modelling.
- **Do no harm:** Make ex-ante and ex-post distributional and climate impact assessments mandatory, published, and used to adjust advice. This should lead to clear subsidy reform guidance, requiring equity analysis, compensation plans, phased sequencing and safeguards before recommending energy price reforms.
- **Tools must have a clear purpose:** If staff apply models (CPAT, ENV, DIGNAD), they must show how results shaped the policy package.
- **Financing annex:** Require a 'climate financing map' in surveillance (public vs private, concessional vs market, domestic vs external).
- **Inclusive consultation:** Country teams must engage unions, civil society organisations, parliaments, and publish a summary of inputs in staff reports.
- **Move beyond one-size-fits-all carbon pricing and provide green industrial policy guidance.** Staff should assess public investment, state owned enterprises' roles, and industrial strategies as macro-critical, not just pricing tools — and apply them evenhandedly across country groups.
- **Stay in the macro lane:** When issues lie outside IMF tools, flag macro relevance but refer governments to multilateral bodies such as the UNFCCC, ILO, OHCHR, and UN Women.

Introduction



Jamshoro coal-fired power plant, Pakistan. Credit: Zain Moulvi / Alternative Law Collective.

Climate change is no longer a distant or sectoral concern. The Intergovernmental Panel on Climate Change (IPCC) has underscored that limiting warming to 1.5 degrees Celsius requires “rapid and far-reaching transitions in energy, land, urban systems, and industry” — changes that go well beyond incremental adjustments but call for comprehensive changes to countries’ economic structures (IPCC 2018). Central to these efforts will be the transition away from fossil fuel extraction and usage, and towards the development and utilisation of greener energy sources. The urgency of this transition was underscored by UN Secretary-General António Guterres, who warned in July 2025 that “the greatest threat to energy security today is in fossil fuels. They leave economies and people at the mercy of price shocks, supply disruptions, and geopolitical turmoil” (Guterres 2025).

These warnings provide the yardstick for evaluating whether the International Monetary Fund (IMF) — the world’s premier

international financial institution, responsible for advising governments on economic policy — is enabling or constraining the green transition. The organisation’s rhetoric is promising. Already in 2015, the year of the Paris Agreement, then-Managing Director Christine Lagarde asserted that climate issues are ‘macro-critical’ — impacting the economy and financial stability as a whole and, therefore, within the Fund’s remit.

This led to a flurry of activity — primarily analytical — to spell out economic policy measures to underpin the green transition (Clift 2024; Gallagher, Rustomjee, and Arevalo 2024). As it will be explained in the next section, the 2021 Comprehensive Surveillance Review (CSR) was a key milestone in this regard. By 2023, the IMF’s current Managing Director Kristalina Georgieva could confidently reiterate that “climate risks affect macroeconomic and financial stability” and informed the world that “we are a financial institution, so we put money where our mouth is” (World Bank 2023).

But how, exactly, is the IMF pursuing these climate objectives in its operations? A recent study by the IMF's Independent Evaluation Office found that the institution's evolving application of its mandate, under which the climate work fell, "lacked clarity", and that "the absence of a strategic longer-term anchor" "resulted in decisions being taken in an ad hoc manner" (Rustomjee et al., 2024). The US Treasury Secretary claimed that the IMF now "devotes disproportionate time and resources to work on climate change, gender, and social issues. These issues are not the IMF's mission" (US Department of the Treasury 2025).

Moreover, scholarship sketches out different policy futures in relation to green economic transformations (Gabor and Braun 2025). On the one side of the spectrum is a big green state that uses public investment, industrial coordination, and long-term planning to accelerate decarbonisation; on the other side is a market-derisking regime that relies on carbon pricing, subsidy reform and incentives to crowd in private capital while constraining fiscal space. Where the IMF's operations land within this continuum matters for unpacking whether its policy advice helps deliver a just green transition, in line with international agreed upon targets, or whether it perpetuates a business-as-usual trajectory.

This report pursues two central goals:

- 1. Assessing whether the IMF has lived up to its own commitments** — the 2021 CSR, the 2021 Climate Strategy, and the 2022 Guidance Note on Surveillance. These documents pledged systematic integration of climate risks and policies into Article IV consultations, the vehicle through which the IMF delivers its economic policy advice to its members in regular intervals.
- 2. Evaluating whether IMF surveillance aligns with what science and experts show is needed** — rapid decarbonisation, structural transformation, and expanded fiscal space for adaptation and just transition measures.

This report provides a detailed assessment of IMF climate surveillance between 2022 and mid-2025. Drawing on a review of 60 Article IV reports across a representative sample of countries, we analyse the scope, framing and coherence of the Fund's climate-related advice. Our aim is to determine whether IMF surveillance is supporting the urgent, equitable, and transformative transition required or whether it risks greenwashing fiscal orthodoxy under the banner of climate action. In doing this, we identify and elaborate on the most **contentious issues in the Fund's climate engagement**:

- **Short-termism:** The persistent focus on near-term fiscal balances over long-term climate risks.
- **Climate policy vs austerity:** Fiscal consolidation that narrows the space for investment in adaptation and mitigation.
- **Support for fossil fuels:** Continued endorsement of exploration or subsidy reform that risks prolonging carbon lock-in.
- **Market-based renewables vs green industrial policy:** Privileging price signals and private finance over proactive public investment and industrial strategy.
- **Green austerity through subsidy/tariff reforms:** Rebranding long-standing fiscal adjustment measures as climate policy.

To situate these debates, the next section outlines why IMF surveillance is consequential and how its climate strategy has been formally defined.

Why IMF surveillance matters

A core area of the IMF's operations is the surveillance of its members' economic and financial policies. This is primarily achieved through the research and analysis underpinning the organisation's Article IV reports, which are published annually for large economies and less frequently for smaller ones.³ Per the IMF's Articles of Agreement, all member states have an obligation to periodically submit to such monitoring. In addition, a supplementary economic surveillance tool, the Financial Sector Assessment Program (FSAP), is jointly organised with the World Bank and aims to identify financial sector vulnerabilities as well as opportunities to contribute to development objectives. For 47 IMF member countries with systemically important financial sectors, it is mandatory to participate in a regular FSAP: Thirty-two countries are evaluated once every five years (including several large developing countries, like China, Brazil, India, and Mexico), and once per decade for 15 emerging markets, like Argentina, Malaysia and the Philippines (IMF 2021b). In this section we focus solely on the Article IV consultations, which also incorporate findings from the FSAPs.

Even though they do not contain mandatory policy reforms as IMF lending agreements do, surveillance activities are still highly significant. First, domestic policymakers are informed of the IMF's assessment of their country's economic outlook and the associated policy recommendations. This advice does not come with any enforcement capacity, but it is nonetheless consequential for countries, especially those at lower levels of economic development that form the majority of IMF borrowers and would-be borrowers. The analyses and advice contained in Article

IV reports commonly inform the reforms mandated in subsequent or concurrent IMF lending programmes. In contrast, high-income countries often disregard the Fund's advice, as their economic size and geopolitical significance mean they are unlikely to be penalised and won't face future policy conditionality as they will never resort to borrowing from the Fund (Edwards and Senger 2015; Momani 2006).

Second, as Article IV reports are typically made public and IMF Executive Board members are invited to discuss their findings (Schäfer 2006), critical Article IV reports can yield peer pressure for countries to pursue reforms that others perceive will contribute to regional or global financial stability. So-called 'donor countries' might rely on these reports to learn more about the policy environments and challenges of potential recipients of bilateral development assistance. Such information-sharing via the IMF forms a key source of knowledge on the economic conditions of other countries around the world.

Finally, the IMF's economic surveillance can impact financial markets and investor decisions. Article IV reports give signals to international capital markets on whether a country's economic policies are considered credible, in turn affecting the availability and cost of credit, thus making the Fund a gatekeeper of finance even where countries have no IMF programme. Financial markets have reacted favourably to the publication of positive press releases on surveillance findings (Fratzscher and Reynaud 2011), and private actors use Article IV reports to direct investments or inform their own forecasts of economic performance of countries around the world (Frenkel, Rülke, and Zimmermann 2013). This is especially salient for low- and

³ The IMF also conducts regional and multilateral surveillance. These activities are not covered here.

middle-income countries, where private investors are typically less informed about economic developments (Breen and Doak 2023) and extensive economic policy research capacity is often lacking (Fellessen 2017; Sanyal and Varghese 2006).

While the IMF's economic surveillance recommendations are normally offered

outside the confines of a lending programme, this does not mean that countries with loans have their Article IV consultations suspended. Instead, these reports are published concurrently with the parallel IMF loan reviews and are generally consolidated so that a subset of Article IV recommendations also forms part of loan conditionality.

The Paris Agreement and the IMF's Mandate

The IPCC's Sixth Assessment Report underscores that aligning financial flows with low-emission, climate-resilient development is integral to the Paris Agreement and central to macro-financial stability. Chapter 15 warns that financial markets remain structurally misaligned with climate goals, as capital continues to flow into carbon-intensive activities, creating vulnerabilities that could destabilise banks, sovereigns, and entire economies if abrupt repricing occurs (Kreibiehl et al., 2022). Chapter 17 of the IPCC report emphasises that climate action and sustainable development are inseparable: without embedding mitigation and adaptation into development pathways, climate risks will undermine growth, resilience, and stability (Denton et al., 2022). In this framing, delivering on the Paris Agreement is not a peripheral goal but a condition for the IMF's core mandate of safeguarding macroeconomic and financial stability.

The IMF's *Embedded in Nature* Staff Climate Note (2024/002) reinforces this macro-financial framing. It argues that "the economy is embedded in nature" and highlights how nature loss and climate change can trigger tipping points or non-linear "feedback effects" and "cascading nature-climate impacts" that jeopardise financial stability (Gardes-Landolfini et al., 2024). The note documents the high exposure of the global financial system, with 38% of lending by the 100 largest banks tied to nature-degrading,

subsidy-dependent sectors, and 44% exposed to conservation areas. This entanglement creates the possibility of abrupt "nature Minsky moments". The IMF's own staff analysis therefore recognises that without reforms to integrate climate and biodiversity into financial governance, the Fund risks failing in its mandate to preserve macroeconomic and financial stability.

Independent expert analysis converges on the same conclusion. The TF-Clima report argues that aligning finance with the Paris Agreement requires systemic reform of the international financial architecture, including fiscal frameworks, prudential regulation, and industrial policy strategies (Independent Report of the G20 TF-CLIMA, 2024).



IMF Managing Director Kristalina Georgieva speaks at an event. Credit: IMF.

Incremental tools like carbon pricing or disclosure are insufficient; instead, the report calls for embedding climate into structural economic planning, supporting diversification away from fossil dependence, and scaling public investment into green industries. These proposals echo the IPCC's call for deep, rapid, and just transitions and the IMF note's warning that policy frameworks must evolve "to embrace environmental sustainability" if they are to contain systemic risk (Gardes-Landolfini et al., 2024).

Finally, across the IPCC, IMF, and TF-Clima literatures, equity and the principle of common but differentiated responsibilities (CBDR) emerge as essential conditions for stability. The IPCC stresses that uneven action

exacerbates global inequalities, while the IMF note highlights how cascading risks are most acute where climate shocks intersect with debt vulnerabilities and weak institutions. The TF-Clima experts argue that without CBDR-grounded reforms that expand fiscal space and policy autonomy for developing economies, the global financial system will reinforce structural fragilities rather than contain them. Taken together, this body of work suggests that industrial policy, sustainable development, strong financial regulation, and equity-based reform of the financial architecture are not add-ons but prerequisites for the IMF to fulfil its macro-financial stability mandate in the age of planetary crisis.

The IMF's climate strategy and its application to economic surveillance

The IMF's institutional engagement with climate change has shifted from an ad-hoc, issue-specific focus to a formal framework embedded in its surveillance mandate (IEO 2024). This evolution reflects the recognition — codified in the Comprehensive Surveillance Review and the Climate Strategy, both published a few months apart in 2021 — that climate change constitutes one of the most critical macroeconomic and financial challenges facing the Fund's membership in the coming decades (IMF 2021d, 2021c). One of the 2021 CSR background papers included a section describing the "legal framework for Article IV consultations as it pertains to the coverage of climate change" (IMF, 2021e).

These policy documents emphasise three core pillars for the IMF's policy engagement, each to be covered at different frequencies and levels of detail:

- (i) mitigation policies to reduce greenhouse gas emissions and limit global warming: the objective was to focus on these policies every three years for the 20 largest emitters of greenhouse gases
- (ii) adaptation policies to strengthen resilience to the physical impacts of climate change: the objective was to focus on these policies every three years for 60 climate vulnerable countries
- (iii) transition management policies to navigate the structural shifts entailed by a low-carbon economy: the objective was to focus on these policies in IMF economic surveillance of all countries every 5–6 years, including a mix of in-depth coverage for 8–9 countries annually and more standardised treatment for 25 countries annually (IMF 2021d, 17).

A key priority for IMF surveillance was “ensuring economic sustainability”, which broadened the time horizon of Article IV consultations beyond short-term macroeconomic stability to cover structural trends and long-term risks, including climate change, demographic shifts, inequality, and technological disruption (IEO 2024). The IMF’s own Independent Evaluation Office conducted analyses on how this expansion was designed to embed climate change firmly within the Fund’s remit as a determinant of longer-term macro-financial sustainability. In principle, this shift created a clear benchmark: IMF surveillance is now expected not only to assess immediate macroeconomic balances, but also whether countries are on a sustainable trajectory in light of climate-related risks.

The Surveillance Review clarified that mitigation is primarily a multilateral surveillance issue, given its nature as a global public good. Even so, systematic coverage of related challenges and policies in Article IV reports was strongly encouraged for the largest emitters of greenhouse gases, with discussions of the adequacy of mitigation measures expected at least every three years (IMF 2021c). Adaptation and transition management challenges fall within the bilateral surveillance framework when they are macro-critical — that is, when they have a significant impact on a member’s present or prospective balance of payments or domestic stability. This can include, for example, fiscal planning for resilience investments, financial stability risks from climate shocks, or the macroeconomic implications of policy reforms needed to meet Nationally Determined Contributions (NDCs) under the Paris Agreement. Further, the IMF also spells out the importance of covering environmentally-relevant economic policies in the world’s major fossil fuel exporters, who have extraction models that contribute to emissions and who may be vulnerable to economic shocks from changes in energy

prices; as well as small developing states that are often also highly climate vulnerable.

The 2022 Guidance Note for Surveillance under Article IV Consultations translated this strategic direction into operational expectations for IMF country teams that go on country missions to perform these analyses. The note emphasises that coverage of climate issues should be selective but even-handed, guided by the macro-criticality criterion (IMF 2022c). Specifically, staff are expected to:

- assess physical, transition, and — where applicable — mitigation risks as part of the Risk Assessment Matrix, a dedicated section of each Article IV report;
- draw on IMF climate diagnostics or external analysis to quantify macroeconomic impacts;
- analyse climate financing needs, distinguishing public and private contributions where possible;
- evaluate the implications of the global green transition on the macroeconomy and of diversification from fossil fuel production and export; and
- incorporate climate-related policy recommendations into the broader macroeconomic policy mix, ensuring coherence with fiscal, monetary, and structural advice.

These IMF policy documents clearly spell out the IMF’s commitments vis-a-vis coverage of climate issues in Article IV reports. To be sure, the formulation of the guidance for staff leaves considerable leeway to the IMF teams conducting the surveillance to decide if and how to incorporate climate considerations into their analyses. Even so, the recent policy documents provide an entry point for our analysis: They offer a benchmark against which IMF practices can be evaluated. This is attempted in the remainder of the report, where we present disaggregated data on the climate coverage in IMF surveillance.

Data collection and analysis of climate-related terms

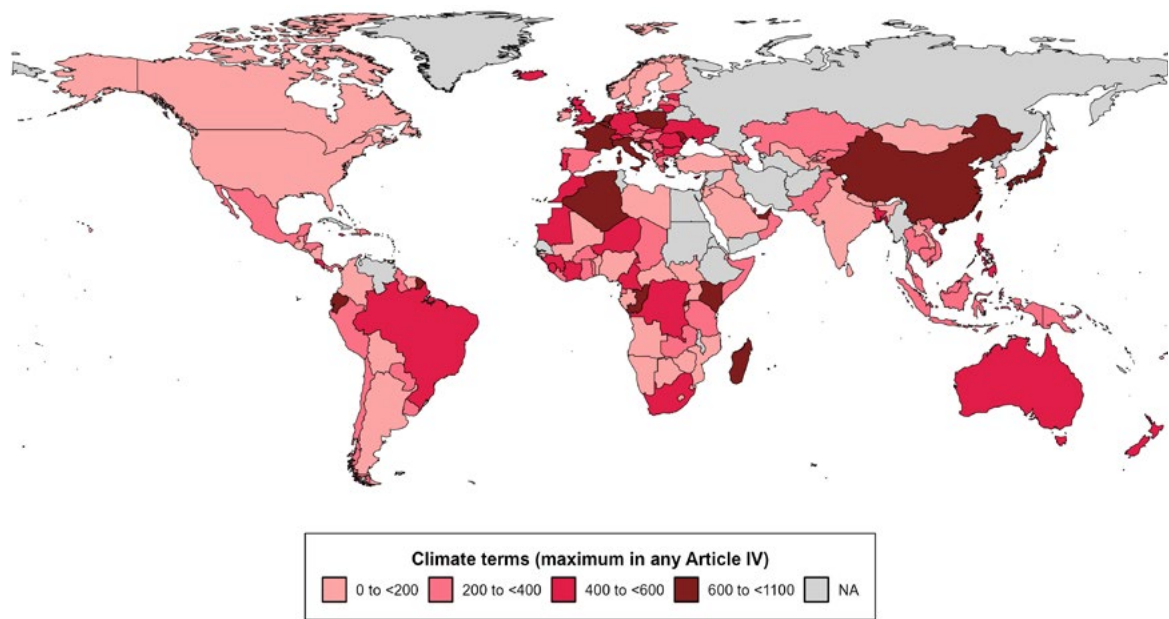
For this analysis, we collected all Article IV reports and their accompanying Selected Issues papers published in the period from 1 January 2022 to 20 May 2025, to reflect the period following the publication of the IMF's Climate Strategy and Comprehensive Surveillance Review: A total of 597 documents from 178 countries, including 307 Article IV reports, 60 joint Article IV and programme review reports, and 230 Selected Issues papers. We then assessed the frequency of climate-related language in each document using the quantda package for R (a software for quantitative text analysis). A custom dictionary of 17 climate-related keywords, primarily related to mitigation and energy (e.g. climate, energy, renewable), was used to search across the corpus, with additional filtering applied to exclude irrelevant uses (e.g. "investment

climate").⁴ The resulting word frequencies were first calculated for each individual document and then combined by country-year by aggregating the counts from the corresponding Article IV report and Selected Issues paper.

Figure 1 shows the maximum number of climate-related terms referenced in any single Article IV report for each country during the coverage period. Among the 178 countries analysed, the average maximum count was 329 terms, with a median of 267 and a standard deviation of 220. The highest term counts were observed in China and Trinidad and Tobago (both with 1,087 mentions), followed by Moldova (1,029), Japan (847), and Belgium (820). At the other end of the spectrum, Lebanon had the fewest climate mentions (26), followed by Armenia (50), Mongolia (53), Montenegro (59), and Laos (62).

Figure 1: Most IMF attention to climate issues directed to Europe and China; haphazard coverage in Asia, Africa and the Americas

Maximum number of climate terms per country in any single Article IV report, January 2022–May 2025



⁴ Our dictionary of climate-related terms included the following: 'climate', 'environmental', 'green', 'renewable', 'solar', 'wind', 'energy', 'emissions', 'carbon', 'flood', 'drought', 'disaster', 'weather', 'desertification', 'biodiversity', 'ecosystem', and 'forest'. Our exclusions included 'investment climate', 'business climate', 'political climate', 'economic climate', and 'financial climate.'

In Figure 2, we track the evolution of climate-related terms in IMF Article IV reports between 2022 and 2025. Panel A presents the overall trend, excluding reports linked to RSF or Upper Credit Tranche (UCT) programmes,⁵ as these reports are qualitatively distinct from standard surveillance: The RSF is explicitly climate-focused, while both RSF and UCT reports reflect programme-driven assessments that go well beyond standard surveillance practices. The data show a steady decline in climate-related coverage: From an average of 248 terms in 2022 (103 reports), to 222 in 2023 (98 reports), and 198 in 2024 (104 reports). Preliminary data for 2025 suggest a further drop, with an average of 130 terms across 15 reports. This marks a reversal of the upward trend observed between 2015 and 2022 (IEO 2024, 34), a retreat that may reflect a waning of attention as staff face competing priorities, resource constraints, and the perception that climate concerns are better addressed through specialised facilities such as the RSF.

Panel B compares advanced economies, low- and middle-income fossil fuel producers, and low- and middle-income non-producers.⁶ Except in 2025 — when the small number

of reports skews results — advanced economies consistently recorded the most climate coverage, followed by fossil fuel producers and then non-producers. Even so, advanced economies saw a steady fall, from 310 terms in 2022 (44 reports) to 205 in 2024 (43 reports) and 114 in 2025 (8 reports). Fossil fuel producers followed a similar trajectory, rising from 215 terms in 2022 (21 reports) to 248 in 2023 (18 reports), before dropping to 190 in 2024 (20 reports) and 104 in 2025 (2 reports). These findings suggest that while advanced economies and fossil fuel producers receive more attention on climate issues, coverage has weakened over the period.

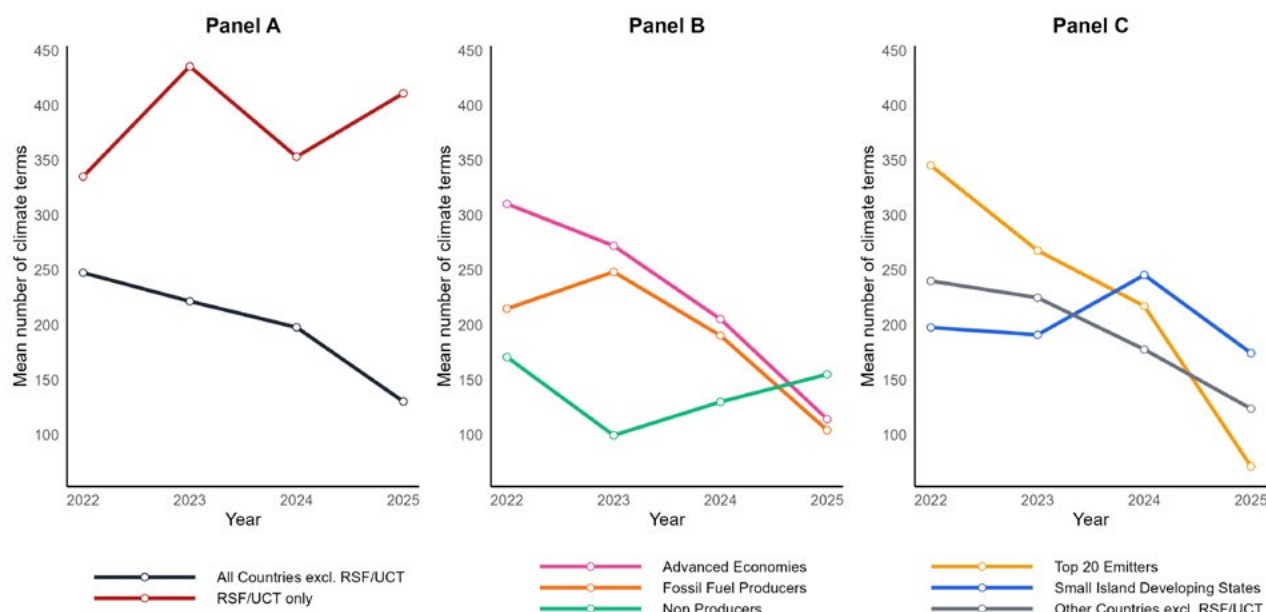
Panel C disaggregates results into the top 20 greenhouse gas emitters (Climate Watch 2025), Small Island Developing States (SIDS), and all other countries. Among the top emitters, the reduction was sharpest, falling from an average of 345 terms in 2022 to 217 in 2024 (and 71 in 2025, though based on only one report). SIDS showed greater stability between 2022 and 2023, followed by a notable increase in 2024 to 246 terms (21 reports), before declining again to 174 in 2025 (3 reports).

⁵ Upper Credit Tranche programmes refer to lending agreements that need to be justified with reference to balance of payments problems and generally last 1–3 years.

⁶ Our typology of advanced economies, low- and middle-income fossil fuel producers, and low- and middle-income non-producers uses income classifications from the World Bank's 2024–25 fiscal year. A country is defined as a fossil fuel producer if it accounted for at least 0.05% of global oil, gas, or coal output in 2023 or if fossil fuel rents exceeded two percent of GDP in 2021. Our typology excludes SIDS, given their atypical economic circumstances arising from small size, narrow export bases and acute vulnerability to climate shocks. It also excludes countries with RSF or UCT arrangements, as these reports are qualitatively distinct from standard surveillance. SIDS and RSF/UCTs are instead covered separately in this report.

Figure 2: The IMF's declining attention to climate issues in surveillance reports

Mean climate terms per year, overall and by climate categories, in IMF surveillance reports 2022–2025



We then chose 60 Article IV reports for deeper analysis using a **structured multi-step selection strategy to ensure coverage across key institutional, regional, and climate-policy dimensions**.

- ➔ First, we removed country duplicates by retaining only the year entry with the highest number of climate-related terms.
- ➔ We then selected 17 of the world's top 20 greenhouse gas emitters (Climate Watch 2025), excluding Iran, Russia, and Saudi Arabia, which were not present in the dataset.
- ➔ 10 Small Island Developing States (SIDS) were then selected based on climate term frequency, excluding any with a Resilience and Sustainability Facility (RSF) or Upper Credit Tranche (UCT) programmes and omitting Curaçao and Sint Maarten.
- ➔ Next, we selected 8 non-SIDS RSF countries. These were chosen based on climate term count and apportioned to reflect the distribution of the 16 RSF participants in the dataset:
 - 4 from Sub-Saharan Africa (SSA)
 - 2 from Latin America and the Caribbean (LAC)
 - 1 from Europe and Central Asia (ECA)
 - 1 from a combined Middle East & North Africa and South Asia (MENASA) region.
- ➔ For UCT countries, we selected 6 cases based on climate term count, reflecting a proportional allocation derived from the 34 UCT participants in the dataset (21 SSA, 4 MENASA, 4 LAC, 5 ECA), but adjusted downward by 1 SSA and 1 MENASA case to account for their inclusion in the top emitter category. These 6 UCT cases were distributed as follows: 4 from SSA, 1 from LAC, and 1 from ECA.
- ➔ Finally, we selected 19 "Other" countries based on climate term count, restricted to those not participating in RSF or UCT programmes, and excluding advanced economies, SIDS, and any countries selected under other categories — these exclusion criteria ensure that we can still capture countries with high incidence of climate terms but that are not captured in other groupings.

Table 1 presents the resulting sample, which the remainder of this report focuses on.

Table 1. Sample of Article IV reports for in-depth analysis

Category	Number of countries	Article IV reports
Top 20 greenhouse gas emitters	17	Australia 2024; Brazil 2023; Canada 2024; China 2022; Congo Dem. Rep. 2022; Germany 2022; India 2024; Indonesia 2022; Japan 2022; Korea Rep. 2022; Mexico 2023; Pakistan 2024; South Africa 2023; Türkiye 2024; Thailand 2022; United States 2023; Vietnam 2023
Small Island Developing States (SIDS)	10	Bahamas 2024; Belize 2024; Grenada 2024; Guyana 2025; Kiribati 2023; Maldives 2024; Micronesia 2023; Palau 2023; St. Kitts and Nevis 2024; Trinidad and Tobago 2024
Resilience and Sustainability Facility (RSF) countries	8	Bangladesh 2023; Barbados 2023; Cote d'Ivoire 2024; Costa Rica 2023; Kenya 2023; Madagascar 2024; Moldova 2023; Rwanda 2023
Upper Credit Tranche (UCT) countries	6	Cameroon 2023; Congo, Rep. 2024; Ecuador 2024; Mauritania 2022; North Macedonia 2023; Sierra Leone 2022
Other countries	19	Albania 2022; Algeria 2023; Azerbaijan 2023; Bosnia and Herzegovina 2024; Cambodia 2022; Chad 2024; Equatorial Guinea 2022; Guinea 2024; Kazakhstan 2024; Kyrgyz Republic 2022; Malaysia 2022; Mali 2023; Namibia 2023; Nicaragua 2022; Peru 2023; Philippines 2022; Tajikistan 2022; Togo 2024; Uzbekistan 2024

Notes: For reports not categorised as SIDS or RSF and UCT countries, italicised reports are advanced economies (6 countries), bold reports are low- and middle-income fossil

fuel producers (17 countries), and underlined reports are low- and middle-income non-producers (11 countries).

Novel policy instruments: The IMF's climate diagnostics

Integrating climate considerations into the Fund's core areas — fiscal, financial, monetary, and exchange rate policy — means fully accounting for the impact of adaptation, mitigation, and transition measures on a country's fiscal and external balances, greenhouse gas emissions, and overall population welfare.

To support this effort, the IMF has recently introduced a suite of climate diagnostics that enable countries to assess the macroeconomic implications of climate risks and the green transition, and to evaluate the effects of alternative policy pathways. The IMF has also committed to expanding the use of these tools in its surveillance activities (IMF 2021a, 2021d).

Table 2. Use frequency of IMF diagnostics by selection categories

	Top 20 Greenhouse Gas Emitters 17 countries	Small Island Developing States 10 countries	Resilience and Sustainability Facility 8 countries	Upper Credit Tranche 6 countries	Other 19 countries	Total 60 countries
DIGNAD	1 (6%)	1 (10%)	3 (38%)	0 (0%)	1 (5%)	6 (10%)
IMF-ENV	5 (29%)	0 (0%)	0 (0%)	0 (0%)	1 (5%)	6 (10%)
CPAT mitigation	7 (41%)	2 (20%)	1 (13%)	2 (33%)	9 (47%)	21 (35%)
CPAT distribution	2 (12%)	1 (10%)	0 (0%)	1 (17%)	4 (21%)	8 (13%)
LIC-DSA natural disasters stress test	1 of 2 (50%)	2 of 2 (100%)	5 of 5 (100%)	1 of 4 (25%)	3 of 8 (38%)	12 of 21 (57%)
MAC-DSA climate change long-term risk assessment	4 of 15 (27%)	8 of 8 (100%)	2 of 3 (67%)	2 of 2 (100%)	3 of 11 (27%)	19 of 39 (31%)
RAM climate coverage	15 (88%)	10 (100%)	8 (100%)	5 (83%)	15 (79%)	53 (88%)
EBA climate coverage	3 (18%)	4 (40%)	6 (75%)	3 (50%)	6 (32%)	22 (37%)
FSAP climate test	3 of 5 (60%)	1 of 1 (100%)	1 of 1 (100%)	0 of 1 (0%)	4 of 4 (100%)	9 of 12 (75%)
IMF climate financing analysis	11 (65%)	4 (40%)	4 (50%)	3 (50%)	10 (53%)	32 (53%)
IMF adaptation financing analysis	2 (12%)	4 (40%)	3 (38%)	2 (33%)	5 (26%)	16 (27%)

Table 3. Use frequency of IMF diagnostics by fossil fuel production status

	Advanced Economies 6 countries	Non-AE Fossil Fuel Producers 17 countries	Non-AE Non- Producers 11 countries
DIGNAD	0 (0%)	0 (0%)	1 (9%)
IMF-ENV	3 (50%)	3 (18%)	0 (0%)
CPAT mitigation	2 (33%)	10 (59%)	4 (36%)
CPAT distribution	0 (0%)	5 (29%)	1 (8%)
LIC-DSA natural disasters stress test	n/a	2 of 3 (67%)	2 of 6 (33%)
MAC-DSA climate change long-term risk assessment	0 of 6 (0%)	6 of 14 (43%)	0 of 5 (0%)
RAM climate coverage	4 (67%)	15 (88%)	9 (82%)
EBA climate coverage	2 (33%)	2 (12%)	4 (36%)
FSAP climate test	1 of 2 (50%)	3 of 4 (75%)	3 of 3 (100%)
IMF climate financing analysis	3 (50%)	12 (71%)	5 (45%)
IMF adaptation financing analysis	0 (0%)	3 (18%)	3 (37%)

We collected data on how often the IMF used its climate diagnostic tools in Article IV reports, summarised in Table 2 and 3. Some of these relate to core analytical tools and reporting structures that are formal requirements in Article IV consultations (DSAs, RAMs, and EBAs), whereas others are optional (IMF 2022c). The main results are as follows.

DIGNAD (Dynamic Integrated Growth and Natural Disasters):

- Models the economic impact of climate-related natural disasters and adaptation policies by simulating shocks and interventions to project key macroeconomic outcomes, such as economic growth, fiscal balances, public debt (Aligishiev, Ruane, and Sultanov 2023).
- Used in only 10% of Article IV reports, including only Micronesia among SIDS, Pakistan among top 20 emitters, and Guinea among other countries, and deployed primarily in the context of RSF programmes (Barbados, Moldova, Rwanda).
- Not used in any advanced economies or fossil fuel producers, and applied only to Guinea among non-producers.

IMF-ENV:

- Models macroeconomic, sectoral, and environmental impacts of climate mitigation policies by simulating and comparing different policy scenarios, such as carbon pricing and fossil fuel subsidy reform (Chateau et al. 2025).
- Adopted in only 10% of Article IV reports, and used only among top 20 greenhouse gas emitters (Australia, Canada, Mexico, South Africa, United States) and Kazakhstan.
- Used in 50% of advanced economies but only 18% of fossil fuel producers and never among non-producers.

CPAT (Climate Policy Assessment Tool):

- Less complex, more user-friendly tool than IMF-ENV that models macroeconomic, environmental, and distributional impacts of climate mitigation policies by simulating and comparing different policy scenarios, such as carbon pricing, renewable energy support, or fossil fuel subsidy reform (Black et al. 2023).
- Applied to climate mitigation effects in 35% of Article IV reports, and to poverty and inequality effects in 13% of Article IV reports (Azerbaijan, Kazakhstan, Kiribati, North Macedonia, Peru, Philippines, South Africa, and Vietnam).
- Adopted in 59% of fossil fuel producers, 36% of non-producers, and 33% of advanced economies for climate mitigation effects; for poverty and inequality effects, it was adopted for 29% of fossil fuel producers, only the Philippines among non-producers, and in no advanced economies.

LIC-DSA (Low Income Country Debt Sustainability Analysis) natural disasters stress test:

- Models how a country's debt trajectory would respond to a climate-related shock, such as a hurricane or drought, and applies to low and lower-middle income countries (IMF 2024i).
- Implemented in 57% of Article IV reports of applicable countries, including in all SIDS and RSF programmes.
- Deployed in two-thirds of applicable fossil fuel producers (Chad and India) and one-third of applicable non-producers (Cambodia and Nicaragua).

MAC-DSA (Market Access Country Debt Sustainability Analysis) climate change long-term risk assessment:

- Models how a country's debt dynamics would respond to the implementation of climate adaptation and mitigation policies or a climate-related shock, and applies to high and upper-middle income countries (IMF 2022f).
- Adopted in 31% of Article IV reports of applicable countries, including in all SIDS and UCT programmes and two-thirds of RSF programmes, but in only 27% of applicable top 20 emitters and other countries.
- Used in 43% of applicable fossil fuel producers (Algeria, China, Kazakhstan, Peru, Türkiye, and Vietnam), but never used for applicable non-producers or advanced economies.

RAM (Risk Assessment Matrix) climate coverage:

- Identifies key risks to a country's macroeconomic outlook — both domestic and external — and assesses their relative likelihood, economic impact, and corresponding contingency measures (IMF 2022c).
- Climate-related risks were identified in 88% of Article IV reports, and were absent only in Bosnia and Herzegovina, Equatorial Guinea, Germany, Kyrgyzstan, North Macedonia, United States, and Uzbekistan.
- Climate risks were identified in 67% of advanced economies, 88% of fossil fuel producers, and 82% of non-producers.

EBA (External Balance Assessment) climate coverage:

- Evaluates whether a country's current account balance and real exchange rate are appropriately positioned given the economic context (Rabanal et al. 2023).
- Climate change was referred to in 37% of Article IV reports, including three-quarters of all RSF programmes and one-half of all UCT programmes, but in only 18% of top 20 emitters, 40% of SIDS, and 32% of other countries.
- Climate change was referred to in 33% of advanced economies and 36% of non-producers, but only 12% of fossil fuel producers (Azerbaijan and Chad).

FSAP (Financial Sector Assessment Program) climate test:

- Evaluates the stability of a country's banking and financial system by identifying key risks and vulnerabilities (Adrian et al. 2022).
- Climate risk diagnostics were reported in 75% of FSAPs we covered (i.e., those that occurred within two years of the Article IV report year) — which all included policy recommendations to improve supervision of climate risks — and was absent only in Ecuador, Korea, and Türkiye.
- Climate risk diagnostics were reported in FSAPs we covered for 50% of advanced economies, 75% of fossil fuel producers, and 100% of non-producers.

IMF climate financing analysis:

- Coverage of a country's overall climate financing needs, including either adaptation, mitigation, or both combined.
- Occurred in 53% of Article IV reports, including in 65% of top 20 emitters, 40% of SIDS, 50% of RSF and UCT programmes, and 53% of other countries.
- Provided in 50% of advanced economies, 71% of fossil fuel producers, and 45% of non-producers.

IMF adaptation financing analysis:

- Specific coverage of a country's climate adaptation financing needs.
- Occurred in 27% of Article IV reports, including 40% of SIDS, 38% of RSF programmes, 33% of UCT programmes, and 26% of other countries, but only 12% of top 20 emitters.
- Provided in no advanced economies, 18% of fossil fuel producers (Algeria, Malaysia, Thailand), and 27% of non-producers (Albania, Guinea, Togo).

Overall, uptake of the IMF's climate diagnostic tools in Article IV surveillance has been uneven, with more technical or complex models like DIGNAD and IMF-ENV rarely used, primarily in RSF programmes or among major emitters. While the more accessible CPAT tool saw slightly broader application

for assessing climate mitigation, its use for distributional analysis remained limited. In contrast, the highest coverage occurred where climate diagnostics were embedded within the standard surveillance framework, such as climate-related RAM entries, climate stress tests and long-term risk assessments in DSAs, and climate references in EBAs. Climate financing analysis also appeared in many reports.

However, coverage tended to neglect adaptation and was often superficial. Indeed, only three reports gave a detailed breakdown of financing sources in terms of the expected contributions from public versus private actors. This lack of specificity raises concerns about the soundness of fiscal advice, especially when private sector investment may fall short. Without clear assumptions on who will pay and how, the IMF risks underestimating the public sector's role in financing essential climate measures. In short, absent detailed financing estimates, fiscal recommendations may rest on shaky foundations. More broadly, these models remain rooted in mainstream economic modelling that has long been criticised for treating climate concerns as add-ons rather than embedding them meaningfully into the core analysis (Merling 2021; Stiglitz 2018). And their failure to capture environmental tipping points creates significant uncertainty, as acknowledged by IMF staff (Mitra et al. 2025), underscoring the fundamental limits of this approach.



Flooding devastated communities across Pakistan in 2010. Credit: Department for International Development / Russell Watkins, from [Flickr](#).

Climate analytics and DSAs

Pakistan's case shows that despite considerable reforms for integrating climate into fiscal analytics, there are significant gaps and a systemic 'optimism bias' in the IMF's latest diagnostic toolkits. Under the revised MAC-SDRSF framework, the Fund's DSAs introduced a climate module combining EM-DAT, WB, and IMF-WEO data with its DIGNAD tool to quantify natural disaster risks and climate investment needs and model their impacts on debt and macroeconomic stability over the medium- and long-term horizons. The medium term analysis involves a stress test that forecasts future disaster events measuring their impact on debt-to-GDP and Gross Financing Needs (GFN)-to-GDP ratios over a ten-year period. A similar longer term analysis tests for the impacts of adaptation and mitigation needs over a thirty year period (IMF, 2022f).

Curiously, however, the medium term test for 'natural disasters' is not triggered in the 2025 RSF report and EFF review despite warnings of severe nationwide floods (see Figure 6 of Annex 1 in IMF, 2025i).⁷ Consequently, the DSA's projection of debt reduction until 2029 fails to account for the impact of major climate-induced disasters such as the ongoing floods. The climate DSAs have continued to assess Pakistan's debt as "sustainable in the medium term," despite the staff recognising the high risks posed by elevated gross financing needs and significant 'downside risks' with the DSA admitting to high chances of over optimism (over 75%) in their inbuilt realism test.

⁷ These warnings have sadly come to pass. As of the preparation of this report, 862 lives have been reportedly lost in the ongoing deluge with \$1.4bn in estimated economic losses (BR Web Desk, 2025; Dilawar, 2025).

The climate tool kits have also been used in uneven ways and lack a function for modeling the impact of debt burdens on climate spending and related risks (Rashid et al., 2024). Pakistan has paid 45% more in external debt servicing costs since entering the 2018 EFF programme. As a result the nation had to slash climate investments during the flood year in 2022, spending up to 11 times more on debt servicing than on overall development during that year. The trend has continued in the years since. The Fund's toolkits remain unable to model the welfare losses and climate risks associated with this shrinking fiscal space.

The DSAs are also based on assumptions that fail to accurately account for the country's specific climate-vulnerability. The Fund's attempts to forecast extreme events or quantify slow onset impacts and flood related damages grossly underestimate losses and risks, due to methodological limitations, uncertainties in data sets, and inconsistent assumptions (Mitra et al., 2025).

The DIGNAD assessments for the EFF and RSF programmes also under-report established climate investments needs. Adaptation needs are estimated at only 1% of GDP per year modelled over a 5 year period, with 40% of the financing sought to be sourced by concessional debt.⁸ This assumes total needs at just \$18.7bn.⁹ Pakistan's Ministry of Climate Change (MoCC) and the World Bank on the other hand provide conservative estimates of \$152bn between 2023 and 2030 — over 6% of the GDP in annual expenditures and nearly eight times higher than the Fund's estimate (World Bank Group, 2022).

Similarly, mitigation needs are estimated by the DIGNAD model at 5.6% of the GDP between 2023 and 2030 and are spread out over 20 years "due to fiscal and implementation constraints." This amounts to approximately \$133–\$150bn¹⁰ — a figure far smaller than the \$196bn recommended for investments over a much smaller seven year period by the World Bank (2022). Even with these underestimations, mitigation needs fetch numbers over 85% and 110% debt-to-GDP and nearly 35% and 40% GFN-to-GDP in the customised and standardised scenarios (IMF, 2025i). The Fund's framework, however, fails to provide any clear and actionable financing strategy for meeting this crucial need.¹¹

8 See Figure 7b of Annex 1 (IMF, 2025i). See also, Annex III for details on calculations for adaptation.

9 Assuming 2023 as the base year for GDP.

10 Calculations are depicted as a range based on GDP for years 2023 and 2024.

11 On this crucial question the IMF country report (2025i) merely comments that "The massive increase in the debt-to-GDP ratio relative to baseline, to more than 80 percent of GDP by the mid-2050s, points to the need for a well thought-out climate financing strategy and support from bilateral and multilateral partners."



Protests against debt and fossil fuel financing in Lahore, Pakistan, taking place during the IMF Spring Meetings, April 2024.
Credit: APMDD Pakistan.

Changing energy consumption patterns

Per the IMF's Guidance Note on 'how to embed climate considerations in economic surveillance' (IMF 2022c), energy reforms are central to two categories of climate engagement. First, they fall under transition management risks, which arise when countries adjust to low-carbon production either through their own domestic commitments — such as phasing out energy subsidies — or in response to external pressures like volatile fossil fuel markets or trade measures (e.g. the EU's Carbon Border Adjustment Mechanism). In such cases, the note advises that Article IV consultations should assess

how energy price reforms affect fiscal stability, competitiveness, and social equity, and whether accompanying measures are in place to manage distributional consequences (IMF 2022c). Second, the note highlights mitigation policies for **the world's 20 largest emitters as a systematic surveillance priority**, given their global spillovers. While the coverage of these issues is not universal across all Article IV reports, where these topics appear, they are framed as instruments with both macroeconomic and climate relevance, serving fiscal as well as climate goals.

Carbon pricing and its discontents

Carbon pricing is a market-based climate policy tool that seeks to 'internalise' the environmental costs of greenhouse gas emissions by attaching a monetary charge to them. This can be done via carbon taxes — levies on fossil fuel use calibrated to reflect their climate and local pollution damage — or through emissions trading systems (ETS) that cap emissions and allow tradable permits. By "getting the prices right," the IMF argues, markets will reallocate resources towards low-carbon technologies and more efficient energy use, catalysing deep decarbonisation (Clift 2024). From this perspective, carbon pricing is a powerful instrument to reduce emissions. It promises two key co-benefits: Raising government revenues, and putting emissions on track with the Paris Agreement. The Fund's climate strategy promotes phasing out fossil fuel subsidies (both 'explicit' budgetary subsidies and 'implicit' under-pricing of environmental costs) alongside introducing or raising carbon taxes (Clift 2024).

Critics note that carbon pricing's effectiveness depends heavily on how it is designed and how revenues are used. The IMF's own modelling shows that without recycling revenues into social protection and green investment, carbon taxes can be regressive and politically fragile (Merling 2024). In many borrowing countries, however, IMF programmes emphasise fiscal consolidation, limiting scope for such compensatory spending. At the same time, these countries still have limited renewable energy, so without being able to shift to alternative "green" sources for necessary economic activity, raising the price of carbon usually just accelerates inflation. This creates tension between climate goals and austerity measures, especially in the Global South, where the IMF has more leverage but emissions are relatively low, while its influence over large emitters is minimal (Diab 2023). Further, the IMF's narrow focus on price signals neglects industrial policy, public investment, and the wider social, labour, energy, and trade reforms needed for a just transition (Kentikelenis and Stubbs 2025).

IMF climate policy centres on carbon pricing and subsidy removal as universal prescriptions, often embedded in Article IV surveillance and lending conditionality. While recent Fund discourse has acknowledged the potentially adverse distributional impacts of carbon pricing and called for compensating "losers" to build political support, in practice such measures are frequently underdeveloped, poorly sequenced, or outweighed by broader austerity packages (He, Fan, and Ma 2022). This has led to concerns that IMF-backed carbon pricing risks 'greenwashing' structural adjustment — repackaging long-standing market liberalisation and fiscal tightening in climate language without expanding the policy space for transformative green investment (Merling 2024).

An assessment by an independent task force concluded that the IMF's surveillance activities overemphasise "carbon pricing as a panacea for climate action" (TCD-IMF 2023). Recent IMF research recognised that carbon pricing, fuel excises and phasing out energy subsidies "will be insufficient to cover costs of rebuilding existing public infrastructure" (Mitra et al., 2025). Moreover, from six climate-related market failures identified by researchers, carbon pricing addresses only one (Stern et al., 2022).

The IMF recommended **reductions to electricity, gas or fuel subsidies in nearly three-quarters of the countries in our sample**. This included two-thirds of advanced economies and about three-quarters of low- and middle-income fossil fuel producers and non-producers. In advanced economies, such advice was typically framed as a means of strengthening incentives for energy conservation and advancing climate mitigation — though in the United States, the focus was instead on eliminating federal subsidies and tax preferences for fossil fuel producers and carbon-intensive agriculture to reduce the fiscal deficit and service public debt. **In low- and middle-income contexts, the advice was often justified as a way to generate fiscal savings**, where a portion of the savings could be used on targeted social spending to cushion vulnerable groups or redirected toward climate adaptation and mitigation initiatives.

For example, in its Article IV consultation with Albania, IMF staff emphasised how global price shocks had exposed weaknesses in domestic subsidy structures, leading to recommendations for the removal of fossil fuel subsidies and movement toward cost-reflective energy pricing (IMF 2022a). Similar concerns were raised for Algeria, Ecuador, and Guinea. Across these instances, the IMF consistently argues that countries can avoid fiscal pressures by eliminating or reducing subsidies. Importantly, the IMF's recommendations for subsidy removals were often embedded in broader political-economic concerns, in part a recognition of how unpopular their energy subsidy reforms have been in the past (IMF 2025c, chap. 2). The emphasis was frequently on the importance of phasing in reforms gradually, acknowledging the political or social challenges of removing subsidies. For example, Algeria's recommendations included "a gradual reform of energy subsidies, accompanied by a well-designed spending package and sectoral fiscal interventions such as feebates," while also underscoring

the importance of "a well-designed spending package" (IMF 2024a, 2).

Although not as central as fiscal or efficiency themes, **approximately two thirds of subsidy-cut promoting reports flagged the distributional implications of these measures**. In Kazakhstan, for instance, staff noted that phasing out fossil fuel subsidies could be pursued in conjunction with targeted public transfers in order to ensure an 'equitable' transition (IMF 2025e, 11); a policy move that is far from guaranteed to reach the appropriate segments of the population due to bureaucratic hurdles and overly restrictive eligibility constraints (Hussein 2022). In Thailand, the Article IV report stressed the importance of using carbon tax and subsidy savings to finance "well-targeted safety nets," green public investment, and support for low-carbon employment transitions (IMF 2022g, 12). Azerbaijan's report similarly emphasised the dual-use of carbon pricing revenues: "to incentivise firms and households to rely less on non-renewables... [and] potentially support the vulnerable who will be affected by the energy transition" (IMF 2024c, 61); an optimistic scenario, given the lack of affordable and reliable green alternatives.

In short, recent Article IV reports increasingly pair subsidy cuts and carbon pricing with **targeted safety nets** as a way to mitigate regressive effects and political resistance. This reflects the Fund's post-2019 social-spending strategy and its emphasis on "protecting the most vulnerable" while improving spending efficiency. Yet a substantial body of evidence suggests that **narrow targeting is prone to large coverage gaps, high administrative costs, and weak enforcement**, especially in economies with sizable informal sectors — precisely the contexts where energy price shocks hit broad swathes of lower- and middle-income households (Kentikelenis and Stubbs 2023). For carbon-pricing and subsidy reforms, these design realities matter: Energy price increases propagate well beyond the "poorest of the poor," affecting near-poor and lower-middle quintiles that

drive informal-economy demand and self-provisioned resilience. Where targeting misses these groups — or cannot scale quickly — distributional losses and growth headwinds follow. Under such conditions, **universal or broad-based compensatory measures** are more likely to achieve equitable protection and maintain political support than finely targeted schemes that struggle with eligibility, data, and delivery at speed. This is consistent with wider critiques of the Fund's long-standing preference for targeting over universalism in social protection design and with evidence that carbon-pricing and subsidy reforms carry significant distributional risks that require **broad, reliable** offset mechanisms rather than narrow ones (Stubbs and Kentikelenis 2018).

Beyond subsidy reform, **two thirds of the cases in our sample also received broader IMF recommendations on introducing carbon pricing as a central policy instrument for shaping energy demand and generating fiscal revenue.** This included all advanced economies, 82% of low- and middle-income fossil fuel producers, and 55% of non-producers. Across these cases, carbon pricing — either in the form of carbon taxes or emissions trading systems (ETS) — was promoted as a tool that could simultaneously contribute to climate mitigation and improve fiscal balances. This emphasis on mitigation measures, however, raises concerns as it is often directed at countries that are not historically significant emitters. Notably, while some nations are large emitters today, historical responsibility for cumulative emissions lies predominantly with early-industrialised countries, which have contributed disproportionately to global greenhouse gas concentrations over time. This underscores the need to consider historical emissions when designing equitable climate policies.

In Kazakhstan, for example, IMF staff outlined a comprehensive climate strategy that includes “improving carbon pricing through reduced fossil fuel subsidies... and strengthened ETS effectiveness,” noting that “the ETS carbon price is currently about

USD 1/tCO₂, one of the lowest in the world” (IMF 2025d, 16). Azerbaijan was also advised to consider carbon taxation alongside subsidy reform to support its Nationally Determined Contribution (IMF 2024c). But these concerns are not only related to developing countries. In Germany, the Fund called for the phaseout of distortive fossil fuel tax cuts, suggesting instead that “meaningful financial incentives could be considered to encourage further voluntary gas-saving behavior” (IMF 2022b, 28). Similarly, in Japan, IMF staff pointed out that the existing Tax for Climate Change Mitigation remains “very low” and suggested “further integrat[ing] carbon charges into the [fuel tax] scheme while extending them to carbon-intensive energy sources and economic activities” (IMF 2022e, 45–46). This attention reflects the IMF's stated ambition of embedding carbon pricing within a **macro-fiscal framework aimed at balancing environmental goals with resource mobilisation and spending efficiency.**

In several countries, carbon pricing is presented not in isolation but as part of broader efforts to reform energy markets. In the case of Indonesia, for example, the IMF welcomed the introduction of a carbon tax and plans to develop an emissions trading system but repeatedly emphasised that “carbon pricing mechanisms will thus only be effective with complementary broader energy pricing reforms” (IMF 2022d, 55). These would include “enhancing accountability and transparency of the government and energy companies” (IMF 2022d, 55).

Carbon pricing recommendations were also linked to external regulatory developments, particularly in Europe. For example, in North Macedonia, staff explicitly tied domestic pricing reforms to the EU's Carbon Border Adjustment Mechanism (CBAM): “Meeting the targets would require... setting the right incentives, including through further tariff reforms and consideration of a carbon tax as also specified in national legislation” (IMF 2024h, 35–36). This kind of framing positions carbon pricing not just as a domestic economic policy, but as a response to shifting global trade norms.

Power subsidy reform in Pakistan

In another regressive measure, the RSF mandates the reversal of Pakistan's built-in power subsidies in favour of targeted cash transfers via the Benazir Income Support Programme (BISP) (IMF, 2025i). The IMF has long favoured subsidy removal as a tool for fiscal balancing, based on the view that power subsidies disproportionately benefit wealthier households due to inefficient over-coverage. The Pakistani RSF adds an additional rationale of countering "overconsumption among upper income quintiles" — citing subsidies as the chief cause of energy wastage and emissions (IMF, 2025i). The evidence, however, contradicts both these views.

Recent trends show that even at higher cost recovery prices, the upper quintiles are likely to maintain unsustainable consumption levels or simply shift to distributed self-generation, transferring cost recovery burdens to low-income users (Liddle, 2023). Subsidy removals also disproportionately harm both poor people and those in the lower-middle class, especially those consuming just above 100kWh per month (Ilyas et al., 2022a). These are not over-consumptive elites but working-class households with basic energy-dependent appliances. Around 89% of poor households fall into this bracket, already spending 13.8% of their income on electricity — a share that will only rise with price hikes (Choi et al., 2024). Meanwhile, BISP's focus on the bottom 40% leaves the vulnerable middle class exposed. This demographic, already facing erosion of purchasing power due to inflation and climate shocks, is forced into either energy poverty or unsustainable debt to finance alternative energy sources like solar.

The proposed shift to a cash-based targeting also fails to account for structural issues in BISP's design which is especially prone to exclusion errors. According to the World Bank, BISP's proxy means test (PMT) can exclude up to 88% of the lowest-income decile, raising serious concerns about the reliability of this system as a replacement for universal or broad-based energy subsidies (World Bank Group, 2009). Moreover, households hovering near the poverty line — impacted by economic or climate shocks — are easily misclassified or dropped from coverage altogether. A case study of subsidy loss shows that the middle class suffers welfare losses up to 20–21% more than those of either the poorest or richest groups (Ilyas et al., 2022b). This group includes Pakistan's professionals, shopkeepers, entrepreneurs, and workers in the cottage industry — 72.7% of whom rely on the national grid for appliances essential to productivity (Choi et al., 2024). Welfare losses in these groups also risk compounding climate vulnerability due to decreased spending on private adaptive action.

Removing subsidies penalises the very segment that drives informal and inclusive economic growth — an engine comprising over 33% of GDP and employing 81% of Pakistan's labour force, including a significant number of women (Ahad et al., 2024; SDPI, 2023). These reversals run contrary to the spirit of the RSF which emphasises "protecting the most vulnerable and building human capital" as a key goal deemed "vital to long-term and inclusive growth" (IMF, 2025i). The Fund's approach to power subsidies treats energy in isolation, ignoring their centrality to economic productivity and social welfare across key demographics. In the absence of any meaningful harm assessments or trade-off analysis in its surveillance reviews and programme conditionality, these impacts remain ignored. Without supportive policies, the middle class ends up subsidising elite grid defection to self generating solar while enduring worsening power outages and unaffordable bills.

Green industrial policy versus market-driven models

While the IMF has increasingly acknowledged the role of climate change in shaping macroeconomic trajectories, its **engagement with green industrial policy in surveillance remains limited and uneven**. The precise instruments encompassed by this term are subject to extensive debate, but here we follow recent work to understand green industrial policy as the set of measures to embed environmental considerations in state-led efforts to anticipate and accelerate technological change that is likely to contribute to meeting development objectives. This includes addressing market failures (a common focus of IMF advice), but also systematically steering investments, providing coordination, reducing uncertainty for private actors, and achieving the desired transformations in the urgent timeframes posed by climate change (Allan, Lewis, and Oatley 2021; Harrison, Martin, and Nataraj 2017). Recent scholarship has argued that climate transitions unfold within distinct “green macrofinancial regimes”, depending on how much the state spends and how much discipline it imposes on private capital (Gabor and Braun 2025). In this framework, a ‘big green state’ regime uses public investment and planning to accelerate transformation, while derisking regimes rely on market incentives and fiscal levers to crowd in private finance. IMF surveillance advice largely reflects the latter, privileging fiscal prudence and market-compatible reforms over proactive industrial policy.

Among the 60 Article IV reports analysed, only **about a quarter contained recommendations that clearly reflect green industrial policy thinking** — those involving proactive state involvement in directing investment, reshaping industrial sectors, or fostering

green technologies. Strikingly, such recommendations were heavily concentrated in advanced economies and in low- and middle-income fossil fuel producers, with roughly half of the countries in each group receiving this type of advice. By contrast, among low- and middle-income non-producers, only a single case, Namibia, out of 11 countries received such advice. This raises normative concerns about **the IMF’s role in reinforcing a dual-track climate strategy**, whereby wealthier and resource-rich countries are supported in deploying active state-led green transitions, while poorer countries are nudged toward market mechanisms and fiscal restraint. This also has implications for the implementation capacity of IMF advice recipients, as state capacity can vary considerably by income level, and the Fund’s interventions — by promoting an ever greater role for markets — may even pre-empt state capacity from being developed over the medium- and long-term (Reinsberg et al. 2019). In sum, despite persistent concerns about the ‘evenhandedness’ of the IMF’s advice (Bretton Woods Project 2025; IEO 2010), this evidence still points to unequal treatment. Thus, developing countries are being placed in a bind: on the one hand, they need state capacity to implement green industrial strategies; on the other, the Fund’s advice does not necessarily help them build up that capacity.

More broadly, the focus areas of green industrial policy advice varied, but several themes emerged: The promotion of green infrastructures, fostering energy efficiency, supporting budding green sectors, and designing green policies for competitiveness. For instance, Australia was lauded for reforms that add up to “narrowly targeted

green industrial policy that aims to address market failures and externalities [and could] maximise[the country's] natural comparative advantage in the critical minerals sector" (IMF 2024b, 44). Although advice for green industrial policy was usually more circumspect than this, the IMF still identified a strong steering role for the state. For example, Kazakhstan's report emphasised further improvements in climate-related public investment management and institutional arrangements to support decarbonisation (IMF 2025d).

Green industrial policy advice to lower-middle income countries was more limited.

Only two countries received such advice. India's 2024 Article IV encouraged the government to "invest in infrastructure that is resilient to climate risks" and promote "green public transport" as part of a broader development strategy. Similarly, Uzbekistan was urged to "invest in clean technologies and business models, [including through] decommissioning inefficient gas plants, electrification of transportation, and widespread use of green hydrogen" (IMF 2024j, 59). However, there have been strong and persistent concerns that 'green' hydrogen is a false solution for the green transition (Doig 2024; Doig and Seeger 2023). In both cases, the IMF's policy advice fell short of the level of detail that could help these countries bolster the role of the public sector in supporting decarbonisation.

In contrast to green industrial policy, energy sector restructuring — whether or not the IMF explicitly endorses privatisation, unbundling, deregulation, or other forms of restructuring in the energy sector — was more frequently discussed in Article IV reports, receiving coverage in 24 countries. This included around one-third of advanced economies and low- and middle-income fossil fuel producers, and about one-half of 11 low- and middle-income non-producers — a pattern that

again suggests wealthier and resource-rich countries may be treated differently by the IMF. This advice generally reflected a strong preference for market-orientated approaches, even when such reforms occur in contexts of climate vulnerability or development constraints. In particular, this restructuring was almost always framed as a means of improving cost recovery, reducing fiscal risks, and increasing private sector participation — rather than a strategy for industrial transformation or public-led decarbonisation. In this sense, energy reform within the IMF's surveillance continues to operate largely within the constraints of prioritising fiscal discipline and market competition over strategic state intervention (Kentikelenis and Stubbs 2021; Stubbs and Kentikelenis 2022, 2023).

For instance, Madagascar's Article IV report emphasised the fiscal risks posed by energy-related state-owned enterprises, urging the government to address losses through price adjustments and utility reform (IMF 2025f). This advice underscores how energy restructuring is framed primarily as a fiscal risk mitigation exercise, with climate or equity considerations notably absent. A similar logic is evident in Bosnia and Herzegovina, where the IMF called for increased ambition in energy decarbonisation, but tethered these to pursuing further improvements in electricity market liberalisation (IMF 2024d).

In other words, what is largely missing in this narrative is recognition of the developmental role of the energy sector, particularly in countries where public investment is crucial for building renewable energy capacity, expanding access, or enabling structural transformation (Robbins et al. 2024; Sward and Le Lannou 2025; Transnational Institute 2025). Even when restructuring is tied to renewable energy goals — as in Uzbekistan, Chad, or Grenada — the IMF's advice often lacks substantive guidance on how governments might strategically lead or coordinate this

process, instead framing public action primarily as a facilitator of markets and not as a key actor shaping them.

But even beyond energy sector restructuring, IMF staff recommended a range of complementary climate policy instruments that reflected a consistent preference for market-based tools over more active state intervention. These include feebates, tax incentives, voluntary standards, and public-private partnerships. Across surveillance reports, these tools are frequently presented as cost-effective, behaviour-shaping levers, rather than as part of a coherent industrial or regulatory climate strategy. The Kazakhstan Article IV, for example, encapsulates this market-centric approach. Staff recommend feebates¹² to “encourage shifts to greener energy... especially to help address resistance from the public and energy-intensive industries” (IMF 2025e, 12). The rationale is tactical: While pricing mechanisms like carbon taxes are preferred, feebates are useful to manage political and behavioural frictions. Similarly, Algeria's report repeatedly endorses revenue-neutral feebate systems, emphasising their fiscal acceptability and low administrative costs (IMF 2024a). These are described as tools that do not raise the average tax burden and thus increase public acceptability of emissions reforms. In South Africa, feebates

are championed as non-fiscal cost alternatives to carbon taxes, intended to avoid backlash over rising energy prices (IMF 2023b).

Across countries, this approach results in narrow applications of otherwise potentially powerful tools of state intervention. Instruments are evaluated not for their developmental impact or ability to shift economic structures, but for their efficiency and market compatibility. This reflects a persistent assumption: That climate goals can be met within existing market frameworks, rather than requiring a redefinition of those frameworks. In other words, while the IMF has expanded its repertoire of climate-related tools in surveillance, it continues to prioritise instruments that operate through prices and incentives, rather than those that alter ownership, production, or strategic direction. The result is a toolkit that may optimise existing systems but rarely challenges or transforms them. Yet the IPCC's most recent assessment underlines that limiting warming to 1.5°C requires “rapid and far-reaching transitions” across energy, land, urban systems, and industry (IPCC 2018). Incremental policy adjustments within current market frameworks are insufficient to deliver the scale and pace of change needed; systemic reform of production and financial structures is required to align with Paris Agreement targets.

12 A feebate (fee + rebate) is a market-based policy tool designed to incentivise behavior change — typically in energy, transport, or industry — without increasing the average tax burden. Products (e.g. vehicles) with above-average emissions incur a fee, while those with below-average emissions receive a rebate. The system is usually revenue-neutral, meaning the fees fund the rebates.

Gas subsidy reforms and the industrial sector in Pakistan

Alongside power subsidy reforms under the RSF, the EFF programme has also reversed gas subsidies and imposed a grid transition levy on industrial captive power, aiming to discourage industries from using gas and diverting it instead to grid based generators (IMF, 2024k) The policy attempts to force industries to migrate to the grid to curb the growing utility death spiral. However, the combined effects of the gas levy, solar tax, coal subsidies, and rising electricity tariffs have distorted the industrial energy landscape — undermining growth, export competitiveness, gas sector sustainability and environmental goals.

The levy on captive gas power is based on flawed assumptions, outdated operation and maintenance costs, and unrealistic peak-hour grid rates (Hussain, 2024). This has caused industrial gas demand to collapse by nearly 90% creating a 400MMcfd regasified liquefied natural gas (RLNG) surplus the grid cannot absorb, worsening circular debt (News Desk, 2025). The IMF assumed diverting industrial gas to “more efficient grid based generators” would improve efficiency, but RLNG plants are costly and less dispatchable than cheaper alternatives. The Petroleum Division's own working group found RLNG uncompetitive against imported coal (Ghumman, 2025). Consequently, the government has had to approve new domestic connections to absorb the surplus, derailing domestic electrification plans and risking inefficiencies, increased emissions from UFG losses, and stranded assets (Hashmi, 2025).

These reforms come amid grid-based outages, voltage fluctuations, and equipment damage in key industrial regions (Hussain, 2024). Shifting gas to on-grid generators despite the falling demand risks locking the power sector into further dependency on expensive and stranded fossil assets also threatening the textile sector that represents over 50% of exports and millions of jobs (Pakistan Textile Council, 2025). The carbon levy's tax on furnace oil has also forced industries into loss-making exports, undermining local value addition (Arshad, 2025). Yet, the latest EFF review fails to assess these harms or model long-term impacts of the gas levy on growth, exports, employment, or foreign exchange, neglecting IMF guidelines requiring such analyses.

The IMF's surveillance and advice also fails to differentiate between technologies and local differences in gas use, treating CHP and single-cycle plants alike and disregarding export clusters. This runs contrary to national policies like the National Electricity Plan (NEP) 2023–27 and National Energy Efficiency & Conservation Authority's (NEECA) certification framework, which emphasise technical audits, efficiency incentives, and regionally competitive pricing — especially under the Textile and Apparel Policy 2020–25 (Ministry of Energy, 2023; Ministry of Commerce, 2024). Simultaneous solar taxes, homogenous gas levies, subsidy reversals, coal incentives, and tariff hikes are shrinking industrial energy choices pushing firms towards dirtier fuels or relocation.

The Fund could have extended support to Pakistan in exiting costly RLNG contracts with global gas giants — particularly Qatar — an outcome closer to the principles of CBDR enshrined in the Paris Agreement (Shabhaz, 2025).¹³ It could also have aligned reforms with local policies, and prioritised a phased, audited, and equitable transition away from gas and towards cleaner fuels. The RSF and EFF review are a lost opportunity to synergise climate goals with industrial growth by improving grid reliability, expanding renewables integration, and ending support for coal projects that perpetuate unsustainable energy pathways.

13 Pertinently, ECC has recently authorized the Petroleum Division to open a line of communication with Qatar, with options including cutting monthly cargoes, pushing deliveries beyond the 2031 expiry, or using a non-performance damages clause that lets Qatar resell cargoes and bill Pakistan the difference. Assistance from the IMF in these negotiations would have been a crucial form of support for freeing up fiscal space.

Moving away from fossil fuel energy?

While the focus on changing energy consumption patterns through carbon pricing forms the backbone of the IMF's 'climate-sensitive' policy advice, the organisation has also developed a keen interest in examining and spurring changes in energy production patterns, in line with its focus on transition management risks (IMF 2022c). To this end, we collected data on whether Article IV reports included advice on fossil fuel exploitation, diversification from fossil fuels, and investments in renewable energy. These findings are summarised in Table 4.

The data show that while IMF advice favoured renewable energy investment across all groups, fossil fuel exploration was still encouraged in a few low- and middle-income countries, particularly fossil fuel non-producers. Advanced economies and non-producers were also most often advised to pursue a mixed public-private approach, while fossil-fuel producers were more frequently steered toward greater private sector involvement.

Table 4. IMF advice on fossil fuel exploitation and renewable energy investment based on fossil fuel production status

	Advanced economies	Fossil-fuel producers	Non-producer (includes emergent fossil fuel producers)
Advocating for fossil fuel exploration and exploitation	0 of 6 (0%)	1 of 17 (6%)	3 of 11 (27%)
Promoting investment in renewables	4 of 6 (67%)	16 of 17 (94%)	7 of 11 (64%)
Public-private sector mix:			
• Promoting private sector	0 of 4 (0%)	5 of 16 (31%)	0 of 7 (0%)
• Promoting public sector	1 of 4 (25%)	3 of 16 (19%)	1 of 7 (14%)
• Promoting mix	3 of 4 (75%)	8 of 16 (50%)	6 of 7 (86%)

First, in terms of **advising countries to proceed with exploration and exploitation of fossil fuels**, 7 of the 60 countries in our sample included this, all related to the economic benefits that such exploitation could yield. For example, IMF staff explained that Cote d'Ivoire's growth prospects "could further improve from higher than anticipated oil and gas extraction" (IMF 2025b, 19) and that Namibia's offshore oil discoveries heralded positive developments for the country's economy (IMF 2023a). The beneficial economic effects of expanding fossil fuel

exploitation were often linked to the potential of such proceeds to boost economic activity and improve the public debt outlook.

However, the IMF also recommended some degree of diversification from fossil fuels and promoting renewable energy for nearly half of the countries covered here, including in four of the countries where it recommended scaling up exploitation. Even in the case of Guinea, where the potential of earnings from oil fields was positively commented upon, IMF staff still emphasised the importance of gradually reducing reliance on that

sector, as it made the economy excessively exposed to oil price shocks (IMF 2024f). In some instances, diversification of the energy supply was also seen as underpinning the potential for generating new sources of trade revenues. In Guinea, where the IMF recommended scaling up the extraction of iron-ore and other minerals, its advice also emphasised the importance of the economy increasingly utilising hydroelectric and solar energy in order to make the country “a fully green energy country exporting electricity to neighbour countries, and improving energy access in favour of strong economic growth” (IMF 2024f, 14). **These calls for diversification beg the question on whether diversification is prioritised per se, or whether it is seen as a desirable objective but ultimately secondary to economic priorities and debt service. Comparative evidence on the IMF's lending suggests that it is clearly the latter (Kentikelenis and Stubbs 2025).**

The theme of investment in renewables was crosscutting in Article IV reports, included in 48 out of the 60 countries, regardless of whether the country was being urged to diversify from fossil fuels specifically. This represents a positive shift in the IMF's coverage, going beyond what was typical before 2022 (IEO 2024). These investments were seen as serving parallel goals of attaining energy security, economic diversification, emissions reduction, and climate resilience. Recurring topics among those recommendations were the modernisation of grid infrastructures to accommodate renewables, leveraging hydro and solar power, and implementing tax incentives and tariff and pricing reforms to support the development of this sector.

Importantly, the IMF's advice **emphasised the role of the public sector in delivering these investments**: Thirteen Article IV reports explicitly promoted such a role,

29 reports emphasised both the public and the private sectors, while only 6 solely emphasised the role of private financing. Staff recommendations generally outlined that public investment was central for supporting the development of major infrastructure (like energy grids), and that governments should prioritise these even in cases where there is limited fiscal space, like in Chad (IMF 2024e). With regard to the private sector, various policies were promoted primarily as instruments for supporting innovation and attracting investment. For example, Algeria was urged to offer incentives for renewable energy generation (IMF 2024a), and the Bahamas were told to encourage private participation in efforts to expand use of solar energy and upgrade electricity distribution (IMF 2025a).

Overall, **IMF advice on fossil fuels entails a mix of contradictory and short-sighted measures, like the advocacy of exploration and extraction initiatives, combined with some policy advice for scaling up public investments into the green transition**, in line with what many Global North countries have been practicing in recent years. This set of measures falls short of the scale and urgency needed to reach science-based and internationally agreed-upon climate goals. It points directly to areas on which the IMF's advice can help make a difference, and to the different models for pursuing green transition objectives. These contradictions in energy advice are mirrored in the Fund's fiscal guidance, where austerity pressures often directly undermine the investments needed for green transition, a topic to which we turn to next.

Carbon levy in Pakistan

The carbon levy, a key RSF reform, is a flawed attempt to balance fiscal consolidation with green investment through 'revenue recycling'. This tax of Rs 2.5 per litre on petrol, set to double in FY-2026 along with additional levies on ICE vehicles, places a burden on ordinary consumers (IMF, 2025i; Coady, 2015). Despite its re-labelling as a 'climate support levy', its ambiguous legal mechanism allows for the funneling of revenues into a discretionary federal fund with no guarantee for ensuring climate spending or equitable provincial sharing (PREC and ACJCE, 2025).

The levy is unlikely to achieve the RSF's goal of "disincentivising fossil fuel use" since it penalises a captive market of dependent end consumers and vehicle owners, rather than fossil fuel producers (Coady et al., 2015). Although the Fund claims reductions of "9.6 MtCO₂e per year by 2030" ostensibly from calculation using its CPAT tool, the claim is opaque with no details as to the methodology, source data, and modelling assumptions, and no discussion on distributional impacts.¹⁴

The claim is also belied by the empirical evidence. With no viable system of public transport, the policy offers no real pathway for households to transition away from gasoline, which can constitute up to 40% of household energy costs (Sajid et al., 2022). Since fuel demand is inelastic in the transport sector, consumers are forced to absorb higher costs, not reduce consumption (Omer, 2018). This 'green reform' also ignores established evidence and the IMF's own findings that even minor fuel price increases can radically diminish household income (Coady et al., 2015). Studies have therefore consistently found in favor of the "government subsidizing clean fuels rather than imposing taxes on fossil fuels" (Coady et al., 2015).

The carbon levy directly violates several RSF guidelines, which require fossil fuel reforms to "account for affordability and distributional effects" and be "accompanied by social assistance and public transport subsidies" (IMF, 2025j). There is no trade-off analysis comparing emissions savings with welfare losses under the broader market and policy constraints to justify the measure, despite clear requirements for such analysis under the CSR guidelines (IMF, 2021c). The carbon levy also sends a stunningly contradictory market signal: It taxes petrol to disincentivise fossil fuels while the IMF backed budget allocates massive public spending for coal projects¹⁵ and increases the scope of tax credits for the sale of locally mined coal¹⁶ (Butt, 2025). This strategy directly supports the expansion of Pakistan's dirtiest fossil fuel industry with Sindh Engro Coal Mining Company (SECMC) now set to increase mining by 3.6m tonnes adding another 4.2m tonnes in CO₂ emissions (Dawn, 2025).

¹⁴ See Figure 14, Annex II in IMF, 2025i for a graph depicting claimed savings from the carbon levy measures.

¹⁵ The Public Sector Development Programme (PSDP) 2025–2026 developed under the Federal Budget 2025–26 allocates Rs. 7bn for the Thar Coal Railway Line project which is designed to expand the sale of local lignite coal beyond the power sector and across the country. It allocates an additional Rs.4.25bn for the Jamshoro Coal Fired Power Plant (co-funded by Asian Development Bank) which runs on highly expensive imported coal. Government of Pakistan, Planning Commission (2025)

¹⁶ Whereas previous coal related tax credits were confined to the power sector covering persons engaged exclusively in the sale of coal to coal fired power plants, the scope has now been enhanced to cover persons who sell additionally to other industrial undertakings encouraging the wider use of coal. (Butt, 2025)

Contradictions between fiscal policy and the green transition

One area of persistent IMF attention does not directly target climate issues even though it has a profound impact on countries' ability to meet their climate goals and commitments: Fiscal policy. This shapes the ability of governments to spend on investing in adaptation and mitigation measures, as there is growing recognition that private finance is not adequate to meet these challenges and that the public sector must be centrally involved (Georgieva and Adrian 2022). Climate investments can have high upfront costs and take a long time to generate profits, thus making them unattractive to many private actors — an issue that the IMF has explicitly acknowledged (Georgieva and Adrian 2022). The solution of 'blended finance' — a mix of private and public capital — has failed to deliver on its promise, despite high expectations (Oil Change International 2025). This approach socialises risks while privatising rewards: Public institutions provide guarantees or first-loss protections, while private actors take safer senior debt positions and reap returns (Mazzucato and Vieira de Sá 2025). The IMF itself has recognised the limitations of this approach: "On average, MDBs attracted only 1.2 times the amount of private finance (equity and debt) relative to commitments of their own resources in 2020" (IMF, 2022h, p. 57).

The IMF is relevant in these discussions because its attention to fiscal issues has been long-standing and comprehensive — indeed, the organisation is best known for its demands on countries to introduce fiscal consolidation measures, commonly known as 'structural adjustment' or 'austerity' — with the hope of improving their macroeconomic positions (Kentikelenis and Stubbs, 2023). Thus, beyond the specific climate measures included in IMF surveillance, a broader question remains:

To what extent do countries have a fiscal policy environment that enables investments in the green transition?

For this, we examined the scale of fiscal adjustment requested of countries in our sample, as shown in Figure 3. These projections become prescriptions for many developing countries, especially IMF borrowers, where they get inscribed as conditions the country must meet for loans to be disbursed (Atoyan and Conway 2011). Of the 60 countries, 38 were projected to implement austerity in the year ahead, with an average projected fiscal contraction of 1.1% of GDP. Three countries were projected to maintain a stable fiscal balance, while 19 were expected to expand, as indicated by negative values of fiscal contraction. Japan faced the largest projected contraction at 4.3% of GDP, followed by Togo (3.4%), Maldives (2.8%), Thailand (2.4%), and Micronesia (1.9%). In contrast, Grenada and Algeria — excluded from the figure due to their outlier status — had projected fiscal expansion of 13.6% and 5.5% of GDP respectively. Azerbaijan (1.6%), Mexico (1.5%), and Palau (1.5%) also recorded substantial fiscal expansions. Notably, we see that:

- ➡ among advanced economies, 4 of the 6 were projected to contract;
- ➡ for upper-middle income countries 9 of 16 were projected to contract;
- ➡ and for low- and lower-middle income countries, 8 of the 12 were projected to contract.
- ➡ Among SIDS — which face some of the most extreme climate risks of all — 6 of the 11 countries were projected to fiscally contract.¹⁷

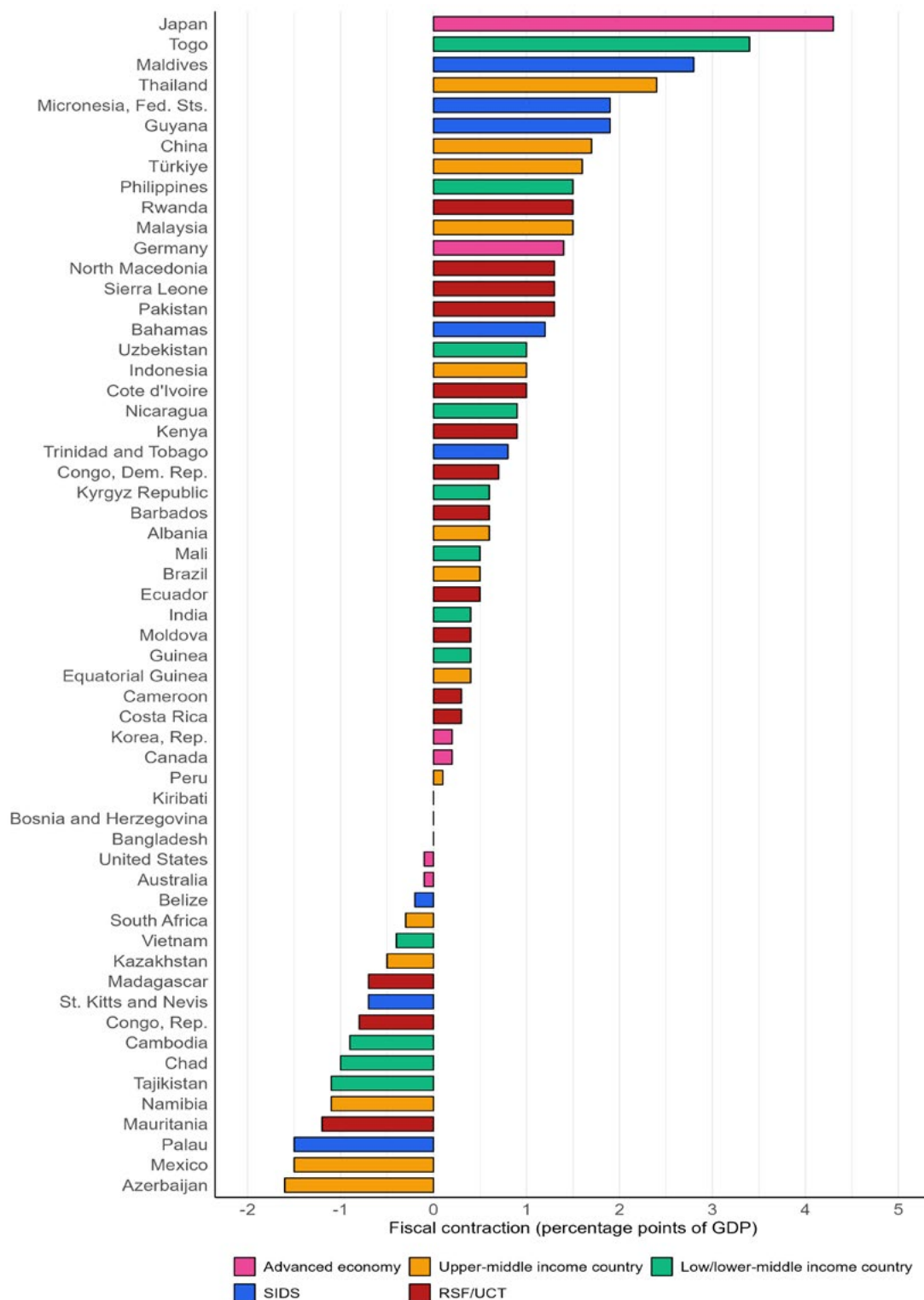
¹⁷ While 10 SIDS were explicitly selected for our sample, an 11th SIDS, Barbados, was included as an RSF.

In contrast to findings elsewhere in this report, there is evidence of even-handedness across income groups: Austerity is applied broadly. Even so, this belies the general recognition that SIDS and low- and lower-middle income

countries require greater fiscal space, given their levels of government spending remain well below those of advanced economies and their adaptation investment needs are significantly higher.

Figure 3: Nearly two thirds of countries in sample projected to implement austerity measures

Magnitude of fiscal adjustment by country



A just green transition requires not only investment in climate infrastructure but also increased social spending to help households adapt to the impacts of climate change. However, among the 26 countries for which data were available, 12 were projected to see declines in social spending as a share of GDP, while 9 were expected to maintain current levels. The most substantial projected reductions were in Thailand (–0.9% of GDP) and Germany (–0.8%), with declines also observed in low and lower-middle income countries such as the Republic of Congo, Togo, Nicaragua, and Uzbekistan. Only 5 countries — Albania, Azerbaijan, the Philippines, Türkiye, and the Kyrgyz Republic — were projected to increase their social spending.

For those countries that receive RSF loans, fiscal reforms form the backbone of the IMF's recommendations. The Fund's own analysis has shown that 18% of RSF agreements include 'green' fiscal policies — a term used by the organisation to refer primarily to fossil fuel subsidy reforms, carbon taxes, and the pricing of water and electricity (IMF 2024g). Even so, these types of reforms form common measures in the IMF's lending agreements (Kentikelenis and Stubbs 2025); that is, IMF-preferred fiscal policies have now been rebranded as measures that help meet green transition objectives, essentially greenwashing policies with often highly-problematic inequality impacts (Kentikelenis and Stubbs 2024). In addition, a lack of transparency in terms of how resources freed up from energy subsidies are repurposed means that IMF (2019) claims that fiscal savings are directed toward increasing social protection and renewable energy investment are difficult to verify (Kentikelenis and Stubbs 2024).

Overall, the contradictions between fiscal policy and the green transition matter as austerity directly undermines the policy

space needed for climate action. Budget cuts constrain public investment in areas critical for adaptation and mitigation, including renewable energy infrastructure, clean transport, and green subsidies. **Governments under pressure to consolidate public finances are often forced to choose between short-term necessities like health and education and long-term green investments with delayed payoffs.** Moreover, green industrial policies, such as public support for green research and development and infrastructure, require proactive state involvement and upfront financing — conditions unlikely to materialise under tightening fiscal limits. In such cases, countries are pushed to rely disproportionately on private finance or external donors to fund their climate transition.

Austerity also has broader economic and social ripple effects that can inhibit green policy uptake. Empirical research has shown that IMF programmes are often associated with weaker growth outcomes (Dreher 2006), due to factors such as poor fiscal multiplier assumptions, inappropriate reform pacing, or overly rigid targets (Blanchard and Leigh 2014; Blyth 2013; Kentikelenis and Stubbs 2023). These dynamics depress household incomes — making it harder for consumers to adopt greener lifestyles — and discourage firms from investing in climate resilience or emissions reduction. Meanwhile, revenue erosion reduces the state's future capacity to lead on green investment. While the IMF promotes instruments like carbon pricing, to which we turn next, these alone cannot drive an equitable transition. As the Fund itself has acknowledged, **decarbonisation in developing countries also requires public investment in low-carbon manufacturing and green innovation systems** (Bettarelli et al. 2023; Prasad et al. 2022).



Solar panels in Karachi, Pakistan. Credit: Hexzain / Shutterstock.

Solar tax in Pakistan

To make matters worse for vulnerable groups, Pakistan's 'Green Budget' imposes a blanket 10% GST on solar products even as the new RSF programme claims to build long-term, low-carbon resilience through "incentivizing renewable energy investments and protecting vulnerable communities" (IMF, 2025i). The tax, initially proposed at 18% has been bitterly opposed by civil society for undermining the nation's clean energy transition, disproportionately impacting marginalised communities, and weakening climate resilience. Justified under the pretexts of grid protection, revenue generation, and protection for a local renewables industry, the solar tax is, in practice, a highly regressive measure that runs counter the RSF's own principles of mitigation. It raises the cost of access to affordable, clean energy for millions, particularly in off-grid rural areas where solar-powered systems enable essential services like lighting, irrigation, water pumping, and health care (Khalil et al., 2022). For women and vulnerable groups, solar energy supports livelihoods and reduces energy poverty; studies show it cuts irrigation costs by up to 80%, and improves education and health outcomes (Raza, 2025). Solar growth under tax exemptions has also reportedly slashed diesel consumption by 35%, a trend that the tax will likely stall (Peavey and Lewin, 2025).

The Fund also ignores the World Bank's assessments which identify off-grid solar as the most cost-effective way to electrify at least 1 million of the 40 million Pakistanis still without power (World Bank, 2024). This is despite requirements of enhanced and "high level cooperation" with the Bank under the RSF guidelines (IMF, 2025j). From a fiscal standpoint, the tax is equally unsound. Projected revenues of Rs75bn account for an insignificant 0.5% of the FBR's FY 2025–26 target¹⁸. Meanwhile, with continued tax exemptions, expanded solar adoption could boost GDP growth by 2–3% annually, create 500,000 jobs, increase household and SME incomes by \$12.5bn, and generate \$18bn in national savings — over 6.5% of GDP (IRENA, 2025). The tax sacrifices enormous economic and climate benefits for negligible revenue.

¹⁸ Assuming a high estimate of 25 GW of solar panel sales in FY 2025–26 at 30 rupees per watt, total sales would amount to 750 billion rupees. A 10% tax would yield no more than Rs75bn, or just 0.5% of FBR's total revenue according to FBR's annual target which for 2025–2026 has been set at Rs14,131bn.

Conclusion

The IMF has made significant strides in integrating climate change into its institutional architecture and surveillance practices. From the adoption of a formal Climate Strategy in 2021 to the introduction of diagnostic tools like CPAT and DIGNAD, and the creation of the RSF, the Fund has affirmed its intention to support member countries in responding to the macroeconomic and financial risks posed by climate change. This commitment has helped reposition the IMF as a relevant actor in global climate governance.

Yet, this report finds that the Fund's operational practice remains uneven and deeply shaped by legacy frameworks. Across the 60 Article IV reports analysed, the IMF's climate advice is occasionally ambitious in scope but generally narrow in method, constrained by a persistent preference for market-based instruments, fiscal conservatism, and institutional minimalism — especially in low- and middle-income countries. Further, as our analysis shows, the practical application of the IMF's "economic sustainability" focus remains partial. Surveillance still privileges short-term fiscal consolidation and market-based efficiency measures over the long-term investments and structural reforms needed for climate resilience and decarbonisation. The gap between the Comprehensive Surveillance Review's stated ambition (IMF 2021c) and operational practice underscores how far the Fund has to go in aligning surveillance with the sustainability objective it has set for itself.

This creates a two-tiered approach: Wealthy countries receive guidance on innovation and long-term green investment, while lower-income countries are directed toward short-term efficiency measures and fiscal retrenchment, limiting their capacity for

sustainable climate action. This divergence undermines both the IMF's goal of an inclusive green transition and its mandate to maintain global macroeconomic stability, while incremental, market-focused reforms fall short of the systemic change needed to meet the Paris Agreement targets and address the cascading risks of climate change.

The Fund's support for carbon pricing and energy subsidy reforms is emblematic of this approach. These measures feature prominently in the majority of reports, endorsed for their fiscal and environmental benefits. But their deployment often lacks attention to the broader political economy or equity impacts of such reforms. In many cases, climate-sensitive pricing is promoted without detailed consideration of the institutional, infrastructural, or distributional challenges countries may face. While the IMF occasionally recommends compensatory social transfers, these are typically presented as implementation details rather than central components of the green transition.

Moreover, carbon pricing is frequently embedded in wider reform packages aimed at liberalising energy markets, restructuring state-owned enterprises, or rationalising subsidies. These are framed as necessary to "get prices right", yet rarely accompanied by strategies to reshape production structures, foster domestic innovation, or address technological dependency. The emphasis remains on adjusting market signals rather than enabling proactive state leadership in climate transformation.

This technocratic bias is especially visible in the IMF's uneven engagement with green industrial policy. Only about one-quarter of the

countries in the sample received guidance that clearly supports state-led climate investment, and such advice was overwhelmingly directed toward higher-income or upper-middle income economies. By contrast, lower-income countries were far more likely to be advised on subsidy removal, price liberalisation, or fiscal consolidation, with little discussion of how these countries might develop their own green manufacturing sectors or value chains. In effect, industrial policy is treated as a privilege of the rich, not a pathway for development.

Compounding this disparity is the pervasive influence of austerity logic in IMF climate surveillance. Of the 60 countries analysed, 38 were projected to undergo fiscal consolidation in the year following their Article IV consultation. In such contexts, the fiscal space needed for long-term climate investment — particularly in adaptation and resilience — is narrowed before green strategies can even be designed. This undermines the IMF's stated commitment to support climate action and casts doubt on the feasibility of a just transition under current macroeconomic constraints. These findings also raise a deeper concern: To what extent can the IMF credibly claim progress on climate when its core fiscal advice continues to undermine the basics of a just transition? Integration cannot mean climate add-ons while austerity remains the default. Unless climate is embedded at the heart of fiscal frameworks, the Fund risks presenting itself as a climate leader while failing on the very foundations needed for effective action.

At the same time, the Fund's shortcomings point to what is needed. A more robust and

less fragmented approach to climate at the IMF is essential if it is to credibly support its members. This requires moving beyond piecemeal surveillance references and toward a comprehensive framework that systematically addresses climate finance sources and the design of green industrial strategies. Doing so will demand greater internal capacity and diversity of expertise, more engagement with external experts capable of this analysis, and more constructive dialogue with climate-vulnerable countries themselves. Without such steps, the Fund risks remaining reactive and partial in its climate work, unable to match the scale of the challenge.

The IMF's own tools, while expanding, are also inconsistently applied. Diagnostics like CPAT and DIGNAD remain underutilised outside of RSF programmes and major emitters. Adaptation finance is insufficiently analysed, and very few reports contain disaggregated projections of public versus private climate funding. This lack of analytical precision weakens the coherence of fiscal advice and risks overestimating the capacity of private capital to fill the climate finance gap. Without clear assumptions on who pays — and how — the IMF's policy prescriptions may rest on unrealistic expectations.

These gaps are especially concerning given that climate change has become even more core to the Fund's mandate than when its Climate Strategy was first adopted in 2021. With the 1.5°C threshold now in danger of being breached, climate risks pose systemic threats to balance-of-payments stability, fiscal sustainability, and financial markets — the very domains at the heart of IMF surveillance.

Evaluating the Fund's climate engagement today requires acknowledging this heightened urgency: What appeared ambitious in 2021 is no longer adequate.

Altogether, this report reveals a stratified model of IMF climate engagement. In wealthier economies, the Fund encourages investment, innovation, and leadership in climate sectors. In poorer countries, the focus remains on efficiency, subsidy removal, and incremental institutional reform. This two-track approach risks entrenching global inequalities in climate preparedness and green industrial capacity.

The divergence between rhetoric and practice is not only out of step with science, but also with emerging legal obligations. In July 2025, the International Court of Justice ruled that states have an obligation under international law to cease harmful activities — including new fossil fuel exploration and extraction — that would make the 1.5°C target unattainable (UN News 2025). By continuing to advise or endorse fossil fuel expansion in some contexts, the IMF risks aligning its surveillance with activities that run counter to international legal standards, further undermining its credibility as a steward of global macroeconomic stability.

The road ahead is also fraught with uncertainty. At the time of writing (September 2025), the IMF is projecting a future of weaker

growth, higher debt burdens and greater political economy constraints (IMF 2025h). Perhaps the greatest threat to the ongoing efforts to integrate climate considerations into the work of the IMF is the climate-sceptic position of the new US administration, the Fund's largest shareholder. US Treasury Secretary Scott Bessent sharply criticised the IMF in a recent speech for what he called "mission creep [...and] devoting disproportionate time and resources to work on climate change, gender, and social issues" (US Department of the Treasury 2025).

While IMF Managing Director Kristalina Georgieva responded by reasserting the organisation's mandate to address balance of payments risks that could arise from a rapidly advancing climate crisis (IMF 2025g), the changing political winds may lead climate issues to be sidelined from the Fund's agenda, especially if the US and other climate-sceptic countries seek to actively block IMF engagement in such issues. This leaves the IMF with difficult choices for how to placate its largest shareholder while not betraying its promises to help countries put in place economic policies that will help meet climate objectives.

Recommendations

- **Climate change should be treated as a core macro-financial risk, and be integrated into the IMF's core policy advice.** Every Article IV report should state whether the IMF's core policy advice (fiscal, monetary, financial, exchange rate) enables or undermines countries' climate mitigation and adaptation plans. If not, staff must present alternatives.
- **Climate surveillance coverage must follow Paris Agreement principles, including equity and common but differentiated responsibilities, while supporting sustainable development and poverty eradication.** This means advanced economies must take the lead and recognise spillover effects from their fiscal, monetary, financial and climate policies onto low- and middle-income countries.
- **Upgrade analytics:** Science-based recommendations on the impact of the climate crisis on macroeconomic and financial stability should be acknowledged and tipping-points properly incorporated in modelling.
- **Do no harm:** Make ex-ante and ex-post distributional and climate impact assessments mandatory, published, and used to adjust advice. This should lead to clear subsidy reform guidance, requiring equity analysis, compensation plans, phased sequencing, and safeguards before recommending energy price reforms.
- **Tools must have a clear purpose:** If staff apply models (CPAT, ENV, DIGNAD), they must show how results shaped the policy package.
- **Financing annex:** Require a 'climate financing map' in surveillance (public vs private, concessional vs market, domestic vs external).
- **Inclusive consultation:** Country teams must engage unions, civil society organisations, parliaments, and publish a summary of inputs in staff reports.
- **Move beyond one-size-fits-all carbon pricing and provide green industrial policy guidance.** Staff should assess public investment, state owned enterprises' roles, and industrial strategies as macro-critical, not just pricing tools — and apply them evenhandedly across country groups.
- **Stay in the macro lane:** When issues lie outside IMF tools, flag macro relevance but refer governments to multilateral bodies such as the UNFCCC, ILO, OHCHR, and UN Women.

References

- Adrian, Tobias, Pierpaolo Grippa, Marco Gross, Vikram Haksar, Ivo Krznar, Sujan Lamichhane, Caterina Lepore, et al. 2022. Approaches to Climate Risk Analysis in FSAPs. Washington, DC: International Monetary Fund. IMF Staff Climate Note. <https://doi.org/10.5089/9798400212895.066> (July 17, 2025).
- Ahad, M. Saqib Farid, Zaheer Anwer (2024). Designing energy policy in the presence of underground economy: the case of Pakistan. *International Journal of Emerging Markets* 23 January 2024; 19 (2): 367–389. <https://doi.org/10.1108/IJOEM-03-2022-0486>
- Aligishiev, Zamid, Cian Ruane, and Azar Sultanov. 2023. User Manual for the DIGNAD Toolkit. Washington, D.C: International Monetary Fund. IMF How To Notes. <https://doi.org/10.5089/9798400239502.005>.
- Allan, Bentley, Joanna I. Lewis, and Thomas Oatley. 2021. 'Green Industrial Policy and the Global Transformation of Climate Politics'. *Global Environmental Politics* 21(4): 1–19. https://doi.org/10.1162/glep_a_00640.
- Arshad, K. (2025, June 28). The cost of irrational energy levies [Opinion]. *Business Recorder*. <https://www.brecorder.com/news/40369962>
- Atoyan, Ruben, and Patrick Conway. 2011. 'Projecting Macroeconomic Outcomes: Evidence from the IMF'. *Review of International Organizations* 6(3–4): 415–41. <https://doi.org/10.1007/s11558-011-9109-6>.
- Bettarelli, Luca, Davide Furceri, Pietro Pizzuto, and Nadia Shakoor. 2023. Environmental Policies and Innovation in Renewable Energy. Washington, DC: International Monetary Fund. IMF Working Paper. <https://elibrary.imf.org/openurl?genre=journal&issn=1018-5941&volume=2023&issue=180> (October 26, 2023).
- Black, Simon, Ian Parry, Victor Mylonas, Nate Vernon, and Karlygash Zhunussova. 2023. The IMF-World Bank Climate Policy Assessment Tool (CPAT): A Model to Help Countries Mitigate Climate Change. Washington, DC: International Monetary Fund. IMF Working Paper. <https://doi.org/10.5089/9798400242342.001> (May 6, 2025).
- Blanchard, Olivier J., and Daniel Leigh. 2014. 'Learning about Fiscal Multipliers from Growth Forecast Errors'. *IMF Economic Review* 62(2): 179–212. <https://doi.org/10.1057/imfer.2014.17>.
- Blyth, Mark. 2013. *Austerity: The History of a Dangerous Idea*. Oxford: Oxford University Press.
- BR Web Desk. (2025, September 8). Floods 2025: Pakistan faces \$1.4bn economic loss, agriculture hit hardest. *Business Recorder*. Retrieved from <https://www.brecorder.com/news/40381676>
- Breen, Michael, and Elliott Doak. 2023. 'The IMF as a Global Monitor: Surveillance, Information, and Financial Markets'. *Review of International Political Economy* 30(1): 307–31. <https://doi.org/10.1080/09692290.2021.2004441>.
- Bretton Woods Project. 2025. 'IEO Exposes Structural Issues in IMF's Exceptional Access Policy'. <https://www.brettonwoodsproject.org/2025/04/new-independent-evaluation-office-findings-expose-political-pressure-and-over-optimism-in-imfs-exceptional-access-policy/> (September 4, 2025).
- Butt, K. (2025, June). Budget Brief 2025. KPMG Taseer Hadi & Co, pg 1. <https://kpmg.com/pk/en/home/insights/2025/06/budget-brief-2025.html>
- Chateau, Jean, Hugo Rojas-Romagosa, Sneha Thube, and Dominique van der Mensbrugghe. 2025. IMF-ENV: Integrating Climate, Energy, and Trade Policies in a General Equilibrium Framework. Washington, DC: International Monetary Fund. IMF Working Paper. <https://doi.org/10.5089/9798229005029.001> (May 9, 2025).
- Choi, H. J., Qayyum, S., & Koo, B. B. (2024). Pakistan Energy Survey: Insights into the true energy access situation in Pakistan based on the Multi-Tier Framework. Pakistan Sustainable Energy Series. <https://documents1.worldbank.org/curated/en/099062824120620952/pdf/P1693131aa11a409b1bd991b944e3711bfe.pdf>
- Clift, Ben. 2024. 'Global Economic Governance and Environmental Crisis: The Widening Repertoire of IMF Economic Ideas and Limits of Its Climate Policy Advocacy'. *Climate Policy* 0(0): 1–15. <https://doi.org/10.1080/14693062.2024.2441226>.
- Climate Watch. 2025. 'Historical GHG Emissions'. <https://www.climatewatchdata.org/ghg-emissions> (September 4, 2025).
- Coady, D., Flamini, V., & Sears, L. (2015, November). The unequal benefits of fuel subsidies revisited: Evidence for developing countries (IMF Working Paper No. WP/15/250). International Monetary Fund. <https://www.imf.org/external/pubs/ft/wp/2015/wp15250.pdf>
- Dawn. (2025, June 21). Efforts against mining expansion. <https://www.dawn.com/news/1940432/efforts-against-mining-expansion>

Denton, F., K. Halsnæs, K. Akimoto, S. Burch, C. Diaz Morejon, F. Farias, J. Jupesta, A. Shareef, P. Schweizer-Ries, F. Teng, E. Zusman, 2022: Accelerating the transition in the context of sustainable development. In IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926.019

Diab, Osama. 2023. 'The IMF and Ending Energy Subsidies in Egypt'. Transnational Institute. <https://www.tni.org/en/article/the-imf-and-ending-energy-subsidies-in-egypt> (August 29, 2024).

Dilawar, I. (2025, September 2). Pakistan floods devastate crops, farmers warn of 'billions' in losses. Arab News Pakistan. <https://www.arabnews.pk/node/2613836/pakistan?>

Doig, Alison. 2024. 'Banking on Renewables'. Recourse. <https://re-course.org/wp-content/uploads/2024/10/Banking-on-Renewables-criteria-for-public-investment-in-renewable-energy-for-climate-for-people-for-planet.pdf> (September 4, 2025).

Doig, Alison, and Maia Seeger. 2023. 'Why the World Bank Should Be Cautious on Green Hydrogen'. Energy Monitor. <https://www.energymonitor.ai/opinion/beyond-the-h2ype-why-the-world-bank-should-be-cautious-on-green-hydrogen/> (September 4, 2025).

Dreher, Axel. 2006. 'IMF and Economic Growth: The Effects of Programs, Loans, and Compliance with Conditionality'. World Development 34(5): 769–88. <https://doi.org/10.1016/j.worlddev.2005.11.002>.

Edwards, Martin S., and Stephanie Senger. 2015. 'Listening to Advice: Assessing the External Impact of IMF Article IV Consultations of the United States, 2010–2011'. International Studies Perspectives 16(3): 312–26. <https://doi.org/10.1111/insp.12059>.

Fellsson, Måns. 2017. Research Capacity in the New Global Development Agenda. Stockholm: Expertgruppen för biståndsanalys (EBA).

Fratzscher, Marcel, and Julien Reynaud. 2011. 'IMF Surveillance and Financial Markets—A Political Economy Analysis'. European Journal of Political Economy 27(3): 405–22. <https://doi.org/10.1016/j.ejpoleco.2011.01.002>.

Frenkel, Michael, Jan-Christoph Rülke, and Lilli Zimmermann. 2013. 'Do Private Sector Forecasters Chase after IMF or OECD Forecasts?' Journal of Macroeconomics 37: 217–29. doi:10.1016/j.jmacro.2013.03.002.

Gabor, Daniela, and Benjamin Braun. 2025. 'Green Macrofinancial Regimes'. Review of International Political Economy 0(0): 1–27. <https://doi.org/10.1080/09692290.2025.2453504>.

Gallagher, Kevin P., Cyrus Rustomjee, and Andrea Arevalo. 2024. Evolution of IMF Engagement on Climate Change. Washington, DC: Independent Evaluation Office of the International Monetary Fund. IEO Background Paper.

Gardes-Landolfini, C., Oman, W., Fraser, J., Montes de Oca Leon, M., & Yao, B. (2024). Embedded in Nature: Nature-Related Economic and Financial Risks and Policy Considerations. Staff Climate Notes, 2024(002). <https://doi.org/10.5089/9798400288548.066>. (September 10, 2025)

Georgieva, Kristalina, and Tobias Adrian. 2022. 'Public Sector Must Play Major Role in Catalyzing Private Climate Finance'. IMF Blog. <https://www.imf.org/en/Blogs/Articles/2022/08/18/public-sector-must-play-major-role-in-catalyzing-private-climate-finance> (September 4, 2025).

Ghumman, M. (2025, August 25). Petroleum sector: Pakistan govt finalising reforms to ease financial distress. Business Recorder. <https://www.brecorder.com/news/40379484/petroleum-sector-govt-finalising-reforms-to-ease-financial-distress>

Government of Pakistan, Planning Commission. (2025). Public Sector Development Programme 2025–26 (pp. 79, 84). Islamabad: Planning Commission. https://pc.gov.pk/uploads/archives/PSDP_2025-26_Final.pdf

Guterres, António. 2025. 'Secretary-General's Remarks on Climate Action "A Moment of Opportunity: Supercharging the Clean Energy Age"'. United Nations. <https://www.un.org/sg/en/content/sg/statement/2025-07-22/secretary-generals-remarks-climate-action-moment-of-opportunity-supercharging-the-clean-energy-age-delivered-scroll-down-for-all-french> (September 4, 2025).

Harrison, Ann, Leslie A. Martin, and Shanthi Nataraj. 2017. 'Green Industrial Policy in Emerging Markets'. Annual Review of Resource Economics 9(Volume 9, 2017): 253–74. <https://doi.org/10.1146/annurev-resource-100516-053445>.

Hashmi, R. (2025, July 5). Government approves 30,000 new RLNG home connections amid gas shortage. News Alert. <https://newsalert.com.pk/pakistan-rlng-home-connections-2025/>

Hussain, S. (2024, December 9). Govt to begin gas disconnection notices for captive power plants amid IMF demands. Profit by Pakistan Today. <https://profit.pakistantoday.com.pk/2024/12/09/govt-to-begin-gas-disconnection-notices-for-captive-power-plants-amid-imf-demands/>

Hussein, Salma. 2022. 'Uncovered: The Role of the IMF in Shrinking Social Protection'. Friedrich Ebert Stiftung. <https://library.fes.de/pdf-files/bueros/tunesien/19559.pdf> (September 5, 2025).

IEO. 2010. IMF Interactions with Member Countries. IMF Independent Evaluation Office. <https://www.imf.org/en/Publications/Independent-Evaluation-Office-Reports/Issues/2016/12/31/IMF-Interactions-with-Member-Countries-23501>.

IEO. 2024. 'The Evolving Application of the IMF's Mandate'. IMF Independent Evaluation Office. <https://ieo.imf.org/en/evaluations/completed/2024-0618-evolving-application-of-the-imfs-mandate> (September 4, 2025).

Ilyas, R., Ullah Khan, H., & Rauf, A. (2022a). Welfare Impacts of Policy Reforms: A Case of Electricity Subsidies in Pakistan. *International Journal of Energy Economics and Policy*, 12(3), 41–49. <https://doi.org/10.32479/ijeep.12891>. Further reporting substantiates this observation, as a total of 58% of recorded consumers who consume more than just 200kWh are currently included in the slab system as 'high consumers/non-lifeline consumers'.

Ilyas, R., Hussain, K., Ullah, M. Z., & Xue, J. (2022b). Distributional impact of phasing out residential electricity subsidies on household welfare. *Energy Policy*, 163, Article 112825. <https://doi.org/10.1016/j.enpol.2022.112825>

IMF. 2019. A Strategy for IMF Engagement on Social Spending. Washington, DC: International Monetary Fund. IMF Policy Paper.

IMF. 2021a. 2021 Comprehensive Surveillance Review—Background Paper on Integrating Climate Change into Article IV Consultations. Washington, DC: International Monetary Fund. IMF Policy Paper.

IMF. 2021b. 2021 Financial Sector Assessment Program Review—Towards a More Stable and Sustainable Financial System. Washington, DC: International Monetary Fund. IMF Policy Paper.

IMF. 2021c. 'Comprehensive Surveillance Review — Overview Paper'. IMF Policy Paper No. 2021/027. <https://www.imf.org/en/Publications/Policy-Papers/Issues/2021/05/18/2021-Comprehensive-Surveillance-Review-Overview-Paper-460270> (October 24, 2021).

IMF. 2021d. 'IMF Strategy to Help Members Address Climate Change Related Policy Challenges—Priorities, Modes of Delivery, and Budget Implications'. IMF Policy Paper 2021/057. <https://www.imf.org/en/Publications/Policy-Papers/Issues/2021/07/30/IMF-Strategy-to-Help-Members-Address-Climate-Change-Related-Policy-Challenges-Priorities-463093> (October 25, 2021).

IMF. 2021e. '2021 Comprehensive Surveillance Review— Background Paper on Integrating Climate Change Into Article IV Consultations International Monetary' <https://www.imf.org/en/Publications/Policy-Papers/Issues/2021/05/18/2021-Comprehensive-Surveillance-Review-Background-Paper-on-Integrating-Climate-Change-into-460303>.

IMF. 2022a. Albania: 2022 Article IV Consultation. Washington, DC: International Monetary Fund. IMF Country Report.

IMF. 2022b. Germany: 2022 Article IV Consultation. Washington, DC: International Monetary Fund. IMF Country Report.

IMF. 2022c. 'Guidance Note for Surveillance under Article IV Consultations'. IMF Policy Paper 2022/029. <https://www.imf.org/en/Publications/Policy-Papers/Issues/2022/06/23/Guidance-Note-for-Surveillance-Under-Article-IV-Consultations-519916> (September 27, 2023).

IMF. 2022d. Indonesia: Selected Issues. Washington, DC: International Monetary Fund. IMF Country Report.

IMF. 2022e. Japan: Selected Issues. Washington, DC: International Monetary Fund. IMF Country Report.

IMF. 2022f. Staff Guidance Note on the Sovereign Risk and Debt Sustainability Framework for Market Access Countries. Washington, DC: International Monetary Fund. IMF Policy Paper. <https://doi.org/10.5089/9798400216862.007> (February 10, 2025).

IMF. 2022g. Thailand: Selected Issues. Washington, DC: International Monetary Fund. IMF Country Report.

IMF. 2022h. Global Financial Stability Report. Washington, DC: International Monetary Fund.

IMF. 2023a. Namibia: 2023 Article IV Consultation. Washington, DC: International Monetary Fund. IMF Country Report.

IMF. 2023b. South Africa: Selected Issues. Washington, DC: International Monetary Fund. IMF Country Report.

IMF. 2024a. Algeria: 2023 Article IV Consultation. Washington, DC: International Monetary Fund. IMF Country Report.

IMF. 2024b. Australia: Selected Issues. Washington, DC: International Monetary Fund. IMF Country Report.

IMF. 2024c. Azerbaijan: 2023 Article IV Consultation. Washington, DC: International Monetary Fund. IMF Country Report.

IMF. 2024d. Bosnia and Herzegovina: Selected Issues. Washington, DC: International Monetary Fund.

IMF. 2024e. Chad: 2024 Article IV Consultation. Washington, DC: International Monetary Fund. IMF Country Report.

IMF. 2024f. Guinea: 2024 Article IV Consultation and Request for Disbursement under the Rapid Credit Facility. Washington, DC: International Monetary Fund. IMF Country Report.

- IMF. 2024g. Interim Review of the Resilience and Sustainability Trust and Review of Adequacy of Resources. Washington, DC: International Monetary Fund. IMF Policy Paper. <https://doi.org/10.5089/9798400281297.007> (October 11, 2024).
- IMF. 2024h. North Macedonia: 2023 Article IV Consultation and First Review under the Precautionary and Liquidity Line. Washington, DC: International Monetary Fund. IMF Country Report.
- IMF. 2024i. Supplement to 2018 Guidance Note on the Bank-Fund Debt Sustainability Framework for Low Income Countries. Washington, DC: International Monetary Fund. IMF Policy Paper. <https://doi.org/10.5089/9798400285363.007> (June 5, 2025).
- IMF. 2024j. Uzbekistan: 2024 Article IV Consultation. Washington, DC: International Monetary Fund. IMF Country Report.
- IMF. 2024k. Pakistan: 2024 Article IV Consultation and request for an Extended Arrangement under the Extended Fund Facility—Press release; staff report; and statement by the Executive Director for Pakistan (Country Report No. 24/310). <https://doi.org/10.5089/9798400290992.002>
- IMF. 2025a. Bahamas: Selected Issues. Washington, DC: International Monetary Fund. IMF Country Report.
- IMF. 2025b. Cote d'Ivoire: 2024 Article IV Consultation, Third Reviews under Extended Arrangement under the Extended Fund Facility and the Arrangement under the Extended Credit Facility, Request for Modification of a Quantitative Performance Criterion, and Second Review under the Resilience and Sustainability Facility Arrangement. Washington, DC: International Monetary Fund. IMF Country Report.
- IMF. 2025c. Fiscal Monitor: Fiscal Policy under Uncertainty. Washington, DC: International Monetary Fund.
- IMF. 2025d. Kazakhstan: 2024 Article IV Consultation. Washington, DC: International Monetary Fund. IMF Country Report.
- IMF. 2025e. Kazakhstan: Selected Issues. Washington, DC: International Monetary Fund. IMF Country Report.
- IMF. 2025f. Madagascar: Selected Issues. Washington, DC: International Monetary Fund. IMF Country Report.
- IMF. 2025g. 'Press Briefing Transcript: Managing Director's Global Policy Agenda, Spring Meetings 2025'. <https://www.imf.org/en/News/Articles/2025/04/24/tr-042425-managing-directors-press-briefing-on-gpa> (May 14, 2025).
- IMF. 2025h. 'World Economic Outlook, April 2025: A Critical Juncture amid Policy Shifts'. <https://www.imf.org/en/Publications/WEO/Issues/2025/04/22/world-economic-outlook-april-2025> (May 14, 2025).
- IMF. 2025i. Pakistan: First Review Under the Extended Arrangement Under the Extended Fund Facility. <https://www.imf.org/en/Publications/CR/Issues/2025/05/17/Pakistan-First-Review-Under-the-Extended-Arrangement-Under-the-Extended-Fund-Facility-567021>
- International Monetary Fund. (2025j). Resilience and Sustainability Facility—Updated Operational Guidance Note, pg 74
- Independent Report of the G20 TF-CLIMA Group of Experts co-chaired by M. Mazzucato and V. Songwe, (2024). A Green and Just Planet. Available at: <https://www.g20.org/en/tracks/sheepa-track/climate-change/the-g20-taskforce-on-a-global-mobilization-against-climate-change-tf-clima>
- IPCC. 2018. 'Global Warming of 1.5 oC - Summary for Policymakers'. <https://www.ipcc.ch/sr15/chapter/spm/> (September 4, 2025).
- International Renewable Energy Agency (IRENA) quoted in Butt, Z. A. (2025, June 1). Pakistan's solar 'revolution' [Opinion]. Business Recorder. <https://www.brecorder.com/news/40365644>
- Kentikelenis, Alexander, and Thomas Stubbs. 2021. Missing Links: How Climate Change Remains Peripheral to IMF Economic Surveillance Activities. Amsterdam: Recourse. https://re-course.org/wp-content/uploads/2022/04/Missing-Links-Final_compressed-1.pdf
- Kentikelenis, Alexandros, and Thomas Stubbs. 2023. A Thousand Cuts: Social Protection in the Age of Austerity. New York, NY: Oxford University Press.
- Kentikelenis, Alexandros, and Thomas Stubbs. 2024. Off Track: The Long Road to Mainstreaming Climate Action into IMF Lending. Amsterdam: Recourse. <https://re-course.org/newsupdates/imf-climate-action-report/>
- Kentikelenis, Alexandros, and Thomas Stubbs. 2025. Greening the International Monetary Fund. Cambridge: Cambridge University Press.
- Khalil, S., Hussain, B., & Rehman, Z. (2022, March). Analysis of Solar PV Technology Adoption in off-Grid Communities of Khyber Pakhtunkhwa. International Journal of Engineering Works, 9(03), 57–66. <https://doi.org/10.34259/ijew.22.9035766>
- Kreibiehl, S., T. Yong Jung, S. Battiston, P. E. Carvajal, C. Clapp, D. Dasgupta, N. Dube, R. Jachnik, K. Morita, N. Samargandi, M. Williams, 2022: Investment and finance. In IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926.017

Liddle, B., Hasanov, F. (2023). Are the income and price elasticities of economy-wide electricity demand in middle-income countries time-varying? Evidence from panels and individual countries. *Environ Ecol Stat* 30, 827–849. <https://doi.org/10.1007/s10651-023-00585-4>

Mazzucato, Mariana, and Rogério Vieira de Sá. 2025. *Mind the Mission, Not the Gap: Rethinking Blended Finance for Public Purpose*. London: Institute for Innovation and Public Purpose. IIPP Working Paper.

Merling, Lara. 2021. *Reforming the IMF for a Resilient Recovery*. Washington, DC: International Trade Union Confederation. ITUC Report.

Merling, Lara. 2024. "Greenwashing" Structural Adjustment'. *Phenomenal World*. <https://www.phenomenalworld.org/analysis/greenwashing-structural-adjustment/> (September 4, 2025).

Ministry of Commerce, Government of Pakistan. (2024). *Textiles and Apparel Policy 2020–25*. https://www.commerce.gov.pk/wp-content/uploads/2024/07/Textiles-and-Apparel-Policy_2020-25.pdf

Ministry of Energy (Power Division), Government of Pakistan. (2023). *National Electricity Plan 2023–27*. <https://power.gov.pk/Sitelimage/Policy/National%20Electricity%20Plan%202023-27.pdf>

Mitra, Pritha, Mehdi Raissi, Bruno Versailles, Samuele Centorrino, Maksym Ivanyna, Korlai Kirabaeva, Emanuele Massetti, et al. 2025. *Integrating Climate Change into Macroeconomic Analysis: A Review of Impact Channels, Data, Models, and Scenarios*. Washington, DC: International Monetary Fund. IMF Working Paper. <https://doi.org/10.5089/9798229021890.001> (September 4, 2025).

Momani, Bessma. 2006. 'Assessing the Utility of, and Measuring Learning from, Canada's IMF Article IV Consultations'. *Canadian Journal of Political Science / Revue canadienne de science politique* 39(2): 249–69.

News Desk. (2025, April 21). APTMA urges revision of Grid Transition Levy to align with updated electricity tariffs. *Profit by Pakistan Today*. <https://profit.pakistantoday.com.pk/2025/04/21/aptma-urges-revision-of-grid-transition-levy-to-align-with-updated-electricity-tariffs>

Oil Change International. 2025. *Private Fantasies, Public Realities: Why Private Finance Isn't Delivering an Energy Transition and the Case for Public Sector Leadership*. Washington, DC: Oil Change International. <https://oilchange.org/publications/limits-to-private-finance-approach/>.

Omer, M. (2018). *Estimating elasticity of transport fuel demand in Pakistan* (State Bank of Pakistan Working Paper No. 96). State Bank of Pakistan.

Pakistan Renewable Energy Coalition (PREC), & Alliance for Climate Justice and Clean Energy (ACJCE). (2025). "Letter to the IMF Executive Board regarding the solar tax and carbon levy in Pakistan's budget". Unpublished letter.

Pakistan Textile Council. (2025, January 26). PTC decries gas tariff hike for captive power plants as a blow to Pakistan's textile exports and exhibits anti-export bias [Press release]. <https://ptc.org.pk/pakistan-textile-council-ptc-press-release/>

Peavey, N., & Lewin, D. (2025, August 19). Here Comes the Sun: Bill McKibben on Solar's Breakout Moment [Blog post]. *Energy Capital Podcast*. <https://www.douglewin.com/p/here-comes-the-sun-bill-mckibben>

Prasad, Ananthakrishnan, Elena Loukoianova, Alan Xiaochen Feng, and William Oman. 2022. *Mobilizing Private Climate Financing in Emerging Market and Developing Economies*. IMF Staff Climate Note. <https://elibrary.imf.org/openurl?genre=journal&issn=2789-0600&volume=2022&issue=007> (September 2, 2022).

Rabanal, Pau, Daniel Leigh, Giovanni Ganelli, Luciana Juvenal, Jair Rodriguez, João Tovar Jalles, Camila Casas, Cyril Rebillard, and Cian Allen. 2023. *2022 update of the External Balance Assessment methodology*. Washington, DC: International Monetary Fund. IMF Working Paper. <https://doi.org/10.5089/9798400234934.001> (July 17, 2025).

Rashid, H. B., Moulvi, Z., & Moeed, S. (2024). Debt sustainability, climate crisis and development: Assessing the IMF's 'green austerity' in response to Pakistan's 2022 floods. *Development*, 67(3), 291–304. <https://doi.org/10.1057/s41301-025-00423-z>

Raza, A. (2025, July 15). Feature: Solar-powered transformation: Chinese panels light up lives across Pakistan. *Xinhua*. <https://english.news.cn/asiapacific/20250715/4dfae2462c8a4597b17902feadc9279f/c.html>

Reinsberg, Bernhard, Alexander Kentikelenis, Thomas Stubbs, and Lawrence King. 2019. 'The World System and the Hollowing out of State Capacity: How Structural Adjustment Programs Affect Bureaucratic Quality in Developing Countries'. *American Journal of Sociology* 124(4): 1222–57. <https://doi.org/doi:10.1086/701703>

Robbins, Patrick, Johanna Bozuwa, Alex Lenferna, Daniel Chavez, Chris Hayes, Melanie Brusseler, and Anne Debregeas. 2024. "Who Owns Power in the Energy Transition?" *Climate and Community Institute*. <https://climateandcommunity.org/research/who-owns-power-in-the-energy-transition/> (September 4, 2025).

Rustomjee, Cyrus, Anthony De Lannoy, Joshua Wojnilower, Andrea Arevalo Arroyo, and Lukasz Jannils. *The Evolving Application of the IMF's Mandate: Evaluation Report*. Washington, DC: International Monetary Fund, 2024.

- Sajid, A., & Hussain, S. (2022). Fuel subsidies to curb cost-push inflation: A case study of Pakistan to assess the impact of untargeted subsidies on fiscal space and current accounts. *Polityka Energetyczna – Energy Policy Journal*, 25(4), 5–26. <https://doi.org/10.33223/epj/156594>
- Sanyal, Bikas C., and N.V. Varghese. 2006. 'Research Capacity of the Higher Education Sector in Developing Countries'. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000153116> (January 21, 2025).
- Schäfer, Armin. 2006. 'A New Form of Governance? Comparing the Open Method of Co-Ordination to Multilateral Surveillance by the IMF and the OECD'. *Journal of European Public Policy* 13(1): 70–88. <https://doi.org/10.1080/13501760500380742>.
- Shahbaz, Rana (2025, August, 20) Pakistan seeks to renegotiate LNG deal with Qatar. *The Express Tribune*. <https://tribune.com.pk/story/2562163/pakistan-seeks-to-renegotiate-lng-deal-with-qatar#>.
- Stern, N., Stiglitz, J., & Taylor, C. (2022). The economics of immense risk, urgent action and radical change: towards new approaches to the economics of climate change. *Journal of Economic Methodology*, 29(3), 181–216. <https://doi.org/10.1080/1350178X.2022.2040740>
- Stiglitz, Joseph E. 2018. 'Where Modern Macroeconomics Went Wrong'. *Oxford Review of Economic Policy* 34(1–2): 70–106.
- Stubbs, Thomas, and Alexander Kentikelenis. 2022. *Cautious Optimism: How IMF Economic Surveillance Can Foster the Green Transition*. Amsterdam: Recourse. <https://re-course.org/publications/cautious-optimism-how-imf-economic-surveillance-can-foster-the-green-transition/>
- Stubbs, Thomas, and Alexander E Kentikelenis. 2018. 'Targeted Social Safeguards in the Age of Universal Social Protection: The IMF and Health Systems of Low-Income Countries'. *Critical Public Health* 28(2): 132–39. <https://doi.org/10.1080/09581596.2017.1340589>.
- Stubbs, Thomas, and Alexandros Kentikelenis. 2023. *Blind Spots: The Green Transition and the IMF's Economic Surveillance*. Amsterdam: Recourse. <https://re-course.org/newsupdates/new-report-shows-slow-progress-in-the-imfs-climate-change-strategy-in-surveillance-activities/>
- Sustainable Development Policy Institute (SDPI). (2023). Two neighbours – Cottage industries move at different pace in India and Pakistan. [Blog] https://sdpi.org/two-neighbours--cottage-industries-move-at-different-pace-in-india-and-pakistan/blogs_detail
- Sward, Jon, and Laure-Alizée Le Lannou. 2025. 'A Just Energy Transition Deferred: How the World Bank Counts pro-Privatisation Energy Sector Reforms as "Climate Finance"'. *Bretton Woods Project*. <https://www.brettonwoodsproject.org/2025/06/new-data-reveal-world-bank-dpf-climate-finance-carries-strong-private-sector-bias-undermining-a-just-transition/> (September 4, 2025).
- TCD-IMF. 2023. 'The International Monetary Fund, Climate Change and Development: A Preliminary Assessment'. Task Force on Climate, Development and the IMF. <https://www.bu.edu/gdp/files/2023/03/TF-Assessment-Exec-Summ-FIN.pdf> (September 4, 2025).
- Transnational Institute. 2025. 'Energy, Power and Transition'. <https://www.tni.org/en/publication/energy-power-and-transition> (September 4, 2025).
- UN News. 2025. 'World Court Says Countries Are Legally Obligated to Curb Emissions, Protect Climate'. <https://news.un.org/en/story/2025/07/1165475> (September 5, 2025).
- US Department of the Treasury. 2025. 'Treasury Secretary Scott Bessent Remarks before the Institute of International Finance'. <https://home.treasury.gov/news/press-releases/sb0094> (May 14, 2025).
- World Bank Group. 2009. Project Appraisal Document. <https://documents1.worldbank.org/curated/en/509551468291941285/txt/472880PAD0P103101Official0Use0Only1.txt>
- World Bank Group. (2022). Pakistan Country Climate and Development Report (CCDR Series, p. 54). World Bank. <http://hdl.handle.net/10986/38277>
- World Bank. 2023. 'Delivery on the Ground: Country Action for a Livable Planet'. <https://live.worldbank.org/en/event/2023/2023-annual-meetings-delivery-on-the-ground-country-action-for-a-livable-planet> (November 8, 2024).
- World Bank. (2024, July 19). Pakistan Least-Cost Electrification Study (Pakistan Sustainable Energy Series). World Bank. <https://hdl.handle.net/10986/41909>
- He, X., Zhai Fan, and Ma, J. 2022. 'An Analysis of the IMF's International Carbon Price Floor Proposal'. Task Force on Climate, Development and the IMF. https://www.bu.edu/gdp/files/2022/09/TF_WP_012_PKU_FIN.pdf.



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Methodological appendix

For our analysis of IMF engagement in the green transition, our team collected Article IV reports and Selected Issues papers in the period January 2022 to 20 May 2025. We downloaded these from the following link:

<https://www.elibrary.imf.org/view/journals/002/002-overview.xml>

We excluded documents pertaining to currency unions or published in a non-English language, or where a Selected Issues paper did not have an accompanying Article IV report. In total, we downloaded 597 documents that relate to 178 countries.¹ This includes 307 Article IV reports, 60 joint Article IV and programme review reports, and 230 Selected Issues papers and other addendums.²

To construct a globally representative dataset of 60 country-cases, we applied a structured, multi-step selection strategy using a master dataset that included information on income level, Small Island Developing States (SIDS) status, region, participation in IMF lending arrangements — Resilience and Sustainability Facility (RSF) and Upper Credit Tranche (UCT) — and the number of climate-related references in Article IV reports. First, we removed duplicates by retaining only the country-year entry with the highest number of climate-related terms. We then selected 17 of the world's top 20 greenhouse gas emitters, excluding Iran, Russia, and Saudi Arabia, which were not present in the dataset. Ten SIDS were selected based on climate term frequency, excluding any with RSF or UCT programs and omitting Curaçao and Sint Maarten. Next, we selected 8 RSF countries. These were chosen based on climate term count and apportioned to reflect the distribution of the 16 RSF participants in the dataset: 4 from Sub-Saharan Africa (SSA), 2 from Latin America and the Caribbean (LAC), 1 from Europe and Central Asia (ECA), and 1 from a combined Middle East & North Africa and South Asia (MENASA) region. For UCT countries, we selected 6 cases based on climate term count, reflecting a proportional allocation derived from the 34 UCT participants in the dataset (21 SSA, 4 MENASA, 4 LAC, 5 ECA), but adjusted downward by 1 SSA and 1 MENASA case to account for their inclusion in the top emitter category. These 6 UCT cases were distributed as follows: 4 from SSA, 1 from LAC, and 1 from ECA. Finally, we selected 19 "Other" countries based on climate term count, restricted to those not participating in RSF or UCT programmes, and excluding advanced economies, SIDS, and any countries already selected under other categories. This stratified sampling strategy ensures coverage across key institutional, regional, and climate-policy dimensions.

Thus, the number of reports to be analysed was 102 documents, 60 of which were Article IV reports and 42 Selected Issue papers that relate to 60 countries. Climate-related IMF advice was collected and labelled as described below.

¹ Curaçao and Sint Maarten have a joint Article IV report.

² Note on file naming conventions: All Article IV reports are labelled according to the year of the consultation, regardless of their actual publication date. For example, a 2022 Article IV report published in 2023 is still named 2022. Selected Issues reports follow the same logic: they are named after the year of the corresponding Article IV consultation, even if published later. For example, a Selected Issues report that was published in 2023 but accompanies a country's 2022 Article IV report will be labelled as 2022. This ensures consistent and easy matching between Article IV and Selected Issues reports.

For the subset of variables under 'Climate change and green transition support' and 'Climate diagnostics', we extract concrete IMF advice and diagnostics but do not code factual reporting of the government's policies (except when coding the 'NDCs' variable); we also code explicit IMF endorsement of a government policy (e.g., "Staff welcomes the gradual withdrawal of untargeted energy subsidies.") Throughout, we do not include extracts where the IMF is explicitly summarising advice in a previous Article IV report, advice in previous capacity development activities, or the country authorities' view. We also do not include extracts from the Press Release (on the third page of the PDF) or the Statement by the Executive Director (on the last few pages of the PDF).

Where extracts are taken from the documents, for each variable they are copied into a transitional word file and then formatted into paragraphs with one extract per paragraph; the collection of extracts is then pasted into excel. This method allows for analysts to distinguish between distinct extracts from the same document within the excel cell, as they will be separated with a line-break.

Country and Article IV identifiers	
Country	Country name
Country code	World Bank three-letter country code
Article IV	Title year of the report
Report code	Formal document classification number according to the IMF, available generally in the top right corner of the cover page.
Publication date	Date of publication of the staff report for the Article IV consultation, available generally in the cover page of that report (comes after the Press Release in the PDF).
Climate terms	Number of hits for climate terms across both Article IV report and Selected Issues paper
RSF programme	Article IV report is part of RSF programme: review number
UCT programme	Article IV report is part of UCT programme: review number
Other instrument	Article IV report is part of an RCF, SMP, or PCI: review number
Selection criteria	Author classification of country based on criteria by which it was selected into the sample for in-depth coding: top 20 greenhouse gas emitter (Top), Small Island Developing States (SIDS), Resilience and Sustainability Facility countries (RSF), Upper Credit Tranche countries (UCT), and Other (Other).
SI paper	Article IV is paired with a Selected Issues paper: formal document classification according to the IMF.

RSF date	Date of RSF arrangement. Sourced from the IMF Lending Commitments webpage at https://www.imf.org/external/np/fin/tad/extarr1.aspx (retrieved July 2025).
CCDR published	World Bank's Country Climate Development Report is published: date of publication. Sourced from the World Bank's CCDR webpage at https://www.worldbank.org/en/publication/country-climate-development-reports (retrieved 7 July 2025).
CCDR mentioned	Article IV report mentions a World Bank Country Climate Development Report (CCDR). Search terms: CCDR, World Bank, country climate.
Background data	
Income level	Income classification according to the World Bank for the 2024–25 fiscal year (retrieved June 2025).
Region	Region classification according to the World Bank
SIDS	A binary variable on whether a country is a Small Island Developing State, as reported by the UN at https://www.un.org/ohrlls/content/list-sids (retrieved June 2025).
Top 20 emitter	A binary variable on whether a country is a top 20 greenhouse gas emitter in 2022, as reported by Climate Watch at https://www.climatewatchdata.org/ghg-emissions?end_year=2022&start_year=1990 (retrieved June 2025).
ND-GAIN rank	Country ranking on the ND-GAIN index of a country's vulnerability to climate change in 2023, as reported at https://gain.nd.edu/our-work/country-index/rankings/ (retrieved June 2025).
Oil production	Country's oil production as a share of global oil production in 2023, from the 'Oil Production – tonnes' excel tab of the 2024 Energy Institute Statistical Review of World Energy.
Gas production	Country's gas production as a share of global gas production in 2023, from the 'Gas Production – Bcm' excel tab of the 2024 Energy Institute Statistical Review of World Energy.
Coal production	Country's coal production as a share of global coal production in 2023, from the 'Coal Production – mt' excel tab of the 2024 Energy Institute Statistical Review of World Energy.
High fossil fuel production	Whether or not a country's fossil fuel production was at least 0.05% of global oil, gas, or coal in 2023 (i.e., the latest available data at time of data collection). Values: Yes/No.

Oil rents	A country's oil rents as a share of GDP for 2021, as reported in the World Bank's World Development Indicators (retrieved August 2025).
Gas rents	A country's natural gas rents as a share of GDP for 2021, as reported in the World Bank's World Development Indicators (retrieved August 2025).
Coal rents	A country's coal rents as a share of GDP for 2021, as reported in the World Bank's World Development Indicators (retrieved August 2025).
Fossil fuel rents	The sum of oil, natural gas, and coal rents as a share of GDP for 2021.
High fossil fuel rents	Whether or not a country's fossil fuel rents were at least 2% of GDP in 2021 (i.e., the latest available data at time of data collection). Values: Yes/No.
Established fossil fuel producer	Country is an established fossil fuel producer, defined as either producing at least 0.05% of global oil, gas, or coal in 2023 or as having fossil fuel rents that are at least 2% of GDP for 2021. Values: Yes/No.
Fossil fuel typology	Fossil fuel classification of countries: those classified by the World Bank as "High income" are coded as "Advanced economy"; for non-high income countries, established fossil fuel producers are coded as "Fossil fuel producer" and those that are not are coded as "Non producer". We exclude SIDS and countries with RSF or UCT arrangements.
Income typology	Income classification of countries: those classified by the World Bank as "High income" are coded as "Advanced economy", "Upper middle income" as "Upper-middle income country", and "Low income" and "Lower middle income" as "Low/lower-middle income country. We exclude SIDS and countries with RSF or UCT arrangements.
Debt distress	Risk of overall debt distress as stated in the Debt Sustainability Analysis of the Article IV. If not contained with the Article IV, then published IMF-World Bank Debt Sustainability Analysis ratings as of June 2025.
Fiscal consolidation (% of GDP), based on latest available review	
Fiscal balance baseline	Fiscal (or overall) balance as a share of GDP the title year of the Article IV, and is an estimation drawn from the IMF report's Selected Economic and Financial Indicators table or equivalent. If reported as fiscal rather than calendar year, then we take the 2022/23 value for 2022, 2023/24 value for 2023, and so on.
Fiscal balance one-year projection	Fiscal (or overall) balance as a share of GDP for one-year after the title year of the Article IV, and is either a projection or an estimation drawn from the IMF report's Selected Economic

	and Financial Indicators table or equivalent. If reported as fiscal rather than calendar year, then we take the 2022/23 value for 2022, 2023/24 value for 2023, and so on.
Magnitude of fiscal adjustment	Fiscal balance one-year projection subtracted from fiscal balance baseline.
Primary balance baseline	Primary balance as a share of GDP for the title year of the Article IV, and is an estimation drawn from the IMF report's Selected Economic and Financial Indicators table or equivalent. If reported as fiscal rather than calendar year, then we take the 2022/23 value for 2022, 2023/24 value for 2023, and so on.
Primary balance one-year projection	Primary balance as a share of GDP for one-year after the title year of the Article IV, and is either a projection or an estimation drawn from the IMF report's Selected Economic and Financial Indicators table or equivalent. If reported as fiscal rather than calendar year, then we take the 2022/23 value for 2022, 2023/24 value for 2023, and so on.
Revenues and grants baseline	Government revenues and grants as a share of GDP for the title year of the Article IV, and is an estimation drawn from the IMF report's Selected Economic and Financial Indicators table or equivalent. If reported as fiscal rather than calendar year, then we take the 2022/23 value for 2022, 2023/24 value for 2023, and so on.
Revenues and grants one-year projection	Government revenues and grants as a share of GDP for one-year after the title year of the Article IV, and is either a projection or an estimation drawn from the IMF report's Selected Economic and Financial Indicators table or equivalent. If reported as fiscal rather than calendar year, then we take the 2022/23 value for 2022, 2023/24 value for 2023, and so on.
Expenditures baseline	Total government expenditures as a share of GDP for the title year of the Article IV, and is an estimation drawn from the IMF report's Selected Economic and Financial Indicators table or equivalent. If reported as fiscal rather than calendar year, then we take the 2022/23 value for 2022, 2023/24 value for 2023, and so on.
Expenditures one-year projection	Total government expenditures as a share of GDP for one-year after the title year of the Article IV, and is either a projection or an estimation drawn from the IMF report's Selected Economic and Financial Indicators table or equivalent. If reported as fiscal rather than calendar year, then we take the 2022/23 value for 2022, 2023/24 value for 2023, and so on.
Magnitude of expenditures adjustment	Total government expenditures one-year projection subtracted from total government expenditures baseline.
Social spending measure	Verbatim text of the social spending measure captured in the IMF report.

Social spending baseline	Social spending as a share of GDP for the title year of the Article IV, and is an estimation drawn from the IMF report's Budgetary Government Operations table or equivalent. If reported as fiscal rather than calendar year, then we take the 2022/23 value for 2022, 2023/24 value for 2023, and so on.
Social spending one-year projection	Social spending as a share of GDP for one-year after the title year of the Article IV, and is either a projection or an estimation drawn from the IMF report's Budgetary Government Operations table or equivalent. If reported as fiscal rather than calendar year, then we take the 2022/23 value for 2022, 2023/24 value for 2023, and so on.
Magnitude of social spending adjustment	Social spending one-year projection subtracted from social spending baseline.
Climate financing	
Climate financing coverage	Whether or not the IMF explicitly covers climate financing needs and, if so, whether it is their own analysis or an external organisation's (e.g., World Bank, domestic government). Values: 'No', or the organisation that does the analysis (e.g., 'IMF', 'World Bank', 'UNFCCC document' [LTS, NAP, NDC], 'Government'). Search terms: - financing - climate
Private-public funding	Climate financing projected to be covered by the private and public sector as a percentage (e.g., '36/64' would mean 36% by the public sector and 64% by the private sector). If not included in the report, it is coded as ''
Adaptation financing coverage	Whether or not the climate financing coverage specifically reports adaptation financing needs and, if so, whether it is the IMF's analysis or an external organisation's (e.g., World Bank, domestic government). Values: 'No', or the organisation that does the analysis (e.g., 'IMF', 'World Bank', 'UNFCCC document' [LTS, NAP, NDC], 'Government').
Climate change and green transition support	
Electricity, gas, fuel tariffs and subsidies	Whether or not the IMF calls for an increase in tariffs or decrease in subsidies for electricity, gas, or fuel. Search terms: - subsid* - tariff - energy - power - electric - gas - fuel

	- diesel - petrol - octane - kerosene Values: Yes/No.
Electricity, gas, fuel tariffs and subsidies savings	Estimated combined savings as a share of GDP of increase in tariffs or decrease in subsidies for electricity, gas, or fuel.
Extracts	Verbatim text of electricity, gas, and fuel tariff or subsidy reforms covered in the IMF report, including their rationale.
Fossil fuel exploitation	Whether or not the IMF explicitly approvingly mentions fossil fuel expansion. Search terms: - extract(ion/ive) - explor(e/ation) - mining - oil - gas - coal - hydrocarbon - discover - field Values: Yes/No.
Extracts	Verbatim text of support for fossil fuel expansion.
Renewable energy investment	Whether or not the IMF explicitly endorses investment in renewable energy. Search terms: - wind - solar - renewable - green Values: Yes/No. A "Yes*" indicates support for hydroelectric power plants. While these are renewable, they are not sustainable; therefore, Recourse does not endorse their use as a clean renewable energy source.
Public or private	Whether IMF support for investment in renewable energy is for public investment, private investment, or both. Values: Public/Private/Both. n/a means not applicable or unable to ascertain.
Extracts	Verbatim text of support for investment in renewable energy
Green industrial policy	Whether or not the IMF explicitly endorses green industrial policy (e.g., trade policy to protect infant green industry, state investment to move up the value chain for renewable technology, and so on). Excludes PPPs and de-risking mechanisms to mobilise private sector investment, such as concessional financing or regulatory reforms to incentivise private sector investment. Search terms:

	- climate - energy - green - clean - industrial - value chain Values: Yes/No.
Extracts	Verbatim text of support for green industrial policy
Carbon pricing	Whether or not the IMF explicitly endorses the introduction of increase in carbon pricing. Search terms: - carbon - emission trading - emissions trading
Extracts	Verbatim text of support for carbon pricing introduction or increase
Diversification from fossil fuels	Whether or not the IMF explicitly endorses diversification away from fossil fuels (e.g., for export).
Extracts	Verbatim text of support for diversification away from fossil fuels. Search terms: - divers*
Energy sector restructuring	Whether or not the IMF explicitly endorses privatisation, unbundling, deregulation, or other forms of restructuring in the energy sector.
Extracts	Verbatim text of support for privatisation, unbundling, deregulation, or other forms of restructuring in the energy sector. Search terms: - energy - electricity - gas - oil - unbund* - deregul* - privati*
Additional climate policy instruments	Whether or not the IMF explicitly endorses additional climate policy instruments not covered in the other variables in this subsection (e.g., feebates, feed-in tariffs, research subsidies, capital subsidies).
Extracts	Verbatim text of support for additional climate policy instruments. Search terms: - feebat - feed-in

	- feedin - research subsid* - capital subsid*
Climate diagnostics	
SIP climate chapter	Selected Issues paper has a section or chapter on climate, green transition, energy, or similar: name of chapter/s.
SIP climate authors	Author name of the SIP climate chapter/s, including their department in brackets (where available). If multiple authors, separate by comma, using the convention "Name (Department), Name (Department)".
Article IV climate annex	Article IV report has an annex on climate, green transition, energy, or similar: name of annex/s.
Article IV climate annex authors	Author names of the Article IV climate annex/s, including their department (where available). If multiple authors, separate by comma, using the convention "Name (Department), Name (Department)".
DIGNAD	Whether or not analyses apply 'DIGNAD'. Values: Yes/No. Search term: DIGNAD, DIG-NAD.
IMF-ENV	Whether or not analyses apply 'IMF-ENV'. Values: Yes/No. Search terms: IMFENV, IMF-ENV.
CPAT mitigation	Whether or not analyses apply 'CPAT' (Carbon Policy Assessment Tool) to climate mitigation scenarios (e.g., carbon tax). Values: Yes/No. Search terms: CPAT.
CPAT distribution	Whether or not analyses apply 'CPAT' (Carbon Policy Assessment Tool) to poverty, distribution, and inequality scenarios. Values: Yes/No. Search terms: CPAT.
LIC-DSA stress test on natural disasters	Whether or not the debt sustainability analysis of a low income country (or lower-middle income country) has a stress test on natural disasters. Values: Yes/No/.
MAC-DSA long-term risk assessment on climate change	Whether or not the debt sustainability analysis of a market access country has a long-term risk assessment on climate (e.g., adaptation, mitigation, and/or natural disasters). If more than one is present, list them separated by a comma. Value: Yes/No/.
RAM climate coverage	Whether or not the Risk Assessment Matrix includes any mention of climate change as a source of threat (includes terms like 'natural disaster', 'drought', 'green transition', and so on).

EBA climate coverage	Whether or not the External Balance Assessment (EBA) includes any mention of climate change.
FSAP date	Date of last FSAP prior to the Article IV report, taken from https://www.imf.org/en/Publications/fssa .
FSAP climate test	If the FSAP was within two years of the title year, then whether or not the IMF conducted a climate stress test.
Transition risks	Whether or not the IMF mentions domestic or global transition risks. This includes changes to tax regimes to account for reduced government revenues, changes to regulatory frameworks, consideration of banking and financial stability linked to stranded assets, reduced source of foreign exchange, and so on. We do not capture transition risks linked to social protection. Search terms: - transition - strand(ed/ing) - climate risk
Extracts	Verbatim text of mention of global transition risks.
NDCs, LTSSs, NAPs	Whether or not NDCs, LTSSs, NAPs are mentioned in the report. Search terms: - NDC - determined contribution - NAP - adaptation plan - LTS - LT- - long-term strategy
Extracts	Verbatim text of mention of NDCs, LTSSs, and NAPs.