Gold Standard for the Global Goals

METHODOLOGY TOOL
GS4GG PAA MT400-05

DOWNWARD ADJUSTMENT FACTOR DETERMINATION

PUBLICATION DATE 22/12/2025
VERSION 1.0
NEXT UPDATE 15/12/2030

Summary

This methodology tool, "Downward Adjustment Factor (DAF) Determination," establishes the foundational criteria for setting and dynamically adjusting baselines within GS4GG methodologies. It provides default DAF values for the period of 1st Jan 2026 to 31st Dec 2030 and ensures adherence to the GS4GG "Requirements for Baseline Determination in Methodologies." The tool's primary purpose is to determine the downward adjustment of crediting baselines to foster enhanced mitigation ambition and uphold environmental integrity.

Key principles for DAF determination include:

- Providing a standardized and transparent methodology for computing a DAF for a host country.
- Progressively incentivizing ambition by linking the DAF to long-term national climate targets.
- Establishing a default DAF as an ambition floor.
- Using a robust and pragmatic approach to country selection and exclusion to ensure DAF's relevance and ambition.

This document specifically:

- Provides a stepwise framework for selecting the appropriate DAF approach (based on National Net-Zero or Sectoral targets), establishing reference years, and calculating country-specific default DAFs.
- Details the determination of DAF update frequency and fixed DAF application periods to ensure ambition and predictability in emission reduction/removal quantification.

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1| INTRODUCTION

1.1.1 | This document establishes the methodological framework for determining the Downward Adjustment Factor (DAF) applicable across Gold Standard for the Global Goals (GS4GG) methodologies.

1.1.2 | The DAF is a critical component for upholding environmental integrity and promoting ambition as required by Article 6 of the Paris Agreement. Its fundamental function is to ensure that crediting baselines are established below a conservatively determined Business-As-Usual (BAU) emissions level and are dynamically adjusted downward over time. This systematic reduction aligns crediting with national climate trajectories, consistent with GS4GG requirements and global goals i.e. Paris Agreement.

1.1.3 | The primary objective of this tool is to provide a standardised, transparent, and robust approach to calculating the DAF. By implementing this universally applicable framework, the tool aims to improve predictability for stakeholders, reduce transaction costs, and streamline the DAF determination process across diverse contextual scenarios. This tool provides a systematic, sequential procedure for deriving DAF values, which can then be rigorously applied across applicable GS4GG methodologies.

2| PURPOSE AND SCOPE

2.1 | Purpose

2.1.1 | The primary purpose of this tool is to establish a standardized, transparent, and robust methodology for determining the DAF. This tool operationalizes the requirements for enhancing mitigation ambition and ensuring environmental integrity within the GS4GG methodologies, consistent with the goals and mechanisms of the Paris Agreement.

2.1.2 | Specific objectives include:

a. To define a standardised and transparent procedure for the computation of a dynamic DAF.
b. To ensure the DAF progressively incentivises ambition by linking baseline adjustments to long-term national or sectoral climate targets, consistent with the goals of the Paris Agreement.
c. To provide consistent and predictable DAF values for application across GS4GG methodologies, thereby enhancing market certainty.
d. To establish criteria for country selection and comparison group formation to ensure the relevance and robustness of the DAF.
e. To establish a default DAF that also functions as an ambition floor for those nations lacking specific targets or possessing calculated DAFs below the established benchmark.

2.2 | Scope

2.2.1 | This tool provides the methodological basis for the determination of the DAF for methodologies operating under GS4GG. It outlines procedures for calculating the DAF based primarily on national Net-Zero targets (the default approach) or, where appropriate, stringent sectoral targets. The framework is designed for broad applicability across various sectors and activity types, subject to the specific requirements and alternative treatments detailed herein (see Section 6).

3| DEFINITIONS

3.1.1 | For the purpose of this methodology tool, the following definitions apply:

Table 1. Terms and definitions

TERM	DEFINITION
Absolute DAF Floor	A global fallback DAF of 0.0125 (1.25%), applied when a comparison group cannot be established or as otherwise specified in this tool. This value is derived from the linear pathway between the Reference Year (2021) and the end of the century (2100), reflecting the Paris Agreement's long-term goal. The calculation is based on an inclusive 80-year period from 2100 to 2021 (i.e.,1/80 = 0.0125= 1.25%).
Ambition Floor	A calculated DAF value derived from a comparison group that serves as the minimum DAF applicable to the countries within that group.
Annual DAF ($DAF_{Net-Zero}$)	The Adjustment Factor to align with Net-Zero Target of Host Party or sector, determined as $1/(Y_{NetZero}-Y_{ref})$. This factor quantifies the annual linear reduction rate applied to baseline emissions.
Downward Adjustment Factor (DAF)	A numerical coefficient applied to crediting baselines to ensure the encouragement of ambition by setting crediting baselines below Business-As-Usual (BAU) levels and increasing the ambition of crediting baselines over time.
Net-Zero Target Year ($Y_{NetZero}$)	The year formally declared by a sovereign nation or established for a sector to achieve Net-Zero emissions.
Reference year (Y_{ref})	The designated start year for the DAF calculation period. For this tool, $Yref$ is defined as 2021, corresponding to the commencement of the initial Nationally Determined Contribution (NDC) periods under the Paris Agreement.

4| APPLICABILITY

4.1.1 | This methodological tool is mandatory and foundational for the development, assessment, and approval of all methodologies and methodological tools submitted under the GS4GG. It ensures a consistent, transparent, and robust approach to determining the Downward Adjustment Factor (DAF) across all applicable activities.

4.1.2 | The applicability conditions are as follows:

a. All methodology developers shall apply the most recent version of this document when submitting methodology drafts for review and approval, in accordance with the "Procedure for Development, Revision, and Clarification of Methodologies and Methodological Tools".

b. For methodologies approved under the Paris Agreement Crediting Mechanism (PACM), the downward adjustment mechanisms defined within the approved PACM methodology shall apply. In such cases, the procedures defined in this tool are not required.

c. This tool shall be applied by the GS4GG Secretariat, the Methodological Expert Group (MEG), and the Technical Advisory Committee (TAC) in the assessment and consideration of GS4GG methodologies, and by the project developers as directed by the applied methodology.

d. While this tool is primarily intended for use at the methodology development stage, the methodologies shall require activity developers to use this tool or derived default values for preparation of Project Design Documents (PDDs) or monitoring reports.

e. This tool is subject to periodic review and amendment to ensure continuous refinement and alignment with evolving international climate policy, scientific understanding, and best practices.

5| METHODOLOGY PROCEDURE

This section outlines the systematic, stepwise procedure for determining the applicable DAF.

5.1 | Step 1. Selection of Approach

5.1.1 | The initial step requires the methodology developer to determine the appropriate basis for DAF derivation: a National Net-Zero Target-Based Approach or a Sectoral Approach.

a. **National Target-Based Approach:** This is the default approach. It utilizes national-level climate targets (e.g., NDCs, Net-Zero commitments adopted in law and/or policy) as the foundation for DAF derivation. This approach aligns with the requirements for baselines to

be consistent with the host Party's NDC, long-term climate strategies, and to be adjusted downwards to reflect increasing ambition over time.

b. **Sectoral Approach:** This approach may be utilized when the DAF shall reflect the specific technological, economic, and policy dynamics within a distinct industry. It allows for the derivation of granular DAFs aligned with economic viability and incentives for lower-GHG technologies, consistent with requirements for baselines to consider technological advancement and be applicable to specific sectors. The implementation of this approach requires clear, objective criteria for defining the sector's boundaries.

Constraint: The Sectoral Approach shall only be used if the resulting DAF is demonstrably equivalent to or more ambitious (i.e., higher DAF value) than the DAF derived from the host country's national Net-Zero target. This ensures that the fundamental requirement of increasing ambition is maintained and safeguards the host country's accounting integrity..

5.2 | Step 2. Compilation of Data

5.2.1 | Compilation of Data: A comprehensive dataset corresponding to the selected approach shall be compiled. For the National Target-Based Approach, this involves compiling a list of countries with declared Net-Zero targets and associated socio-economic data.

5.2.2 | **Target Year Definition and Conditionality:** For nations specifying a range (e.g., 2050-2060) or using generalised terms (e.g., "mid-century"), the earliest plausible year (e.g., 2050) shall be used to ensure conservativeness. The DAF determination utilizes the full stated national ambition, including both conditional and unconditional targets.

5.2.3 | **Data Sources and Requirements:** Acceptable data sources include official governmental submissions (e.g., NDCs, LT-LEDS) and reputable international databases (e.g., UNFCCC, IEA, World Bank, Net Zero Tracker, UNDP, ND-GAIN). All data employed shall satisfy criteria of credibility, relevance, and accuracy. Detailed requirements for data collection and normalization are specified in Step 1 of the **Annex 01.**

5.2.4 | **Specific Groupings:** Countries that have already achieved Net-Zero status and Small Island Developing States (SIDS) shall be compiled separately and treated as distinct groups, as detailed in the **Annex 01,** to ensure appropriate comparison.

5.3 | Step 3. Selection of the Comparison Group

5.3.1 | The compiled list of countries is filtered to select a representative comparison group. This group is essential for establishing a relevant and ambitious benchmark (Ambition Floor).

a. **Methodology:** The selection and categorization of the comparison group shall be conducted strictly following the procedures outlined in the **" Annex 01."**
b. **Criteria:** The comparison group is established based on objective criteria detailed in the **Annex 01**, which include:
   i. Human Development Index (HDI);
   ii. Per Capita GDP;
   iii. Economic Structure (Sectoral Contribution to GDP);
   iv. Climate risk vulnerability (ND-GAIN Vulnerability Index).

5.4 | Step 4. Establishment of Reference Start and End Year

5.4.1 | The temporal scope for the DAF calculation is defined as follows:

a. **Reference Start Year (Y_{ref}):** This is defined as the first year of the Paris Agreement's NDC periods, i.e., 2021.
b. **Net-Zero Target Year ($Y_{NetZero}$):** The country's or sector's formally declared Net-Zero target year, as identified in Step 2.

5.5 | Step 5. Calculation of Country-Specific Adjustment Factors

5.5.1 | The individual Annual DAF for each country in the comparison group (and the host country, if applicable) shall be calculated using a linear reduction pathway between the reference year and the target year:

$$DAF_{NetZero} = \frac{1}{(Y_{NetZero} - Y_{ref})} \qquad eq.\ 1$$

Where:

$DAF_{NetZero}$	=	The annual downward adjustment factor for the specific country or sector.
$Y_{NetZero}$	=	The Net-Zero target year
Y_{ref}	=	The reference start year (2021)

5.6 | Step 6. Calculation of a Comparison Group Average DAF

5.6.1 | A Comparison Group Average DAF is calculated based on the individual DAFs (Step 5) of the countries selected in the comparison group (Step 3). This calculation utilizes a GHG emissions-weighted average, as defined in Equation 2:

$$Comparison\ Group\ Average\ DAF = \frac{[\sum(DAF_{country,x} \times GHG\ emissions_{country\ x})]}{Total\ GHGs\ emission\ of\ country\ group} \qquad eq.\ 2$$

Where:

$Comparison\ Group\ Average\ DAF$	=	Average DAF applicable for the comparison group

$DAF_{country,x}$	=	Individual DAF for country x
$GHG\ emissions_{country\ x}$	=	GHG Emissions (including LULUCF) of country in reference year
$Total\ GHGs\ emission\ of\ country\ group$	=	Sum of GHG emissions from all countries in the group

5.6.2 | This calculated average serves as the **Ambition Floor**.

5.7 | Step 7: Determination of the Applicable DAF

5.7.1 | The final DAF applicable to the host country is determined according to the following hierarchy:

a. **Comparison Group Application:** If a comparison group is successfully established in Step 3:
   i. If the host country has a calculated $\boldsymbol{DAF_{NetZero}}$ (Step 5), the applicable DAF shall be the **higher** of the host country's $\boldsymbol{DAF_{NetZero}}$ and the Ambition Floor (Step 6).
   ii. If the host country does not have a Net-Zero target, the applicable DAF shall be the Ambition Floor (Step 6).

b. **Absolute DAF Floor Application (General)**: In situations where a comparison group cannot be established, the **Absolute DAF Floor** of 0.0125 (1.25%) shall be applied. This value reflects the requirement under Article 4.2 of the Paris Agreement to reach global net-zero by the end of the century. The period from our reference year of 2021 to 2100 is 80 years, which leads to a DAF of 1/80=1.25%.

c. **Absolute DAF Floor Application (Specific Sectors):** Unless otherwise directed or justified in the relevant GS4GG methodology, project activities in the following sectors/types shall apply the Absolute DAF Floor (1.25%):
   i. Removals: Land Use and Forestry (LUF)
   ii. Engineered removals.
   iii. Agriculture.
   iv. Blue Carbon.

6| APPLICATION OF DAF

6.1 | General application

6.1.1 | The DAF shall be applied as a fixed, coefficient to adjust the crediting baseline during the Application period. This ensures the baseline is set below Business-As-Usual (BAU) in alignment with national ambition trajectories. The DAF coefficient value (e.g., 2.0%) is fixed and applied consistently as a static adjustment for every year within the Application Period (e.g., 2026-2030). The application of the DAF values is determined

by the calendar year (y) in which the emissions reductions or removals occur. This application is independent of the start date, duration, or renewal schedule of a specific project activity's crediting period.

6.1.2 | **Application for Emission Reduction Activities:** For emission reduction activities, the baseline emissions adjusted for uncertainty ($BE_{unc,y}$) shall be adjusted downward using the fixed DAF coefficient.

$$BE_{adjsuted} = BE_{unc,y} \times (1 - DAF) \qquad \text{eq. 3}$$

6.1.3 | **Application for Removal Activities:** The DAF shall be applied to increase the ambition of the removal baseline (BR) (e.g., by adjusting the baseline removals upward).

$$BR_{adjsuted} = BR_{unc,y} \times (1 + DAF) \qquad \text{eq. 4}$$

Where (for eq 3&4):

y	=	The calendar year for which the baseline is being calculated
BE_t	=	The calculated baseline emissions for year y, as determined by the applied methodology before the DAF adjustment.
BR_t	=	The calculated baseline removals for year y, as determined by the applied methodology before the DAF adjustment.
DAF	=	The fixed Downward Adjustment Factor determined for the Application Period.

6.1.4 | **Application for Removals with Zero Baseline:** For removal activities where the baseline removal is mathematically zero (e.g., certain ARR, or engineered removal activities), the application of eq. 4 yields zero adjustment. In such cases, the relevant methodology shall define alternative approaches to ensure ambition, subject to approval by GS4GG. These methodologies may apply default DAF of 1.25%.

6.1.5 | **Application for Dynamic Baselines:** For methodologies employing dynamic baselines, the fixed DAF coefficient shall be applied to the dynamic BAU baseline value ($BE_{unc,y}$ or $BR_{unc,y}$) determined for that specific year, following equations 3 or 4 as applicable.

6.2 | Application Periods and Default Values

6.2.1 | To provide predictability for methodology development and project implementation, DAF values are fixed for specific durations aligned with the Nationally Determined Contribution (NDC) cycles under the Paris Agreement.

a. **Initial Period:** The DAF values determined by this tool shall be effective for the application period from 1st January 2026 to 31st December 2030.

b. **Default Values:** The default DAF values calculated according to the procedure in Section 5 and the " **Annex 01**" for this initial period are provided in **Table 3** of this document. Methodology developers shall refer to these default values unless a specific, justified alternative approach (e.g., a Sectoral Approach as per Section 5.1(b)) or alternative approach is applied and approved.

6.2.2 | Transitional Application (Legacy Projects): For projects registered prior to 1st January 2026, the DAF applicable for the 2026-2030 period shall be applied starting from the 2026 vintage. For example, if a project registered in 2023 request issuance for the 2026 calendar year, the baseline adjustment shall be calculated using eq. 3 as: $BE_{adjsuted,2026} = BE_{unc,2026} \times (1 - DAF)$.

6.3 | Update Frequency and Procedure

6.3.1 | The DAF values shall be reviewed and updated periodically to reflect changes in national or sectoral Net-Zero targets, updated socio-economic data, and evolving global ambition.

a. **Review Cycle:** To provide necessary predictability for project finance and methodology application, DAF values are fixed for 5-year periods. Updates will coincide with the subsequent NDC reporting cycles. The next scheduled update will establish the DAF values applicable for the 2031–2035 period.

b. **Procedure:** The update process involves re-executing the Methodology Procedure (Section 5) utilizing the most current and credible data available at the time of the review. Updated values will be published in a revised version of this tool or an associated annex in advance of the next application period.

6.4 | Exemptions and Alternative Approaches

6.4.1 | In certain circumstances, specific methodologies may propose exemptions from this tool or the use of alternative approaches for DAF determination (e.g., non-linear adjustment pathways), subject to the following conditions:

a. **Justification:** Any deviation shall be robustly justified based on the specific technology, activity type, or sectoral context, demonstrating that the alternative approach provides a more accurate representation of the decarbonization pathway.

b. **Ambition Requirement:** Any alternative approach shall demonstrate that it results in an equivalent or greater level of ambition (i.e., resulting in equivalent or greater cumulative emissions reductions/removals) compared to the standard application of this tool. Accuracy alone is not sufficient justification if the ambition level is reduced.

c. **Approval:** Deviations shall be assessed and approved in accordance with the "Procedure for Development, Revision, and Clarification of Methodologies and Methodological Tools." In such approved cases, the requirements specified within the relevant GS4GG methodology shall take precedence.

6.5 | Coordination with Article 6 Frameworks

6.5.1 | To ensure harmonization and prevent double discounting of mitigation outcomes, the application of the DAF shall be coordinated with national frameworks established under Article 6 of the Paris Agreement. If a host country applies a national buffer, conservative baseline adjustment, or similar mechanism specifically intended to enhance ambition for the purpose of Article 6 authorization, methodology developers may propose an approach to reconcile the GS4GG DAF with the host country mechanism. Any such approach shall robustly demonstrate that the combined effect meets or exceeds the ambition level required by this tool and must be approved by the GS4GG Secretariat.

7| GUIDANCE FOR IMPLEMENTATION

7.1 | General Guidance

7.1.1 | This section provides additional clarification and practical guidance on applying the Methodology Procedure (Section 5) and the Application rules (Section 6). This guidance is intended to ensure the consistent, transparent, and robust determination and application of the DAF. Methodology developers should refer to the default DAF values provided in Annex 01 unless a deviation is explicitly justified and approved according to the procedures outlined in this tool.

7.2 | Guidance for Step 1: Selection of Approach

7.2.1 | The choice between a National Target-Based Approach and a Sectoral Approach (Section 5.1) shall be clearly justified within the methodology documentation.

a. **When to Use National (Default):** The national approach is the default and is most appropriate when: (i) A methodology applies broadly across multiple sectors (e.g., grid-connected renewable energy). (ii) Clear, verifiable, and consistently reported sectoral data regarding Net-Zero targets is unavailable. (iii) Activities are cross-cutting (e.g., energy efficiency in buildings) or diffuse, where ambition is primarily linked to national-level targets.

b. **When to Use Sectoral (Conditional):** A sectoral approach is recommended only when a sector's unique characteristics—such as specific technology diffusion rates, distinct international agreements,

or recognized sectoral decarbonization pathways (e.g., heavy industry)—make the national average unrepresentative.

c. **Demonstrating Ambition and Accuracy:** Crucially, the Sectoral Approach is only permissible if it is both accurate and results in ambition equivalent to or greater than the national approach (See Constraint in 5.2). Methodology developers shall provide verifiable evidence demonstrating that the DAF calculated from the sectoral target is equal to or higher than the DAF derived from the host country's national Net-Zero target.

7.3 | Guidance for Step 2 & 3: Compilation and Selection of Comparison Group

7.3.1 | The integrity of the DAF determination relies heavily on the objective and transparent formation of the comparison group, strictly following the procedures in the **Annex 01**

a. Objectivity and Integrity: The selection process is designed to identify a relevant peer group based on development tier, economic structure, and climate vulnerability. The methodology shall be applied rigorously and shall not be manipulated to select a comparison group that yields a lower DAF.

b. Data Quality and Documentation: All data utilized shall be sourced exclusively from the authoritative international databases specified in the **Annex 01** (e.g., UNDP, World Bank, ND-GAIN, Net Zero Tracker). Adherence to the specified reference years (e.g., 2021 for socio-economic data) is mandatory to ensure consistency and comparability.

7.4 | Guidance for Steps 5 & 6: Calculation of DAFs

7.4.1 | **Linear Reduction Pathway (eq. 1):**

a. The methodology employs a linear pathway for calculating the country-specific DAF (Section 5.5). This assumes a constant annual rate of reduction between the Reference Year (2021) and the Net-Zero Target Year. While actual national decarbonization may follow non-linear trajectories, the linear approach provides a standardized, transparent, and predictable metric for setting the DAF.

b. **Interaction with BAT/Benchmarks :** For methodologies utilizing Best Available Technology (BAT) or ambitious benchmarks for initial baseline setting, the DAF is still required. The DAF ensures that the baseline is dynamically adjusted downward over time to reflect ongoing technological advancements and increasing national ambition

7.4.2 | **Emissions-Weighted Average (eq. 2):** The use of a GHG emissions-weighted average for calculating the Comparison Group DAF (Section 5.6)

ensures that the ambition levels of the major emitting economies within the peer group have a proportionate influence on the resulting Ambition Floor.

7.5 | Guidance for Step 7: Application and Exemptions

7.5.1 | The hierarchical approach defined in Step 7 functions as a critical mechanism to uphold environmental integrity and incentivize ambition. It prevents a "race to the bottom," where a country might otherwise benefit from having a less ambitious target or no target at all. The application logic is summarized in the table below:

Table 2. DAF Application Hierarchy.

Scenario	Host Country Target Exists	Comparison group exists	Applicable DAF Determination
1	Yes	Yes	The **higher** of the Host Country's calculated DAF ($\boldsymbol{DAF_{NetZero}}$) and the Comparison Group Average DAF (Ambition Floor).
2	No	Yes	The Comparison Group Average DAF (Ambition Floor).
3	Yes	No	The higher of Host Country DAF (DAFNetZero) and Absolute Floor.
	No -	No	The Absolute DAF Floor (1.25%).
4	Yes/No	Yes/No	Activity falls under sectors specified in 5.8(c) (LUF, Agriculture, Blue Carbon, Engineered Removals). The Absolute DAF Floor (1.25%) applies, unless methodology directs otherwise.

Example 1 (Ratcheting Ambition): Host Country A has a calculated DAF of 2.0%. Its Comparison Group Average DAF is 2.5%. The applicable DAF is 2.5%.

Example 2 (Higher National Ambition): Host Country B has a calculated DAF of 3.0%. Its Comparison Group Average DAF is 2.5%. The applicable DAF is 3.0%.

7.6 | Guidance for Section 6: Application and Updates

a. **Balancing Predictability and Ambition:** Section 6 defines fixed application periods (e.g., 2026-2030). This means the *value* of the DAF coefficient (e.g., 2.0%) remains constant during this period (Table 03), providing stability for financial planning and methodology application.
b. **Continuous Downward Adjustment:** The DAF coefficient is fixed for the period and is applied annually to the crediting baseline (Section 6.1). This

ensures that the baseline is consistently set below BAU, reflecting the required ambition for the period. The requirement for "increasing ambition over time" is operationalized through the periodic updates of the DAF coefficient itself; the coefficient will be reviewed and updated for subsequent application periods (e.g., 2031-2035) to reflect evolving national and global commitments. The specific mathematical application of the DAF to the baseline emissions shall be clearly articulated within the respective GS4GG methodology following the equations in Section 6.1.

c. **Alternative Approaches:** The burden of proof for proposing an exemption or alternative approach (Section 6.4) rests with the methodology developer. The justification shall quantitatively demonstrate that the proposed alternative achieves an equivalent or greater level of cumulative emissions reduction compared to the application of the default DAF.

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Table 03. Default Downward Adjustment Factor Value (2026-2030)

Country	HDI (2021)	Development Tier	Primary Economic Sector	Vulnerability Index	Net Zero Year	Net Zero Status	Country DAF	Ambition floor	Default DAF	Peer Group
Afghanistan	0.478	Tier 4 (Low)	Services-Dominant	High (> 0.50)	2030	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Albania	0.796	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2030	In policy document*		3.34%	3.34%	Ambition Floor (Peer Group)
Algeria	0.745	Tier 2 (Medium-High)	Industry-Dominant	Low (0.30 - 0.40)	2030	In policy document*		2.56%	2.56%	Ambition Floor (Peer Group)
Andorra	0.858	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Angola	0.586	Tier 3 (Medium)	Resource-Dependent	High (> 0.50)	2035	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Antigua and Barbuda	0.788	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2040	In policy document	5.26%	3.45%	5.26%	Country DAF
Argentina	0.842	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.34%	3.45%	Ambition Floor (Peer Group)
Armenia	0.759	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.34%	3.45%	Country DAF
Australia	0.951	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)

Austria	0.916	Tier 1 (High)	Services-Dominant	Very Low (< 0.30)	2040	In law	5.26%	3.86%	5.26%	Country DAF
Azerbaijan	0.745	Tier 2 (Medium-High)	Resource-Dependent	Medium (0.40 - 0.50)	2050	In policy document*		2.56%	2.56%	Ambition Floor (Peer Group)
Bahrain	0.875	Tier 1 (High)	Industry-Dominant	Medium (0.40 - 0.50)	2060	Declaration / pledge		3.45%	3.45%	Ambition Floor (Peer Group)
Bangladesh	0.661	Tier 3 (Medium)	Services-Dominant	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Barbados	0.79	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.34%	3.45%	Country DAF
Belarus	0.808	Tier 2 (Medium-High)	Industry-Dominant	Low (0.30 - 0.40)	2035	In policy document*		2.56%	2.56%	Ambition Floor (Peer Group)
Belgium	0.937	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Belize	0.683	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Benin	0.525	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2030	Achieved (self-declared)		NA	1.25%	Absolute Ambition Floor
Bermuda	0	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Bhutan	0.666	Tier 2 (Medium-High)	Industry-Dominant	High (> 0.50)	2050	Achieved (self-declared)		NA	1.25%	Absolute Ambition Floor
Bolivia	0.692	Tier 3 (Medium)	Services-Dominant	Medium (0.40 - 0.50)	0	0		2.04%	2.04%	Ambition Floor (Peer Group)

Bosnia and Herzegovina	0.78	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	Declaration / pledge		3.34%	3.34%	Ambition Floor (Peer Group)
Botswana	0.693	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Brazil	0.754	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.34%	3.45%	Country DAF
Brunei Darussalam	0.829	Tier 1 (High)	Resource-Dependent	Medium (0.40 - 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Bulgaria	0.795	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	Declaration / pledge		3.34%	3.34%	Ambition Floor (Peer Group)
Burkina Faso	0.449	Tier 3 (Medium)	Industry-Dominant	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Burundi	0.426	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2050	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Cambodia	0.593	Tier 2 (Medium-High)	Industry-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	2.90%	3.45%	Country DAF
Cameroon	0.576	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Canada	0.936	Tier 1 (High)	Services-Dominant	Very Low (< 0.30)	2050	In law	3.45%	3.86%	3.86%	Ambition Floor (Peer Group)
Cape Verde	0.662	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Cayman Islands	0	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)

Central African Republic	0.404	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Chad	0.394	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2030	0		3.45%	3.45%	Ambition Floor (Peer Group)
Chile	0.855	Tier 1 (High)	Industry-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.45%	3.45%	Country DAF
China	0.768	Tier 2 (Medium-High)	Industry-Dominant	Low (0.30 - 0.40)	2060	In policy document	2.56%	2.56%	2.56%	Country DAF
Colombia	0.752	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In law	3.45%	3.45%	3.45%	Country DAF
Comoros	0.558	Tier 3 (Medium)	Agriculture-Dominant	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Congo	0.571	Tier 2 (Medium-High)	Resource-Dependent	High (> 0.50)	2030	Declaration / pledge		2.56%	2.56%	Ambition Floor (Peer Group)
Costa Rica	0.809	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.34%	3.45%	Country DAF
Côte d'Ivoire	0.55	Tier 2 (Medium-High)	Agriculture-Dominant	Medium (0.40 - 0.50)	2030	Declaration / pledge		2.56%	2.56%	Ambition Floor (Peer Group)
Croatia	0.858	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Cuba	0.764	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Cyprus	0.896	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)

Czech Republic	0.889	Tier 1 (High)	Industry-Dominant	Very Low (< 0.30)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Dem. Rep. Congo	0.479	Tier 3 (Medium)	Resource-Dependent	High (> 0.50)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Denmark	0.948	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2045	In policy document	4.17%	3.47%	4.17%	Ambition Floor (Peer Group)
Djibouti	0.509	Tier 4 (Low)	Services-Dominant	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Dominica	0.72	Tier 2 (Medium-High)	Agriculture-Dominant	Medium (0.40 - 0.50)	2030	In policy document	11.11%	11.11%	11.11%	Country DAF
Dominican Republic	0.767	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Ecuador	0.74	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Egypt	0.731	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
El Salvador	0.675	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Equatorial Guinea	0.596	Tier 2 (Medium-High)	Resource-Dependent	Medium (0.40 - 0.50)	2050	Declaration / pledge		2.56%	2.56%	Ambition Floor (Peer Group)
Eritrea	0.492	Tier 4 (Low)	Not available	High (> 0.50)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Estonia	0.89	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)

Eswatini	0.597	Tier 3 (Medium)	Services-Dominant	Medium (0.40 - 0.50)	2030	In policy document*		2.04%	2.04%	Ambition Floor (Peer Group)
Ethiopia	0.498	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Fiji	0.73	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In law	3.45%	3.45%	3.45%	Country DAF
Finland	0.94	Tier 1 (High)	Services-Dominant	Very Low (< 0.30)	2035	In law	7.14%	3.86%	7.14%	Country DAF
France	0.903	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Gabon	0.706	Tier 2 (Medium-High)	Industry-Dominant	Medium (0.40 - 0.50)	2050	Achieved (self-declared)		NA	1.25%	Absolute Ambition Floor
Georgia	0.802	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.34%	3.45%	Country DAF
Germany	0.942	Tier 1 (High)	Services-Dominant	Very Low (< 0.30)	2045	In law	4.17%	3.86%	4.17%	Country DAF
Ghana	0.632	Tier 3 (Medium)	Agriculture-Dominant	Medium (0.40 - 0.50)	2060	Declaration / pledge		2.76%	2.76%	Ambition Floor (Peer Group)
Greece	0.887	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Grenada	0.795	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2030	In policy document*		3.34%	3.34%	Ambition Floor (Peer Group)
Guatemala	0.627	Tier 3 (Medium)	Services-Dominant	Medium (0.40 - 0.50)	2030	In law*		2.04%	2.04%	Ambition Floor (Peer Group)
Guinea	0.465	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)

Guinea-Bissau	0.483	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Guyana	0.714	Tier 2 (Medium-High)	Resource-Dependent	Medium (0.40 - 0.50)	2050	Achieved (self-declared)		2.56%	1.25%	Absolute Ambition Floor
Haiti	0.535	Tier 3 (Medium)	Services-Dominant	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Holy See	0	Not Available	Not available	Not available	0	0		3.45%	3.45%	Ambition Floor (Peer Group)
Honduras	0.621	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
HongKong	0.952	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	0	0		3.47%	3.47%	Ambition Floor (Peer Group)
Hungary	0.846	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Iceland	0.959	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2040	In law	5.26%	3.47%	5.26%	Country DAF
India	0.633	Tier 3 (Medium)	Services-Dominant	Medium (0.40 - 0.50)	2070	In law	2.04%	2.04%	2.04%	Country DAF
Indonesia	0.705	Tier 2 (Medium-High)	Industry-Dominant	Medium (0.40 - 0.50)	2060	In law	2.56%	2.90%	2.90%	Ambition Floor (Peer Group)
Iran, Islamic Republic of	0.774	Tier 2 (Medium-High)	Resource-Dependent	Low (0.30 - 0.40)	2030	In policy document*		2.56%	2.56%	Ambition Floor (Peer Group)
Iraq	0.686	Tier 2 (Medium-High)	Resource-Dependent	Medium (0.40 - 0.50)	2030	In policy document*		2.56%	2.56%	Ambition Floor (Peer Group)
Ireland	0.945	Tier 1 (High)	Industry-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.45%	3.45%	Country DAF

Israel	0.919	Tier 1 (High)	Services-Dominant	Very Low (< 0.30)	2050	Proposed / in discussion		3.86%	3.86%	Ambition Floor (Peer Group)
Italy	0.895	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Jamaica	0.709	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	Declaration / pledge		3.45%	3.45%	Ambition Floor (Peer Group)
Japan	0.925	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Jordan	0.72	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	Proposed / in discussion		3.34%	3.34%	Ambition Floor (Peer Group)
Kazakhstan	0.811	Tier 2 (Medium-High)	Resource-Dependent	Low (0.30 - 0.40)	2060	In law	2.56%	2.56%	2.56%	Country DAF
Kenya	0.575	Tier 2 (Medium-High)	Services-Dominant	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Kiribati	0	Tier 4 (Low)	Not available	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Kuwait	0.831	Tier 1 (High)	Industry-Dominant	Low (0.30 - 0.40)	2060	Declaration / pledge		3.45%	3.45%	Ambition Floor (Peer Group)
Kyrgyzstan	0.692	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	Proposed / in discussion		3.34%	3.34%	Ambition Floor (Peer Group)
Laos	0.607	Tier 2 (Medium-High)	Industry-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	2.90%	3.45%	Country DAF
Latvia	0.863	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)

Lebanon	0.706	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Lesotho	0.514	Tier 3 (Medium)	Services-Dominant	Medium (0.40 - 0.50)	2050	Declaration / pledge		2.04%	2.04%	Ambition Floor (Peer Group)
Liberia	0.481	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Ambition Floor (Peer Group)
Libya	0.718	Tier 2 (Medium-High)	Resource-Dependent	Medium (0.40 - 0.50)	0	0		2.56%	2.56%	Ambition Floor (Peer Group)
Liechtenstein	0.935	Tier 1 (High)	Industry-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.45%	3.45%	Ambition Floor (Peer Group)
Lithuania	0.875	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Luxembourg	0.93	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Macedonia, the former Yugoslav Republic of	0	0	Services-Dominant	Low (0.30 - 0.40)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Madagascar	0.501	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Malawi	0.512	Tier 3 (Medium)	Agriculture-Dominant	High (> 0.50)	2050	Declaration / pledge		3.45%	3.45%	Ambition Floor (Peer Group)
Malaysia	0.803	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.34%	3.45%	Country DAF
Maldives	0.747	Tier 2 (Medium-High)	Services-Dominant	High (> 0.50)	2035	In law*		3.45%	3.45%	Ambition Floor (Peer Group)

Mali	0.428	Tier 3 (Medium)	Agriculture-Dominant	High (> 0.50)	2030	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Malta	0.918	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Marshall Islands	0.639	Tier 2 (Medium-High)	Services-Dominant	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Mauritania	0.556	Tier 3 (Medium)	Industry-Dominant	High (> 0.50)	2030	In policy document	11.11%	11.11%	11.11%	Country DAF
Mauritius	0.802	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2070	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Mexico	0.758	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.34%	3.45%	Country DAF
Micronesia	0.628	Tier 2 (Medium-High)	Services-Dominant	High (> 0.50)	2025	Declaration / pledge		3.45%	3.45%	Ambition Floor (Peer Group)
Moldova, Republic of	0.767	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.34%	3.45%	Country DAF
Monaco	0	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Mongolia	0.739	Tier 2 (Medium-High)	Resource-Dependent	Low (0.30 - 0.40)	2050	Declaration / pledge		2.56%	2.56%	Ambition Floor (Peer Group)
Montenegro	0.832	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	Declaration / pledge		3.34%	3.34%	Ambition Floor (Peer Group)

Morocco	0.683	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2030	In policy document*		3.34%	3.34%	Ambition Floor (Peer Group)
Mozambique	0.446	Tier 3 (Medium)	Agriculture-Dominant	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Myanmar	0.585	Tier 3 (Medium)	Industry-Dominant	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Namibia	0.615	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Nauru	0	Tier 4 (Low)	Not available	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Nepal	0.602	Tier 3 (Medium)	Agriculture-Dominant	Medium (0.40 - 0.50)	2045	In policy document	4.17%	2.76%	4.17%	Country DAF
Netherlands	0.941	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
New Zealand	0.937	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Nicaragua	0.667	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Niger	0.4	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Nigeria	0.535	Tier 3 (Medium)	Agriculture-Dominant	Medium (0.40 - 0.50)	2060	In law	2.56%	2.76%	2.76%	Ambition Floor (Peer Group)
Niue	0	Tier 2 (Medium-High)	Services-Dominant	High (> 0.50)	2050	Declaration / pledge		3.45%	3.45%	Ambition Floor (Peer Group)

North Korea	0	Tier 4 (Low)	Industry-Dominant	Medium (0.40 - 0.50)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Norway	0.961	Tier 1 (High)	Services-Dominant	Very Low (< 0.30)	2050	In law	3.45%	3.86%	3.86%	Ambition Floor (Peer Group)
Oman	0.816	Tier 1 (High)	Resource-Dependent	Medium (0.40 - 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Pakistan	0.544	Tier 3 (Medium)	Agriculture-Dominant	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Palau	0.767	Tier 2 (Medium-High)	Services-Dominant	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Palestinian Territory, Occupied	0.715	Tier 3 (Medium)	Services-Dominant	Medium (0.40 - 0.50)	2040	In policy document*		2.04%	2.04%	Ambition Floor (Peer Group)
Panama	0.805	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Papua New Guinea	0.558	Tier 3 (Medium)	Resource-Dependent	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Paraguay	0.717	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2030	In policy document*		3.34%	3.34%	Ambition Floor (Peer Group)
Peru	0.762	Tier 2 (Medium-High)	Industry-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	2.90%	3.45%	Country DAF
Philippines	0.699	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Poland	0.876	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2030	In policy document*		3.47%	3.47%	Ambition Floor (Peer Group)

Portugal	0.866	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Qatar	0.855	Tier 1 (High)	Industry-Dominant	Low (0.30 - 0.40)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Romania	0.821	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Russian Federation	0.822	Tier 1 (High)	Resource-Dependent	Low (0.30 - 0.40)	2060	In law	2.56%	3.45%	2.56%	Country DAF
Rwanda	0.534	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2035	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Saint Kitts and Nevis	0.777	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Saint Lucia	0.715	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2030	In policy document*		3.34%	3.34%	Ambition Floor (Peer Group)
Saint Vincent and the Grenadines	0.751	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Samoa	0.707	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
San Marino	0.853	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2030	In policy document*		3.47%	3.47%	Ambition Floor (Peer Group)
Sao Tome and Principe	0.618	Tier 3 (Medium)	Services-Dominant	High (> 0.50)	2050	Declaration / pledge		3.45%	3.45%	Ambition Floor (Peer Group)
Saudi Arabia	0.875	Tier 1 (High)	Resource-Dependent	Medium (0.40 - 0.50)	2060	Declaration / pledge		3.45%	3.45%	Ambition Floor (Peer Group)

Senegal	0.511	Tier 3 (Medium)	Services-Dominant	High (> 0.50)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Serbia	0.802	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Seychelles	0.785	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Sierra Leone	0.477	Tier 3 (Medium)	Agriculture-Dominant	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Singapore	0.939	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Slovakia	0.848	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Slovenia	0.918	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
Solomon Islands	0.564	Tier 3 (Medium)	Agriculture-Dominant	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Ambition Floor (Peer Group)
Somalia	0	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2035	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
South Africa	0.713	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.34%	3.45%	Country DAF
South Korea	0.925	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)
South Sudan	0.385	Tier 4 (Low)	Resource-Dependent	High (> 0.50)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Spain	0.905	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In law	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)

Sri Lanka	0.782	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Sudan	0.508	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Suriname	0.73	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	Achieved (self-declared)		NA	1.25%	Absolute Ambition Floor
Sweden	0.947	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2045	In law	4.17%	3.47%	4.17%	Country DAF
Switzerland	0.962	Tier 1 (High)	Services-Dominant	Very Low (< 0.30)	2050	In law	3.45%	3.86%	3.86%	Ambition Floor (Peer Group)
Syrian Arab Republic	0.577	Tier 4 (Low)	Agriculture-Dominant	Medium (0.40 - 0.50)	0	0		3.45%	3.45%	Ambition Floor (Peer Group)
Tajikistan	0.685	Tier 3 (Medium)	Industry-Dominant	Low (0.30 - 0.40)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Tanzania	0.549	Tier 3 (Medium)	Agriculture-Dominant	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Ambition Floor (Peer Group)
Thailand	0.8	Tier 2 (Medium-High)	Services-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
The Bahamas	0.812	Tier 1 (High)	Services-Dominant	Medium (0.40 - 0.50)	2030	In policy document*		3.47%	3.47%	Ambition Floor (Peer Group)
The Gambia	0.5	Tier 4 (Low)	Services-Dominant	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Timor-Leste	0.607	Tier 4 (Low)	Resource-Dependent	High (> 0.50)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Togo	0.539	Tier 3 (Medium)	Agriculture-Dominant	Medium (0.40 - 0.50)	2050	Proposed / in discussion		2.76%	2.76%	Ambition Floor (Peer Group)

Tonga	0.745	Tier 2 (Medium-High)	Services-Dominant	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Trinidad and Tobago	0.81	Tier 1 (High)	Industry-Dominant	Low (0.30 - 0.40)	2050	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Tunisia	0.731	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.34%	3.45%	Country DAF
Türkiye	0.838	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2053	In policy document	3.13%	3.34%	3.34%	Ambition Floor (Peer Group)
Turkmenistan	0.745	Tier 2 (Medium-High)	Resource-Dependent	Low (0.30 - 0.40)	2030	0		2.56%	2.56%	Ambition Floor (Peer Group)
Tuvalu	0.641	Tier 4 (Low)	Not available	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Country DAF
Uganda	0.525	Tier 3 (Medium)	Agriculture-Dominant	High (> 0.50)	2050	In policy document	3.45%	3.45%	3.45%	Ambition Floor (Peer Group)
Ukraine	0.773	Tier 2 (Medium-High)	Services-Dominant	Low (0.30 - 0.40)	2060	In law	2.56%	3.34%	3.34%	Ambition Floor (Peer Group)
United Arab Emirates	0.911	Tier 1 (High)	Industry-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.45%	3.45%	Ambition Floor (Peer Group)
United Kingdom	0.929	Tier 1 (High)	Services-Dominant	Very Low (< 0.30)	2050	In law	3.45%	3.86%	3.86%	Ambition Floor (Peer Group)
United States of America	0.921	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	0	0		3.47%	3.47%	Ambition Floor (Peer Group)
Uruguay	0.809	Tier 1 (High)	Services-Dominant	Low (0.30 - 0.40)	2050	In policy document	3.45%	3.47%	3.47%	Ambition Floor (Peer Group)

Uzbekistan	0.727	Tier 2 (Medium-High)	Industry-Dominant	Low (0.30 - 0.40)	2050	Declaration / pledge		2.56%	2.56%	Ambition Floor (Peer Group)
Vanuatu	0.607	Tier 2 (Medium-High)	Agriculture-Dominant	High (> 0.50)	2035	In policy document	7.14%	7.14%	7.14%	Country DAF
Venezuela, Bolivarian Republic of	0.691	Tier 4 (Low)	Resource-Dependent	Low (0.30 - 0.40)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Vietnam	0.703	Tier 2 (Medium-High)	Industry-Dominant	Medium (0.40 - 0.50)	2050	In policy document	3.45%	2.90%	3.45%	Country DAF
Yemen	0.455	Tier 4 (Low)	Agriculture-Dominant	High (> 0.50)	2030	Proposed / in discussion		3.45%	3.45%	Ambition Floor (Peer Group)
Zambia	0.565	Tier 3 (Medium)	Resource-Dependent	Medium (0.40 - 0.50)	2030	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
Zimbabwe	0.593	Tier 3 (Medium)	Services-Dominant	High (> 0.50)	2035	In policy document*		3.45%	3.45%	Ambition Floor (Peer Group)
*Not defined as Net Zero target.										

ANNEX -01: COUNTRY GROUPING AND COMPARISON FOR DAF DETERMINATION

Summary

This document outlines a four-step methodology to objectively identify a group of countries comparable to a designated "host country." The primary aim is to inform the determination of a Dynamic Downward Adjustment Factor (DAF), especially for host countries without a national net-zero target or where a comparison group is needed. This methodology provides a robust and pragmatic approach for selecting a representative comparison group, as required by the Gold Standard for the Global Goals (GS4GG) DAF tool.

The process begins with comprehensive data collection and normalization (Step 1) of key socio-economic, structural, and environmental indicators. This data is then used to form a grouping matrix (Step 2), which categorizes countries by development tier (based on HDI and GDP) and economic structure. The preliminary group is refined with a climate vulnerability filter (Step 3) using the ND-GAIN Index. The final step (Step 4) involves the selection of suitable countries from this pool, with a multi-criteria justification for each choice, including their national net-zero target status. This transparent and objective methodology ensures a highly relevant comparison group, offering insights for benchmarking ambition and establishing a reference DAF and ambition floor.

A1.1 | Introduction

The Downward Adjustment Factor (DAF) is applied to continuously reduce baselines below Business-As-Usual (BAU) emissions. The methodology outlines the details for identifying comparable countries to support DAF determination for a "host country," particularly one without a national net-zero target. This approach aligns with the requirements of GS4GG DAF tool for a robust country selection process. The methodology is built on four core principles:

- **Clarity:** Every step and data source is defined for full replicability.
- **Objectivity:** The framework uses quantitative metrics to minimize subjective bias.
- **Transparency:** All data and rationale are explicitly presented for accountability and verification.
- **Host Country Centricity:** The process is anchored around the host country's specific profile, ensuring relevant comparators.

This assessment is structured following a four-step methodological approach: Data Collection and Normalization (Step 1), Initial Country Grouping Matrix (Step 2), Refining Groups by Climate Change Vulnerability (Step 3), and Final Selection and Justification of Comparison Countries (Step 4). Each step systematically builds upon

the previous one to progressively narrow down the pool of potential comparators to the most suitable candidates, ensuring a robust outcome.

A1.2 | Step 1: Data Collection and Normalization for Comparative Analysis

This foundational step involves the systematic gathering of comprehensive, standardized data for the host country and a broad list of potential comparison countries. The selection of authoritative data sources and adherence to a consistent reference year is critical for ensuring the integrity and comparability of the subsequent analysis.

A1.2.1 | Essential Data Requirements and Authoritative Sources

For a robust comparative analysis, the following key indicators are collected:

a. **Human Development Index (HDI):** The HDI is a composite statistical index developed by the United Nations Development Programme (UNDP) that assesses a country's average achievement in three fundamental dimensions of human development: a long and healthy life, knowledge, and a decent standard of living. It provides a holistic measure of a nation's social and economic progress. Data for the year 2021 is sourced directly from the UNDP. The HDI is a critical component for establishing the "Development Tiers" in Step 2.

b. **Per Capita GDP:** Gross Domestic Product (GDP) per capita represents the total economic output of a country divided by its mid-year population. It serves as a primary indicator of a country's economic prosperity and overall economic capacity. Data for the year 2021 is obtained from the World Bank. Per Capita GDP complements the HDI in defining the "Development Tiers."

c. **Economic Structure (Sectoral Contribution to GDP):** This data identifies the percentage contribution of major economic sectors—such as Agriculture, Industry, and Services—to a country's total GDP. This breakdown reveals the fundamental nature of a country's economy. This information is essential for categorizing countries along the "Economic Structure Categories" in the grouping matrix.

d. **Climate Change Vulnerability (ND-GAIN Vulnerability Index):** The Notre Dame Global Adaptation Initiative (ND-GAIN) Index provides a quantitative score that summarizes a country's vulnerability to climate change. A higher score indicates greater susceptibility to the negative impacts of climate change. ND-GAIN data for 2021 is utilized. This index is a critical quantitative filter in Step 3.

e. **National Net Zero Target Status:** This qualitative data point categorizes a country's net-zero commitment based on its legal or policy standing, reflecting the maturity and robustness of its climate ambition. The Net Zero Tracker is used to gather this information. Countries are classified into two distinct groups:

    i. Category 1: With a national net zero target (in law or in policy development). This indicates a high level of institutional commitment.

ii. Category 2: No national net zero target (declaration/pledge, proposed/in discussion, or other). This encompasses public declarations or targets still under discussion, representing an intent but lacking formal legal or policy backing.

This categorization is crucial for the final selection and justification in Step 4, allowing for a nuanced comparison of countries on the legal and political robustness of their climate commitments.

A1.2.2 | DATA NORMALIZATION AND CONSISTENCY CONSIDERATIONS

All quantitative data points are used as reported by their respective authoritative sources, as they are inherently designed for cross-country comparison. The consistent reference year of 2021 ensures that the socio-economic and vulnerability context for all countries is temporally coherent.

It is important to note a temporal distinction between the contextual data (HDI, GDP, etc.), which is anchored in 2021, and the net-zero commitment status, which reflects the more recent update of the ECIU Net Zero Tracker in Aug 2025. This is a deliberate methodological choice, as it prioritizes the most current and authoritative assessment of a country's net-zero commitment level.

A1.2.3 | DATA PRESENTATION

The comprehensive dataset collected for the host country and all potential comparison countries serves as the foundation for all subsequent analytical steps. This table provides a clear, single-point reference for all raw and categorized data points, enabling immediate visual comparison of the host country's profile against a broad range of potential peers.

Table 1: Comprehensive Country Data (Reference Year 2021/Nov 2023 - Illustrative Data)

Country Name	HDI (2021)	Per Capita GDP (2021, USD)	Primary Economic Sector (2021)	ND-GAIN Vulnerability Index (2021)	Net Zero Target Status (Nov 2023)
Host Country X	**0.755**	**8,500**	**Services**	**0.480**	**In Law/Policy**
Country A	0.780	10,200	Services	0.450	In Law/Policy
Country B	0.720	7,800	Services	0.510	Declaration/Pledge/Other
Country C	0.765	9,100	Industry	0.490	In Law/Policy
Country D	0.610	3,500	Agriculture	0.650	Declaration/Pledge/Other
Country E	0.890	45,000	Services	0.320	In Law/Policy
Country F	0.745	8,900	Services	0.475	In Law/Policy
Country G	0.730	8,100	Industry	0.500	Declaration/Pledge/Other
Country H	0.770	9,500	Services	0.460	In Law/Policy
Country I	0.710	7,500	Services	0.520	Declaration/Pledge/Other

Note: *The data in this table is illustrative and does not represent actual country data. Refer to GS4GG DAF Data Tool for country wise data complied from resources listed above.*

A1.3 | STEP 2: INITIAL COUNTRY GROUPING MATRIX

This step constructs a preliminary matrix that systematically categorizes countries based on their development status and economic structure. This matrix

forms the fundamental framework for identifying the host country's initial peer group.

A1.3.1 | Establishing Development Tiers (Vertical Axis)

Countries are classified into four distinct tiers based on a combined assessment of their Human Development Index (HDI) and Per Capita GDP. This dual-metric approach offers a more comprehensive and nuanced understanding of a country's developmental stage than relying on a single indicator. While HDI and GDP are often correlated, they capture distinct aspects of national development. GDP primarily reflects economic output and resource availability, which is crucial for funding climate initiatives. However, HDI provides insights into human capital, health, and education – factors that significantly influence a nation's capacity for innovation, technological adoption, public awareness, and effective governance for climate policy implementation. A country with high GDP but low HDI might struggle with skilled labor for green industries or public acceptance of new policies. Conversely, a country with a relatively lower GDP but strong HDI might be more agile in adopting sustainable practices due to a well-educated populace and robust social systems. Using both metrics creates a more robust and holistic "development tier," ensuring that comparisons are made between countries that are similar not just in economic size but also in their foundational human capital and social well-being. This is critical for assessing the feasibility and equity of climate targets, as human development levels directly influence adaptive capacity, public engagement, and the political economy of climate action. This dual approach prevents misleading comparisons that might arise from relying solely on economic metrics.

The tier definitions are as follows (example thresholds based on 2021 data ranges and World Bank classifications):

- **Tier 1 (High):** Countries demonstrating a Very High HDI (e.g., HDI > 0.800) AND classified as High-Income economies (e.g., Per Capita GNI > $13,205 in 2021). These nations typically possess advanced infrastructure, high levels of human capital, and diversified economies.
- **Tier 2 (Medium-High):** Countries with a High HDI (e.g., HDI 0.700-0.799) AND classified as Upper-Middle-Income economies (e.g., Per Capita GNI $4,256 - $13,205 in 2021). These countries are often in a phase of rapid industrialization or service sector growth, with improving human development outcomes.
- **Tier 3 (Medium):** Countries with a Medium HDI (e.g., HDI 0.550-0.699) AND classified as Lower-Middle-Income economies (e.g., Per Capita GNI $1,086 - $4,255 in 2021). These nations are typically undergoing significant structural transformations, often with large agricultural sectors and emerging industrial bases.
- **Tier 4 (Low):** Countries characterized by a Low HDI (e.g., HDI < 0.550) AND classified as Low-Income economies (e.g., Per Capita GNI < $1,086 in 2021). These countries often face significant developmental challenges, including limited infrastructure and high reliance on subsistence agriculture.

This combined approach ensures that countries grouped together share similar levels of human well-being and economic capacity, which are fundamental determinants of a nation's ability to undertake ambitious climate action, implementing carbon pricing, or developing adaptation infrastructure.

A1.3.2 | ESTABLISHING ECONOMIC STRUCTURE CATEGORIES (HORIZONTAL AXIS)

Countries are classified into one of four primary categories based on the largest sector's contribution to their GDP, utilizing the International Standard Industrial Classification (ISIC) framework. This provides a standardized and internationally comparable classification of economic activities. A country's economic structure profoundly influences its greenhouse gas emission profile, its inherent decarbonization challenges, and its opportunities for green growth. The dominant economic sector is a direct proxy for a country's primary sources of greenhouse gas emissions. For instance, an industry-dominant economy will face significant challenges in decarbonizing heavy manufacturing, energy-intensive processes, and industrial heat. An agriculture-dominant economy will focus on sustainable land management, livestock emissions reduction, and climate-resilient farming. A services-dominant economy might prioritize energy efficiency in buildings, sustainable transport, and greening its financial sector. The "Resource-Dependent" category is particularly critical as these economies face the dual challenge of transitioning away from their primary revenue source while simultaneously decarbonizing. Grouping countries by economic structure ensures that the comparison is relevant to the *nature* of their decarbonization challenges. An industrial host country would gain much more valuable insight from comparing with other industrial economies pursuing net-zero, as they are likely to share similar technological, regulatory, and economic hurdles in achieving their targets. This categorization moves beyond generic development levels to address the specific sectoral pathways for emissions reduction, making the comparison highly practical for policy formulation.

The categories are defined as:

- **Agriculture-Dominant:** The agricultural sector (e.g., ISIC sections A, B for agriculture, forestry, and fishing) contributes the largest share to GDP. These economies are often highly susceptible to climate variability and have significant emissions from land use and livestock.
- **Industry-Dominant:** The industrial sector (e.g., ISIC sections B-F, encompassing mining, manufacturing, electricity, gas, water supply, and construction) contributes the largest share to GDP. These economies typically face significant challenges in decarbonizing heavy industries and energy production.
- **Services-Dominant:** The services sector (e.g., ISIC sections G-U, including trade, transport, finance, education, health, etc.) contributes the largest share to GDP. While direct emissions might be lower, indirect emissions from energy consumption in buildings and transport remain significant.

- **Resource-Dependent:** A specific sub-category where a significant portion of GDP (e.g., often defined as >20-30%) is derived directly from the extraction and export of natural resources (e.g., oil, gas, minerals). This distinction is crucial due to the unique economic and environmental challenges these economies face in transitioning away from fossil fuels, often requiring profound economic diversification strategies.

A1.3.3 | Populating the Matrix

Each potential comparison country is systematically placed into the appropriate cell within the matrix, which is determined by its Development Tier and Economic Structure Category. The specific cell in which the host country is positioned defines its initial comparison group. All other countries that fall into this same cell constitute the preliminary pool of candidates for further refinement.

A1.3.4 | Data Presentation

This table provides a clear, visual representation of the systematic application of the first two grouping criteria and the resulting preliminary country clusters. It offers an immediate and intuitive overview of how all countries are initially categorized based on their fundamental socio-economic and structural characteristics. This table directly identifies the host country's initial peer group, making the initial selection process transparent. It also visually demonstrates which countries are *excluded* from the comparison at this early stage due to significant differences in development or economic structure, thereby validating the objectivity of the grouping. This matrix serves as a critical intermediate output, reinforcing the methodological rigor and allowing for quick verification of country placements.

Table 2: Initial Country Grouping Matrix (Illustrative Data)

Development Tier \ Economic Structure	Agriculture-Dominant	Industry-Dominant	Services-Dominant	Resource-Dependent
Tier 1 (High)			Country E	
Tier 2 (Medium-High)		Country C, Country G	Host Country X, Country A, Country B, Country F, Country H, Country I	
Tier 3 (Medium)	Country D			
Tier 4 (Low)				

Note: The data p in this table is illustrative and does not represent actual country data. Host Country X is highlighted in bold. Refer to GS4GG DAF Data Tool for full datasets.

Based on the illustrative data, **Host Country X** is categorized as **Tier 2 (Medium-High) & Services-Dominant**. Its initial comparison group from this matrix includes Country A, Country B, Country F, Country H, and Country I.

A1.4 | STEP 3: REFINING GROUPS BY CLIMATE CHANGE VULNERABILITY

This crucial step introduces climate change vulnerability as a key filter, significantly refining the initial comparison group. This ensures that the selected countries not only share similar socio-economic and structural characteristics but also face comparable inherent climate risks.

A1.4.1 | THE ROLE OF THE ND-GAIN VULNERABILITY INDEX

The ND-GAIN Vulnerability Index is a comprehensive metric that quantifies a country's susceptibility to the negative impacts of climate change. A higher score indicates greater vulnerability. Countries with similar vulnerability scores are likely to experience comparable magnitudes of climate-related challenges, which directly influences a nation's priorities and capacities for climate action.

A1.4.2 | APPLICATION OF THE STRINGENT VULNERABILITY FILTER

From the initial group of countries identified in Step 2 (i.e., all countries residing in the same matrix cell as the host country), a filtering process is applied to group of countries with comparable climate risks. Countries are categorized into four distinct vulnerability levels based on their ND-GAIN Vulnerability Index score:

1. Very Low Vulnerability (< 0.30)
2. Low Vulnerability (0.30 – 0.40)
3. Medium Vulnerability (0.40 – 0.50)
4. High Vulnerability (> 0.50)

The refined comparison group consists of countries that fall within the same vulnerability level category as the host country.

A1.4.3 | FORMATION OF THE REFINED COMPARISON GROUP

The countries that successfully pass vulnerability filter constitute the "refined comparison group." This pool is now highly representative, as its members share similar development stages, economic structures, and climate vulnerability characteristics with the host country. This refined group forms the basis for the final selection process in Step 4.

A1.4.4 | DATA PRESENTATION

This table clearly and transparently demonstrates which countries successfully passed the strict vulnerability criterion and thus remain in the pool of potential comparators. By including the specific ND-GAIN scores for each country and the host country, it allows for visual confirmation that all listed countries fall within the specified range, directly validating the rigorous application of the filter and the objectivity of the selection. This table serves as a critical bridge between the broad initial grouping and the final selection, isolating countries that are truly comparable in terms of climate risk.

Based on the illustrative data, the refined comparison pool for Host Country X now includes Country A, Country B, Country F, Country H, and Country I.

A1.5 | STEP 4: FINAL SELECTION OF COMPARISON COUNTRIES

This concluding step involves the judicious selection of the most suitable countries from the refined pool and the provision of a comprehensive, transparent, and multi-layered justification for their inclusion. This ensures the final comparison group is robust, relevant, and defensible.

A1.5.1 | CRITERIA FOR FINAL CANDIDATE SELECTION

From the refined comparison pool, a small, manageable number of countries (e.g., 3-5) will be selected. The exact number may be influenced by the size of the refined pool and the specific analytical needs of the host country. The primary criterion for final selection is the closest overall resemblance to the host country across *all* previously established dimensions:

- **Development Tier Alignment:** Ensuring the selected countries firmly belong to the same HDI and Per Capita GNI tier as the host country.
- **Economic Structure Alignment:** Verifying that their dominant economic sector aligns precisely with the host country's, indicating similar structural challenges or opportunities for decarbonization.
- **Climate Change Vulnerability Alignment:** Confirming that their ND-GAIN Vulnerability Index score is well within the 10% range of the host country, signifying comparable climate risks and adaptation needs.
- **Net Zero Target Status Alignment:** Prioritizing countries that match the host country's net-zero target status (i.e., both "in law/policy" or both "declaration/pledge/other"). This ensures a comparison of countries with similar levels of formalized commitment and implementation readiness.

Additional factors may be considered (not applied) if applicable for enhanced relevance:

- **Similar Climatic Conditions:** If the host country is, for example, a tropical nation, preference may be given to other tropical countries within the refined group. Similarly, if the host country is particularly prone to specific climate hazards (e.g., sea-level rise, desertification, glacial melt), countries facing similar hazards would be prioritized. This adds an extra layer of contextual relevance to the comparison.
- **Geographic Proximity/Regional Context:** While not a primary quantitative filter, regional peers can sometimes offer more directly transferable policy lessons due to shared socio-political contexts, cultural similarities, or regional economic integration. This can serve as a valuable tie-breaker if multiple countries are equally strong candidates on the quantitative metrics.

A1.5.2 | OTHER CONSIDERATION

- Countries that have already achieved Net-Zero targets are not included in the comparison group assessment; however, they are listed separately and assigned the Absolute DAF Floor (1.25%).

Understanding the ND-GAIN Vulnerability Index

For readers seeking a deeper understanding of the Climate Change Vulnerability (ND-GAIN Vulnerability Index), this section provides additional detail on its structure, components, and how it contributes to our comparative analysis.
The **Notre Dame Global Adaptation Initiative (ND-GAIN) Country Index** is a leading public-access tool that helps decision-makers understand a country's

climate change vulnerability and its readiness to adapt. It is developed by the University of Notre Dame and uses two decades of data across 45 indicators to rank 185 countries annually. The overall ND-GAIN Index score is composed of two main pillars: **Vulnerability** and **Readiness**. Our methodology specifically focuses on the
Vulnerability Index to ensure that comparison countries face similar climate risks.

What is Climate Change Vulnerability (ND-GAIN Vulnerability Index)?

The ND-GAIN Vulnerability Index quantifies a country's susceptibility to the negative impacts of climate change. It is a composite score derived from 36 indicators that measure three key dimensions :

1. **Exposure:** This refers to the degree to which a system is exposed to significant climate change from a biophysical perspective. It considers projected climate impacts that are largely independent of socio-economic context, such as changes in temperature, precipitation, and sea-level rise.
2. **Sensitivity:** This measures the extent to which a country is dependent upon sectors negatively affected by climate hazards, or the proportion of the population particularly susceptible to a climate change hazard. For example, a country heavily reliant on rain-fed agriculture would be highly sensitive to drought.
3. **Adaptive Capacity:** This assesses the availability of social resources for sector-specific adaptation. It reflects a country's ability to implement sustainable adaptation solutions and put newer, more sustainable adaptations into place. This includes factors like access to clean water, healthcare, and disaster preparedness.

The ND-GAIN Vulnerability Index considers these dimensions across six critical, life-supporting sectors :

- **Food:** Assessing vulnerability related to agricultural yields, food import dependency, and child malnutrition.
- **Water:** Examining projected changes in water resources, water withdrawal rates, and access to drinking water.
- **Health:** Looking at projected changes in climate-induced diseases, slum populations, and access to medical staff and sanitation.
- **Ecosystem Services:** Evaluating impacts on biodiversity, natural capital dependency, and engagement in environmental conventions.
- **Human Habitat:** Considering factors like projected warm periods, flood hazards, urban concentration, and quality of infrastructure.
- **Infrastructure:** Assessing vulnerability related to hydropower capacity, sea-level rise impacts, energy import dependency, and electricity access.

A higher score on the ND-GAIN Vulnerability Index indicates greater susceptibility to the negative impacts of climate change. For instance, a country with a score of 0.650 is considered more vulnerable than one with a score of 0.300.

Relevance to this work:

In four-step methodology, the ND-GAIN Vulnerability Index serves as a crucial quantitative filter in Step 3. By ensuring that our comparison countries have vulnerability scores within a tight 10% range of the host country, we guarantee that

the selected peers face similar inherent climate risks. This shared context of climate risk is vital because it directly influences a nation's priorities and capacities for climate action. Countries with comparable vulnerability levels are likely to share similar challenges in balancing adaptation and mitigation efforts, securing international climate finance, and managing the socio-economic impacts of climate change. This rigorous filtering prevents misleading comparisons and ensures that the insights gained from peer analysis are truly relevant and actionable for the host country's climate policy development.

Visualizing ND-GAIN Data:

The ND-GAIN website offers various interactive visuals to explore their data, including:

- **Country Rankings:** Tables that list countries by their overall ND-GAIN Index, Vulnerability, and Readiness scores.
- **Interactive Maps:** Visual representations of country scores across the globe, allowing for geographical insights.
- **The ND-GAIN Matrix:** This conceptual visual plots countries based on their Vulnerability (vertical axis) and Readiness (horizontal axis) scores. It helps categorize countries into four quadrants:
    - **High Vulnerability, Low Readiness:** Countries with great need and urgency for adaptation action.
    - **High Vulnerability, High Readiness:** Countries ready to respond, but with significant adaptation needs.
    - **Low Vulnerability, Low Readiness:** Countries facing fewer climate challenges but with limited ability to invest in adaptation.
    - **Low Vulnerability, High Readiness:** Countries well-positioned to adapt, despite some challenges.

Readers are encouraged to visit the official ND-GAIN website (gain.nd.edu) to explore these interactive tools and gain further insights into specific country profiles and global climate vulnerability trends

DOCUMENT INFORMATION

Version	Date	Description
01.0	XX Month Year	First version released

Published by Gold Standard

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