

Toward an Intergovernmental Transparency Arrangement for Fossil Fuel Production

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To achieve the Paris Agreement's temperature goals, a managed decline of fossil fuel production is necessary. Heeding this message, there are growing calls for an international governance framework to facilitate cooperation on winding down fossil fuel production. Promoting transparency is of major importance for international cooperation on winding down fossil fuel production effectively and equitably. Specifically, to align fossil fuel production with climate change goals, a better understanding of global trends in current and planned production is required. However, at present such information is incomplete, inconsistent, and scattered across a range of transparency initiatives, and much of this information is reported or collected largely on a voluntary basis. This article therefore explores how an intergovernmental transparency arrangement could be designed, drawing on examples of intergovernmental transparency arrangements in various areas of international law and governance. The article concludes that an intergovernmental transparency arrangement for fossil fuel production should: (1) allow for differentiation, but subject to minimum requirements; (2) provide capacity-building support for developing countries; (3) combine technical and peer review; (4) ensure that follow-up activities are linked to the outcome of the review process; and (5) provide for non-state actor participation.

I. Introduction

With the 2015 Paris Agreement, the international community agreed that preventing the most dangerous impacts of climate change requires limiting the global average temperature increase to well below 2°C above pre-industrial levels and that efforts should be pursued to keep warming below 1.5°C.¹ Achieving these goals requires a focus on fossil fuels—coal, oil, and gas—as the single largest contributor to green-

house gas emissions, accounting for 86% of carbon dioxide emissions in the past 10 years.² To achieve the 2°C goal, research suggests that one-third of present estimates of oil reserves, half of gas reserves, and more than 80% of coal reserves need to remain untouched.³ Achieving the 1.5°C goal would make 58% of oil, 59% of gas, and 89% of coal reserves 'unextractable' by 2050.⁴ While the International Energy Agency has stated that to achieve its Net-Zero Emissions by 2050 Scenario '[t]here is no need for in-

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- 1 Paris Agreement (adopted 12 December 2015, entered into force 4 November 2016) UN Doc FCCC/CP/2015/10/Add.1, Annex, art 2(1)(a).
- 2 Josep G Canadell et al, 'Global Carbon and other Biogeochemical Cycles and Feedbacks' in Valérie Masson-Delmotte et al (eds), *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (Intergovernmental Panel on Climate Change (IPCC) 2021).
- 3 Christoph McGlade and Paul Ekins, 'The Geographical Distribution of Fossil Fuels Unused when Limiting Global Warming to 2°C' (2015) 517 *Nature* 187.
- 4 Dan Welsby et al, 'Unextractable Fossil Fuels in a 1.5 °C World' (2021) 597 *Nature* 230.

vestment in new fossil fuel supply,⁵ governments continue to support and invest in fossil fuel projects. At the current rate, this will result in more than double the production consistent with the 1.5°C goal.⁶

Acknowledging the linkages between fossil fuel production and climate change, a growing number of countries have begun to take measures to restrict fossil fuel supply, including moratoria, extraction fees, and reforms of fossil fuel producer subsidies.⁷ While such supply-side measures can offer an important complement to traditional, demand-oriented climate policies,⁸ their effectiveness would be strengthened by international cooperation.⁹ International institutions can support national efforts by setting overall goals and defining guiding principles, putting in place mechanisms to strengthen transparency and accountability, offering capacity-building, financial, and technological support, and allowing for learning across countries.¹⁰

In the run-up to the Glasgow Climate Conference in November 2021, the first steps towards international cooperation were taken in the form of the launch of the Beyond Oil and Gas Alliance, an initiative by the governments of Costa Rica and Denmark that seeks to align oil and gas production with the Paris Agreement temperature goal.¹¹ Intergovernmental efforts such as these could form a stepping stone towards a more comprehensive Fossil Fuel

Non-Proliferation Treaty (FF-NPT).¹² The campaign behind the FF-NPT has gained traction, with non-governmental organisations (NGOs), subnational authorities, and academics supporting the development of a dedicated intergovernmental instrument to address fossil fuel production.¹³

With the mounting interest for the design of international institutions to govern fossil fuel supply, it is important to consider how a fossil fuel treaty could be structured, how it could work, and what kinds of provisions it could include.¹⁴ Responding to this need, this article explores options for an intergovernmental transparency arrangement that could either be part of an FF-NPT, or that could operate as a standalone mechanism while such a treaty is being developed and negotiated.

In developing an intergovernmental transparency mechanism for fossil fuel production there is no need to start from a blank slate. Transparency arrangements feature in a wide range of multilateral regimes, including on human rights, trade, and nuclear weapons, and monitoring, reporting, and review are an important feature of most contemporary multilateral environmental agreements.¹⁵ This article therefore explores what lessons can be learned from these experiences for the design of an intergovernmental transparency arrangement for fossil fuel production, focusing on five crosscutting elements: (1) differen-

5 International Energy Agency (IEA), 'Net Zero by 2050 A Roadmap for the Global Energy Sector' (IEA 2021) 21 <<https://www.iea.org/reports/net-zero-by-2050>> accessed 24 August 2022.

6 Stockholm Environment Institute (SEI) et al, 'The Production Gap Report 2021' (2021) 15 <<https://productiongap.org/2021report/>> accessed 24 August 2022. To be clear, this article focuses on addressing fossil fuel *production* rather than *consumption*. The latter is directly addressed through many climate change mitigation policies, from carbon pricing to fuel efficiency standards. The climate impacts of fossil fuel production can be estimated through so-called 'extraction-based accounting' methods, which attribute the greenhouse gas emissions released from the burning of fossil fuels to the location of extraction. See *ibid* v; and Steven J Davis, Glen P Peters and Ken Caldeira, 'The Supply Chain of CO₂ Emissions' (2011) 108 *Proceedings of the National Academy of Sciences of the United States of America* 18554.

7 Peter Erickson et al, 'Why Fossil Fuel Producer Subsidies Matter' (2020) 578 *Nature* E1; Michael Lazarus and Harro van Asselt, 'Fossil Fuel Supply and Climate Policy: Exploring the Road Less Taken' (2018) 150 *Climatic Change* 1; Angela V Carter and Janetta McKenzie, 'Amplifying "Keep It in the Ground" First-Movers: Toward a Comparative Framework' (2020) 33 *Society & Natural Resources* 1339; Nicolas Gaulin and Philippe Le Billon, 'Climate Change and Fossil Fuel Production Cuts: Assessing Global Supply-Side Constraints and Policy Implications' (2020) 20 *Climate Policy* 888.

8 Fergus Green and Richard Denniss, 'Cutting with Both Arms of the Scissors: The Economic and Political Case for Restrictive Supply-Side Climate Policies' (2018) 150 *Climatic Change* 73.

9 Georgia Piggot et al, 'Curbing Fossil Fuel Supply to Achieve Climate Goals' (2020) 20 *Climate Policy* 881; Geir B Asheim et al, 'The Case for a Supply-Side Climate Treaty' (2019) 365 *Science* 325.

10 Tim Rayner, 'Keeping It in the Ground? Assessing Global Governance for Fossil-Fuel Supply Reduction' (2021) 8 *Earth System Governance* 100061.

11 See <<https://beyondoilandgasalliance.com/>> accessed 24 August 2022.

12 See Peter Newell and Andrew Simms, 'Towards a Fossil Fuel Non-Proliferation Treaty' (2020) 20 *Climate Policy* 1043; Harro van Asselt and Peter Newell, 'Pathways to an International Agreement to Leave Fossil Fuels in the Ground' (2022 *fc*) *Global Environmental Politics*.

13 See <<https://fossilfuel treaty.org/endorsements>> accessed 24 August 2022.

14 See Harro van Asselt, 'Governing Fossil Fuel Production in the Age of Climate Disruption: Towards an International Law of "Leaving It in the Ground"' (2021) 9 *Earth System Governance* 100118.

15 Kal Raustiala, 'Reporting and Review Institutions in 10 Multilateral Environmental Agreements' (United Nations Environment Programme 2001); Tom Sparks and Anne Peters, 'Transparency Procedures' in Lavanya Rajamani and Jacqueline Peel (eds), *The Oxford Handbook of International Environmental Law* (2nd edn, OUP 2021) 904, 906–912.

tiation; (2) capacity-building support; (3) modalities of review; (4) follow-up; and (5) stakeholder involvement.

The article is structured as follows. Section II identifies the rationales for an intergovernmental transparency arrangement on fossil fuel production. Sections III to VII discuss the five elements of transparency arrangements, outlining available options drawing from experiences in other international regimes. Section VIII discusses the options for either hosting a standalone transparency arrangement or embedding it in existing international institutions. Section IX concludes with recommendations for the design and implementation of an intergovernmental transparency mechanism for fossil fuel production.

II. Rationales for an Intergovernmental Transparency Arrangement for Fossil Fuel Production

The creation of intergovernmental transparency arrangements is underpinned by a variety of claims, including improving sustainability and state performance and the holding of disclosers to account. In particular, it is suggested that information disclosure by states, and the vetting of this information, can shed light on the performance of states against their inter-

national commitments and therefore induce states to strengthen their performance.¹⁶ These claims may be used to support a variety of governance goals, including the technocratisation, democratisation, marketisation, or privatisation of governance architectures.¹⁷ Thus, it is important to recognise that transparency is a tool used to meet larger governance goals, not an end in and of itself. Moreover, there remain questions about the ability of transparency arrangements to engender accountability or whether they merely act to reflect existing conflicts around accountability¹⁸

Having said that, promoting transparency is of major importance for international cooperation on fossil fuel production. Specifically, to align fossil fuel production with climate change goals, a better understanding of global trends in current and planned production is required. In a chapter dedicated to the role of transparency, the Production Gap Report notes that '[t]he public disclosure of verifiable and comparable information by governments and corporations is key to addressing the fossil fuel production gap', as '[s]uch information can reveal the extent to which governments are supporting fossil fuel production, and provide insights into how countries can wind down production in light of the Paris Agreement's goals'.¹⁹

There are a wide range of international initiatives that seek to collect and publish data relevant to fossil fuel production. The goals of these initiatives include reducing price volatility and creating market stability (e.g., the Joint Organisations Data Initiative, which publishes oil and gas statistics²⁰), removing market distortions and inefficiencies (e.g., efforts to collect data on fossil fuel subsidies by organisations such as the Organisation for Economic Co-operation and Development (OECD) and the International Energy Agency²¹), and strengthening the governance of extractive industries (e.g., the Extractive Industries Transparency Initiative²²). While none of these initiatives focus on the link to fossil fuel production and climate change, recent non-state initiatives have emerged that seek to disclose relevant information. One example is the Task Force for Climate-Related Financial Disclosures, established by the G20's Financial Stability Board, which has adopted recommendations for the disclosure of climate-related financial risk by companies, which may include transition risks related to continued fossil fuel production.²³ Another example is the Energy Policy Tracker, through which five NGOs and a university keep track of public finance for energy production and consumption,

16 Myele Rouxel, 'The Paris Rulebook's Rules on Transparency: A Compliance Pull?' (2020) 14 *Carbon & Climate Law Review* 18.

17 Aarti Gupta and Michael Mason, 'Disclosing or Obscuring? The Politics of Transparency in Global Climate Governance' (2016) 18 *Current Opinion in Environmental Sustainability* 82.

18 Aarti Gupta and Harro van Asselt, 'Transparency in Multilateral Climate Politics: Furthering (or Distracting from) Accountability?' (2019) 13 *Regulation & Governance* 18.

19 SEI et al (n 6) 55.

20 See <<https://www.jodidata.org/>> accessed 24 August 2022.

21 See Organisation for Economic Co-operation and Development (OECD), 'OECD Work on Fossil Fuel Subsidies' <<https://www.oecd.org/fossil-fuels/>> accessed 24 August 2022; and IEA, 'Fossil Fuel Subsidies Database' <<https://www.iea.org/data-and-statistics/data-product/fossil-fuel-subsidies-database>> accessed 24 August 2022.

22 See <<https://eiti.org/>> accessed 24 August 2022.

23 See Task Force on Climate-Related Financial Disclosures, 'Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures' (2017) <<https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf>> accessed 24 August 2022. The Task Force's work is part of a broader trend towards disclosure of physical, liability, and transition risks by companies and financial institutions. Increasingly, governments are considering mandating such disclosure: Paul Griffin and Amy Myers Jaffe, 'Challenges for a Climate Risk Disclosure Mandate' (2021) 7 *Nature Energy* 2.

including for fossil fuels.²⁴ Other relevant information is compiled by the Global Energy Monitor, a not-for-profit organisation that has created numerous trackers related to fossil fuel infrastructure (e.g., coal mines, coal-fired power plants, gas pipelines and terminals).²⁵ Together with the Carbon Tracker Initiative, the Global Energy Monitor in 2021 also launched the Global Registry for Fossil Fuels, which compiles data from public and private sources on fossil fuel reserves, resources, and production, with the specific aim of managing the global carbon budget.²⁶

In addition to these initiatives focused on fossil fuel production, important strides have been made to strengthen the transparency arrangements of the international climate regime established by the United Nations Framework Convention on Climate Change (UNFCCC). Particularly, the Paris Agreement envisages an important role for transparency with the creation of an 'Enhanced Transparency Framework' (ETF).²⁷ Through the ETF, parties are instructed to regularly submit information on their greenhouse gas emissions and removals, as well as information necessary to track progress with the implementation and achievement of their Nationally Determined Contributions (NDCs). Moreover, parties need to convey relevant information on financial, technology transfer, and capacity-building support.²⁸ To this end, they are required to submit biennial transparency reports, which are subject to a review by both technical experts and other parties.²⁹ Although the ETF applies to all parties, it provides for flexibility for those 'developing country Parties that need it in the light of their capacities'.³⁰ In the modalities, procedures and guidelines on the ETF, which were adopted at the first Conference of the Parties serving as Meeting of the Parties to the Paris Agreement in Katowice, Poland in December 2018, parties elaborated on what information needs to be reported exactly.³¹ To the extent countries include fossil fuel production-related information in their NDCs, the ETF can provide an opportunity for strengthening transparency in this area. This is because parties can select their own indicators to track progress towards their NDCs, which, in principle, could include fossil fuel production-related indicators (e.g., historical production levels or size of fossil fuel reserves).³² With only few countries including relevant information related to fossil fuel production in their NDCs,³³ however, this potential of the ETF remains under-utilised.

Notwithstanding the growing number of initiatives promoting transparency, the available informa-

tion on fossil fuel production remains incomplete, inconsistent, and scattered across a range of transparency initiatives, and much of this information is reported or collected largely on a voluntary basis.³⁴ The types of information that could be made more transparent include data on the fossil fuels that are produced in a country in any given year, plans and policies for future production, oil and gas fields and coal mines that are under production or in development (including their historical production and projected future production levels), fossil fuel infrastructure including pipelines and refineries, and other information facilitating an assessment of the alignment of fossil fuel production and climate goals, amounts of government support for the production of fossil fuels (e.g., fossil fuel production subsidies), and information related to governments' plans for a fair and equitable transition away from fossil fuels.³⁵

24 See <<https://www.energypolicytracker.org/>> accessed 24 August 2022.

25 See <<https://globalenergymonitor.org/>> accessed 24 August 2022.

26 See Global Registry of Fossil Fuels <<https://fossilfuelregistry.org/>> accessed 24 August 2022.

27 Paris Agreement (n 1) art 13. For a detailed commentary, see Harro van Asselt and Kati Kulovesi, 'Article 13: Enhance Transparency Framework for Action and Support' in Geert Van Calster and Leonie Reins (eds), *The Paris Agreement on Climate Change: A Commentary* (Edward Elgar 2021) 302.

28 *ibid* art 13(7), (9) and (10).

29 *ibid* art 13(11)-(12).

30 *ibid* art 13(2). See further Christina Voigt and Felipe Ferreira, 'Differentiation in the Paris Agreement' (2016) 6 *Climate Law* 58; and Harald Winkler, Brian Mantlana and Thapelo Letete, 'Transparency of Action and Support in the Paris Agreement' (2017) 7 *Climate Policy* 853.

31 UNFCCC 'Decision 18/CMA.1, Modalities, Procedures and Guidelines for the Transparency Framework for Action and Support Referred to in Article 13 of the Paris Agreement' UN Doc FCCC/PA/CMA/2018/3/Add.2 (19 March 2019) Annex.

32 The examples of indicators listed in Decision 18/CMA.1 include one that may be of relevance, namely the 'share of non-fossil fuel in primary energy consumption' (*ibid* Annex, para 66). However, this indicator does not necessarily convey any information about fossil fuel production in a country.

33 Natalie Jones et al, 'Database: Fossil Fuel Production Commitments under the UNFCCC' (Stockholm Environment Institute 2022) <<https://www.sei.org/publications/ndcs-It-leds-dataset-fossil-fuel-plan/>> accessed 24 August 2022.

34 SEI et al (n 6) 63.

35 See further *ibid* 56–57. A further, more specific call for information disclosure related to fossil fuel finance was made by the Special Rapporteur on the promotion and protection of human rights in the context of climate change, Ian Fry, who called on the UN General Assembly to 'establish an internationally legally binding fossil fuel financial disclosure mechanism, to require Governments, businesses and financial institutions to disclose their investments in the fossil fuel and carbon intensive industries'. UNGA 'Promotion and Protection of Human Rights in the Context of Climate Change' UN Doc A/77/226 (22 July 2022).

An intergovernmental fossil fuel transparency mechanism offers one means through which such information can be collected and made public. Such an arrangement can provide baseline information on fossil fuel production that could be used to determine the gap between fossil fuel production and climate goals by assessing the embedded greenhouse gas emissions of future extraction against the emissions pathways likely to limit warming to 1.5°C. This information could also be used in climate risk assessments and decision-making about future fossil fuel production and investment, by both governmental and non-governmental actors.³⁶ Importantly, global transparency on fossil fuel production could facilitate a just transition away from fossil fuels, both in terms of enabling an assessment of the fair allocation of the remaining fossil fuel budget in a way that is consistent with the 1.5°C goal, and supporting national governments to effectively plan for the wind down of fossil fuel production in their territories. A transparency mechanism on fossil fuels could also feed into reporting processes under the climate regime, including the Paris Agreement's five-yearly global stocktake,³⁷ to ensure the ongoing production of fossil fuels is adequately reflected in evaluating the global trajectory towards meeting the 1.5°C goal.

An intergovernmental transparency mechanism could further provide an important vehicle for the sharing of best practices between countries regarding fossil fuel phase-out policies and the collection of data in settings where it is difficult for third parties to do so. It would provide a means for enhancing governmental buy-in, by providing reassurance

that other countries are also acting to curtail fossil fuel production, and could thus offer a foundation for international commitments on limiting production in line with climate goals.³⁸

Through regular reporting and review, it is hoped that states and other actors, including corporations, can be better held to account for their actions. Transparency can help to identify states that are shirking their responsibilities or significantly diverging from their climate commitments. Various measures can thus be deployed to help states better align their fossil fuel production plans with climate goals. These can include the sharing of best practices and experiences, reassurance that other states are also acting in good faith, and the socialisation of the idea that fossil fuel production needs to be drawn down. Enforcement mechanisms can also be utilised, including naming and shaming, various forms of sanctions, and domestic pressure.

Having established the main rationales for an intergovernmental transparency arrangement for fossil fuel production, the following sections explore five crosscutting elements that can be considered important for most multilateral transparency arrangements. For each of these elements, we explain some of the key choices to be made in the design of an intergovernmental transparency arrangement for fossil fuel production, and explain what choices have been made in the context of other international regimes.

III. Differentiation

An intergovernmental transparency arrangement should generally encourage transparency across the board, with all countries reporting information and, where appropriate, undergoing review. Not all countries are in the same position, however. Some countries—particularly in the Global South—may lack the capacity to report or participate in a review, or they may face challenges in collecting the relevant data (which in some cases may be held by privately owned companies). Acknowledging the different national circumstances prevailing in countries, many international agreements provide for differential, more advantageous, treatment for some countries.³⁹ Here, we identify some of the existing practices, and indicate what this means in terms of options for a fossil fuel transparency arrangement.

36 For instance, information could inform governmental decision-making on new fossil fuel projects. The need for such information is underscored by a recent consultation in the United Kingdom, where the Department for Business, Energy and Industrial Strategy (BEIS) asked for input on how to design a checkpoint to ensure the compatibility of fossil fuel licensing with climate change goals. See BEIS, 'Designing a Climate Compatibility Checkpoint for Future Oil and Gas Licensing in the UK Continental Shelf' (December 2021) <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1042291/oil-gas-licensing-checkpoint.pdf> accessed 24 August 2022.

37 Paris Agreement (n 1) art 14.

38 Rebecca Byrnes, 'A Global Registry of Fossil Fuels: White Paper' (Fossil Fuel Non-Proliferation Treaty 2020).

39 See generally Lavanya Rajamani, *Differential Treatment in International Environmental Law* (OUP 2006). In the context of international climate change law, see Voigt and Ferreira (n 30).

1. Voluntary Reporting

For reporting, the most extreme form of differentiation would be to allow countries to submit reports on an entirely voluntary basis, taking into account national circumstances and priorities. This is the case for the Voluntary National Reviews submitted to the High-Level Political Forum on how countries are implementing the 2030 Agenda for Sustainable Development and the Sustainable Development Goals. Agenda 2030 encourages—not requires—countries to ‘conduct regular and inclusive reviews of progress at the national and sub-national levels, which are country-led and country-driven.’⁴⁰ Even though these reviews are submitted on a voluntary basis, some level of harmonisation has been pursued through the development of—again, voluntary—reporting guidelines.⁴¹ While the voluntary nature of these reports and the associated guidelines may grant countries with varying capacities the necessary flexibility, a clear drawback is that information can be difficult to compare, and that the submission of information is often unpredictable. For a fossil fuel transparency arrangement, minimum reporting requirements could help address these concerns.

2. Differentiation in Substantive Reporting Requirements

For many international agreements, including multilateral environmental agreements, the main reporting requirements apply to all parties. Nevertheless, as experiences within the international climate regime show, the substantive reporting requirements can be differentiated. For example, acknowledging that not all relevant data for the purposes of greenhouse gas inventory reporting under the United Nations Framework Convention on Climate Change (UNFCCC) is available everywhere, guidelines by the Intergovernmental Panel on Climate Change distinguish between different tiers of information, corresponding to increasing levels of methodological complexity.⁴² Based on data availability, parties can choose the appropriate tier for reporting their information.

The Paris Agreement differentiates between parties through a system of ‘built-in flexibility’ for ‘those developing country Parties that need it in the light of their capacities.’⁴³ Under this system, developing

countries may report in lesser detail for several elements. However, even in these instances, the reporting requirements still require parties to report basic information. For instance, while developing countries may opt not to report information on all greenhouse gases, they still need to report data for ‘at least three gases (CO₂, CH₄ and N₂O) as well as any of the additional four gases (HFCs, PFCs, SF₆ and NF₃) that are included in the Party’s NDC ..., or have been previously reported.’⁴⁴ For the reporting of other types of information where developing countries can avail of flexibilities, they are still ‘encouraged’ to provide the information.⁴⁵

Following the example of the international climate regime, substantive reporting requirements on fossil fuel production could thus distinguish between different tiers of reporting guidance, for instance related to ‘must have’ (Tier 1), ‘should have’ (Tier 2), and ‘nice to have’ (Tier 3) information. Reporting guidance would spell out the minimum information subject to mandatory reporting.⁴⁶ This could include information that is usually readily available in countries, such as information on the physical infrastructure for fossil fuel production,⁴⁷ as well as other information that is essential for understanding overall trends in fossil fuel production, for instance information on fossil fuel reserves, licenced resources, and historical production levels.⁴⁸ In addition, guidance could be provided on types of information that may

40 UNGA ‘Transforming Our World: The 2030 Agenda for Sustainable Development’ UN Doc A/RES/70/1 (21 October 2015) para 79.

41 UN, ‘Voluntary Common Reporting Guidelines for Voluntary National Reviews at the High-level Political Forum on Sustainable Development (HLPF)’ <https://sustainabledevelopment.un.org/content/documents/27171SG_Guidelines_2021.final.pdf> accessed 24 August 2022.

42 IPCC, ‘2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories’ (IPCC 2019).

43 Paris Agreement (n 1) art 13(1)-(2).

44 Decision 18/CMA.1 (n 31) para 48.

45 This is the case for the reporting of information on quality assurance/quality control in the context of national inventory reports, estimates of expected and achieved emission reductions of parties’ actions, policies and measures and projections of greenhouse gas emissions and removals; *ibid* Annex, paras 34, 35, 85, 92.

46 In relevant reporting guidance, different auxiliary verbs could be used for Tier 1 (‘shall’), Tier 2 (‘should’), and Tier 3 (‘may’).

47 Fergus Green and Declan Kuch, ‘Counting Carbon or Counting Coal? Anchoring Climate Governance in Fossil Fuel-based Accountability Frameworks’ (2022 *fc*) *Global Environmental Politics*.

48 Byrnes (n 38).

be more difficult to collect for some countries, which could be reported on a voluntary basis. Tier distinctions could concern either the types of information (e.g., information on historical levels of production, production plans and projections, and fossil fuel reserves) or the level of granularity (e.g., national-level or basin-level information on fossil fuel production). Over time, with an improving information base, countries should move up between tiers, with previously reported information providing an upward-shifting baseline. To encourage countries to be as transparent as possible further safeguards could be put in place. For example, the Paris Agreement requires parties that want to make use of the flexibilities to ‘clearly indicate the provision to which flexibility is applied, concisely clarify capacity constraints, ... and provide self-determined estimated time frames for improvements in relation to those capacity constraints.’⁴⁹

Arguably, some countries—i.e., countries not producing fossil fuels at all—could be altogether exempted from reporting requirements. However, basic reporting requirements may still be appropriate, as some countries may begin producing fossil fuels after joining, for instance if they discover new offshore oil and gas wells. Moreover, even if countries do not produce fossil fuels themselves, they may still financially support them, again suggesting that minimum reporting requirements for all countries would be beneficial.

3. Differentiation in Frequency of Reporting and Review

Regular reporting and review allow for the continuous monitoring of progress towards a treaty’s goals, and can help to improve data availability over time. However, preparing national reports can be resource-intensive, and put an undue burden on some coun-

tries. For these reasons, it may be appropriate to differentiate between parties in terms of the frequency of reporting and/or of review. Specifically, some countries could be required to report more regularly than others (e.g., annually or biannually), or undergo review more frequently than others.

Examples can again be found in the context of the international climate regime. For instance, under the Paris Agreement (continuing a practice initiated under the UNFCCC), Least Developed Countries (LDCs) and Small Island Developing States (SIDS) can provide relevant information ‘at their discretion’, whereas other countries are required to submit biennial transparency reports.⁵⁰ While some countries may accordingly be granted leeway in terms of reporting and/or review under a fossil fuel transparency arrangement, it could be agreed that, subject to capacity-building and financial support (see below), the frequency of reporting and review is gradually increased over time.

In the context of international trade governance, the frequency of Trade Policy Reviews under the Trade Policy Review Mechanism of the World Trade Organization (WTO) is tied to a country’s share in world trade.⁵¹ Similarly, the frequency of reviews under an intergovernmental transparency arrangement for fossil fuel production could be tied to a country’s share in global fossil fuel production, possibly combined with criteria linked to a country’s income levels.

4. Differentiation in Modalities of Review

Depending on which modalities of review are chosen (see below), it may be possible to apply them in a differentiated fashion. For instance, more resource-intensive forms of technical reviews—such as in-country visits or inspections by review teams—may be limited to only certain parties. Under the UNFCCC, for example, less resource-intensive ‘centralised’ reviews were chosen for developed countries with very low emissions levels, such as Cyprus, Liechtenstein, and Malta.⁵² Under the Paris Agreement, developing countries can choose to similarly undergo centralised reviews rather than in-country reviews.⁵³ To ensure that all countries at least once in a while undergo a more thorough review, provisions can be included to alternate between less and more resource-intensive reviews.

49 Decision 18/CMA.1 (n 31) Annex, para 6.

50 *ibid* para 4 and Annex, para 11.

51 WTO, ‘Trade Policy Reviews: Ensuring Transparency’ <https://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm11_e.htm> accessed 24 August 2022.

52 Yamide Dagnet et al, ‘Designing the Enhanced Transparency Framework, Part 2: Review under the Paris Agreement’ (World Resources Institute 2017) 11.

53 Decision 18/CMA.1 (n 31) Annex, para 159.

Another way to differentiate in terms of the modalities would be to provide for group reviews for some types of countries. For instance, under the WTO's Trade Policy Review Mechanism, Botswana, Eswatini, Lesotho, Namibia, and South Africa are reviewed as the Southern African Customs Union rather than individually. Likewise, under the Paris Agreement's ETF, LDCs and SIDS can choose to undergo a centralised review as a group.⁵⁴

An important open question—which goes beyond the scope of this article—is *which countries* should be granted differential treatment. Differentiation in an intergovernmental transparency arrangement could be tied to equity principles related to fossil fuel production (e.g., capacity or dependence on fossil fuels),⁵⁵ and/or consist of listing specific groups of countries (e.g., LDCs and SIDS) that would be treated differently.

IV. Capacity-building Support

Closely related to the previous element, the lack of capacity and/or information availability also points to the importance of providing technical and financial support to build capacity to allow countries in the Global South to effectively participate in reporting and review, and to implement any recommendations emerging from the transparency arrangement. Providing support to overcome capacity challenges is a common feature of intergovernmental transparency arrangements in international environmental governance as well as other areas of governance.

This support could be focused specifically on helping countries to develop the necessary transparency-related institutional capacity to prepare (better) reports. For instance, under the Convention on Biological Diversity (CBD), support is offered for report preparation, including funding from the Global Environment Facility, global and regional workshops run by the CBD Secretariat and other partners, including the United Nations Environment Programme (UNEP) and the United Nations Development Programme, offering scientific, technical, and technological advice, support offered to other subregional and national workshops, including those to facilitate domestic consultation processes and report preparation, the organisation of side-events on report preparation at major meetings, the development of technical support materials and webinars, including

training and support on the use of the online reporting tools, and the review of draft reports with the provision of comments and recommendations.⁵⁶

Capacity-building support can also focus on the review process. In the context of human rights, the Universal Periodic Review (UPR) under the United Nations (UN) Human Rights Council has established specific funds to support LDCs and SIDS in participating in the (Geneva-based) review: one to allow countries to participate in the review, and another to facilitate the implementation of recommendations emanating from the review.⁵⁷ The funds are dependent on contributions on a voluntary basis. While states are the primary contributors, contributions can also be made by international organisations, private organisations, and even individuals.⁵⁸

Capacity-building support can also cover the entire process of reporting and review. For instance, the Capacity-Building Initiative for Transparency, operated by the Global Environment Facility, funds a range of capacity-building projects to support the reporting of information under the Paris Agreement's ETF.⁵⁹ By the end of 2021, the initiative supported 74

54 *ibid* Annex, para 157.

55 As suggested by Greg Muttitt and Sivan Kartha, 'Equity, Climate Justice and Fossil Fuel Extraction: Principles for a Managed Phase Out' (2020) 20 *Climate Policy* 1024. See also Steve Pye et al, 'An Equitable Redistribution of Unburnable Carbon' (2020) 11 *Nature Communications* 3968; 'A Fair Shares Phase Out: A Civil Society Equity Review on an Equitable Global Phase Out of Fossil Fuels' (November 2021) <<https://www.equityreview.org/2021>> accessed 24 August 2022.

56 CBD 'National Reporting Under the Convention' UN Doc CBD/SBI/3/11/Add.1 (4 November 2020).

57 United Nations Human Rights Council (HRC), 'The Voluntary Fund for Participation in the Universal Periodic Review' <<https://www.ohchr.org/EN/HRBodies/UPR/Pages/TrustFundParticipation.aspx>> accessed 24 August 2022; and HRC, 'The Voluntary Fund for Financial and Technical Assistance in the Implementation of the Universal Periodic Review' <<https://www.ohchr.org/en/hr-bodies/upr/trust-fund-implementation>> accessed 24 August 2022. The funds were established pursuant to HRC 'Resolution 6/17, Establishment of Funds for the Universal Periodic Review Mechanism of the Human Rights Council' UN Doc A/HRC/RES/6/17 (28 September 2007), and strengthened by HRC 'Resolution 16/21, Review of the Work and Functioning of the Human Rights Council' UN Doc A/HRC/RES/16/21 (12 April 2011). The Trust Fund for Participation can also support members in preparing national reports.

58 However, only in one instance—a contribution by the *Organisation internationale de la Francophonie*—has a contribution been made by an entity other than a state. United Nations Office of the High Commissioner for Human Rights, 'Voluntary Fund for Participation in the Universal Periodic Review' (July 2021) <https://www.ohchr.org/Documents/HRBodies/UPR/July2021_VoluntaryFundParticipation_UPR.pdf> accessed 24 August 2022.

59 UNFCCC 'Decision 1/CP.21, Adoption of the Paris Agreement' UN Doc FCCC/CP/2015/10/Add.1 (29 January 2016) para 84.

projects across 72 countries for the amount of US\$ 120.5 million.⁶⁰

As with the differentiation of reporting and review requirements, capacity-building efforts could target specific (groups of) countries based on equity principles, or generally focus on those countries with the lowest capacities (e.g., LDCs and SIDS). However, capacity-building efforts should be developed with care, and ensure a balance between the need to improve information availability and respecting countries' national priorities in embarking for a just transition away from fossil fuels.⁶¹

In addition to capacity-building support to countries in reporting and undergoing review, capacity development may also be needed to facilitate the review process itself. This may include developing a community of (technical) experts—and providing them with relevant training—to undertake the reviews, and providing support for a secretariat to organise a review process. In this regard, the role of the UNFCCC's Consultative Group of Experts can be noted. This group's mandate not only covers technical assistance to developing countries, but also includes the training of technical experts to participate in the review of national reports.⁶²

V. Modalities of Review

An intergovernmental transparency arrangement should include a review of reported information to

ensure its legitimacy. Under a review process, the information reported by individual countries is examined and discussed. This process can take various forms and fulfil different purposes, including assessing levels of compliance, sharing lessons learnt and best practices, and identifying areas for further international cooperation or capacity-building. Three broad types of review can be distinguished in existing intergovernmental transparency arrangements: (1) the verification of information by technical experts; (2) a political process of peer review among governments; and (3) a global-level review in which country-level data are aggregated to understand how collective efforts are progressing. Whereas the former two can be characterised as 'implementation review', the latter may extend to an 'effectiveness review'.⁶³

A review by independent technical experts can offer a detailed check of reported country data along a set of objective criteria (e.g., accuracy, completeness, consistency) without having to engage in a discussion on the subjective, political dimension of the reported information. Such reviews can serve to build the confidence that the reported information is trustworthy. Peer reviews can also help build mutual trust, as well as enhance learning across countries. Such reviews provide an opportunity for states to ask each other the more politically oriented questions that expert reviewers may not be well-positioned or permitted to ask. These two forms of review can be deployed independently or in combination within a given transparency arrangement focused on individual parties. A global-level review allows for both a technical assessment and understanding in relation to gaps and future needs, but also the creation and maintenance of political impetus and momentum. For this to be achieved, it is important that country reports be prepared in a standardised format, as the data is then easier to compare and aggregate.

1. Technical Review

In the context of other international regimes, technical reviews are often carried out by bureaucracies, such as the Secretariat of the Convention on Biological Diversity for the Nagoya Protocol on Access and Benefit-Sharing, or the WTO Secretariat for the Trade Policy Review Mechanism. Alternatively, independent experts can be drawn upon to conduct the re-

60 Global Environment Facility, 'The Capacity-Building Initiative for Transparency (CBIT)' (2021) <https://www.thegef.org/sites/default/files/2021-10/gef_capacity_building_initiative_transparency_cbit_2021_10.pdf> accessed 24 August 2022.

61 As Konrad and colleagues have shown in the climate change context, capacity-building efforts are not politically neutral, with such efforts focusing primarily on strengthening greenhouse gas inventories rather than responding to other (national) priorities. See Susanne Konrad, Max van Deursen and Aarti Gupta, 'Capacity Building for Climate Transparency: Neutral 'Means of Implementation' or Generating Political Effects?' (2022) 22 *Climate Policy* 557.

62 UNFCCC 'Decision 19/CP.19, Work of the Consultative Group of Experts on National Communications from Parties not Included in Annex I to the Convention' UN Doc FCCC/CP/2013/10/Add.2/Rev.1 (25 September 2014) Annex, para 2(i). The group will also serve the Paris Agreement. See Decision 18/CMA.1 (n 31) para 15; and UNFCCC 'Decision 11/CP.24, Review of the Terms of Reference of the Consultative Group of Experts on National Communications from Parties not Included in Annex I to the Convention' UN Doc FCCC/CP/2018/10/Add.1 (19 March 2019).

63 For an explanation of these categories, see Daniel Bodansky, *The Art and Craft of International Environmental Law* (Harvard University Press 2010) 242.

view, such as those included in the UNFCCC's roster of experts. The technical expert review under the Paris Agreement examines parties' national greenhouse gas inventories, as well as information related to climate impacts and adaptation, and financial, technological, and capacity-building support. Reviewers are further tasked with 'consideration of the Party's support provided, as relevant, and its implementation and achievement of its [NDC]'.⁶⁴ The review is also expected to identify areas in which parties can improve and any capacity-building needs of developing country parties. The information provided by parties is to be reviewed for its transparency, accuracy, completeness, consistency, and comparability. These reviews are to be 'facilitative, non-intrusive, non-punitive', and respectful of national sovereignty.⁶⁵ Review teams are expected to avoid making political judgements and placing undue burden on parties and are not to review the appropriateness of NDCs, progress indicators used, the adequacy of domestic actions taken, or support provided. In terms of developing country parties, experts are also not permitted to review a determination to apply flexibility or levels of capacity to meet NDCs.⁶⁶ It is stressed that these reviews be non-political and facilitative.

In contrast to the UNFCCC process, the CITES Secretariat is largely tasked with the role of the review and verification of reported information.⁶⁷ The verification mechanisms under CITES have evolved over time through a series of mostly soft law resolutions and decisions. The Secretariat conducts verification missions to assess implementation progress and verify reported information. The Secretariat also conducts a review of implementation through the National Legislation Project, which involves a review of implementation reports (previously known as the biennial reports) on the legislative, regulatory, and administrative measures taken to enforce CITES provisions.⁶⁸ Through this review the Secretariat categorises parties by their level of implementation and identifies those that require attention. The Secretariat also provides parties with feedback on ways to improve their implementation. Reviews of the trade in listed species are conducted under the Review of Significant Trade, in which data from annual reports that are compiled into the CITES trade database are examined. This allows for the comparison and verification of reports, including corresponding reports from trade partners. This review is conducted under the auspices of the UNEP-World Conservation Mon-

itoring Centre, which informs the Secretariat when reports do not match, or information is missing.

The Nuclear Non-Proliferation Treaty (Nuclear NPT) offers a third example of a verification mechanism, in which the signatories to the treaty tasked the International Atomic Energy Agency with the role of monitoring nuclear facilities and ensuring weapon programs were not being established.⁶⁹ Confidence in the agreement is often attributed to this monitoring by the IAEA.⁷⁰ The IAEA conducts these inspections and monitoring via on-site inspections, video monitoring and accounting of the in- and out-bound amounts of nuclear materials to particular facilities. The terms of each signatory's surveillance are documented within a Comprehensive Safeguard Agreement with the IAEA. There is also the option of agreeing to an 'Additional Protocol', which can be voluntarily included in a country's Safeguard Agreement and expands the IAEA's ability to detect undeclared nuclear materials and activities. This step has been widely accepted, with 138 Additional Protocols currently in force and another 14 signed and waiting to be brought into force.⁷¹

The Paris Agreement, CITES, and Nuclear NPT offer three examples of ways in which expert review is conducted under varying international regimes. Under the Paris Agreement, experts verify information provided by parties, but are limited in the scope of their review. They are tasked with verification of information and assessment of how countries are tracking in complying with their self-determined goals and are allowed to provide advice on how to better report on the implementation and achievement of

64 Paris Agreement (n 1) art 13(12).

65 Decision 18/CMA.1 (n 31) Annex, para 148.

66 *ibid* Annex, para 149.

67 Convention on International Trade in Endangered Species of Wild Fauna and Flora (adopted 3 March 1973, entered into force 1 July 1975) 993 UNTS 243 (CITES) art XII

68 CITES, 'National Legislation Project' <https://cites.org/eng/legislation/National_Legislation_Project> accessed 24 August 2022.

69 Treaty on the Non-Proliferation of Nuclear Weapons (adopted 1 July 1968, entered into force 5 March 1970) 729 UNTS 161, art III.

70 Ruth Greenspan Bell et al, 'Building International Climate Cooperation: Lessons from the Weapons and Trade Regimes for Achieving International Climate Goals' (World Resources Institute 2012) 76–77.

71 International Atomic Energy Agency, 'Additional Protocol' <<https://www.iaea.org/topics/additional-protocol>> accessed 24 August 2022.

these goals. However, there is no judgement allowed in terms of whether these self-determined goals are adequate and need to be stronger. This is in contrast with the CITES process, in which the Secretariat identifies breaches, non-compliance and the adequacy of implementation, all of which can result in suspension of trade privileges in CITES-listed species. Under the Nuclear NPT, a separate, international agency is responsible for monitoring and verification, whose scope has expanded (with country assent) to even include inspection of undeclared facilities.

These processes differ, in part, due to the overall design of the institutions in which they are embedded. For example, the ETF works within the Paris Agreement's governance architecture, under which each country develops its own climate action plan. While parties are bound to submit reports, they are not bound to meet their own NDCs. By contrast, CITES and the Nuclear NPT have articulated clear global goals and standards, and the review process is verifying party adherence and implementation. Technical review can trigger enforcement procedures under both mechanisms when countries are found to be non-compliant. If a transparency arrangement is embedded in a fossil fuel treaty (see Section VIII) that contains concrete fossil fuel phase-out targets and timetables, it may be more appropriate to follow the CITES and Nuclear NPT approach. If the transparency arrangement is disconnected from broader substantive obligations to wind down fossil fuel production, however, it may be more appropriate to develop an approach informed by the Paris Agreement in which countries report on how they are meeting their own goals.

A drawback of technical review, whether conducted by independent experts or the Secretariat, is that it can be highly resource-intensive. For instance, by one estimate, in the context of technical expert review under the UNFCCC for national greenhouse gas inventories, the average amount of time for carrying out one party's review is 153 working days if it involves an in-

country review. Even when a review is done remotely, it can take up to 83 days.⁷² These resource implications—for the reviewers, a possible treaty secretariat, and the country under review—need to be considered prior to putting it into effect. Nevertheless, the process of technical review can ensure that vital information is trustworthy, as well as build confidence both in the system, and compliance by other participants.

2. Peer Review

Several international review processes involve state-to-state interactions, or peer reviews. These processes often provide opportunities for states to ask each other questions in a public forum. This has been the case in international regimes as diverse as human rights (the UPR), trade (the Trade Policy Review Mechanism), and climate change (the 'facilitative sharing of views' and 'multilateral assessment' under the UNFCCC, and the upcoming 'facilitative, multilateral consideration of progress' under the Paris Agreement).

A facilitative approach to peer review will generally be apolitical and avoid recommendations or requirements for behavioural change. The aim of a facilitative process is to develop capacity and build peer-to-peer learning, and its strength lies in wide acceptance and buy-in and the building of confidence and mutual trust. An example of this type of process can be found in the peer review process under the Paris Agreement, which is designed to be implemented in a facilitative, non-intrusive, non-punitive manner. States are instructed to avoid querying the adequacy of state commitments with respect to achieving global climate goals, to avoid politicising the process.⁷³ While a facilitative process can potentially be transformative in its ability to socialise states to emergent norms and thereby improve state behaviour and social accountability, it also runs the risk of becoming a ritualistic behaviour that avoids true answerability.⁷⁴ In addition, such processes risk delegating the important task of holding states to account to non-state actors. The design should ensure accountability is embedded within the process, possibly through the formal inclusion of civil society actors within the process (see Section VII).

The goal-oriented approach to peer review is more overtly focused on holding states accountable and ensuring short-term behaviour change than the facilita-

72 Tinus Pulles, 'Did the UNFCCC Review Process Improve the National GHG Inventory Submissions?' (GHG Management Institute, 28 October 2016) <<https://ghginstitute.org/2016/10/28/did-the-unfccc-review-process-improve-the-national-ghg-inventory-submissions/>> accessed 24 August 2022.

73 Decision 18/CMA.1 (n 31) Annex, para 149.

74 Aarti Gupta et al, 'Performing Accountability: Face-to-Face Account giving in Multilateral Climate Transparency Processes' (2021) 21 *Climate Policy* 616.

tive approach. Moreover, while the facilitative approach can be very effective in helping states improve their behaviour, this is only true when there is political will to do so.⁷⁵ If the desire to change is lacking, a more goal-oriented follow-up approach is likely to be more effective, through for example the application of political pressure. The UPR under the Human Rights Council employs this type of approach, allowing questions, comments, and recommendations from any UN member state and even civil society. The state under review has an opportunity to respond, choosing to either accept or note recommendations, which are then included in the final report of the review.⁷⁶ While such question-and-answer sessions risk becoming a mere formality,⁷⁷ or may become overtly political, it has been argued that it is precisely because of this politicisation that states are likely to accept some of the recommendations proffered by other states and it therefore plays a powerful role in changing state behaviour.⁷⁸ It is the mobilisation of constructive criticism, account-holding, and encouragement from peers that has been described as holding transformative potential in this context.⁷⁹

The UPR is a process under which the human rights records of Member States are assessed. Countries are required to report on the steps they have taken to protect human rights, and, in the process, the best human rights practices are shared. State reviews are conducted by the UPR Working Group, which is made up of the 47 members of the Human Rights Council and assisted by a 'troika', a group of three states who serve as rapporteurs. The troikas are selected by the drawing of lots. The review takes the format of an interactive dialogue between the state under review and UN member state, and any state can ask questions, make recommendations, or offer comments during this time. Following the discussion, the troika, in conjunction with the state under review, prepares an 'outcome report', which gives a summary of the discussion, including questions, comments and recommendations and the responses provided by the state under review. The outcome report then goes through an adoption process, in which the reviewed state has the opportunity to make comments on the recommendations and to either accept or note them. During this process other states can express their opinion on the outcome of the review.⁸⁰ The UPR shows that the peer review process can help build peer pressure and foster a process of socialisation to prevailing norms.⁸¹ This can promote adherence to

such norms without resorting to coercion, which is important for securing the widest possible participation in a transparency arrangement. Peer review can also facilitate learning between countries when best practices, experiences, and challenges are shared.⁸² Such a review process may be useful in the context of fossil fuel production even in the absence of a binding fossil fuel treaty, as it could help build support for a global norm to wind down fossil fuel production.

In the context of the G20's 2009 non-binding commitment to phase out fossil fuel subsidies,⁸³ several G20 countries—starting with the United States and China, later followed by other G20 members—have undergone voluntary peer reviews of each other's subsidies and intended reforms in pairs. The peer review panels are commonly chaired by the OECD and involve officials from other G20 countries as well as other experts. Following a 'self-review' by the G20 member under review, the panels discuss subsidies and reform options with the member, and in their peer review report offer concrete suggestions for which subsidies should be considered for reform.⁸⁴

75 Valentina Carraro, 'Promoting Compliance with Human Rights: The Performance of the United Nations' Universal Periodic Review and Treaty Bodies' (2019) 63 *International Studies Quarterly* 1079.

76 HRC 'Modalities and Practices for the Universal Periodic Review Process' UN Doc 8/PRST/1 (2008).

77 See Jan Karlas and Michal Parížek, 'The Process Performance of the WTO Trade Policy Review Mechanism: Peer-Reviewing Reconsidered' (2019) 10 *Global Policy* 376; Gupta et al (n 74).

78 Rochelle Terman and Erik Voeten, 'The Relational Politics of Shame: Evidence from the Universal Periodic Review' (2018) 13 *The Review of International Organizations* 1.

79 Ana María Ulloa, Kurt Jax and Sylvia I Karlsson-Vinkhuyzen, 'Enhancing Implementation of the Convention on Biological Diversity: A Novel Peer-Review Mechanism Aims to Promote Accountability and Mutual Learning' (2018) 217 *Biological Conservation* 371.

80 United Nations Human Rights Council, 'Basic Facts about the UPR' <<https://www.ohchr.org/en/hr-bodies/upr/basic-facts>> accessed 24 August 2022.

81 Ryan Goodman and Derek Jinks, 'How to Influence States: Socialization and International Human Rights Law' (2004) 54 *Duke Law Journal* 621; Damian Etone, 'Theoretical Challenges to Understanding the Potential Impact of the Universal Periodic Review Mechanism: Revisiting Theoretical Approaches to State Human Rights Compliance' (2019) 18 *Journal of Human Rights* 36.

82 Carraro (n 75).

83 'G20 Leaders Statement: The Pittsburgh Summit' (24–25 September 2009) para 24 <<http://www.g20.utoronto.ca/2009/2009communique0925.html>> accessed 24 August 2022.

84 OECD and IEA, 'Update on Recent Progress in Reform of Inefficient Fossil-Fuel Subsidies that Encourage Wasteful Consumption 2021' (OECD and IEA 2021) <<https://www.oecd.org/fossil-fuels/publicationsandfurtherreading/OECD-IEA-G20-Fossil-Fuel-Subsidies-Reform-Update-2021.pdf>> accessed 24 August 2022.

This pairing practice offers a useful example for peer review under a fossil fuel production transparency arrangement, given the politically sensitive nature of fossil fuel production. Encouraging two similar producers to undergo review simultaneously could help remove concerns, and set an example for other producers to follow, with a view to achieving the broadest possible coverage.

3. Global-level Review

A global-level review takes place under the Stockholm Convention on Persistent Organic Pollutants (POPs), in which the effectiveness of the Convention at protecting humans and the environment from POPs is evaluated.⁸⁵ To assess the Convention's effectiveness the review takes into consideration information provided in national reports, the global monitoring plan and non-compliance procedures. To identify changes in the concentrations and the global and regional transport of POPs over time, the global monitoring plan establishes a standardised framework for data collection to ensure that it is comparable.

A similar global-level review of fossil fuel production could regularly assess national reports, and incorporate the information collected by the Production Gap Report⁸⁶ and the Global Registry of Fossil Fuels.⁸⁷ While such a global-level review could be government-led, an alternative model may be to establish a high-level expert group or commission to lead the review. Such a high-level group could be commissioned or mandated by the UN General Assembly or the UN Secretary-General. An example of the

latter is the High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities, which was convened by UN Secretary-General António Guterres with a view to developing improved standards for net-zero pledges.⁸⁸ If such an option is pursued, it would be important to clearly define the terms of reference of the expert group (e.g., to avoid any conflict of interest and ensure independence), and to ensure that the expert group can carry out its mandate over a longer period of time (rather than delivering on a short-term mandate).⁸⁹

The information collected in a global-level fossil fuel production review could also feed into the five-yearly global stocktake under the Paris Agreement.⁹⁰ The global stocktake is designed to assess the implementation of the Paris Agreement and evaluate collective progress toward achieving the long-term goals of the treaty.

VI. Follow-up

The aim of follow-up is to ensure that the findings of the review process are acted upon. The types of follow-up will depend on the obligations that parties have. If there are procedural requirements to report, follow-up may come in the form of finding ways for reporting to become more effective, thorough and accurate. Alternatively, if substantive obligations exist, follow-up may be in the form of filling gaps in implementation. For either type of activity follow-up can occur through capacity-building, resource mobilisation, or other forms of implementation support, or through expectations of state behaviour change resulting from recommendations or enforcement procedures.

State needs, in terms of capacity-building and opportunities for cooperation, can be identified either during or after the review process through open dialogues between states. This may also involve non-state actors and expert reviewers. Formalised linkages between the review process and forms of support can assist in ensuring that states are provided with the assistance they need to implement the outcomes of review. Linking the review process with capacity-building can promote compliance by both offering an incentive for better compliance and the removal of barriers to compliance.⁹¹ Under CITES, the Compliance Assistance Programme has been established to provide targeted support to countries with

85 Stockholm Convention on Persistent Organic Pollutants (adopted 22 May 2001, entered into force 17 May 2004) 2256 UNTS 119, art 16.

86 SEI et al (n 6).

87 Global Registry of Fossil Fuels (n 26); see also Byrnes (n 38).

88 UN, 'High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities' <<https://www.un.org/en/climatechange/high-level-expert-group>> accessed 24 August 2022.

89 For comparison, the mandate of the High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities is for 12 months. See UN, 'Appendix 2: Terms of Reference for the High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities' <https://www.un.org/sites/un2.un.org/files/expert_group_terms_of_reference.pdf> accessed 24 August 2022.

90 Paris Agreement (n 1) art 14.

91 Raustiala (n 15). See also Ronald B Mitchell, 'Compliance Theory' in Rajamani and Peel (n 15) 887.

ongoing compliance issues. These matters may be identified through the reviews of national reports.⁹² Similarly, the UPR has a Voluntary Fund for Financial and Technical Assistance, which is designed to assist countries in implementing the recommendations that come out of their review.

In cases where non-compliance does not result from under-capacity, enforcement procedures may need to be triggered. This may be due to a continued lack of reporting, non-participation in review, or failure to implement findings of a review process. Under the UPR, for example, the reviewed state has the responsibility to implement recommendations from the outcome report and is expected to provide information on how they have done so in the subsequent review. Technical assistance and capacity-building support may be provided if needed and in cases of non-cooperation the Human Rights Council has the capacity to impose response measures. Similarly, other intergovernmental transparency arrangements include follow up procedures that can feed into compliance or enforcement mechanisms, including under the Nuclear NPT, in which findings of non-compliance by the IAEA can result in the country under review being referred to the UN Security Council, which can impose penalties to incentivise a return to compliance.⁹³ Under CITES, parties that are identified as failing to report for three consecutive years, without justification, can have their trading rights suspended, these rights can also be suspended for other acts of non-compliance.⁹⁴ The use of trade sanctions as an enforcement mechanism under CITES has generally met with success. However, the application of these sanctions almost exclusively on developing countries has been questioned as being inequitable.⁹⁵

A third avenue for linking the review with tangible outcomes is by providing openness in terms of the review process and/or the findings of review. This can allow for non-state stakeholders to engage with the process more fully, both through providing assistance to states in implementation and through their role in holding states accountable for their international commitments. Further examples of this are provided in the next section.

VII. Stakeholder Involvement

Civil society plays an important role in the protection of the environment and the promotion of envi-

ronmental concerns. This can include capacity-building, conducting research, documentation, awareness raising, and holding corporations and governments accountable. Their involvement in transparency arrangements can ensure a more rigorous and representative process. Non-state actors can also highlight gaps in information, best practices, and options for future action.⁹⁶ Notwithstanding their potential contributions, some existing transparency arrangements allow for only indirect involvement of non-state actors, while others specify a more formalised role.

The CBD, for instance, expects that stakeholders, including indigenous peoples, local communities, business, civil society, and NGOs are to be involved in the preparation of national reports. Similarly, the UPR provides for participation for ‘other stakeholders’, including civil society and national human rights institutions. These actors can submit written information to be considered during the review process, known as ‘shadow reports’. They can also gain accreditation to observe the UPR Working Group and can attend and make oral contributions to the Human Rights Council sessions where the outcomes of state reviews are considered. Moreover, all information generated by the UPR, including which recommendations were accepted by states after review, can be accessed easily by civil society. This is one factor which has led to the perception amongst civil society members that they have greater influence within the UPR than other similar regimes.⁹⁷

CITES is another regime in which NGOs play an important role and have done so since its inception. The International Union for Conservation of Nature (IUCN) was involved in the founding of CITES and the initial actions of the Secretariat. This close rela-

92 ‘CITES Resolution Conf. 14.3, CITES Compliance Procedures’ (2007) Annex.

93 Statute of the International Atomic Energy Agency (adopted 26 October 1956, entered into force 29 July 1957) 276 UNTS 3, art XII(C).

94 ‘CITES Resolution Conf 11.17, (Rev. CoP18), National Reports’ (2000/2007) para 15. See also CITES Compliance Procedures (n 93). These measures are based on CITES (n 67) art XIII(3).

95 Peter H Sand, ‘Enforcing CITES: The Rise and Fall of Trade Sanctions’ (2013) 22 *Review of European Community and International Environmental Law* 251.

96 Harro van Asselt, ‘The Role of Non-State Actors in Reviewing Ambition, Implementation, and Compliance under the Paris Agreement’ (2016) 6 *Climate Law* 91.

97 Carraro (n 75).

tionship was formalised by a provision in the Convention which allows for non- and intergovernmental organisations to assist the Secretariat.⁹⁸ This close relationship has evolved over time to include receiving information from NGOs on compliance, as well as NGOs reviewing and commenting on party proposals to amend the CITES appendices. The IUCN and the Trade Records Analysis for Flora and Fauna in International Commerce (TRAFFIC) are also directly tasked with reviewing the status and trade of significant species and reviewing and categorising national legislation under the national legislation project.

Under the regularised review process of the International Labour Organization (ILO), the Committee of Experts on the Application of Conventions and Recommendations has developed a methodology for eliciting information from civil society, which involves posing a series of questions to gather information from workers' and employers' organisations. Another formalised role that NGOs play within the ILO consists of the triggering of the second form of review, the ad hoc review process, that reviews claims of whether member states have failed to observe their obligations.⁹⁹ Similarly, under the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, members of the public can file complaints ('communications') with the Convention's Compliance Committee.¹⁰⁰

These 'fire alarm'-type procedures can allow NGOs and/or individuals to lodge complaints about party performance. Fire alarm-style mechanisms can be a comprehensive method of identifying non-compliance as there tends to be a broader group of actors with eyes on the data than in a centralised review process. This process can also have an important legitimising and democratising impact by directly empowering civil society to play a role in the regime. However, given that this method depends upon the interest and capacity of civil society, it may need to

be combined with other, more centralised methods of review.¹⁰¹

The important role that civil society actors frequently play in monitoring state compliance and their work in helping to overcome barriers could similarly be formalised in a fossil fuel transparency arrangement, for example through consultation with expert reviewers, and the submission of comments and shadow reports. This can also be achieved, although to a lesser extent, by ensuring openness and accessibility of the process to the general public and non-state actors, including making reports and other documents publicly available and webcasting meetings. For this to be most successful, information should be provided in systematised and accessible formats so as to be easily understandable and useful to non-state actors who may not have full technical capacities to utilise the information made available. In the context of fossil fuel production, NGOs and businesses hold important information that governments may not have access to. There should therefore be an opportunity to bring such information into the intergovernmental transparency process. This could be achieved through a formalised relationship with the Global Registry of Fossil Fuels.¹⁰² The registry is designed to provide transparency over the production of fossil fuels and associated emissions, and could provide a means for verifying national reports. Formal integration into an intergovernmental transparency arrangement would also likely further incentivise governments to engage with the registry, ensuring more open flows of information and more robust accounting, further feeding back to enhanced verification of reports.

Another area for consideration is the involvement of fossil fuel companies and their regulation. While engaging in constructive dialogue with fossil fuel companies may be an important part of planning and implementing the transition away from fossil fuels, allowing for their wholesale participation in a transparency mechanism risks its hijacking by vested interests and corporate capture, especially with regard to the release of information relating to untapped reserves and markets, as well as their stonewalling action by other non-state actors or NGOs. While not directly transparency-related, the World Health Organization (WHO) Framework Convention on Tobacco Control directly recognises the role that the tobacco industry has played in subverting the role of governments and the WHO in implementing tobacco related health policies and that there is 'a fundamental

98 CITES (n 67) art XII.

99 ILO, 'ILO Complaints Procedure' <https://www.ilo.org/wcmsp5/groups/public/--ed_norm/--normes/documents/image/wcms_088451.pdf> accessed 24 August 2022.

100 UN Economic Commission for Europe 'Decision I/7, Review of Compliance' UN Doc ECE/MP.PP/2/Add.8 (2 April 2004) para 18.

101 Raustiala (n 15).

102 See Global Registry of Fossil Fuels (n 26).

and irreconcilable conflict between the tobacco industry's interests and public health policy interests'.¹⁰³ Given the similar role that fossil fuel companies have played in undermining the science of climate change,¹⁰⁴ it is worth considering whether a similar stipulation to protect government policy around winding down fossil fuel production is needed. A framework similar to that of the WHO's Framework for Engagement with Non-State Actors¹⁰⁵ could hence be included within an intergovernmental fossil fuel transparency arrangement, with the development of rules of engagement and an open registry of non-state actor participation. A component of this registry could be the inclusion of commitments of non-state actors, such as fossil fuel companies, and the disclosure of relevant information. Similar lists of voluntary commitments are collected in repositories, such as the UNFCCC's Global Climate Action portal and the Biodiversity Convention's registry of non-state actor biodiversity commitments.

VIII. A Standalone or Embedded Transparency Arrangement?

An intergovernmental transparency arrangement on fossil fuel production could in principle be developed as a standalone initiative. This would mean that the obligation to report (and undergo review) is the core commitment for states signing up to it.¹⁰⁶ Such an approach may have several advantages. First, compared to requiring states to signing up to substantive commitments (e.g., phasing out fossil fuels, providing financing for a just transition away from fossil fuels), the procedural obligation to furnish information and have that information reviewed entails fewer compliance costs, and, as a consequence, may lead to wider participation. Second, while a treaty process is often driven by national governments, and may leave less space for participation by non-state actors, a less formal standalone arrangement could more easily draw on the input by such actors (for instance, by building on information collected for the Global Registry for Fossil Fuels). At the same time, depending on the types of review included in the arrangement, a standalone arrangement may entail significant costs (e.g., for a secretariat, expert reviewers, and convening intergovernmental meetings), which may be more easily funded under the auspices of a treaty with a wider scope (e.g., it may be easier to attract funding

from states for a secretariat carrying out a wide range of functions rather than a secretariat only concerned with managing a reporting and review process).¹⁰⁷

Having said that, even if an intergovernmental transparency arrangement is first developed as a standalone initiative, it could provide a basis for the development of a fossil fuel treaty, or be integrated in the latter over time.¹⁰⁸ Indeed, it has been shown that 'if key countries can be persuaded to join a regime—even if it is not yet universal and particularly if that regime has detailed verification provisions, an effective implementing organization, and stakeholder buy-in—the negotiation of a formal multinational treaty can establish international norms that, over time, can gain strength and become the only acceptable form of behavior'.¹⁰⁹ As such, agreement on a standalone transparency arrangement could even foster the development of a fossil fuel treaty.

If the transparency arrangement is embedded in a broader treaty, any reporting and review obligations would generally be linked to the primary substantive obligations under such a treaty. For instance, reporting and review of greenhouse gas emissions under the Kyoto Protocol, or on the production and consumption levels of ozone-depleting substances under

103 World Health Organization (WHO), 'Guidelines for Implementation of Article 5.3 of the WHO Framework Convention on Tobacco Control' (2013) <<https://fctc.who.int/publications/m/item/guidelines-for-implementation-of-article-5.3>> accessed 24 August 2022.

104 Geoffrey Supran and Naomi Oreskes, 'Assessing ExxonMobil's Climate Change Communications (1977–2014)' (2017) 12 *Environmental Research Letters* 084019; Christophe Bonneuil, Pierre-Louis Choquet and Benjamin Franta, 'Early Warnings and Emerging Accountability: Total's Responses to Global Warming, 1971–2021' (2021) 71 *Global Environmental Change* 102386.

105 WHO, 'Framework of Engagement with Non-State Actors' WHA69.10 (28 May 2016) Annex I <https://apps.who.int/gb/ebwha/pdf_files/wha69/a69_r10-en.pdf> accessed 24 August 2022.

106 Of course, procedural obligations can also be an important part of a broader treaty. A case in point is the Paris Agreement, whose primary obligation is a procedural obligation for each Party to 'prepare, communicate and maintain successive nationally determined contributions that it intends to achieve'. Paris Agreement (n 1) art 4(2).

107 An outstanding question pertains to who covers the costs of the transparency arrangement. International organisations (including, for instance, the UNFCCC) are commonly dependent on (voluntary) contributions from their members. This means that any transparency arrangements would likely depend on contributions from its wealthier members. However, it is not inconceivable that any financial mechanisms under a broader fossil fuel treaty would be tailored to the problem it seeks to address (e.g., one could think of funding coming from a tax on fossil fuel exports).

108 Newell and Simms (n 12).

109 Greenspan Bell et al (n 71) 79.

the Montreal Protocol, is essential for verifying compliance with the core obligations under these treaties (achieving emissions targets, and phasing out ozone-depleting substances, respectively). Likewise, transparency arrangements under a fossil fuel treaty would likely be closely linked to the main obligations taken on by parties to such a treaty (e.g., phasing out a certain amount of fossil fuel production by a given date, or restricting the export of fossil fuels).

The main substantive obligations as well as the broader treaty architecture are likely to have implications for the design of a fossil fuel transparency mechanism. For instance, if a fossil fuel treaty is agreed to with the goal of reducing fossil fuel production by a certain amount by a given year, a technical review process similar to that of the Nuclear NPT may be useful, allowing for assessments of production amounts per country per year. An agreement based on trade restrictions of fossil fuels could benefit from a review design similar to that of CITES, in which trade flows are closely monitored. In addition, offering a voluntary means for broadening the scope of the technical review teams, as with the Additional Protocol under the Nuclear NPT, provides a means for strengthening the review process without alienating states that are perhaps not yet ready to sign up for such a sweeping review.

An advantage of being embedded in a broader treaty is that the financial and human resources required for maintaining an effective transparency arrangement may be more easily provided for under an international agreement—which can usually avail of a dedicated secretariat—particularly if such an agreement also establishes a financial mechanism. Moreover, by being part of a broader treaty, there would also be a clear purpose for the transparency arrangement—i.e., the monitoring and verification of compliance with primary obligations under such a treaty.

A related question is how an intergovernmental transparency arrangement would interact with the Paris Agreement. As discussed in Section II, the ETF

does not require parties to the Paris Agreement to report information on fossil fuel production, although it may be that parties will choose to report such information if they include mitigation actions related to fossil fuel production in their future NDCs. The information generated through the intergovernmental transparency arrangement could nevertheless find its way into the international climate regime in several ways. First, parties to the Paris Agreement can include the information collected in their NDCs or in their long-term low-emissions development strategies on a voluntary basis.¹¹⁰ Second, the format of the biennial transparency reports submitted under the ETF is sufficiently flexible to allow parties—again, on a voluntary basis—to share information on fossil fuel production levels and expected growth, policies and public finance to support fossil fuel production, as well as plans to wind down and transition away from fossil fuel production, all of which could be compiled through a fossil fuel transparency arrangement.¹¹¹ Lastly, as discussed in Section V, information generated by the intergovernmental transparency arrangement could also be synthesised as technical input into the five-yearly global stocktake. That way, information about the (in)consistency of fossil fuel production plans with the Paris Agreement could be considered by parties to the Paris Agreement—even if some of them do not participate in the fossil fuel transparency arrangement

IX. Conclusions

With the increasing acknowledgement of the need for a managed decline of fossil fuel production to achieve the Paris Agreement's long-term goals, it is timely to consider how international cooperation can help to ensure that the transition is fair and equitable as well as effective. Promoting transparency of fossil fuel production is a necessary—if not sufficient—component of any form of international cooperation. The design and implementation of an intergovernmental transparency arrangement on fossil fuel production requires careful consideration, and its specifics will likely depend on whether it would form part of a broader treaty, such as the FF-NPT, or whether it would be pursued as a standalone arrangement.

This article has sought to outline the main design options for such an arrangement. In doing so, we have

110 As suggested by Cleo Verkuijl, Natalie Jones and Michael Lazarus, 'Untapped Ambition: Addressing Fossil Fuel Production through NDCs and LEDS' (Stockholm Environment Institute 2019). See also Jones et al (n 33) for an overview of the extent to which parties already include such information.

111 See Georgia Piggot, Peter Erickson, Harro van Asselt and Michael Lazarus, 'Swimming Upstream: Addressing Fossil Fuel Supply under the UNFCCC' (2018) 18 *Climate Policy* 1189, 1194.

drawn on various examples of intergovernmental transparency arrangements in various areas of global governance, including climate change, biodiversity, human rights, trade, and nuclear weapons. Based on this analysis, we have identified the following suggestions for the design of an intergovernmental transparency arrangement for fossil fuel production.

First, a flexible approach to reporting and review under an intergovernmental transparency arrangement on fossil fuel production may be warranted for some countries. However, a fully bottom-up approach to reporting and review could lead to key information being omitted, which would not only hamper insights into progress made in individual countries, but would also hamper an aggregate understanding of trends in fossil fuel production and their alignment with climate change goals, making it more challenging to compare progress across countries. A bounded approach to differentiation could help reconcile these challenges, providing for some flexibility subject to minimum requirements. Such minimum requirements could relate to both the substantive information to be reported (e.g., fossil fuel production levels, or financial support for fossil fuel production) and to the frequency of reporting and/or review. Differentiation could thus provide the necessary flexibility to allow a wide range of governments to participate, and minimum requirements would ensure that a basic level of information is available for all countries. In this way, a balance can be struck between inducing participation in a standalone intergovernmental transparency arrangement on fossil fuels (or a broader fossil fuel treaty) on the one hand, and ensuring that stakeholders can avail of relevant information on fossil fuel production on the other.

Second, capacity-building for reporting is important given the general need to disclose information on fossil fuel production. Capacity-building to support countries' participation in a review process can further allow those countries to learn and benefit from the information generated in such a review. Lastly, support to implement recommendations can alleviate fears that a review process would lead to undue burdens for lower-income countries. Capacity-building efforts for (low-income) developing countries should therefore be an integral part of a fossil fuel transparency arrangement.

Third, a staged process involving technical review, peer review, and global-level review can combine the

advantages of each type of review. This could involve an initial period of only a technical review of reported information on fossil fuel production, with a focus on information gathering, reporting, and learning. A second phase could include a global-level review, with gap analysis and examination of progress and needs, either led by governments or by a high-level group of experts. The final phase could introduce goal-oriented peer review, in which states would have an opportunity to ask questions, provide comments and make recommendations for improvement, that would need to be responded to by the state under review.

Fourth, while the review process itself can lead to substantive outcomes, including self-assessment and peer-to-peer learning, creating other pathways for follow-up can ensure that a fossil fuel transparency arrangement would effectively support governments and other national stakeholders in the winding down of fossil fuel production. Three pathways for doing so include capacity-building, openness, and enforcement. By providing capacity-building as a part of the follow-up process, states that have a general desire to fulfil the recommendations of the review process, but are unable to due to lack of capacity, will be able to do so. In many multilateral processes non-state actors play important roles in both helping states to meet their obligations and in holding states accountable to their commitments. Providing openness in the outcomes of the review process can assist these actors in being more heavily engaged. Lastly, states that are unwilling to submit reports or participate in review may need to be incentivised to do so. Designing an enforcement mechanism with linkages to the review process can assist in achieving greater levels of compliance.

This brings us to our final point: as NGOs and businesses hold important information that governments may not have access to, there should be an opportunity for non-state actors to bring such information into a fossil fuel transparency arrangement. Additionally, the important role that civil society actors frequently play in monitoring state compliance and their work in helping to overcome barriers could be formalised through consultation with expert reviewers, the submission of comments and shadow reports, and, to a lesser extent, by ensuring openness and accessibility of the process to the general public and non-state actors.