

# Climate Action from Abroad: Assessing Mass Support for Cross-Border Climate Transfers

## Appendices

<b>A</b>	<b>Scholarly and Policy Discussion on Climate Transfer Design Features</b>	<b>2</b>
<b>B</b>	<b>International Climate Finance: Overview of Practices</b>	<b>5</b>
B.1	Multilateral vs. Bilateral Finance . . . . .	5
B.2	Donors . . . . .	6
B.3	Recipients . . . . .	7
B.4	Rationales of International Climate Finance . . . . .	7
<b>C</b>	<b>IPCC Negotiations and The Centrality of Transfers and “Just Transitions”</b>	<b>8</b>
<b>D</b>	<b>Significance of Public Opinion in Climate Finance Politics</b>	<b>9</b>
D.1	Climate Finance and Transfers in Political Speeches . . . . .	9
D.2	Climate Finance in (Social) Media and Grassroots Discourse . . . . .	10
D.3	Climate Finance in Electoral Campaigns and at COPs . . . . .	11
<b>E</b>	<b>Additional Survey Evidence</b>	<b>12</b>
E.1	Importance of Different Groups in Deciding Over Climate Transfers . . . . .	13
E.1.1	Group importance within recipient countries . . . . .	13
E.1.2	Group importance within donor countries . . . . .	13
E.2	Opinion Salience . . . . .	18
E.3	Multilateral versus bilateral flows . . . . .	18
<b>F</b>	<b>Vignette Experiment</b>	<b>19</b>
F.1	US Experimental Design and Results . . . . .	19
F.2	India Experimental Design and Results . . . . .	20
<b>G</b>	<b>Additional Conjoint Results</b>	<b>23</b>
G.1	Conjoint Results for Policy Ratings . . . . .	23
G.2	Conjoint Results: Marginal Means . . . . .	24
<b>H</b>	<b>Conjoint Dimension Interactions</b>	<b>27</b>
<b>I</b>	<b>Heterogeneous Effects in Conjoint Experiments</b>	<b>30</b>
<b>J</b>	<b>Donor and Recipient Country’s Profiles Conjoint</b>	<b>32</b>

## A Scholarly and Policy Discussion on Climate Transfer Design Features

The discussion around the design features of international climate transfers is present in academic discourse and public policy debates. Here we report the main elements of this discussion and their more relevant references, which justify the selection of the factors presented in our paper.

**Costs, Duration and Targets** Governments in the Global North are limited in their capacity to disburse climate-related funding. This matters because the degree of financing allocated towards the green transition may be a concern that overlays with the question of whether or not climate policy should be prioritized at all. Notably, in the US, the Republican Party has articulated a prioritization of domestic energy security over support for the transition to clean energy sources domestically or, in fact, anywhere (Barasso, 2022). Democrats have pinned the shortcomings of the Green Climate Fund on the Republican Party’s “refusal to engage on climate change in any meaningful way”(Friedman, 2022). Additionally, Democrats have highlighted the lack of ambition also in terms of durable commitments. The backdrop of very high inflation rates globally has only served to further politicize the issue, as has the energy crisis brought on by the Russia-Ukraine conflict. Recent scholarship suggests that within donor countries, the current share of emissions (e.g., the polluter pays principle) ought not to be the predominant determinant of the distribution of costs associated with adaptation finance, with a dimension rooted in the donor’s ‘ability to pay,’ (Kruse and Atkinson, 2022).

From the perspective of developing countries including India, cost is a major factor in policy discussions. With significant inflation and rising interest rates, there are concerns that higher cost of capital may have adverse effects on capital-intensive decarbonization investments, particularly in the context of emerging markets where investments are typically associated with a higher risk profile. However, climate economists suggest that this concern is mostly unfounded, with little to no impacts predicted (Bhat and Purohit, 2022). Given growing energy demand and the development of India's economy, Indian government officials and policymakers have emphasized the need for international cooperation and financing to take advantage of the low-carbon opportunities required to transition. While social and transaction costs are significant, the largest challenge is associated with capital costs. Indian government officials have emphasized the importance of developed countries fulfilling their prior financing commitments as these pose a dependency for developing countries; a government official from the Ministry of Environment, Forests and Climate Change, said in the lead up to COP27 that “[the funding gap] needs to be met by international climate public financing to attract investors in the renewable energy domain,” (Arasu, 2022). Importantly, Indian government officials have positioned the decision to facilitate the transition as binary (i.e., to transition or not to transition) based upon reaching a critical threshold of international financing, using this as a critical condition which, if not met, will preclude the nation from setting adaptation and mitigation targets (Koshy, 2021*a*).

**Conditionalities and Monitoring** A recent debate suggests that important differences between climate finance and traditional development finance may render typical “institutionalist turn” frameworks less applicable, which could offer a potential explanation for why

conditionalities around institutional development may be less pervasive in climate-related lending (Browne, 2022). However, some literature suggests that developed countries make financing decisions not only on the basis of climate change vulnerability, but also with consideration of the institutions present in the recipient country as a proxy for how ‘well-governed’ these states are (Weiler, Klöck and Dornan, 2018), the extent to which corruption and waste are associated with existing regimes (Gampfer, Bernauer and Kachi, 2014), institutional capacity (Doshi and Garschagen, 2020), as well as the potential economic and political benefits for the home country. These factors are taken into consideration when states make funding decisions, but also impact public opinion for or against funding, suggesting that selection could be occurring in an earlier stage of the financing decision making process without the use of explicit conditionalities.

**Reciprocity** Developed countries have publicly advocated for reciprocity on the basis of current emissions as opposed to national wealth or GDP or level of development, with the US in particular signalling that its funding would be contingent on China’s participation as well (see SIPRI’s November 2023 commentary on ‘climate finance and geopolitics: The China-US factor’). Research suggests that public opinion towards the disbursement of climate finance is positively impacted by the involvement of other countries; specifically, if the share of total financing taken on by other countries is greater than the share of financing deployed by the country from which the respondent is from (Gampfer, Bernauer and Kachi, 2014).

**Partners** The *who* to do climate transfers with is increasingly an important matter of practical, policy discussion. Developed countries including Canada and the US have predominantly partnered with non-private bilateral and multilateral partners (i.e., developing country governments, non-governmental organizations, multilateral organizations, and dedicated climate funds and financial mechanisms, such as GCF and GEF). However, countries including Canada and members of the European Union have also developed initiatives aimed at the mobilization of private sector participation. This discussion has trickled down to developing countries, where governments involved in climate transfers negotiations (e.g. in the JTEPs in South Africa and Indonesia) are scoping the role of domestic versus businesses in leading local energy transitions. At the same time, developing countries maintain a concern for private enterprises engagement. For example, Indian government officials from the Ministry of Environment, Forest and Climate Change have also publicly called for “enhanced climate finance that is largely public, grant based and concessional” (PIB, 2023).

**Compensation** At COP27 in November 2022, nearly 200 countries signed on to a United Nations agreement to compensate developing countries for loss and damage resulting from climate change. In response to prior concerns expressed on behalf of developed countries (Harvey, Lakhani and Gayle, 2022), the agreement states that nations cannot be held legally liable for payments (Bearak and Gross, 2022). Many of the details around the implementation of this agreement are yet to be determined; over the course of 2023, representatives of 24 countries aimed to align on the structure of the fund, contributors, and recipients. Recent scholarship has found that voters in developed countries have preferences towards funding on the basis of need (Kruse and Atkinson, 2022). However, existing evidence does not seem to suggest that developed countries are making financing decisions primarily on the basis of vulnerability to climate-change related hazards (Doshi and Garschagen, 2020). There is mixed evidence on the relationship between perceived vulnerability and public opinion.

Large developing nations like India and China have played an important role in international negotiations around climate compensation. For example, India was a major proponent of the Loss and Damage Fund at COP27. On one hand, the political stances of large developing countries on loss and damage are an important signal of solidarity with other countries that are similarly at risk due to climate disasters, in particular smaller states that may have less of an international platform from which to demand support from developed states. On the other hand, some developing countries including small island developing states (SIDS) have called for countries such as India and China to bear some responsibility, given the large share of global emissions for which they account, in financing the Loss and Damage fund and supporting adaptation and mitigation efforts in smaller countries (Goswami, 2022). Their refusal will likely have significant implications for the buy-in of other countries such as the US. The link drawn between climate-related reparations as a form of compensation aimed at benefiting those who are adversely impacted by historical systems like colonialism, and mitigating the influence of ‘neocolonial’ institutions (e.g., IMF, World Bank) is also becoming increasingly prevalent (Harvey, Lakhani and Gayle, 2022).

**Goals** Policy discussions and government statements surrounding transfers have touched upon both adaptation and mitigation efforts. While mitigation financing efforts have commanded nearly three times more financing than adaptation efforts per OECD estimates, the goal to raise \$100 billion per year by 2020 specifically for mitigation purposes, which was initially set in 2009, has only been met in 2023 (Falduto, Noels and Jachnik, 2024). Mitigation financing may be preferred by developed states as there is a greater ability to measure success through the quantification of avoided or captured emissions compared to assessing the effectiveness of adaptation efforts (Green, 2015). Further, adaptation efforts require a deeper understanding of geographically-specific consequences of climate change. Given that adaptation efforts are more likely to be required in countries characterized by developing markets, there is a higher risk-profile associated with these investments. The literature suggests that public opinion in developed countries towards climate finance is impacted by the explicit objective of the financing, with funding targeted at both mitigation and adaptation more acceptable than funding for adaptation alone (Gampfer, Bernauer and Kachi, 2014).

As for developing countries, recently policymakers have been encouraging a prioritization of adaptation efforts over mitigation, although not in consistent ways. At COP27, India and other developing countries successfully pushed for the agreement to establish a Loss and Damage Fund for countries that are particularly vulnerable to climate-related disasters. Given vastly different micro-climates across the Indian subcontinent, researchers and activists have highlighted the importance of local, region-specific adaptation efforts that also take into account variances in the socioeconomic and cultural realities faced by Indians. Indian government officials have also recently advocated for increased prioritization of adaptation efforts. For example, Indian government officials have stated that achieving the objectives of their Nationally Determined Contributions would be conditional upon their receipt of a trillion dollars in climate finance and that funding for adaptation purposes specifically must be increased (Koshy, 2021*a*). At the same time, the increasing relevance of the energy transition frame suggests that the nation and government officials are also active in discussing mitigation targets, in particular the adoption of technology to start decoupling the economy from greenhouse gas emissions (Arasu, 2022).

## B International Climate Finance: Overview of Practices

The need for international climate finance first developed out of the United Nations Framework Convention on Climate Change (UNFCCC) (United Nations, 2024). Today, there are many more funds for multilateral finance, bilateral finance, climate related export credits and private finance (which is mobilized in partnership with bilateral and multilateral finance initiatives coming from developed countries). The bulk of international climate finance today is made up of bilateral and multilateral finance (over 80%). These can however have many types of donors/recipients and be designed around specific rationales. Below is a brief overview of the core components of climate transfers that exist as of 2023.

### B.1 Multilateral vs. Bilateral Finance

**UNFCCC** Multilateral finance passes through either systems set up by the UNFCCC or through non-UNFCCC funds. Non-UNFCCC funds are largely made up of funds transferred through other UN agencies including the UNDP or a host of multilateral development banks, e.g. the World Bank Group. In 2023 developed countries are estimated to have contributed about US\$38 billion in multilateral financing and about US\$34.5 billion in bilateral financing (OECD, 2023). But estimates are debated and bilateral financing, which is largely underreported, may in fact be larger than multilateral finance (Oxfam, 2023).

The first multilateral fund formally launched through the UNFCCC in 1994 is the Global Environmental Facility (GEF). For the 2022-2026 year, the GEF budgeted \$5.33 billion, up from \$4.1 billion for the prior four years (gef, 2024). In 2011, a second mechanism was set up, the Green Climate Fund (GCF). The GCF describes itself as having “a country-driven approach, which means that developing countries lead GCF programming and implementation” (2024). GCF partners include banks, institutions, UN agencies and others that work in partnership with states to design and implement projects. According to the U.S. Department of Treasury, The US provided \$2 billion at the start and is again doing so as of 2023 along with 25 countries (U.S. Department of the Treasury, 2023). In turn, the GCF’s portfolio is documented as \$13.5 billion in financing and \$51 billion in co-financing of 243 projects (Green Climate Fund, 2024). This includes investment from US businesses. Aside from these two larger funds are several other UNFCCC funds including the Special Climate Change Fund established in 2001 to fund “projects relating to: adaptation; technology transfer and capacity building; energy, transport, industry, agriculture, forestry and waste management; and economic diversification;” the Least Developed Countries Fund to assist Least Developed Countries plans to adapt; and the Adaptation Fund as part of the Kyoto Protocol for adaptation related programs (UNFCCC Standing Committee on Finance, 2022).

**Non-UNFCCC** Outside of the UNFCCC, other UN agencies manage multilateral funds for climate change. The vast majority of this is through the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation (UN-REDD) which was launched in 2008. UN-REDD claims to have contributed over \$1 billion since its creation (UN-REDD Programme, 2024). Besides UN agencies, key contributors of multilateral finance are multilateral development banks who give assistance typically in the form of loans. The total funding by multilateral development banks for 2021 is documented at

\$41.12 billion (Watson, Schalatek and Evequoz, 2023). The World Bank Group claims to have delivered \$38.6 billion in fiscal year 2023, about 41% of its total financing for climate financing (The World Bank, 2023). The vast majority of this comes from the International Bank for Reconstruction and Development (offering loans to middle-income countries) and the International Development Association (offering loans and grants to the poorest nations). The World Bank Group’s private sector branch, the International Finance Corporation also makes about 46% of its investments in climate finance (The World Bank, 2023). There are also a number of smaller country and region-specific collaborative funds. The largest of this is Brazil’s Amazon funds including a commitment of \$1.28 billion by Norway and Germany (Watson, Schalatek and Evequoz, 2023).

**Trade-offs** Despite the major historical role of UNFCCC-based multilateral financing, bilateral funds make up a significant share of climate financing. The largest donors in this respect are Japan, Germany and France, who reportedly account for 71% of all climate finance funds given by developed countries (Donor Tracker (SEEK Development), 2023). As noted above, with the fractionalization of international climate politics bilateral finance has increased substantially in the past decade. This has generated different views of the value of either type of financing.

Generally, multilateral finance is considered to be more friendly to the recipient country and allows more room for ownership and agency by the recipient (see for example the recipient country centered approach of the GCF) (Green Climate Fund, 2024). Aid sent through multilateral channels is also considered less politicized and less fragmented (Biscaye, 2024). Multilateral aid helps states reach non-allied countries whereas bilateral aid is largely limited to allies and considered more strategic (Biscaye, 2024). When it comes to financial flows more generally, this has largely found support in the scholarship (Dreher et al., 2022). Publicly, countries largely attest to the importance of both initiatives (see for example the joint statement by India and US) (The White House, 2023).

## B.2 Donors

Although donations have been steadily increasing over the past decade, transfers from developed countries still remain below targets and need. A 2023 OECD report documents that in 2021, developed countries donated US\$89.6 billion, short of the goal of \$100 billion from the Paris Agreement. This OECD number has been criticized by many as an overestimate. Notably, Oxfam’s Climate Finance Shadow Report 2023 posits that real contributions are a small fraction of the amount specifically \$21 – 24.5 billion, by highlighting the difference between committed and actually reported and disbursed funds. According to CARE International (2023), most of this money is not “new and additional” but rather anywhere from 52% – 93% is diverted from development assistance. It is also largely insufficient. Estimated total climate finance needs are repeatedly quoted as \$1 trillion+ (Macquarie et al., 2020).

Not all developed countries contribute the same. According to a 2022 working paper using methodology agreed to in COP26, Colenbrander and Cao determine that “only seven countries provided and mobilised their fair share of climate finance in 2020 ... [specifically] Sweden, France, Norway, Japan, the Netherlands, Germany and Denmark. Meanwhile, looking forward to 2025, only four countries have made climate finance commitments com-

mensurate with their fair share: Norway, Sweden, France and Japan.” Notably missing are the United States, Australia, Canada, the United Kingdom, Italy, and Spain. Since then, US President Biden pledged much more for climate finance. The amount reached \$5.8 billion in 2022 with the expectation of going up to \$9.5 billion by 2024 (U.S. Department of the State, 2023). The European Union is a big player in climate financing, claiming to have provided 23 billion euros in 2021 including contributions by the Union, Member States and the European Investment Bank (Jensen and Roniger, 2023). The contribution of the European Commission specifically was 2.50 billion Euros.

### **B.3 Recipients**

Regardless of multilateral versus bilateral nature, most funds go to Low Middle Income Countries (LMICs) and Upper Middle Income Countries (UMIC), with Low Income Countries making up a smaller but significant portion (OECD, 2023). There has also been a steady increase in aid to affected small island nations.

Most funds given multilaterally are specifically disbursed in partnership with trusted and accredited entities (who are steadily increasing in number), including public and private, national, regional and international groups (Green Climate Fund, 2024). These entities manage and monitor specific projects. There is increasing interest and push for public private partnerships (e.g. The White House (2021)). However, currently, there are many more entities capable of working on climate change related issues than there are funds disbursed to those eligible and in need (Watson, Schalatek and Evequoz, 2023).

### **B.4 Rationales of International Climate Finance**

**Goals** There are several reasons funds may be given. In 2021, the majority (60%) were allocated for mitigation, 27% for adaptation and 13% were crosscutting across the two (OECD, 2023). The main sectors targeted are “energy” followed by “transport and storage,” “agriculture, forestry and fishing” and finally “water supply and sanitation” (OECD, 2023). Notably absent is compensation in terms of loss-and-damages which states have only recently committed to and have yet to be formally institutionalized. As of 2022, a new “Loss and Damages Fund” was to be set up following COP27, which was reinforced at COP28 (UNFCCC Standing Committee on Finance, 2022).

There has been a sustained effort to increase funds for adaptation, designed to provide assistance to vulnerable nations affected by climate change. The EU, for example, specifically seeks to allocate at least 40% to climate adaptation (Jensen and Roniger, 2023). The US likewise had vowed to increase adaptation assistance (U.S. Department of the State, 2023). The GCF promises to invest 50% in mitigation and 50% in adaptation (Green Climate Fund, 2024). Half too must go to the “most climate vulnerable countries.” In general, thus far, multilateral public finance has focused more on mitigation whereas MDBs and bilateral financing does more for adaptation (UNFCCC Standing Committee on Finance, 2022). Mitigation finance is mostly loans whereas adaptation financing is often grants.

**Conditions** Climate finance can also be attached to substantive areas of policy action, and there can be instrumentalized climate transfers too. According to Oxfam’s 2023 report,

only about 2.9% of climate finance today integrates gender inequality and an even smaller amount is locally led. However, the vast majority of finance is in the form of loans (more than 50% with estimates of up to 70%) and constitutes debt, coming with requirements for audits, monitoring and repayment (OECD, 2023). Most of these loans (about 75%) are non-concessional. Less than 20% of climate finance is in the form of grants. According to an article by the United Nations Conference on Trade and Development, “future loans will need to be contracted at significantly lower rates than is currently the case and for a much longer duration” (Kozul-Wright, 2023).

## **C IPCC Negotiations and The Centrality of Transfers and “Just Transitions”**

The motivation behind the study of public attitudes towards climate transfers stems from the discussion on just transitions championed in various international organizations, including the Intergovernmental Panel on Climate Change (IPCC). An increasingly important part of global climate agreements is financing that is cooperative and actively engages recipient states and affected communities at the local level (Working Group III contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, 2022). The need for Just Transitions, as they are termed in IPCC negotiations have been recognized formally in both the Paris Agreement and the 2018 Just Transition Declaration at COP24. To ensure Just Transitions, international climate financing must be responsive to needs on the ground, especially of the most vulnerable including indigenous peoples, minorities, women, and the poor. Ideally, projects are designed and implemented in partnership with those same communities and states in the Global South.

Much of Just Transition comes out of a growing recognition that the least developed countries and the poorest communities suffer disproportionately from climate-related disasters. Global shocks like pandemics and recessions only compound the problem as several IMF reports have noted (for example Sedik and Xu (2020)). At the same time, those most vulnerable struggle the most to finance mitigation and adaptation efforts and also to provide assistance to those affected who lack any social safety nets. Just Transition hopes to bring in the human focus of climate justice, labor and environmental rights, social inclusion, and poverty alleviation to move towards greater equity. Reducing inequality and increasing social transfers may also lessen much of the social unrest that makes it especially difficult to implement climate policies (Furceri et al., 2021).

Several key priorities emerge from the Just Transition framework that have implications for international climate finance. For one, Just Transitions require that climate finance transfers that already occur from the Global North to the Global South prioritize low or no interest loans and grants with needed flexibility to address a wide range of concerns. Without this, low-income countries risk getting caught in debt traps and struggle to recover from climate related emergencies. Second, there needs to be an immense increase in the amount of transfers to meet actual need and at least to reach the stated goal of USD 100 billion as well as a need to standardize key definitions. Without standard definitions, financing occurs in a haphazard, uncoordinated and ad hoc manner.

Third, there is a need to support private initiatives in low income countries by pro-

moting public private engagement and access to funds including through public guarantee instruments. Much of this also necessitates greater standardization, clear and consistent definitions and mechanisms for accountability (Hourcadea, Dasgupta and Gherzi, 2021). On the other hand, not having clear operational rules and procedures can lead to fragmentation and distrust (Weikmans and Roberts, 2019).

Fourth, Just Transitions requires prioritizing and addressing job losses which can serve as a significant hindrance for countries to shift to low-carbon initiatives, reduce logging etc. (Zografos and Robbins, 2020). Fifth, climate financing needs to move to address consumption. Currently, the wealthiest in the population also have the highest carbon footprint as do certain sectors and cities, which disproportionately affect others (Ivanova and Wood, 2020). Several measures may be implemented to help address high carbon consumption including zoning restrictions, advertising regulation and taxes, subsidies and tax exemptions, and others (Reisch et al., 2020). Finally, Just Transitions calls for a change to how projects are done, aiming to create more support and ideas from local governments, universities, businesses and networks. This recognizes that those on the ground are often best suited to find options that fit their contexts.

## **D Significance of Public Opinion in Climate Finance Politics**

The designs of climate transfers can both reflect and influence public support for international climate finance, perhaps most intuitively because the cost of climate transfers is often incurred by the public of the donor country itself through the use of taxpayer money. Notably, climate finance and climate transfers are already on the political agenda in a meaningful way: politicians discuss climate finance and climate transfers publicly in a way that captures media attention, through which voters' attitudes and preferences towards climate transfers can be influenced. Climate finance has also been discussed and debated on various social media platforms, through which proponents and opponents both receive information and are also able to contribute to the discourse. Understanding the formation and current status quo of public preferences towards the design of policy instruments can therefore be informative as we theorize how support for climate transfers can be built and what coalitions may emerge for or against. Finally, we expect that widespread calls for uplifting voices of the Global South within broader conversations around adaptation and mitigation may influence public opinion in both developing and developed countries on climate finance, and that positive changes in public opinion in developed countries, as an enabler of the disbursement of climate finance from developed to developing countries, can in turn allow for the further amplification the voices of non-elites in the Global South. We elaborate upon these factors further in the following subsections.

### **D.1 Climate Finance and Transfers in Political Speeches**

Climate transfers from developed to developing countries are part of a broader global recognition of a financing shortfall for adaptation and mitigation efforts, and have been the focus of domestic political speeches by executives, legislators, and bureaucrats in many major developed nations, including the United States, France, and Canada. However, politicians seeking to issue climate transfers must operate within domestic political constraints, including voter

attitudes and preferences towards climate change and climate aid, the political stances of key opposition parties, and the broader geopolitical context. All impact both the scope of policy commitments made, as well as the extent to which subsequent implementation occurs.

In some cases, important constituencies may favor climate aid commitments and punish rollbacks. In the UK, Prime Minister Rishi Sunak framed his rollback of previous climate aid commitments as an attempt to avoid imposing an undue burden on the British public, suggesting that the previous plan was characterized by “unacceptable costs on hard-pressed British families,” (Sunak, 2023). Sunak’s reversal, though, was met by backlash from industry representatives and the international community, with concerns around a diminished global perception of Great Britain’s leadership on climate change, as well as worries that inconsistencies in policy make it challenging for businesses to adapt (Harvey, 2022). In France, Macron has attempted to differentiate himself from right-wing candidate Marine Le Pen on the basis of pro-environmentalist stances, hoping to peel away support from The Ecologists’ Yannick Jadot and left-wing candidate Jean-Luc Melenchon, both of whom have gained significant support from pro-climate voters in recent elections (Guillot, 2022). To do so, Macron has brought select ideas, such as ‘ecological planning’ into his campaign platforms from these oppositional candidates. On the topic of climate transfers specifically, Macron has publicly advocated for innovative financial solutions to support vulnerable countries in their climate change mitigation and adaptation efforts including a call to designate \$100 billion in special drawing rights to vulnerable countries to extend the financial strategies employed during the COVID-19 pandemic to address climate challenges in developing nations (Macron, 2023).

However, other constituencies may criticize leaders who make climate aid commitments. For example, President Biden’s pledge of \$1 billion to the Green Climate Fund in 2023 was met with significant backlash from Republican candidates and right-leaning news agencies (Masters, 2023). Domestic political considerations may impact leaders’ statements and commitments on the transfer recipient side as well. India is an example. While Prime Minister Modi has emphasized the need for climate transfers (The Week, 2023) and pledged to take on a greater role in global climate initiatives (BBC, 2021), India has also rejected aid for environmental disasters multiple times since 2004 (Carnegie and Dolan, 2021), prioritizing concerns around sovereignty and self-reliance where diplomatic strings or formal conditionalities may be attached to aid.

## **D.2 Climate Finance in (Social) Media and Grassroots Discourse**

Media and social media act as catalysts in the climate finance discourse, enabling information dissemination, public engagement, and grassroots mobilization. Polling data and reports on public opinion regarding climate change and climate finance are frequently featured in media outlets targeting policy elites. Such coverage can influence policymakers by highlighting the public’s stance on climate issues, potentially swaying government actions in response to the public’s preferences as reflected in these polls. There appears to be increasing support among younger voters for climate action and the provision of aid abroad to address climate challenges (Leiserowitz et al., 2021).

Grassroots mobilization for climate aid is also visible in specific campaigns, such as those led by faith-based organizations like Catholic Churches in the US, which have called on President Biden to transfer funds abroad, as well as forgive and restructure debts, to assist

countries most at risk from climate change (Roewe, 2023). In the UK, 92 civil society organizations mobilized through a letter campaign to urge Prime Minister Rishi Sunak to fulfill his climate finance promises (Relief Web, 2023).

In recognition of the important role played by the media in the dissemination of information, climate advocacy groups such as Climate Power have deployed significant sums of capital in the way of \$80 million to promote President Biden’s climate policies and raise awareness of his pro-climate record in advance of the next election through television and digital advertising (Epstein, 2023). This highlights a critical pathway through which the media is used to shape public opinion and voter attitudes towards climate finance.

Additionally, recent scholarship suggests that since 2019, a growing right-wing and climate contrarian presence on Twitter has taken shape in response to a previously pro-climate discourse (Falkenberg et al., 2022). This suggests that these social media platforms can be important venues for ideological polarization in either direction on climate change and consequently, climate finance.

### **D.3 Climate Finance in Electoral Campaigns and at COPs**

Taxpayers fund climate finance on the donor side, and constituents on the recipient side experience tangible implications of design decisions. So, public opinion is a relevant factor for policymakers to consider when determining the form that climate transfers may take. The exit of developing nations from discussions on the Loss and Damage Fund, in response to the EU and US-led proposal to manage the fund via the World Bank, highlights the need for constituent buy-in on the recipient sides (Murthy, 2023). At the same time, the sizeable gap between the amount the public is willing to contribute to climate transfers and the actual estimated financial resources required in order to achieve climate targets illustrates the need for public buy-in on the donor side (O’Garra and Mourato, 2016).

The public’s support for climate funding is influenced by the degree to which donor and recipient countries collaborate in determining the use and allocation of financing, as well as the degree to which financing is being provided by other nations (Doshi and Garschagen, 2020). Voters also seem sensitive to considerations around governance quality, corruption levels, and potential benefits for the donor country, in addition to factoring in the immediate vulnerability to climate change when determining to whom aid should be given (Weiler, Klöck and Dornan, 2018) (Gampfer, Bernauer and Kachi, 2014).

For example, during his presidency, Bolsonaro accused France and Germany of attempting to “buy” Brazil’s sovereignty through the provision of aid for fighting fires in the Amazon, in response to Macron accusing Bolsonaro of failing to make good faith efforts towards meeting Brazilian climate commitments (Taylor, 2019), highlighting tensions around both self determination on the recipient side and worries about developing countries reneging on climate targets on the donor side.<sup>43</sup> Relatedly, India has established the condition that an adequate amount of funding, specifically a trillion dollars over the next decade, must be

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<sup>43</sup>Importantly, while the election of Brazilian President Luiz Inacio Lula da Silva signalled a shift in the national policy orientation towards accepting finance from developed states (Spring, 2022), at COP28, shortly after Lula presented Brazil’s new climate commitments, including the target to cease deforestation of the Amazon by 2030, his Energy Secretary Alexandre Silveira put forth that Brazil would more closely align itself with OPEC in the future, contradicting these earlier pro-climate policy orientations (Watts, 2023).

mobilized in order for it to deliver on commitments regarding adaptation and mitigation efforts made by Prime Minister Narendra Modi (Koshy, 2021*b*).

The mandates of the Green Climate Fund and the Adaptation Fund, focusing on protecting the most vulnerable, further reflect public preferences in donor countries for equitable and need-based funding (Kruse and Atkinson, 2022). Scholarship suggests that financing mechanisms that prioritize the global public good of mitigation over adaptation are often preferred by voters in donor countries (Gampfer, 2014).<sup>44</sup>

Recent discourse around climate change has featured a strong awareness on behalf of both developed and developing countries that developed nations bear the brunt of the historical responsibility for global warming and should assist developing states in their pursuit of sustainable development, by fostering technological development, lending expertise, and providing financial support. Political officials representing developing countries, including Indonesia, South Africa, Brazil, and India, have signed onto agreements or otherwise issued public calls to developed countries on this. Brazil is an important example of a country where indigenous communities and activists are gaining a seat at the table, calling for climate justice. Upon his entry into office, Lula appointed Brazil’s first minister of indigenous peoples, Sonia Guajajara, who also served as a representative for the country at COP28, where Brazil sent the second-largest delegation in the history of UN climate summits made up of, among others, civil society activists and Indigenous representatives (Syed, 2023; McSweeney, 2023). Activists have also raised concerns around the potential for developmental finance to serve as a channel for ‘carbon colonialism’, suggesting that dependence and conditionalities exacerbate existing structural power imbalances and reparations and rights-based approaches to funding are necessary (Bhadani, 2021). The term ‘carbon colonialism’ was explicitly included in the 2022 IPCC report as one of the key causes of global warming (Pörtner et al., 2022). Such views have contributed to the momentum around the idea of a ‘Just Transition’.

## E Additional Survey Evidence

We use additional survey data to corroborate the evidence presented in the main text. We start first with further exploring whether the public in developed and developing countries attach salience to public opinion on international climate transfers in the same way/on the same levels as the importance of business groups and government elites.

We also use the additional survey data to understand if this salience is meaningful and pertinent to bilateral transfers (as per the conjoint profiles in the main text).<sup>45</sup>

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<sup>44</sup>Canada’s commitment to allocate a substantial portion of its climate finance to adaptation projects (Government of Canada, 2023), though, despite the global trend of financing towards mitigation thus far, suggests that there is some appetite for integrated approaches, but balancing both sides of the funding need may depend on broader public acceptance

<sup>45</sup>Additionally, we have other results that shed light on subsequent questions. For example, we have evidence in our US sample that, when asked straight up if they would prioritize mitigation over adaptation operations with climate finance, this sample corroborates the main findings that the majority (64%) prioritises mitigation when thinking about the use of climate transfers. We also have evidence that, when confronted with a more refined distinction between the goal of adaptation and the up-coming purpose of Loss and Damage, most people in our US sample still prefer to invest in adaptation.

## E.1 Importance of Different Groups in Deciding Over Climate Transfers

In the spring of 2024 we fielded a simple survey question designed to gauge how members of the public view the importance of different groups in determining how climate finance funds are used. In particular, we asked the following question.

*Recently, large developed countries have committed to providing funds to help developing countries reduce their emissions. How important do you think it is that [business groups/government elites/general public] in [developing/developed] countries have a say in how those funds are used?*

The answers could be: ‘Very important,’ ‘Somewhat important,’ ‘Somewhat not important,’ and ‘Not at all important.’ Items in brackets were randomized, such that each respondent only received one version of the question. We scaled the response outcome from 0 (Not at all important), Somewhat not important (.333), Somewhat important (.666), to 1 (Very important).

We conducted two separate survey sampling strategies. For our first sample, we conducted a new quota based nationally representative survey (N=1,500) of the US population. For these purposes, we used the firm Qualtrics that we use for our analyses in the main text.

Our second sample comes from a survey fielded in 2024 to 52 small island nations via Meta/Facebook (Mildenberger et al., 2023). This approach used a campaign for each country, and then created an “ad set” for each demographic quota. Demographic quotas used for sampling included age, gender, and a geographic quota for capital regions versus outlying region. Advertisements and surveys were delivered in the most common language ((English, French, Spanish, Portuguese, Dutch). Respondents were entered into a lottery for a prize. Survey weights were constructed for most countries using raking methods from the svyweight package in R. Some countries did not have sufficient information and quotas were not weighted.

For this question set we merge the two samples together.

### E.1.1 Group importance within recipient countries

Figures 3 and 4 present the results for the three groups within recipient countries. We split the respondents’ countries of belonging apart into two separate graphs to ease presentation. We see that average responses for all three groups (government elites, general public, and business groups) are all above the midway point of the scale, with many well above. Furthermore, the importance of the general public is in line with government elites and business groups.

### E.1.2 Group importance within donor countries

Figures 5 and 6 present the results for the three groups within donor countries. The results parallel what we observe for recipient country groups.

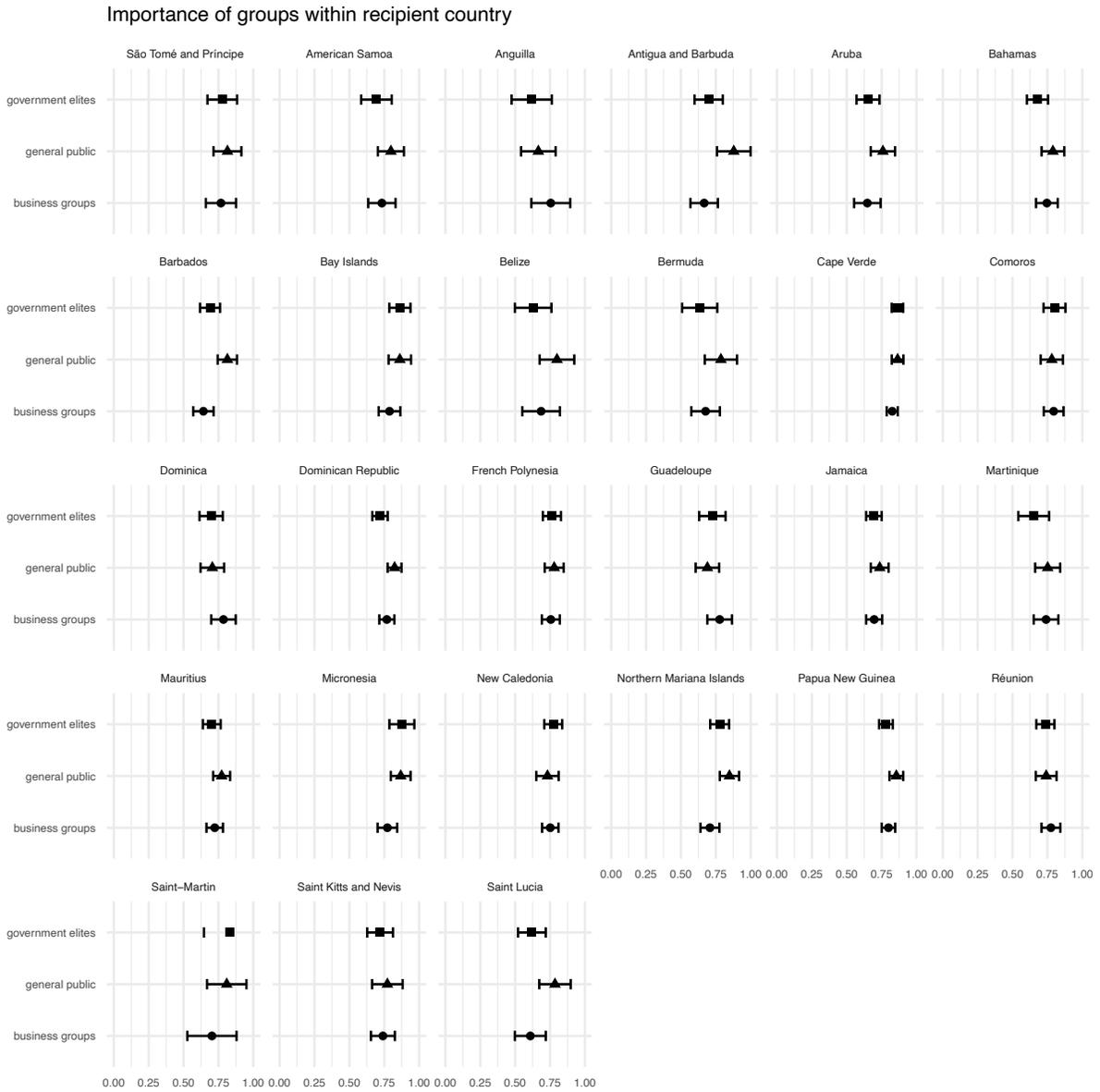


Figure 3: Group importance within recipient countries (first set of countries). Mean estimates with 95% confidence intervals.

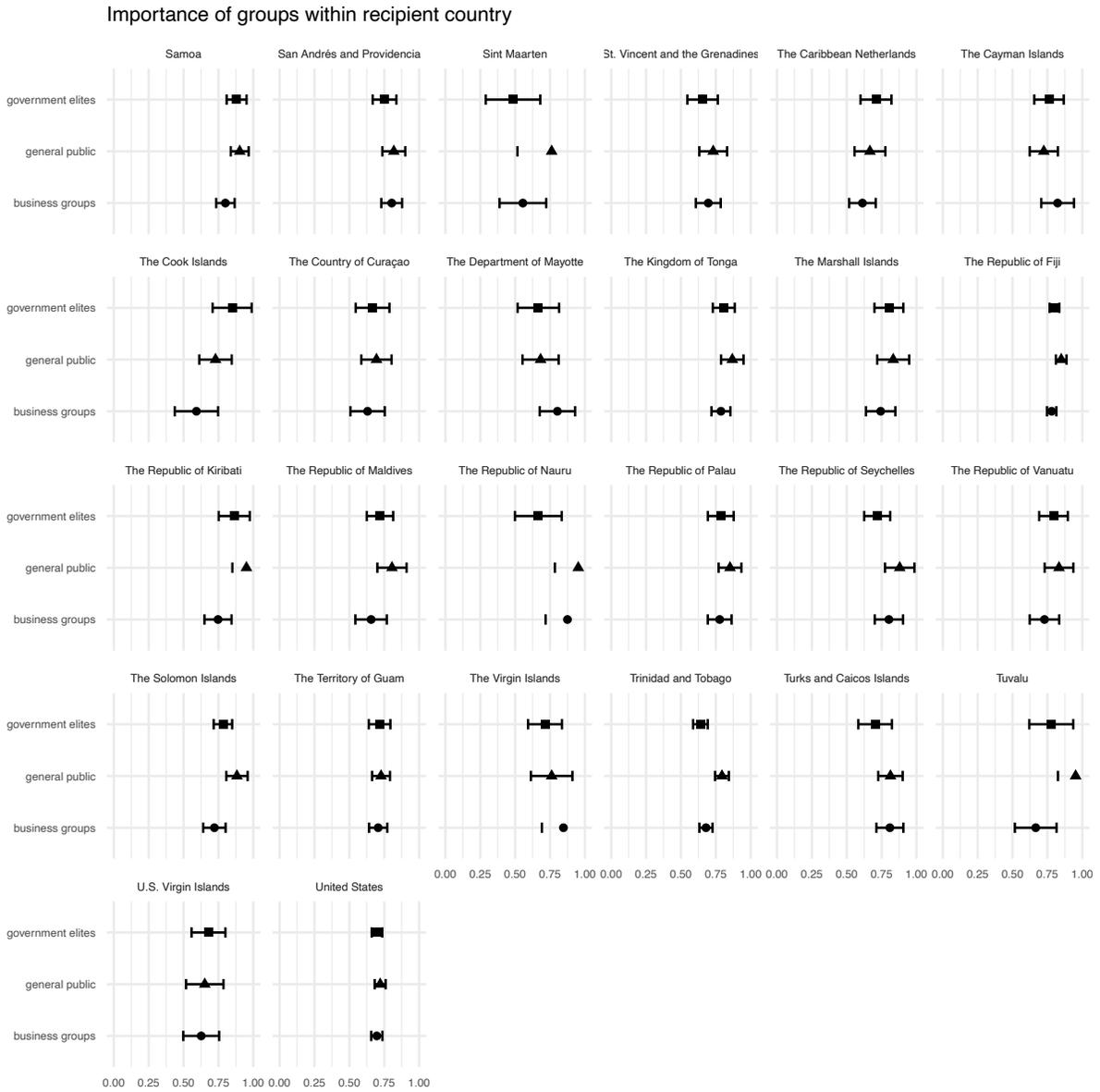


Figure 4: Group importance within recipient countries (second set of countries). Mean estimates with 95% confidence intervals.

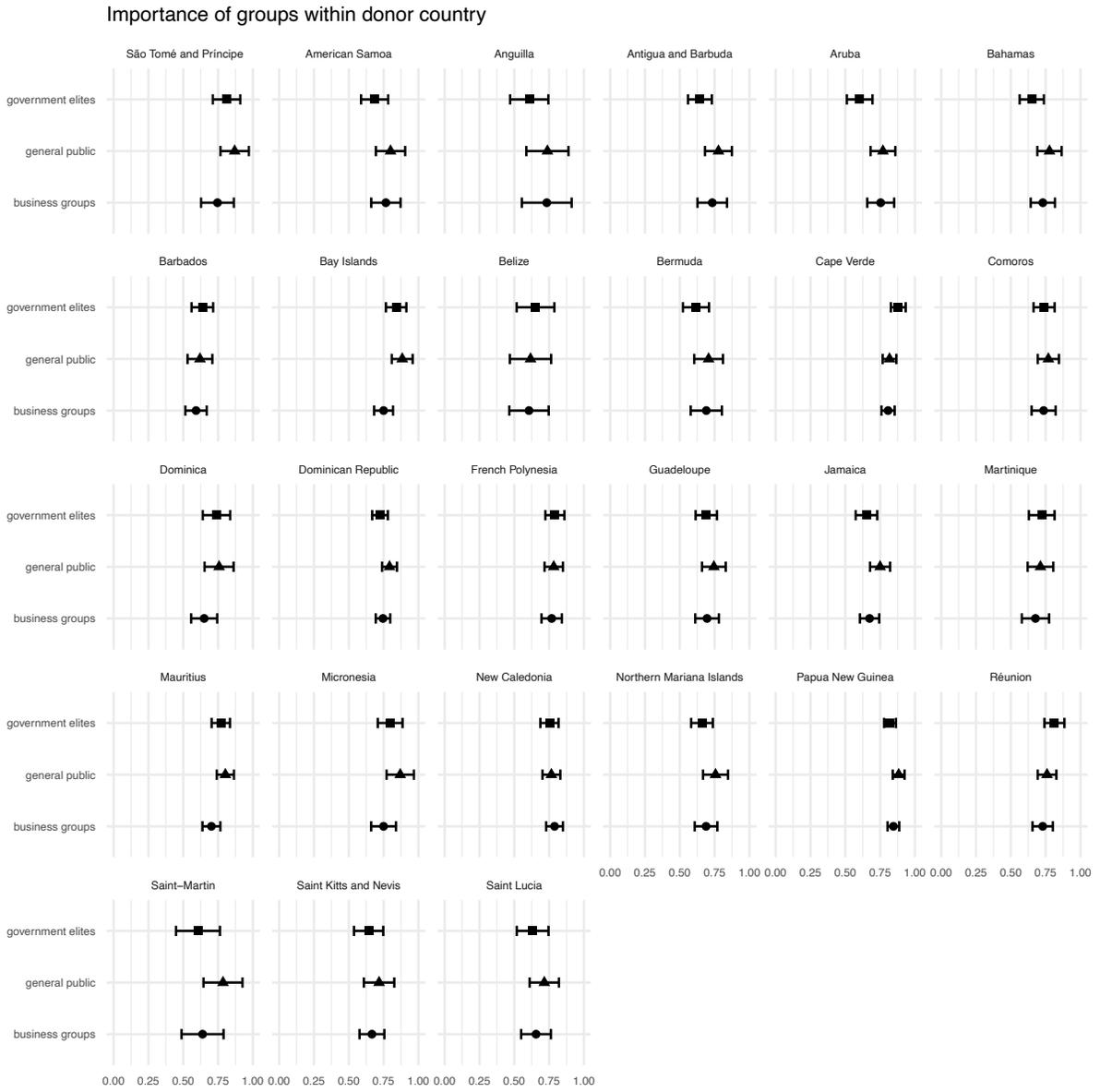


Figure 5: Group importance within donor countries (first set of countries). Mean estimates with 95% confidence intervals.

### Importance of groups within donor country

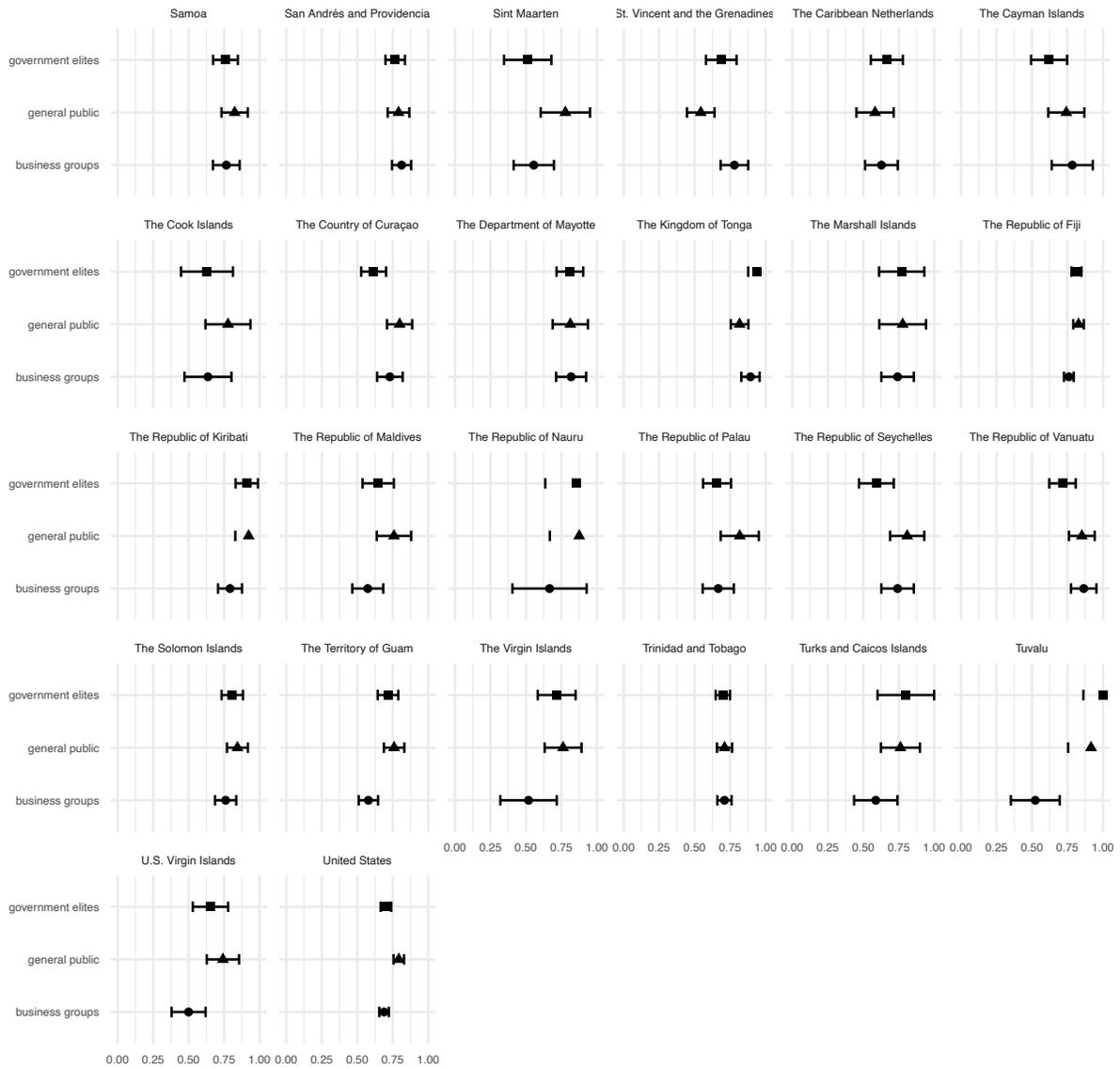


Figure 6: Group importance within donor countries (second set of countries). Mean estimates with 95% confidence intervals.

## E.2 Opinion Salience

In the US-specific sample described above, we asked two additional questions to probe whether people have opinions about climate finance commitments. In particular, we asked:

*The United States government has committed to providing funding to developing countries to combat climate change by reducing their fossil fuel emissions.*

*Do you think that people in your community/your neighbors would have opinions about whether or not the US should fulfill such commitments?*

Responses ranged from: They would have strong opinions (1), They would have moderately strong opinions (.666), They would have weak opinions (.333), They would not care (0).

A potential advantage of asking about opinions of the members of their community instead of their own is that it would result in less social desirability bias. The average response in the sample was .60 (95% CI: .59, .62), or close to they would have moderately strong opinions.

Next we followed this question up by asking “*Do you have opinions on this topic?*” Responses ranged from I have very strong opinions (1), I have moderately strong opinions (.666), I have weak opinions (.333), I do not care (0). The average response in the sample was .62 (95% CI .6, .63), or close to they would have moderately strong opinions.<sup>46</sup>

## E.3 Multilateral versus bilateral flows

In the US survey we also asked respondents about their preference over climate aid delivered through multilateral institutions versus their own governments. Specifically, we asked:

*Funds from the US government that are used to help developing countries fight climate change can be delivered in two different ways. 1) Agreements between the United States and recipient countries directly or 2) International organizations funded by wealthy countries. These organizations control how the money is spent with the input of all contributors.*

*Which way would you prefer for the United States to deliver these funds?*

A majority, 62%, of our sample preferred agreements directly between the US and recipient countries (bilateral transfers). A majority of Democrats, Independents, and Republicans shared this preference, though it was strongest amongst Republicans.

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<sup>46</sup>We note that we did not engage in a cross-issue comparative analysis where we consider the importance of climate finance compared to other issues. This would require a much larger survey design.

## F Vignette Experiment

Our vignette experiments probe the role of efficiency considerations and home bias in cross-border compensation preferences. The experiments vary the cost of climate mitigation as a function of the climate policy target. For donor country respondents, mitigating at home is more expensive than mitigation abroad. For recipient country respondents, mitigation financed by foreign transfers is cheaper than mitigating at home. Compensation also varies according to whether it is funneled to policy vulnerable communities at home or abroad.<sup>47</sup> Thus, developing countries accepting transfers must be willing to implement *more* emissions reductions than donor countries.<sup>48</sup> The experiments test whether home bias can be attenuated by economic efficiency considerations and whether compensation (conditional on household costs) shifts preferences for international transfers among donor and recipient country publics.<sup>49</sup> We deployed our vignette experiment on nationally representative samples in the US and India.<sup>50</sup>

### F.1 US Experimental Design and Results

American respondents choose between two hypothetical policies the government could enact to achieve the same reduction in global emissions (bold figures reflect experimental manipulations):

Suppose that in order to combat climate change, the US government can choose between two options, which would result in the same reduction of global fossil fuel emissions.

Option A. The US government attempts to reduce the use of fossil fuels at home. The average household energy cost in the US is increased by \$64. These funds are used to compensate American workers in the coal and oil industries who will lose jobs due to policies implemented in the US.

Option B. The US government attempts to help the government of a developing country like India reduce the use of fossil fuels. The average household energy cost in the US is increased by [**\$8 / \$32**]. These funds are used to compensate

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<sup>47</sup>Specifically, we focus on compensating coal workers who risk losing jobs from decarbonization. Coal is the most polluting energy source and workers’ compensation is a pressing political priority in both the US and India. Appendix A reviews public discourse around these issues.

<sup>48</sup>If poorer countries receive transfers to help transition fossil fuel workers to other sectors, then more emissions cuts—and more job losses in the recipient country as opposed to the donor country—would be required. Alternatively, costs for transitioning workers can be entirely borne by developing countries themselves, in which case emissions cuts would be lower and fewer individuals would lose jobs.

<sup>49</sup>We held constant additional theoretical determinants. For example, mitigation is the sole goal of the transfers, and national governments are the only transfer agreement partners. This allows us to first ascertain how the general public evaluates the tradeoffs between efficiency-based transfers and transfers motivated by other considerations.

<sup>50</sup>We also fielded the experiment on targeted samples in regions particularly vulnerable to decarbonization policy (“Coal Country” sample) and regions vulnerable both to the physical impacts of climate change and decarbonization policy (“Cross-Pressured” sample), following Gaikwad, Genovese and Tingley (2022). The findings, available upon request, were largely similar to the general population findings.

Indian workers in the coal and oil industries who will lose jobs due to policies implemented in India.

The cost of compensation is lower in the second option because wages are lower in developing countries, making it far cheaper to compensate workers who lose jobs there than in the US.

If you had to choose, which options would you pick?

	Option A: Support for High Home Costs [\$64] & Domestic Compensation	Option B: Support for Low Cost Transfers [\$8/32] & Foreign Compensation
Cost: \$8 (n=936)	66%	34%
Cost: \$32 (n=926)	74%	26%

Table 3: *US general population samples and preferences for Option A (higher costs, domestic compensation) and Option B (lower costs, foreign compensation). Rounded percentages.*

Table 3 reports the findings. Column 1 indicates the proportion of general population voters that supported the policy option targeting domestic emissions reductions, with average household energy costs rising in the US by \$64. Column 2 reports support for international transfers resulting in the same net reduction of emissions. The upper panel of Table 3 considers international transfers that would raise average household energy costs in the US by only \$8, while the lower panel focuses on international transfers that raise average US household costs by \$32.

Strikingly, across both the \$8 and \$32 international transfers choices, the majority of American respondents eschew international transfers. Voters disfavor foreign transfers, even if it means that they must incur significantly higher costs to fund domestic transfers. That said, our results do indicate some cost sensitivity among respondents. Support for high-cost domestic transfers falls from 74% at the \$32 international transfers option to 66% at the \$8 international transfers option.<sup>51</sup> This treatment effect is statistically significant, although the magnitude indicates that efficiency considerations are secondary. Even when international transfers are substantially cheaper than domestic action, only one third of Americans support international transfers; the majority would rather incur higher personal costs to direct action domestically, evidencing home bias over efficiency considerations.

## F.2 India Experimental Design and Results

We introduced a congruent set of tradeoffs to the general population in India. The first option proposes an increase in monthly household energy costs in order to compensate coal workers, with domestic emissions reduction in India proportional to emissions reduction in the US. Energy costs increased be either ₹140 or ₹2,240. The second option entails no cost

<sup>51</sup>In additional analyses (available upon request) we investigate the treatment effects by reporting the results of OLS regressions that adjust for pre-treatment covariates.

increase; compensation for Indian coal workers who lose jobs would come from the US, but India would be required to reduce a higher proportion of coal emissions relative to the US, with more Indian coal workers losing jobs. The increase in India’s emissions at the lower cost option parallels the structure of our US surveys. The question was worded as follows:

Suppose now that in order to combat climate change, the Indian government can choose between two options, which would result in the same reduction of global fossil fuel emissions.

Option A. Indians increase their average monthly household energy costs by [**Rs. 140 / Rs. 2,240**] to compensate Indian coal workers who lose jobs. However, India will have to reduce the same proportion of coal emissions as developed countries like the US.

Option B. Indians will not increase their household energy costs because the US will send money to compensate Indian coal workers who lose jobs. However, India will have to reduce a much greater proportion of coal emissions than the US and more Indian coal workers will lose jobs compared to Option A.

Q. If you had to choose, which option would you pick?

	Option A: Support for Home Costs [₹140/2,240] & Lower Compensation	Option B: Support for No-Cost Transfers & Greater Compensation
Cost: ₹140 (n=1005)	66%	34%
Cost: ₹2,240 (n=1034)	62%	38%

Table 4: *India general population samples and preferences for increased energy costs and reduction equity versus foreign aid, no energy cost increases and greater emission reductions.*

Table 4 presents our findings. Across both levels of cost increases, a majority of Indians chose to incur higher costs and have equitable emissions reductions across India and the US than to receive transfers on the condition that India reduce more emissions. Evidently, the home-country bias we documented among donor country voters extends to voters in recipient countries. Indian respondents indicate more support for the policy that results in higher personal material costs than cost-neutral international transfers that necessitate greater emission reductions.

At the lower (₹140) cost level, 66% of respondents oppose international transfers; at the higher (₹2,240) cost level, 62% of respondents oppose such transfers. This treatment effect is small in magnitude and only marginally significant statistically. Increasing the monthly household energy costs associated with domestic action does not meaningfully lead voters to favor international transfers. Presumably, Indians would rather incur personal material

costs and oppose financing from the US because they consider it unfair that the transfers will result in more Indian coal workers losing jobs than if the country pursued mitigation domestically.

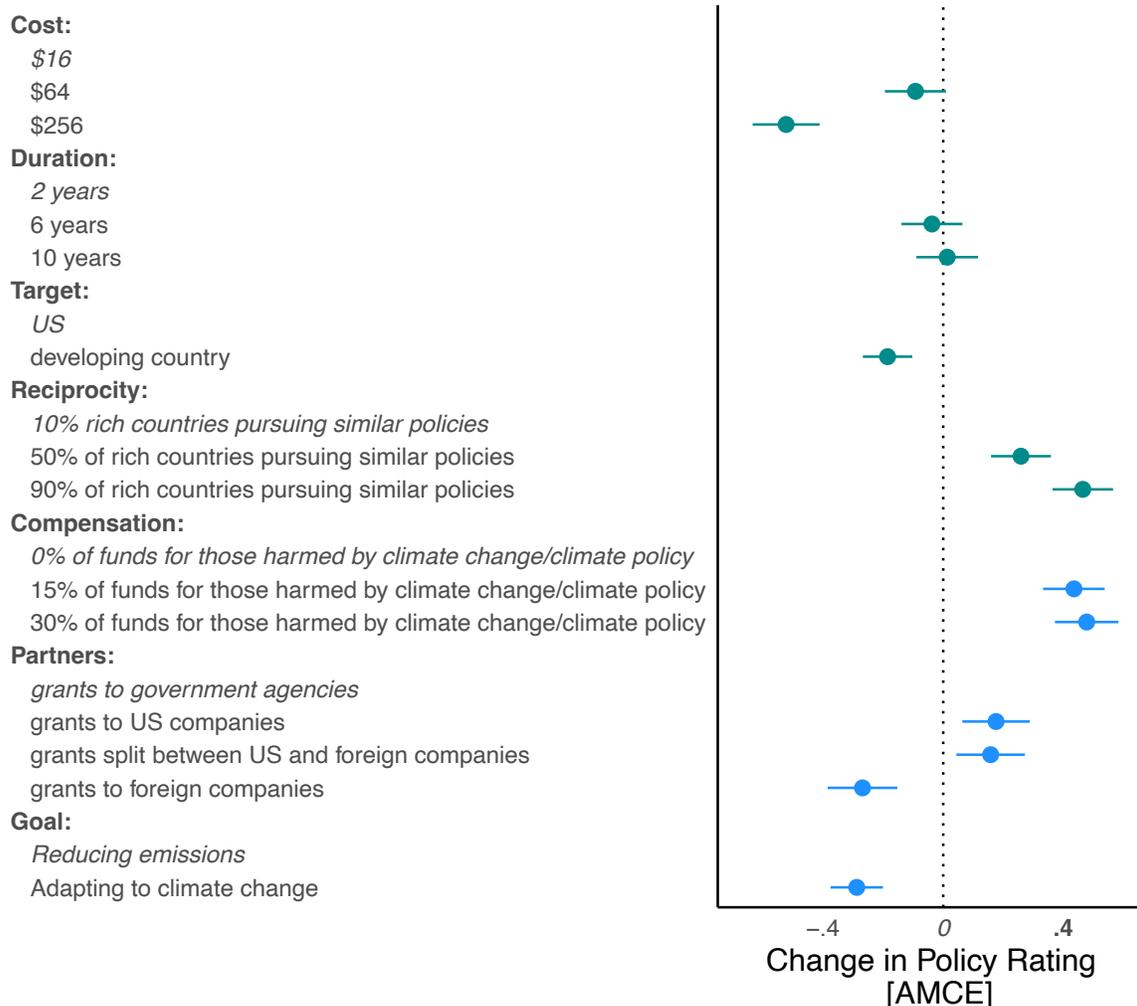
The India results corroborate the US findings. Home bias prevails among a majority of the electorate, which prefers domestic spending to economically more efficient international transfers, in both donor and recipient countries. Sharpening the global efficiency gains associated with transfers in the minds of voters does not augment support. These findings are instructive, but they raise a fresh set of questions. While a critical contingent of voters (approximately one-third in both the US and India) support international transfers, we cannot disentangle whether this is because—or in spite—of the compensatory features in the transfers.

## G Additional Conjoint Results

### G.1 Conjoint Results for Policy Ratings

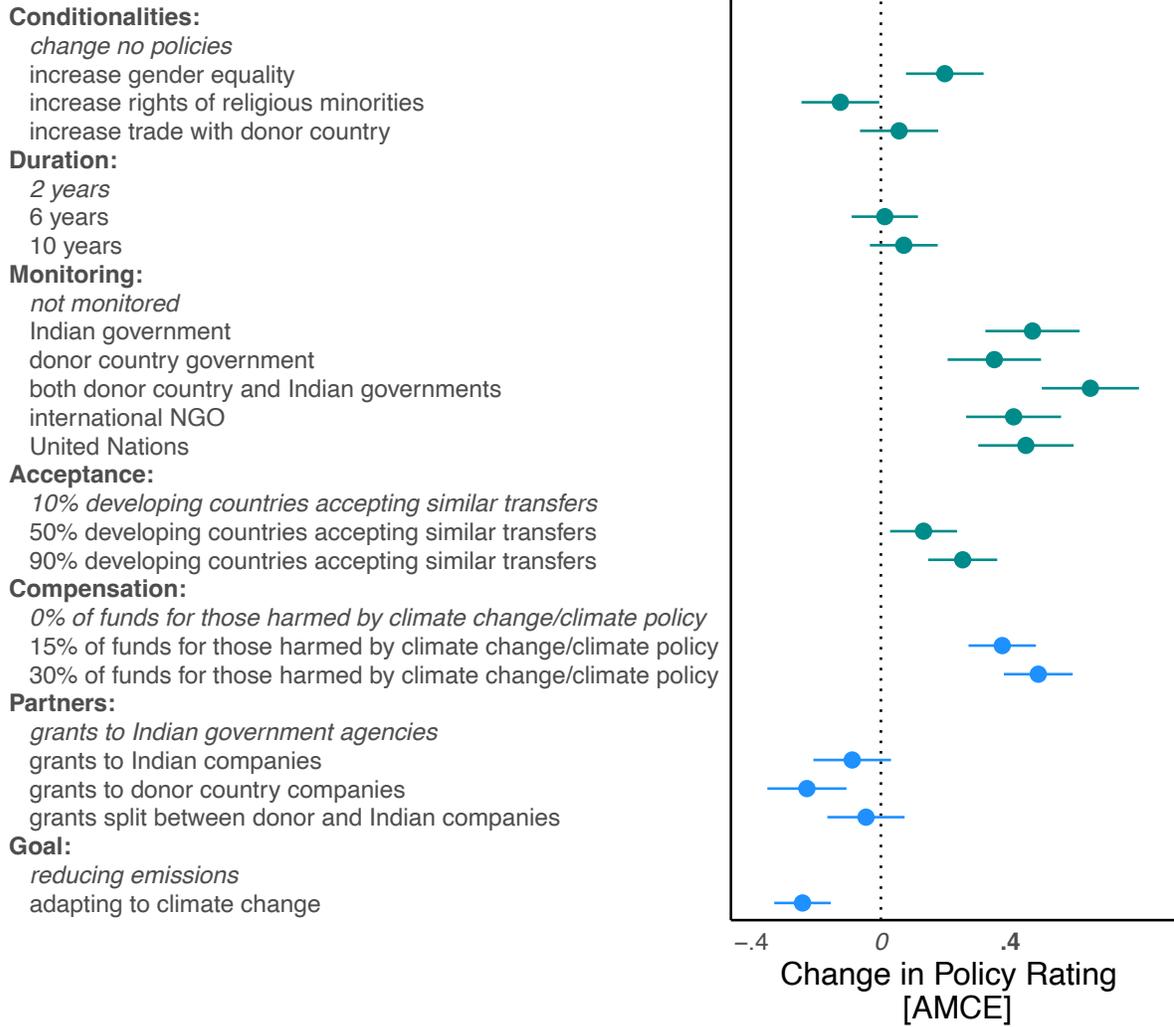
Figure 7 (US data) and Figure 8 (India data) report the conjoint results where the outcome variable is each policy's ratings (scale 1-10) instead of the choice between two policies. These results indicate that the main findings in the paper are not an artifact of the forced choice, and exist even in light of individuals with low tolerance for climate policies. On average the findings across attribute levels are consistent with the results reported in the main text.

Figure 7: US Policy Conjoint Results: Ratings



Average Marginal Component Effects (AMCE) calculated from the first conjoint rating experiment for the different dimensions with 95% confidence intervals (respondent-level clustered standard errors). Individual rating of each policy is the dependent variable. Points without bars indicate the reference category for a given dimension.

Figure 8: India Policy Conjoint Results: Ratings



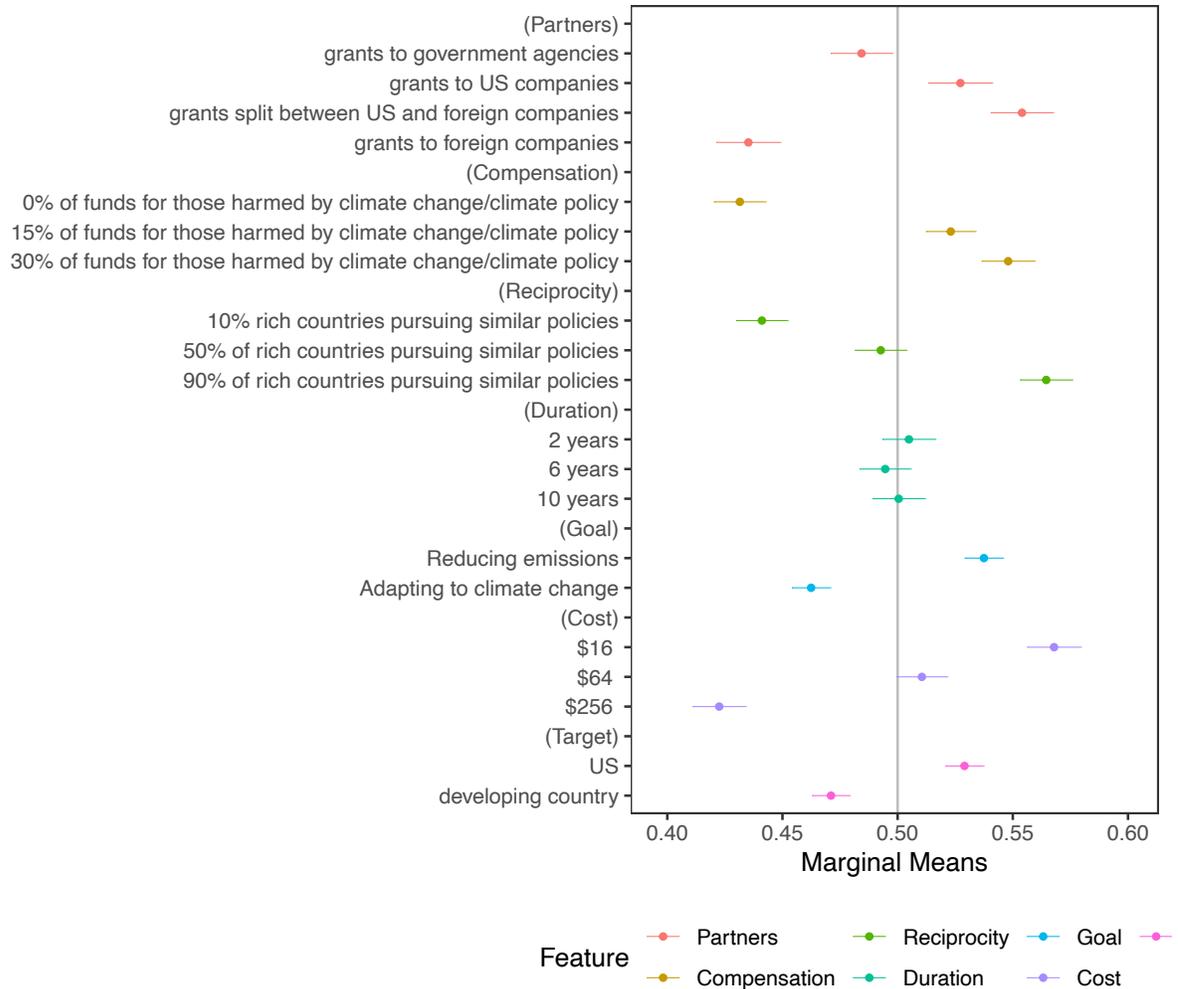
Average Marginal Component Effects (AMCE) calculated from the first conjoint rating experiment for the different dimensions with 95% confidence intervals (respondent-level clustered standard errors). Individual rating of each policy is the dependent variable. Points without bars indicate the reference category for a given dimension.

## G.2 Conjoint Results: Marginal Means

We calculate marginal means to describe the level of favorability toward climate transfer policies with particular feature levels, ignoring all other features. These calculations allow us to explore, for example, if regardless of conditionalities, goals and configuration of partners, there are levels of favorability for any projects based on levels of monitoring (a basic feature of any type of project, regardless of the source of funding). The marginal means for the US and India, which corroborate the average marginal component effects in the main text, are

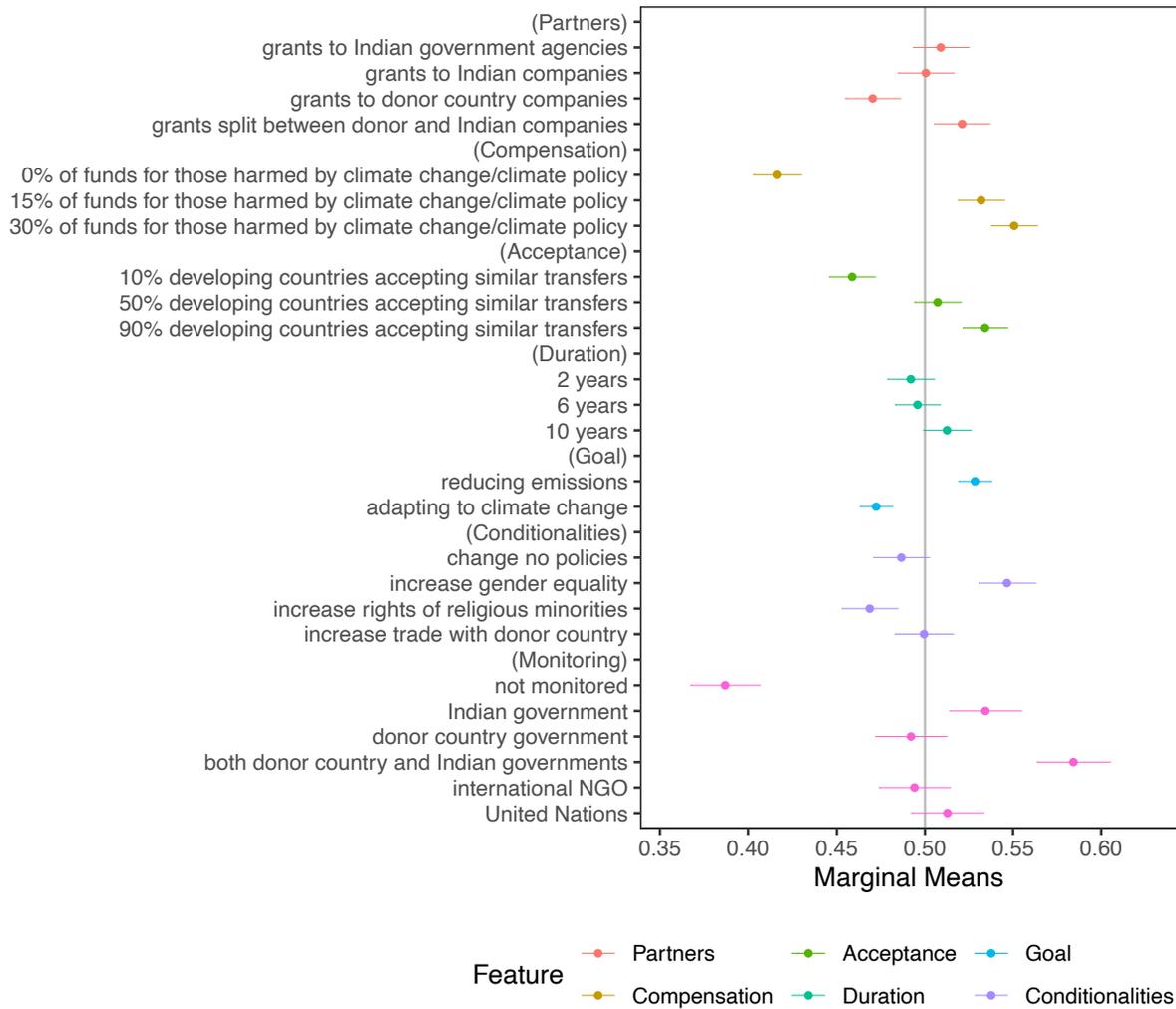
reported below. In the US, we find that climate transfer favorability drops most substantially for high levels of cost, 0% funds for vulnerable communities, and exclusive grants to foreign companies (are drastically below the 0.5 level). In India, we find that, with the exception of completely unmonitored projects and transfers that do not reach any vulnerables (which drastically decrease favorability), many features are around 0.5 or more.

Figure 9: US Policy Conjoint Results: Marginal Means



Marginal means calculated from the first conjoint rating experiment for the different dimensions with 95% confidence intervals (respondent-level clustered standard errors). Individual choice of each policy is the dependent variable. Points without bars indicate the reference category for a given dimension.

Figure 10: India Policy Conjoint Results: Marginal Means

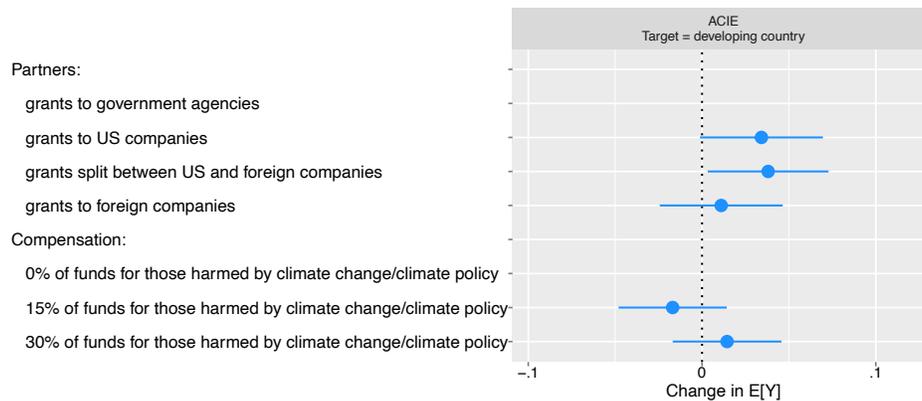


Marginal means calculated from the first conjoint rating experiment for the different dimensions with 95% confidence intervals (respondent-level clustered standard errors). Individual choice of each policy is the dependent variable. Points without bars indicate the reference category for a given dimension.

## H Conjoint Dimension Interactions

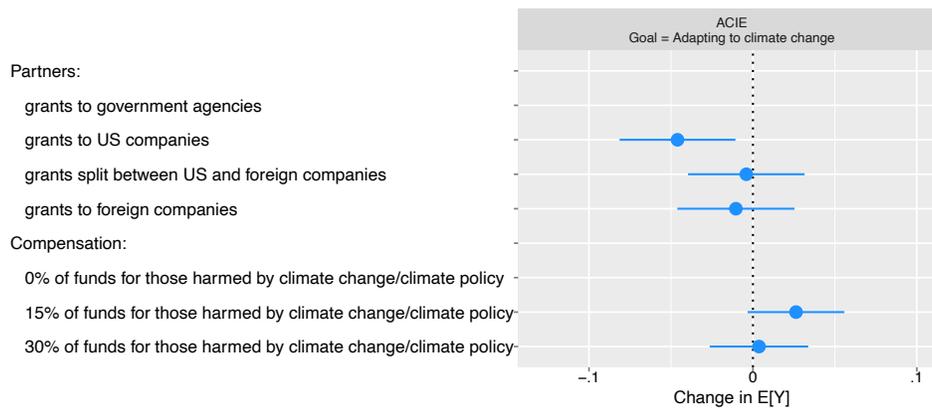
This Appendix reports the coefficients of the *partners* and *compensation* attributes conditional on fixed values of other dimensions. For the US, we fix the *target* to ‘developing country’ and the *goal* to ‘adaptation’. For India, we fix the different levels of *monitoring* (see description in the main text) as well as the *goal* to ‘adaptation’. The figures below report the average component interaction effects (ACIE) of these models where the dependent variable is the binary choice outcome. (Note that, as reported in the main text, for the US we also ran models where we subset the responses by the ‘developing country’ or ‘US’ levels of the *target* attribute, to find no major differences in the direction or significance of the other attributes).

Figure 11: US Policy Conjoint Results: Interactions with Developing Country as a Target



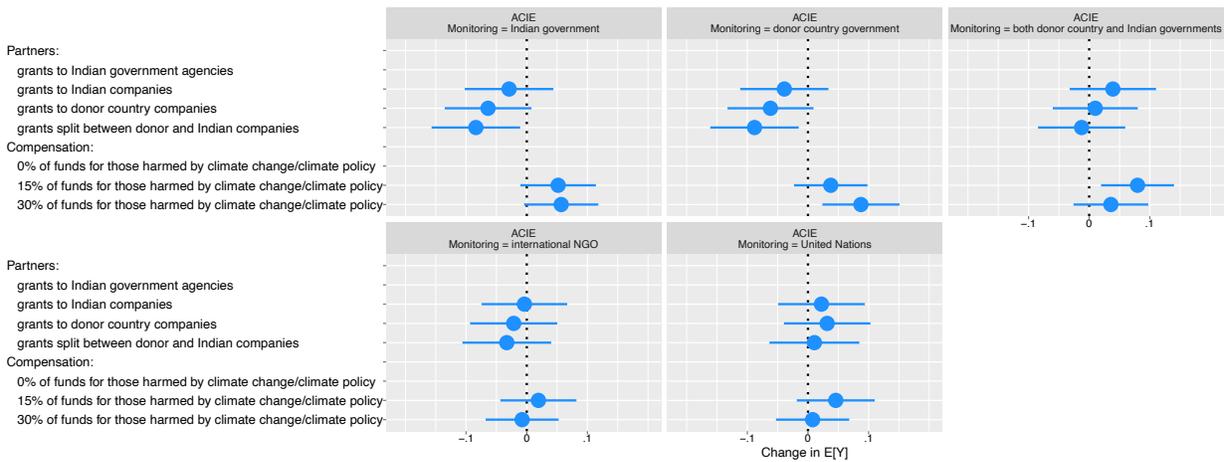
Average Component Interaction Effects (ACIE) calculated from the first conjoint choice experiment for the different dimensions with 90% confidence intervals (respondent-level clustered standard errors). Individual choice of each policy is the dependent variable. Points without bars indicate the reference category for a given dimension.

Figure 12: US Policy Conjoint Results: Interactions with Adaptation as the Goal



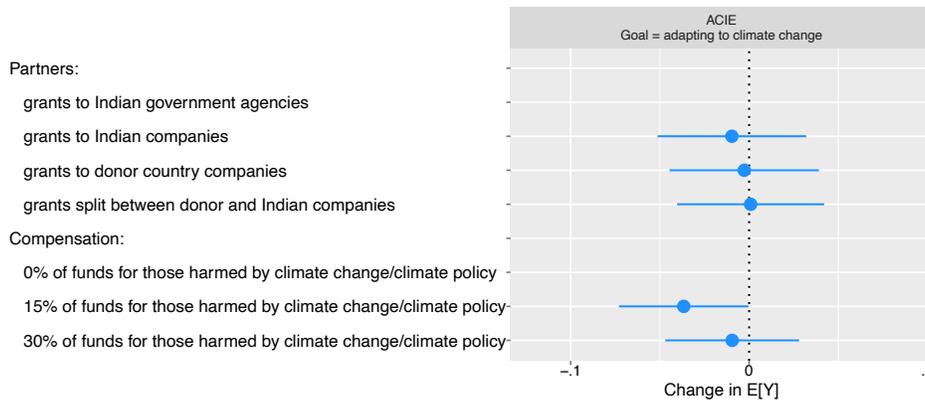
Average Component Interaction Effects (ACIE) calculated from the first conjoint choice experiment for the different dimensions with 90% confidence intervals (respondent-level clustered standard errors). Individual choice of each policy is the dependent variable. Points without bars indicate the reference category for a given dimension.

Figure 13: India Policy Conjoint Results: Interactions with Monitoring



Average Component Interaction Effects (ACIE) calculated from the conjoint choice experiment for the different dimensions with 90% confidence intervals (respondent-level clustered standard errors). Points without bars indicate the reference category for a given dimension.

Figure 14: India Policy Conjoint Results: Interactions with Adaptation as the Goal



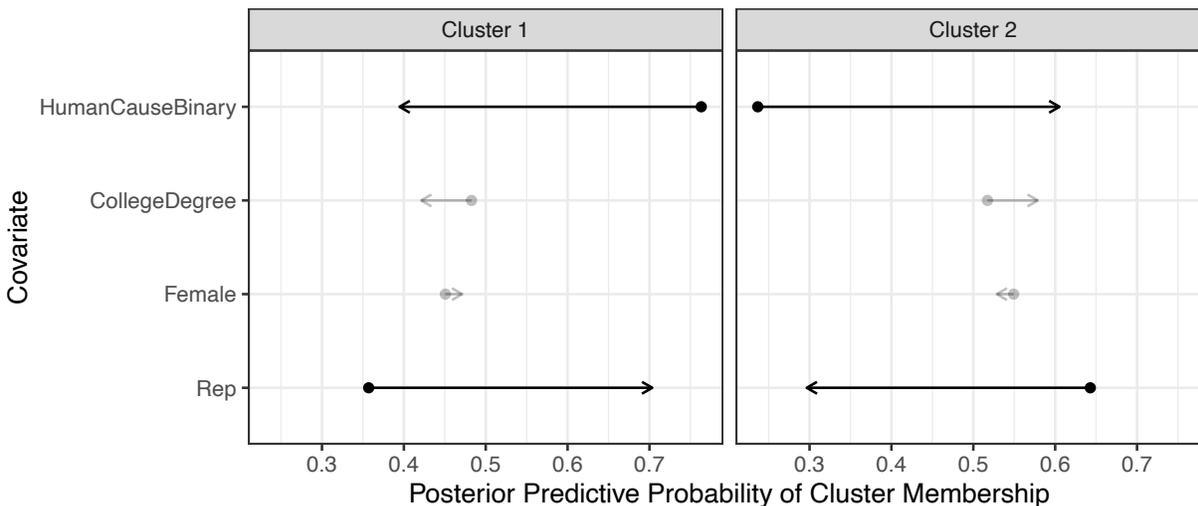
Average Component Interaction Effects (ACIE) calculated from the conjoint choice experiment for the different dimensions with 90% confidence intervals (respondent-level clustered standard errors). Points without bars indicate the reference category for a given dimension.

# I Heterogeneous Effects in Conjoint Experiments

The effect of different conjoint dimensions can vary across pre-treatment variables that we observe. There are a variety of approaches to do this, including subsetting the data by covariate values or interacting treatment levels and pre-treatment covariates and utilizing sparse regression methodologies (e.g., Ratkovic and Tingley, 2017). Here we leverage new advances by Goplerud, Imai and Pashley (2022) that approaches the heterogeneous effect problem by identifying clusters, or groups of units, that correspond to different treatment effects. Methodologically, the approach uses mixtures of Bayesian logistic regression models with a sparse prior to prevent over fitting and the identification of covariate groups following (Goplerud, 2021). Additionally, unlike the traditional conjoint analysis approach that ignores the features of the “other” profile that respondents consider in their choice and rating exercise, this approach builds this information in using a differencing approach. That is, in choosing between A versus B, it is helpful to know not just the treatment profile of option A but also of option B. For more on this, see Egami and Imai (2018).

We report here the heterogeneous effects identified in the US data (similar plots are available for the India data). For each of our conjoints we use a relatively small set of covariates as potential moderators of the treatment effect. For the US conjoints we use the party ID, whether they identify as female, whether they have a college degree, or (in the US case) whether the respondent believes humans are causing global warming. We must also pre-specify the number of clusters to allow, which we set at 2. Similar results hold for 3 clusters. We report here the choice outcome models.

Figure 15: Effects of covariates on group membership for US conjoint

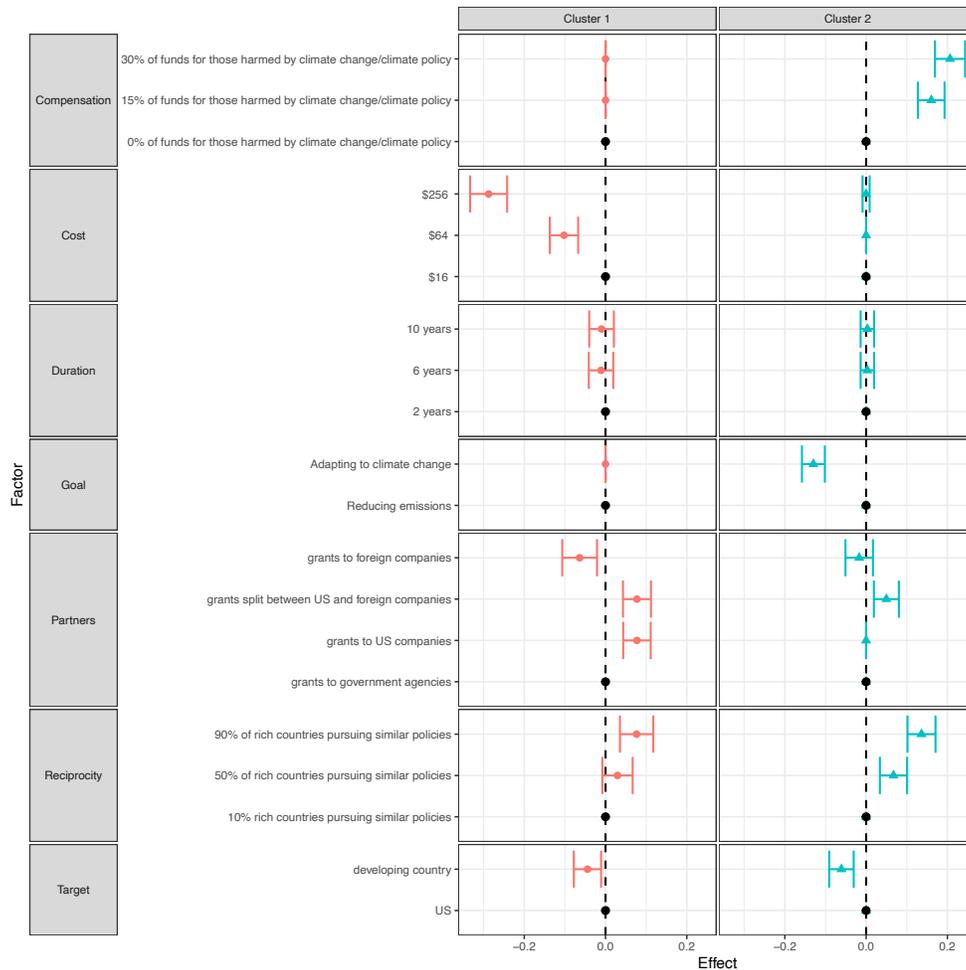


Probability of being in each group or cluster as a function of pre-treatment covariate values. Dark black lines indicate an effect with  $p < .05$ .

We see a salient effect of both being a Republican and believing the humans are causing

climate change on cluster membership. Republicans are more likely to be in the first cluster than in the second cluster. Believing that humans are causing climate change decreases the likelihood of belonging to the first cluster and increases the likelihood of belonging to the second cluster. Importantly, there is variation on the loading across attributes. The first cluster weighs the impact of *Cost*, heavily whereas the second cluster considers *Compensation* much more clearly. The role of *Partners* across the two clusters is heterogeneous, with individuals loading on the first cluster reacting more to this attribute but mattering for the second cluster too: While the first cluster negatively reacts to grants going to foreign countries, they significantly support grants to US companies (however, both clusters support the mixed foreign-domestic companies scenario). The effects of *Goal* activate more the second cluster.

Figure 16: Heterogeneous conjoint effects for US conjoint



Average Marginal Effects (AME) calculated from the conjoint using two latent “clusters”.

For India we considered a range of factors including identification with the BJP party, education, income, gender, and several measures of trust to evaluate heterogenous effects.

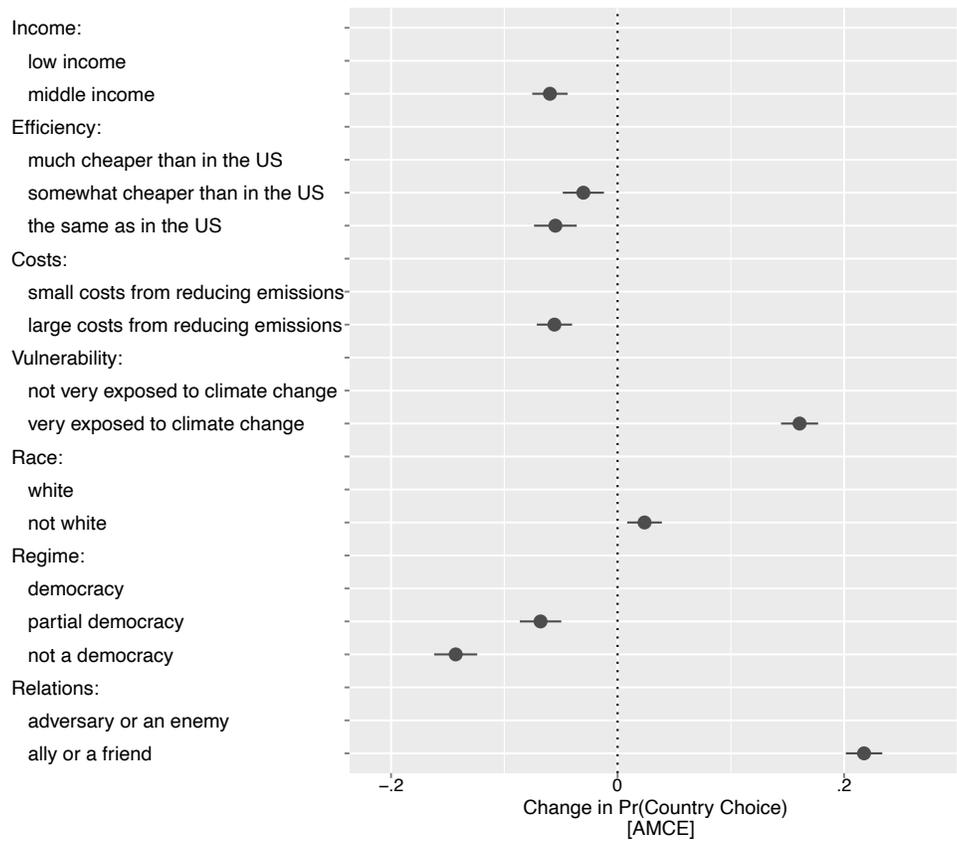
Unlike in the United States we did not find strong evidence of heterogeneous responses to the conjoint dimensions following the modelling in Goplerud (2021); there is also essentially no heterogeneity by levels of trust in national government. Subgroup analyses indicate some minor heterogeneous effects with respect to trust in the national government and employment in fossil fuel (results available upon request).

## **J Donor and Recipient Country’s Profiles Conjoint**

In a second US experiment embedded in the original survey, we asked: ‘We would now like your opinions on what types of countries should get funding for climate programs. Below we will describe different characteristics of the countries. You will indicate what types of countries you would prefer to support.’ The Indian survey included a similar experiment where we asked a similar question referring to potential donor countries for India.

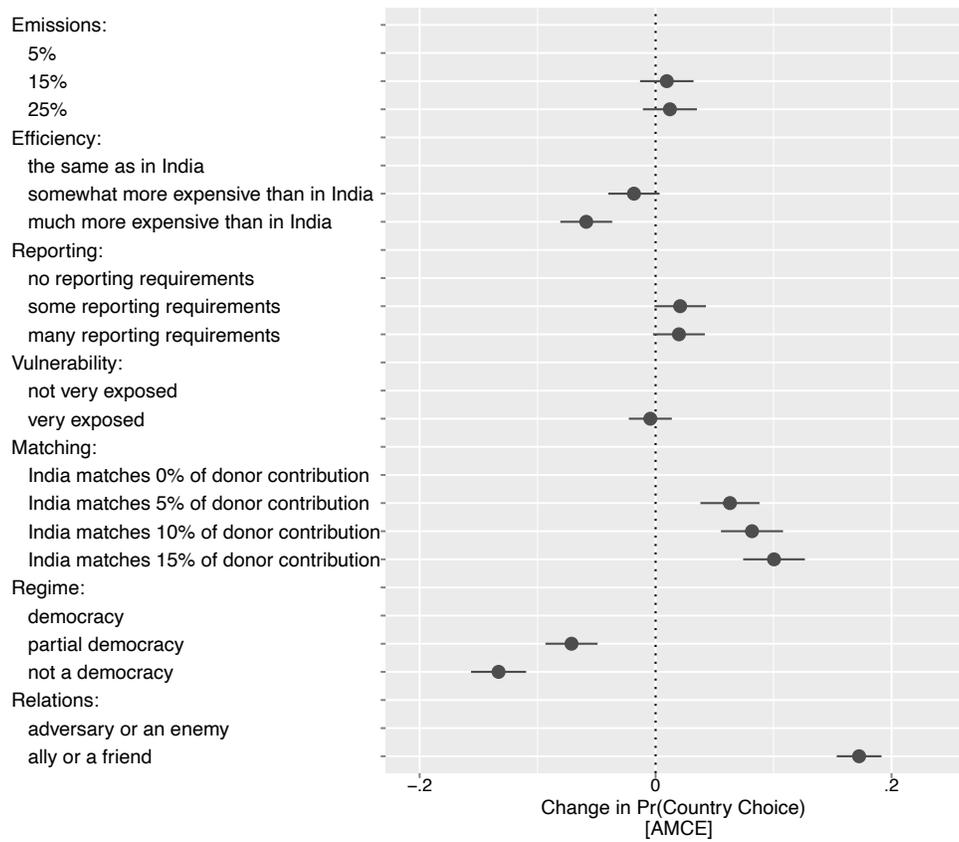
Figure 17 (US data) and Figure 18 (India data) report the conjoint results where the outcome variable is the forced choice (0-1) across the profiles of possible recipients (US case) or donors (India case). We distinguish between economic dimensions and geopolitical dimensions of variation (see main text). The results indicate that the geopolitical attributes of recipients/donors matter substantially more than their economic attributes.

Figure 17: US Profile Conjoint Results



Average Marginal Component Effects (AMCE) calculated from the second conjoint force choice experiment for the different dimensions with 95% confidence intervals (respondent-level clustered standard errors). Individual choice of each policy is the dependent variable. Points without bars indicate the reference category for a given dimension.

Figure 18: Indian Profile Conjoint Results



Average Marginal Component Effects (AMCE) calculated from the second conjoint force choice experiment for the different dimensions with 95% confidence intervals (respondent-level clustered standard errors). Individual choice of each policy is the dependent variable. Points without bars indicate the reference category for a given dimension.

## References

- Arasu, Sibi. 2022. "At UN climate summit, India to flex its negotiating muscles." *Associated Press* .  
**URL:** <https://apnews.com/article/science-business-india-united-nations-climate-and-environment-0db74fbab76933591b4a7d6e241a208d>
- Barasso, United States Senator Wyoming. 2022. "Biden Budget is Another Pipe Dream of Climate Extremism." *John Barasso, United States Senator - Wyoming* .  
**URL:** <https://www.barrasso.senate.gov/public/index.cfm/2022/3/barrasso-biden-budget-is-another-pipe-dream-of-climate-extremism>
- BBC. 2021. "COP26: India PM Narendra Modi pledges net zero by 2070." *BBC* .  
**URL:** <https://www.bbc.com/news/world-asia-india-59125143>
- Bearak, Max, Brad Plumer Lisa Friedman and Jenny Gross. 2022. "In a First, Rich Countries Agree to Pay for Climate Damages in Poor Nations." *The New York Times* .  
**URL:** <https://www.nytimes.com/2022/11/19/climate/un-climate-damage-cop27.html>
- Bhadani, Anita. 2021. "A Guide to Climate Reparations." *Yes! Solutions Journalism* .  
**URL:** <https://www.yesmagazine.org/environment/2021/11/29/climate-reparations>
- Bhat, Prerna, Nair Swathi and Milounee Purohit. 2022. "Rising interest rates only a mild snag in climate battle." *Reuters* .  
**URL:** <https://www.reuters.com/business/environment/rising-interest-rates-only-mild-snag-climate-battle-2022-09-28/>
- Biscaye, Pierre. 2024. "Donorsâ Dilemma: Bilateral versus Multilateral Aid Channels." <https://epar.evans.uw.edu/blog/donors-dilemma-bilateral-versus-multilateral-aid-channels>, Last accessed on 2024-01-23.
- Browne, Katherine Elizabeth. 2022. "Rethinking governance in international climate finance: Structural change and alternative approaches." *Wiley Interdisciplinary Reviews: Climate Change* 13(5):e795.
- Carnegie, Allison and Lindsay R. Dolan. 2021. "The effects of rejecting aid on recipients' reputations: Evidence from natural disaster responses." *The Review of International Organizations* 16(3):495–519.  
**URL:** <https://doi.org/10.1007/s11558-020-09393-y>
- Donor Tracker (SEEK Development). 2023. "Issue: Climate." <https://donortracker.org/topics/climate>, Last accessed on 2024-01-23.
- Doshi, Deepal and Matthias Garschagen. 2020. "Understanding adaptation finance allocation: Which factors enable or constrain vulnerable countries to access funding?" *Sustainability* 12(10):4308.

- Dreher, Axel, Valentin Lang, B. Peter Rosendorff and James Raymond Vreeland. 2022. “Bilateral or Multilateral? International Financial Flows and the Dirty-Work Hypothesis.” *Journal of Politics* 84:1932–1946.
- Egami, Naoki and Kosuke Imai. 2018. “Causal interaction in factorial experiments: Application to conjoint analysis.” *Journal of the American Statistical Association* .
- Epstein, Reid J. 2023. “Biden Will Get \$80 Million Ad Boost From Climate Group.” *The New York Times* .  
**URL:** <https://www.nytimes.com/2023/10/16/us/politics/climate-group-advertising-biden.html>
- Falduto, Chiara, Jolien Noels and Raphael Jachnik. 2024. “The New Collective Quantified Goal on climate finance.” *OECD/IEA Climate Change Expert Group* .
- Falkenberg, Max, Alessandro Galeazzi, Maddalena Torricelli, Niccolò Di Marco, Francesca Larosa, Madalina Sas, Amin Mekacher, Warren Pearce, Fabiana Zollo, Walter Quattrociochi and Andrea Baronchelli. 2022. “Growing polarization around climate change on social media.” *Nature Climate Change* 12(12):1114–1121. Publisher: Nature Publishing Group.  
**URL:** <https://www.nature.com/articles/s41558-022-01527-x>
- Friedman, Lisa. 2022. “Congress Offers \$1 Billion for Climate Aid, Falling Short of Biden’s Pledge.” *The New York Times* .  
**URL:** <https://www.nytimes.com/2022/12/20/climate/congress-climate-finance-biden.html>
- Furceri, Davide, Prakash Loungani, Jonathan David Ostry and Pietro Pizzuto. 2021. “Will COVID-19 Have Long-Lasting Effects on Inequality? Evidence from Past Pandemics.” *IMF Working Paper* .
- Gaikwad, Nikhar, Federica Genovese and Dustin Tingley. 2022. “Creating Climate Coalitions: Mass Preferences for Compensating Vulnerability in the World’s Two Largest Democracies.” *American Political Science Review* .
- Gampfer, Robert. 2014. “Do individuals care about fairness in burden sharing for climate change mitigation? Evidence from a lab experiment.” *Climatic change* 124(1):65–77.
- Gampfer, Robert, Thomas Bernauer and Aya Kachi. 2014. “Obtaining public support for North-South climate funding: Evidence from conjoint experiments in donor countries.” *Global Environmental Change* 29:118–126.
- gef. 2024. “Funding.” <https://www.thegef.org/who-we-are/funding>, Last accessed on 2024-01-23.
- Goplerud, Max. 2021. “Modelling Heterogeneity Using Bayesian Structured Sparsity.” *arXiv preprint arXiv:2103.15919* .

- Goplerud, Max, Kosuke Imai and Nicole E Pashley. 2022. “Estimating Heterogeneous Causal Effects of High-Dimensional Treatments: Application to Conjoint Analysis.” *arXiv preprint arXiv:2201.01357* .
- Goswami, Urmi. 2022. “Small island nations want India, China to contribute for climate fund - The Economic Times.” *The Economic Times* .  
**URL:** <https://economictimes.indiatimes.com/news/international/world-news/small-island-nations-want-india-china-to-contribute-for-climate-fund/articleshow/95570048.cms>
- Government of Canada. 2023. “Climate finance - Canada’s international climate finance commitment.”  
**URL:** <https://www.canada.ca/en/services/environment/weather/climatechange/canada-international-action/climate-finance/commitment.html>
- Green Climate Fund. 2024. “About GCF”. <https://www.greenclimate.fund/about#key-features>, Last accessed on 2024-01-23.
- Green, Fergus. 2015. “Nationally self-interested climate change mitigation: a unified conceptual framework.” *Grantham Research Institute Paper* 199.
- Guillot, Louise. 2022. “Macron goes green to attract red voters.” *POLITICO* .  
**URL:** <https://www.politico.eu/article/macron-goes-green-to-attract-red-voters/>
- Harvey, Fiona. 2022. “Sunak’s U-turns make net zero harder and keep bills high, watchdog warns.” *The Guardian* .  
**URL:** <https://www.theguardian.com/environment/2023/oct/12/sunak-u-turns-make-net-zero-harder-keep-bills-high-watchdog>
- Harvey, Fiona, Nina Lakhani and Damien Gayle. 2022. “Cop27: is it right to talk of ‘reparations’?” *The Guardian* .  
**URL:** <https://www.theguardian.com/environment/2022/nov/18/cop27-is-it-right-to-talk-of-reparations>
- Hourcadea, Jean-Charles, Dipak Dasgupta and Frédéric Gherzi. 2021. “Accelerating the speed and scale of climatefinance in the post-pandemiccontext.” *Climate Policy* 21:1383–1397.
- Ivanova, Diana and Richard Wood. 2020. “The unequal distribution of household carbon footprints in Europe and its link to sustainability.” *Global Sustainability* 3:1–12.
- Jensen, Liselotte and Johanna Roniger. 2023. “International climate finance: Status quo, challenges and policy perspectives.” *European Parliamentary Research Service* .
- Koshy, Jacob. 2021*a*. “India demands \$1 trillion as ‘climate finance’” *The Hindu* .  
**URL:** <https://www.thehindu.com/news/national/india-demands-1-trillion-as-climate-finance/article37438973.ece>

- Koshy, Jacob. 2021b. “India demands \$1 trillion as ‘climate finance’” *The Hindu* .  
**URL:** <https://www.thehindu.com/news/national/india-demands-1-trillion-as-climate-finance/article37438973.ece>
- Kozul-Wright, Richard. 2023. “A climate finance goal that works for developing countries.”  
<https://unctad.org/news/climate-finance-goal-works-developing-countries>,  
Last accessed on 2024-01-23.
- Kruse, Tobias and Giles Atkinson. 2022. “Understanding public support for international climate adaptation payments: Evidence from a choice experiment.” *Ecological Economics* 194:107321.
- Leiserowitz, Anthony, Edward Maibach, Seth Rosenthal and John Kotcher. 2021. Public Support for International Climate Action. Technical report Yale Program on Climate Change Communication.  
**URL:** <https://climatecommunication.yale.edu/publications/public-support-for-international-climate-action-september-2021/>
- Macquarie, Rob, Baysa Naran, Paul Rosane, Matthew Solomon, Cooper Wetherbee and Barbara Buchner. 2020. “Updated View on the Global Landscape of Climate Finance 2019.” *Climate Policy Initiative* .
- Macron, Emmanuel. 2023. “The Pillars of Green Wisdom | by Emmanuel Macron.” *Project Syndicate* . Section: Sustainability Now.  
**URL:** <https://www.project-syndicate.org/commentary/main-priorities-for-global-climate-policy-by-emmanuel-macron-2023-12>
- Masters, Mary Lou. 2023. “US To Hand Billions To United Nations’ ‘Green Climate Fund’ For Poor Countries | The Daily Caller.” *Daily Caller* .  
**URL:** <https://dailycaller.com/2023/12/02/joe-biden-admin-billion-dollar-commitment-united-nations-climate-change/>
- McSweeney, Robert. 2023. “Analysis: Which countries have sent the most delegates to COP28?” *Carbon Brief* .  
**URL:** <https://www.carbonbrief.org/analysis-which-countries-have-sent-the-most-delegates-to-cop28/>
- Mildenberger, Matto, Sara Constantino, Paasha Mahdavi et al. 2023. “How vulnerable publics in small-island states view climate change and international responses to it.” *Working Paper* .
- Murthy, Indu K. 2023. “‘Loss and damage’ fund talks leave developing nations at new disadvantage | Explained.” *The Hindu* .  
**URL:** <https://www.thehindu.com/sci-tech/energy-and-environment/loss-and-damage-fund-cop-28-transitional-committee-failure/article67514293.ece>

- OECD. 2023. “Climate Finance Provided and Mobilised by Developed Countries in 2013-2021: Aggregate Trends and Opportunities for Scaling Up Adaptation and Mobilised Private Finance, Climate Finance and the USD 100 Billion Goal.” <https://www.oecd-ilibrary.org/docserver/e20d2bc7-en.pdf?expires=1706725814&id=id&accname=ocid177456&checksum=6D494DC7BEE0FA2DF67BB039453713E0>, Last accessed on 2024-01-23.
- O’Garra, Tanya and Susana Mourato. 2016. “Are we willing to give what it takes? Willingness to pay for climate change adaptation in developing countries.” *Journal of Environmental Economics and Policy* 5(3):249–264.  
**URL:** <https://www.tandfonline.com/doi/full/10.1080/21606544.2015.1100560>
- Oxfam. 2023. “Climate Finance Shadow Report.” *Oxfam International* .
- PIB. 2023. “India at COP27 highlighted the foundational principles of equity and common but differentiated responsibilities and respective capabilities (CBDR-RC).” *Ministry of Environment, Forest and Climate Change* .  
**URL:** <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1895858>
- Pörtner, H.-O., D.C. Roberts, H. Adams, I. Adelekan, C. Adler, R. Adrian, P. Aldunce, E. Ali, R. Ara Begum, B. Bednar Friedl, R. Bezner Kerr, R. Biesbroek, J. Birkmann, K. Bowen, M.A. Caretta, J. Carnicer, E. Castellanos, T.S. Cheong, W. Chow, G. CissÃ© G. CissÃ© and Z. Zaiton Ibrahim. 2022. *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Technical Summary Cambridge, UK and New York, USA: Cambridge University Press.
- Ratkovic, Marc and Dustin Tingley. 2017. “Sparse estimation and uncertainty with application to subgroup analysis.” *Political Analysis* 25(1):1–40.
- Reisch, Lucia A., Cass R. Sunstein, Mark A. Andor, Friederike C. Doebbe, Johanna Meier and Neal R. Haddaway. 2020. “Mitigating climate change via food consumption and food waste: A systematic map of behavioral interventions.” *Journal of Cleaner Production* 279.
- Relief Web. 2023. “More than 90 UK civil society organisations have written to Prime Minister Rishi Sunak today to demand that he keeps his promise on climate finance.” *Relief Web* .  
**URL:** <https://reliefweb.int/report/world/more-90-uk-civil-society-organisations-have-written-prime-minister-rishi-sunak-today-demand-he-keeps-his-promise-climate-finance>
- Roewe, Brian. 2023. “Catholics ask Biden to deliver debt relief to countries most at risk from climate change.” *National Catholic Reporter* .  
**URL:** <https://www.ncronline.org/earthbeat/politics/catholics-ask-biden-deliver-debt-relief-countries-most-risk-climate-change>
- Sedik, Tahsin Saadi and Rui Xu. 2020. “A Vicious Cycle: How Pandemics Lead to Economic Despair and Social Unrest.” *IMF Working Paper* .
- Spring, Jake. 2022. “Lula cheered for new climate policies after Brazil election.” *Reuters* .

- Sunak, Rishi. 2023. "PM speech on Net Zero: 20 September 2023." *UK Government* .
- Syed, Armani. 2023. "Sonia Guajajara on Land Rights, Climate and Empowering Women | TIME."   
**URL:** <https://time.com/6320891/sonia-guajajara-interview-leadership/>
- Taylor, Chloe. 2019. "Brazil's Bolsonaro hits back at France's Macron over Amazon fires." *CNBC* .   
**URL:** <https://www.cnn.com/2019/08/23/brazils-bolsonaro-hits-back-at-frances-macron-over-amazon-fires.html>
- The Week. 2023. "COP28: PM Modi lands in Dubai; seeks climate fund, tech transfer for developing nations." *The Week* .   
**URL:** <https://www.theweek.in/news/world/2023/12/01/pm-modi-arrives-in-dubai-for-cop28-calls-for-climate-finance-tech-transfer-to-aid-developing-nations.html>
- The White House. 2021. "U.S. International Climate Finance Plan." <https://www.whitehouse.gov/wp-content/uploads/2021/04/U.S.-International-Climate-Finance-Plan-4.22.21-Updated-Spacing.pdf>, Last accessed on 2024-01-23.
- The White House. 2023. "Joint Statement from the United States and India." <https://www.whitehouse.gov/briefing-room/statements-releases/2023/06/22/joint-statement-from-the-united-states-and-india/>, Last accessed on 2024-01-23.
- The World Bank. 2023. "Climate Finance Update." <https://www.worldbank.org/en/news/factsheet/2023/10/10/climate-finance-update#:~:text=Climate%20Finance%20Update&text=The%20World%20Bank%20Group%20delivered,compared%20to%20the%20previous%20year>, Last accessed on 2024-01-23.
- UN-REDD Programme. 2024. "The Programme." <https://www.un-redd.org/about/programme>, Last accessed on 2024-01-23.
- UNFCCC Standing Committee on Finance. 2022. "Fifth Biennial Assessment and Overview of Climate Finance Flows." *United Nations Framework Convention on Climate Change (UNFCCC)* .
- United Nations. 2024. "Introduction to Climate Finance." <https://unfccc.int/topics/introduction-to-climate-finance>, Last accessed on 2024-01-23.
- U.S. Department of the State. 2023. "Progress Report on President Biden's Climate Finance Pledge." <https://www.state.gov/progress-report-on-president-bidens-climate-finance-pledge/>, Last accessed on 2024-01-23.
- U.S. Department of the Treasury. 2023. "Announcement of Pledge to Second Replenishment of the Green Climate Fund." <https://home.treasury.gov/news/>

press-releases/jy1942#:~:text=GCF%27s%20current%20portfolio%20consists%20of,growth%20opportunities%20for%20U.S.%20businesses, Last accessed on 2024-01-23.

Watson, Charlene, Liane Schalatek and Aurelien Evequoz. 2023. “The Global Climate Finance Architecture.” *ODI and hbs* .

Watts, Jonathan. 2023. “Lula’s bid to style himself climate leader at Cop28 undermined by Opec move.” *The Guardian* .

**URL:** <https://www.theguardian.com/environment/2023/dec/02/lula-climate-leader-cop28-brazil-undermined-by-opec-move>

Weikmans, Romain and J. Timmons Roberts. 2019. “The international climatefinance accounting muddle: is there hope on the horizon?” *Climate and Development* 11:97–111.

Weiler, Florian, Carola Klöck and Matthew Dornan. 2018. “Vulnerability, good governance, or donor interests? The allocation of aid for climate change adaptation.” *World Development* 104:65–77.

Working Group III contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. 2022. “Climate Change 2022: Mitigation of Climate Change.” *Intergovernmental Panel on Climate Change* .

Zografos, Christos and Paul Robbins. 2020. “Green Sacrifice Zones, or Why a Green New Deal Cannot Ignore the Cost Shifts of Just Transitions.” *One Earth* 20:543–546.