

## Justification Report for the Climate Policy Index: A Quantitative Assessment

### 1. Introduction

The Climate Policy Index is a quantitative framework designed here to evaluate the comprehensiveness and effectiveness of climate policies across various dimensions. To ensure a robust and balanced assessment, I used four AI platforms—ChatGPT, Claude, Perplexity, and DeepSeek—to analyse the distribution of policy indicators. Each AI model provided distinct weighting structures, leading to a comparative analysis that informed the final index design. This report presents the methodologies employed by the four AI platforms, an analysis of their distributions, and the final averaged weighting system used in the Climate Policy Index. Each AI platform structured the Climate Policy Index based on three primary components: **Policy Coverage**, **Policy Diversity**, and **Policy Focus**, while their weighting distributions and rationales varied:

### 2. AI Model Approaches to Index Distribution

#### 2.1 ChatGPT Approach

- **Policy Coverage: 30%**
- **Policy Diversity: 35%**
- **Policy Focus: 35%**
- Rationale: This approach balanced policy breadth (Diversity) and sectoral targeting (Focus), ensuring that policy instruments were effectively categorized and that recent implementations were considered.

#### 2.2 Claude Approach

- **Policy Coverage: 30% (15% total policies, 15% recent policies)**
- **Policy Diversity: 35% (20% policy types, 15% variety of instruments)**
- **Policy Focus: 35% (15% economic sectors, 10% mitigation, 10% adaptation)**
- Rationale: Claude assigned equal weight to total policies and recency while maintaining a focus on diverse policy instruments and balance between mitigation and adaptation strategies.

#### 2.3 DeepSeek Approach

- **Policy Coverage: 35% (15% total policies, 20% recent policies)**
- **Policy Diversity: 25% (10% policy types, 15% variety of instruments)**
- **Policy Focus: 40% (11% economic sectors, 15% mitigation, 14% adaptation)**
- Rationale: DeepSeek placed the highest weight on Policy Focus (40%), prioritizing mitigation and adaptation over sheer policy quantity, favouring long-term sustainability strategies.

#### 2.4 Perplexity Approach

- **Policy Coverage: 40%**
- **Policy Diversity: 30%**
- **Policy Focus: 30%**
- Rationale: Perplexity assigned the highest weight to Policy Coverage, emphasizing the volume and recency of policies as indicators of governmental engagement, though it risked favouring quantity over quality.

### 3. Average Weighting and Final Index Structure

By averaging the weightings used in the four analyses, the final distributions were derived as follows:

- **Policy Coverage: ~35%**
- **Policy Diversity: ~28.75%**
- **Policy Focus: ~36.25%**

These results indicate that **Policy Focus is consistently rated as the most important component**, followed by Policy Coverage and Policy Diversity.

## Final Climate Policy Index Components and Justifications

Based on the AI-driven analysis, the final Climate Policy Index components are structured as follows:

### - Policy Coverage (35%)

- **Total number of policies (17.5%)** – Reflects policy-making capacity and breadth.
- **Policies implemented recently (17.5%)** – Captures dynamism and responsiveness.

### - Policy Diversity (28.75%)

- **Types of policies (13.75%)** – Ensures a range of approaches (e.g., regulatory, fiscal, voluntary).
- **Variety of instruments (15%)** – Multiple tools (e.g., taxes, subsidies) increase effectiveness.

### - Policy Focus (36.25%)

- **Economic sectors covered (11.5%)** – Broader sectoral coverage ensures comprehensive impact.
- **Policies addressing mitigation (12.5%)** – Targets root causes of climate issues.
- **Policies addressing adaptation (12.25%)** – Ensures resilience against climate-related challenges.

## 4. The results of the used AI Models

### 4.1 ChatGPT

Here's a **scoring system out of 100** for each **major category and subcomponent**, considering their relative importance:

#### 1. Policy Coverage – 30/100

- **Total number of policies** → **10/100** (A large number of policies may not indicate effectiveness.)
- **Policies implemented recently** → **20/100** (Recency is more critical since outdated policies may not be effective.)

#### 2. Policy Diversity – 35/100

- **How many types of policies exist** → **15/100** (Variety is important, but effectiveness matters more.)
- **The variety of instruments used** → **20/100** (Using multiple regulatory, economic, and voluntary tools makes policies more effective.)

#### 3. Policy Focus – 35/100

- **Number of economic sectors covered** → **15/100** (Broader sectoral coverage ensures a comprehensive approach.)
- **Policies addressing mitigation** → **10/100** (Mitigation is crucial for long-term impact.)
- **Policies addressing adaptation** → **10/100** (Adaptation ensures resilience against immediate challenges.)

## 4.2 Claud

### Policy Indicator Components Detailed Breakdown

#### 1. Policy Coverage (Total 30%)

##### a. Total Number of Policies (15%)

- **Rationale:** Provides baseline quantitative measure of policy activity
- Indicates overall policy engagement and comprehensiveness
- Significant weight due to fundamental policy volume insight
- Measures policy-making capacity and breadth

##### b. Policies Implemented Recently (15%)

- **Rationale:** Captures policy dynamism and current responsiveness
- Shows recent policy-making momentum
- Indicates adaptability to emerging challenges
- Equal weight to total policies to balance historical volume with current action

#### Calculation Framework:

- Total policies measured against a benchmark or historical baseline
- Recent policies evaluated based on implementation timeframe (e.g., last 1-2 years)
- Allows for both quantity and recency assessment

#### 2. Policy Focus (Total 35%)

##### a. Number of Economic Sectors Covered (15%)

- **Rationale:** Demonstrates policy comprehensiveness
- Indicates holistic approach to policy-making
- Measures breadth of policy impact across different economic domains
- Significant weight to show multi-sectoral engagement

##### b. Policies Addressing Mitigation (10%)

- **Rationale:** Focuses on proactive policy strategies
- Measures preventive approach to potential challenges
- Slightly lower weight as it's a specific policy type
- Indicates forward-thinking policy design

##### c. Policies Addressing Adaptation (10%)

- **Rationale:** Highlights responsive policy capabilities
- Shows ability to adjust to changing circumstances
- Complementary to mitigation policies
- Equal weight to mitigation to balance proactive and reactive approaches

#### Calculation Approach:

- Economic sectors evaluated for policy coverage

- Mitigation and adaptation policies assessed separately
- Allows for nuanced understanding of policy strategic depth

#### Overall Weighting Recap:

1. Policy Diversity: 35%
  - Policy Types: 20%
  - Instruments Variety: 15%
2. Policy Focus: 35%
  - Economic Sectors: 15%
  - Mitigation Policies: 10%
  - Adaptation Policies: 10%
3. Policy Coverage: 30%
  - Total Policies: 15%
  - Recent Policies: 15%

#### Integrated Scoring Method:

- Each component scored on a 0-5 scale
- Weighted according to the specified percentages
- Provides a comprehensive, nuanced policy indicator

### 4.3 Deepseek

#### 1. Policy Coverage

**Total Weight: 35/100**

1. **Total number of policies: 15/35** (~43% of Coverage)
2. **Policies implemented recently: 20/35** (~57% of Coverage)

##### Rationale:

- Recent policies (20) are weighted higher because they signal **responsiveness to current challenges** (e.g., climate change, technological disruptions).
  - Total policies (15) reflect institutional capacity but risk including outdated measures.
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#### 2. Policy Diversity

**Total Weight: 25/100**

1. **How many types of policies exist: 10/25** (40% of Diversity)
2. **Variety of instruments used: 15/25** (60% of Diversity)

##### Rationale:

- Instruments (15) > types (10) because tools (e.g., subsidies, taxes) directly drive outcomes, while types (e.g., regulatory, fiscal) are organizational labels.
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#### 3. Policy Focus

**Total Weight: 40/100**

1. **Economic sectors covered: 11/40** (27.5% of Focus)
2. **Policies addressing mitigation: 15/40** (37.5% of Focus)
3. **Policies addressing adaptation: 14/40** (35% of Focus)

**Rationale:**

- **Mitigation (15)** is prioritized slightly over adaptation (14) because addressing root causes (e.g., emissions) is foundational to long-term sustainability.
- **Adaptation (14)** remains critical for resilience but often receives less attention.
- **Sectors (11)** ensure broad coverage but are weighted lower than mitigation/adaptation to avoid overextension.

#### **4.4 Perplexity**

##### **1. Policy Coverage (40/100)**

**Total number of policies (85/100)**

**Policies implemented recently (90/100)**

##### **2. Policy Diversity (30/100)**

**How many types of policies exist (80/100)**

**The variety of instruments used (85/100)**

##### **3. Policy Focus (30/100)**

**Number of economic sectors covered (85/100)**

**Policies addressing mitigation (90/100)**

**Policies addressing adaptation (90/100)**

**Justification**

1. Policy Coverage receives the highest weight (40/100) because it provides a quantitative foundation for policy assessment. The number of policies and their recency are crucial indicators of a government's active engagement in addressing issues.
2. Policy Diversity and Policy Focus are equally weighted (30/100 each) as they both provide qualitative insights into the nature and scope of policies.
  - Policy Diversity is important as it reflects the range of approaches and tools used, indicating the sophistication of the policy framework.
  - Policy Focus is equally significant as it shows how comprehensive and targeted the policies are across different sectors and in addressing specific challenges (mitigation and adaptation).

The sub-components are rated individually on a scale of 0-100 to provide more detailed insights into each aspect's relative importance within its category.

This balanced approach ensures that quantity (Coverage), variety (Diversity), and targeting (Focus) of policies are all considered in the overall policy indicator, providing a comprehensive view of policy efforts while maintaining the requested total of 100 for the main components.