SUBMISSION IN RESPONSE TO THE CALL FOR INPUTS TO THE FIRST GLOBAL STOCKTAKE: THE GLOBAL REGISTRY OF FOSSIL FUELS

About Carbon Tracker Initiative

Carbon Tracker is an independent financial think-tank - established in 2011 and based in the UK and USA – which carries out in-depth analysis on the impact of the energy transition on capital markets and the potential investment in high-cost, carbon-intensive fossil fuels.

We are well-known internationally for our ground-breaking research. Carbon Tracker is responsible for cementing the terms "carbon bubble", "unburnable carbon" and "stranded assets" into the financial and environmental lexicon.

We recognise that there is a limited global carbon budget of cumulative emissions that must be respected, in line with the climate science and the Paris temperature goals.

About the Global Registry of Fossil Fuels

The Global Registry is an **open source, fully transparent, policy-neutral tool which tracks coal, oil and gas production and reserves from the country to the project level and translates all the granular data into CO2-equivalent.** It therefore has the potential to be an extremely valuable information resource for the range of stakeholders as a carbon budget tool.

The database – weblink here - has been in development since 2021 and went live in September 2022. It now has the public support of a number of governments, especially in Europe. **UNEP (who are relevant in this context as the sponsors of the Production Gap Report) recognises the value of the registry and has therefore agreed to work formally with Carbon Tracker in order to elevate the database internationally and with national governments.** We are additionally in a dialogue with several international organisations and coalitions (the International Energy Agency, the Powering Past Coal Alliance, the Beyond Oil and Gas Alliance, the Extractive Industries Transparency Initiative) who are interested in using and promoting the registry with their members.

In a similar vein, the registry is generating growing interest among other key stakeholder groups: investors and financial institutions, researchers and civil society organisations.

Key Messages

- The Global Registry of Fossil Fuels is the first of its kind: an open source, policy neutral database which tracks fossil fuel production and translates all data into carbon dioxide equivalent.
- It supports greater transparency and government accountability in respect of fossil fuel production, and can be a valuable public policy tool to apply to the global carbon budget.
- The Registry can support improved reporting by government parties on production data within UNFCCC and NDC processes, drawing on the Common Reporting Framework template.

Objectives of the Global Registry: why it is needed for Public Policymaking

The UNEP Production Gap Report (most recent publication 2021; an updated Production Gap Report will be published this autumn) sets out how the planned production of oil, gas and coal by governments remains dangerously out of sync with the Paris temperature limits. In 2015 – the year that the Paris Climate Agreement was signed – the fossil fuel industry was responsible for roughly 70% of all man-made greenhouse gas emissions. Continued production on a business-as-usual basis cannot therefore be in line with what the increasing urgency of the climate science is telling the international community.

Carbon Tracker's landmark report – Unburnable Carbon: Ten Years On, published in 2022 – spells it out clearly: that, to limit global warming to 1.5C, 90% of fossil fuel reserves should not be burned and must remain in the ground.

Against this background, the **Global Registry – which on going live in September 2022 itself reported that burning the world's fossil fuel reserves would result in seven times more emissions than what is compatible with keeping warming to below 1.5C – can be an essential tool for international public policy in terms of assessing the risks to and managing the global carbon budget.**

Specifically, the registry can improve international and national decision-making on the energy transition and climate risk, by addressing the following key areas:

- **Transparency**. The global registry is the only free to access, public domain database which publishes production and reserves data on oil, gas and coal. It also goes down to a much more granular level in its provision of information: at government, company, and at the project and field level. Private service providers have some of this data; but it is available only on commercial terms, and therefore not free for use by all stakeholders as the global registry is. We note that there is a transparency framework in the Paris Agreement, under which countries have to submit biennial reports on progress for their NDCs.
- **Accountability**. The problem of business-as-usual fossil fuel production is clearly detailed above. The Paris Agreement makes no mention of fossil fuels, and there is no mechanism within the UNFCCC/NDC process which requires governments to report on their production. The publication of production data – especially if it is reported and verified by sovereign governments themselves, as is our plan – will heighten national government accountability. It will also provide a means for this data to be included in NDC reporting. We detail below some ideas about integrating within the NDC process.
- **Carbon Budget**. The global registry is also unique because it translates all productions and reserves data into its carbon dioxide equivalent. It therefore enables policymakers and others to compare what is in the ground and what is being produced directly from within the remaining carbon budget.

How the Registry can support and be integrated within the UNFCCC and NDCs Process: the Value of Data Quality on Fossil Fuel Production and Reserves

There are specific improvements the UNFCCC process could introduce to data collation and presentation which would enable the data to be used much more widely, in comparable and comparative formats which would facilitate all forms of policy and investment based on CO2 and CO2 eq emissions levels, especially Article 6 trading between the Parties, as established in Paris (COP 21) and finalized in Glasgow (COP 26).

Reporting requirements should be updated, since they were established some time ago and reporting capacity has increased among all parties. We make various suggestions to extend the templates in the Common Reporting Format (CRF) for Annex 1 countries, while it is also recommended that non-Annex 1 countries selectively adopt some of the templates in the CRF.

These suggestions address three principles – building on the overall public policy objectives of the global registry – in order to facilitate fuller transparency in global carbon accounting:

- *Full Supply Side Transparency*: Full factorization from mass to energy to emissions on the supply side would enable easier tracking of emissions triggered by production of fossil fuels.
- *Metadata:* The CRF currently contains few places where parties add metadata to explain or refer to the methodologies used to compile the numbers they are submitting. These may exist in the reporting process, but are buried deep inside Annual Inventory Reports (AIR) of hundreds of pages, making integration of data sets from the 200 parties to the Paris Agreement, complete with metadata, unfeasible. The vast majority of numbers reported within the CRF system are on a projection rather than measurement basis, which makes easy access to details of the projection methodology critical to their robustness.
- *Uncertainties:* Most significant numbers reported in the CRF come out of wider analysis as midpoints of ranges, which also include lower and upper bounds and margins of uncertainty. Typically, these ranges might be included in the AIRs but in a non-standard non-interactive way, making scaled inclusion in datasets and analytical modeling extremely hard in practice. As global policy moves towards multiparty carbon agreements of various kinds, these margins of uncertainty need to be integrated directly into the CRF Excel sheets. We attach an Excel sheet (using the example of German data) to illustrate what we mean.

Following is a list of specific extensions recommended:

Annex 1 countries

Table I.A(b)

- *Column D* currently allows the Party to define the input metric as either a unit of mass (such as the United States uses) or a unit of energy (such as Germany and Australia). In fact, totals for both mass and primary energy should be required, to allow users to understand which ratios are being used in the two step process to convert mass into energy, and then energy into conversions. This would then also establish parity with the generic Tier 1 factors within the IPCC process, and facilitate comparison between IPCC generic values, and the actual levels reported by Parties. At present, most Parties use a unit of primary energy expressed in terajoules in column D, which then introduces an unnecessary margin of uncertainty. The IPCC Tier I variables to convert mass into energy for oil, for example, are within a range which varies 5% either way from the midpoint of the range to upper and lower bounds. Without knowing which mass to energy conversion a Party is using, it is not possible to compare their end estimates to those which can be derived from other sources.

- *Two metadata columns appended to column N:* Currently a Party enters a carbon emissions factor in column N to allow the computation of emissions estimates from the stated volumes of production or primary energy. In 2020, the range between the lowest and highest of these factors reported by the Parties was 8% in oil, 15% in gas, and more for various kinds of coal such as lignite and anthracite. One column would describe the basis of the methodology for the factor provided by the Party, or a link to an extended description online, and the second column would provide the year the factor was last updated.

- *Three metadata columns appended to column S:* Parties should be producing inventories with margins of uncertainty, since the vast majority of numbers relating to emissions have not been empirically measured. Most Parties (e.g. Germany and the United States) do this, but these margins are not included within the CRF, but instead buried deep inside the AIR itself, in non-standard format. Column S as reported now is generally the mid-point of a range. Two columns should be added for the Lower and Upper bounds of the range, and a third column to describe, or link to, a discussion of the methodology used to define this range of uncertainty.

Table 1.A(c)

- *Metadata column appended to column H:* A description entered by the Party of the reason for differentials between the Sectoral and the Reference methods.

- *Inclusion of this table in Flexible Query function:* The data in this sheet is available within each individual CRF submitted by a country, but not within the Flexible Query function of the UNFCCC website. Inclusion enables easy comparison of differentials between one Party and another, and within the same Party's submissions over time, without having to manually review some 1,300 individual CRF files.

Table 1.B.1

- *Six metadata columns appended to columns F and G:*
    - Upper and Lower Bound numbers for estimate of CH4 emissions.
    - Upper and Lower Bound numbers for estimate of CO2 emissions.
    - Description, or links to description, of the methodologies used to derive columns F and G (CH4 and CO2 emissions).

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- *Six metadata columns appended to columns I and J:*
    - Upper and Lower Bound numbers for estimate of CH4 emissions.
    - Upper and Lower Bound numbers for estimate of CO2 emissions.
    - Description, or links to description, of the methodologies used to derive columns I and J.

Non-Annex 1 Countries

Data from non-Annex 1 countries is intermittent and non-standard. Only six countries in this group for example have ever reported emissions related to oil production.

We therefore advocate that three templates from the Annex 1 CRF become standard for all countries in the Paris process: Table 1.A(b) and Table I.B.1 and Table 1.B.2. The current situation means that most governments, representing a clear majority of production of all oil, gas and coal, do not report into the global process either the volumes produced nor the estimates of associated emissions. We note that all major fossil fuel producing countries have technical expertise either in ministries or regulatory agencies and parastatal organisations, and should be capable of pulling these figures together – if indeed they do not already have them. Apart from the over-riding connection to the global carbon budget, it is worth saying that, without some universalization at a basic level, it becomes very difficult to imagine Parties able to make carbon trading agreements of various kinds on the basis of trusted information - at least as regards any activity related to fossil fuel production.

Conclusion

We hope that this submission makes clear why and how the Global Registry of Fossil Fuels can be an extremely valuable public policy resource: to generate much greater transparency about oil, gas and coal production; to make governments much more accountable for their production because of the impact of fossil fuels on climate change; and above all because the registry and its comprehensive data, being expressed in projections of CO2-equivalent, can be applied to assessing progress on the global carbon budget - which is becoming increasingly vital and urgent.

The Paris Agreement and NDC reporting process makes no requirement of reporting on fossil fuel production and reserves data, so this submission makes constructive suggestions in this regard related to UNFCCC carbon accounting, We hope these suggestions will be considered within the Global Stocktake and wider UNFCCC processes. In this regard, we believe that the registry can make a very important contribution to the Global Stocktake and carbon budget assessment in a way which also links to Paris and the NDCs.