

# Activity 5: Scope and Framing of a Study on Impacts of Response Measures in Achieving GST Outcomes and Net Zero Pathways

Agenda Item 5b  
KCI/2026/14/8

14<sup>th</sup> meeting of the KCI  
4–5 June 2026  
Bonn, Germany



**United Nations** Climate Change  
Katowice Committee on Impacts

# Activity 5: Mandate and Context

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## **Title**

- Assessing and analysing the impacts, including socioeconomic impacts, of response measures to be implemented to achieve all outcomes of the global stocktake and different net zero scenarios and pathways

## **Purpose**

- Help Parties understand how response measures generate different socio-economic effects across countries, regions and transition pathways
- Support GST-relevant policy deliberation by linking mitigation pathways to socio-economic outcomes

## **Key Deliverables**

- One technical report
- Regional workshops
- Recommendations
- Timeline: Report to be finalized by SB 67



# What the Study Will Examine

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## Focus

- Socio-economic impacts of mitigation-related response measures consistent with GST outcomes and net-zero pathways
- Uses GST mitigation elements (decision 1/CMA.5) and published pathway literature as organising framework

## What It Will NOT Do

- Generate precise forecasts or country-by-country estimates
- Create new bespoke scenarios or undertake systematic national modelling
- No harmonised country-level modelling or forecasts



# Study Design Principles

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## **Grounding in Evidence**

- Draws on peer-reviewed literature and credible grey literature (IPCC, IAM pathways, institutional analyses)
- Combines ex post experience and ex ante modelling literature

## **Policy-Contingent Framing**

- Outcomes depend on how measures are designed, sequenced and implemented, and on complementary measures
- Findings presented as ranges, conditional relationships and typologies - not single-point estimates

## **Regional Differentiation**

- Typologies based on: economic structure, trade exposure, energy mix, development level, sectoral dependence
- Avoids global averages that obscure important variation

## **Value-Added over Existing Work**

- Builds on IPCC WGIII and agency assessments without duplicating them
- Adds response-measures framing and explicit socio-economic impact interpretation for GST deliberations



# Indicator Framework: Three Tiers

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## **Tier 1 - Core Analytical Basis (All Options)**

- sectoral systems transformation, policy stringency proxies, investment patterns, and trade or value-chain exposure.
- These indicators provide a minimum comparable basis across pathways

## **Tier 2 - Best-Effort Coverage (Options B & C)**

- socio-economic outcomes most relevant to decision-makers, including GDP or output and consumption or welfare proxies, sectoral employment shifts,
- just transition pressures, fiscal and public finance implications, and energy access, affordability and distributional risk flags.
- Coverage may vary across regions due to uneven data availability

## **Tier 3 - Acknowledged but Out of Scope (except limited coverage under Option C)**

- Within-country poverty/inequality, subnational impacts, detailed labour market dynamics
- Requires country-specific modelling beyond study timeframe

**KEY QUESTION: Is Tier 1 + selected Tier 2 sufficient for policy usefulness?**



# Three Options for Analytical Approach

## Option A - Evidence Synthesis Only

- Structured synthesis of peer-reviewed and grey literature
- **Delivers:** high-confidence synthesis, impact channels, typology-based differentiation, evidence gap inventory
- **Limitation:** no consistent quantitative comparison across scenarios; limited translation to comparable indicators

## Option B - Synthesis + Targeted Scenario Extraction (Recommended Baseline)

- Builds on A by extracting IPCC IAM pathway outputs; applies empirical translation to socio-economic indicators
- **Delivers:** more consistent comparison across pathways; policy-relevant ranges for Tier 1 and selected Tier 2
- **Limitation:** not full equilibrium modelling; limited country specificity; thinner Tier 2 for developing countries

## Option C - Option B + Small Illustrative Modelling Annex

- Adds 1-2 illustrative model runs to test sensitivity of selected impact channels
- **Delivers:** model-consistent numerical examples for technical audiences
- **Limitation:** not scalable to all regions; risk of over-interpretation; cannot substitute broader modelling



# Options at a Glance: Trade-Offs

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## **Comparability of results across scenarios**

- Option A: Low | Option B: Medium | Option C: Medium-High

## **Tier 2 indicator coverage**

- Option A: Literature-dependent only | Option B: Best-effort | Option C: Best-effort + limited modelling

## **Regional differentiation**

- Option A: Qualitative typologies | Option B: Quantitative ranges by typology | Option C: Same + illustrative model

## **Feasibility within study period**

- Option A: High | Option B: Medium | Option C: Medium

## **Relevance to technical GST audiences**

- Option A: Moderate | Option B: Strong | Option C: Strongest



# Parameters of Analysis

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## **GST Anchoring**

- Covers all major GST mitigation elements: energy system transformation, renewables/efficiency, abatement/removal technologies, fossil fuel transition, non-CO2, land/forests

## **Time Horizon**

- Near- to medium-term focus (to 2030 and 2050); post-2050 only where literature supports

## **Geographic Scope**

- Global framing with regional differentiation as primary lens; no systematic country-level analysis
- Illustrative typologies: fossil-fuel-dependent, high-coal, manufacturing/export, agriculture-dependent, SIDS/import-dependent, high-informality

## **Relationship to Other Institutions**

- Builds on IPCC WGIII; does not duplicate - adds response-measures framing
- Links IPCC scenario outputs to socio-economic impact interpretation through a consistent analytical framework



# Key Decision Points for KCI Agreement

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## **Decision 1: Preferred Implementation Option**

- Option A (synthesis only), Option B (synthesis + scenario extraction), or Option C (B + modelling annex)?

## **Decision 2: Minimum Indicator Basket**

- Is Tier 1 + selected Tier 2 sufficient for policy usefulness while remaining feasible?
- Which specific Tier 2 indicators are considered essential for GST deliberations?

## **Decision 3: Regional Differentiation Approach**

- Preferred approach to region groupings and/or typology matrices?
- How to avoid perceived selectivity in choice of country typologies?

## **Decision 4: Any Other Guidance**

- Additional issues on scope, framing or implementation the KCI wishes to raise



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# THANK YOU

