

NEWPATHWAYS

Global Stakeholder Workshop II – SB64

NEW 
PATHWAYS

From Ambition to Action: Aligning Equity, Finance and Climate Pathways towards 1.5°C

Workshop Summary



New Pathways for Equitable Climate Action in Line with
the Paris Agreement and Sustainable Development

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Colophon

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1. Introduction

1.1 About NEWPATHWAYS

In line with the Paris Agreement (PA), countries worldwide have pledged to reduce greenhouse gas emissions (GHGs) to keep global temperature rise well below 2°C above pre-industrial levels, while striving to limit the temperature increase to 1.5°C. After a temporary reduction in GHG emissions as a result of the COVID-19 pandemic, emissions have rebounded, reaching record levels in 2023. It is now evident that a temporary overshoot of 1.5°C is likely, making urgent, collective climate action and increased ambition more critical than ever.

The NEWPATHWAYS project aims to overcome the following deadlocks, which drive high global emissions and continued reliance on fossil fuels:

- Limited ambition and weak international cooperation to align Nationally Determined Contributions (NDCs) with the global long-term objectives of the PA;
- Fragmented cross-sectoral coordination, slowing down the necessary emissions reductions;
- Insufficient consideration of equity and the role of finance in fostering collective climate action and advancing towards net zero.

NEWPATHWAYS will provide up-to-date scientific information to policymakers and key stakeholders at the international and national levels to strengthen national policies, including NDCs and Long-term Strategies (LTSs), ultimately informing the next Global Stocktake (GST) in 2028. The project will do so by combining the **development of next-generation global and national low-emission transformation pathways with a thorough analysis of opportunities, risks, synergies and trade-offs associated with these pathways.**

The project brings together a multidisciplinary team, drawing on expertise from social sciences, economics, and policy analysis, in collaboration with leading global and national Integrated Assessment Modelling (IAM) teams.

1.2. Workshop Overview

This report presents a comprehensive summary of the key insights and stakeholder feedback received during the second **NEWPATHWAYS Global Stakeholder Workshop: “From Ambition to Action: Aligning Equity, Finance and Climate Pathways towards 1.5°C”**.

The workshop took place on **12 June 2026** in Bonn, Germany, and online, via Zoom, alongside the United Nations Framework Convention on Climate Change (UNFCCC) June Climate Meetings (SB64).

The workshop convened over 80 participants, in-person and virtually, representing a broad spectrum of expertise across climate policy, research and practice. As part of NEWPATHWAYS’ commitment to **co-creation**, the workshop provided a platform for stakeholders to shape the research process, ensuring its relevance to real-world policy and implementation. These efforts aim to inform and enhance not only the project’s research results, but also the Global Stocktake (GST) process in 2028.

Similar to the inaugural Global Stakeholder Workshop, held in 2025 in Bonn, adjacent to SB62, the event was structured around a **World Café-style dialogue with stakeholders**, and consisted of two sessions:

- Session 1: Connecting Global and National Climate Pathways
- Session 2: International Equity and Finance in Climate Transition Pathways

The workshop agenda was as follows:

Time	Session
13:00-13:30	Registration and Welcome
13:30-15:30	Session 1: <i>Connecting Global and National Climate Pathways</i>
15:30-16:00	Coffee Break
16:00-18:00	Session 2: <i>International Equity and Finance in Climate Transition Pathways</i>
18:00-19:00	Closing finger food reception and networking

1.3. Workshop Concept

As countries work towards achieving the 1.5°C goal of the Paris Agreement, the challenge is no longer only to define ambitious climate targets, but to ensure that transition pathways are **equitable, financially viable, and implementable across diverse national contexts**. This requires addressing increasingly complex realities: constrained public finances, rising debt burdens, uneven access to climate finance, and shifting geopolitical dynamics. At the same time, **aligning global mitigation pathways with national policy realities** remains a persistent gap in climate analysis and decision-making.

2026 represents a critical moment to reflect on lessons learned from the first Global Stocktake and the latest round of NDCs, and to help shape the analytical and policy foundations for the 2028 Global Stocktake.

Workshop Overview

Against this backdrop, **the second Global Stakeholder Workshop of the [NEWPATHWAYS](#) project**, held during SB64, convened a selected group of stakeholders from across policy, academia, civil society, industry, finance, and other key sectors to explore pressing questions in climate action:

- How can global and national climate pathways be better aligned to support coherent and policy-relevant climate action?
- How can equity and finance considerations be effectively integrated into mitigation pathways, particularly given limited fiscal space, rising debt burdens, and uneven access to finance?
- How can transition challenges such as overshoot, carbon dioxide removal (CDR), and the shift away from fossil fuels be addressed within feasible and sustainable pathways?
- How can fair effort-sharing and international equity principles guide climate strategies under shifting geopolitical dynamics and diverse national contexts?

Addressing these questions, the workshop served as an open, interactive forum for discussion among project researchers and participants, featuring **two key sessions on:**

1. **Connecting Global and National Climate Pathways**
2. **International Equity and Finance in Climate Transition Pathways**

Throughout these sessions, participants had the opportunity to **explore recent cutting-edge findings from the NEWPATHWAYS project**, engage in interactive discussions, and contribute to shaping research insights that will support the analysis and development of robust global and national low-emission transformation pathways, ultimately feeding into the 2028 Global Stocktake.

2. Session 1: Connecting Global and National Climate Pathways

2.1. Introduction

The workshop opened with an introduction by the project coordinator, **Dr. Elmar Kriegler** (Potsdam Institute for Climate Impact Research – PIK), who provided an overview of the NEWPATHWAYS project. This included a description of the project's key outcomes, objectives, timeline, and the alignment of the latter with international climate policy processes.



Figure 1. Introduction to the Workshop by Dr. Elmar Kriegler (PIK)

Following this brief introduction, **Theofania Troupi** (Climate Strategies) shared an overview of the discussion format and the workshop's objectives, which included:

- Gathering stakeholder perspectives to inform the development of the NEWPATHWAYS scenario and pathways design
- Testing and refining emerging approaches, assumptions, and research questions
- Identifying key priorities, challenges, and opportunities related to climate pathways, equity, finance, and sustainability
- Fostering dialogue across policy, academia, finance, industry, and civil society to ensure the research reflects diverse perspectives and experiences.



Figure 2. *Introduction to the Workshop by Theofania Troupi (Climate Strategies)*

Kicking off the first session on *Connecting Global and National Climate Pathways*, Dr. Elmar Kriegler provided a scene-setting presentation on the focus of the discussions that followed, which will feed into the NEWPATHWAYS Common Scenario Protocol (CSP). As the project will deliver global and national low-emission transformation pathways, the Protocol serves as a shared analytical framework that enables these pathways to be packaged into a consistent set of global and national scenarios. This contributes to a shared vision for equitable climate action in line with the Paris Agreement and sustainable development. The Protocol establishes a core set of socio-economic assumptions, emissions outcomes and transition parameters to ensure global-national alignment, while allowing for flexibility to reflect diverse national circumstances and development priorities, and enabling meaningful comparison across scenarios. Different aspects of the Protocol will be co-created with stakeholders to support this objective.

By exploring pathways that differ in ambition, equity, cost-effectiveness, security, and sustainable development outcomes, the Protocol aims to generate policy-relevant insights that can help inform the second GST in 2028, and strengthen the connection between global mitigation pathways and the realities of national policymaking, implementation and development priorities.

This first session addressed four themes relevant to informing the design of global and national climate change and development pathways, through parallel discussions held both in person and online. The topics were:

- Table 1: Common narratives for national and global pathways
- Table 2: Equity and finance considerations in climate pathways
- Table 3: Overshoot, CDR and transitioning away from fossil fuels
- Table 4: Assessing feasibility and sustainability of transition pathways

Workshop participants were split into four thematic tables corresponding to the aforementioned topics. After 25–30 minutes, participants rotated to a different table, allowing them to contribute to discussions on two topics in total. Each table explored the themes listed above, guided by specific questions designed to surface stakeholder feedback and facilitate the co-design of the CSP. The following sections explore the key takeaways from each theme.

2.2. Common Narratives for National and Global Pathways

Facilitators (in-person): Elmar Kriegler (PIK), Simon Ravelli (PIK)

Facilitators (online): Saritha Sudharmma Vishwanathan (Indian Institute of Management – IIMA), Charmaine Trompell (Climate Strategies)

NEWPATHWAYS is developing a Common Scenario Protocol to support greater consistency between national and global climate pathways, while remaining relevant for policy and decision-making processes such as the Global Stocktake. This discussion focused on the project's proposed set of pathway narratives and their suitability for describing future climate and development trajectories across different scales. These include:

- **Current trends and policies scenario**, which extrapolates existing policy trends, serving as a reference;
- **Country plans (NDCs and LTS) scenario**, building on NDCs (2030 and 2035) and announced net zero targets to estimate implementation and ambition gaps;
- **Paris Agreement (PA) breakdown scenario**, in which countries and regions follow diverging levels of ambition and cooperation to assess what could be in store if PA objectives are not reached;
- **Progressive mitigation scenario**, consistent with achieving well below 2°C and providing a minimum vision for Paris Agreement implementation;
- **Deep mitigation scenario**, which returns warming to below 1.5°C by 2100 after overshoot and represents an ambitious vision of Paris-aligned action.

Participants reflected on whether the narratives capture the diversity of possible policy-relevant futures, how they can accommodate different national circumstances and levels of ambition, and what factors are most critical to ensure coherence between national and global pathways. Cross-cutting topics, including geopolitical developments, equity considerations, development priorities, implementation challenges, and the implications of different levels of international cooperation for future climate action were also addressed.

Guiding Questions:

- Are the proposed narratives useful for describing a policy-relevant set of **national scenarios**? Are some narratives missing?
- Are the proposed narratives useful for describing a policy-relevant set of **global scenarios**? Are some narratives missing?
- Are the proposed narratives useful to establish **consistency between underlying narratives of global and national scenarios**? What is critical for establishing such consistency?

Key Takeaways from the Discussion:

- There was broad agreement that the proposed set of narratives provides a useful basis for exploring future climate and development pathways. However, stakeholders stressed that scenario design should move beyond climate policy

assumptions and **incorporate wider development, industrial, trade, governance and geopolitical drivers.**

- There is a strong **need to better reflect climate impacts, adaptation limits, and socio-economic consequences of climate inaction**, such as implications for health, biodiversity, energy security and development outcomes.
- **International geopolitical developments are emerging as critical considerations for national and global climate pathways.** Participants stressed the need for addressing the role of energy security concerns, trade disruptions, conflicts, and countries moving away from climate commitments in influencing national and global pathways.
- **Emerging drivers, including artificial intelligence, behavioural and lifestyle changes, urbanisation trends, and nature-based solutions**, could significantly impact future mitigation and development trajectories.
- The proposed narrative through the ***Paris Agreement breakdown scenario*** was considered valuable by participants in exploring risks associated with weakened international cooperation. However, attendees highlighted the importance of careful framing to avoid suggesting it would be an acceptable future pathway, as it may not provide sufficient incentive for Parties to continue increasing climate ambition.
- **Consistency between national and global pathways requires a significant level of transparency regarding key assumptions**, including socio-economic development, energy systems, fossil fuel use, carbon sinks, land use patterns and effort-sharing principles. Perfect consistency may not be achievable, or desirable, given differing national circumstances.
- Key limitations, such as the absence of Agriculture, Forestry, and Other Land Use (AFOLU) representation across national models, may need to be addressed or documented as future scope in terms of emissions and sectoral coverage.
- The distinction between national and global pathways should be framed and communicated in a way that is accessible and understandable to broader audiences beyond the modelling community.

2.3. Equity and Finance Considerations in Climate Pathways

Facilitators (in-person): Matteo Calcaterra (Euro-Mediterranean Center on Climate Change – CMCC), Ana Gonzalez Alonso (Climate Strategies)

Facilitators (online): Vaibhav Chaturvedi (Council on Energy, Environment and Water – CEEW), Lucy Oates (PBL)

A key objective of NEWPATHWAYS and the CSP is to ensure that global and national pathways are not only consistent, but also reflect underlying assumptions about equity, development, and international cooperation. Building on the introductory presentation for Session 1, this thematic table addressed the central role of explicit consideration of development objectives, convergence in living standards, fair effort-sharing, financial transfers, and distributional impacts in pathway design. Different equity principles, including equality, responsibility, and capability, can lead to different allocations of mitigation effort and financial transfers across countries. Financial transfers between countries are also limited by factors including international finance architecture, sovereign debt and fiscal latitude in creditor countries, as well as macroeconomic depth of financial markets in recipient countries.

Participants were invited to reflect on how equity, effort-sharing approaches and financial transfers should be appropriately reflected in pathway design, and especially the Common Scenario Protocol under NEWPATHWAYS, and how this can support both policy relevance and alignment between global and national pathways.

Guiding Questions:

- What socio-economic convergence assumptions should be reflected in the NEWPATHWAYS global scenarios? How do you think about plausibility vs. equity considerations in making those assumptions?
- What are the top 2–3 effort-sharing principles to explore in the NEWPATHWAYS global scenarios? What do you think about the suggested choice of an equal per capita cumulative emissions criterion and a capability-related criterion?
- How should we think about the deployment of financial transfers between regions in the global scenarios? The scope for transfers will be limited by institutional factors, what are the key factors in your view?
- What do you think about the proposed approach of investigating fair effort-sharing as a combination of limited transfers and differentiated domestic mitigation stringency?

Key Takeaways from the Discussion:

- **Development goals must remain central to pathway design, particularly in developing countries, to advance meaningful interactions with policymakers.** To do so, framing of equity considerations should go beyond solely allocating mitigation burdens, and focus on enabling sustainable development and improving living standards.

- Socio-economic convergence should be assessed through multiple dimensions, such as energy access, human development, living standards and other indicators related to the Sustainable Development Goals (SDGs), moving beyond exclusive reliance on GDP or income metrics.
- **Exploring multiple effort-sharing approaches is significant in appropriately reflecting equity considerations in mitigation pathways.** Participants argued that equal per-capita emissions alone are not sufficient and should be complemented by considerations such as historical responsibility,¹ capability, vulnerability and development needs.
- **On financial transfers,** the discussion addressed their essential, but complex, role in equitable climate action. Their effectiveness depends on institutional capacity, political feasibility, cost of capital, types of financial instruments, and local development priorities; therefore, stronger granularity regarding financing mechanisms is critical.
- Historical responsibility, within country inequalities, fossil fuel dependencies, and the role of international financial systems are crucial dimensions in shaping feasible transition pathways.
- Finally, stakeholders suggested the potential of **exploring policy-relevant middle-ground scenarios that combine differentiated domestic mitigation efforts with realistic levels of international financial support, while maintaining transparency around underlying assumptions.**

¹ In this report, historical responsibility refers to the principle that countries' responsibilities for climate action and support should take account of their historical contributions to greenhouse gas emissions and climate change, consistent with considerations of equity and common but differentiated responsibilities and respective capabilities (CBDR-RC) under the Paris Agreement and the United Nations Framework Convention on Climate Change.

2.4. Overshoot, CDR and Transitioning Away from Fossil Fuels

Facilitators (in-person): Diamantis Koutsandreas (PIK), Ioannis Dafnomilis (PBL)

Facilitators (online): Fabrice Lécuyer (PIK), Hope Njoroge (Strathmore University)

This thematic table focused on the intersection between assumptions on temperature overshoot, transitioning away from fossil fuels, and carbon dioxide removals (CDR). As described in the introductory presentation, the magnitude of temperature overshoot corresponds to cumulative emissions until net zero CO₂ emissions are reached and is thus largely determined by the pace and scale of the transition away from fossil fuels. CDR also plays a crucial role by compensating for residual fossil fuel emissions in the long term and reversing excess warming to bring temperatures back down following an overshoot. Mitigation scenarios increasingly rely on high CDR deployment in the second half of the century to offset residual emissions and, in some cases, return temperatures to target levels, which raises concerns over feasibility and sustainability.

Building on this context, this discussion focused on these complex interactions between overshoot, CDR and the fossil fuel phase-out, to identify appropriate assumptions that could be applied consistently across global and national pathways within the Common Scenario Protocol.

Guiding Questions:

- Which levels of peak warming vs. end of century warming should be explored in the Paris-aligned pathways? How does feasibility of mitigation and CDR deployment factor in here?
- Which amounts of (cumulative) CDR deployment should be explored in the pathways? How could the uncertainty regarding the future availability, scalability, and sustainability of CDR options be reflected? Which feasibility constraints (e.g., land and resource availability, public acceptance, and institutional capacity) should be explicitly considered? On which CDR options (e.g. BECCS, DACC, afforestation, enhanced weathering) could there be a focus (if any)?
- What levels of transitioning away from fossil fuels (TAFF) should be explored and how could the trade-off between pace of TAFF, level of CDR deployment, and overshoot amount be evaluated? Which dimensions (e.g., biodiversity, land use, costs, equity, and technological feasibility) and indicators could be considered for assessing these trade-offs?

Key Takeaways from the Discussion:

- Participants stressed that **pathways should aim at reflecting the lowest feasible level of overshoot**, while explicitly considering the risks associated with climate impacts, tipping points, and delayed mitigation action. This also required careful communication of scenarios to avoid creating the perception that overshoot is inevitable or acceptable. However, some participants pointed out that overshoot should be excluded from climate mitigation pathways, as they considered it unrealistic. Regarding specific temperature trajectories, it was suggested to

consider an overshoot of 1.7–2.0°C by mid-century, followed by a return to 1.5°C by the end of the century. It was also proposed to explore pathways that return to below 1.5°C in order to assess the geological limits of Earth for CDR.

- **Discussions on temperature overshoot generally pointed to the need for increased granularity in the analysis**, as well as the need to explore the full range of feasible pathways, including different overshoot levels, and improve understanding of associated climate, economic, and social impacts, as well as matters related to sectoral transitions. Specifically, it was also suggested to consider overshoot pathways within the 1.7–2.0°C range with high granularity (e.g., 0.1°C steps), so that the full range of possibilities can be explored. Furthermore, the importance of downscaling pathways to the country level to examine what would be feasible was highlighted.
- **On carbon removals, there was a broad consensus that assumptions should remain realistic and transparent**, in light of specific CDR uncertainties related to technological maturity, scalability, financing requirements, governance, public acceptance and environmental constraints, in particular land and water availability. CDR should, in one word, be deemed plausible in every aspect. With regard to specific estimates for CDR potential, it was mentioned that this could range from 1–3 GtCO₂ per year, corresponding to around 300 GtCO₂ by the end of the century. Regarding the prioritization of different CDR options, the importance of maintaining a diversified portfolio that includes all available options was highlighted. At the same time, the superiority of DACCS was emphasised, mainly due to the scalability it offers.
- **Land-based and technological CDR approaches should be clearly separated in the analysis**. Differences between land-based and technological CDR, such as in their scalability, geographic differences, feasibility constraints and costs of deployment, require a differentiated assessment, as well as potential evaluation of CDR deployment alongside residual emissions and national circumstances. In addition, stakeholders highlighted the importance of expressing CDR deployment not as an absolute number, but rather as a percentage of emissions.
- **Stakeholders highlighted the strong interlinkages between the pace of transitioning away from fossil fuels, the level of overshoot, and CDR requirements in the long term, while faster fossil fuel phase-out was generally seen as reducing long-term dependence on removals**. CDR deployment should not be taken for granted or deter the transition away from fossil fuels in mitigation pathways.
- Key **trade-offs** identified include land use, biodiversity, food and energy security, technological feasibility, financing requirements, physical damages from climate change, impacts at the national level, and equity implications. Greater emphasis was placed by stakeholders on building positive narratives for the transition, such as by focusing on **transition co-benefits**, including health improvements, employment opportunities and increased energy access.

2.5. Assessing Feasibility and Sustainability of Transition Pathways

Facilitators (in-person): Janna Hoppe (NewClimate) and Lara Aleluia Reis (CMCC)

Facilitators (online): Elina Brutschin (IIASA), Gaia Campanelli (Climate Strategies)

The research design of NEWPATHWAYS focuses on ensuring that the pathways developed are credible and useful for international climate policy processes, including the Global Stocktake. For this reason, it is important to assess pathways in terms of their feasibility, plausibility, sustainability, and security implications. For instance, security dimensions in pathways could include food security and energy import dependence, while sustainability considerations include dietary changes towards land-sparing diets, land use and biodiversity, lower energy demand for transport and housing, air pollution reductions, and increased circularity. Pathway feasibility and plausibility, whether near-, mid- or long-term, depend on rates of technological deployment, affordability, financial transfer concerns, debt burdens, CDR scalability, supply chains, critical material availability and other long-term constraints.

This thematic table gathered stakeholder perspectives on which feasibility and sustainability criteria should be prioritized, how they should be reflected in scenario design, as well as their role in evaluating and comparing pathways in a common scenario framework.

Guiding Questions:

- How should we assess feasibility of the pathways? What are the most important feasibility criteria? (Near term trends and change rates in technology deployment and emissions, limits to finance and transfers, price and affordability implications, ...)
- Which sustainability trade-offs are most important to evaluate in the pathways? (land use, biodiversity, water demand, air pollution, energy access, employment, material demand, ...)
- What sustainability and feasibility considerations should be already reflected in the scenario design?

Key Takeaways from the Discussion:

- **Feasibility is a concept that is both complex and dynamic, and encompasses technical, economic, institutional, political and social dimensions.** Participants underscored the need to assess pathways against multiple feasibility criteria rather than relying on a single metric.
- **Equity and finance are key determinants of feasibility.** This includes equitable solutions, adequate climate finance, affordable investment needs, international transfers, and broader political economy considerations.
- **Ambitious pathways may become politically challenging if they exacerbate affordability concerns or generate social backlash due to conditions like inflation or higher commodity prices.** Matters including institutional capacity,

governance quality, political support, accountability, and international cooperation are essential to feasibility, as political will alone is not sufficient.

- **Sustainability appraisal should extend beyond emissions reductions** and include health outcomes, biodiversity, ecosystem integrity, water availability, land carbon stocks, employment, resource requirements, energy access and social equity dimensions.
- The **viability of transition pathways** can be impacted by material constraints, supply chains, labour and skills requirements, access to technology, as well as the geopolitical landscape.
- Finally, **transparency** was identified as an essential criterion for pathway assessment. Participants called for greater clarity on how feasibility is evaluated, how financial assumptions are included in models, and how uncertainties are considered in scenario design and framing.

3. Session 2: International Equity and Finance in Climate Transition Pathways

3.1. Introduction

After a short coffee break, Session 2 started with a brief welcome back and a series of scene-setting presentations introducing the three sub-topics that framed the discussions on finance and equity in climate transition pathways.

The session opened with a presentation by **Lara Aleluia Reis** (Euro-Mediterranean Center on Climate Change – CMCC), who introduced an overview of NEWPATHWAYS' work under Work Package 4, which focuses on integrating finance and equity considerations into climate pathway development. The presentation highlighted that the Paris Agreement is founded on the principle of common but differentiated responsibilities and respective capabilities, guiding the obligations under the Paris Agreement, including the provision of climate finance, underscoring the importance of accounting for unequal access to capital, debt constraints, financial transfers and differing national circumstances when assessing pathways. It also outlined persistent challenges in international climate finance, including the delayed fulfilment of the USD 100 billion climate finance goal, sovereign debt constraints that limit countries' capacity to invest in the transition, and the growing but unquantified needs associated with adaptation and loss and damage in long-term pathways.

Following the same format as the discussions during Session 1, this session included three themes addressing components of the project's analysis of equity and finance considerations in climate pathways. Workshop attendees were split into three groups, both in person and online, corresponding to each of the topics below. After 25–30 minutes, participants were invited to rotate tables and contribute to two topic discussions throughout the session. The topics were:

- Table 1: Finance from an equity perspective
- Table 2: Sustainable Debt
- Table 3: Fair effort-sharing and equity principles

The following sections will provide context and key takeaways from the discussions on the topics.

3.2. Finance from an Equity Perspective

Facilitators (in-person): Janna Hoppe (NewClimate), Simon Ravelli (PIK)

Facilitators (online): Nico Bauer (PIK), Elina Brutschin (IIASA)

Following the introductory presentation, **Selam Kidane Abebe** (University of Oxford) set the scene for the first thematic table, "*Finance from an Equity Perspective*", outlining NEWPATHWAYS' ongoing work on climate finance mechanisms and instruments, and in particular how fairness in climate finance can be assessed beyond the volume of funding alone. The presentation highlighted persistent gaps between climate finance needs and available resources, particularly in developing countries, and introduced a **climate finance fairness assessment framework** currently being developed by the University of Oxford to evaluate fairness across financial mechanisms and platforms. The framework builds on four dimensions:

- **Adequacy:** looks into whether sufficient capital is flowing to support countries' transitions towards net zero
- **Access:** examines whether the allocation process is structured to support vulnerable communities, nations and regions
- **Impact:** assesses the instrument's capacity to advance just transitions and measure outcomes aligned to Paris Agreement goals
- **Participation:** evaluates the availability of governance in place to ensure that power is distributed and accountability is clear.

Based on their expertise, participants were invited to reflect on the framework's presented criteria and their application to current climate finance initiatives and mechanisms, such as the Green Climate Fund (GCF) and Just Energy Transition Partnerships (JETPs).

Guiding Questions:

- When thinking about fairness in climate finance, what matters most: having enough funding, who can access it, the impact it creates, or who is involved in decisions? Why?
- Where are current initiatives (e.g. GCF or JETPs) doing well, and where are they falling short (across these different aspects)?

Key Takeaways from the Discussion:

- **Adequacy, access, impact and participation are all equally essential, and interrelated, dimensions of fairness in climate finance.** Stakeholders pointed out that improvements or limitations in one area can influence outcomes in others.
- **Stakeholders emphasised the need for clearer information on the scale of investment required to meet climate finance needs, including the volumes of finance that must be mobilised by the financial sector.** At the same time, they noted that assessments of climate finance should also consider the quality and outcomes of finance, including socio-economic impacts, human rights implications, distributional effects, and whether finance contributes to decent living standards

alongside mitigation and adaptation objectives. Participants highlighted that the quality of finance is linked to the instruments used, such as grants, loans, guarantees, as well as the way these instruments are deployed through de-risking approaches or blended finance mechanisms, which influence risk allocation and the distribution of benefits and burdens.

- **Access to finance is one of the most significant challenges, with persistent barriers for developing countries, local communities and vulnerable populations**, including complex application procedures, excessive conditionalities, limited institutional capacity and the predominance of loan-based financing approaches.
- **At the international level, the limited effectiveness of current climate finance arrangements and unfulfilled climate finance commitments were identified.** Stakeholders raised concerns on whether existing mechanisms are adequately designed to address equity concerns, historical responsibility, and the scale of current financing needs.
- **Transparency was repeatedly identified as a priority for trust-building.** There is a clear need for more transparent information on financial flows, investment requirements, risk profiles, costs of different investment opportunities, and climate finance model assumptions.
- **Current initiatives, such as the GCF and JETPs, provide useful examples of capacity building, stakeholder engagement, and knowledge sharing, including the GCF experience in Brazil, where a broad participatory and country-led approach was implemented.** However, the same initiatives are characterised by top-down approaches, insufficient participation of local actors, limited mobilisation of finance, and public/private coordination gaps, which raise concerns over their effectiveness.
- **Finally, and most importantly, achieving fairness in climate finance requires addressing not only the volumes of funding, but also access, decision-making power, risk allocation, historical responsibility, and the distribution of benefits as well as of burdens across countries and communities.**

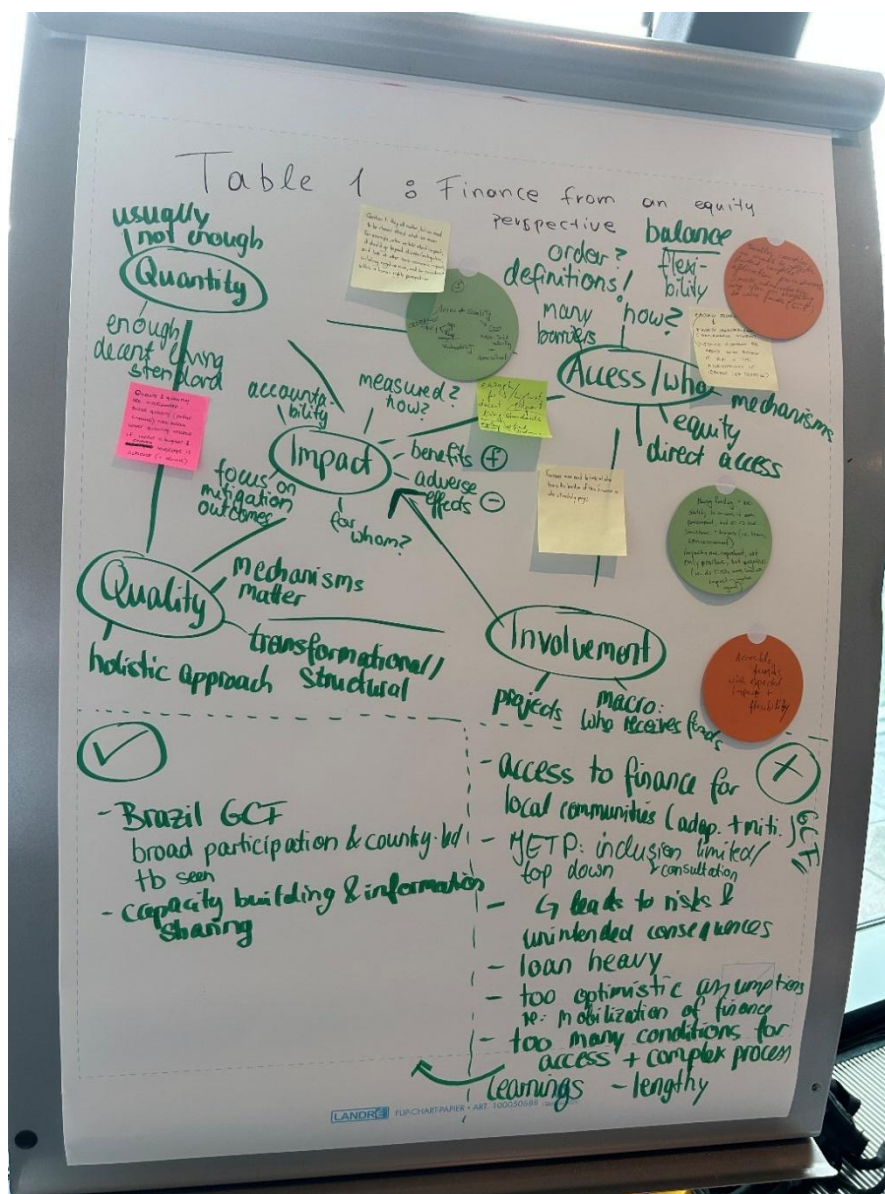


Figure 3. Notes from the Discussion on Finance from an Equity Perspective

3.3. Sustainable Debt

Facilitators (in-person): Matteo Calcaterra (CMCC), Ioannis Dafnomilis (PBL), Diamantis Koutsandreas (PIK)

Facilitators (online): Fatih Yilmaz (KAPSARC), Gaia Campanelli (Climate Strategies)

Project partner **Matteo Calcaterra** (CMCC) introduced the topic of sustainable debt, referring to a country's ability to finance public spending and investments, including climate action, without compromising its long-term fiscal stability. The presentation highlighted that the climate transition will require substantial new investments and increased flows of climate finance, yet public debt sustainability is rarely considered in mitigation scenarios or equity frameworks. NEWPATHWAYS aims to directly address this gap by integrating public debt sustainability into the project's Integrated Assessment Models, in order to assess countries' ability to finance mitigation efforts and climate finance contributions. The presentation also explored how different instruments, including loans, grants, and Internationally Transferred Mitigation Outcomes (ITMOs), can affect mitigation outcomes and debt levels in contributor and recipient countries, with significant implications for equitable, collective climate action.

Guiding Questions:

- Should public debt sustainability be considered in the design of mitigation plans?
- Which instruments should we prioritize in our research?
- How does this interact with effort-sharing principles?

Key Takeaways from the Discussion:

- **There is broad consensus that debt sustainability cannot be assessed through a single indicator**, and therefore **looking beyond the level of debt-to-GDP is essential**. Considerations such as historical debt stocks, cost of capital, exchange rate exposure, debt maturity structures, commodity dependence, fiscal resilience and broader vulnerability to shocks should be thoroughly considered in the analysis.
- Stakeholders suggested that **debt sustainability should not be assessed solely in terms of a country's ability to service and repay its debt**. Sustainable debt frameworks should also consider whether governments retain sufficient fiscal space to invest in development priorities, climate action, resilience, and other public policy objectives, such as education and health.
- Taking the current geopolitical landscape into account, **participants expressed strong support for embedding uncertainty and risk into pathway analysis**, through sensitivity testing using different interest rates, financial shocks and risk assumptions to evaluate the resilience of future mitigation pathways under shifting economic conditions.
- **Carefully framing fiscal sustainability and considering how different assumptions may affect countries' incentives to invest in development, climate action, and debt repayment** should be a crucial part of related analyses.

- Participants highlighted **the role of different financial instruments, including concessional finance, grants, green bonds, blended finance, and subsidies, to mobilise investment**. The effectiveness of these instruments, however, varies depending on the national context and circumstances.
- One of the reflection points was **fossil fuel dependent economies in the context of the energy transition**. Fossil fuel exporters may face unique transition challenges, as declining revenues can affect their fiscal stability and decarbonization efforts.
- Discussions also touched upon the importance of considering the role of financial markets and credit rating agencies, as decisions influencing hard-to-abate sectors or climate ambition can have implications for financing costs and access to capital.
- Finally, exchanges on effort-sharing focused on the relevance of **capability and fiscal capacity when assessing countries' ability to finance the transition, especially in the context of developing economies**. Debt burdens in developed and developing countries may not be comparable and should be assessed within the context of broader equity and fairness considerations, given the historical responsibility of developed nations under the Paris Agreement.

3.4. Fair Effort-sharing and Equity Principles

Facilitators (in-person): Lara Aleluia Reis (CMCC), Elmar Kriegler (PIK), Ana Gonzalez Alonso (Climate Strategies)

Facilitators (online): Vaibhav Chaturvedi (CEEW), Lucy Oates (PBL), Hope Njoroge (Strathmore University)

Finally, **Lucy Oates** (PBL, Netherlands Environmental Assessment Agency) presented on international equity and fair effort-sharing, providing useful background around the various elements and interpretations of equity, including in the context of just transitions. Participants were invited to reflect on how different justice principles, future development pathways and understandings of responsibility can lead to very different assessments of what constitutes a fair climate transition. Echoing discussions across the workshop's various sessions, the presentation highlighted the importance of making equity assumptions transparent, exploring multiple plausible futures, and recognizing the role of modelling, policymaking and stakeholder engagement in shaping climate pathways and just transition outcomes.

Guiding Questions:

- What forms of effort-sharing are politically acceptable, and where do they conflict with what might be considered fair?
- How can equity be represented transparently in scenarios, without reducing it to a single indicator or formula?
- What aspects of effort-sharing are currently invisible in financial models (e.g. institutional capacity, technology access, risk exposure, policy space)?
- Can the same responsibility/capability/equity principles be applied to mitigation and adaptation?

Key Takeaways from the Discussion:

- **Fair effort-sharing is inherently both a technical and political question**, as what is considered equitable does not always align with what is politically acceptable and perceptions of fairness vary across countries, stakeholder groups and governance levels.
- **Pathway design should first consider development objectives, living standards, and access to basic services**, particularly in developing countries, ensuring that mitigation efforts support rather than constrain these objectives.
- **Fair effort-sharing should not rely on single-indicator approaches.** Comprehensive assessments should, where possible, incorporate multiple dimensions, such as historical responsibility, capability, vulnerability, development needs, climate impacts, current emissions, and institutional capacity.
- As a cross-cutting theme across the discussions, transparency was also highlighted as necessary to consider in the choice of metrics for effort-sharing, including explicit communication of equity principles, metrics, assumptions and trade-offs underlying pathway design.

- Alongside international equity concerns, **participants highlighted the importance of considering inequalities within countries**, as public acceptance of international effort-sharing approaches may depend on addressing domestic inequalities and ensuring that transitions generate broader socio-economic benefits.
- **Co-creation and engagement with diverse stakeholders is crucial to better reflect lived experiences, local circumstances and existing power structures.** This includes efforts to facilitate and improve communication between modelling communities, policymakers and affected stakeholders.
- **Discussions, finally, touched upon the differences in addressing equity in mitigation and adaptation.** While views on the principles that can be applied differed, there was a consensus that mitigation and adaptation require different operationalisation. Adaptation requires greater attention to vulnerability, resilience and national circumstances, whereas mitigation discussions focus more on responsibility, capability and emissions-related considerations.



Figure 4. Discussion Table on Fair Effort-sharing and Equity Principles

4. Conclusion

The second NEWPATHWAYS Global Stakeholder Workshop provided a space for stakeholders from diverse areas of expertise and backgrounds to reflect openly on how **global and national climate pathways** can better support **ambitious, equitable and implementable climate action**. Across two dialogue-focused sessions, stakeholders emphasised the importance of strengthening the link between global and national pathways, ensuring that equity and finance considerations are appropriately integrated into pathway design, and improving the transparency of assumptions, trade-offs and methodologies.

Key concluding takeaways from the workshop include:

- **Development objectives must play a central role in climate pathway design**, particularly in developing countries, while climate action should be framed as **supporting sustainable development** rather than constraining it.
- **Equity, finance and feasibility are closely interconnected** and should be considered together when assessing transition pathways, approaches to effort-sharing and implementation challenges.
- **Transparency was consistently identified as a priority across all topics**, including around assumptions, metrics, financial flows, feasibility assessments, equity principles and scenario design choices.
- **Developed pathways should consider diverse national circumstances and shifting global realities**. This includes development priorities, institutional capacities, geopolitical developments, energy security concerns and matters related to access to finance.
- **Pathway assessment requires consideration of a broader range of outcomes beyond emissions reductions**, including, but not limited to, health, biodiversity, energy access, resilience, affordability, social equity and sustainable development dimensions.
- **Stakeholder engagement and co-creation were deemed essential** to ensuring that climate pathways are relevant to policymakers, grounded in real-world experiences, and responsive to the emerging needs of different stakeholders at all levels.

The insights captured through the workshop and consolidated in this report will continue to inform project research, including the NEWPATHWAYS Common Scenario Protocol, the project's work on equity and finance, and broader efforts to support collective climate action and inform the second Global Stocktake in 2028.

What's Next

Looking ahead, **NEWPATHWAYS will continue to translate stakeholder insights into project research, scenario development, and policy-relevant outputs.** The **third and final Global Stakeholder Workshop** will take place during **SB66 in June 2027 in Bonn, Germany**, concluding the project's global workshop series and presenting some of its first final outputs.

In the meantime, the **national and regional workshop series** will begin in **2026**, with the first workshop taking place in **Ho Chi Minh City, Vietnam**, and a second workshop focused on the **European Union** planned for **December 2026 in Brussels, Belgium**. These workshops will support the integration of national and regional perspectives into country-specific low-emission transformation pathways, while examining the intersections between global and national scenarios, the feasibility of sectoral transitions, and the application of just transition principles across diverse contexts.

The project's **webinar series**, launched in 2025, [with five webinars to date](#), will also continue in **early 2027**. These webinars will support the dissemination of emerging findings and provide opportunities for stakeholders to engage with NEWPATHWAYS research outputs as they become available.

To support broader engagement with and application of project insights, NEWPATHWAYS will also organise capacity-building activities, including a **4–5 day tool training week on climate scenario tools for policy practitioners**. The training week is tentatively planned for late September or early October 2027 at Villa del Grumello, Lake Como, Italy, with online participation also expected to be possible.

NEWPATHWAYS will also continue to engage with **key international climate policy moments, including the upcoming COP31**, to share project insights and contribute to ongoing discussions on equitable climate action, finance and transition pathways.

To stay updated on **upcoming events, publications and research outputs**, we invite you to [subscribe to the project's bi-annual newsletter](#), where further information and registration details for future activities will be shared.

You can also visit the NEWPATHWAYS [website](#) and follow us on [LinkedIn](#) and [Bluesky](#) to learn more about the project.

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