Land Sector and Removals Guidance:

Sample Greenhouse Gas Inventory Reporting Template

*Part 2: Descriptive information and methodology*

This sample reporting template illustrates the reporting requirements of the *GHG Protocol Land Sector and Removals Guidance (Draft for Pilot Testing and Review, September 2022)*. Companies may use any format to report emissions and additional information, provided that it contains all of the reporting requirements.

Some reporting categories are required for all companies, while other categories are only reported if applicable to the reporting company. Information in Parts A – E are required, while the information in Part F is optional and should be reported if relevant and applicable to the reporting company.

*Refer to the Sample Reporting Template – Part 1 (Excel file) to provide greenhouse gas inventory data.*

## **Part A: Information about the greenhouse gas inventory**

**Company information**

|  |  |
| --- | --- |
| **Information** | **Response** |
| Company name  |  |
| Description of company |  |
| The reporting period (year) covered |  |

**Greenhouse gas inventory boundary**

(Reference: Chapter 5)

|  |  |
| --- | --- |
| **Information** | **Response** |
| An outline of the organizational boundaries chosen, including the chosen consolidation approach (equity share, operational control or financial control) |  |
| Description of the businesses and operations included in the company’s organizational boundary |  |
| Scopes, scope 3 categories, gases, sources, and sinks included in the GHG inventory  |  |
| Any scopes, scope 3 categories, accounting categories, gases, sources or sinks excluded from the GHG inventory, with justification for their exclusion |  |

**Assurance**

(Reference: Chapter 15)

|  |  |
| --- | --- |
| **Assurance information**  |  |
| Was third-party assurance performed? (Yes or no; if yes, fill in the lines below) |  |
| The relevant competencies of the assurance provider(s) |  |
| The opinion issued by the assurance provider  |  |
| Additional information about assurance or verification |  |

## **Part B: Greenhouse gas impacts of actions**

**GHG impact of actions** (metric tons CO2e)

(Reference: Chapter 11)

*Note:*Companies are required to report the impacts of actions that are expected to have a potentially significant negative impact (i.e., that increase GHG emissions and/or decrease removals) outside the scope 1, 2 and 3 boundary. Companies may report the impacts of other actions (including actions expected to have expected to have a potentially significant positive impact outside the scope 1, 2 and 3 boundary.

|  |  |  |
| --- | --- | --- |
| **GHG impacts of actions** | **Metric tons CO2e** | **Methods, assumptions, assessment boundary, time period, data sources used to calculate impacts** |
| Estimated impacts on GHG emissions and removals resulting from specific action A (using project or intervention accounting methods, including land tracking metric[s]), |  |  |
| Estimated impacts on GHG emissions and removals resulting from specific action B (using project or intervention accounting methods, including land tracking metric[s]) |  |  |
| [Add rows as needed] |  |  |

**Part C: Inventory methodology**

**Methodology: Emissions**

|  |  |
| --- | --- |
| **Information** | **Response** |
| Methods, data sources and assumptions used to calculate scope 1 emissions |  |
| Methods, data sources and assumptions used to calculate scope 2 emissions |  |
| Methods, data sources, allocation methods, and assumptions used to calculate scope 3 emissions (by scope 3 category) |  |
| Methods, data sources, and assumptions used to calculate gross emissions (by category) |  |
| For each scope and scope 3 category, a description of the types and sources of data, including activity data, emission factors and GWP values, used to calculate emissions, and a description of the data quality of reported emissions data |  |
| For each scope 3 category, the percentage of scope 3 emissions calculated using data obtained from suppliers or other value chain partners |  |
| If companies use the recycled content allocation method for post-consumer waste that is recycled or reused, evidence that the waste is post-consumer and that the waste has been reused or recycled |  |

**Methodology: Removals**

*Note:* Reporting CO2 removals in a GHG inventory is optional. If removals are reported, the following information is required to be reported. Removals may only be reported if the requirements for removals in chapter 6 are met.

(Reference: Chapters 6-10)

|  |  |
| --- | --- |
| **Information** | **Response** |
| **Scope 1 removals (if applicable)** |  |
| Methods, data sources and assumptions used to calculate scope 1 removals |  |
| Systems and procedures for long-term monitoring of carbon pools owned/controlled by the reporting company corresponding to reported scope 1 removals |  |
| Information on traceability systems in place to meet physical traceability requirements |  |
| Description of the types and sources of data, including activity data and emission factors, used to calculate scope 1 removals, and a description of the data quality of reported removals data |  |
| The uncertainty range associated with reported scope 1 removals, with justification for how reported removals use conservative assumptions and values |  |
| **Scope 3 removals (if applicable)** |  |
| Methods, data sources and assumptions used to calculate scope 3 removals |  |
| Systems and procedures for long-term monitoring of carbon pools owned/controlled by the relevant entities in the value chain corresponding to reported scope 3 removals |  |
| Information on traceability systems in place to meet physical traceability requirements |  |
| Description of the types and sources of data, including activity data and emission factors, used to calculate scope 3 removals, and a description of the data quality of reported removals data |  |
| The uncertainty range associated with reported scope 3 removals, with justification for how reported removals use conservative assumptions and values |  |

**Methodology: Land Use Change and Land Tracking**

(Reference: Chapter 7 and 17)

|  |  |
| --- | --- |
| **Information** | **Response** |
| Whether direct land use change (dLUC) or statistical land use change (sLUC) was used to account for scope 1, scope 2, and scope 3 land use change emissions, with justification for the approach used |  |
| Whether the shared responsibility approach or product expansion approach was used to calculate sLUC emissions, with justification for the approach used |  |
| The land use change assessment period and approach used to distribute emissions across the assessment period (linear discounting approach or equal discounting approach), with justification for the approach used |  |
| Data sources, methods, and assumptions used to quantify land use change emissions |  |
| Data sources, methods, and assumptions used to quantify selected land tracking metric(s) |  |
| Allocation method(s) used for land use change emissions |  |
| If companies use certification or chain-of-custody programs, the type of certification programs or chain-of-custody models used |  |

**Methodology: Land Management**

(Reference: Chapter 8 and 18)

|  |  |
| --- | --- |
| **Information** | **Response** |
| Approach(es) used to account for anthropogenic emissions and removals due to land management, with justification  |  |
| If companies choose to separate managed from unmanaged, a description of the definitions and criteria used to distinguish managed and unmanaged lands |  |
| Which land uses and carbon pools are included in their analysis of net carbon stock changes, including where they assume no carbon stock changes for a particular carbon pool and land use |  |
| Data sources, quantification methods, and assumptions used  |  |
| Spatial scale and level of traceability of data used, by product type (e.g., harvested area, land management unit, sourcing region, jurisdiction, global) and the attributable managed lands included in the spatial boundary used to evaluate net carbon stock changes |  |
| Monitoring approach and frequency used to estimate land management net CO2 emissions or removals for each relevant land use and/or activity in scope 1 or scope 3 |  |
| Primary data sampling method(s) used, if applicable  |  |
| Uncertainties of the results, quantitatively (with methodology) or qualitatively (description) |  |
| Allocation method(s) used for land management emissions and removals |  |

**Methodology: Product Carbon Pools** (*subject to open question #2*)

(Reference: Chapter 9 and 20)

|  |  |
| --- | --- |
| **Information** | **Response** |
| Net removals with product storage, if separately reported from the scopes (*subject to open question #2*) |  |
| Methods, data sources, and assumptions used to calculate net emissions from product storage or net removals with product storage, if applicable |  |
| Methods, data sources, and assumptions used to calculate gross biogenic product CO2 emissions and gross TCDR-based product CO2 emissions, if applicable |  |
| If applicable, the uncertainty range associated with reported net removals with product storage, based on a specified confidence level, and justification for how the estimated removals use conservative assumptions and values |  |

**Methodology: Geologic Carbon Pools**

(Reference: Chapter 10 and 21)

|  |  |
| --- | --- |
| **Information**  | **Response** |
| Any CO2 or other carbon losses from the geologic reservoir |  |
| Net amount of CO2 (in metric tons) at each custody transfer, where the net amount is the difference between CO2 inputs and outputs, corrected by any changes in composition of the CO2 stream, if applicable |  |
| The monitoring plan for ongoing storage monitoring of the geologic reservoir, including methods, data, and assumptions |  |
| If applicable, description of contractual arrangements that specify which single entity accounts for removals as scope 1, including information on allocation of CO2 related risks and obligations and avoidance of double counting of scope 1 removals between all entities in the geologic removal and storage value chain |  |
| Methods, data sources, and assumptions used to calculate net emissions from geologic storage or net removals with geologic storage, if applicable |  |
| Methods, data sources, and assumptions used to calculate gross CO2 emissions from geologic storage |  |
| If applicable, the uncertainty range associated with reported net removals with geologic storage, based on a specified confidence level, and justification for how the estimated removals use conservative assumptions and values |  |

**Part D: Target Setting and Tracking Progress**

(Reference: Chapter 12)

**Information on base year/period**

|  |  |
| --- | --- |
| **Information on base year/period**  | **Response**  |
| Selected base year or period and the rationale for choosing the base year or period |  |
| Emissions profile over time (for all scopes and scope 3 categories) that is consistent with the base year emissions recalculations policy |  |
| Base year recalculation policy, including the significance threshold that triggers base year recalculations |  |
| Any recalculations of base year/period levels, including the rationale for recalculation and which assumptions and values were changed with a comparison of updated values with original values |  |
| Appropriate context for any significant emissions changes that triggered base year emissions recalculation (acquisitions/divestitures, outsourcing/insourcing, changes in reporting boundaries or calculation methodologies, etc.) |  |

**Information on GHG emissions targets**

|  |  |
| --- | --- |
| **Information on GHG emissions targets** | **Response**  |
| Target boundary |  |
| Target type |  |
| Target base year/period, with justification  |  |
| Target year(s) and whether the target is a single-year or multi-year target |  |
| Target level  |  |
| Progress in reaching target |  |

**Information on removal targets (if applicable)**

|  |  |
| --- | --- |
| **Information on removal targets (if applicable)** | **Response**  |
| Whether scope 1 and/or scope 3 removals are included in the target boundary |  |
| Types of removals included in the target boundary (removals with land-based, geologic, or product storage (*subject to open question #2*); and biogenic or technological removals), including eligibility requirements  |  |
| Target type |  |
| Target base year/period, with justification  |  |
| Target year(s) and whether the target is a single-year or multi-year target |  |
| Approach for accounting for reversals of previously reported removals  |  |
| Target level  |  |
| Progress in reaching target |  |

**Information on net targets that include emissions and removals (if applicable)**

|  |  |
| --- | --- |
| **Information on net targets (if applicable)** | **Response**  |
| Target boundary, including which greenhouse gases and scopes of emissions are included (scope 1, scope 2, scope 3, and which scope 3 categories), which scopes of removals are included (scope 1 and/or scope 3), what types of removals are included (removals with land-based, geologic, or product storage (*subject to open question #2*); and biogenic or technological removals), with justification for their inclusion, and eligibility requirements and limits on the quantity or type of removals allowed in the net targets |  |
| Target type |  |
| Target base year/period, with justification  |  |
| Target year(s) and whether the target is a single-year or multi-year target |  |
| Approach for accounting for reversals of previously reported removals  |  |
| Target level |  |
| Progress in reaching target |  |

**Information on land tracking targets (if applicable)**

|  |  |
| --- | --- |
| **Information on land tracking targets (if applicable)** | **Response**  |
| Selected land tracking metric(s) |  |
| Target boundary |  |
| Target type |  |
| Target base year/period, with justification  |  |
| Target year(s) and whether the target is a single-year or multi-year target |  |
| Target level  |  |
| Progress in reaching target |  |

**Information on targets for gross emissions and gross removals (if applicable)**

|  |  |
| --- | --- |
| **Information on targets for gross emissions and gross removals (if applicable)**  | **Response**  |
| Target metric(s): gross biogenic product CO2 emissions (e.g., from combustion), gross biogenic land CO2 emissions, gross biogenic land CO2 removals, gross technological CO2 removals, gross TCDR-based product CO2 emissions, or gross CO2 emissions from geologic storage |  |
| Target boundary |  |
| Target type |  |
| Target base year/period, with justification  |  |
| Target year(s) and whether the target is a single-year or multi-year target |  |
| Target level  |  |
| Progress in reaching target |  |

**Information on temporary carbon storage targets (if applicable)**

|  |  |
| --- | --- |
| **Information on temporary carbon storage targets (if applicable)**  | **Response**  |
| Carbon pool(s) (land, product, or geologic) |  |
| Target boundary |  |
| Target type |  |
| Target base year/period, with justification  |  |
| Target year(s) and whether the target is a single-year or multi-year target |  |
| Target level  |  |
| Quantity of carbon storage and expected length of storage  |  |
| Methods, data, and assumptions used to quantify temporary carbon storage |  |
| Progress in reaching target |  |

**Information on external compensation or contribution targets (if applicable)**

|  |  |
| --- | --- |
| **Information on external compensation or contribution targets (if applicable)**  | **Response**  |
| Target boundary |  |
| Target base year/period, target year(s), and whether the target is a single-year or multi-year target |  |
| Target level  |  |
| Type of financing or credits used |  |
| Methods, data, and assumptions used |  |
| Progress in reaching compensation or contribution target, separately from emissions and removals within the inventory boundary |  |

**Part E: Information on credits (if applicable)**

**Information on credits (if applicable)**

(Reference: Chapter 13)

|  |  |
| --- | --- |
| **Information** | **Response**  |
| Scope 1 emissions, independent of any transactions |  |
| Scope 2 emissions, independent of any transactions |  |
| Scope 3 emissions, independent of any transactions |  |
| Scope 1 removals, independent of any transactions, if applicable  |  |
| Scope 3 removals, independent of any transactions, if applicable  |  |
| Scope 1 emissions adjusted for sold credits, if applicable  |  |
| Scope 2 emissions adjusted for sold credits, if applicable  |  |
| Scope 3 emissions adjusted for sold credits, if applicable  |  |
| Scope 1 removals adjusted for sold credits, if applicable  |  |
| Scope 3 removals adjusted for sold credits, if applicable  |  |
| Emission reductions or removals from sources or sinks inside the inventory boundary that have been sold/transferred as offsets to a third party, if applicable  |  |
| GHG credits or other instruments purchased and retired, if applicable, reported separately from the scopes  |  |
| Credits used against compensation targets, if applicable, separately from credits used against contribution/financing targets, if applicable  |  |
| Credits separately reported by emission reduction credits, removal credits, or a combination, if relevant  |  |
| Offset/credit quality criteria followed, GHG crediting program and protocols/methodologies used, scale (jurisdictional or project), and other information as relevant  |  |
| Vintages and serial numbers of credits purchased/sold/retired |  |
| Non-permanence risks associated with removals and mechanisms followed to address permanence  |  |
| Type of credited removal activity(ies), if applicable |  |
| Social and environmental co-benefits of credits, if relevant |  |

**Part F: Optional information (if applicable)**

Companies **should** report the information in this section if relevant and applicable to the reporting company.

**Removal storage duration** (optional)

(Reference: Chapters 6-10)

|  |  |  |
| --- | --- | --- |
| **CO2 or carbon storage duration, reported separately**  | **Expected storage duration (years)** | **Methods, assumptions, data sources** |
| **For scope 1 removals** |  |  |
| Information on the expected duration of carbon or CO2 storage (expected length of time the removals are expected to remain stored in carbon pools) |  |  |
| **For scope 3 removals** |  |  |
| Information on the expected duration of carbon or CO2 storage (expected length of time the removals are expected to remain stored in carbon pools) |  |  |

**Total carbon stock or carbon storage data** (optional)

(Reference: Chapters 6-10)

|  |  |  |
| --- | --- | --- |
| **Total carbon stock or CO2 stored in carbon pools, separately by carbon pool category, in the reporting year, in the base year/period, and in all years between the base year/period and the reporting year for which carbon stocks are measured (to provide additional transparency over time on reported net changes in carbon stocks), reported separately**  | **Metric tons C or CO2**  | **Methods, assumptions, data sources** |
|  |  |  |
|  |  |  |

**Other GHG removals** (optional) (metric tons/year)

(Reference: Chapter 6)

|  |  |  |
| --- | --- | --- |
| **If relevant, CO2 removals stored in ocean-based or freshwater-based carbon pools, or non-CO2 GHG removals, reported separately**  | **Metric tons of each gas**  | **Methods, assumptions, data sources** |
|  |  |  |
|  |  |  |

**Additional optional reporting information**

|  |  |
| --- | --- |
| Chapter/topic | Optional reporting information  |
| **Greenhouse Gas Emissions** (Cross-cutting) | * Non-land emissions, separately reported by stationary combustion, mobile combustion, process, and fugitive emissions, by scope and scope 3 category
* Land use change emissions and land management emissions, separately reported by product category
* If relevant, CO2 emissions from ocean-based or freshwater-based carbon pools, separately reported
* Emissions data further subdivided where this adds relevance and transparency (e.g., by business unit, facility, country, source type, activity type, etc.)
* Emissions data further disaggregated within scope 3 categories where this adds relevance and transparency (e.g., reporting by different types of purchased materials within category 1, or different types of sold products within category 11)
* Emissions from scope 3 activities not included in the list of scope 3 categories (e.g., transportation of attendees to conferences/events), reported separately (e.g., in an “other” scope 3 category)
* Scope 3 emissions of GHGs reported in metric tons of each individual gas
* Emissions of any GHGs other than CO2, CH4, N2O, HFCs, PFCs, SF6, NF3 whose 100-year GWP values have been identified by the IPCC to the extent they are emitted in the company’s operations or value chain (e.g., CFCs, HCFCs, NOX, etc.) and a list of any additional GHGs included in the inventory
* Historic scope 3 emissions that have previously occurred, reported separately from future scope 3 emissions expected to occur as a result of the reporting company’s activities in the reporting year (e.g., from Waste generated in operations, Use of sold products, End-of-life treatment of sold products)
* Qualitative information about emission sources not quantified
* Quantitative assessments of data quality
* Information on uncertainty of emissions reported in the GHG inventory (e.g., information on the causes and magnitude of uncertainties in emission estimates) and an outline of policies in place to improve inventory quality
 |
| **Removals**(Chapter 6) | * Land management net removals, separately reported by product category
* Net removals with product storage, separately reported by product category (*subject to* *open question #2*)
 |
| **Additional information**(Cross-cutting) | * Relevant performance indicators and intensity ratios
* Information on the company’s GHG management and reduction activities, including reduction targets, supplier engagement strategies, product GHG reduction initiatives, etc.
* Information on supplier/partner engagement and performance
* Information on product performance
* A description of performance measured against internal and external benchmarks
* Information on any contractual provisions addressing GHG-related risks or obligations
* Information on the causes of emissions changes that did not trigger a base year emissions recalculation
* GHG emissions data for all years between the base year and the reporting year (including details of and reasons for recalculations, if appropriate)
* Additional explanations to provide context to the data
 |