

# An International Law Framework for Climate-Aligned Investment Governance

CCSI Working Paper



Columbia Center  
on Sustainable Investment

**January 2024**

Martin Dietrich Brauch, Elena Klonsky, Fanny Marie Everard,  
and Qiaozi Guanglin, with Tyler Alviano, Justin Cuddihey, and Mary Wang



# An International Law Framework for Climate-Aligned Investment Governance

CCSI Working Paper  
January 2024

Martin Dietrich Brauch, Elena Klonsky, Fanny Marie Everard, and Qiaozi Guanglin,  
with Tyler Alviano, Justin Cuddihey, and Mary Wang

## Authors

Martin Dietrich Brauch is Lead Researcher at the Columbia Center on Sustainable Investment (CCSI). Elena Klonsky and Fanny Marie Everard are 2022 graduates of the M.A. in Climate and Society at the Columbia Climate School and were fall 2021/spring 2022 Graduate Research Assistants at CCSI. Qiaozi Guanglin is a 2022 J.D. graduate from Columbia Law School and was a spring 2022 Graduate Research Assistant at CCSI. Tyler Alviano and Justin Cuddihey are 2022 J.D. graduates and Mary Wang is a 2023 J.D. graduate at the University of Ottawa Faculty of Law; they contributed to Section 3 (International Trade Law).

## Acknowledgments

The authors would like to thank Emily Lydgate, Harro van Asselt, Kyla Tienhaara, Lisa Sachs, Chris Albin-Lackey, Nicolas Perrone, and William W. Burke-White for reviewing drafts of the working paper and providing insightful feedback.

## Suggested Citation

Martin Dietrich Brauch, Elena Klonsky, Fanny Marie Everard, and Qiaozi Guanglin, with Tyler Alviano, Justin Cuddihey, and Mary Wang. *An International Law Framework for Climate-Aligned Investment Governance*. CCSI Working Paper. New York: Columbia Center on Sustainable Investment (CCSI), January 2024. <https://ccsi.columbia.edu/content/investment-governance-climate-energy>.

## Table of Contents

Acronyms and Definitions .....	3
Executive Summary .....	5
Introduction.....	6
1 International Human Rights Law .....	8
2 International Labor Law.....	12
3 International Investment Law .....	13
4 International Trade Law.....	19
4.1 Development and Industrial Policy.....	19
4.2 Trade in Environmental Goods.....	21
4.3 Carbon Pricing and Border Adjustments.....	22
4.4 Fossil Fuel Subsidies .....	24
5 International Intellectual Property Law.....	26
6 Illustrative Options to Reform International Law for Climate-Aligned Investment Governance.....	28
Conclusion .....	29
Annex A.....	30
Annex B .....	31
Annex C .....	32
Endnotes and References .....	33

## Acronyms and Definitions

APEC	Asia-Pacific Economic Cooperation
ACCTS	Agreement on Climate Change, Trade and Sustainability
BCA	Border Carbon Adjustment
BITs	Bilateral Investment Treaties
CBAM	Carbon Border Adjustment Mechanism
CCSI	Columbia Center on Sustainable Investment
CDP	(formerly) Carbon Disclosure Project
COMET	Coalition on Materials Emissions Transparency
COP	Conference of the Parties
CSO	Civil Society Organization
DFI	Development Finance Institution
ECT	Energy Charter Treaty
EPPs	Environmentally Preferable Products
ESTs	Environmentally Sound Technologies
ETD	Energy Taxation Directive
FDI	Foreign Direct Investment
FSB	United Nations Financial Stability Board
FTA	Free Trade Agreement
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GCF	Green Climate Fund

GHG	Greenhouse Gas
GRI	Global Reporting Initiative
High Seas Treaty	United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction
HRIA	Human Rights Impact Assessment
HS	WCO Harmonized Commodity Description and Coding System
IAM	Independent Accountability Mechanism
ICES	International Council for the Exploration of the Sea
ICJ	International Court of Justice
ICMM	International Council on Minerals and Metals
IEA	International Energy Agency
IGF	Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development
IIA	International Investment Agreement
IISD	International Institute for Sustainable Development
ILO	International Labour Organization
IOSCO	International Organization of Securities Commissions
IPCC	Intergovernmental Panel on Climate Change
IRENA	International Renewable Energy Agency
ISDS	Investor–state dispute settlement
Kyoto Protocol	Kyoto Protocol to the United Nations Framework Convention on Climate Change
LDC	Least Developed Country
MEA	Multilateral Environmental Agreement
NCP	National Contact Point
NZE	Net-Zero Emissions
OECD	Organisation for Economic Co-operation and Development
Pact	The Global Pact for the Environment
PCA	Permanent Court of Arbitration
Plastics Treaty	Draft Resolution of End Plastic Pollution: Towards an International Legally Binding Instrument
R&D	Research and Development
SBTi	Science Based Targets Initiative
SCM	Agreement on Subsidies and Countervailing Measures
SEC	United States Securities and Exchange Commission
SDG	Sustainable Development Goal
TCFD	Task Force on Climate-Related Financial Disclosures
TRIMs	WTO Agreement on Trade-Related Investment Measures
TRIPS	WTO Agreement on Trade-Related Intellectual Property Rights
UN	United Nations
UNCITRAL	United Nations Commission on International Trade Law
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEA	United Nations Environment Assembly
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
Vienna Convention	Vienna Convention for the Protection of the Ozone Layer
WCO	World Customs Organization
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

## Executive Summary

- International law is indispensable in promoting international cooperation and collective action to facilitate and govern the domestic and international investment flows necessary to achieve climate-aligned, sustainable development, and in removing roadblocks for domestic measures aimed at fostering climate investment within or across borders.
- International law evolved and is structured in specific and often self-contained thematic areas, many of which are or could be relevant to investment governance, but fragmentation may lead to overlooking that relevance or cause one area of international law to undermine goals of others.
- This working paper **(1)** identifies areas of international law that are or could be relevant to investment governance, **(2)** highlights points of inconsistency, and **(3)** proposes a framework to reform and integrate international law with the objective of *promoting and facilitating climate investment flows and achieving climate-aligned regulation of investment* (hereafter, ‘**climate-aligned investment governance**’).
- Section 1 (International Human Rights Law) and Section 2 (International Labor Law) illustrate the interdisciplinarity between climate-aligned investment governance and human rights, including labor rights. Rather than proposing reforms to these areas of international law, the sections highlight how the two areas must form the bedrock of an international law framework to achieve climate-aligned investment governance, informing the reform of other areas of international law.
- **International Human Rights Law** is critical to climate-aligned investment governance in ensuring that climate investment respects the rights, needs, and priorities of investment-affected individuals, local communities, and Indigenous Peoples, particularly in developing countries, through participatory and inclusive investment processes, access to justice, accountability mechanisms, and legal protections against human rights violations by foreign investors.
- **International Labor Law** is critical to climate-aligned investment governance in including trade unions, industry, labor representatives, affected communities, and all other relevant actors in the formulation, implementation, and monitoring of climate investment policies that respect, promote, and realize international labor rights, and committing to domestic action, such as through creating or strengthening social safety nets, targeted education and training programs, pension funds, and just transition funds.
- Section 3 recommends reforming **International Investment Law** for climate-aligned investment governance by terminating or withdrawing from investment treaties, withdrawing advance treaty-based consent to investment arbitration, neutralizing survival clauses, and refraining from negotiating new investment treaties that fail to align with climate action. It recommends overhauling the existing international investment regime in favor of support to domestic administrative and judicial systems to facilitate investment governance, timelines to swiftly phase out fossil fuel investments on the basis of fairness and equity, and the facilitation of financial flows for climate investment.
- Section 3 recommends reforming **International Trade Law** for climate-aligned investment governance by, among other measures, renegotiating provisions in international trade agreements that hamper states’ ability to adopt climate investment policies to drive the net-zero energy transition, liberalizing trade in environmental goods and services, expanding carbon pricing mechanisms (cap-and-trade systems and carbon taxes), cooperating on adopting border carbon adjustments, harmonizing greenhouse gas accounting and reporting throughout value chains, and swiftly phasing out fossil fuel subsidies.

- Section 4 recommends reforming **International Intellectual Property Law** for climate-aligned investment governance by adopting measures aimed at accelerating the development and deployment of technologies and capital for climate investment through formal commitment, dedicated financing, and incentives for innovation; facilitating and expediting climate-related technology transfer and rights involving intellectual property management, protection, and enforcement; and creating favorable trading conditions, loosened administrative processes, and financial mechanisms to foster the transfer of low-carbon, environmentally sound technologies.
- The scope and depth of areas covered, issues discussed, and reform solutions proposed in this working paper are non-exhaustive. We did not intend, and could not have intended, to provide complete and definitive answers or conclusions. The reflections in this working paper serve as a preface on the need for coherence in international law for climate-aligned investment governance. We invite and hope to inspire further thinking, research, and discussion on how to bridge gaps and build cohesion among these and other areas of international law relevant to climate-aligned investment governance.

## Introduction

Achieving globally agreed climate change mitigation and adaptation goals<sup>1</sup>—including the Paris Agreement goal of “[m]aking finance flows consistent with a pathway towards low greenhouse gas [GHG] emissions and climate-resilient development”<sup>2</sup>—and averting the climate emergency depends on a radical reorientation of global investment flows by public and private economic actors. Massive amounts of ‘**climate investment**’ must be mobilized, which includes investment in energy efficiency; renewable energy sources and storage; zero-emissions transportation; improved urban design; critical mineral reuse and recycling; environmentally sound and climate-resilient infrastructure and technologies; expanded energy grids and access; enhanced adaptive capacity; poverty alleviation; technological transfer and innovation; and disaster risk management.<sup>3</sup>

Estimates of the investment required to keep the world on track to achieve the energy transition in line with the International Renewable Energy Agency (IRENA)’s 1.5°C Scenario, for example, would require annual investments of USD 5.7 trillion on average by 2030 and USD 3.7 trillion between 2031 and 2050.<sup>4</sup> Achieving global climate goals requires climate investment to increase significantly and rapidly. Investment must also be shifted away from high-emission, climate-disruptive projects—particularly those that lead to the burning of fossil fuels (coal, oil, and gas), which makes up for approximately 70% of human-caused global warming—toward climate investment.<sup>5</sup>

Robust legal and policy frameworks are essential to facilitate and govern the domestic and international investment flows necessary to achieve climate-aligned, sustainable development. While many aspects of investment governance fall within the realm of domestic law and policy, international law is indispensable in promoting international cooperation and collective action on climate investment flows and climate-aligned development and in removing potential roadblocks for domestic measures aimed at fostering climate investment within or across borders.

International law is structured in specific and often self-contained thematic areas, including human rights, labor, investment, trade, intellectual property, and environment—itself often divided among water, biodiversity, clean air, climate etc. Fragmentation is a desirable feature of international law, in that it brings practicability, specialization, and depth to international lawmaking in the various discrete areas. At the same time, it carries the risk of creating incoherence. With respect to investment governance, fragmentation creates a diffuse landscape conducive to legal gaps and misalignments. Many areas of international law, including the ones listed, are relevant or contain elements that are or could be relevant to investment governance, but fragmentation may lead to overlooking that relevance or cause one area of international law to undermine goals of others. To support the achievement of global climate mitigation and adaptation goals, all areas of international law should work harmoniously toward the goals

of promoting and facilitating climate investment flows and achieving climate-aligned regulation of investment (hereafter, ‘**climate-aligned investment governance**’).

This working paper proposes a framework to integrate various relevant thematic areas of international law, with the goal of achieving climate-aligned investment governance. We examine five select areas of international law—human rights, labor, investment, trade, and intellectual property—based on our perception of their potential relevance to investment governance, and we present our vision of how they could support the achievement of climate-aligned investment governance.

The sections of this working paper are titled simply with the area or issue of international law discussed, but the nature and focus of the discussions vary.

**Section 1** (International Human Rights Law) and **Section 2** (International Labor Law) illustrate the interdisciplinarity between climate-aligned investment governance and human rights (including labor rights). The goal of these two sections is not to propose reform of these areas of international law, but to highlight how the two areas must form the bedrock of a coherent international law framework to achieve climate-aligned investment governance, informing the reform of other areas of international law discussed in the following sections.

**Section 3** (International Investment Law) discusses how the international investment regime hinders climate-aligned investment governance and how it could be overhauled. **Section 4** (International Trade Law) and **Section 5** (International Intellectual Property Law) examine investment-related aspects of these two regimes and propose reforms to either maximize their positive interactions or minimize their negative interactions with climate-aligned investment governance.

In relation to each of these areas, we provide a literature-backed overview of rationales for change and reform opportunities, summarizing and building upon the existing body of knowledge and research on climate-aligned investment governance at the international level, the just transition to sustainable and net-zero emission (NZE) economies, and the achievement of other Sustainable Development Goals (SDGs). Under each section, the background and rationale is followed by a summary of our main policy recommendations that states could consider adopting to align international legal regimes with climate action, ranging from programmatic or overarching commitments on international cooperation to measurable and enforceable obligations. We roughly ordered our recommendations from most general to most specific and from the highest to the lowest level of ambition, transformative potential, and political feasibility in international negotiations. Each summary is followed by a discussion of recommendations, ordered according to the same criteria.

Implementing these suggested reforms in a discrete manner, by means of amended or new instruments in various areas of international law grounded in common principles of climate-aligned investment governance, can help meet climate goals. Whether additionally or alternatively to siloed reforms, states may consider implementing wholesale reform of international law for climate-aligned investment governance. **Section 6** briefly outlines four types of instruments that could be considered to help coherently advance or consolidate reforms touching on areas of international law that are relevant to achieving climate-aligned investment governance. The choice of instrument or instruments will ultimately depend on various circumstances not analyzed in depth in this paper.

Neither our choice of five areas of international law, nor our selection of discrete issues discussed within each area, nor our discussion of each area or issue is intended to be exhaustive. Our proposals are neither exhaustive nor prescriptive with specific approaches or terminology. Rather, the goal of this working paper is to illustrate the interconnection and interdisciplinarity among the various areas of international law discussed, showcase the importance of thinking holistically about international law, and offer our current vision of how a coherent international law framework could help achieve climate-aligned investment governance.

With this working paper, we invite representatives of governmental and intergovernmental organizations and civil society, among other stakeholders, to conduct more research and host discussions on how to bridge gaps and build cohesion among these and other areas of international law relevant to investment governance, with a view to aligning international law with climate goals. We also hope to inspire government officials in charge of domestic and international policy-making in areas relevant to investment to consider adopting our recommendations as well as other ideas to develop coherence in climate-aligned investment governance.

## 1 International Human Rights Law

The transformations that climate investment aims to achieve will have profound impacts on various stakeholders, including local communities, vulnerable groups, and workers. Therefore, international law for climate-aligned investment governance requires a strong foundation in human rights and labor law principles, to ensure, among others, sustainable development, equity, inclusion, and a just transition. Accordingly, we first examine international human rights law and international labor law in Sections 1 and 2, respectively, before moving on to the other areas of international law that require reform in Sections 3 (International Investment Law), 4 (International Trade Law) and 5 (International Intellectual Property Law). In doing so, we demonstrate how international human rights law and international labor law should serve as the bedrock for reforming international law for climate-aligned investment governance.

### Overview and Rationale

The 1948 Universal Declaration of Human Rights has inspired the establishment of legally binding human rights treaty regimes at both the international and regional levels. Human rights treaties touch on all areas of life, including civil, political, social, and economic rights, and may also apply to specific groups, such as children, women, or Indigenous Peoples. More recently, the United Nations (UN) have recognized a right to a clean, healthy, and sustainable environment, which recognizes the close relationship between climate change and human rights.<sup>6</sup>

Under international human rights law, states have the primary responsibility to respect, protect, and fulfill human rights. However, there is often tension between human rights and the international investment regime as it currently stands. Domestic and international investment processes and investment treaties do not consistently support, and often undermine, the realization of human rights. Investment treaties and arbitration create structural barriers for the realization of social and environmental justice.<sup>7</sup>

Climate change will increasingly threaten the livelihood, health, well-being, and lives of individuals. In the case of inaction or a company or state's failure to meet its environmental obligations, national or, in some cases, international courts and tribunals are important in providing for a fair and impartial judgment. However, litigation cases do not always recognize the right of an individual to halt a project or government action that would go directly against their right for a stable climate.<sup>8</sup> Moreover, access to mediation at present is limited, and investment dispute settlement mechanisms are typically accessible to investors and states only, meaning they do not provide a forum to address concerns by other stakeholders.

Certain features of existing investment treaties put labor, environmental, and other human rights at risk.<sup>9</sup> It is imperative to ensure that the economic interests of investors do not undermine human rights. In the context of climate change, disparities among different countries and social groups will be exacerbated. Emphasis should be placed on the sovereignty of less developed and smaller countries to realize the human rights of individuals, local communities, and Indigenous Peoples, who should have a say in discussions on investments that directly or indirectly affect their livelihoods.



## Summary of Main Recommendations: International Human Rights Law

- Respecting and enforcing human rights and internationally recognized guiding principles on human rights applicable to investment.
- Ensuring that climate investment respects the rights, needs, and priorities of investment-affected individuals, local communities, and Indigenous Peoples, particularly in developing countries, through participatory and inclusive investment processes, access to justice, accountability mechanisms, and legal protections against human rights violations by foreign investors.
- Requiring investors to conduct human rights impact assessments (HRIAs) of investment projects.
- Establishing compensation funds for people affected by the human rights impacts of land-based investments, including mining and renewable energy projects.

## Detailed Recommendations

A climate-aligned investment governance regime must be grounded on principles of human rights and sustainable development. Accordingly, states should adopt responses to climate change in coordination with sustainable development in an integrated manner, taking into account countries' needs and priorities for achieving the SDGs. Moreover, host states of investments, as well as home states of investors, should respect and commit to incorporating and enforcing, at a minimum, the principles of the International Bill of Rights,<sup>10</sup> as well as the UN Guiding Principles on Business and Human Rights,<sup>11</sup> the World Bank Environmental and Social Standards,<sup>12</sup> the UNEP Framework Principles on Human Rights and the Environment,<sup>13</sup> and other policies and procedures to realize human rights and ensure environmental stewardship in foreign investment governance frameworks. Developed country states should commit to contributing toward the realization of human rights in developing country states in the context of climate investment projects. Foreign investors should also commit to respect human rights standards, and their host, as well as home states, should ensure that stakeholders are legally protected from possible human rights infringements by foreign investors (especially non-state actors). Further, all international development cooperation projects, particularly those funded by foreign investors and development finance institutions (DFIs), should make specific provisions denoting human rights and environmental protection as priorities alongside economic development.

Climate-aligned investment governance should ensure a just transition to environmentally, socially, and economically sustainable, climate friendly, and resilient economies and societies.<sup>14</sup> In doing so, states must ensure that climate investment respects the rights, needs, and priorities of individuals, local communities, and Indigenous Peoples. Concurrently, states must recognize, as a matter of principle, individuals, communities, and Indigenous Peoples as the primary decision-makers, by making investment processes participatory and inclusive, and moving away from investor-state arbitration and other dispute settlement mechanisms that fail to accommodate complaints of the people affected by investment projects.

Investment frameworks should be designed to ensure that local populations' views are considered, respected, and given weight in decision-making processes relating to development and climate investment projects in their region. Further, strict procedures should incorporate lessons learned from previous instances of community grievances and human rights infringements into future investment projects rapidly as the scale and speed of climate investment increases.

This section organizes the remaining recommendations into five themes for placing human rights of key stakeholders at the center of decision-making to ensure a just, fair and equitable transition: (a) community consultation and inclusion in decision-making processes; (b) access to justice; (c) accountability mechanisms; (d) land-based climate investments; and (e) DFIs.

a. *Community Consultation and Inclusion in Decision-making Processes*

States should legally recognize, protect, and uphold the human and land rights of investment-affected communities, including their rights to self-determination, self-governance and autonomy rights, and cultural rights. For example, giving local communities the possibility to co-manage their land with the state allows them to have more control over investment processes.<sup>15</sup> These measures should be coupled with mechanisms to protect local communities from corruption and other organized crimes that they might be at risk of when defending their rights to land.

To further protect investment-affected communities, states should establish formal mechanisms as part of investment projects, in order to foster a trusted and durable relationship between local populations and various government ministries—notably ministries of finance and their supportive agencies, which are often among the most influential in government—to ensure the protection of the former’s rights and priorities, and to facilitate constructive exchange throughout the lifetime of the respective project.<sup>16</sup> States should require investors to conduct a collaborative human rights impact assessment (HRIA) of investment projects to ensure a deeper understanding of actual and potential impacts of a project and to provide a forum for all stakeholders to identify shared priorities, enhance communication, and participate in decision-making processes.<sup>17</sup>

Indigenous Peoples are particularly vulnerable to interference with their rights by investment projects, especially extractives projects, due to their close cultural ties with their traditional lands. In addition to the distinct rights afforded to Indigenous Peoples under international law, the legal protections and mechanisms mentioned throughout this section should also apply to them, with special attention given to their circumstances. In addition, states should support the political inclusion of Indigenous communities, including their ability to assert comprehensive land claims, their representation in local governance, and their participation in the wage economy.<sup>18</sup>

b. *Access to Justice*

To guarantee access to justice for marginalized stakeholders, individuals, local communities, and Indigenous Peoples should continue to be explicitly permitted to bring environmental and climate cases before international human rights courts, tribunals, and commissions, in recognition that the right to a stable climate is a human right.<sup>19</sup> States should recognize existing institutions such as the European Court of Human Rights, the Inter-American Court of Human Rights, the United Nations Human Rights Council, and others as the legal recipients of such complaints. At the same time, states should eliminate strategic opportunities for anti-regulatory plaintiffs to make it difficult to enact domestic climate change regulation.<sup>20</sup>

c. *Accountability Mechanisms*

Appropriate mediation and accountability mechanisms can help meet the needs of investment-affected individuals, local communities, and Indigenous Peoples. Leaders of local communities should be provided with details on accountability mechanisms available to them in relation to a particular investment project prior to the commencement of development.<sup>21</sup> To give stakeholders tangible opportunities to raise investment-related concerns a right to consideration and action should be provided from the outset of the investment approval process and throughout the project development<sup>22</sup> up until completion.<sup>23</sup>

In general, states should recognize and uphold local communities’ rights in dispute settlement processes, with an emphasis on their rights of action, access to justice, and appropriate remedies through grievances and complaints mechanisms. Such dispute settlement processes should draw on existing examples of Independent Accountability Mechanisms, for example, to ensure that communities have the time and forum to address their concerns and that actors that are responsible for harms are being held accountable.

Community leaders, Indigenous Peoples, and key stakeholders, including civil society organizations (CSOs), should be involved in the development of any available accountability or complaint reporting mechanism, to ensure widespread awareness of and access for all investment-affected individuals. Such a mechanism should be centered around transparency, remedial action and addressing non-compliance. It should also include access to mediation, by providing space to address individuals', organizations', or investment-affected communities' concerns. Moreover, it should be governed by transparent guidelines, that are easily publicly accessible to all investment-affected individuals. International recognition, publication, and enforcement of the guidelines for the standardized mechanism will ensure trust of individuals, communities, and Indigenous Peoples. Mechanisms should also ensure that lessons learned from disputes are being systemically incorporated into future investment projects. Moreover, to guarantee access to justice, states should recognize that existing regional and international institutions, such as the European Court of Human Rights, the Inter-American Court of Human Rights, the United Nations Human Rights Council, and others as the legal recipients of such complaints, once domestic remedies have been exhausted.<sup>24</sup>

National Contact Points (NCPs) should be established outside of local government and ministry structures, in particular those with stakes in investment projects, such as ministries of commerce or finance,<sup>25</sup> to handle complaints in a way that is impartial, predictable, equitable, and compatible with the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises.<sup>26</sup>

*d. Land-Based Climate Investments*

In recognition of the high-risk nature of land-based climate investments, including in the mining of critical minerals and renewable energy projects, states should establish funds to provide reparations for people affected by the human rights impacts of land-based investments, including for example by displacement from and destruction or expropriation of traditional lands. Similar to mine closure financial assistance, states could require land-based investors to make contributions to such a fund at the beginning, or during the life of, a project to mitigate the risk of companies failing to fulfill obligations to provide reparations for any harms committed through their activities.<sup>27</sup>

*e. Development Finance Institutions*

DFIs should abandon their claims to immunity for environmental and social harms, as they can cause and contribute to human rights abuses and should be held accountable for any harm caused.<sup>28</sup> Further, DFIs involved in investment projects should make explicit commitments to human rights to meet sustainable development criteria. To ensure lessons learned and efficacy of remedial action, complainants should be provided with invitations to express their views on the complaint and the adequacy of the remedy. These meetings must be accessible online and transparent to watchdogs, CSOs, and community members.<sup>29</sup> A publicly accessible database of projects and accountability mechanisms at DFIs should also be created and distributed and publicized in investment-affected communities. All development financing should fall under an accountability mechanism, regardless of the activity being financed or the client receiving the funds from a DFI.<sup>30</sup> Further, all investment projects should be required to transparently disclaim any agency funding in the impact assessment.<sup>31</sup>

DFIs should also consider establishing remedy funds, which would “facilitate rapid and reliable reparations” for any harms, minimize “negative externalities of projects” on the most vulnerable and “help to ensure remedy is delivered in practice.”<sup>32</sup> Such a funding mechanism should ideally “ring-fenc[e] assets, [either] as a pooled fund or on a project-by-project basis at the start of a project or investment,” thereby creating “greater certainty” that “funds will be available that can be accessed in a timely and efficient manner in the event of harm.”<sup>33</sup>

## 2 International Labor Law

### Overview and Rationale

The NZE transition requires countries to employ macroeconomic, industrial, sectoral, and labor policies to mobilize public and private investment in sustainable activities. These activities must generate decent jobs throughout value chains, and require the upgrading and transitioning of jobs, skills, and workers across industries. However, aligning economies with climate action also presents various distributional challenges, particularly in the economic restructuring and subsequent displacement of workers, the inherent costs of adaptation, and adverse effects that may be experienced by low-income households from higher energy and commodity prices.<sup>34</sup> Between countries, even well-managed fossil fuel dependent economies will face more exposure to negative economic and fiscal impacts of the NZE transition, disrupting value chains and affecting stakeholders throughout their economies.<sup>35</sup>

A just transition entails ensuring that “meaningful employment” is available for those whose “jobs are lost in the process of change and ensuring that their rights are respected in the process.”<sup>36</sup> The ILO’s 2015 Guidelines for a Just Transition Towards Environmentally Sustainable Economies and Societies for All, negotiated between governments and unions of employers and workers, serves as a valuable resource on the framework for addressing distributional consequences on various economic stakeholders.<sup>37</sup> The Guidelines are based upon the four pillars of the Decent Work Agenda—social dialogue, social protection, rights at work, and employment.<sup>38</sup> Sustainability and climate action encompass more than just lowered emissions and environmental impacts; they also require addressing decent work, social inclusion, poverty eradication, and socioeconomic development.<sup>39</sup>

Tripartite dialogue—between workers, industry, and governments—is key to shaping effective measures to mitigate climate impacts and create sustainable jobs and enterprises. Effective social dialogue is necessary to ensure that environmental and employment policies and development strategies are coherent and that the NZE transition is inclusive and just.<sup>40</sup>

### Summary of Main Recommendations: International Labor Law

- Including trade unions, industry, labor representatives, affected communities, and all other relevant actors (together, ‘social partners’) in the formulation, implementation, and monitoring of climate investment policies that respect, promote, and realize international labor rights.
- Fostering international cooperation in implementation to avoid a ‘race to the bottom’ and ensuring basic labor rights are recognized across borders.
- Facilitating domestic forums for proactive engagement between social partners to develop agreements on managing energy or workforce transitions.
- Committing to respect international labor obligations and obligating investors and investments to uphold best practices in these areas.
- Committing to domestic action, including through social safety nets, targeted education and training programs, pension funds, and government funding for a just transition.

### Detailed Recommendations

States should cultivate social consensus in drawing pathways towards climate alignment and sustainability. Decision-making processes, political or judicial, should not only include governments and investors (employers), but also workers.<sup>41</sup> Trade unions, industry, labor representatives, affected communities, and all other relevant community groups (together, ‘social partners’)<sup>42</sup> must play an active role in supporting the formulation, implementation, and monitoring of sustainable development policies<sup>43</sup> at the national and international level. Countries should strive to implement coherent policies across economic, environmental, social, education, and

labor portfolios to create an enabling environment for enterprise, workers, investors, and consumers to drive the NZE transition together.<sup>44</sup>

Policies and action addressing climate change should respect, promote, and realize the rights at work defined by the ILO.<sup>45</sup> These include “freedom of association and recognition of the right to collective bargaining, the elimination of forced or compulsory labor, the abolition of child labor and the elimination of discrimination in respect of employment and occupation.”<sup>46</sup>

Sustainable pathways need to account for the gender dimensions of labor and economic policy, ensuring that impacts are appropriately distributed, and that climate-related economic policy does not entrench (or re-entrench) existing gender inequalities in the workforce.<sup>47</sup>

The NZE transition requires a “country-specific mix of macroeconomic, industrial, sectoral, and labor policies” that mobilize and direct public and private investment towards sustainable activities, while generating decent jobs all along the supply chains.<sup>48</sup> Although policies and programs need to be designed in line with conditions of specific countries, international cooperation is necessary for implementation, in order to avoid a ‘race to the bottom,’ in which basic labor rights are not recognized across borders.<sup>49</sup>

Countries must commit to encouraging climate investment and decent related jobs.<sup>50</sup> They should facilitate mediated domestic forums for proactive engagement between social partners to develop agreements on managing energy or workforce transitions.<sup>51</sup>

Parties must commit to respect international labor and human rights obligations, and in all new investment governance regimes, leverage obligations on investors and investments to similarly uphold best practice in these areas.<sup>52</sup> Agreements must ultimately promote the creation of decent jobs, ensure social protection for job loss, promote skills development, and protect the right of laborers to organize and bargain.<sup>53</sup>

All states must commit to domestic action, including the strengthening of social safety nets, creation of targeted education and training programs, protection of pension funds including energy sector workers’ pension savings (requiring divestment from fossil fuel investments), and specifically allocated government funding for just transition.<sup>54</sup> Funding for these programs can be collected through carbon pricing, as well as reallocation of savings from fossil fuel subsidies (discussed further in Sections 4.3 and 4.4 below).<sup>55</sup>

### **3 International Investment Law**

The area of international law that requires the most substantial reform to achieve alignment with climate goals is international investment law. The regime consists of a network of bilateral investment treaties (BITs), investment chapters in free trade agreements (FTAs), and other treaties with investment provisions governing the treatment of foreign direct investment (FDI) and foreign investors by host states. Investment treaties contain substantive provisions on the protection of investors and their investments along with investor–state dispute settlement (ISDS) mechanisms to enforce those substantive provisions through international arbitration.<sup>56</sup> As it stands, the regime is an obstacle to achieving climate goals, and it should be fundamentally redesigned to support climate-aligned investment governance, facilitate flows of climate investment, and progressively eliminate climate-disruptive investment.<sup>57</sup>

#### **Overview and Rationale for Change**

Investment treaties and arbitration raise the costs of legitimate climate action by states, such as fossil fuel phase-outs and the regulation of other high-emission investment.<sup>58</sup> Under the existing investment regime, a foreign investor covered by an applicable treaty may claim monetary compensation from its host state for policy measures

perceived to negatively affect its investments in the host state.<sup>59</sup> As governments adopt climate policy measures, investors are increasingly resorting to ISDS to challenge those measures and seek monetary compensation.<sup>60</sup> For example, when states restrict petroleum activities, stop the expansion of fossil fuel infrastructure, or phase out fossil-fired power generation, investment treaties and arbitration may entitle foreign investors whose investments are impacted to pursue compensation for those measures.<sup>61</sup> The investment regime effectively transfers liability of private companies to bear the costs of high-emission investments to the public, thereby protecting the economic interests of high-emission companies, at the expense of regulating them in the public interest.<sup>62</sup>

Even the risk of climate-related investment arbitration may discourage policy action, leading to regulatory chill.<sup>63</sup> “Denmark, France, and New Zealand have openly admitted that they pushed back their deadlines to phase out oil and gas exploration or exploitation because of investment treaties and the fear of arbitration claims” by foreign investors.<sup>64</sup> There may be other states that are likewise “delaying action or lowering ambition” in relation to climate change because of the international investment regime.<sup>65</sup>

The Energy Charter Treaty (ECT)—an investment treaty that protects energy investments only—illustrates how fossil fuel investors can use investment treaties to protect their economic interests, notwithstanding the purportedly ‘climate neutral’ nature of the treaty. Under the terms of the treaty, foreign investors are offered unilateral protections without corresponding obligations. In addition, domestic investors, affected communities, and even states have no meaningful access to justice vis-à-vis investors under the ECT. This framework establishes an asymmetrical system, including through lack of transparency by, and accountability of, foreign investors. Accordingly, although the ECT contains objectives besides the protection of investors, its arbitration system places a one-sided emphasis on protecting investors and capital flows, while downplaying public interests, and thereby undermining environmental, human rights, and sustainable development objectives.<sup>66</sup>

In the effort to catalyze a just transition to NZE, it is inevitable that fossil fuels will be affected by climate policy. Almost one-fifth of investment arbitrations have been brought by fossil fuel companies; the latter have won around three of every four cases initiated.<sup>67</sup> Simultaneously, other stakeholders who are in much greater need of public support do not benefit from the same privileges to demand justice in the transition away from fossil fuels and other high-emission investments.<sup>68</sup> By maintaining the international investment regime, states are indirectly subsidizing a framework that ignores the climate imperative and, instead, protects and rewards coal, oil, gas, and other high-emission investments that dangerously interfere with the climate system.<sup>69</sup> As states increasingly seek to prohibit high-emission activities in an effort to act on climate change, investment treaties, in their current form, will act as an obstacle and are likely to constrain climate action, in both developing and developed countries.

Investment treaties are narrowly designed to safeguard the economic interests of foreign investors and to protect all types of FDI. Accordingly, by their nature, they protect low-emission and high-emission investments equally, as if they were equally desirable.<sup>70</sup> In recent years, the number and frequency of very large monetary compensation awards granted to foreign fossil fuel investors as a result of investor-state arbitration has significantly increased, especially in relation to disputes against developing countries, where the actions complained of may have been related to efforts of these countries to protect their land, biodiversity, or population.<sup>71</sup>

Climate change generates high physical and transition risk, making the valuation of fossil fuel assets extremely complicated and uncertain.<sup>72</sup> In this context, states should reclaim from private arbitrators the issue of valuation of fossil fuel investments and of the compensation (if any) paid to fossil fuel investors.<sup>73</sup> From a market perspective, it is more efficient for private actors to make arrangements to protect themselves from the risks they may incur as a result of the NZE transition, through diversification and insurance, than for governments to pay compensation or other transitional relief.<sup>74</sup> In short, companies can largely afford to insure themselves against risks and should bear any uninsured costs of the NZE transition.<sup>75</sup>

Without a fundamental deconstruction of the existing framework, the investment regime will continue to perpetuate the influence of fossil fuel companies to chill regulation and leech public funds to cover losses of the fossil fuel industry. In a world that is undeniably undergoing a major energy transition, fossil fuel companies and high-emission investments are increasingly characterized by corporate recklessness, maintaining obsolete energy forms, and investing in stranded assets, and such behavior should not be encouraged or rewarded through the investment treaty regime. Numerous reform proposals aim to bring investment treaties in line with climate action<sup>76</sup> and improve discrete aspects of substantive investment protection provisions and dispute settlement mechanisms.<sup>77</sup> These include for example, the creation of a “standing multilateral mechanism,” such as a multilateral investment court, as championed by the European Commission<sup>78</sup> and considered by the United Nations Commission on International Trade Law (UNCITRAL) Working Group III.<sup>79</sup> Proponents of these reforms argue that they are steps in the right direction, even if they are piecemeal approaches.<sup>80</sup>

However, marginal changes fail to meet the necessary level of ambition or urgency required to address the climate crisis and the underlying problems of international investment law, and therefore risk legitimizing a fundamentally flawed regime. International investment law needs a full overhaul. It is not only incompatible with states’ commitments under the UNFCCC and the Paris Agreement, by constraining their right and duty to regulate in the climate policy space, as well as hindering policy action on the grounds of public health, access to public goods, protection of human rights and other environmental processes, and sustainable development generally.<sup>81</sup> Further, the evidence on whether investment treaties and ISDS actually achieve their key benefits with respect to promoting FDI is, at best, inconclusive, with existing treaties neither increasing the quality nor quantity of FDI, nor promoting good governance, nor strengthening the rule of law, nor depoliticizing international conflicts surrounding foreign investment.<sup>82</sup> As a result, even if there were evidence of any marginal benefits in these areas, they would be far outweighed by the outsized costs of the regime, some of which are explained above. Given the scale and urgency of the climate crisis, it is inefficient for states to renegotiate thousands of investment treaties to include climate-specific carve-outs, exceptions, or right to regulate clauses. Therefore, terminating investment treaties and arbitration mechanisms would help prevent complexity and enable urgent action.<sup>83</sup>

As it stands, the investment regime allows foreign investors to undermine states’ climate ambitions. It sustains rules and power dynamics that are detrimental to individuals, local communities, and Indigenous Peoples, as well as the land and ecosystems on which they depend. In light of the multiple issues concerning investment treaties, international investment law needs to be redesigned to promote and facilitate climate-aligned investment governance.

After moving away from the existing regime, the international community should take bold and immediate action to design a new system that achieves climate-aligned investment governance. This new regime should be grounded in clear and common goals for promoting investment flows that support and protect people and planet; encourage sustainable, climate-aligned investment projects; and provide well-defined guidelines on climate-aligned investment governance, covering areas not only related to climate action, but also public health, environmental protection, and human and labor rights. To prioritize achieving climate goals, the regime should focus on phasing out investments in fossil fuels, related infrastructure, and other high-emission projects; facilitating a significant uptick in domestic and foreign climate investment flows, notably in critical minerals and their value chains, given their importance to the NZE transition; and achieving climate-aligned domestic and international governance of investment.

## Summary of Main Recommendations: International Investment Law

- Terminating or withdrawing from investment treaties.
- Withdrawing advance treaty-based consent to investment arbitration.
- Neutralizing survival clauses.
- Eliminating privileges or protections for investors or investments that are unsound from a climate policy perspective or that challenge the sovereignty of states to adopt climate policy.
- Refraining from negotiating new investment treaties that fail to align with global climate goals.
- Strengthening international cooperation between states to address challenges in the governance of international investment.
- Supporting domestic administrative and judicial systems to facilitate investment governance and enforcement, including through investment assessment regimes based on climate-aligned criteria.
- Agreeing to swiftly phase out fossil fuel investments, including an immediate prohibition on new investments in coal, oil, and gas supply, and specific obligations and timelines for individual states, on the basis of fairness and equity.
- Eliminating international, domestic, and contractual law privileges for investors that are unsound from a climate perspective or that challenge climate policy, including protections, subsidies and other incentives, and public financing for fossil fuel and other high-emission investments.
- Agreeing to only incentivize, promote, and facilitate foreign investments that align with climate goals, the SDGs, and national development priorities.
- Moving away from investor–state arbitration in favor of dispute prevention mechanisms and state–state proceedings such as quasi-judicial compliance committees and joint committees.
- Facilitating and increasing North–South FDI flows of finance for climate investment.
- Dedicating public funds to just transition measures for disproportionately impacted workers and communities in developing countries.
- Agreeing to adapt domestic legal frameworks and practices on compensation to primarily protect individuals (workers, local communities, Indigenous Peoples, and low-income taxpayers) and smaller companies that are most vulnerable to climate impacts and the NZE transition.
- Disallowing claims of compensation from fossil fuel companies from states under domestic and international legal frameworks for legitimate regulatory changes responding to climate change.
- Modifying the valuation method of fossil fuel assets under international and domestic law frameworks in light of climate goals, stranded assets, and the remaining carbon budget.
- Focusing international legal frameworks on compensation on ensuring that states, particularly in lower-income economies, have sufficient resources for climate investment and loss and damages.

## Detailed Recommendations

To remove the obstacles to climate investment posed by the existing international investment regime, states should adopt binding commitments to terminate, or withdraw from, investment treaties, and to withdraw advance treaty-based consent to investment arbitration. These measures would swiftly phase out investment protections for coal, oil, gas, and other high-emission investments.<sup>84</sup> States may take a tiered approach, starting with withdrawal of consent to arbitration, and subsequently either unilaterally terminating or withdrawing from treaties, or terminating treaties by mutual consent. Taking this approach would wipe the slate clean to build a just, climate-aligned investment regime.

State parties to relevant investment treaties should agree to neutralize sunset or survival clauses, which are typically included in investment treaties and protect existing investments in the host country for a period ranging from 10 to 30 years beyond the treaty’s termination.<sup>85</sup>



States should also commit to refraining from negotiating new investment treaties that fail to align with global climate goals, the SDGs, or national development or public interest goals.<sup>86</sup>

Moving towards an international investment law regime that supports climate-aligned investment governance will require international cooperation between states. Cooperation could include the creation of “mechanisms to address challenges in the governance of international investment, including with respect to intellectual property, technology transfer, and data; and support domestic administrative and judicial systems to facilitate investment governance and enforcement.”<sup>87</sup> States could also consider establishing independent national climate-aligned investment advisory bodies to oversee and support the implementation of global-to-local climate investment policies.<sup>88</sup>

The urgency of the climate crisis means states should acknowledge that fossil fuels threaten the climate system and human lives.<sup>89</sup> Going beyond this, as well as the limited commitments in international climate agreements to date,<sup>90</sup> states should also agree on timelines to swiftly phase out fossil fuel investments, including an immediate prohibition on new investments in coal, oil, and gas, in line with the International Energy Agency’s (IEA) net-zero pathway.<sup>91</sup> In particular, states could establish a framework to negotiate the phase-out of fossil fuel production, including specific phase-out obligations and timelines for individual states (defining which fuels each country will produce, how much of them, and until when),<sup>92</sup> on the basis of principles of fairness and equity.<sup>93</sup>

Moving away from an exclusive focus on the protection of foreign investors and their economic interests, states should consider adopting international law mechanisms to eliminate international, domestic, and contractual law privileges for investors that are unsound from a climate policy perspective<sup>94</sup> or that challenge the sovereignty of states to regulate climate change and other public interest issues. In particular, states should eliminate all protections, incentives (including subsidies), and public financing for fossil fuel and other high-emission investments.<sup>95</sup> At the same time as they phase out fossil fuel subsidies, states should commit to dedicating public funds to just transition measures for the benefit of disproportionately impacted workers and communities,<sup>96</sup> and to restricting the use of public funds to cover losses of companies that continue to invest in fossil fuels despite the climate imperative. The proposed Fossil Fuel Non-Proliferation Treaty for example, envisions an international agreement based on three pillars: non-proliferation of coal, oil, and gas; a fair phase-out in line with the 1.5°C goal; and a just transition.<sup>97</sup>

Another area of cooperation to facilitate climate investment is the standardization of criteria to define sustainable, climate-aligned investment, helping funnel investment into the relevant sectors. States could establish an (international) body, made up of stakeholders spanning the public and private sector, civil society, and academia, to produce and mainstream these criteria. Criteria on sustainability and climate alignment must be applied meaningfully throughout the lifecycle of an investment, not simply its admission. All new investment governance treaties and regulation should provide incentives to meet the criteria, and practical consequences of not meeting them, including, for example, when considering favorable access to sustainable public procurement markets, facilitated approval processes, tax advantages and disadvantages, and regulatory sanctions.<sup>98</sup>

Along with facilitating climate investment, states should also cooperate to shape climate-aligned governance regimes for existing and future foreign investment. For example, states could agree to only incentivize, promote, and facilitate foreign investments that align with climate goals, the SDGs, and national development priorities,<sup>99</sup> including by incorporating the criteria mentioned above. Similarly, states should strengthen their investment assessment regimes, with a view to thoroughly reviewing all domestic and foreign investments against internationally (and nationally) defined climate-aligned criteria, including environmental, social, and HRIAs; the maintenance of environmental management systems; and labor standards.

Similarly, states’ right and duty to take climate action and other measures in the public interest<sup>100</sup> and to regulate all investment in a climate-aligned manner should be strengthened. For example, states should cooperate to

introduce national measures to regulate and limit the production of fossil fuels and other high-emission activities,<sup>101</sup> as well as to create and enforce investors' environmental and social obligations.

Finally, states should move away from investor–state arbitration and rely instead on dispute prevention mechanisms, including mediation, and state–state proceedings, such as quasi-judicial compliance committees and a joint committee between states to prevent and settle disputes. Such joint committees, in the model of existing best-practice investment treaties, could be composed of representatives of both parties, with the intention to monitor compliance, share opportunities for expanded climate investment, promote participation of private sector and civil society, and seek to resolve issues and disputes outside of ISDS.<sup>102</sup>

With respect to building a new investment regime that promotes climate-aligned investment, states should negotiate specific ways in which they will implement the principle of common but differentiated responsibilities and respective capabilities enshrined in the UNFCCC.<sup>103</sup> They should emphasize the need for developed countries to take the lead in investing in decarbonization, building on earlier experiences regarding the consumption and production of hydrofluorocarbons under the Montreal Protocol<sup>104</sup> and the Kigali Amendment.<sup>105</sup> They should also conceive of innovative ways to facilitate and increase North–South FDI flows of finance for climate investment.<sup>106</sup> Relatedly, states should create and strengthen incentives for countries to conduct Research and Development (R&D) and share technologies, building on earlier experiences.<sup>107</sup>

Further, to ensure a just transition, states should establish transition funds and other just transition mechanisms, with developed country funding, to support developing countries' workers and communities in transitioning away from fossil energy sources and other high-emission activities.<sup>108</sup> Establishing a framework with distinct responsibilities for developing and developed countries and common guidelines can help ensure a fair and equitable transition.

In light of the importance of critical minerals to the NZE transition, states should cooperate to ensure sustainable, ethical, and stable investment flows for critical minerals for the energy transition, and thoroughly review and oversee current investments to assure the suspension of unsustainable mining and processing practices. States should also adopt circular economy principles and guidelines on investment in sustainable production and systems and in R&D for efficient recycling practices for minerals and metals used by the industry, including critical minerals.<sup>109</sup>

States should also agree to adapt their existing domestic legal frameworks and practices on compensation to primarily protect individuals and smaller companies that are most vulnerable to the impacts of climate change. Domestic legal frameworks on compensation should primarily focus on benefitting workers affected by the phase-out of fossil fuels, as they will need compensation in the form of severance packages, social safety nets, and resources and opportunities for retraining and upskilling.<sup>110</sup> Domestic schemes should also primarily benefit other local communities and Indigenous Peoples, as well as broader populations and taxpayers directly or indirectly affected by climate change and the NZE transition.<sup>111</sup> Such effects include: the impacts of economic diversification away from coal, oil, and gas on other industries; subsequent increases in energy prices; social and environmental impacts of increased mining of critical minerals and metals needed for the NZE transition; and economic, social, and environmental impacts of the closure of coal mines, and the decommissioning of oil and gas fields and infrastructure.<sup>112</sup> International law should also embed commitments by states to translate those principles and criteria of distributive and procedural justice into their respective domestic legal frameworks and mechanisms—for example, through just transition or climate justice commissions or task forces—while staying mindful of countries' different priorities and capabilities.<sup>113</sup>

States should disallow fossil fuel companies to claim compensation from states under domestic or international legal frameworks for legitimate regulatory changes responding to climate change.<sup>114</sup> In addition, states should cooperate to modify the valuation method of fossil fuel assets to represent climate adaptation and mitigation

interests, as well as the remaining carbon budget. If a fossil fuel asset can no longer be exploited for the benefit of the carbon budget, then the cost of stranding it should not be shifted from the investor to the state through an award or judgment for monetary compensation.<sup>115</sup>

Instead, international legal frameworks should center on ensuring that states have sufficient resources to invest in climate mitigation and adaptation, and to cover the growing costs of loss and damage.<sup>116</sup> Compensation for loss and damage should be available especially for lower-income countries that are most vulnerable to climate and transition impacts and have least access to public finance.<sup>117</sup>

## 4 International Trade Law

The international trade regime hosts a variety of intersecting and relevant areas to climate investment. Below, we discuss Development and Industrial Policy (Section 4.1), Trade in Environmental Goods (Section 4.2), Carbon Border Adjustments (Section 4.3), and Fossil Fuel Subsidies (Section 4.4) and how these areas should be reformed for climate-aligned investment governance.

### 4.1 Development and Industrial Policy

#### Overview and Rationale for Change

Alongside reform of the international investment regime, specific developments and reforms of international trade frameworks are required to prepare and strengthen the economies in low and middle-income countries for an NZE world.<sup>118</sup> The developing world is endowed with abundant resources required to address the climate emergency. These resources span across renewable energy, strategic minerals, biodiversity, and human capital. The African continent, in particular, encounters a considerable opportunity to develop productive capacity in zero-carbon value chains, including a massive scaling up of strategic minerals mining and supply chains for photovoltaics, electric batteries, hydrogen and other green fuels, electric vehicles, and digital services.<sup>119</sup>

A prerequisite for successfully capturing this opportunity is ensuring that international trade law frameworks applicable to the developing world contribute to, and allow for, climate investment flows and therefore, the development of economic sectors relevant to the NZE transition.

The energy sector, in particular, presents a great opportunity for the NZE transition. While there have been some increases in access to energy in Africa, the industry as a whole is generally still plagued with unreliability. Paired with significant rates of poverty, the limited access to energy is a serious problem in the developing world generally, and in Africa specifically. Additionally, widespread dependency on energy from coal, oil, gas, and traditional biomass is causing severe environmental, economic, and health damage.<sup>120</sup> Africa's energy potential, especially in relation to renewable energy, is vast; yet only a fraction of it is currently being used.<sup>121</sup>

As the world adopts renewable energy technologies on a larger scale, the energy transition will become exceedingly more mineral intensive as demand for these resources increases. To ensure sustainable development, circular economy approaches that lead to the recycling and reuse of these minerals, or even their substitution, may have a significant impact on the demand for these resources in the future.<sup>122</sup>

Africa's extractive industries have been hampered in the past by a lack of infrastructure, political instability, conflict, corruption, and conflicting regulations.<sup>123</sup> There is now the opportunity to lower or eliminate emissions within the industry, thus making a much more sustainable venture in the long term, as well as the opportunity to sustainably grow the extractives industry.

Resource-rich countries in Africa, and beyond, have long used local content requirements (LCRs) to try to turn short-term gain from natural resource endowments to long-term prosperity of extractive industries.<sup>124</sup> In recent years, LCRs have gained in popularity in the renewable energy industry in African countries, which have attached LCRs to solar, wind, and other renewable energy investments, aiming to maximize their benefits.<sup>125</sup>

World Trade Organization (WTO) Agreements have been ratified by the bulk of the world's trading nations. These agreements are intended to provide the legal ground rules for international commerce. The following frameworks cover and prohibit a broad range of policies that governments can and do use to promote nascent local industries and support the implementation of NZE transition policies:

1. The General Agreement on Tariffs and Trade (GATT);<sup>126</sup>
2. Agreement on Trade-Related Investment Measures (TRIMs);<sup>127</sup>
3. Agreement on Subsidies and Countervailing Measures (SCM);<sup>128</sup> and
4. The General Agreement on Trade in Services (GATS).<sup>129</sup>

The provisions of these agreements focus to a great extent on preventing discrimination against foreign goods and service providers. These agreements are intricate and rely on interconnected provisions. Article III of GATT on National Treatment prohibits WTO member states from applying discriminatory measures on imports vis-à-vis like domestic products. Article XI of the GATT deals with the general elimination of quantitative restrictions on the importation and exportation of any products. Further, the TRIMs Agreement serves to clarify the kinds of trade-related investment measures that are specifically prohibited under Articles III:4 and XI.

The operation of these provisions may restrict countries' ability to enact LCRs and other potentially useful policies for the NZE transition, as described above. Therefore, states should adopt trade policies, including the reform of trade agreements, to provide the policy space to promote and facilitate climate investment, particularly in developing countries.

For example, states and regional organizations such as Ecuador, the EU, Kenya, and New Zealand have started to team up to cooperate on trade and climate, forming the Coalition of Trade Ministers on Climate.<sup>130</sup> This coalition is the beginning of the needed "joint action to tackle the climate crisis in a fair manner through trade policy."<sup>131</sup> As Kenya's Cabinet Secretary for Industrialization, Trade and Enterprise Development, Betty Maina stated: "trade should not only empower and improve the livelihoods of communities but should also serve as a catalyst for climate solutions."<sup>132</sup>

### **Summary of Main Recommendations: Development and Industrial Policy**

- Enacting policies (including roadmaps, incentives, and financing mechanisms) to encourage the development of renewable energy systems.
- Renegotiating provisions in international trade agreements that hamper states' ability to adopt climate investment policies to drive the NZE transition.
- Developing innovative climate-aligned trade agreements to foster regional industrial policy.

### **Detailed Recommendations**

States should cooperate in enacting policies to encourage the development of renewable energy sources<sup>133</sup> to promote energy security, access to energy, sustainable development, reduction of greenhouse gas (GHG) emissions, reduction of deforestation, and integration of renewable energy production in one state with other countries in the region.<sup>134</sup> Such policies are particularly vital in the developing world, to boost the development of renewable energy-focused economies rather than developing obsolete and stranded assets in the fossil fuel industry.

Ideally, in line with the recommendations in Section 3.2, states should consider renegotiating international trade agreements that hamper their ability to adopt climate investment policies to drive the NZE transition. In particular, policy space in the form of removing prohibitions or explicitly allowing appropriately designed and implemented performance requirements for climate investments should be formalized within the WTO.

In the interim, states should develop innovative regional treaties, with qualifiers attached that limit the applicable scope of these restrictive obligations. Permitting preferences to achieve development goals and broadening the scope for interpreting like circumstances to consider a variety of local policy and other considerations would accommodate many types of LCRs that might be found contrary to other legal obligations. By incorporating expanded exceptions to substantive standards of treatment in regional treaties, the operation of these standards of treatment could be significantly constrained, thereby enhancing states' policy-making ability.

## 4.2 Trade in Environmental Goods

### Overview and Rationale for Change

One of the most cost-effective ways to foster climate investment is by liberalizing trade in low-carbon environmental goods, services, and Environmentally Preferable Products (EPPs)<sup>135</sup> by reducing tariffs and non-tariff barriers.<sup>136</sup> It is “a key mechanism through which climate change will influence the economic outcomes of low- and middle-income countries.”<sup>137</sup> In terms of environmental goods, while the Asia-Pacific Economic Cooperation (APEC) and the OECD have defined goods lists to be used in negotiations, structured plurilateral negotiations have so far been unsuccessful.<sup>138</sup> Trade in environmental services is a critical and complementary area to environmental goods, but there has been minimal formal discussion or negotiation of the matter to date.<sup>139</sup>

The Agreement on Climate Change, Trade and Sustainability (ACCTS) is one initiative in this area that seeks to reconcile various issues of climate change, sustainability, and trade. The multilateral negotiations of the ACCTS, taking place amongst a narrow group of climate-progressive countries, will address the recommendations posed in this section.<sup>140</sup> However, action by other states is also needed to scale and mobilize trade in environmental goods and services in a globalized system.

The critical issue in trade in environmental goods has been defining what these goods are in trade classifications. Amendments to the World Customs Organization's (WCO's) Harmonized Commodity Description and Coding System (HS), which is used by nearly every country for classifying imports and exports, were implemented in 2022.<sup>141</sup> These amendments specify definitions that should ease the distinction of which goods can be considered environmental goods in tariff schemes. They specifically provide detail and categorization for environmental goods, distinguishing them from alternatives, and making negotiations and data collection in the area much more straightforward.

However, EPPs are not included in the environmental good specifications. EPPs are produced in less carbon-intensive ways, and reducing tariffs on these goods could price in the social costs and benefits of these goods (in comparison to more carbon-intensive alternatives).

Goods and services that contribute to sustainability goals or climate-neutral production processes are opaquely defined and not recognized by any universal system. By providing a common language and broad-based precedents, policymakers can use consensus-based methods to legitimize stakeholders that use and promote sustainability characteristics in their goods and services.<sup>142</sup> Furthermore, universally recognized international standards for environmental goods and EPPs allow international instruments to be used to embed the societal benefit of such goods and services into their prices, making environmentally-friendly products more competitive in market-based economies.

## Summary of Main Recommendations: Trade in Environmental Goods

- Exploring options for liberalizing trade in environmental goods and services through universal environmental goods lists (including EPPs) and tariff reduction measures.
- Committing to reducing tariffs on goods and services building on existing standards and environmental goods lists to meet climate goals.
- Establishing inclusive working groups to discuss universalizing a sustainability characteristics list.
- Enhancing transparency and exchanging information on sustainability metrics, regulatory systems, accreditation systems, and testing procedures.

### Detailed Recommendations

Countries should continue to commit to exploring options for liberalizing trade in environmental goods and services at the WTO, including through the Trade in Environmental Sustainability Structured Discussions (TESSD). These discussions should develop options for negotiating universal environmental goods lists and tariff reduction measures. Countries should convene these discussions to reopen negotiations on a universal Environmental Goods Agreement. Besides the structured discussions at the WTO, the negotiation of the ACCTS may serve as momentum for developing solutions to these challenges, which could subsequently be applied by other countries.<sup>143</sup>

Countries should explore options for including EPPs on an agreed-upon environmental goods list. The APEC and OECD lists only include goods for which the environmental benefit relates to intrinsic characteristics in use, rather than its production process. Sustainably produced goods should be defined and included in trade liberalization measures. States should also produce further research and data on what defines environmental services and how to incorporate them into liberalizing measures.<sup>144</sup>

States should commit to reducing tariffs on goods and services derived from the WCO standards and existing environmental goods lists (APEC and OECD) to meet climate goals.

An essential first step in regulating environmental goods and services is to be transparent and exchange information on sustainability metrics, regulatory systems, accreditation systems, and testing procedures. Working groups should be established to discuss universalizing a sustainability characteristics list. Such groups should consist of a broad range of stakeholders (governments, private sector, civil society, and academia) to explore options for defining “sustainability” in the context of goods and services. These groups should play a key role in improving data on EPPs and services by defining core metrics and methodological standard regulation.

## 4.3 Carbon Pricing and Border Adjustments

### Overview and Rationale for Change

Carbon pricing mechanisms, in the form of either emissions trading (or cap-and-trade) systems or carbon taxes, have emerged as an increasingly promising and ubiquitous form of embedding the social cost of carbon emissions into the economic price of goods and services;<sup>145</sup> they create market-based incentives that encourage climate investment and a shift away from high-emissions investment. As of April 2023, there were 73 emissions trading systems or carbon taxes in operation, covering approximately 23% of global GHG emissions.<sup>146</sup>

Despite growing climate ambition, in the absence of a binding multilateral agreement, national and regional carbon pricing mechanisms must be reconciled with each other to apply the same pricing pressure on goods and services crossing borders. The “competitive argument posits that carbon pricing mechanisms, environmental standards, carbon taxes, and more robust domestic regulations impose costs on specific domestic industries. Depending on

how stringent these policy instruments are, the production costs in these countries will be higher than industries making the same goods in jurisdictions with either weak or unenforced environmental regulations.”<sup>147</sup>

As a result, policy that regulates and imposes taxes on GHG emissions will be priced into the domestic industry, and imported goods and services from unregulated sectors will be more competitive in domestic markets. For “energy-intensive and hard-to-abate sectors,” compliance costs for meeting environmental regulations can be up to six percent higher.<sup>148</sup> In plainer terms, risks around leakage and competitiveness persist. Border carbon adjustments (BCAs) present an opportunity to avoid these risks by applying the same domestic emissions pricing frameworks to foreign goods and services.

In December 2022, the European Council and European Parliament reached a provisional agreement on the European Union Carbon Border Adjustment Mechanism (CBAM),<sup>149</sup> which began to operate pursuant to the provisional agreement from October 2023.<sup>150</sup> Preliminary design of other BCA policies are also being explored in similar advanced economies, including Canada, the United Kingdom, and the United States.

The effective implementation of carbon pricing and border adjustment mechanisms depends on consistent accounting of the greenhouse gases embedded in traded products and services. Various accounting frameworks, including the Task Force on Climate-Related Financial Disclosures (TCFD), Global Reporting Initiative (GRI), and CDP (formerly Carbon Disclosure Project), rely on voluntary reporting by companies and do not prescribe any particular accounting methodology.<sup>151</sup> Harmonizing so that emerging economies that are climate ambitious may verify their carbon competitiveness.<sup>152</sup> Such a system would make it easier for states and organizations to receive credit for lower carbon intensity in an international market that puts a price on carbon emissions.<sup>153</sup>

### **Summary of Main Recommendations: Carbon Pricing and Border Adjustments**

- Expanding carbon pricing mechanisms such as emissions trading systems and carbon taxes, and in the interim cooperating on adopting BCAs to avoid offshoring and leakage.
- Designing cooperative tools based on their role for climate action and adapting international trade rules accordingly.
- Exploring international climate or carbon clubs and other solutions to prevent carbon leakage, as a first step toward a multilateral approach to carbon leakage.
- Dedicate revenues from BCAs to support the industrial low-carbon transition in vulnerable low- and middle-income countries.
- Adopting an internationally harmonized accounting framework for reporting GHG emissions throughout value chains.

### **Detailed Recommendations**

States without carbon pricing mechanisms should, in light of national circumstances, explore cap and trade systems or carbon taxes as policy options to embed the social externalities of fossil fuels into the economy. States with carbon pricing mechanisms should cooperate on the adoption of BCAs to avoid incentivizing offshoring and leakage.<sup>154</sup>

Rather than designing climate policies around concerns regarding WTO compatibility, states should “design cooperative tools that further the cause of fighting climate change, and WTO members should broaden their understanding of WTO exceptions to include such measures.”<sup>155</sup>

An international climate or carbon club could be one option to prevent carbon leakage. This could be the first step by states towards a more multilateral approach to carbon leakage. It would expand the bounds of carbon pricing

mechanisms, avoid leakage, and pressure external parties to join or face carbon pricing mechanisms to avoid limited market access.<sup>156</sup>

Revenues from BCA taxation should support the industrial low-carbon transition in low- and middle-income countries, which is where these mechanisms will have the greatest impact. States implementing BCAs should explore solutions through an international industry transition investment fund that would help to reduce capital costs. Advanced economies could dedicate part of the revenues to top-up climate finance support for vulnerable low-income countries.

To support climate pricing and border adjustment mechanisms, states should explore harmonizing greenhouse gas accounting by developing an internationally uniform and comprehensive framework that accurately and consistently measures GHG emissions throughout supply chains. For example, the Coalition on Materials Emissions Transparency (COMET) Framework is an effort to harmonize GHG emissions standards and protocols and provide sector-specific guidance.<sup>157</sup>

## 4.4 Fossil Fuel Subsidies

### Overview and Rationale for Change

Phasing out fossil fuel subsidies would not only remove incentives that make fossil fuels and other high-emission investments artificially competitive but would also help free up resources for climate investment and a just energy transition.<sup>158</sup> Fossil fuel subsidy schemes pull scarce financing and public investment away from the energy transition and climate action plans. A subsidy swap to redirect savings and reallocate spending away from fossil fuels to renewable energy would accelerate the replacement of fossil fuels with sustainable energy systems.<sup>159</sup>

Major advanced economies still support coal, oil, and fossil gas production and consumption by funneling hundreds of billions of U.S. dollars into subsidies each year.<sup>160</sup> Fossil fuels receive considerable subsidies in much of the world, and more subsidies are directed towards consumers and producers of fossil fuels than renewable energy.<sup>161</sup> According to the OECD and IEA, overall government support for fossil fuels in 51 countries worldwide doubled to USD 697.2 billion in 2021, from USD 362.4 billion in 2020.<sup>162</sup> This total volume is multiples of the USD 100 billion annual commitment by developed countries set out in international climate agreements,<sup>163</sup> which, according to the OECD, developed countries have so far failed to meet,<sup>164</sup> demonstrating the vast potential resources available to states to funnel into climate investment if fossil fuel subsidies were removed.<sup>165</sup> Governments should instead use these funds to develop low-carbon alternatives and finance the NZE transition, both of which are desperately needed to meet climate goals.

Data from the IEA shows that, while there was a noticeable dip in fossil fuel subsidies in 2020 due to the COVID-19 pandemic, energy subsidies have been rising again since 2021, with fossil fuel consumption subsidies hitting a record USD 1 trillion in 2022, as the global energy crisis triggered by Russia's invasion of Ukraine created turmoil in energy markets.<sup>166</sup> However, as noted by the OECD and IEA, countries should resist raising government support for fossil fuels in response to global surges in energy prices, as well as any lingering economic impacts of the pandemic.<sup>167</sup> According to the OECD, "given the existential threat of climate change and the need for a green recovery, [states] should accelerate investment in sustainable energy infrastructure and the creation of green jobs, as well as meeting the [SDGs], in particular SDG 7, to ensure access to affordable, reliable, sustainable and modern energy for all."<sup>168</sup> For example, despite the increase in public stimulus in response to the COVID-19 pandemic, environmental goals only accounted for 21% of COVID-19 recovery spending.<sup>169</sup> The increase in public spending presents a unique opportunity to shift public resources to areas that support environmental and climate goals, without destabilizing existing economic structures. The current global energy crisis also brings increased opportunities for renewable energy. Energy security has emerged as a strong motivation to accelerate renewable energy deployment.<sup>170</sup> At the EU level for example, in response to concerns about energy security, the European



Commission announced aims to increase the share of renewables in final energy consumption to 45% by 2030, exceeding the 40% previously under negotiation.<sup>171</sup> However, as the energy crisis continues, states must be conscious that market interventions to shelter citizens from high energy costs should not harm the business case for renewable developers.<sup>172</sup>

Macro-level changes in the international subsidy structure are visible as overall fossil fuel subsidies decrease and investment in renewables increases. However, progress is not linear and follows oil prices. The OECD and IEA estimate, which covers 76 economies, shows a downward trend in support of fossil fuels from 2013 to 2016.<sup>173</sup> A reversal in 2017 of 5% indicates that policy is incongruent with the efficiency of energy sources and returns on investments and instead prioritizes vested interests in the fossil fuel industry.<sup>174</sup> Returns on renewable investments have exceeded returns on fossil fuel investments every year since 2008.<sup>175</sup> Falling costs and increasing returns on investment implies the USD 697.2 billion spent in 2021 by 51 economies on fossil fuel subsidies could instead fund more renewables every year at greater efficiency.<sup>176</sup>

SDG 12, target 12.C, mandates that countries “[r]ationalize inefficient fossil fuel subsidies that encourage wasteful consumption.”<sup>177</sup> A subsidy swap would funnel assets from fossil fuel industries to retraining programs, renewable energy innovation and production, and other climate goals, and in doing so magnify the contributions to long-term emission reductions and supporting SDGs focused on the economy, jobs, public health, and gender equality.<sup>178</sup>

### **Summary of Main Recommendations: Fossil Fuel Subsidies**

- Cooperating in exploring options for swapping subsidies away from the fossil fuel industry and into the renewable energy industry, notably by supporting large-scale on-grid renewables and implementing mechanisms that mobilize private finance into renewable energy projects.
- Expanding and expediting commitments to review and reform fossil fuel subsidies, turning them into actionable mandates to phase out fossil fuel subsidies.
- Increasing taxes on fossil fuels to generate fiscal resources for renewable energy.
- Subjecting subsidies to periodic evaluations and interdepartmental policy reviews to ensure a just transition and efficient spending on climate goals.
- Maintaining a public inventory of fossil fuel production and consumption subsidies, broadly defined, to keep up the momentum for fossil fuel subsidy phase-out.

### **Detailed Recommendations**

To avoid stranding scarce public spending in an industry which will be rendered obsolete by the need to address the climate emergency, countries should commit to international cooperation in exploring options for swapping subsidies away from fossil fuels and into renewable energy.

Commitments have existed since 2009 to reform and revise fossil fuel subsidy schemes. Countries can expand their commitment to exiting fossil fuel subsidies to include mandates for reform, followed by increases in taxes on fossil fuels to continue to generate fiscal resources for renewable energy, while simultaneously reducing emissions.

COVID-19 recovery spending should be committed to financing renewable energy, rather than subsidizing fossil fuels. Countries must commit to using recovery stimulus on climate-aligned technologies and jobs, rather than undermining commitments to address the climate crisis by reinvesting in inefficient subsidy schemes. Similarly, concerns about energy security, as a result of the global energy crisis, should be harnessed to accelerate renewable energy development.<sup>179</sup>

Governments should explore ways to focus on higher-impact swaps by supporting large-scale on-grid renewables and implementing mechanisms that mobilize private finance into renewable energy projects.<sup>180</sup>

According to the OECD, the G20 has already committed to auditing and reviewing their fossil fuel subsidies for efficiency.<sup>181</sup> This agreement should broaden to more countries. Continued peer reviews under the G20 2009 Pittsburgh Agreement can ensure impartial judgment and remove conflicts of interest in the evaluation of subsidy schemes.<sup>182</sup>

Countries should commit to periodic evaluations and interdepartmental policy reviews to ensure both a just transition and efficient spending on climate goals. A policy review should include the impact of energy taxation, alternative measures, and reforms to ascertain how subsidy schemes distribute the burden among consumer groups and interactions with other policy measures proposed to address the just transition and renewable energy transition within countries' climate goals and commitments.<sup>183</sup>

Countries should also maintain a public inventory of fossil fuel subsidies.<sup>184</sup> Increasing transparency on the use of scarce public resources is one way to keep up the momentum for fossil fuel subsidy reform. Inventories should consider subsidies for both production and consumption of fossil fuels, as well as tax and non-tax measures that incentivize fossil fuel production and use. This inventory and review should be open to transparent stakeholder consultation.<sup>185</sup>

Countries should consider the “negative externalities of the use of fossil fuels when evaluating the energy taxation and public finance supporting the use and consumption of fossil fuels.”<sup>186</sup> International organizations and political entities should review the tax schedules under their purview, which fit the above description.<sup>187</sup>

## 5 International Intellectual Property Law

### Overview and Rationale for Change

Changes to intellectual property laws are needed for more effective and efficient transfers of climate mitigation technologies to ensure the emissions reductions necessary to meet the 1.5°C goal.

The existence of few treaty provisions for the management of intellectual property with respect to the development and transfer of technologies, with little or limited implementation, limits the developing world's ambition to reduce GHG emissions.<sup>188</sup> Beyond acknowledgement of the need, little action has been adopted to address the urgency of scaling up action and support—including finance, capacity building, and technology transfer—to enhance adaptive capacity, strengthen resilience, and reduce vulnerability to climate change in line with the best available science.<sup>189</sup> While the establishment of a Technology Mechanism under the Paris Agreement was a useful step towards facilitating climate-aligned technology transfer, the mechanism has struggled to reach operational level, and fails to fulfill the ambitions needed to match the scale of necessary sustainable development.<sup>190</sup> Delayed technology transfer and stringent international intellectual property regulations impede the priorities and needs of vulnerable and developing countries, where climate-aligned technology is required both to adapt to the consequences of climate change in the short term, and to assist development along low-carbon development pathways in the long term.<sup>191</sup> While the Paris Agreement commits countries to collaborate on innovation for the energy transition, the rate of transfer of these technologies fails to meet the urgency of requirements under the UNFCCC.<sup>192</sup> Technology flows from OECD to non-OECD economies accounted for only 22% of all transfers of climate mitigation technology, indicating a vast issue of justice and efficiency in the existing paradigm for distribution of green technology.<sup>193</sup>

The international framework governing intellectual property does not contain specific permissions for environmentally sound technologies (ESTs), though avenues can be found using particular language in Article 27.2 of the WTO Agreement on Trade-Related Intellectual Property Rights (TRIPS).<sup>194</sup> Under the TRIPS Agreement, all fields of technologies, including ESTs, have to be equally protected by intellectual property rights, and all developing WTO Members, except Least Developed Countries (LDCs), have to incorporate minimum intellectual

property right standards into their national legal systems. However, according to the Intergovernmental Panel on Climate Change (IPCC), evidence that strict and rigid intellectual property protection facilitates domestic innovation is almost exclusively limited to specific sectors in developed countries.<sup>195</sup>

While intellectual property regulations are critical in catalyzing investment and innovation in carbon mitigation and climate-aligned technology, facilitating easy and inexpensive technological transfers avoids wasting resources and human capital reinventing technologies that benefit the collective action required to tackle the climate emergency.<sup>196</sup> FDI is not an essential development tool in the initial stages of technological development across countries, but it plays an increasingly important role in more advanced stages.<sup>197</sup> However, foreign investors tend to do most of their R&D in their home countries, limiting the growth of core technologies in host countries.<sup>198</sup> Effective financing for the transfer of ESTs can avoid duplicating costs and efficient use of investment.

### **Summary of Main Recommendations: International Intellectual Property Law**

- Accelerating the development and deployment of technologies and capital for climate investment through formal commitment, dedicated financing, and incentives for innovation.
- Facilitating and expediting climate-related technology transfer and rights involving intellectual property management, protection, and enforcement.
- Exploring market, hybrid, and non-market approaches to fast track the transfer of ESTs.
- Including private sector technologies and intellectual property in the WIPO GREEN database.
- Strengthening existing funding mechanisms and networks to disseminate green technology.
- Declaring exceptions to intellectual property law under the TRIPS Agreement for “emergency,” “non-commercial use” and “domestic market requirement,” given the climate crisis.
- Increasing multilateral development bank financing for climate-aligned investment projects involving technology transfer.
- Creating favorable trading conditions, loosened administrative processes, and other financial mechanisms to encourage climate-aligned development and foster transfer of EST technologies.

### **Detailed Recommendations**

Countries must accelerate the development and deployment of technologies and capital, which will ensure the emissions reductions necessary to reach the 1.5°C goal, through formal commitment, dedicated financing, and incentives for innovation.

WTO, UNFCCC, and World Intellectual Property Organization (WIPO) members should collaborate to discuss climate-related technology transfer and rights involving intellectual property management, protection, and enforcement.<sup>199</sup> States, key stakeholders from the private sector, and international institutions should undertake these discussions and conclude subsequent agreements to facilitate faster technology transfer and adjust restrictions on intellectual property for ESTs to allow affordable dissemination of these technologies in the developing world.

States should also explore market, hybrid, and non-market approaches to fast track the transfer of ESTs, including examining provisions in EST transfer deals that may limit the transfer of capability and adaptive capacity to technology-importing countries.<sup>200</sup> The latter should also consider entering into collaborative agreements, such as innovation cooperation or pooling demand, to improve their bargaining power.<sup>201</sup>

States should commit to collaborating with the private sector to include their technologies and intellectual property in the WIPO GREEN database to deploy climate technology more efficiently.<sup>202</sup>

The funding mechanisms and networks to disseminate green technology established by the Copenhagen and Paris negotiations, and in particular the Green Climate Fund (GCF), should be reviewed and reformed as needed for greater efficiency.<sup>203</sup> States must reinforce the commitment to set a quantifiable climate finance goal and mechanism as explored in the ad hoc work program on financing under the Paris Agreement.

Parties should declare exceptions to intellectual property law under the TRIPS Agreement for “emergency,” “non-commercial use” and “domestic market requirement,” given the rapidly accelerating climate crisis.<sup>204</sup>

Multilateral development banks need to enhance financing for projects which help to achieve climate plans and to develop new approaches for mobilizing finance from private parties for adaptation.

In the style of the Clean Development Mechanism (CDM) in the Kyoto Protocol and its successor, the so-called Sustainable Development Mechanism in the Paris Agreement,<sup>205</sup> industrialized countries may be incentivized to develop or finance projects that reduce GHG emissions in developing countries in exchange for emission reduction credits or modified Nationally Determined Contributions (NDCs). Favorable trading conditions, loosened administrative processes, and other financial mechanisms, at the international, multilateral, bilateral or national level should be explored to similarly encourage climate-aligned development. Further, promoting projects in non-Annex I parties may be a great use of financing to foster transfer of EST technologies.

## 6 Illustrative Options to Reform International Law for Climate-Aligned Investment Governance

The preceding sections provide a literature-backed overview of rationales for change and reform opportunities to align disparate areas of international law to achieve climate-aligned investment facilitation and governance. While our recommendations include measures that can be taken at the multilateral, bilateral, and domestic levels, states may consider, additionally or alternatively, tying all of these strands of reforms together under one or more overarching international instruments on advancing climate-aligned investment governance. Having such international law instruments highlights the global issue of the inadequate level of climate investment and the need to catalyze collective action to meet international climate mitigation and adaptation goals and to ensure a just transition to sustainable, NZE economies.

What is ultimately important is that international law is coherent and supportive of investment flows necessary to achieve climate action, other SDGs, and the realization of human rights. The means of reform is less important than its outcome. Nevertheless, we offer illustrative examples of international instruments that could be useful in realizing a coherent framework for climate-aligned investment governance under international law, serving as a commitment device, a reference framework, or a multilateral instrument of reform:

- **A non-binding political declaration on climate-aligned investment governance:** This declaration would set out the main principles and objectives for climate-aligned reform of international law, in line with the recommendations made in this paper, and include a call to action for states to voluntarily commit to pursuing such reforms.
- **A framework convention on climate-aligned investment governance:** This framework convention would be legally binding. It would set up the general norms, objectives, and institutions of a new regime to form the foundation for subsequent protocols. These protocols would include specific commitments to reform the various areas of international law outlined in this paper.

- **A binding protocol on climate-aligned investment governance under the UNFCCC:** This protocol (or protocols) would set out specific commitments to reform the areas of international law identified in this paper. It would fall under the existing climate-related framework convention.
- **A binding treaty or treaties on climate-aligned investment governance:** Such treaty or treaties would take a comprehensive approach to reforming each of the areas of international law, as relevant, in the various self-contained regimes dealt with in this paper (largely focusing on International Investment, Trade, and Intellectual Property Law).

Our aim is to simply highlight the various options available, as well as to provide ideas of how such instruments could take shape. Further research is needed to discuss these and other possible approaches, outlining advantages and disadvantages of each, considering how to ensure broad representation of state parties and meaningful engagement by non-state parties, and assessing whether the instrument would create a stand-alone regime or be situated within an existing one.

## Conclusion

In this working paper, we discussed why and how to align international law holistically to achieve climate-aligned investment governance. Across the thematic areas of international law focused on—namely, human rights (Section 1), labor (Section 2), investment (Section 3), trade (Section 4), and intellectual property (Section 5)—we examined the interdisciplinarity of investment governance and outlined recommendations that states could consider adopting to align international legal regimes with climate action. International law instrument or instruments that states could consider adopting, whether alternatively or additionally to regime-specific reform, to strengthen coherence in climate-aligned investment governance across the various strands of international law, include those listed in (Section 6): (1) a non-binding political declaration on climate-aligned investment governance, (2) a framework convention on climate-aligned investment governance, (3) a binding protocol on climate-aligned investment governance under the UNFCCC, and (4) a binding treaty or treaties on climate-aligned investment governance.

The scope and depth of areas covered, issues discussed, and reform solutions proposed in this working paper are non-exhaustive. We did not intend, and could not have intended, to provide complete and definitive answers or conclusions, which even a treatise on climate-aligned investment governance would have failed to provide, given the need to take into account a diversity of perspectives by all stakeholders, including governments, business, civil society, workers, local communities, Indigenous Peoples, women, youth, and other historically disadvantaged groups.

Instead, the reflections in this working paper serve as a preface on the need for coherence in international law for climate-aligned investment governance and on a possible framework to achieve it. We invite and hope to inspire further thinking, research, and discussion on how to bridge gaps and build cohesion among these and other areas of international law relevant to investment governance, with a view to aligning international law with climate goals.

# Annex A

Via IPCC, “Summary for Policymakers” in *Climate Change 2022: Mitigation of Climate Change*, eds. Priyadarshi R. Shukla et al. (Cambridge and New York: Cambridge University Press, 2022), 38, [https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC\\_AR6\\_WGIII\\_SummaryForPolicymakers.pdf](https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SummaryForPolicymakers.pdf).

**Many options available now in all sectors are estimated to offer substantial potential to reduce net emissions by 2030. Relative potentials and costs will vary across countries and in the longer term compared to 2030.**



**Figure SPM.7 | Overview of mitigation options and their estimated ranges of costs and potentials in 2030.**

## Annex B






Via IPCC, “Summary for Policymakers” in *Climate Change 2014: Synthesis Report*, eds. Rajendra K. Pachauri et al. (Cambridge and New York: Cambridge University Press, 2022), 27, [https://www.ipcc.ch/site/assets/uploads/2018/02/AR5\\_SYR\\_FINAL\\_SPM.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/AR5_SYR_FINAL_SPM.pdf).

**Table SPM.3** | Approaches for managing the risks of climate change through adaptation. These approaches should be considered overlapping rather than discrete, and they are often pursued simultaneously. Examples are presented in no specific order and can be relevant to more than one category. *(Table 4.2)*

Overlapping Approaches	Category	Examples
<b>Vulnerability &amp; Exposure Reduction</b> through development, planning & practices including many low-regrets measures	Human development	Improved access to education, nutrition, health facilities, energy, safe housing & settlement structures, & social support structures; Reduced gender inequality & marginalization in other forms.
	Poverty alleviation	Improved access to & control of local resources; Land tenure; Disaster risk reduction; Social safety nets & social protection; Insurance schemes.
	Livelihood security	Income, asset & livelihood diversification; Improved infrastructure; Access to technology & decision-making fora; Increased decision-making power; Changed cropping, livestock & aquaculture practices; Reliance on social networks.
	Disaster risk management	Early warning systems; Hazard & vulnerability mapping; Diversifying water resources; Improved drainage; Flood & cyclone shelters; Building codes & practices; Storm & wastewater management; Transport & road infrastructure improvements.
	Ecosystem management	Maintaining wetlands & urban green spaces; Coastal afforestation; Watershed & reservoir management; Reduction of other stressors on ecosystems & of habitat fragmentation; Maintenance of genetic diversity; Manipulation of disturbance regimes; Community-based natural resource management.
	Spatial or land-use planning	Provisioning of adequate housing, infrastructure & services; Managing development in flood prone & other high risk areas; Urban planning & upgrading programs; Land zoning laws; Easements; Protected areas.
	Structural/physical	<b>Engineered &amp; built-environment options:</b> Sea walls & coastal protection structures; Flood levees; Water storage; Improved drainage; Flood & cyclone shelters; Building codes & practices; Storm & wastewater management; Transport & road infrastructure improvements; Floating houses; Power plant & electricity grid adjustments.
		<b>Technological options:</b> New crop & animal varieties; Indigenous, traditional & local knowledge, technologies & methods; Efficient irrigation; Water-saving technologies; Desalination; Conservation agriculture; Food storage & preservation facilities; Hazard & vulnerability mapping & monitoring; Early warning systems; Building insulation; Mechanical & passive cooling; Technology development, transfer & diffusion.
		<b>Ecosystem-based options:</b> Ecological restoration; Soil conservation; Afforestation & reforestation; Mangrove conservation & replanting; Green infrastructure (e.g., shade trees, green roofs); Controlling overfishing; Fisheries co-management; Assisted species migration & dispersal; Ecological corridors; Seed banks, gene banks & other <i>ex situ</i> conservation; Community-based natural resource management.
		<b>Services:</b> Social safety nets & social protection; Food banks & distribution of food surplus; Municipal services including water & sanitation; Vaccination programs; Essential public health services; Enhanced emergency medical services.
Institutional	<b>Economic options:</b> Financial incentives; Insurance; Catastrophe bonds; Payments for ecosystem services; Pricing water to encourage universal provision and careful use; Microfinance; Disaster contingency funds; Cash transfers; Public-private partnerships.	
	<b>Laws &amp; regulations:</b> Land zoning laws; Building standards & practices; Easements; Water regulations & agreements; Laws to support disaster risk reduction; Laws to encourage insurance purchasing; Defined property rights & land tenure security; Protected areas; Fishing quotas; Patent pools & technology transfer.	
	<b>National &amp; government policies &amp; programs:</b> National & regional adaptation plans including mainstreaming; Sub-national & local adaptation plans; Economic diversification; Urban upgrading programs; Municipal water management programs; Disaster planning & preparedness; Integrated water resource management; Integrated coastal zone management; Ecosystem-based management; Community-based adaptation.	
Social	<b>Educational options:</b> Awareness raising & integrating into education; Gender equity in education; Extension services; Sharing indigenous, traditional & local knowledge; Participatory action research & social learning; Knowledge-sharing & learning platforms.	
	<b>Informational options:</b> Hazard & vulnerability mapping; Early warning & response systems; Systematic monitoring & remote sensing; Climate services; Use of indigenous climate observations; Participatory scenario development; Integrated assessments.	
	<b>Behavioural options:</b> Household preparation & evacuation planning; Migration; Soil & water conservation; Storm drain clearance; Livelihood diversification; Changed cropping, livestock & aquaculture practices; Reliance on social networks.	
Spheres of change	<b>Practical:</b> Social & technical innovations, behavioural shifts, or institutional & managerial changes that produce substantial shifts in outcomes.	
	<b>Political:</b> Political, social, cultural & ecological decisions & actions consistent with reducing vulnerability & risk & supporting adaptation, mitigation & sustainable development.	
	<b>Personal:</b> Individual & collective assumptions, beliefs, values & worldviews influencing climate-change responses.	

## Annex C

Via UNCTAD, *World Investment Report 2022: International Tax Reforms and Sustainable Investment* (New York: UNCTAD, 2022), 33, [https://unctad.org/system/files/official-document/wir2022\\_en.pdf](https://unctad.org/system/files/official-document/wir2022_en.pdf).

Table I.12. Climate change investment categories	
Sectors	Investment area
<b>Climate change mitigation</b>	
Renewable energy	 <ul style="list-style-type: none"> <li>Power generation from: biomass, geothermal, hydroelectric, hydrogen, solar, tidal or wave, waste (excluding biomass), wind.</li> </ul>
Energy efficiency/ emission reduction	 <ul style="list-style-type: none"> <li>Energy provision efficiency transmission lines, battery storage, carbon capture.</li> <li>Other investments in energy efficient technology or products: electric vehicles, clean technologies.</li> </ul>
Low-emission transport	 <ul style="list-style-type: none"> <li>Mass transit systems: rail, public transport systems.</li> </ul>
<b>Climate change adaptation</b>	
Water management	 <ul style="list-style-type: none"> <li>Investments on climate related changes in the water cycle: water pipelines, water supply, district cooling (i.e. deep ocean or lake water cooling systems), desalination, water storage, disposal and treatment.</li> </ul>
Other adaptation	 <ul style="list-style-type: none"> <li>Investments to improve the climate resilience of existing infrastructure, and coastal protection.</li> <li>Climate resilient agriculture, such as flood / drought resistant crops.</li> </ul>

Source: UNCTAD.



## Endnotes and References

- <sup>1</sup> United Nations General Assembly (UNGA), Transforming Our World: The 2030 Agenda for Sustainable Development, UN Doc. A/RES/70/1 (September 25, 2015) (Sustainable Development Goals), Goal 13, <https://undocs.org/en/A/RES/70/1>.
- <sup>2</sup> Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC), Adoption of the Paris Agreement, UN Doc. FCCC/CP/2015/L.9/Rev.1 (December 12, 2015), Art. 2.1(c) (Paris Agreement), <https://undocs.org/en/FCCC/CP/2015/L.9/Rev.1>.
- <sup>3</sup> Intergovernmental Panel on Climate Change (IPCC), “Summary for Policymakers” in *Climate Change 2022: Impacts, Adaptation, and Vulnerability*, eds. Hans-Otto Pörtner et al. (Cambridge and New York: Cambridge University Press, 2022), [https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC\\_AR6\\_WGII\\_SummaryForPolicymakers.pdf](https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf);
- IPCC, “Summary for Policymakers” in *Climate Change 2022: Mitigation of Climate Change*, eds. Priyadarshi R. Shukla et al. (Cambridge and New York: Cambridge University Press, 2022), [https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC\\_AR6\\_WGIII\\_SummaryForPolicymakers.pdf](https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SummaryForPolicymakers.pdf);
- International Energy Agency (IEA), *Net Zero by 2050: A Roadmap for the Global Energy Sector* (Paris: IEA, 2021), <https://www.iea.org/reports/net-zero-by-2050>;
- IEA, *Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach* (Paris: IEA, 2023), <https://www.iea.org/reports/net-zero-roadmap-a-global-pathway-to-keep-the-15-0c-goal-in-reach>.
- See Annexes A, B, and C for more economic activities within the authors’ adopted definition of climate investment.
- <sup>4</sup> International Renewable Energy Agency (IRENA) and Climate Policy Initiative (CPI), *Global Landscape of Renewable Energy Finance, 2023* (Abu Dhabi: IRENA, 2023), <https://www.irena.org/Publications/2023/Feb/Global-landscape-of-renewable-energy-finance-2023>, 10. See also:  
IRENA, *World Energy Transitions Outlook 2023: 1.5°C Pathway* (Abu Dhabi: IRENA, June 2023), <https://www.irena.org/Publications/2023/Jun/World-Energy-Transitions-Outlook-2023>;
- IEA, *World Energy Investment 2023* (Vienna: IEA, May 2023), <https://www.iea.org/reports/world-energy-investment-2023>.
- REN21, *Renewables 2023 Global Status Report* (Paris: REN21 Secretariat, 2023), <https://www.ren21.net/gsr-2023>.
- <sup>5</sup> IPCC, “Summary for Policymakers” in *Climate Change 2022: Mitigation of Climate Change* (n. 3).
- <sup>6</sup> Human Rights Council, The Human Right to a Clean, Healthy and Sustainable Environment, UN Doc. A/HRC/RES/48/13 (October 8, 2021), <https://undocs.org/en/A/HRC/RES/48/13>;
- UNGA, The Human Right to a Clean, Healthy and Sustainable Environment, UN Doc. A/RES/76/300 (July 28, 2022), <https://undocs.org/en/A/RES/76/300>.
- See also the work of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment: “Special Rapporteur on Human Rights and the Environment,” UN Human Rights Special Procedures, UN Human Rights Office of the High Commissioners, 2023, <https://www.ohchr.org/en/special-procedures/sr-environment>.
- <sup>7</sup> Lorenzo Pellegrini, Murat Arsel, Martí Orta-Martínez, Carlos F. Mena, “International Investment Agreements, Human Rights, and Environmental Justice: The Texaco/Chevron Case From the Ecuadorian Amazon,” *Journal of International Economic Law* 23, no. 2 (June 2020): 455–468, <https://doi.org/10.1093/jiel/jgaa016>;
- Lisa Sachs, Lise Johnson, and Ella Merrill, “Environmental Injustice: How treaties undermine human rights related to the environment,” *Le Revue des Juristes de Sciences Po*, no. 18 (January 2020), <https://ccsi.columbia.edu/content/investor-state-dispute-settlement-and-environmental-justice>;
- Olabisi D. Akinkugbe and Adebayo Majekolagbe, “International Investment Law and Climate Justice: The Search for a Just Green Investment Order,” *Fordham International Law Journal* 46, no. 169 (2023), <https://ir.lawnet.fordham.edu/ilj/vol46/iss2/1>.
- <sup>8</sup> Office of the High Commissioner on Human Rights (OHCHR), *Understanding Human Rights and Climate Change: Submission of the High Commissioner for Human Rights to the 21<sup>st</sup> Conference of the Parties to the UNFCCC* (Geneva: OHCHR, 2015), <https://www.ohchr.org/sites/default/files/Documents/Issues/ClimateChange/COP21.pdf>.
- <sup>9</sup> Sachs, Johnson, and Merrill, “Environmental Injustice” (n. 7).
- <sup>10</sup> UNGA, Universal Declaration of Human Rights, Res. 217A (III), UN Doc. A/810 (December 1948), <https://undocs.org/en/A/810>;
- International Covenant on Civil and Political Rights, opened for signature December 16, 1966, entered into force March 23, 1976 (ICCPR) <https://treaties.un.org/doc/publication/unts/volume%20999/volume-999-i-14668-english.pdf>;
- International Covenant on Economic, Social and Cultural Rights, opened for signature December 16, 1966, entered into force January 3, 1976 (ICESCR), <https://treaties.un.org/doc/Publication/UNTS/Volume%20993/volume-993-I-14531-English.pdf>.

- <sup>11</sup> UN Human Rights Council, Guiding Principles on Business and Human Rights, UN Doc. A/HRC/17/31 (March 21, 2011), [https://www.ohchr.org/sites/default/files/Documents/Issues/Business/A-HRC-17-31\\_AEV.pdf](https://www.ohchr.org/sites/default/files/Documents/Issues/Business/A-HRC-17-31_AEV.pdf).
- <sup>12</sup> The World Bank, *The World Bank Environmental and Social Framework* (Washington: The World Bank, 2017), <https://thedocs.worldbank.org/en/doc/837721522762050108-0290022018/original/ESFFramework.pdf>.
- <sup>13</sup> John H. Knox (UN Special Rapporteur on Human Rights and the Environment), *Framework Principles on Human Rights and the Environment* (Geneva: Office of the High Commissioner on Human Rights (OHCHR), 2018), <https://www.ohchr.org/sites/default/files/FrameworkPrinciplesUserFriendlyVersion.pdf>.
- <sup>14</sup> See for example International Labour Organization (ILO), *Guidelines for a Just Transition Towards Environmentally Sustainable Economies and Societies for All* (Geneva: ILO, 2015), [https://www.ilo.org/wcmsp5/groups/public/@ed\\_emp/@emp\\_ent/documents/publication/wcms\\_432859.pdf](https://www.ilo.org/wcmsp5/groups/public/@ed_emp/@emp_ent/documents/publication/wcms_432859.pdf).
- <sup>15</sup> Tehtena Mebratu-Tsegaye and Leila Kazemi, *Free, Prior and Informed Consent: Addressing Political Realities to Improve Impact* (New York: CCSI, October 2020), <https://ccsi.columbia.edu/sites/default/files/content/docs/publications/Eng-Report-Free-prior-and-informed-consent-Addressing-political-realities-to-improve-impact.pdf>.
- <sup>16</sup> Mebratu-Tsegaye and Kazemi, *Free, Prior and Informed Consent* (n. 15).
- <sup>17</sup> “Developing a Collaborative Approach to Human Rights Impact Assessments,” Human Rights and Investment, Columbia Center on Sustainable Investment (CCSI), 2023, <https://ccsi.columbia.edu/content/developing-collaborative-approach-human-rights-impact-assessments>.
- <sup>18</sup> Julia Christensen and Miriam Grant, “How Political Change Paved the Way for Indigenous Knowledge: The Mackenzie Valley Resource Management Act,” *Arctic* 60, no. 2: 115–123, <http://www.jstor.org/stable/40513127>.
- <sup>19</sup> The Environment and Human Rights (State Obligations in Relation to The Environment in the Context of the Protection and Guarantee of the Rights to Life and to Personal Integrity: Interpretation and Scope Of Articles 4(1) and 5(1) in Relation to Articles 1(1) and 2 of the American Convention on Human Rights), Advisory Opinion OC-23/17 of November 15, 2017 requested by the Republic of Colombia, Inter-American Court of Human Rights, <https://aida-americas.org/en/resource/advisory-opinion-of-the-23-inter-american-court-on-human-rights>.
- <sup>20</sup> United Nations Environment Programme (UNEP) and Sabin Center for Climate Change Law, *Global Climate Litigation Report: 2020 Status Report* (Nairobi: UNEP, 2020), <https://wedocs.unep.org/bitstream/handle/20.500.11822/34818/GCLR.pdf?sequence=1&isAllowed=y>.
- <sup>21</sup> Office of the High Commissioner on Human Rights (OHCHR), *Remedy in Development Finance: Guidance and Practice* (New York and Geneva: OHCHR, 2022), <https://www.ohchr.org/sites/default/files/2022-03/Remedy-in-Development.pdf>.
- <sup>22</sup> Annabella Roseberg, *Policy Analysis Brief: Strengthening Just Transition Policies in International Climate Governance* (Muscatine: The Stanley Foundation, April 2017), <https://stanleycenter.org/publications/pab/RosebergPABStrengtheningJustTransition417.pdf>.
- <sup>23</sup> UNEP and Sabin Center for Climate Change Law, *Global Climate Litigation Report* (n. 20).
- <sup>24</sup> Mebratu-Tsegaye and Kazemi, *Free, Prior and Informed Consent* (n. 15).
- <sup>25</sup> OHCHR, *Remedy in Development Finance* (n. 21).
- <sup>26</sup> Organisation for Economic Cooperation and Development (OECD), *OECD Guidelines for Multinational Enterprises* (Paris: OECD Publishing, 2011), <https://www.oecd.org/daf/inv/mne/48004323.pdf>.
- <sup>27</sup> Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF), “Global Review: Financial Assurance Governance for the Post-Mining Transition” (Winnipeg and Ottawa: IISD and IGF, 2021), <https://www.iisd.org/system/files/2021-09/financial-assurance-governance-for-post-mining-transition.pdf>.
- <sup>28</sup> OHCHR, *Remedy in Development Finance* (n. 21).
- <sup>29</sup> OHCHR, *Remedy in Development Finance* (n. 21).
- <sup>30</sup> OHCHR, *Remedy in Development Finance* (n. 21).
- <sup>31</sup> OHCHR, *Remedy in Development Finance* (n. 21).
- <sup>32</sup> OHCHR, *Remedy in Development Finance* (n. 21).
- <sup>33</sup> OHCHR, *Remedy in Development Finance* (n. 21).
- <sup>34</sup> ILO, *Guidelines for a Just Transition*, 5 (n. 14).
- <sup>35</sup> Martin Dietrich Brauch, “Taking Equity into Account in International and Domestic Legal Frameworks on Compensation for Climate Change and the Energy Transition,” CCSI (blog), May 2, 2022, <https://ccsi.columbia.edu/equity-just-transition-climate-justice-compensation-energy-transition-isds>.

- <sup>36</sup> The Creative Disruptors, *Treaty on Sustainable Investment for Climate Change Mitigation and Adaptation: Argumentation Demonstrating How the Model Treaty Meets the Assessment Criteria* (Stockholm Treaty Lab, 2022), 15, <https://ccsi.columbia.edu/sites/default/files/content/docs/The-Creative-Disrupters-Argumentation.pdf>.
- <sup>37</sup> ILO, *Guidelines for a Just Transition* (n. 14).
- <sup>38</sup> ILO, *Guidelines for a Just Transition* (n. 14).
- <sup>39</sup> Brauch, “Taking Equity into Account” (n. 35).
- <sup>40</sup> Claire La Hovary, “A Challenging Ménage à Trois? Tripartism in the International Labour Organization,” *International Organizations Law Review* 12 (2015): 204–236, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2684455](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2684455).
- <sup>41</sup> The Creative Disruptors, *Treaty on Sustainable Investment for Climate Change Mitigation and Adaptation*, 15 (n. 36).
- <sup>42</sup> The Creative Disruptors, *Treaty on Sustainable Investment for Climate Change Mitigation and Adaptation*, 15 (n. 36).
- <sup>43</sup> La Hovary, “Tripartism in the International Labour Organization” (n. 40).
- <sup>44</sup> ILO, *Guidelines for a Just Transition* (n. 14).
- <sup>45</sup> ILO, *ILO Declaration on Fundamentals Principles and Rights at Work and its Follow-up* (Geneva: ILO, 2022), <https://www.ilo.org/declaration/lang-en/index.htm>;
- ILO, *Guidelines for a Just Transition*, 4 (n. 14).
- <sup>46</sup> ILO, *Guidelines for a Just Transition*, 7 (n. 14).
- <sup>47</sup> ILO, *Guidelines for a Just Transition*, 3 (n. 14).
- <sup>48</sup> ILO, *Guidelines for a Just Transition*, 6 (n. 14).
- <sup>49</sup> ILO, *Guidelines for a Just Transition*, 6 (n. 14).
- <sup>50</sup> The Creative Disruptors, *Treaty on Sustainable Investment for Climate Change Mitigation and Adaptation* (n. 36).
- <sup>51</sup> ILO, *National Tripartite Social Dialogue: An ILO Guide for Improved Governance* (Geneva: ILO, 2013), [https://www.ilo.org/wcmsp5/groups/public/---ed\\_dialogue/---dialogue/documents/publication/wcms\\_231193.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---dialogue/documents/publication/wcms_231193.pdf);
- Rosemberg, *Strengthening Just Transition Policies in International Climate Governance*, 9 (n. 22).
- <sup>52</sup> The Creative Disruptors, *Treaty on Sustainable Investment for Climate Change Mitigation and Adaptation*, 15 (n. 36).
- <sup>53</sup> ILO, *Guidelines for a Just Transition*, 6 (n. 14).
- <sup>54</sup> The Creative Disruptors, *Treaty on Sustainable Investment for Climate Change Mitigation and Adaptation*, 8 (n. 36).
- <sup>55</sup> Philip Gass and Daniella Echeverría, *Fossil Fuel Subsidy Reform and the Just Transition: Integrating Approaches for Complementary Outcomes* (Geneva: Global Subsidies Initiative and IISD, December 2017), <https://www.iisd.org/system/files/publications/fossil-fuel-subsidy-reform-just-transition.pdf>.
- <sup>56</sup> CCSI, *Primer on International Investment Treaties and Investor-State Dispute Settlement* (New York: CCSI, December 2021), <https://ccsi.columbia.edu/content/primer-international-investment-treaties-and-investor-state-dispute-settlement>.
- <sup>57</sup> Martin Dietrich Brauch, “Climate Action Needs Investment Governance, Not Investment Protection and Arbitration,” *CCSI* (blog), March 15, 2022, <https://ccsi.columbia.edu/news/climate-action-needs-investment-governance-not-investment-protection-isds>. Much of this section is adapted from this source, with additional references.
- <sup>58</sup> Brauch, “Climate Action Needs Investment Governance” (n. 57).
- <sup>59</sup> Brauch, “Climate Action Needs Investment Governance” (n. 57).
- <sup>60</sup> Brauch, “Climate Action Needs Investment Governance” (n. 57). See also:
- Kyla Tienhaara and Lorenzo Cotula, *Raising the Cost of Climate Action? Investor–State Dispute Settlement and Compensation for Stranded Fossil Fuel Assets* (London: International Institute for Environment and Development (IIED), October 2020), 12–19, <https://pubs.iied.org/17660iied>;
- Lea Di Salvatore, *Investor-State Disputes in the Fossil Fuel Industry* (Geneva: International Institute for Sustainable Development (IISD), December 2021), <https://www.iisd.org/system/files/2022-01/investor%E2%80%93state-disputes-fossil-fuel-industry.pdf>;
- Lea Di Salvatore, Lorenzo Cotula, Anirudh Nanda, and Chloe Yuqing Wang, “Investor–State Dispute Settlements: A Hidden Handbrake on Climate Action,” *IIED Briefing* (IIED and CCSI, November 2023), <https://ccsi.columbia.edu/content/investor-state-dispute-settlements-hidden-handbrake-climate-action>.
- <sup>61</sup> “Rockhopper v. Italy,” The U.S. Global Climate Change Litigation Database, Sabin Center for Climate Change Law (Sabin Center), <http://climatecasechart.com/climate-change-litigation/non-us-case/rockhopper-v-italy>;

- Ella Merrill and Martin Dietrich Brauch, “U.S. Climate Leadership Must Reject ISDS: As the United States Faces Another \$15 Billion Suit from the Fossil Fuel Industry, it’s Time for President Biden to Take a Decisive Stance,” *CCSI* (blog), July 13, 2021, <https://ccsi.columbia.edu/news/us-climate-leadership-must-reject-isds-united-states-faces-another-15-billionsuit-fossil-fuel>;
- “Uniper v. Netherlands,” The U.S. Global Climate Change Litigation Database, Sabin Center, <http://climatecasechart.com/climate-change-litigation/non-us-case/uniper-v-netherlands>.
- <sup>62</sup> See Lisa Sachs and Ladan Mehranvar, “The role and relevance of investment treaties in the energy transition: An analysis of renewable energy investment protection by the international investment regime,” in Anja Ipp and Annette Magnusson (eds.), *Investment Arbitration and Climate Change* (Wolters Kluwer, 2024).
- <sup>63</sup> Brauch, “Climate Action Needs Investment Governance” (n. 57).
- <sup>64</sup> Brauch, “Climate Action Needs Investment Governance” (n. 57);
- Elizabeth Meager, “COP26 Targets Pushed Back Under Threat of Being Sued,” *Capital Monitor*, January 14, 2022, <https://capitalmonitor.ai/institution/government/cop26-ambitions-at-risk-from-energy-charter-treaty-lawsuits>.
- <sup>65</sup> Brauch, “Climate Action Needs Investment Governance” (n. 57).
- <sup>66</sup> Martin Dietrich Brauch, “Should the European Union Fix, Leave or Kill the Energy Charter Treaty?” *CCSI* (blog), February 9, 2021, <https://ccsi.columbia.edu/news/should-european-union-fix-leave-or-kill-energy-charter-treaty>;
- Martin Dietrich Brauch, “The Agreement in Principle on ECT ‘Modernization’: A Botched Reform Attempt that Undermines Climate Action,” *CCSI* (blog), October 2022, <https://ccsi.columbia.edu/news/agreement-principle-ect-modernization-botched-reform-attempt-undermines-climate-action>.
- <sup>67</sup> Di Salvatore, *Investor–State Disputes in the Fossil Fuel Industry* (n. 60).
- <sup>68</sup> Brauch, “Taking Equity into Account” (n. 35).
- <sup>69</sup> Brauch, “Climate Action Needs Investment Governance” (n. 57).
- <sup>70</sup> Martin Dietrich Brauch, “Reforming International Investment Law for Climate Change Goals,” in *Research Handbook on Climate Finance and Investment*, eds. Michael Mehling and Harro van Asselt (Cheltenham: Edward Elgar Publishing: forthcoming), 5, <https://academiccommons.columbia.edu/doi/10.7916/d8-300v-7h63>. See also:
- “International Investment Agreements Navigator,” Investment Policy Hub, United Nations Conference on Trade and Development (UNCTAD), <https://investmentpolicy.unctad.org/international-investment-agreements>.
- <sup>71</sup> Brauch, “Climate Action Needs Investment Governance” (n. 57). See also:
- Di Salvatore et al., “Investor–State Dispute Settlements” (n. 67).
- <sup>72</sup> Kyla Tienhaara, Lise Johnson and Michael Burger, “Valuing Fossil Fuel Assets in an Era of Climate Disruption,” *Investment Treaty News* (blog), June 20, 2022, <https://cf.iisd.net/itn/en/2020/06/20/valuing-fossil-fuel-assets-in-an-era-of-climate-disruption>.
- <sup>73</sup> Brauch, “Taking Equity into Account” (n. 35).
- <sup>74</sup> Louis Kaplow, “An Economic Analysis of Legal Transitions,” *Harvard Law Review* 99, no. 3 (January 1986): 509–617, <https://www.jstor.org/stable/pdf/1341148.pdf>.
- <sup>75</sup> Brauch, “Taking Equity into Account” (n. 35).
- <sup>76</sup> “Webinar on International Investment Agreements and Climate Action,” UNCTAD and International Institute for Environment and Development (IIED), February 4, 2022, <https://unctad.org/meeting/webinar-international-investment-agreements-and-climate-action>;
- “Investor Obligations and Investor-State Arbitration,” Investment Law and Policy, CCSI, <https://ccsi.columbia.edu/content/counterclaims-investor-state-disputes>.
- <sup>77</sup> Jesse Coleman, *Briefing Note: Modern Provisions in Investment Treaties* (New York, CCSI, July 2020), <https://ccsi.columbia.edu/content/briefing-note-modern-provisions-investment-treaties>;
- CCSI, *Position Paper in support of opinions expressed in response to the European Commission’s “Public Consultation on a Multilateral Reform of Investment Dispute Settlement”* (New York: CCSI, March 1, 2017), <https://ccsi.columbia.edu/sites/default/files/content/docs/publications/CCSI-EU-Court-public-consultation-submission-15-Mar-17-FINAL.pdf>;
- Lise Johnson, “Proposed Standing Multilateral Mechanism for Investor-State Disputes: Navigating the Negotiations,” *CCSI* (blog), February 14, 2022, <https://ccsi.columbia.edu/news/proposed-standing-multilateral-mechanism-investor-state-disputes-navigating-negotiations>.
- <sup>78</sup> “Multilateral Investment Court project,” European Commission, [https://policy.trade.ec.europa.eu/enforcement-and-protection/multilateral-investment-court-project\\_en](https://policy.trade.ec.europa.eu/enforcement-and-protection/multilateral-investment-court-project_en).

- <sup>79</sup> Johnson, “Proposed Standing Multilateral Mechanism” (n. 77).
- <sup>80</sup> Brauch, “Climate Action Needs Investment Governance” (n. 57).
- <sup>81</sup> Sachs, Johnson, and Merrill, “Environmental Injustice” (n. 7); Brauch, “Climate Action Needs Investment Governance” (n. 57).
- <sup>82</sup> Ladan Mehranvar and Sunayana Sasmal, *The Role of Investment Treaties and Investor-State Dispute Settlement in Renewable Energy Investments* (New York: CCSI, December 2022), <https://ccsi.columbia.edu/content/renewable-energy-investment-roadblocks-drivers>.
- <sup>83</sup> See European Commission, Agreement for the termination of Bilateral Investment Treaties between the Member States of the European Union, EU Doc. 22020A0529(01) (2019) (Termination Agreement), [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:22020A0529\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:22020A0529(01)). Signatories of the Termination Agreement are Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia and Spain.
- See also: Brauch, “Climate Action Needs Investment Governance” (n. 57).
- <sup>84</sup> See CCSI, IIED and IISD, *Draft Treaty Language: Withdrawal of Consent to Arbitrate and Termination of International Investment Agreements, Submission to UNCITRAL Working Group III on ISDS Reform* (CCSI, IIED and IISD, July 15 2019), <https://ccsi.columbia.edu/sites/default/files/content/docs/publications/UNCITRAL-submission-Withdrawal-of-Consent-and-Termination.pdf>;
- Lise Johnson, Lisa Sachs, Brooke Güven, and Jesse Coleman, *Clearing the Path: Withdrawal of Consent and Termination as Next Steps for Reforming International Investment Law (CCSI Policy Paper)* (New York: CCSI, April 2018), <https://ccsi.columbia.edu/sites/default/files/content/docs/publications/IIA-CCSI-Policy-Paper-FINAL-April-2018.pdf>;
- Daniel Rangel, Lori Wallach, Ladan Mehranvar, Alvaro Santos, and Mario Osorio, *Turning the Tide: How to Harness the Americas Partnership for Economic Prosperity to Deliver an ISDS-Free Americas (White Paper)* (Washington D.C.: Georgetown Law’s Center for the Advancement of the Rule of Law in the Americas (CAROLA), CCSI, and Rethink Trade, October 2023), <https://ccsi.columbia.edu/content/termination-international-investment-agreements-and-withdrawal-consent-arbitrate>.
- <sup>85</sup> Nathalie Bernasconi-Osterwalder, Sarah Brewin, Martin Dietrich Brauch and Suzy Nikiëma, *IISD Best Practices Series: Terminating a Bilateral Investment Treaty* (Winnipeg: IISD, March 2020), <https://www.iisd.org/system/files/publications/terminating-treaty-best-practices-en.pdf>;
- Brauch, “Should the European Union Fix, Leave or Kill the Energy Charter Treaty?” (n. 66).
- <sup>86</sup> Brauch, “Climate Action Needs Investment Governance” (n. 57);
- Lise Johnson, Lisa E. Sachs, and Nathan Lobel, “Aligning Investment Treaties with Sustainable Development Goals,” *Columbia Journal of Transnational Law* 58, [https://scholarship.law.columbia.edu/sustainable\\_investment\\_staffpubs/2](https://scholarship.law.columbia.edu/sustainable_investment_staffpubs/2).
- <sup>87</sup> Brauch, “Climate Action Needs Investment Governance” (n. 57).
- <sup>88</sup> David Coen, Julia Kreienkamp, and Tom Pegram, *Global Climate Governance*, Elements in Public and Nonprofit Administration (Cambridge: Cambridge University Press, November 2020), <https://www.cambridge.org/core/elements/abs/global-climate-governance/920B86A424832E2803119C976969B262>.
- <sup>89</sup> “The Fossil Fuel Non-Proliferation Treaty,” The Fossil Fuel Non-Proliferation Treaty Initiative (2024), <https://fossilfuel treaty.org>.
- <sup>90</sup> Falling short of calling for a phase-out of fossil fuel exploration, exploitation, and use, COP 28 merely called on Parties to contribute to “[t]ransitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science.” COP serving as the meeting of the Parties to the Paris Agreement, First global stocktake, Proposal by the President, Draft decision -/CMA.5, Outcome of the first global stocktake, Revised advance version, UN Doc. FCCC/PA/CMA/2023/L.17 (December 13, 2023), para. 28(d), [https://unfccc.int/sites/default/files/resource/cma2023\\_L17\\_adv.pdf](https://unfccc.int/sites/default/files/resource/cma2023_L17_adv.pdf).
- See also the commitment to accelerate “efforts towards the phasedown of unabated coal power and phase-out of inefficient fossil fuel subsidies” in paragraph 36 of the Glasgow Climate Pact and paragraph 28 of the Sharm el-Sheikh Implementation Plan. UNFCCC COP serving as the meeting of the Parties to the Paris Agreement, Decisions adopted by the COP serving as the meeting of the Parties to the Paris Agreement: Glasgow Climate Pact, Decision 1/CMA.3, UN Doc. FCCC/PA/CMA/2021/10/Add.1 (March 8, 2022) (Glasgow Climate Pact), para. 36, [https://unfccc.int/sites/default/files/resource/cma2021\\_10\\_add1\\_adv.pdf](https://unfccc.int/sites/default/files/resource/cma2021_10_add1_adv.pdf);
- UNFCCC COP, Decisions adopted by the COP: Sharm el-Sheikh Implementation Plan, Decision 1/CP.27, UN Doc. FCCC/CP/2022/10/Add.1 (March 17, 2023) (Sharm el-Sheikh Implementation Plan), para. 16, [https://unfccc.int/sites/default/files/resource/cp2022\\_10a01\\_adv.pdf](https://unfccc.int/sites/default/files/resource/cp2022_10a01_adv.pdf).
- <sup>91</sup> IEA, *Net Zero Roadmap* (n. 3).
- <sup>92</sup> Tzeporah Berman, “The Bad Math of The Fossil Fuel Industry,” filmed October 2021 at the TED Countdown Summit in Glasgow, [https://www.ted.com/talks/tzeporah\\_berman\\_the\\_bad\\_math\\_of\\_the\\_fossil\\_fuel\\_industry/transcript](https://www.ted.com/talks/tzeporah_berman_the_bad_math_of_the_fossil_fuel_industry/transcript).

- <sup>93</sup> Berman, “The Bad Math Of The Fossil Fuel Industry.”
- <sup>94</sup> Lise Johnson and Brooke Güven, “International Investment Agreements: Impacts on Climate Change Policies in India, China and Beyond,” in *Trade in the Balance: Reconciling Trade and Climate Policy*, ed. Kevin P. Gallagher (Boston: Frederick S. Pardee Center for the Study of the Longer-Range Future and Global Economic Governance Initiative, November 2016), [https://open.bu.edu/bitstream/handle/2144/22909/Pardee\\_TradeClimate\\_110316final.pdf?sequence=1&isAllowed=y](https://open.bu.edu/bitstream/handle/2144/22909/Pardee_TradeClimate_110316final.pdf?sequence=1&isAllowed=y).
- <sup>95</sup> Martin Dietrich Brauch, “How Can States Best Fill the Vacuum of the Flawed Energy Charter Treaty?” CCSI (blog), March 9, 2023, <https://ccsi.columbia.edu/news/energy-charter-treaty-international-law-climate-investment-just-transition>.
- <sup>96</sup> Brauch, “How Can States Best Fill the Vacuum of the Flawed Energy Charter Treaty?” (n. 95).
- <sup>97</sup> “Frequently Asked Questions,” About, Fossil Fuel Non-Proliferation Treaty, <https://fossilfueltreaty.org/faq>. See also: Peter Newell, Harro van Asselt, and Freddie Daley, “Building a Fossil Fuel Non-Proliferation Treaty: Key Elements,” *Earth System Governance* 14 (December 2022), <https://doi.org/10.1016/j.esg.2022.100159>.
- <sup>98</sup> Karl Sauvant and Howard Mann, *Towards an Indicative List of FDI Sustainability Characteristics* (Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum (WEF), October 2017), <http://e15initiative.org/wp-content/uploads/2015/09/E15-Investment-Sauvant-and-Mann-Final-1.pdf>.
- <sup>99</sup> Martin Dietrich Brauch, “Can Existing International Agreements on ‘Investment Facilitation’ Advance Sustainable Development, Climate Action, and Human Rights?,” CCSI (blog), November 30, 2023, <https://ccsi.columbia.edu/news/investment-facilitation-wto-sustainable-development-climate-energy-transition>;
- Brauch, “Climate Action Needs Investment Governance” (n. 57).
- <sup>100</sup> Brauch, “Climate Action Needs Investment Governance” (n. 57).
- <sup>101</sup> Berman, “The Bad Math of The Fossil Fuel Industry” (n. 92).
- <sup>102</sup> See, for example, the models developed by Brazil (which includes the establishment of joint committees and national focal points) and South Africa (which requires dispute resolution through mediation):
- Martin Dietrich Brauch, “The Best of Two Worlds? The Brazil–India Investment Cooperation and Facilitation Treaty,” IISD Investment Treaty News (March 10, 2020), <https://www.iisd.org/itn/en/2020/03/10/the-best-of-two-worlds-the-brazil-india-investment-cooperation-and-facilitation-treaty-martin-dietrich-brauch>;
- Fabio Morosini and Michelle Ratton Sanchez Badin, “The Brazilian Agreement on Cooperation and Facilitation of Investments (ACFI): A New Formula for International Investment Agreements?,” IISD Investment Treaty News (August 4, 2015), <https://www.iisd.org/itn/en/2015/08/04/the-brazilian-agreement-on-cooperation-and-facilitation-of-investments-acfi-a-new-formula-for-international-investment-agreements/>;
- Republic of South Africa, Protection of Investment Act, 2015, Act No. 22 of 2015, December 15, 2015 (Protection of Investment Act) [https://www.gov.za/sites/default/files/gcis\\_document/201512/39514act22of2015protectionofinvestmentact.pdf](https://www.gov.za/sites/default/files/gcis_document/201512/39514act22of2015protectionofinvestmentact.pdf).
- <sup>103</sup> United Nations Framework Convention on Climate Change, opened for signature June 12, 1992, entered into force March 21, 1994 (UNFCCC), Preamble and Arts. 3(1) and 4(1).
- <sup>104</sup> The Montreal Protocol on Substances that Deplete the Ozone Layer, opened for signature September 16, 1987, entered into force January 1, 1989 (Montreal Protocol), <https://ozone.unep.org/treaties/montreal-protocol>.
- <sup>105</sup> Meeting of the Parties to the Montreal Protocol, The Kigali Amendment to the Montreal Protocol, opened for signature October 15, 2016, entered into force January 1, 2019 (Kigali Amendment), <https://ozone.unep.org/treaties/montreal-protocol/amendments/kigali-amendment-2016-amendment-montreal-protocol-agreed>.
- <sup>106</sup> 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), <https://ccsi.columbia.edu/content/renewable-energy-investment-roadblocks-drivers>.
- <sup>107</sup> TEAP “provides, at the request of Parties, technical information related to the alternative technologies that have been investigated and employed to make it possible to virtually eliminate use of Ozone Depleting Substances (such as CFCs and halons) that harm the ozone layer.” “Technology and Economic Assessment Panel (TEAP),” Science, UNEP, 2020, <https://ozone.unep.org/science/assessment/teap>.
- <sup>108</sup> 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>.
- <sup>109</sup> 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>;

- Aurore Stephant, “Les Métaux De La Révolution 4.0 : La face cachée de la transition : l’intensification de l’exploitation minière,” *Systemt*, November 23, 2019, <https://www.systemt.org/node/1568>;
- Ela Dominish, Nick Florin, and Rachael Wakefield-Rann, *Reducing New Mining for Electric Vehicle Battery Metals* (Sydney: Earthworks and ISF, April 2021), <https://earthworks.org/wp-content/uploads/2021/09/UTS-EV-battery-metals-sourcing-20210419-FINAL.pdf>;
- Kirsten Hund, Daniele La Porta, Thao P. Fabregas, Tim Laing and John Drexhage, *Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition* (Washington: Climate-Smart Mining Facility (World Bank Group), 2020), <https://pubdocs.worldbank.org/en/961711588875536384/Minerals-for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition.pdf>;
- “Circular Economy,” Innovation for Sustainability, ICMM, 2023, <https://www.icmm.com/en-gb/our-work/innovation-for-sustainability/circular-economy>;
- Bruce Connell, “The Circular Economy: A Sustainable Future for Mining and the World,” Sustainable Minerals Institute, The University of Queensland, <https://stories.uq.edu.au/smi/the-circular-economy/index.html>;
- Perrine Toledano, Martin Dietrich Brauch, Solina Kennedy and Howard Mann, *Don’t Throw Caution to the Wind: In the green energy transition, not all critical minerals will be goldmines* (New York: CCSI, May 2020), <https://ccsi.columbia.edu/work/projects/dont-throw-caution-to-the-wind-in-the-green-energy-transition-not-all-critical-minerals-will-be-goldmines>.
- <sup>110</sup> Brauch, “Taking Equity into Account” (n. 35).
- <sup>111</sup> Brauch, “Taking Equity into Account” (n. 35).
- <sup>112</sup> Brauch, “Taking Equity into Account” (n. 35). See also:
- 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: CCSI and Sabin Center for Climate Change Law, August 2023), <https://ccsi.columbia.edu/decommissioning-offshore>;
- Martin Dietrich Brauch, Esteban F. Fresno Rodríguez, and José Luis Gallardo Torres, *Provisions on Liability for Decommissioning Upstream Offshore Oil and Gas Infrastructure in Investor–State Contracts* (New York: CCSI, August 2023), <https://ccsi.columbia.edu/decommissioning-offshore>.
- <sup>113</sup> Brauch, “Taking Equity into Account” (n. 35).
- <sup>114</sup> Brauch, “How Can States Best Fill the Vacuum of the Flawed Energy Charter Treaty?” (n. 95).
- <sup>115</sup> Tienhaara, Johnson and Burger, “Valuing Fossil Fuel Assets in an Era of Climate Disruption” (n. 72).
- <sup>116</sup> Brauch, “Taking Equity into Account” (n. 35).
- <sup>117</sup> Brauch, “Taking Equity into Account” (n. 35).
- <sup>118</sup> The Development and Industrial Policy section and accompanying citations have been adapted from a memo produced for CCSI titled “International Trade and Investment Legal Frameworks to Unlock Zero-Carbon Markets in Africa,” by Tyler Alviano, J.D. Candidate 2022, Justin Cuddihey, J.D. Candidate 2022, and Mary Wang, J.D. Candidate 2023, under the supervision of Professor Anthony VanDuzer at University of Ottawa’s Faculty of Law.
- <sup>119</sup> Sola Adesola and Brennan Feargal, eds., *Renewable Energy in Africa: Policies, Sustainability, and Affordability* (Cham: Palgrave Macmillan, 2019), 201, <https://link.springer.com/book/10.1007/978-3-319-91301-8>;
- IRENA, *Scaling up Renewable Energy Deployment in Africa: Detailed Overview of IRENA’s Engagement and Impact* (Abu Dhabi: IRENA, January 2020), 8, [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Feb/IRENA\\_Africa\\_Impact\\_Report\\_2020.pdf](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Feb/IRENA_Africa_Impact_Report_2020.pdf).
- <sup>120</sup> KfW Development Bank (KfW), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and IRENA, *The Renewable Energy Transition in Africa: Powering Access, Resilience and Prosperity* (Frankfurt am Main: KfW, GIZ and IRENA, September 2020), <https://www.irena.org/publications/2021/March/The-Renewable-Energy-Transition-in-Africa>.
- <sup>121</sup> KfW, GIZ, and IRENA, *The Renewable Energy Transition in Africa*, 21 (n. 120).
- <sup>122</sup> Toledano, Brauch, Kennedy, and Mann, *Don’t Throw Caution to the Wind* (n. 109).
- <sup>123</sup> Extractives Industries Transparency Initiative (EITI), *EITI in Africa: Disclosing Data, Strengthening Governance, Fighting Corruption* (Oslo: EITI Secretariat, September 2018), [https://eiti.org/sites/default/files/attachments/eiti\\_africa\\_brief\\_en.pdf](https://eiti.org/sites/default/files/attachments/eiti_africa_brief_en.pdf).
- <sup>124</sup> Babafemi Oyewole, *Overview of Local Content Regulatory Frameworks in Selected ECCAS Countries* (Geneva: UNCTAD, May 2018), 1, [https://unctad.org/system/files/official-document/ditccominf2018d4\\_en.pdf](https://unctad.org/system/files/official-document/ditccominf2018d4_en.pdf).
- <sup>125</sup> IRENA, *Renewable Energy Auctions: Cases from Sub-Saharan Africa* (Abu Dhabi: IRENA, 2018), <https://www.irena.org/publications/2018/Apr/Renewable-energy-auctions-Cases-from-sub-Saharan-Africa>.
- <sup>126</sup> World Trade Organization (WTO), General Agreement on Tariffs and Trade (GATT) 1994, Marrakesh Agreement Establishing the World Trade Organization, opened for signature April 15, 1994, entered into force January 1, 1995 (GATT), Annex 1A, [https://www.wto.org/english/docs\\_e/legal\\_e/06-gatt\\_e.htm](https://www.wto.org/english/docs_e/legal_e/06-gatt_e.htm).

- 127 WTO, Agreement on Trade-Related Investment Measures, Marrakesh Agreement Establishing the World Trade Organization, opened for signature April 15, 1994, entered into force January 1, 1995 (TRIMs), Annex 1A, [https://www.wto.org/english/docs\\_e/legal\\_e/18-trims\\_e.htm](https://www.wto.org/english/docs_e/legal_e/18-trims_e.htm).
- 128 WTO, Agreement on Subsidies and Countervailing Measures, Marrakesh Agreement Establishing the World Trade Organization, opened for signature April 15, 1994, entered into force January 1, 1995 (SCM), Annex 1A, [https://www.wto.org/english/docs\\_e/legal\\_e/24-scm\\_01\\_e.htm](https://www.wto.org/english/docs_e/legal_e/24-scm_01_e.htm).
- 129 WTO, General Agreement on Trade in Services, Marrakesh Agreement Establishing the World Trade Organization, opened for signature April 15, 1994, entered into force January 1, 1995 (GATS), Annex 1B, [https://www.wto.org/english/docs\\_e/legal\\_e/26-gats\\_01\\_e.htm](https://www.wto.org/english/docs_e/legal_e/26-gats_01_e.htm).
- 130 “Ecuador, EU, Kenya and New Zealand Team Up To Forge Cooperation On Trade And Climate,” *TESS: Forum on Trade Environment and the SDGs, News* (June 13, 2022), <https://tessforum.org/news/ministers-team-up-to-forge-cooperation-on-trade-and-climate>.
- 131 “Ecuador, EU, Kenya and New Zealand Team Up” (n. 130), quoting European Commission Executive Vice-President and Commissioner for Trade, Valdis Dombrovskis.
- 132 “Ecuador, EU, Kenya and New Zealand Team Up” (n. 130), quoting Kenya’s Cabinet Secretary for Industrialization, Trade and Enterprise Development, Betty Maina.
- 133 Aydos et al., *Scaling Investment in Renewable Energy* (n. 106).
- 134 See, for example, the discussion of the Moroccan Renewable Energy Law in Rachid El Bachtiri and Ernest Matagne, “A Technical Reading of the 13-09 Law on Renewable Energy in Morocco” (Conference Paper, International Renewable and Sustainable Energy Conference (IRSEC), Ouarzazate: IRSEC, March 2013), 4, <https://ieeexplore.ieee.org/document/6529733>.
- 135 This includes products that can “help achieve environmental and climate protection goals, such as generating clean and renewable energy, improving energy and resource efficiency, controlling air pollution, managing waste, treating waste water, monitoring the quality of the environment, and combating noise pollution.” “Environmental Goods Agreement (EGA),” Trade and Environment, WTO, 2024, [https://www.wto.org/english/tratop\\_e/envir\\_e/ega\\_e.htm](https://www.wto.org/english/tratop_e/envir_e/ega_e.htm).
- 136 Paul Brenton and Vicky Chemutai, *The Trade and Climate Change Nexus: The Urgency and Opportunities for Developing Countries* (Washington DC: The World Bank Group, 2021), 55–63, <https://openknowledge.worldbank.org/bitstream/handle/10986/36294/9781464817700.pdf>.
- 137 Brenton and Chemutai, *The Trade and Climate Change Nexus* (n. 136).
- 138 Brenton and Chemutai, *The Trade and Climate Change Nexus* (n. 136);
- Jaime de Melo and Jean-Marc Solleder, “The EGA Negotiations: Why They Are Important, Why They Are Stalled, and Challenges Ahead,” *Journal of World Trade* 54, no. 3 (2020): 333–347, <https://kluwerlawonline.com/journalarticle/Journal+of+World+Trade/54.3/TRAD2020015>.
- 139 Brenton and Chemutai, *The Trade and Climate Change Nexus* (n. 136).
- 140 “Joint Leaders’ Statement on the launch of the ‘Agreement on Climate Change, Trade and Sustainability’ initiative,” New Zealand Government, September 25, 2019, <https://www.beehive.govt.nz/sites/default/files/2019-09/ACCTS%20joint%20leaders%20statement.pdf>.
- 141 Ronald P. Steenblik, *Code Shift: The environmental significance of the 2022 amendments to the Harmonized System* (Winnipeg: IISD, May 2020), <https://www.iisd.org/system/files/publications/code-shift-2022-harmonized-system.pdf>.
- 142 Jaime de Melo and Jean-Marc Solleder, “The EGA Negotiations” (n. 138).
- 143 New Zealand, Costa Rica, Fiji, Iceland, Norway and Switzerland are parties to the ACCTS.
- 144 See Michael Jakob, Stavros Afionis, Max Åhman, Angelo Antoci, Marlene Arens, Fernando Ascensão, Harro Van Asselt, Nicolai Baumert, Simone Borghesi, Claire Brunel, Justin Caron, Aaron Cosbey, Susanne Droege, Alecia Evans, Gianluca Iannucci, Magnus Jiborn, Astrid Kander, Viktoras Kulionis, Arik Levinson, Jaime De Melo, Tom Moerenhout, Alessandro Monti, Maria Panezi, Philippe Quirion, Lutz Sager, Marco Sakai, Juan Sesmero, Mauro Sodini, Jean-Marc Solleder, Cleo Verkuijl, Valentin Vogl, Leonie Wenz, and Sven Willner, “How Trade Policy Can Support the Climate Agenda: Ensure Open Markets for Clean Technologies and Products,” *Science* 376, no. 6600 (June 23, 2022): 1401–1403, <https://www.science.org/doi/10.1126/science.abo4207>.
- 145 See “Event Highlights: Carbon Border Adjustments in the EU, the U.S., and Beyond: Economic, Legal, Political, and GHG Accounting Aspects,” CCSI Past Event on November 19, 2021, <https://ccsi.columbia.edu/content/event-highlights-carbon-border-adjustments-eu-us-and-beyond>.
- 146 World Bank, *State and Trends of Carbon Pricing 2023* (Washington, D.C.: World Bank, 2023), <http://hdl.handle.net/10986/39796>.
- 147 Vaughan: “Event Highlights: Carbon Border Adjustments in the EU, the U.S., and Beyond” (n. 145). See also, Andrei Marcu, Michael Mehling and Aaron Cosbey, *CBAM for the EU: A Policy Proposal* (Roundtable on Climate Change and Sustainable Transition (ERCST), 2021), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3838167](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3838167).



- <sup>148</sup> Vaughan: “Event Highlights: Carbon Border Adjustments in the EU, the U.S., and Beyond” (n. 145).
- <sup>149</sup> Ilaria Espa, Joseph Francois, and Harro van Asselt, *The EU Proposal for a Carbon Border Adjustment Mechanism (CBAM): An Analysis under WTO and Climate Change Law*, World Trade Institute Working Paper No. 06/2022 (November 2, 2022), <https://www.wti.org/research/publications/1375/the-eu-proposal-for-a-carbon-border-adjustment-mechanism-cbam-an-analysis-under-wto-and-climate-change-law>.
- <sup>150</sup> Council of the European Union, “EU climate action: provisional agreement reached on Carbon Border Adjustment Mechanism (CBAM),” press release, December 13, 2022, <https://www.consilium.europa.eu/en/press/press-releases/2022/12/13/eu-climate-action-provisional-agreement-reached-on-carbon-border-adjustment-mechanism-cbam>.
- <sup>151</sup> Perrine Toledano: “Event Highlights: Carbon Border Adjustments in the EU, the U.S., and Beyond” (n. 145); Emily Spittle and Martin Dietrich Brauch, *Carbon Accounting by Public and Private Financial Institutions: Can We Be Sure Climate Finance Is Leading to Emissions Reductions?* (New York: CCSI, August 2021), <https://ccsi.columbia.edu/sites/default/files/content/docs/ccsi-comet-carbon-accounting-climate-finance.pdf>.
- <sup>152</sup> Paul Brenton: “Event Highlights: Carbon Border Adjustments in the EU, the U.S., and Beyond” (n. 145).
- <sup>153</sup> Brenton: “Event Highlights: Carbon Border Adjustments in the EU, the U.S., and Beyond” (n. 145).
- <sup>154</sup> See Michael Mehling, Harro van Asselt, Susanne Droege, and Kasturi Das. “The Form and Substance of International Cooperation on Border Carbon Adjustments.” *AJIL Unbound* 116 (2022): 213–18, <https://www.cambridge.org/core/journals/american-journal-of-international-law/article/form-and-substance-of-international-cooperation-on-border-carbon-adjustments/93E335B483378B2E2EE5CE33E47BB7A6>;
- Goran Dominioni and Alessandro Monti, *Internalizing Climate Externalities from Internationally Traded Goods: Challenges and Way Forward for Border Carbon Adjustment Mechanisms* (SSRN, March 2023), [https://jura.ku.dk/sustainabilityhub/enact/?pure=en%2Fpublications%2Finternalizing-climate-externalities-from-internationally-traded-goods-challenges-and-way-forward-for-border-carbon-adjustment-mechanisms\(7790d775-fda3-42ba-b22e-b736692c9275\).html](https://jura.ku.dk/sustainabilityhub/enact/?pure=en%2Fpublications%2Finternalizing-climate-externalities-from-internationally-traded-goods-challenges-and-way-forward-for-border-carbon-adjustment-mechanisms(7790d775-fda3-42ba-b22e-b736692c9275).html).
- <sup>155</sup> Timothy Meyer and Todd N. Tucker, “How the U.S. and EU Can Rewrite Trade Rules to Fight the Climate Crisis,” *Roosevelt Institute (blog)*, March 15, 2023, <https://rooseveltinstitute.org/2023/03/15/how-the-us-and-eu-can-rewrite-trade-rules-to-fight-the-climate-crisis>; see also: Timothy Meyer and Todd N. Tucker, “A Pragmatic Approach to Carbon Border Measures,” *World Trade Review* 21, no. 1 (2022): 109–120, <https://doi.org/10.1017/S1474745621000409>.
- <sup>156</sup> See Emily Lydgate, *Climate Equivalence and International Trade*, Robert Schuman Centre for Advanced Studies Research Paper No. 2022\_64 (October 20, 2022), <https://ssrn.com/abstract=4267090>;
- William Nordhaus, “Climate Clubs: Overcoming Free-riding in International Climate Policy,” *American Economic Review* 105, no. 4 (2015): 1339–1370, <https://ycsg.yale.edu/sites/default/files/files/nordhaus-climate-clubs.pdf>.
- <sup>157</sup> See, for example, “The Coalition on Materials Emissions Transparency (COMET),” Columbia Center on Sustainable Investment (CCSI), <https://ccsi.columbia.edu/content/coalition-materials-emissions-transparency-comet>.
- <sup>158</sup> OECD, “Energy Price Surge Underlines Need to Accelerate Clean Energy Transitions Rather than Subsidise Fossil Fuels,” press release, November 2, 2021, <https://www.oecd.org/newsroom/energy-price-surge-underlines-need-to-accelerate-clean-energy-transitions-rather-than-subsidise-fossil-fuels.htm>.
- <sup>159</sup> Richard Bridle, Shruti Sharma, Mostafa Mostafa, and Anna Geddes, *Fossil Fuel to Clean Energy Subsidy Swaps: How to pay for an energy revolution* (Winnipeg: IISD and GSI, June 2019), <https://www.iisd.org/system/files/publications/fossil-fuel-clean-energy-subsidy-swap.pdf>.
- <sup>160</sup> OECD, “Energy Price Surge Underlines Need to Accelerate Clean Energy Transitions” (n. 158).
- <sup>161</sup> Bridle, Sharma, Mostafa, and Geddes, *Fossil Fuel to Clean Energy Subsidy Swaps* (n. 159).
- <sup>162</sup> OECD, “Support for Fossil Fuels Almost Doubled in 2021, Slowing Progress Toward International Climate Goals, According to new Analysis from OECD and IEA,” press release, August 29, 2022, <https://www.oecd.org/newsroom/support-for-fossil-fuels-almost-doubled-in-2021-slowing-progress-toward-international-climate-goals-according-to-new-analysis-from-oecd-and-iea.htm>. See also: “Global Estimates on Subsidies to Fossil Fuels,” Fossil Fuel Subsidy Tracker, [fossilfuelsubsidytracker.org](https://fossilfuelsubsidytracker.org). Bloomberg’s calculations were even higher, estimating that the G20 alone provided almost USD 600 billion in support for coal, gas, oil and fossil fuels in 2020, with a total allocation of USD 3.2 trillion in fossil fuel support over 2016 to 2020 (though, a small proportion of fossil fuel subsidies in that study correspond to energy subsidies for vulnerable households).
- Victoria Cuming and Maia Godemer, *Climate Policy Factbook: COP27 Edition* (Bloomberg NEF, November 1, 2022), <https://assets.bbhub.io/professional/sites/24/BNEF-Climate-Policy-Factbook-COP27-Edition.pdf>.

- <sup>163</sup> See for example, UNFCCC COP, Decisions adopted by the Conference of the Parties: Copenhagen Accord, Decision 2/Cp.15, FCCC/CP/2009/11/Add.1 (March 30, 2010) (Copenhagen Accord), para. 8, <https://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf#page=4>;
- UNFCCC COP, Decisions adopted by the Conference of the Parties: The Cancun Agreements, Decision 1/CP.16, FCCC/CP/2010/7/Add.1 (March 15, 2011), para. 98, <https://unfccc.int/sites/default/files/resource/docs/2010/cop16/eng/07a01.pdf>;
- Paris Agreement, paras. 54 and 115 (n. 2).
- <sup>164</sup> “Climate Finance and the USD 100 Billion Goal,” Climate Change, OECD, <https://www.oecd.org/climate-change/finance-usd-100-billion-goal>.
- <sup>165</sup> Cuming and Goedemer, *Climate Policy Factbook* (n. 162).
- <sup>166</sup> Toru Muta and Musa Erdogan, “The global energy crisis pushed fossil fuel consumption subsidies to an all-time high in 2022,” IEA, February 16, 2023, <https://www.iea.org/commentaries/the-global-energy-crisis-pushed-fossil-fuel-consumption-subsidies-to-an-all-time-high-in-2022>.
- <sup>167</sup> OECD, “Energy Price Surge Underlines Need to Accelerate Clean Energy Transitions” (n. 158).
- <sup>168</sup> OECD, “Energy Price Surge Underlines Need to Accelerate Clean Energy Transitions” (n. 158).
- <sup>169</sup> OECD, “Energy Price Surge Underlines Need to Accelerate Clean Energy Transitions” (n. 158).
- <sup>170</sup> International Energy Agency (IEA), *Renewables 2022: Analysis and Forecast to 2027* (Vienna: IEA, December 2022) <https://www.iea.org/reports/renewables-2022>.
- <sup>171</sup> IEA, *Renewables 2022* (n. 170).
- <sup>172</sup> IEA, *Renewables 2022* (n. 170).
- <sup>173</sup> “Inventory of Support Measures for Fossil Fuels: Country Notes,” OECD Database, <https://www.oecd-ilibrary.org/sites/5a3efe65-en/index.html?itemId=/content/publication/5a3efe65-en>. See also:
- OECD, *OECD Companion to the Inventory of Support Measures for Fossil Fuels 2021* (Paris: OECD Publishing, March 30, 2021), <https://doi.org/10.1787/e670c620-en>.
- <sup>174</sup> OECD and IEA, *Update on Recent Progress in Reform of Inefficient Fossil-Fuel Subsidies that Encourage Wasteful Consumption* (Paris: OECD Publishing, 2019), <https://oecd.org/fossil-fuels/publication/OECD-IEA-G20-Fossil-Fuel-Subsidies-Reform-Update-2019.pdf>.
- <sup>175</sup> Bridle, Sharma, Mostafa, and Geddes, *Fossil Fuel to Clean Energy Subsidy Swaps* (n. 159).
- <sup>176</sup> OECD, “Support for Fossil Fuels Almost Doubled in 2021, Slowing Progress Toward International Climate Goals, According to New Analysis from OECD and IEA,” press release, August 29, 2022, <https://www.oecd.org/newsroom/support-for-fossil-fuels-almost-doubled-in-2021-slowing-progress-toward-international-climate-goals-according-to-new-analysis-from-oecd-and-iea.htm>. See also:
- “Inventory of Support Measures for Fossil Fuels: Country Notes,” OECD Database (n. 173).
- <sup>177</sup> Sustainable Development Goals, Goal 12.c (n. 1).
- <sup>178</sup> Bridle, Sharma, Mostafa, and Geddes, *Fossil Fuel to Clean Energy Subsidy Swaps* (n. 159).
- <sup>179</sup> IEA, *Renewables 2022* (n. 170).
- <sup>180</sup> Bridle, Sharma, Mostafa, and Geddes, *Fossil Fuel to Clean Energy Subsidy Swaps* (n. 159).
- <sup>181</sup> OECD and IEA, *Update on Recent Progress in Reform of Inefficient Fossil-Fuel Subsidies* (n. 174).
- <sup>182</sup> Laura Merrill, Franziska Funke, IISD, “All Change and No Change: G20 Commitment on Fossil Fuel Subsidy Reform, Ten Years On,” *Global Subsidies Initiative* (Blog), October 8, 2019, <https://www.iisd.org/gsi/subsidy-watch-blog/all-change-and-no-change-g20-commitment-fossil-fuel-subsidy-reform-ten-years>.
- <sup>183</sup> OECD and IEA, *Update on Recent Progress in Reform of Inefficient Fossil-Fuel Subsidies*, 31 (n. 174).
- <sup>184</sup> On the importance of defining fossil fuel subsidies, see Harro van Asselt and Jakob Skovgaard, “Reforming fossil fuel subsidies requires a new approach to setting international commitments,” *One Earth* 4, no. 11 (November 19, 2021): 1523–1526, <https://doi.org/10.1016/j.oneear.2021.10.019>;
- Emily Lydgate, *Beyond Non-Regression: Mainstreaming Climate Action into FTAs*, Centre for Inclusive Trade Policy Working Paper (February 1, 2023), <https://citp.ac.uk/publications/beyond-non-regression-mainstreaming-climate-action-into-ftas>.
- <sup>185</sup> Assia Elgouacem and Peter Journeay-Kaler, *The Netherlands’s Effort to Phase Out and Rationalise its Fossil-Fuel Subsidies: An OECD/IEA Review of Fossil-Fuel Subsidies in the Netherlands* (Paris: OECD, 2020), <https://www.oecd.org/fossil-fuels/publication/2020-OECD-IEA-review-of-fossil-fuel-subsidies-in-the-Netherlands.pdf>.
- <sup>186</sup> OECD and IEA, *Update on Recent Progress in Reform of Inefficient Fossil-Fuel Subsidies*, 30 (n. 174).
- <sup>187</sup> OECD and IEA, *Update on Recent Progress in Reform of Inefficient Fossil-Fuel Subsidies*, 30 (n. 174).

- <sup>188</sup> Chen Zhou, “Can Intellectual Property Rights Within Climate Technology Transfer Work for the UNFCCC and the Paris Agreement?,” *International Environmental Agreements: Politics, Law and Economics* 19, no. 1 (2019): 107-122, [https://ideas.repec.org/a/spr/ieapple/v19y2019i1d10.1007\\_s10784-018-09427-2.html](https://ideas.repec.org/a/spr/ieapple/v19y2019i1d10.1007_s10784-018-09427-2.html).
- <sup>189</sup> Zhou, “Can Intellectual Property Rights Within Climate Technology Transfer Work?” (n. 188); Matthew Rimmer, “Beyond the Paris Agreement: Intellectual Property, Innovation Policy, and Climate Justice” *Laws* 8, no. 1 (2019), 7, <https://doi.org/10.3390/laws8010007>.
- <sup>190</sup> Rimmer, “Beyond the Paris Agreement ” (n. 189).
- <sup>191</sup> Rimmer, “Beyond the Paris Agreement ” (n. 189); Glasgow Climate Pact (n. 90).
- <sup>192</sup> Zhou, “Can Intellectual Property Rights Within Climate Technology Transfer Work?” (n. 188); see also: Antoine Dechezleprêtre, Matthieu Glachant, Yann Ménière, “The Clean Development Mechanism and the international diffusion of technologies: An empirical study,” *Energy Policy* 36, no. 4 (2008): 1273–1283, <https://doi.org/10.1016/j.enpol.2007.12.009>.
- <sup>193</sup> Rimmer, “Beyond the Paris Agreement ” (n. 189).
- <sup>194</sup> Wei Zhuang, *Intellectual Property Rights and Climate Change: Interpreting the TRIPS Agreement for Environmentally Sound Technologies* (Cambridge: Cambridge University Press, 2017), <https://doi-org.ezproxy.cul.columbia.edu/10.1017/9781316662892>. See also: UNCTAD and ICTSD, *Resource Book on TRIPS and Development* (Cambridge: Cambridge University Press, 2005), 375, <https://doi.org/10.1017/CBO9780511511363>.
- <sup>195</sup> Zhuang, *Intellectual Property Rights and Climate Change*, chap. 6 (n. 194).
- <sup>196</sup> Zhuang, *Intellectual Property Rights and Climate Change*, chap. 6 (n. 194).
- <sup>197</sup> Zhuang, *Intellectual Property Rights and Climate Change*, chap. 6 (n. 194).
- <sup>198</sup> Zhuang, *Intellectual Property Rights and Climate Change*, chap. 6 (n. 194).
- <sup>199</sup> Zhuang, *Intellectual Property Rights and Climate Change*, chap. 6 (n. 194).
- <sup>200</sup> Nicolás M. Perrone, “Technology Transfer and Climate Change: A Developing Country Perspective,” *South Centre Climate Policy Brief No. 28* (November 14, 2022), <https://www.southcentre.int/climate-policy-brief-28-14-november-2022>.
- <sup>201</sup> Perrone, “Technology Transfer and Climate Change” (n. 200).
- <sup>202</sup> World Intellectual Property Organization (WIPO), *WIPO GREEN Strategic Plan 2019–2023: Accelerating the Transition to a Greener Global Economy* (Geneva: WIPO, 2019), <https://doi.org/10.34667/tind.29099>.
- <sup>203</sup> UNFCCC Technology Executive Committee, Experiences, lessons learned and good practices from GCF and GEF’s support for technology, UN Doc. TEC/2021/23/11 (August 26, 2021), [https://unfccc.int/ttclear/misc\\_/StaticFiles/gnwoerk\\_static/tn\\_meetings/fe69e115290a4dd8b779d116a26038d3/2a811f5b4b5b4364bf89ca64511a3df8.pdf](https://unfccc.int/ttclear/misc_/StaticFiles/gnwoerk_static/tn_meetings/fe69e115290a4dd8b779d116a26038d3/2a811f5b4b5b4364bf89ca64511a3df8.pdf)
- <sup>204</sup> Zhuang, *Intellectual Property Rights and Climate Change*, 157–317 (n. 194).
- <sup>205</sup> Charles E. Di Leva and Scott Vaughan, “The Paris Agreement’s New Article 6 Rules,” *IISD* (blog), December 13, 2021, <https://www.iisd.org/articles/paris-agreement-article-6-rules>.



**[ccsi.columbia.edu](http://ccsi.columbia.edu)**

Columbia Center on  
Sustainable Investment

Jerome Greene Hall  
435 West 116th Street  
New York, NY 10027  
Phone: +1 (212) 854-1830  
Email: [ccsi@law.columbia.edu](mailto:ccsi@law.columbia.edu)

The Columbia Center on Sustainable Investment is a leading applied research center and forum dedicated to the study, discussion and practice of sustainable international investment.