

Global Guidance for Just Transition Policy

The extent to which the ILO Guidelines address energy transition challenges facing developing countries and a comparative analysis of their application in South Africa and Germany



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Acronyms and Abbreviations

JET IP	Just Energy Transition Investment Plan
IEA	International Energy Agency
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
ITUC	International Trade Union Confederation
KVBG	Act to Reduce and End Coal-Fired Power Generation and Amend Other Laws (Kohleverstromungsbeendigungsgesetz)
MDB	Multilateral Development Bank
MSMEs	Micro, small, and medium enterprises
OECD	Organization for Economic Cooperation and Development
OSH	Occupational safety and health
PCC	Presidential Climate Commission
SAREM	South African Renewable Energy Masterplan
SDG	Sustainable Development Goal
STEM	Science, technology, engineering, and mathematics
StStG	Structural Reinforcement Act for Mining Regions (Strukturstärkungsgesetz Kohleregionen)
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly

Key Messages

The 2015 International Labour Organization ***Guidelines for a Just Transition Towards Environmentally Sustainable Economies and Societies for All*** are an authoritative and valuable source of international just transition guidance.

This analysis compares and contrasts how developing and developed countries have approached **just transition policymaking in the energy sector** by examining legal and policy instruments adopted in **South Africa** and **Germany** and their application of the ILO Guidelines.

It also investigates the extent to which the ILO Guidelines address **developing countries' unique challenges** and provides **recommendations to shape further guidance on just energy transition policymaking from international institutions** to support developing countries in 12 key areas:

1. **Government Institutional Capacity and Corruption:** Further guidance should:

- Identify research needs and provide guidance on how countries facing government institutional capacity challenges can achieve a just transition, including by indicating the forms of technical and financial assistance available and whether developed countries have an obligation to provide such assistance.
- Explicitly lay out the challenge of corruption and, based on additional investigation, provide guidance on how to achieve a just transition in the context of widespread corruption.

2. **Participation of Affected Groups in Policymaking:** Further guidance should:

- Examine how all affected groups, including traditional communities and informal workers, can be consulted adequately at every stage of just transition policymaking and implementation, while preventing their voices from being overshadowed by investors, development partners, and other more powerful stakeholders.
- Advise on how countries can ensure the quality of consultations and overcome specific challenges, such as a lack of rural connectivity and access to venues.

3. **Decent Employment:** Further guidance should:

- Address how active labor market policies may be more challenging to implement in a developing country context.
- Advise on how to promote decent employment in a context with preexisting high rates of unemployment and informal work during the transition and beyond.

4. **Green Industry and Economic Diversification:** Further guidance should:

- Provide recommendations on how developing countries can design and implement green industrial policies for achieving economic diversification and developing internationally competitive green industries.
- Advise on how international institutions and developed countries can help enable such policies and avoid undermining developing countries' just transition efforts, including by avoiding making their own green industrial policies overly protectionist.

5. **Social Protection:** Further guidance should:

- Provide detailed guidance on the measures that need to be taken for developing countries with low rates of social protection to expand their social protection floor to be able to meet new demands posed by the energy transition.
- Expressly address the integral role of international cooperation in increasing social protection rates in developing countries.

6. Skills Development and Training: Further guidance should:

- Differentiate between skills development and training challenges relevant to developing and developed countries.
- Consider how governments can update skills development opportunities to be relevant and accessible for vulnerable groups and responsive to the need in the green economy for more professionals with university degrees and who are trained in STEM.

7. Effective Phase-out of Fossil Fuel Production, Use, and Subsidies: Further guidance should:

- Call for a phase-out of fossil fuel production and use (combined with enhanced social protection measures), with differentiated guidance for developing and developed countries.
- Call for fossil fuel subsidy reform, with guidance on how to realize such reforms while ensuring negative impacts are not disproportionately felt by low-income populations.

8. International Cooperation and the Principle of Common but Differentiated Responsibility: Further guidance should:

- Advance specific recommendations to enhance international equity and cooperation, including guidance to ensure developed countries fulfill their responsibility to provide finance for developing countries to enable just transition policy measures.
- Expressly ground such recommendations in developed countries' disproportionate contributions to climate change and greater access to finance.

9. Human Rights: Further guidance should:

- Lay out the risks energy transitions pose to Indigenous Peoples' land rights and other human rights; provide specific guidance on how to ensure such rights are fully recognized and respected, including the right to Free, Prior and Informed Consent.
- Address how countries that export critical minerals can directly manage the environmental and human rights impacts of their primary and secondary production; encourage importing countries to mandate and enforce requirements that companies mitigate, prevent, and remedy their human rights and environmental impacts, including those that occur abroad.

10. Access to Affordable and Sustainable Energy: Further guidance should:

- Address how developing countries can simultaneously expand access to affordable energy and transition to renewable energy systems, accounting for the risk of governments using energy insecurity to attempt to justify continued unsustainable reliance on fossil fuels.

11. Adequate Finance: Further guidance should:

- Provide guidance on how developing countries can finance their domestic just transition measures, including what reforms international financial institutions should take to increase developing countries' access to low-cost, long-term finance.

12. Environmental Remediation and Repurposing of Former Industrial Sites: Further guidance should:

- Address measures of environmental remediation and repurposing of former industrial sites as essential components of just transitions and the challenges faced by developing countries in the regulation and financing of such measures.

1 Introduction

In 2015, the International Labour Organization (ILO) published its Just Transition Guidelines (“ILO Guidelines”),¹ an international set of policy guidelines for national-level just transition planning. They provide governments and social partners² with “non-binding practical orientation” on the just transition and cover nine key policy areas: macroeconomic and growth policies; industrial and sectoral policies; enterprise policies; skills development; occupational safety and health; social protection; active labor market policies; rights; and social dialogue³ and tripartism.⁴ The ILO Guidelines were the first set of global guidelines established by a United Nations (UN) specialized agency and were agreed upon by governments, employers’ organizations, and workers’ organizations from 187 countries, marking a profound victory for the international labor movement following years of advocacy.⁵ Although other international guidance has since been published,⁶ the ILO Guidelines remain an authoritative international source of just transition guidance, having recently been formally endorsed in 2023 by all countries at the International Labour Conference at its 111th session.⁷

Scholars and institutions have proposed various definitions of a just transition. Notably, the Intergovernmental Panel on Climate Change (IPCC) has defined it as:

[...] a set of principles, processes, and practices aimed at ensuring that no people, workers, places, sectors, countries or regions are left behind in the move from a high-carbon to a low-carbon economy. It includes respect and dignity for vulnerable groups; creation of decent jobs; social protection; employment rights; fairness in energy access and use, and social dialogue and democratic consultation with relevant stakeholders. [...]

A Just Transition entails targeted and proactive measures [...] to ensure that any negative social, environmental, or economic impacts of economy wide transitions are minimized, whilst benefits are maximized for those disproportionately

¹ International Labour Organization (ILO), *Guidelines for a Just Transition Towards Environmentally Sustainable Economies and Societies for All* (Geneva: ILO, 2015) (ILO Guidelines), 3, https://www.ilo.org/wcmsp5/groups/public/@ed_emp/@emp_ent/documents/publication/wcms_432859.pdf.

² “Social partners” includes workers’ organizations and employers’ organizations. “Social Partners,” ILO, <https://ilo.org/pardev/partnerships/employers-workers-organizations/lang--en/index.htm>.

³ The International Labour Office defines “social dialogue” as to “include all types of negotiation, consultation or simply exchange of information between, or among, representatives of governments, employers and workers, on issues of common interest relating to economic and social policy.” International Labour Office, *Social Dialogue: Finding a Common Voice* (Geneva: ILO, 2002), 2, https://labordoc.ilo.org/permalink/41ILO_INST/1s2ok2m/alma994818913402676.

⁴ ILO Guidelines, 3, 7.

⁵ International Trade Union Confederation (ITUC), *Just Transition – Where are We Now and What’s Next? A Guide to National Policies and International Climate Governance* (Brussels: ITUC, September 2017), 6, <https://www.ituc-csi.org/just-transition-where-are-we-now>; ITUC, “ITUC – IOE Joint Statement on Just Transition Negotiations at COP28,” ITUC, news release, December 6, 2023, <https://www.ituc-csi.org/ituc-ioe-statement-cop28-en>.

⁶ United Nations Framework Convention on Climate Change Secretariat (UN Climate Change), *Just Transition of the Workforce, and Creation of Decent Work and Quality Jobs: Technical Paper* (Bonn, Germany: UN Climate Change, April 2020), <https://unfccc.int/sites/default/files/resource/Just%20transition.pdf>; Sangji Lee, *Issue Brief: Just Transition* (New York: United Nations Development Program [UNDP], August 2022), <https://www.undp.org/publications/issue-brief-just-transition>; United Nations Global Compact, *Introduction to Just Transition: A Business Brief* (New York: United Nations Global Compact, September 2022), <https://ungc-communications-assets.s3.amazonaws.com/docs/publications/Just%20Transition%20-%20LK.pdf>; Office of the United Nations High Commissioner for Human Rights (OHCHR) and ILO, *Human Rights and a Just Transition* (Geneva: OHCHR and ILO, 2023), <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/v4-key-messages-just-transition-human.pdf>; African Development Bank (AfDB), Asian Development Bank (ADB), Asian Infrastructure Investment Bank (AIIB), European Bank for Reconstruction and Development (EBRD), European Investment Bank (EIB), Inter-American Development Bank Group (IDBG), Islamic Development Bank (IsDB), New Development Bank (NDB), and World Bank Group (WBG), “High Level MDB [Multilateral Development Bank] Statement: For Publication at the UNSG [UN Secretary General] Climate Action Summit,” September 22, 2019, <https://www.adb.org/sites/default/files/page/41117/climate-change-finance-joint-mdb-statement-2019-09-23.pdf>; Samantha Smith, *Just Transition: A Report for the OECD [Organization for Economic Cooperation and Development]* (Just Transition Centre, May 2017), <https://web.archive.org/web/20230314150908/https://www.oecd.org/environment/cc/g20-climate/collapsecontents/Just-Transition-Centre-report-just-transition.pdf>.

⁷ ILO, Record of Proceedings: Outcome of the General Discussion Committee on a Just Transition: Proposed resolution and Conclusions submitted to the Conference for Adoption, ILC.111/Record No.7A, June 15, 2023, https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_885375.pdf; Bert De Wel, “Recognition of Labour Rights Is a Major Victory for Trade Unions at COP28,” ITUC, December 22, 2023, <https://www.ituc-csi.org/Recognition-of-labour-rights-is-a-major-victory-for-trade-unions-at-COP28>.

affected. These proactive measures include eradication of poverty, regulating prosperity, and creating jobs in “green” sectors. In addition, governments, polluting industries, corporations, and those more able to pay higher associated taxes, can pay for transition costs by providing a welfare safety net and adequate compensation to people, communities, and regions that have been impacted by pollution, or are marginalized, or negatively impacted by a transition from a high- to low-carbon economy and society.⁸

This policy brief’s aims are to (i) comparatively assess developing and developed countries’ just energy transition policies against the ILO Guidelines; (ii) investigate the extent to which the ILO Guidelines address developing⁹ countries’ challenges and concerns in designing just transition policies for the energy sector, given that they are purportedly designed to serve all countries; and (iii) provide recommendations to shape further guidance on just transition policies for the energy sector from international institutions. While the ILO Guidelines are useful in general and address just transition policy areas that are especially relevant for developing countries, additional international guidance building on the ILO Guidelines is needed to support developing countries in addressing certain key facets of a just transition, particularly in the energy context. It is important to assess how international guidance can address the needs of developing countries because many developing countries face unique challenges in realizing a just energy transition, such as having lower social protection rates, energy access, and government institutional capacity; smaller public budgets; higher rates of unemployment; and institutional challenges that can exacerbate corruption risks.¹⁰ In addition, developing and developed countries have differing obligations under the UN Framework Convention on Climate Change’s (UNFCCC) principle of common but differentiated responsibilities.¹¹ This policy brief recognizes that just transition processes should be bottom-up and unique to each country context, and that some countries may choose to not follow international-level guidance. Some of the key policy areas identified will be more relevant to some developing countries than others. However, it is important for international just transition guidance that aims to serve all countries to offer a menu of options for addressing key areas that tend to be especially relevant for various developing countries.

This policy brief first compares and contrasts how developing and developed countries have approached just transition policymaking in the energy sector by examining just transition legal and policy instruments adopted in South Africa and Germany. We chose South Africa and Germany for this comparison exercise because they are developing and developed countries, respectively, that have both historically relied heavily on domestically-produced coal for their energy consumption.¹² Both are global forerunners in national-level just transition policymaking, and their laws and policies often serve as exemplars for other

⁸ Minal Pathak, Raphael Slade, Ramón Pichs-Madruga, Diana Ürge-Vorsatz, Priyadarshi R. Shukla, and Jim Skea, “Technical Summary” in *Climate Change 2022: Mitigation of Climate Change* (Cambridge University Press, 2022), 75, https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_TechnicalSummary.pdf.

⁹ While we are cognizant of the shortcomings of this terminology, we use the terms “developing” and “developed” countries because their meaning is widely understood and it is commonly used in the UN system and in international conventions and treaties, such as the Paris Agreement. For a list of developing countries, see United Nations Development Program (UNDP), *Human Development Report 2023/2024: Breaking the Gridlock – Reimagining Cooperation in a Polarized World* (New York: UNDP, March 2024), 306, <https://doi.org/10.18356/9789213588703>.

¹⁰ See [Section 4](#).

¹¹ United Nations Framework Convention on Climate Change, opened for signature May 9, 1992, entered into force March 21, 1994 (UNFCCC), Preamble, Arts. 3.1, 4.1, <https://unfccc.int/resource/docs/convkp/conveng.pdf>; Paris Agreement, adopted December 12, 2015, opened for signature April 22, 2016, entered into force November 4, 2016 (Paris Agreement), Art. 4.4, https://unfccc.int/sites/default/files/english_paris_agreement.pdf.

¹² Hannah Ritchie and Pablo Rosado, “Energy Mix,” *Our World in Data*, January 2024, <https://ourworldindata.org/energy-mix>; International Energy Agency (IEA), *Germany 2020: Energy Policy Review* (Paris: IEA, February 2020), 11, <https://www.iea.org/reports/germany-2020>; IEA, “South Africa,” IEA, *Germany 2020: Energy Policy Review* (Paris: IEA, February 2020), 11, 84, <https://www.iea.org/reports/germany-2020>.

countries in their respective regions.¹³ This analysis looks into what aspects of the ILO Guidelines are reflected in the South African and German legal and policy frameworks governing the countries' just energy transitions. We look into just energy transition policy instruments specifically, rather than comprehensively examining South Africa and Germany's legal systems holistically. One of the limitations of our approach is that key policy areas for a just energy transition may be covered in other instruments within South Africa's and Germany's legal and policy frameworks, a limitation that we acknowledge generally here as well as in specific points throughout the policy brief. However, our approach allowed us to narrow the policy brief and report's scope and isolate our focus on policies directly relevant to each country's coal transition, providing for valuable insights into national-level just transition policymaking.

Next, the policy brief presents several key just energy transition policy areas and associated challenges and assesses the extent to which the ILO Guidelines address these areas. To inform this section, the policy brief reviews relevant international just transition literature, including academic articles and reports from think tanks and advocacy organizations. The authors also conducted interviews of experts in South Africa and Germany who belong to various sectors, including government, labor unions, civil society organizations, and research institutions.¹⁴ For each of the twelve policy areas and challenges, we provide recommendations aimed at shaping future international just energy transition guidance from international institutions. There are various forms that future guidance could take—for example, it could involve creating new guidelines, amending or supplementing the existing ones, or publishing guidance from another international institution. Such future guidance can provide a menu of options for countries to adopt depending on national circumstances, without being strictly prescriptive. We have included ambitious recommendations that we find to be sound policy based on our research, while recognizing that it may be challenging to reach international consensus for some of them.

¹³ Regarding South Africa, see Kingsley Ighobor, "A Just Transition to Renewable Energy in Africa," *Africa Renewal*, October 31, 2022, <https://www.un.org/africarenewal/magazine/november-2022/just-transition-renewable-energy-%C2%A0africa>; John F. Clark, "South Africa: Africa's Reluctant and Conflicted Regional Power," *Air & Space Power Journal Africa & Francophonie* 7, no. 1 (2016): 30–47, 30, https://www.airuniversity.af.edu/Portals/10/ASPJ_French/journals_E/Volume-07_Issue-1/clark_e.pdf. Regarding Germany, see Daniel Sarmiento, "On the Road to German Hegemony in EU Law?" *Verfassungsblog* (blog), October 7, 2020, <https://verfassungsblog.de/on-the-road-to-german-hegemony-in-eu-law>; Marta Cartabia, Daniel Halberstam, Anna Sledzinska-Simon, Antoine Vauchez, and Armin von Bogdandy, "Debate: German Legal Hegemony?" *Verfassungsblog* (blog), October 23, 2020, <https://verfassungsblog.de/category/debates/german-legal-hegemony-debates>; Beyond Fossil Fuels, "Europe's Coal Exit," June 10, 2024, <https://beyondfossilfuels.org/europes-coal-exit>.

¹⁴ The authors also contacted for interview, but did not receive responses from, stakeholders from the private sector, given their role in the just transition.

2 Background on South Africa's and Germany's Just Transition Policies

In 2020, South African President Cyril Ramaphosa established the Presidential Climate Commission (PCC), an “independent, statutory, multistakeholder body” with a purpose to “oversee and facilitate a just and equitable transition towards a low-emissions and climate-resilient economy.”¹⁵ In June 2022, the PCC adopted a final Just Transition Framework¹⁶ (“South Africa’s Framework”), which was approved by the South African Cabinet in September 2022¹⁷ and is the South African policy this policy brief concentrates on. South Africa’s Framework was drafted following extensive research and a series of consultations with social partners and communities. It serves as a unifying national policy frame to guide the government’s measures on the just energy transition.¹⁸ Further, it proposes guiding principles, long-term goals, short-term action steps to be taken, as well as policies and governance arrangements to give effect to the transition.¹⁹ Importantly, it is a principle-based national framework that envisages the development of a more detailed implementation plan.²⁰ As the first steps toward actioning the national framework, the just transition investment plan (JET IP) was released in 2022,²¹ and the cabinet approved the JET IP Implementation Plan in November 2023.²²

In Germany, the most important laws governing the country’s coal phase-out include the Structural Reinforcement Act for Mining Regions (*Strukturstärkungsgesetz Kohleregionen*, StStG)²³ and the Act to Reduce and End Coal-Fired Power Generation and Amend Other Laws (*Kohleverstromungsbeendigungsgesetz*, KVBG)²⁴ (“coal exit laws”), which are the German laws this policy brief focuses on. The KVBG established the procedures for phasing out coal in Germany starting in 2020 in a gradual and “socially acceptable manner” that safeguards electricity access.²⁵ It also outlines compensation for coal companies and establishes an adjustment allowance for coal power plant and open-cast mine workers aged 58 and older who lose their jobs as a result of the phase-out.²⁶ The StStG seeks to deal with the socioeconomic impacts of the coal phaseout by apportioning federal funds to Germany’s lignite regions, thereby promoting economic growth and job creation. The StStG has two main pillars: the state funding program and the federal funding program.

¹⁵ “About Us,” Presidential Climate Commission (PCC), <https://www.climatecommission.org.za/about>; Cynthia Elliott, Clea Schumer, Rebecca Gasper, Katie Ross, and Neelam Singh, “South Africa Establishes an Inclusive Process Toward a Just Transition, with Broad Stakeholder Engagement,” *World Resources Institute*, March 6, 2024, <https://wri.org/update/south-africa-establishes-inclusive-process-toward-just-transition-broad-stakeholder>.

¹⁶ PCC, *A Framework for a Just Transition in South Africa* (June 2022) (South African Just Transition Framework), <https://pcccommissionflo.imgix.net/uploads/documents/A-Just-Transition-Framework-for-South-Africa-with-dedication-FSP-002.pdf>.

¹⁷ PCC, “PCC Welcomes the Adoption of Just Transition Framework,” media release, September 2, 2022, <https://www.climatecommission.org.za/news-and-insights/media-release-pcc-welcomes-adoption-of-just-transition-framework>.

¹⁸ South African Just Transition Framework, 5.

¹⁹ South African Just Transition Framework, 2, 26; “Just Transition Framework,” PCC, <https://www.climatecommission.org.za/just-transition-framework>.

²⁰ South African Just Transition Framework, 5.

²¹ Republic of South Africa, *South Africa’s Just Energy Transition Investment Plan (JET IP) for the Initial Period 2023–2027*, November 2022, <https://pcccommissionflo.imgix.net/uploads/images/South-Africas-Just-Energy-Transition-Investment-Plan-JET-IP-2023-2027-FINAL.pdf>.

²² Republic of South Africa, *Just Energy Transition Implementation Plan 2023–2027*, <https://www.stateofthenation.gov.za/assets/downloads/JET%20Implementation%20Plan%202023-2027.pdf>; Republic of South Africa, “Statement on the Cabinet Meeting of 16 November 2023,” South African Government, November 20, 2023, <https://www.gov.za/news/cabinet-statements/statement-cabinet-meeting-16-november-2023%C2%A0-20-nov-2023>.

²³ Federal Republic of Germany, Structural Reinforcement Act for Mining Regions, BGBl I, 1795, August 8, 2020 (StStG), <https://www.bmbf.de/SharedDocs/Downloads/files/strukturstärkungsgesetz-kohleregionen.pdf>.

²⁴ Federal Republic of Germany, Act to Reduce and End Coal-Fired Power Generation and Amend Other Laws, BGBl I, 1818, August 8, 2020 (KVBG), <https://www.gesetze-im-internet.de/kvbg/BJNR181810020.html>.

²⁵ KVBG, §§ 1.1, 2.1.

²⁶ KVBG, § 57.

3 Assessment of South Africa's Just Transition Framework and Germany's Coal Exit Laws Against the ILO Guidelines

The following dashboard summarizes the full report's comparison of South Africa's Just Transition Framework and Germany's coal exit laws with the ILO's Just Transition Guidelines, through assessing the degree to which each country has integrated the ILO Guidelines into their national policy instruments. The full report's in-depth comparison and analysis of primary sources is useful for understanding the extent to which the ILO's just transition recommendations appear to have been reflected in relevant national-level policies. There is significant overlap between the ILO Guidelines, on the one hand, and South Africa's Framework and Germany's coal exit laws, on the other, but there are also various instances in which the ILO Guidelines' policy recommendations are not directly reflected in the national policies analyzed. This comparison helps reveal what policy issues are especially relevant for just energy transitions in different country contexts.

Legend	
Alignment of the domestic policies with the ILO Guideline	Color code
High (domestic policy mostly or completely aligns with the ILO Guideline, or surpasses it)	
Moderate (domestic policy partly aligns with the ILO Guideline)	
Low (domestic policy does not address the ILO Guideline)	

Guideline category	Subcategory	Summary of guideline	South African Framework	German Coal Exit Laws
Guiding principles [Sect. 3.1]	N/A	Make social dialogue a major part of policymaking and implementation (¶ 13(a)).	High	High
		Promote fundamental principles and rights at work (¶ 13(b)).	Moderate	Low
		Account for gender in environmental policies and promote equity (¶ 13(c)).	High	Low
		Adopt coherent policies that enable the just transition (¶ 13(d)).	High	High
		Coherent policies should provide a just transition framework (¶ 13(e)).	High	High
		Design policies in light of the specific conditions of countries (¶ 13(f)).	High	High
		Cooperate internationally on implementing sustainable strategies (¶ 13(g)).	Moderate	Low
Policy coherence and institutional arrangements [Sect. 3.2]	Just transition policies should be deliberately managed and coherent vis-à-vis related policy areas [Sect. 3.2.1]	Integrate just transition provisions into national sustainable development plans (¶ 15(c)).	High	Moderate
		Integrate just transition provisions into line ministries' agendas (¶ 15(d)).	High	High

Guideline category	Subcategory	Summary of guideline	South African Framework	German Coal Exit Laws
		Encourage ministries to collaborate and establish adaptable policies (¶ 15(e)).	High	High
		Strengthen capacity of local and regional governments (¶ 15(f)).	Moderate	Moderate
	Governments should adopt practices that would enable them to execute their just transitions more effectively [Sect. 3.2.2]	Provide stable policy signals based on social dialogue and a regulatory framework (¶ 15(a)).	Moderate	High
		Give social partners opportunities to participate at all stages of policymaking (¶ 15(g)).	High	High
		Increase labor market data and assess ex ante environmental policy impacts (¶ 15(h)).	Moderate	Moderate
		Research potential impacts of economic and social policies (¶ 15(i)).	Moderate	High
		Bring together governments, employees' and workers' organizations to make enabling policies (¶ 15(j)).	Moderate	Moderate
	Guidance for both governments and social partners [Sect. 3.2.3]	Conclude agreements with social partners for implementing policies (¶ 16(a)).	High	High
		Mobilize funding and support, including through Decent Work Country Programmes (¶ 16(b)).	Moderate	Low
		Share best practices with social partners on macroeconomic and social policies (¶ 16(c)).	Low	Moderate
		Analyze potential policy impacts to inform policy choices (¶ 16(d)).	Low	Low
		Encourage international cooperation for assistance and capacity building on sustainable development goals (SDGs) (¶ 16(e)(i)).	High	Low
		Promote [South-South] cooperation in agriculture, renewables, conservation, reforestation (¶ 16(e)(ii)).	Low	Moderate
		Promote cooperation with social partners at the national level (¶ 16(e)(iii)).	High	High
		Promote cooperation at the industry level (¶ 16(e)(iv)).	High	High
		Promote cooperation in sustainable development at the local level (¶ 16(e)(v)).	High	High
		Promote cooperation at the enterprise level (¶ 16(e)(vi)).	Moderate	Moderate
	Guidance pertaining to international issues [N/A]	Promote international labor standards relevant to the just transition (¶ 15(b)).	Low	Low

Guideline category	Subcategory	Summary of guideline	South African Framework	German Coal Exit Laws
Social dialogue and tripartism [Sect. 3.3]	N/A	Promote and engage in social dialogue at all policymaking stages (¶ 17(a)).	High	High
		Formalize dialogue mechanisms at all levels (¶ 17(b)).	Moderate	High
		(For social partners) Guide and raise awareness among members (¶ 18(a)).	Moderate	Low
		(For social partners) Play active role in national sustainable development policymaking (¶ 18(b)).	Moderate	High
		(For social partners) Encourage members to participate in social dialogue (¶ 18(c)).	Low	Low
		(For social partners) Use collective bargaining to promote environmental provisions (¶ 18(d)).	Low	Moderate
		Foster social dialogue at the sectoral level to increase social acceptance of policies (¶ 20(b)).	High	High
Macro-economic and growth policies [Sect. 3.4]	Governments should integrate sustainable development and just transition goals into macroeconomic and growth policies [Sect. 3.4.1]	Integrate the just transition framework into macroeconomic policies (¶ 19(a)(i)).	High	Moderate
		Adopt macroeconomic policies that promote sustainable production and consumption (¶ 19(a)(ii)).	Moderate	High
		Use incentive schemes to encourage sustainable enterprise innovation (¶ 19(a)(iii)).	Moderate	High
	Governments should adopt measures that would allow them to align economic growth with their social and environmental objectives [Sect. 3.4.2]	Incorporate sustainable macroeconomic policies into national development plans (¶ 19(b)(i)).	High	Moderate
		Adopt action plans with stable social and environmental targets (¶ 19(b)(ii)).	High	High
	Governments should adopt appropriate regulations and instruments [Sect. 3.4.3]	Adopt appropriate instruments and monitor and evaluate government measures (¶ 19(c)(iii)).	High	High
		Use targeted fiscal policy measures, market-based instruments, and public procurement (¶ 19(c)(iv)).	High	Moderate
		Monitor regulatory compliance and facilitate it through tailored guidance (¶ 19(c)(v)).	Moderate	Moderate
		Use public procurement to incentivize sustainability and social inclusion (¶ 19(d)(iii)).	Low	Low
	Governments should use trade policies to promote specific ends [Sect. 3.4.4]	Use trade policies to increase green technology, industry, and innovation (¶ 19(e)(i)).	Moderate	Moderate
Financing a just transition	N/A	Articulate long term financing needs and establish a sustainable funding mechanism (¶ 19(b)(iii)).	High	High

Guideline category	Subcategory	Summary of guideline	South African Framework	German Coal Exit Laws
[Sect. 3.5]		Determine the right mix of taxes, subsidies, incentives, guaranteed prices, and loans (¶ 19(c)(i)).	High	Moderate
		Consider an environmental tax to compensate those disproportionately impacted (¶ 19(c)(ii)).	Moderate	Low
Investment-related policies [Sect. 3.6]	Guidelines pertaining to both public and private investment [Sect. 3.6.1]	Improve policy effectiveness through investment policies (¶ 19(c)(iv)).	High	Moderate
		Use investment policies to increase green technology, industry, and innovation (¶ 19(e)(i)).	Moderate	Moderate
	Governments should invest public funds toward transforming the economy into becoming more sustainable. [Sect. 3.6.2]	Invest public funds to develop green infrastructure, rehabilitate nature, and improve resilience (¶ 19(d)(i)).	Moderate	High
	Governments should support markets in sectors linked to decarbonization [Sect. 3.6.3]	Establish incentives, mandates, and regulations to encourage the green market (¶ 20(c)).	High	High
Industrial and sectoral policies [Sect. 3.7]	Recommendations for sectoral policymaking in general [Sect. 3.7.1]	Design sectoral policies in line with the conditions of each sector (¶ 20(a)).	Moderate	High
		Use policy instruments for markets creation in a transparent and predictable manner and ensure effective use of public resources (¶ 20(d)).	High	High
		Pay special attention to those who might experience the hardest transition impacts (¶ 20(e)).	High	High
	Governments should set goals to improve sectors' sustainability and innovation [Sect. 3.7.2]	Set goals for improving the sustainability of sectors and design tailored sectoral policies (¶ 20(a)).	High	Moderate
		Encourage innovation (¶ 20(d)).	High	High
	Sectoral policy recommendations that aim to minimize risks of the energy transition and climate change [Sect. 3.7.3]	Facilitate work formalization and promote decent work, especially in waste management (¶ 20(f)).	Moderate	Low
		Address OSH impacts of informal work in green activities and facilitate formalization (¶ 27(c)).	Low	Low
		Establish targeted programs to increase work formalization (¶ 21(h)).	Moderate	Low
	Guidance pertaining to international issues [N/A]	Ratify and implement international labor standards (¶ 20(h)).	Low	Low

Guideline category	Subcategory	Summary of guideline	South African Framework	German Coal Exit Laws
Enterprise policies [Sect. 3.8]	Governments should survey their overall governance and regulatory environment to ensure it is amenable to sustainable business [Sect. 3.8.1]	Provide for a policy environment that enable sustainable enterprises to thrive (¶ 21(a)).	Moderate	Moderate
	Governments should work with businesses and other stakeholders to promote climate adaptation and mitigation. [Sect. 3.8.2]	Enhance resilience of businesses and micro, small, and medium enterprises (MSMEs) (¶ 21(c)).	Moderate	Moderate
		Develop with stakeholders national climate mitigation and adaptation plans (¶ 21(d)).	High	Moderate
	Governments should take measures to encourage and assist businesses with increasing the sustainability of their operations, goods, and services [Sect. 3.8.3]	Provide financial incentives for businesses to adopt environmentally sound practices (¶ 21(f)).	Moderate	High
		Use public procurement and local content requirements to promote sustainability (¶ 21(g)).	Low	Low
		Raise awareness among green technology startups to foster a culture of eco-entrepreneurship and provide technical support (¶ 22(b)).	Moderate	Moderate
		Assist management and workers in reducing the emissions of their businesses (¶ 22(c)).	Moderate	Moderate
		Support enterprises doing green technology research and development (¶ 23(b)).	Low	Moderate
		Promote institutionalized workplace cooperation to improve enterprise sustainability (¶ 23(d)).	Low	Low
		Push enterprises to adopt long term sustainable policies; engage workers, governments (¶ 23(e)).	Moderate	Moderate
		Foster enterprise peer learning to spread sustainable practices (¶ 25(e)).	Moderate	Moderate
	Governments should support businesses in complying with environmental or climate-related regulations [Sect. 3.8.4]	Reform fiscal and tax policies to enhance compliance with environmental taxes (¶ 21(b)).	Low	Low
		Help enterprises establish their own environmental management and compliance systems (¶ 22(b)).	Low	Low
		Inform and advise businesses on green practices/innovation and regulatory compliance (¶ 22(a)).	Moderate	Moderate
	Governments should support enterprises that may be negatively impacted by the energy transition [Sect. 3.8.5]	Pay special attention to assisting MSMEs in the transition (¶ 21(e)).	High	High
		Consider support measures for enterprises and workers affected by the transition (¶ 23(c)).	High	High

Guideline category	Subcategory	Summary of guideline	South African Framework	German Coal Exit Laws
Skills development policies [Sect. 3.9]	Guidelines regarding the development of skills development policies themselves [Sect. 3.9.1]	Coordinate skills development policies with environmental policies (¶ 24(b)).	High	Moderate
		Match supply and demand for skills (¶ 24(c)).	High	Moderate
		Prioritize anticipating evolving skills needs and aligning occupational skills profiles (¶ 24(d)).	Moderate	Low
		Use social dialogue to make labor market/training institutions responsive, collaborative (¶ 25(a)).	Moderate	Moderate
		Formulate holistic skills development policies for green jobs; create skills certifications (¶ 25(d)).	High	Moderate
	Guidelines regarding the substance of training programs [Sect. 3.9.2]	Provide training opportunities in green business practices and technology (¶ 23(a)).	High	Moderate
		Ensure skills development policies support training, capacity building, and curricula (¶ 24(a)).	High	High
		Encourage acquisition of both generic and science, technology, engineering, and mathematics (STEM) skills (¶ 24(e)).	Moderate	High
		Promote practical work-related experience in the training process to boost employability (¶ 25(c)).	High	High
		Provide green entrepreneurship training to spread sustainable business practices (¶ 25(e)).	Moderate	Moderate
		Support tailored courses linked to specific jobs in the green economy (¶ 29(d)).	High	Moderate
		Adopt active labor market policies to improve workers' skills and employability (¶ 29(g)).	Moderate	Moderate
	Governments should improve the accessibility and inclusivity of skills development programs, especially for vulnerable groups [Sect. 3.9.3]	Promote equal access to skills acquisition opportunities among marginalized groups (¶ 25(b)).	Moderate	Moderate
		Help businesses engage with governments and training providers on skills upgrading (¶ 25(f)).	Moderate	Moderate
Occupational safety and health (OSH) policies [Sect. 3.10]	Governments should establish a baseline of OSH and labor policies [Sect. 3.10.1]	Adopt and implement OSH standards and enhance capacity for monitoring compliance (¶ 26(c)).	Low	Low
		Encourage the use of prevention, protection, and safety processes (¶ 26(f)).	Low	Low
		Promote joint workers' and employers' OSH committees (¶ 26(h)).	Low	Low
		Regulate/incentivize companies to reduce hazardous materials in supply chains (¶ 26(i)).	Low	Low

Guideline category	Subcategory	Summary of guideline	South African Framework	German Coal Exit Laws
	Governments should improve their understanding of how climate change and just transition-related measures and policies could impact workers' OSH and take steps to adapt to such changes [Sect. 3.10.2]	Assess new OSH risks created by climate change and identify protection measures (¶ 26(a)).	Low	Moderate
		Improve OSH standards for technologies, processes, and materials for the transition (¶ 26(b)).	Low	Moderate
		Support research to better understand OSH risks of new technologies and jobs (¶ 26(g)).	Low	Moderate
		Introduce environmental issues to joint workers' and employers' OSH committees (¶ 26(h)).	Low	Low
		Require companies mitigate negative impacts of products throughout their life cycle (¶ 26(j)).	Low	Low
		Include OSH aspects in sustainability certification programs (¶ 27(a)).	Low	Low
		Promote OSH training in green jobs (¶ 27(b)).	Low	Low
	Recommendations concerning policy coherence and institutional arrangements [Sect. 3.10.3]	Improve OSH policy coherence and cooperation among agencies on regulation (¶ 26(d)).	Low	Low
		Formulate policies to provide protection against risks of major industrial accidents (¶ 26(e)).	Low	Low
		Strengthen national and subnational government capacities to enforce laws concerning imminent threats of major accidents or risks (¶ 26(f)).	Low	Low
Social protection policies [Sect. 3.11]	Governments should increase peoples' resilience against climate and transition impacts by adopting general social protection policies [Sect. 3.11.1]	Formulate workforce redeployment policies to support enterprises and workers negatively impacted by the transition (¶ 20(g)).	High	High
		Promote social protection, including healthcare, income security, and social services (¶ 28(a)).	High	Moderate
		Promote innovative social protection mechanisms to offset climate and transition challenges (¶ 28(c)).	Moderate	Moderate
		Use unemployment guarantee schemes and public works (¶ 28(d)).	High	Moderate
		Promoting adequate and innovative social protection mechanisms that both protect existing benefits and account for emerging social needs. (¶ 28(h)).	Moderate	Moderate
		Support public works programs and public employment programs, including for laid off workers (¶ 29(f)).	High	Moderate
		Formulate unemployment insurance and skills training for workers in sectors negatively impacted by the transition (¶ 20(g)).	High	High
		Integrate social protection into energy transition measures, especially for affected workers (¶ 28(b)).	High	High
		Use public insurance for those impacted by environmental disasters (e.g., farmers, MSMEs) (¶ 28(g)).	Moderate	Low

Guideline category	Subcategory	Summary of guideline	South African Framework	German Coal Exit Laws
	Governments should increase peoples' resilience against climate and transition impacts by adopting specific social protection mechanisms tailored to certain impacted groups [Sect. 3.11.2]	Consider compensating low income households for potentially higher energy expenses (¶ 28(i)).	Low	Low
	Guidance regarding how social protection policies should be formulated [Sect. 3.11.3]	Direct fiscal revenue toward social protection and active labor market policies (¶ 19(d)(ii)).	High	High
		Integrate social protection measures into national climate change responses (¶ 28(e)).	High	Moderate
		Foster tripartite mechanisms to identify challenges and formulate social protection measures (¶ 28(h)).	Moderate	Moderate
	Guidance pertaining to international issues [N/A]	Coordinate bilaterally on social protection in cases of cross border displacement (¶ 28(f)).	Moderate	Moderate
Active labor market policies [Sect. 3.12]	N/A	Encourage sound labor market policies to help enterprises and workers in the transition (¶ 29(a)).	High	High
		Give particular attention to unemployed workers at risk of unemployment (¶ 29(b)).	High	High
		Promote effective and responsive employment services; extend outreach to informal workers (¶ 29(c)).	High	Moderate
		Strengthen public employment services to become agents for the energy transition providing information, guidance, matching services, and training (¶ 29(e)).	Moderate	Moderate

4 The Extent to Which the ILO Guidelines Address Key Energy Transition Policy Areas and Challenges Facing Developing Countries

This section examines the extent to which the ILO Guidelines address twelve key just energy transition policy areas and unique challenges faced by developing countries that we identified based on our research. These policy areas (in no particular order of priority) are:

1. Government institutional capacity and corruption
2. Affected groups' participation in policymaking
3. Decent employment
4. Green industry and economic diversification
5. Social protection
6. Skills development and training
7. Effective phase-out of fossil fuel production, use, and subsidies
8. International equity and cooperation
9. Human rights
10. Access to affordable and sustainable energy
11. Adequate finance
12. Environmental remediation

This policy brief also proposes recommendations for how future international guidance on a just transition could build on the ILO Guidelines and expand them to better serve developing countries across the 12 policy areas. Though the ILO Guidelines may not have set out to provide highly detailed guidance,²⁷ this policy brief includes various recommendations for future guidance to be more detailed and ambitious and to more thoroughly address specific issues falling under the key policy areas.

As there are some key policy areas and challenges that the ILO Guidelines do not fully address, to some extent these gaps are filled by the ILO's Just Transition Policy Briefs, which were prepared by ILO staffers and published as supplements to the Just Transition Guidelines.²⁸ Though designed and potentially useful for that purpose, the policy briefs are not a replacement for amending the Guidelines, which, unlike the policy briefs, were formally adopted by representatives from governments and workers' and employers' organizations. The international tripartite consensus and participatory decision-making process that went into the development of the Guidelines make them more influential and authoritative as international soft-law guidance compared with the policy briefs, prepared internally by ILO staffers, even if with some degree of consultation with other stakeholders. The more authoritative guidance is, the more likely it is to potentially influence national-level policymaking, multilateral climate negotiations, and other forms of international cooperation on climate change. Therefore, even though additional policy briefs could work as a compromise in view of the political challenges of formally amending the ILO Guidelines, amending the ILO Guidelines or otherwise supplementing them would carry greater weight than publishing additional policy briefs. Similarly, we

²⁷ The ILO Guidelines' goal is to provide for governments and social partners a "tool to support a just transition," "practical orientation," and "some specific options on how to formulate, implement and monitor the policy framework". ILO Guidelines, 3; Lene Olsen and Claire La Hovary, *User's Manual to the ILO's Guidelines for a Just Transition Towards Environmentally Sustainable Economies and Societies for All* (Geneva: ILO, 2021), 9–10, https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed_dialogue/@actrav/documents/publication/wcms_826060.pdf.

²⁸ Between October 2022 and September 2023, while research for this policy brief and the full report was ongoing, the ILO published 12 policy briefs as supplements to the ILO Guidelines. This section of the policy brief draws on those briefs to the extent they respond to the specific issues raised here. However, the scope of this policy brief and the report are the ILO Guidelines themselves, and as such they do not analyze the policy briefs exhaustively. The policy briefs can be found at <https://www.ilo.org>, and the links to each brief are in Appendix A of the full report. The following article also discusses some similar issues as this policy brief—namely, distinct challenges faced by middle income countries in achieving just transitions and recommended paths forward. Adriana Abdenur, "What Does Just Transition Mean for Middle Income Countries," United Nations, <https://www.un.org/en/climatechange/what-does-just-transition-mean-middle-income-countries>.

encourage other international institutions to develop just transition guidance through participatory processes involving a range of stakeholders, as such processes make it more likely that the resulting guidance will address the issues that are most important in practice.

4.1 Government Institutional Capacity and Corruption

Governments' institutional capacities "to plan, implement and monitor just transition measures" is an overarching consideration that affects their abilities to achieve policy goals, such as those related to job creation and social protection.²⁹ In addition, inadequate institutional capacity and governance challenges can pose obstacles for achieving just transitions in developing countries.³⁰ While the ILO Guidelines acknowledge areas of government institutional capacity that should be strengthened to achieve a just transition,³¹ they do not provide detailed guidance on how developing countries can accomplish such institutional capacity growth goals. To be even more useful for developing countries, international just transition guidance should go beyond acknowledging the issue of institutional capacity by identifying research needs and providing guidance on how countries facing governance challenges can achieve a just transition, including identifying the forms of technical and financial assistance are available, and whether developed countries have an obligation to provide such assistance.

Corruption can also pose a challenge for achieving just transitions in both developing and developed countries, although it can take different forms.³² The ILO Guidelines do not refer to corruption as a barrier to a just transition. However, they do refer to the 2007 International Labour Conference Conclusions, which encourage anti-corruption measures, and call for "an enabling environment for enterprises, workers, investors and consumers to embrace and drive the transition towards environmentally sustainable and inclusive economies and societies."³³ Additional international just transition guidance should lay out the challenge of corruption more explicitly to reflect the critical and central nature of this issue. Based on additional investigation, it should provide guidance on how countries can achieve a just transition in the context of widespread government corruption.

4.2 Participation of Affected Groups in Policymaking

A key component of just transitions is genuine participation and engagement by affected communities in formulating and implementing policies, programs, and initiatives.³⁴ Ensuring genuine engagement not only allows for a procedurally just transition,

²⁹ Catherine Saget, Trang Luu, and Tahmina Karimova, "A Just Transition Towards Environmental Sustainability for All" in *The Palgrave Handbook on Environmental Labour Studies*, eds. Nora Räthzel, Dimitris Stevis, and David Uzzell (Cham, Switzerland: Palgrave Macmillan, 2021), 487, <https://doi.org/10.1007/978-3-030-71909-8>.

³⁰ "Breaking Down Barriers to Clean Energy Transition," *The World Bank Group*, May 16, 2023, <https://www.worldbank.org/en/news/feature/2023/05/16/breaking-down-barriers-to-clean-energy-transition>; Clara Galeazzi, Jevgenijs Steinbuks, and Laura Diaz Anadon, "Is the Gap Widening? Assessing the Current Renewable Energy Policies in Developing Countries," *World Bank Blogs*, June 1, 2023, <https://blogs.worldbank.org/en/energy/gap-widening-assessing-current-renewable-energy-policies-developing-countries>.

³¹ ILO Guidelines, ¶¶ 15(f), 21(a), 26(f).

³² David Aled Williams, *Greening Energy: An Anti-Corruption Primer*, ed. Sophie Lemaître (Bergen, Norway: Chr. Michelsen Institute, November 14, 2022), 2, <https://www.cmi.no/publications/8548-greening-energy-an-anti-corruption-primer>; Kaunain Rahman, *Anti-corruption in the Renewable Energy Sector*, U4 Helpdesk Answer no. 21, (U4, October 16, 2020), <https://www.u4.no/publications/anti-corruption-in-the-renewable-energy-sector#background>; G20 Anti-Corruption Working Group, *Background Note on Mitigating Corruption Risks in Renewable Energy* (G20 Indonesia, 2022), 3, https://www.unodc.org/documents/corruption/G20-Anti-Corruption-Resources/Thematic-Areas/Sectors/2022_Background_Note_on_Mitigating_Corruption_Risk_in_Renewable_Energy_adopted.pdf. See generally Dieter Zinnbauer and Stephanie Trapnell, *Race to Renewables: Tackling Corruption and Integrity Risks in the Renewables Sector* (Oslo: Extractive Industries Transparency Initiative, November 2023), https://eiti.org/sites/default/files/2023-11/EITI_Report_Race%20to%20renewables.pdf.

³³ International Labour Conference, *Conclusions Concerning the Promotion of Sustainable Enterprises* (Geneva: ILO, June 2007) (2007 ILC Conclusions), <https://www.ilo.org/media/366701/download>; ILO Guidelines, ¶ 13(d).

³⁴ Eyene Okpanachi, Terhembra Ambe-Uva, and Anas Fassih, "Energy Regime Reconfiguration and Just Transitions in the Global South: Lessons for West Africa from Morocco's Comparative Experience," *Futures* 139, no. 102934 (May 2022): 10, <https://doi.org/10.1016/j.futures.2022.102934>.

but also for communities to have and feel a sense of ownership over policies, thereby instilling interest and trust in the energy transition as well as achieving both actual and perceived energy justice.³⁵ It is important that, at a minimum, government engagement has a genuine purpose of determining communities' interests and incorporating them into policies. Successful engagement also requires promoting education and awareness among communities of energy issues and potential impacts of energy transition measures, as well as mobilizing people to actively learn, participate, and take the lead at every stage of the transition.³⁶ Governments should also ensure frontline communities are prioritized in such engagements.³⁷

In developing countries' energy transitions, development partners—such as regional bodies, international financial institutions, and businesses—often play especially large roles.³⁸ Achieving procedural justice requires ensuring governments prioritize the decision-making autonomy and agency of directly impacted communities over the interests of such international development partners and investors.³⁹ Developing countries also must deal with challenges to participation including higher rates of informal work and a lack of infrastructure and connectivity, especially in rural areas.⁴⁰

The ILO Guidelines have a strong focus on engagement, participation, and achieving social consensus. Their heavy emphasis on social dialogue⁴¹ tends to privilege social partners—representatives of employers and workers organizations—not informal workers or other affected people.⁴² They also do not address the tension involved in countries being accountable to both international development partners and directly impacted communities, or challenges related to allocating sufficient time to consultations and rural connectivity. Future international just transition guidance should look into how governments can ensure that all affected communities, including traditional communities and informal workers, are consulted adequately at every stage of just transition policymaking and implementation, while preventing their voices from being overshadowed by investors, development partners, and other more powerful stakeholders. Guidance should also advise on how countries can ensure the quality of consultations and overcome specific challenges, such as a lack of rural connectivity and access to venues.

4.3 Decent Employment

Energy transitions are causing and will cause job losses all along fossil fuel supply chains, as well as cause labor disruptions for surrounding communities.⁴³ At the same time, the energy transition is expected to lead—and is already leading⁴⁴—to the creation of new jobs in renewable energy and other sustainable sectors.⁴⁵ A key component of a just transition is to safeguard existing employment to the extent possible and create new jobs that are of equal or better quality as fossil fuel jobs and that are located in

³⁵ Maria Mercedes Vanegas Cantarero, “Of Renewable Energy, Energy Democracy, and Sustainable Development: A Roadmap to Accelerate the Energy Transition in Developing Countries,” *Energy Research & Social Science* 70, no. 101716 (2020): 11, <https://doi.org/10.1016/j.erss.2020.101716>; Sanya Carley and David M. Konisky, “The Justice and Equity Implications of the Clean Energy Transition,” *Nature Energy* 5 (June 12, 2020): 569–577, 574, <http://dx.doi.org/10.1038/s41560-020-0641-6>.

³⁶ Carley and Konisky, “Justice and Equity Implications,” 573; Okpanachi, Ambe-Uva, and Fassih, “Energy Regime Reconfiguration,” 9.

³⁷ Zoom interviews with anonymous expert interviewees (July 14, 2023, and June 20, 2023).

³⁸ Okpanachi, Ambe-Uva, and Fassih, “Energy Regime Reconfiguration,” 8–9.

³⁹ Okpanachi, Ambe-Uva, and Fassih, “Energy Regime Reconfiguration,” 9–10.

⁴⁰ Zoom interviews with anonymous expert interviewees (June 12, 2023).

⁴¹ Igor Guardiancich, Rainer Pritzer, Camilla Roman, Monica Castillo, and Moustapha Kamal Gueye, *Just Transition Policy Brief: The Role of Social Dialogue and Tripartism in a Just Transition Towards Environmentally Sustainable Economies and Societies for All* (Geneva: ILO, August 2022), 3, <https://www.ilo.org/publications/role-social-dialogue-and-tripartism-just-transition-towards-environmentally>; ILO Guidelines, ¶ 13(a).

⁴² International Labour Office, *Social Dialogue*, 5; Konstantinos Papadakis, “Social Dialogue at the Dawn of the ILOs Centenary: Sorting Out Challenges, Setting Priorities for the Future” in *The Governance of Labour Administration*, eds. Jason Heyes and Ludek Rychly (Cheltenham and Northampton, United Kingdom: Edward Elgar, November 2021), 48, <https://doi.org/10.4337/9781802203158.00010>.

⁴³ Carley and Konisky, “Justice and Equity Implications,” 571.

⁴⁴ International Renewable Energy Agency (IRENA), “Renewable Energy Jobs Hit 12.7 Million Globally,” press release, September 22, 2022, <https://www.irena.org/News/pressreleases/2022/Sep/Renewable-Energy-Jobs-Hit-12-7-Million-Globally>.

⁴⁵ ILO, “The Just Ecological Transition: An ILO solution for creating 100 million jobs by 2030,” news release, May 24, 2022, https://www.ilo.org/global/topics/green-jobs/news/WCMS_846279/lang-en/index.htm; Carley and Konisky, “Justice and Equity Implications,” 572.

the same geographic areas. Developing countries are confronted with the added challenges of higher preexisting rates of unemployment and higher rates of informal work.⁴⁶

The ILO Guidelines address the need to promote decent employment as well as some of the challenges created by widespread informal work.⁴⁷ However, they do not address how active labor market policies may be more challenging to implement in a developing country context. They also do not address the challenge of promoting decent employment in a context with preexisting high unemployment rates. To be even more useful for developing countries, additional international policy guidance for a just transition should explicitly address how countries grappling with high rates of unemployment and informal work can ensure decent employment during the energy transition and beyond.

4.4 Green Industry and Economic Diversification

A just transition requires promoting sustainable industries and diversifying economies to create sustainable, low-carbon jobs.⁴⁸ Achieving economic diversification and growth in green industries will look different in developing countries as compared to developed countries. Developed countries have advantages in their ability to profit from the energy transition by producing internationally competitive technologies.⁴⁹ In contrast, many developing countries have smaller and less-resilient economic infrastructure, and their economies are often dependent on extractive and low value-added export-oriented industries.⁵⁰ Achieving economic growth and diversification in developing countries will require industrial policies that allow them to “produce and retain most of the value-added content of manufactured goods.”⁵¹ Such policies are important for growing green industry and generating revenue needed to fund just transition policies, such as social protection.

Given these differences between developing and developed countries, there is a risk that developed countries will monopolize high value-added green sectors while sidelining developing countries as sources of low value added raw materials, especially critical minerals.⁵² The transition from emission-intensive industries to low-carbon ones will cause a relative increase in the proportion of high-skilled jobs, but such reallocation is likely to strongly favor developed countries, which are in the strongest position to protect and invest in their infant green industries. Already the United States and European Union have advanced major green industrial

⁴⁶ Mauro Pucheta and Ana Belén Sánchez, *Just Transition in the Global South: Perspectives from Latin America* (Brussels: European Trade Union Institute, July 2022), 3, <https://ssrn.com/abstract=4243526>; ILO, *A Global Employment Divide: Low-income Countries Will Be Left Further Behind Without Action on Jobs and Social Protection* (Geneva: ILO, May 31, 2023), 4, https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/briefingnote/wcms_883341.pdf; “Tackling Vulnerability in the Informal Economy - Most Workers in the World Still Go Without Social Protection,” OECD, June 9, 2021, <https://web.archive.oecd.org/2021-06-10/538330-tackling-vulnerability-informal-economy-workers-still-without-social-protection.htm>.

⁴⁷ ILO Guidelines, ¶¶ 13(e), 20(f), 21(h), 19(a)(i)–(iii), 19(e)(i), 27(c), 29(b)–(c).

⁴⁸ Carley and Konisky, “Justice and Equity Implications,” 571.

⁴⁹ Ajay Gambhir, Fergus Green, and Peter J. G. Pearson, *Towards a Just and Equitable Low-Carbon Energy Transition*, Briefing Paper No. 26 (Imperial College London, Grantham Institute, August 2018), 6, <https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/publications/briefing-papers/26.-Towards-a-just-and-equitable-low-carbon-energy-transition.pdf>.

⁵⁰ Youba Sokona, Yacob Mulugetta, Meron Tesfamichael, Fadhel Kaboub, Niclas Hällström, Matthew Stilwell, Mohamed Adow, and Colin Besaans, *Just Transition: A Climate, Energy and Development Vision for Africa* (Independent Expert Group on Just Transition and Development, 2023), 30, https://justtransitionafrica.org/wp-content/uploads/2023/05/Just-Transition-Africa-report-ENG_single-pages.pdf; Pedro Alarcon, Nadia Catalina Combariza Diaz, Julia Schwab, and Stefan Peters, *Policy Brief: Rethinking ‘Just Transition’: Critical Reflections for the Global South*, Policy Brief No. 01-2022 (Berlin: Transnational Centre for Just Transitions in Energy, Climate and Sustainability – TRAJECTS, August 2022), 8, <https://trajects.org/resource-library/item/81>; Pucheta and Sánchez, *Just Transition in the Global South*, 2 (noting Latin American countries’ economies have a high dependence on natural resources for the production of commodities and that they increasingly rely on resource extraction for their economic development, including cattle ranches, gas, oil, and mining activities); Monkogoi Otlhogile and Rebekah Shirley, “The Evolving Just Transition: Definitions, Context, and Practical Insights for Africa,” *Environmental Research: Infrastructure and Sustainability* 3, no. 013001 (February 2023): 6, <https://doi.org/10.1088/2634-4505/ac9a69> (noting “African economies are largely undiversified, depending predominantly on agriculture, a climate-dependent, primary-commodity, export-oriented industry limited in local value-addition”).

⁵¹ Sokona et al., *Just Transition*, 30.

⁵² Sokona et al., *Just Transition*, 6.

policies, including the Inflation Reduction Act and Green Deal Industrial Plan, respectively.⁵³ A just transition in developing countries necessitates preventing the recreation of relationships developing countries have had with developed countries under the fossil fuel-based economy, where developing countries are used as resource banks for industries that provide little to no benefit for local communities.⁵⁴

The ILO Guidelines provide several recommendations related to economic diversification and green industry that are relevant to developing and developed countries alike.⁵⁵ They also recommend several policy tools that match those that developing countries have already implemented as part of their energy transitions.⁵⁶ However, the Guidelines do not address all of the specific challenges that developing countries face in moving from extractivist, export-oriented economies to diversified low-carbon ones. They also do not address the above-noted risk that structural global injustices will be recreated in the green economy. Moving forward, international institutions producing additional policy guidance for a just transition should address how developing countries can design and implement green industrial policies for achieving economic diversification and developing internationally competitive green industries, and how developed countries and international institutions can help enable such policies. They should also provide recommendations that suggest how developed countries can avoid undermining developing countries' just transition efforts, including by avoiding making their own green industrial policies overly protectionist.

4.5 Social Protection

Social protection programs are key for mitigating the social and economic impacts of energy transition measures, particularly for vulnerable groups⁵⁷ that are the most impacted by climate change and potential price increases brought on by the energy transition.⁵⁸ Currently, more than four billion people worldwide have no social protection benefits,⁵⁹ and only 18.6% of unemployed people receive unemployment benefits.⁶⁰ Developing countries tend to have lower levels of social protection than developed countries.⁶¹

The ILO Guidelines rightly do not assume a baseline of universal social protection and include recommendations for governments to build up their systems of social protection generally.⁶² However, some of the ILO Guidelines may be unattainable currently in certain developing countries, such as the recommendation to make use of employment guarantee schemes.⁶³ The Guidelines also do not mention cash benefits and universal basic income schemes or the role of international cooperation in funding expansions of social protection programs in developing countries. Moving forward, international institutions should provide additional

⁵³ United States of America, Inflation Reduction Act of 2022, Pub. L. No. 117-169, 136 Stat. 1819 (2022), <https://www.congress.gov/117/plaws/publ169/PLAW-117publ169.pdf>; European Commission, Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions: A Green Deal Industrial Plan for the Net-Zero Age, Brussels, (February 1, 2023) COM(2023), 62 final, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52023DC0062>. For a commentary on the effect of the Inflation Reduction Act on developing countries, see Jack Radford and Mariana Ferreira, "Does US Protectionism Jeopardize the Global Energy Transition?" *IE University Insights*, September 11, 2023, <https://www.ie.edu/insights/articles/does-us-protectionism-jeopardize-the-global-energy-transition/>.

⁵⁴ Sokona et al., *Just Transition*, 6.

⁵⁵ ILO Guidelines, ¶¶ 19(c)(i), 20(c).

⁵⁶ Vanegas Cantarero, "Of Renewable Energy," 6.

⁵⁷ For the purposes of this policy brief, we define vulnerable groups as "[p]eople who are socially, economically, culturally, politically, institutionally, or otherwise marginalized . . . [t]he rural and urban poor, [r]emote groups and communities[,] . . . the young[,] and the old". Least Developed Countries Expert Group, *Considerations Regarding Vulnerable Groups, Communities and Ecosystems in the Context of the National Adaptation Plans* (Bonn, Germany: UN Climate Change, December 2018), 4, <https://unfccc.int/sites/default/files/resource/Considerations%20regarding%20vulnerable.pdf>.

⁵⁸ Otlhogile and Shirley, "The Evolving Just Transition," 6; Pucheta and Sánchez, *Just Transition in the Global South*, 5.

⁵⁹ International Labour Office, *World Social Protection Report 2020-22: Social Protection at the Crossroads – in Pursuit of a Better Future*, (Geneva: ILO, 2021), 45, <https://www.ilo.org/publications/flagship-reports/world-social-protection-report-2020-22-social-protection-crossroads-pursuit>.

⁶⁰ International Labour Office, *World Social Protection Report*, 46.

⁶¹ International Labour Office, *World Social Protection Report*, 46.

⁶² ILO Guidelines, ¶¶ 28(a)–(c), (e), (h).

⁶³ ILO Guidelines, ¶ 28(d).

detailed guidance on the measures that need to be taken for developing countries with low rates of social protection to expand their social protection floor to be able to meet new demands posed by the energy transition. They should also expressly address the integral role of international cooperation in increasing social protection rates in developing countries.

4.6 Skills Development and Training

While some of the skills needed for sustainable, low-carbon jobs are more similar to fossil fuel industry jobs than other jobs,⁶⁴ some new skills will also be needed for new jobs created in sustainable, low-carbon, and increasingly digitized industries.⁶⁵ Enabling workers in high-carbon industries to move into these new jobs will require some degree of reskilling and upskilling.⁶⁶ There are special considerations relevant to developing countries. In many of them, preexisting systems for skills development tend to be weaker and renewable energy industries and green industry generally are still nascent, so skills development in this sector are a lower priority compared to other larger sectors.⁶⁷ In addition, given the high number of low-skilled informal workers in developing countries, tailored training programs may be necessary to ensure workers in the informal sector can also develop the skills needed to benefit from new jobs created by the energy transition.⁶⁸

The ILO Guidelines include a section on skills development that addresses many of the issues raised in the literature on this topic,⁶⁹ but it does not differentiate between developing and developed countries. Future international just transition guidance should differentiate between skills development and training challenges relevant to developing and developed countries, as is the case in the ILO's Skills Development Policy Brief.⁷⁰ It should also consider how governments can update skills development opportunities to be relevant and accessible for vulnerable groups and responsive to the need in the green economy for more professionals with university degrees and who are trained in STEM.

⁶⁴ Francesco Vona, "Managing the Distributional Effects of Climate Policies: A Narrow Path to a Just Transition," *Ecological Economics* 205, no. 107689 (March 2023); 3, <https://www.sciencedirect.com/science/article/pii/S0921800922003500>; Caleigh Andrews, Bruno Idini, and Rebecca Ruff, *World Energy Employment 2023* (Paris: IEA, November 2023), 7, <https://www.iea.org/reports/world-energy-employment-2023>.

⁶⁵ Andrews, Idini, and Ruff, *World Energy Employment*, 20; Kirsty Lindsay Reoch Denyer, "A Just Transition for UK Oil and Gas Workers? Re-employment After Job Loss," thesis submitted for degree of Doctor of Philosophy, Henley Business School Leadership, Organisations and Behavior (June 2023), 37, https://centaur.reading.ac.uk/113368/1/Denyer_thesis.pdf.

⁶⁶ Reoch Denyer, "A Just Transition for UK Oil and Gas Workers," 38, 106, 124; Vona, "Managing the Distributional Effects," 3; Sandeep Pai, Kathryn Harrison, and Hisham Zerriffi, "A Systematic Review of the Key Elements of a Just Transition for Fossil Fuel Workers" (Clean Economy Working Paper Series WP 20-04, Ottawa: Smart Prosperity Institute, April 2020), 33, <https://justtransitionforall.com/wp-content/uploads/2022/09/transitionforfossilfuelworkers.pdf>. Upskilling refers to a "refresh, revisit or development of skills through continuous learning" while reskilling/retraining refers to "the process of learning a new vocation of skillset, so that an individual can adapt to new responsibilities, a new role of a new job of career." Reoch Denyer, "A Just Transition for UK Oil and Gas Workers," 124.

⁶⁷ Nthabiseng Mohlakoana, Muhammed Lokhat, Nives Dolšak, and Aseem Prakash, "Varieties of Just Transition: Public Support in South Africa's Mpumalanga Coal Community for Different Policy Options," *PLOS Climate* 2, no. 5 (May 2023): 5, <https://doi.org/10.1371/journal.pclm.0000205>.

⁶⁸ Phoebe Sirotin, "'No Jobs on a Dead Planet': Barriers to a Just Transition for Informal Workers and Unskilled Labourers in the European Union," BA Thesis Liberal Arts and Sciences, Tilburg University (June 2022), 22, <https://arno.uvt.nl/show.cgi?fid=158724>.

⁶⁹ ILO Guidelines, ¶¶ 24(c), 25(b)–(c).

⁷⁰ Hae Kyeong Chun, Olga Strietska-Illina, José Luis Viveros Añorve, Olsen Lene, Claire La Hovary, Rafael Peels, Amanda Claribel Villatoro, Maria Helena Andre, Anna Biondi, Moustapha Kamal Gueye, Tahmina Mahmud, Monica Castillo and Yanghaoyue Xiong, *Just Transition Policy Brief: Skills Development for a Just Transition* (Geneva: ILO, October 2022), 6–8, 10, 13, <https://www.ilo.org/publications/skills-development-just-transition>.

4.7 Effective Phase-out of Fossil Fuel Production, Use, and Subsidies

A key aspect of a just transition is phasing out fossil fuel production and use.⁷¹ Developing and developed countries also have different responsibilities with regard to phasing out production and use of fossil fuels given their distinct contributions to climate change and current capacities to decarbonize. Developed countries are in the best position to pay for climate adaptation and mitigation measures,⁷² and they should therefore have the responsibility to bear the brunt of rapidly phasing out their use of fossil fuels and reducing global emissions to net zero.⁷³ Developing countries should reduce their emissions, but with greater flexibility than developed countries, and relying on financing and investment from developed countries, to achieve a full phase-out of fossil fuel production and use.⁷⁴

The ILO Guidelines do not reference the science-based need for an equitable phase-out of fossil fuels globally. Future international just transition guidance should call for a phase-out of fossil fuels (combined with enhanced social protection measures) and provide differentiated guidance on how to realize just fossil fuel phase-outs in developing and developed countries.

In addition to the imperative to phase out the use of fossil fuels, fossil fuel subsidy reform is another important aspect of a just transition.⁷⁵ Fossil fuel subsidies impose costs on taxpayers and artificially lower prices of energy produced by fossil fuels, thereby discouraging renewable energy growth.⁷⁶ Fossil fuel subsidies are especially common in developing countries, and reforming them will face particular challenges in these countries.⁷⁷ Removing fossil fuel subsidies can cause short-term price increases, which have a disproportionate impact on people with limited or fixed incomes.⁷⁸ Therefore, just reform of fossil fuel subsidies should involve enhanced social protection measures, such as targeted cash transfers to offset the impacts of price increases on low-income households.⁷⁹

⁷¹ Intergovernmental Panel on Climate Change (IPCC), “Summary for Policymakers” in *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, eds. Hoesung Lee and José Romero (Geneva: IPCC, 2023), 4, 21, 28, <https://doi.org/10.59327/IPCC/AR6-9789291691647.001>; IEA, *Net Zero by 2050: A Roadmap for the Global Energy Sector* (Paris: IEA, October 2021), 18, 21, <https://www.iea.org/reports/net-zero-by-2050>.

⁷² Paris Agreement, Art. 9 (referring to the obligation of developed country parties to provide financial resources to assist developing country parties on climate mitigation and adaptation and to take the lead on mobilizing climate finance).

⁷³ Paris Agreement, Art. 4.4 (noting developed countries “should continue taking the lead by undertaking economy-wide absolute emission reduction targets,” “should continue enhancing their mitigation efforts,” and “are encouraged to move over time towards economy-wide emission reduction or limitation targets in the light of different national circumstances.”). See also Jeffrey D. Sachs, Perrine Toledano, and Martin Dietrich Brauch, with Tehtena Mebratu-Tsegaye, Efosa Uwaifo, and Bryan Michael Sherrill, *Roadmap to Zero-Carbon Electrification of Africa by 2050: The Green Energy Transition and the Role of the Natural Resources Sector (Minerals, Fossil Fuels, and Land)* (New York: Columbia Center on Sustainable Investment (CCSI), November 2022), 57, <https://ccsi.columbia.edu/content/roadmap-zero-carbon-electrification-africa> (noting that some analysts view the principle of common but differentiated responsibilities as justification for exploiting more fossil fuel resources in Africa, but also that there is a strong economic case for Africa to leapfrog to low-carbon development); Martin Dietrich Brauch and Brenda Akankunda, “Investment Governance in Africa to Support Climate Resilience and Decarbonization,” *CCSI* (blog), December 10, 2021, <https://ccsi.columbia.edu/news/investment-governance-africa-support-climate-resilience-and-decarbonization> (noting that African nations should not be expected to take the lead in addressing the climate emergency, but instead should receive support and investment, given their marginal contributions to climate change).

⁷⁴ Paris Agreement, Preamble, Art. 2

⁷⁵ See generally IEA, *Fossil Fuel Subsidies in Clean Energy Transitions: Time for a New Approach?* (Paris: IEA, February 2023), <https://www.iea.org/reports/fossil-fuel-subsidies-in-clean-energy-transitions-time-for-a-new-approach>; “Explainer: Fossil Fuel Subsidy Reform by the Numbers,” International Institute for Sustainable Development (IISD), August 26, 2021, <https://www.iisd.org/articles/explainer/fossil-fuel-subsidy-reform-numbers>; Simon Black, Antung A. Liu, Ian W.H. Parry, and Nate Vernon, “IMF Fossil Fuel Subsidies Data 2023 Update” (International Monetary Fund (IMF) Working Papers, WP/23/169, Washington, DC: IMF, August 2023), <https://www.imf.org/en/Publications/WP/Issues/2023/08/22/IMF-Fossil-Fuel-Subsidies-Data-2023-Update-537281>; Grégoire Garsous, *OECD Inventory of Support Measures for Fossil Fuels* (Paris: OECD, December 2023), <https://doi.org/10.1787/87dc4a55-en>.

⁷⁶ Sachs et al., *Roadmap to Zero-Carbon Electrification of Africa*, 72.

⁷⁷ Vanegas Cantarero, “Of Renewable Energy,” 5.

⁷⁸ Otlhogile and Shirley, “The Evolving Just Transition,” 6.

⁷⁹ “Climate Change: Fossil Fuel Subsidies,” IMF, <https://www.imf.org/en/Topics/climate-change/energy-subsidies#A%20Plan%20for%20Reform>. For an overview of cash transfer programs in the context of energy subsidy reform, see Anit Mukherjee, Yuko Okamura, Ugo Gentilini, Defne Gencer, Mohamed Almenfi, Adea Kryeziu, Miriam Montenegro, and Nithin Umapathi, *Energy Subsidy Reform in Action: Cash Transfers in the Context of Energy Subsidy Reform* (Washington, DC: World Bank, July 2023), <https://openknowledge.worldbank.org/server/api/core/bitstreams/041897fe-02ef-4c40-b42c-8cb6320aab73/content>.

The ILO Guidelines do not specifically reference fossil fuel subsidies, but they acknowledge the need to “explore and identify an appropriate combination of taxes, *subsidies*, incentives, guaranteed prices, and loans to encourage a transition towards economically sustainable activities” (emphasis added).⁸⁰ Moving forward, international institutions providing policy guidance for a just transition should expressly call for fossil fuel subsidy reform and provide guidance to countries on how to realize such reforms while ensuring negative impacts are not disproportionately felt by low-income populations.

4.8 International Cooperation and the Principle of Common but Differentiated Responsibilities

International cooperation is necessary for just transitions globally. Most developing countries lack sufficient resources to fund basic public goods in many cases, let alone just transition policies.⁸¹ At the same time, developed countries are the most responsible for climate change. Thus, the imperative for developed countries to provide financial support for just transition measures in developing countries is being recognized by leaders worldwide.⁸²

The ILO Guidelines provide general guidance on international cooperation. Their guiding principles recognize the importance of fostering international cooperation among countries in implementing sustainable development policies.⁸³ The Guidelines also recall the principle of common but differentiated responsibilities⁸⁴ and note that member states “have widely varying capabilities” to act.⁸⁵ They recommend that governments “mobilize funding, support and assistance, facilitated where appropriate by international organizations”⁸⁶ and promote cooperation at the international level, including assistance and capacity building, as a way to carry out SDGs.⁸⁷ However, they do not explicitly mention the specific issue of developed countries’ disproportionate greenhouse gas emissions nor do they advance specific policy recommendations and guidance for enhanced international cooperation. Future international just transition guidance should advance specific policy recommendations for ensuring developed countries fulfill their responsibility to provide finance for developing countries to enable just transition policy measures. It should also expressly ground such recommendations in developed countries’ disproportionate contributions to climate change and greater access to finance.

⁸⁰ ILO Guidelines, ¶ 19(c)(i).

⁸¹ Mohlakoana et al., “Varieties of Just Transition,” 2.

⁸² UNFCCC Standing Committee on Finance, *Report on Progress Towards Achieving the Goal of Mobilizing Jointly USD 100 Billion per Year to Address the Needs of Developing Countries in the Context of Meaningful Mitigation Actions and Transparency on Implementation* (Bonn, Germany: UN Climate Change, 2022), 10, <https://unfccc.int/process-and-meetings/bodies/constituted-bodies/standing-committee-on-finance-scf/progress-report>. Developed countries are slated to update the 100 billion climate finance goal at the 29th Conference of the Parties (COP) to the UNFCCC in 2024. Report of the COP serving as the meeting of the Parties to the Paris Agreement, *New Collective Quantified Goal on Climate Finance*, 8/CMA.5, UN Doc. FCCC/PA/CMA/2023/16/Add.2 (November 30, 2023), <https://undocs.org/FCCC/PA/CMA/2023/16/Add.2>. See also “New Collective Quantified Goal on Climate Finance,” UN Climate Change, <https://unfccc.int/NCQG>; David Waskow, Jamal Srouji, Jennifer Layke, Nataniel Warszawski, Gabrielle Swaby, Preety Bhandari, Natalia Alayza, Edward Davey, Rogier van den Berg, Mario Julien Díaz, Roman Paul Czebiniak, Paige Langer, Subrata Chakrabarty, David Burns, Nathan Cogswell, Deirdre Cogan, and Rhys Gerholdt, “Unpacking COP28: Key Outcomes from the Dubai Climate Talks, and What Comes Next,” World Resources Institute, December 17, 2023, <https://www.wri.org/insights/cop28-outcomes-next-steps#climate-finance>.

⁸³ ILO Guidelines, ¶ 13(g).

⁸⁴ ILO Guidelines, ¶ 11.

⁸⁵ ILO Guidelines, ¶ 10.

⁸⁶ ILO Guidelines, ¶ 16(b).

⁸⁷ ILO Guidelines, ¶ 16(e)(i).

4.9 Human Rights

Human rights, including the rights of Indigenous Peoples, are an essential component of a just transition notably in the context of renewable energy projects.⁸⁸ Energy transitions pose risks to the rights of Indigenous Peoples and local communities. Because many Indigenous Peoples' lands lack formal state recognition, they are at risk of being appropriated for renewable energy projects without their consent. Land-grabbing and forced displacement for renewable energy projects have already taken place in some instances.⁸⁹ There are also challenges with regards to consultation.⁹⁰ Indigenous Peoples are also especially impacted by the just transition processes in developing countries, as 96% of the world's Indigenous population resides in either low- or middle-income countries.⁹¹

The ILO Guidelines do not reference Indigenous Peoples or local communities, but the ILO's 2022 Indigenous Peoples Policy Brief provides an overview of the ways that Indigenous Peoples are uniquely impacted by climate change and identifies relevant international labor standards.⁹² Moving forward, international just transition guidance should be clear about the risks energy transitions pose to Indigenous Peoples' land rights and other human rights and provide specific guidance on how to ensure such rights are fully recognized and respected, including the right to Free, Prior and Informed Consent.⁹³

There are also human rights risks related to critical minerals. Minerals such as lithium, cobalt, copper, and nickel are critical to produce technologies for the energy transition,⁹⁴ and the demand for these minerals is projected to double or quadruple by 2040.⁹⁵ Regarding primary production, there have already been allegations of human rights abuses connected to the mining of critical minerals.⁹⁶ In addition, tailings (the waste materials produced by mining) are laced with metals and toxic materials dangerous to the environment and human health and can have disastrous consequences for people and ecosystems if not safely managed.⁹⁷ In addition, the demand for critical minerals from secondary sources, such as processing electronic waste (e-waste), is expected to

⁸⁸ In particular, governments should (1) “[r]ecognize and respect human rights, including all legitimate tenure rights;” (2) “[f]acilitate meaningful engagement with affected peoples and communities;” (3) “[a]dvance local-level development, including through co-equity models and benefit sharing;” (4) “[i]nstitute systems to address human and land rights harms;” and (5) “[p]rotect the safety of environmental, land, and human rights defenders.” Hansika Agrawal, Laura El-Katiri, Kimathi Muiruri, and Sam Szoke-Burke, *Enabling a Just Transition: Protecting Human Rights in Renewable Energy Projects* (New York: CCSI, April 2023), 2, <https://ccsi.columbia.edu/content/enabling-just-transition-protecting-human-rights-renewable-energy-projects>.

⁸⁹ Agrawal et al., *Enabling a Just Transition*, 4.

⁹⁰ Zoom interview with anonymous expert interviewee (June 12, 2023).

⁹¹ Rishabh Kumar Dhir, Umberto Cattaneo, Maria Victoria Cabrera Ormazá, Hernán Coronado, and Martin Oelz, *Implementing ILO Indigenous and Tribal Peoples Convention No. 169: Towards an Inclusive, Sustainable and Just Future* (Geneva: ILO, 2019), 13, <https://www.ilo.org/publications/implementing-ilo-indigenous-and-tribal-peoples-convention-no-169-towards>.

⁹² Gabriela Balvedi Pimentel, *Just Transition Policy Brief: Indigenous Peoples and a Just Transition for All* (Geneva: ILO, November 7, 2022), 11, <https://www.ilo.org/publications/indigenous-peoples-and-just-transition-all>.

⁹³ See Indigenous and Tribal Peoples Convention, 1989 (No. 169), opened for signature June 27, 1989, entered into force September 5, 1991, https://normlex.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C169; UN General Assembly (UNGA), UN Declaration on the Rights of Indigenous Peoples, UN Doc. A/RES/61A/295 (September 13, 2007), Art. 19, <http://undocs.org/A/RES/61/295>.

⁹⁴ Tae-Yoon Kim et al., *The Role of Critical Minerals in Clean Energy Transitions* (Paris: IEA, May 2021), 43–44, <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions>.

⁹⁵ Kim et al., *The Role of Critical Minerals*, 50.

⁹⁶ Amnesty International, “Democratic Republic of Congo: Cobalt and Copper Mining for Batteries Leading to Human Rights Abuses,” news release, September 12, 2023, <https://www.amnesty.org/en/latest/news/2023/09/drc-cobalt-and-copper-mining-for-batteries-leading-to-human-rights-abuses>; Stephanie Ngo Pouhe and Manson Gwanyanya, *Fast and Fair: Achieving a Just Energy Transition in Africa* (London: Business & Human Rights Resource Centre, June 2023), 3, https://media.business-humanrights.org/media/documents/2023_Africa_clean_energy_3.pdf.

⁹⁷ MiningWatch Canada and Earthworks, *Mine Tailings Waste Storage*, <https://earthworks.org/wp-content/uploads/2022/06/INFOGRAPHIC-Safety-First-Mine-Tailings-Waste-Storage.pdf>; Jan Morrill, David Chambers, Steven Emerman, Richard Harkinson, Jamie Kneen, Ugo Lapointe, Ann Maest, Bruno Milanez, Paulina Personius, Payal Sampat, and Rodrigue Turgeon, *Safety First: Guidelines for Responsible Mine Tailings Management* (Earthworks, MiningWatch Canada, and London Mining Network, May 2022), 11, 15, <https://earthworks.org/wp-content/uploads/2022/05/Safety-First-Safe-Tailings-Management-V2.0-final.pdf>; “Tailings,” Earthworks, <https://earthworks.org/issues/tailings>.

⁹⁷ “Protecting Communities from Tailings Disasters,” Earthworks, <https://earthworks.org/issues/protecting-communities-from-tailings-disasters>.

increase as the transition to a circular economy gains traction worldwide.⁹⁸ E-waste processing can be a source of human rights violations, as electronic components in renewable energy technologies contain many hazardous materials that, without adequate safeguards, can be released into the environment and harm human health.⁹⁹ E-waste recycling also tends to be unregulated in many developing countries.¹⁰⁰ Energy transitions that rely on critical minerals cannot be considered just if the social and environmental risks and harms caused by primary and secondary sourcing of critical minerals are not well managed and if they disproportionately affect vulnerable populations, particularly in developing countries.¹⁰¹

The ILO Guidelines reference rights as a key just transition policy area¹⁰² and address some human rights risks associated with e-waste, although they do not reference critical minerals. They recommend governments regulate and incentivize companies to reduce or eliminate hazardous materials in their supply chains and production processes.¹⁰³ They also recommend governments address the occupational safety and health impacts of and promote formalization in waste management, materials recovery, and recycling.¹⁰⁴ Future international institutions' just transition policy guidance should address how countries that export critical minerals can directly manage the environmental and human rights impacts of their primary and secondary production. It should also encourage importing countries to mandate and enforce requirements that companies mitigate, prevent, and remedy their human rights and environmental impacts, including those that occur abroad.

4.10 Access to Affordable and Sustainable Energy

Another key pillar of a just transition is achieving universal access to affordable renewable energy, in line with SDG 7.¹⁰⁵ Energy plays a central role in development, contributing to poverty eradication, public health, and helping provide for basic human needs, as endorsed by the UN General Assembly.¹⁰⁶ However, energy poverty—a lack of access to sustainable, renewables-based electricity or energy due to insufficient infrastructure, inefficiencies, or unaffordability—remains a challenge worldwide, especially in developing countries.¹⁰⁷ Thus, many developing countries face the dual challenges of expanding energy access while also transitioning to renewable energy. This feat is made more challenging by the fact that energy transitions themselves, without safeguards, risk exacerbating energy poverty.

The ILO Guidelines underscore that the just transition presents an opportunity to improve access to affordable and sustainable energy and thereby improve social inclusion, particularly for women and rural populations.¹⁰⁸ On policy recommendations, the ILO Guidelines recommend that governments consider compensating low-income households when adopting energy transition

⁹⁸ Perrine Toledano, Martin Dietrich Brauch, and Jack Arnold, *Circularity in Mineral and Renewable Energy Value Chains: Overview of Technology, Policy, and Finance Aspects. Executive Summary* (New York: CCSI, October 2023), <https://ccsi.columbia.edu/circular-economy-mining-energy>.

⁹⁹ BAN Toxics (BT) and Center for International Environmental Law (CIEL), *Human Rights Impacts of E-Waste*, https://www.ciel.org/wp-content/uploads/2015/10/HR_EWaste.pdf.

¹⁰⁰ BT and CIEL, *Human Rights Impacts of E-Waste*, 6.

¹⁰¹ Otlhogile and Shirley, “The Evolving Just Transition,” 4, 7-8.

¹⁰² ILO Guidelines, 7.

¹⁰³ ILO Guidelines, ¶ 26(i).

¹⁰⁴ ILO Guidelines, ¶¶ 20(f), 27(c).

¹⁰⁵ Peter Newell and Dustin Mulvaney, “The Political Economy of the ‘Just Transition,’” *The Geographical Journal* 179, no. 2 (June 2013): 132–140, 135, <https://doi.org/10.1111/geoj.12008>. SDG 7 is to “[e]nsure access to affordable, reliable, sustainable and modern energy for all”. UNGA, Transforming Our World: The 2030 Agenda for Sustainable Development, UN Doc. A/RES/70/1 (September 25, 2015), 14, <http://undocs.org/A/RES/70/1>.

¹⁰⁶ UNGA, The Future We Want, UN Doc. A/RES/66/288 (July 27, 2012), ¶ 125, <http://undocs.org/A/RES/66/288>.

¹⁰⁷ Laura Cozzi, Daniel Wetzel, Gianluca Tonolo, Nouhoun Diarra, and Arthur Roge, “Access to Electricity Improves Slightly in 2023, but Still Far from the Pace Needed to Meet SDG7,” (Paris: IEA, September 15, 2023), <https://www.iea.org/commentaries/access-to-electricity-improves-slightly-in-2023-but-still-far-from-the-pace-needed-to-meet-sdg7>.

¹⁰⁸ ILO Guidelines, ¶ 12(c).

measures,¹⁰⁹ although this recommendation neglects supply-side policy measures for managing energy affordability.¹¹⁰ To be even more relevant for developing countries, additional international just transition policy guidance should address how developing countries can simultaneously expand access to affordable energy and transition to renewable energy systems. Such recommendations should also account for the risk of governments using energy insecurity to attempt to justify continued unsustainable reliance on fossil fuels.

4.11 Adequate Finance

Governments must secure adequate finance to enable just transition policies. However, developing economies receive only one-fifth of renewable energy investments despite accounting for two-thirds of the global population.¹¹¹ In addition, developing countries face several roadblocks in securing financing for renewable energy projects. They pay higher interest rates on their borrowing, making capital more expensive, and are only able to borrow at short maturities.¹¹² These conditions make it difficult to rapidly expand renewable energy, as these projects require higher upfront capital financing compared to fossil fuel ones.¹¹³ In addition, there is insufficient local debt finance in developing countries.¹¹⁴

With regards to domestic financial resources, the ILO Guidelines recommend that states determine their “long-term financing needs and establish sustainable funding mechanisms” for their just transition frameworks.¹¹⁵ They do not acknowledge how countries’ economic development statuses would affect their ability to expand green industry and thereby generate domestic capital to finance their just transitions, or the need to reform international financial institutions to ensure that developing countries have access to low-cost, long-term financing. Moving forward, international institutions should provide additional policy guidance on how developing countries can finance their domestic just transition measures, including what reforms international financial institutions should take to increase developing countries’ access to low-cost, long-term finance

4.12 Environmental Remediation and Repurposing Former Industrial Sites

Another key element of a just transition is environmental remediation and repurposing of former sites of fossil fuel extraction, energy production, and related industrial activity.¹¹⁶ In the case of coal mines, if they are not properly closed and rehabilitated,

¹⁰⁹ ILO Guidelines, ¶ 28(i).

¹¹⁰ The latter strategy (involving supply-side policy measures) was implemented in Germany: per KVBG Art. 4.5, in 2023 the German national government will begin to pay subsidies to transmission system operators as a means to reduce electricity costs. See also Sachs et al., *Roadmap to Zero-Carbon Electrification of Africa*, Sects. 3.2.3 and 3.2.4 (discussing electricity affordability challenges facing many African households and principles for governments to enable greater affordability).

¹¹¹ IEA, *Financing Clean Energy Transitions in Emerging and Developing Economies* (Paris: IEA, June 2021), 13, <https://www.iea.org/reports/financing-clean-energy-transitions-in-emerging-and-developing-economies>.

¹¹² “Scaling Renewables: Jeffrey Sachs on Development Finance,” CCSI (blog), June 27, 2023, <https://ccsi.columbia.edu/news/scaling-renewables-jeffrey-sachs-development-finance>; Mithatcan Aydos, Perrine Toledano, Martin Dietrich Brauch, Ladan Mehranvar, Theodoros Iliopoulos, and Sunayana Sasmal, *Scaling Investment in Renewable Energy Generation to Achieve Sustainable Development Goals 7 (Affordable and Clean Energy) and 13 (Climate Action) and the Paris Agreement: Roadblocks and Drivers* (New York: CCSI, December 2022), 15, <https://ccsi.columbia.edu/content/renewable-energy-investment-roadblocks-drivers>.

¹¹³ Aydos et al., *Scaling Investment in Renewable Energy Generation*, 15.

¹¹⁴ Aydos et al., *Scaling Investment in Renewable Energy Generation*, 24.

¹¹⁵ ILO Guidelines, ¶ 19(b)(iii).

¹¹⁶ For an in-depth analysis concerning the decommissioning of offshore oil and gas infrastructure, see Martin Lockman, Martin Dietrich Brauch, Esteban F. Fresno Rodríguez, and José Luis Gallardo Torres, *Decommissioning Liability at the End of Offshore Oil and Gas: A Review of International Obligations, National Laws, and Contractual Approaches in Ten Jurisdictions* (New York: Sabin Center for Climate Change Law and CCSI, August 2023), <https://ccsi.columbia.edu/content/decommissioning-liability-offshore-oil-gas-infrastructure>.

some air pollution can continue, as well as other environmental problems, such as acid mine water pollution.¹¹⁷ Decommissioned mines also pose economic liabilities if not properly closed and rehabilitated.¹¹⁸ As fossil fuel production has a disparate adverse impact on people of color, Indigenous Peoples, women, and other marginalized groups, remediation can help reduce historical injustices.¹¹⁹ In addition, environmental rehabilitation supports economic development by increasing local property values, generating employment (at least temporarily), and attracting new businesses.¹²⁰ Developing countries can face greater social and economic barriers to environmental remediation compared to the most developed ones.¹²¹ Some specific challenges include technological barriers, political instability, and “insufficient capacity for regulation and supervision from government and local institutions.”¹²²

The ILO Guidelines recommend governments promote cooperation with regards to “restoration of natural resources.”¹²³ However, they do not provide specific policy recommendations, nor do they provide guidance tailored to developing countries to help them ensure both the regulation and the funding of environmental remediation of former fossil fuel extraction sites. They also do not provide guidance in relation to repurposing sites for other economic activities. Future international just transition policy guidance should address how governments can ensure environmental remediation measures as essential components of their just transitions. They should also address challenges faced by developing countries in the regulation and financing of such measures.

¹¹⁷ Daniel Raimi, Aurora Barone, Sanya Carley, David Foster, Emily Grubert, Julia Haggerty, Jake Higdon, Michael Kearney, David Konisky, Jennifer Michael, Gilbert Michaud, Sade Nabahe, Nina Peluso, Molly Robertson, and Tony Reames, *Policy Options to Enable an Equitable Energy Transition*, Report 21-09 (Washington, DC: Resources for the Future, April 2021) 18, 20, https://media.rff.org/documents/RFF_Report_21-09_Policy_Options_to_Enable_an_Equitable_Energy_Transition.pdf; Lochner Marais, Jesse Burton, Maléne Campbell, and Etienne Nel, “Mine Closure in the Coal Industry: Global and National Perspectives” in *Coal and Energy in South Africa: Considering a Just Transition*, eds. Lochner Marais, Philippe Burger, Maléne Campbell, Stuart Paul Denoon-Stevens, and Deidré Van Rooyen (Edinburgh University Press, 2022), 41, 42, <https://edinburghuniversitypress.com/pub/media/ebooks/9781474487078.pdf>; Deidré van Rooyen and Johan van Zyl, “Boom or Bust for Emalahleni Businesses?” in *Coal and Energy in South Africa: Considering a Just Transition*, 154.

¹¹⁸ Marais et al., “Mine Closure in the Coal Industry,” 42.

¹¹⁹ Raimi et al., *Policy Options to Enable an Equitable Energy Transition*, 18.

¹²⁰ Raimi et al., *Policy Options to Enable an Equitable Energy Transition*, 18; Daniel Raimi, *Environmental Remediation and Infrastructure Policies Supporting Workers and Communities in Transition*, Report 20-11 (Washington, DC: Resources for the Future and Environmental Defense Fund, September 2020), 1, https://media.rff.org/documents/RFF_Report_20-11_Fairness_for_Workers.pdf; Christiane Beuermann, *Toolkit. Environmental Rehabilitation and Repurposing. Guidance on the Governance of Environmental Rehabilitation and Repurposing in Coal Regions in Transition* (Brussels: European Commission), 5, https://energy.ec.europa.eu/system/files/2020-05/environmental_rehabilitation_and_repurposing_toolkit_-_platform_for_coal_regions_in_transition_0.pdf; Claudia Strambo, Jesse Burton, and Aaron Atteridge, *The End of Coal? Planning a “Just Transition” in South Africa* (Stockholm: Stockholm Environment Institute (SEI), February 2019), 9, <https://www.sei.org/wp-content/uploads/2019/02/planning-a-just-transition-in-south-africa.pdf>.

¹²¹ Rosalie O’Brien, Thomas Phelan, Nicole Smith, and Kathleen Smits, “Remediation in Developing Countries: A Review of Previously Implemented Projects and Analysis of Stakeholder Participation Efforts,” *Critical Reviews in Environmental Science and Technology* 51, no. 12 (2021): 1259–1280, 1260, <https://doi.org/10.1080/10643389.2020.1755203>.

¹²² O’Brien et al., “Remediation in Developing Countries,” 1260.

¹²³ ILO Guidelines, ¶ 16(e)(ii).

5 Conclusion

While the ILO Guidelines have proven to be a valuable resource and their adoption by the ILO Governing Body marked an important milestone, they do not sufficiently address some of the key facets of just energy transitions. To ensure that future international soft-law guidance for national-level just transition policy is responsive and readily adaptable to different country contexts, international organizations should seek a better understanding of these key facets, including challenges that are particularly relevant for developing countries, and expand their policy guidance to address the challenges identified. Moreover, future research is needed to explore how the broad issues identified in this policy brief manifest in specific contexts, and how to implement just transition policies in those specific contexts.

This policy brief has identified the following issues as deserving additional policy guidance (and research as needed) from international institutions:

Developing countries

- How developing country governments with institutional capacity constraints can achieve a just transition, including what forms of technical and financial assistance are available.
- How to achieve a just transition in the context of widespread government corruption, given its effect on public trust in institutions and risks of mismanagement of funds.
- How developing countries grappling with high rates of unemployment and informal work can ensure decent employment during the just transition and beyond.
- How developing countries can simultaneously expand access to affordable energy and transition to renewable energy systems, accounting for the risk of governments using energy insecurity to attempt to justify continued unsustainable reliance on fossil fuels.
- What measures need to be taken for developing countries with low rates of social protection to expand their social protection floor so that it is capable of meeting new demands posed by the transition.
- How developing countries can fund their domestic just transition measures, including what reforms international financial institutions should take to increase developing countries' access to low-cost, long-term financing.
- How developing countries should design and implement green industrial policies for achieving economic diversification and developing internationally competitive green industries.

Developed countries

- How developed countries can avoid undermining developing countries' just transition efforts, including by seeking to avoid making their own green industrial policies overly protectionist.
- How to acknowledge and enforce developed countries' responsibility to provide finance for developing countries to enable just transition policy measures given developed countries' disproportionate responsibility for climate change and their greater access to finance.
- How developed countries and international organizations can help enable developing countries' green industrial policies.

All countries

- How governments can ensure affected communities, including traditional and rural communities, youth, women, and informal workers, are consulted adequately at every stage of just transition policymaking, while preventing their voices from being overshadowed by investors, external development partners, and other more powerful stakeholders, and overcoming challenges such as a lack of connectivity and access to venues.
- How the just transition affects Indigenous Peoples, and how to address their particular challenges and needs in this context.
- How countries that export critical minerals can directly manage the environmental and human rights impacts of their primary and secondary production and how importing countries can mandate companies carry out human rights and environmental due diligence.
- How governments can update skills development opportunities to (i) be relevant and accessible for vulnerable groups and (ii) encourage university-level education and education in STEM fields, which are in high demand in the green economy.
- How to reform fossil fuel subsidies and ensure a swift phaseout of fossil fuel production and consumption (combined with enhanced social protection measures) as integral parts of a just transition.
- How to ensure environmental remediation measures as essential components of a just transition and address challenges faced by developing countries in the regulation and funding of such measures.
- How to advance gender equity and equality in just transition processes in different country contexts.¹²⁴

Just transition policymaking requires incorporating various perspectives. Multi-stakeholder collaboration is necessary to formulate policy guidance as well as develop and implement just transition policy. Collaboration must include, among others, human rights organizations, civil society organizations, academics, the private sector, governments at all levels, international and regional organizations, and international financial institutions.

¹²⁴ While recognizing the critical importance of a thorough exploration of the gender dimensions of just transition processes, this policy brief does not include in its scope a detailed examination of the gender dimension of a just transition. Dedicated resources on the gender dimension of a just transition include: Emanuela Pozzan, Elena Dedova, and Gabriela Balvedi Pimentel, *Just Transition Policy Brief: Gender Equality, Labour and a Just Transition for All* (Geneva: ILO, October 2022), <https://www.ilo.org/publications/gender-equality-labour-and-just-transition-all>; Carla Kraft and Seemin Qayum, *A Gender-Responsive Just Transition for People and Planet* (New York: UN Women, 2023) <https://www.unwomen.org/sites/default/files/2023-11/policy-brief-a-gender-responsive-just-transition-for-people-and-planet-en.pdf>; Johanna Lehtmetts and Laura Del Duca, “Q&A: Bridging Gender and Just Energy Transitions,” SEI, April 18, 2023, <https://www.sei.org/features/qa-bridging-gender-and-just-energy-transitions/>; “Why Does Gender Matter in a ‘Just Transition’?” International Institute for Environment and Development (recording of online event), October 26, 2023, <https://www.iied.org/why-does-gender-matter-just-transition>.



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