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Experimental evidence from five continents

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Patrik Michaelsen
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Sverker C. Jagers

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Patrik Michaelsen
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Abstract

Rapid global expansion of protected areas is critical for safeguarding biodiversity but depends on political action for successful implementation. Following ratification of the Kunming-Montreal Global Biodiversity Framework, most countries face an unprecedented increase in area-based conservation in adhering to its Target 3: conserving 30% of land, waters, and seas by 2030. These expansions prompt difficult trade-offs between conservation, social and economic interests. A key factor in securing legitimacy and practical feasibility for expansion programs is understanding what factors determine public support for them. Using novel survey and conjoint experiment data we show that, in eight countries across five continents, public opinion is 1) strongly in favor of the "30-by-30"-target, and 2) surprisingly consistent about policy priorities for the design of both international and domestic expansion regimes. We find that, at the international level, support increases with protection responsibilities equally split between countries, rich countries bearing higher costs, more countries cooperating, and placement trade banned. At the domestic level, support generally increase when nature-values are prioritized over social or economic values, and in many countries decrease when costs are borne by a general tax increase, parks are managed by private companies, and when access to parks is restricted. Together, our results demonstrate how protected area expansion policies can be shaped in line with public opinion and facilitate achieving 30% protected areas by 2030.

Patrik Michaelsen
Department of Political Science
University of Gothenburg
Affiliated to the Department of Management Engineering, and Economics, Linköping Uni.
patrik.michaelsen@gu.se

Aksel Sundström
The Quality of Government Institute
Department of Political Science
University of Gothenburg
aksel.sundstrom@pol.gu.se

Sverker C. Jagers
The Quality of Government Institute
Department of Political Science
University of Gothenburg
sverker.jagers@pol.gu.se

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Mass support for conserving 30% of the Earth by 2030: Experimental evidence from five continents

Patrik Michaelsen, Aksel Sundström, & Sverker C. Jagers

The Earth faces a rapid loss of biodiversity – endangering the quality of life for inhabiting animals, plants and humans. About one in eight species of plants and animals are currently at the risk of extinction.[1] A potent remedy is safeguarding nature through protected areas: geographical spaces with restrictions on human activity. Recent calls by conservationists suggest that at least 30% of land, waters, and seas need be conserved before 2030.[2–5] In December 2022, 196 nations ratified this "30-by-30"-target by adopting the *Global Biodiversity Framework* (GBF) at the COP15 meeting in Kunming-Montreal.[6] For the target to be achieved, however, an unprecedented expansion of protected areas is needed; global protection currently stands at 17.5% terrestrial and 8.5% marine coverage.[7] With five years left, approximately half of the countries in the world are less than halfway to reaching the target. China and the US would need to approximately double, and India – quadruple, their terrestrial protection coverage to reach this level.

However, successful expansion of protected areas entails extensive resource claims and requires navigating conflicts between conservation, social, and economic interests.[2,8] Efficient biodiversity protection will demand area use restrictions, including cessation of resource extraction and human relocation, affecting significant parts of the global population.[9–11] In direct financial costs, annual targeted investments of up to $200 billion may be needed, [6,12] comprising a steep increase from an estimated $24 billion spent in 2020.[10] The multifarious costs and difficult trade-offs prompted by protected area expansion suggests that protecting areas with the highest conservation benefits will not always be possible.[13] Instead, policymakers need to seek politically feasible compromises, and in this pursuit, tools and perspectives from the social sciences provide essential insights.[14]

Here, we focus on one central aspect of political feasibility – public opinion. Public opinion, the aggregate of individual views about a societal topic, shapes the scope of actions available

to political leaders, as catering to citizen preferences increases chances of staying in power.[15,16] Lack of support for protected area expansion could lead to conservation of less biologically valuable areas, or to protection not being expanded at all. Conservation regimes with low public support are also less likely to be long-lived[17], as grievances and promises of change tend to be used by political opposition to challenge such policies. Conversely, if conservation regimes are designed in ways garnering higher support, this means that more effective protections measures could be possible.[8] Echoing these concerns, the GBF (§7e) recognizes "mobilization of broad public support at all levels" an explicit priority.[6]

One way that political leaders can bolster support and avoid opposition is through careful policy design.[17–20] Both between and within countries, the 30-by-30-expansion actualizes issues where policy choices could lead to diametrically opposite levels of support. A fundamental theme connecting several of these concerns relates to fairness and division of burdens: how conservation and financial responsibilities should be allocated.[21,22] Notably, the GBF provides only minimal guidance in these regards. However, for policy support, fairness perceptions have been found to be one of the strongest predictors.[23] This suggests that understanding what divisions of burdens are perceived as more or less fair could be a key to shape effective expansion regimes.

Policy design factors, which tap into fairness concerns, exist at both international and domestic levels.[24] At the international level, even though a negotiated treaty is in place, countries need to agree on terms of cooperation for achieving a global expansion of protected areas – including where to place them and how to fund them. This is complicated by countries differing significantly in conservation potential, social costs of expanding protection, and financial capabilities to provide effective management. Recent estimates suggest the costs of a 30-by-30-expansion may fall disproportionately on lower-income countries,[25] echoing a history of criticism that area-based conservation projects provide global benefits at the expense of local communities.[26–28] Adaption and design of redistribution regimes or cap-and-trade-like systems are measures offering political leaders with opportunities to proactively shape policy to be compatible with public opinion. At the domestic level, additional public concerns and corresponding policy decisions arise, including what societal groups are directly affected by expansion,[29] how protected

areas are managed,[30] and what access and use restrictions are put on protected areas.[31] A key aim of our study is to investigate how design of such policy solutions influence opinion.

Our approach differs from previous conservation opinion research by focusing explicitly on expansion of protected area coverage, targeting general publics, and enabling quantitative comparisons between multiple countries. Previous research on attitudes towards protected areas has primarily been based on case studies, studying perceptions of single and existing (rather than expansion of) protected areas, voiced by communities in the closest vicinity.[32,33] While these studies generally find positive views of protected areas,[30,34] by design, they cannot reflect the scope of an undertaking at the scale of the 30-by-30-target. In addition, there is a need to move beyond cross-sectional research methodology to enable causal inferences about how policy design factors influence opinion. Thus, we identify a need for additional research informing what opportunities and pitfalls policymakers face when rapidly expanding protected areas across the world.

Here we present a study on the general public's support for the 30-by-30 target, using original survey data from 8 countries across 5 continents: Argentina, Brazil, India, Indonesia, South Africa, Spain, Sweden, and the US. Our study has two primary contributions 1) we measure overall support for a national protection of 30% of terrestrial and marine areas, and 2) we experimentally test how variations in policy design (trade-offs in arrangements and between priorities) influence support for protected area expansion regimes. By adopting a conjoint design in two experimental tasks, we can estimate causal effects of international and domestic policy factors on preferences for conservation expansion regimes based on a combined total of 194 112 observations.

The results show strong support for implementing the 30-by-30-target. Overall, 82.4% of our sample support the target, and only 6.6% report being against. Support is strongest in Brazil (90%), where the target is already close to achieved, and weakest in Sweden (66%), where approximately 14% terrestrial and sea coverage remains. Support levels are largely stable across individual differences in demographics, socio-economic status, and political perceptions and preferences.

Our experimental findings show that support tends to increase with protection responsibilities equally split between countries, rich countries bearing higher costs, more countries cooperating, and protected area placement trade not being allowed. At the domestic level, support generally increases when nature-values are prioritized over social or economic values, and decreases when costs are borne by a general tax increase, parks are managed by private companies, and when access to parks is restricted (though significant heterogeneity exists between countries).

Together, these findings suggest that general public opinion is currently not a threat to successful implementation of a rapid large-scale expansion of protected areas. Moreover, we identify core policy design factors on the international as well as on the domestic level that make such an expansion less likely to be opposed by the public.

Public support for the 30-by-30-target in nine countries

Our survey was fielded in May 2024, just over five and a half years before the vowed realization of the 30-by-30-target. At the time, Brazil (31% terrestrial, 27% marine protected areas) and Spain (28%; 13%) were the countries in our sample closest to achieving the target. Three countries were halfway or more with protection on either land or in the sea: Sweden (15%; 16%), the US (13%; 19%), and South Africa (9%; 16%). Another three countries lacked 18 or more percentage points in both area types: Indonesia (12%; 3%), Argentina (9%; 12%), and India (8%, 0.2%). Countries were selected to reflect wide geographical dispersal, including countries from both the global north and global south, and dispersal of current protected area coverage. Descriptions of the national conservation contexts are provided in the Supplementary Materials (Section 1).

Through market research company YouGov, we recruited nationally representative samples of approximately 1500 individuals from each country. Our final sample consists of data from 12 132 individuals (demographic details in Supplementary Table 1). Respondents answered an online questionnaire containing questions on 1) political preferences and perceptions, 2) a brief-

ing on biodiversity protection by means of protected areas (including current national coverage), 3) two conjoint experiments eliciting preferences between hypothetical expansion regimes, and 4) questions about perceived societal impacts and general opinion of the 30-by-30-target. The final two sections provide complementary approaches to understanding public opinion about conservation expansion regimes. In the first, policy design factors are experimentally manipulated to enable causal inferences about mechanisms driving support for expansion regimes. In the second, absolute levels of support for national implementation of the 30-by-30-target are assessed.

In the conjoint section, respondents indicated preferences between pairs of "hypothetical arrangements for how an expansion of protected areas could be managed" (Figure 1). Conjoint analysis subsequently allows us to estimate the effect that inclusion of a specific policy design factor has on the likelihood of a respondent preferring a hypothetical expansion regime (that is, estimation of average marginal component effects, "AMCEs"). Given random assignment of attribute levels, an AMCE can be interpreted as the causal effect that substituting one attribute level for another has on the dependent variable (here, preference between expansion regimes), averaged across all levels from other attributes.[35,36]

[Conjoint profiles]

[Conjoint attributes]	Please carefully review the agreements detailed below.	
	Agreement A	Agreement B
Protected area placement priority	*Prioritize what is best for nature*	*Prioritize what is best for the economy*
Restrictions on protected area use	*No personal use allowed (no picking, hunting, fishing)*	*Limited personal use allowed (some picking, hunting, fishing)*
Protected area management	*Private companies*	*State authorities and employees*
National funding of protected areas	*Funds are shifted from other environmental investments by the state*	*Funds are shifted from welfare investments by the state*
Which agreement do you prefer?	[ ]	[ ]

[Conjoint attribute levels]

Figure 1. **Conjoint task example**. An illustration of choice task participants, clarifications added in bold.

Our study included two separate conjoint experiments: one focusing on policy factors at the international level, and one focusing on policy factors at the domestic level. Each participant

made four rounds of binary choices between expansion regimes for each conjoint, resulting in a combined total of 194 112 rankings of hypothetical expansion regimes (97 056 per conjoint). The preregistrations for the data collection procedure, stimulus materials, and our analytic approach can be found here (https://osf.io/v63a2) and here (https://osf.io/fhvub).

In the international-level conjoint, respondents were instructed to think of expansion regimes ("conjoint profiles", Figure 1) as "global agreements your country could decide to join or not", and in the domestic-level conjoint, as "general national strategies (guidelines compatible with local exemptions) for how to manage current and future protected areas". Each conjoint included 4 policy design factors ("conjoint attributes"), containing 3-4 possible specifications ("conjoint attribute levels"; abbreviated in Figures 4-5, see Table 1 in Methods for details). The factors included in each conjoint were based on previously established connections with support for environmental policies or from being prominent issues in current debates about protected areas (Supplementary Materials Section 3).

Subsequently, respondents were asked about perceived societal impacts and overall support for implementing the 30-by-30-target in their country. We surveyed perceptions of how difficult achieving the target would be, how it would affect the economy, the well-being of the population, and then asked for overall support of the target. Overall support was intentionally measured last, and after the conjoint experiments, to increase the saliency of potential trade-offs and costs associated with implementing the 30-by-30-target (that is, to decrease naivete in overall opinion answers).

Overall support for 30-by-30-target

Our first finding is that there is strong overall support for protecting 30% of terrestrial and marine areas in one's own country (Figure 2). In the pooled sample, 82.4% report being in favor of the target, 6.6% report being against, and 11% are indifferent.

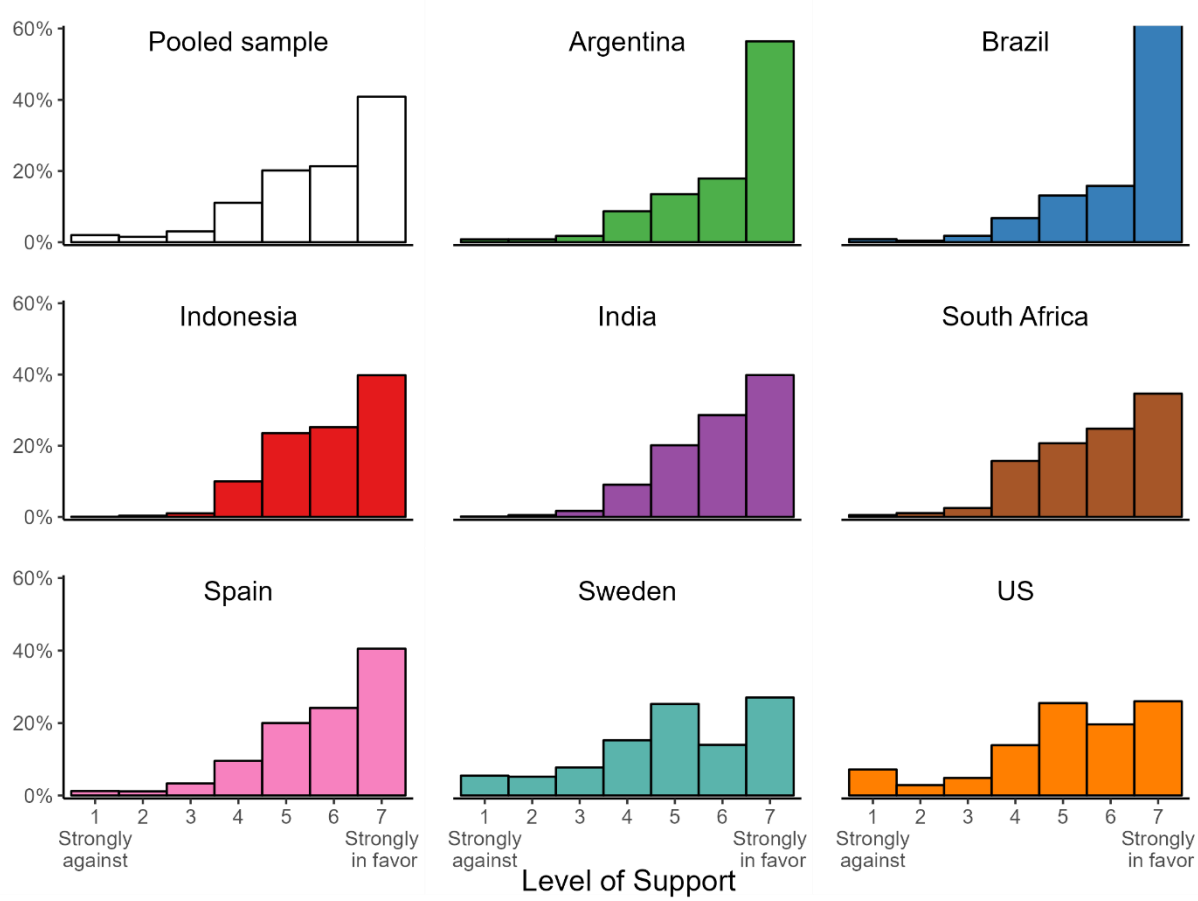

Figure 2. Overall support for 30% national protected area coverage by the year 2030. Bars represent counts of responses to the question "What is your overall opinion about the target of 30% protected areas by the year 2030 in [your country]?". N = 11 596, n per country = 1368-1485.

Support is consistently strong across all countries in our sample, but with apparent differences in magnitude. Most notably, Argentinian (87.9% supportive) and Brazilian respondents (90% supportive) skew more positively than average, whereas Swedish (66.3%) and US respondents (71.2%) are less strongly in favor (Supplementary Table S2 provides full descriptive results).

Regression analyses show that support for implementing the 30-by-30-target is associated with individual-level factors in generally similar ways evidenced for other environmental policy measures (Figure 3; Supplementary Tables S3-S12 provide OLS regressions).[23,37] Being a women, being concerned about the environment, supporting income redistribution, and having higher trust in government is associated with higher overall support. However, urbanicity, level

of education and income are not significant predictors of support in most countries, and we find age to be negatively associated.

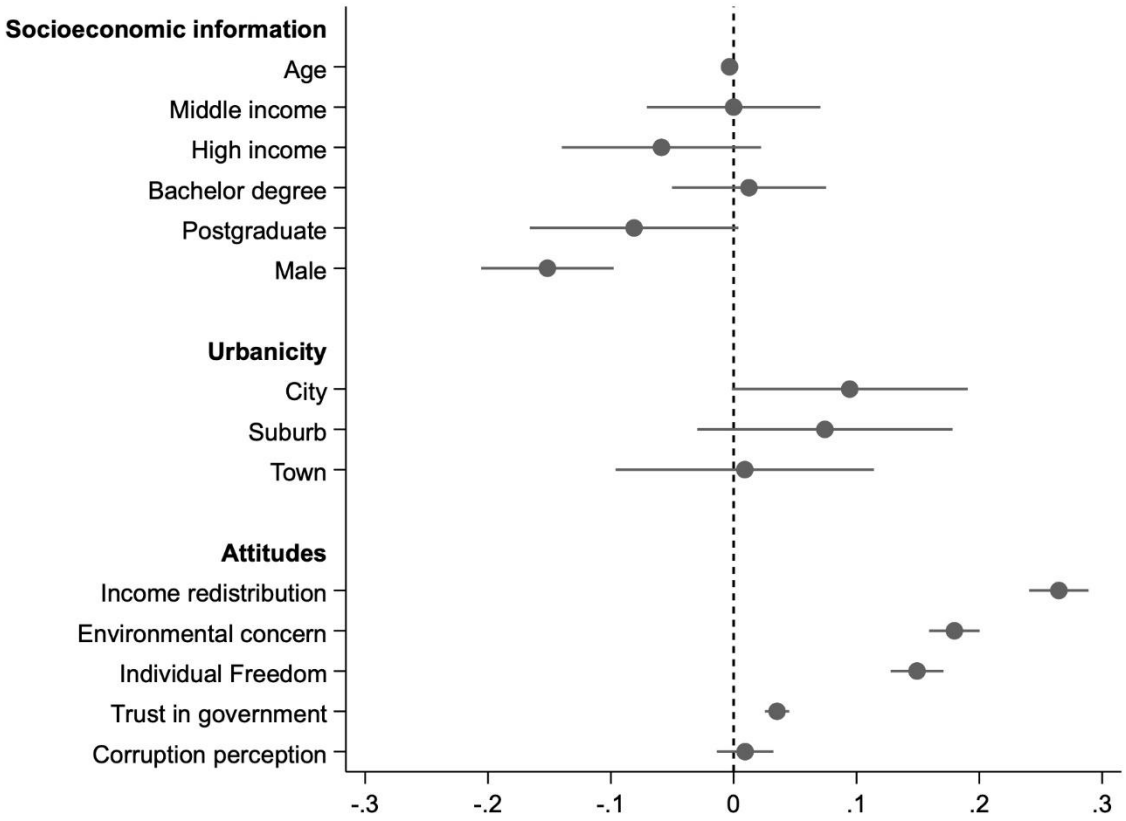

Figure 3. Regression-estimated coefficients predicting individual-level overall support for 30% national protected area coverage by the year 2030. Estimates (unstandardized) are derived from OLS regression predicting overall support for the 30-by-30-target. *Age* is a continuous variable (range 18-96); variables indicating *income*, *education*, and *urbanicity* are based on binary indicator variables compared to a reference category (*Low income*; *sub-bachelor degree level education; rural area*). Attitude variables are based on agreement with 5-point Likert scales (see Methods).

Conjoint experiment results

Having observed strong overall support, we now turn to how specific policy design factors of expansion regimes may promote or impede support. Results from the two conjoint experiments, containing trade-offs between policy design factors at international and domestic levels, respectively, are visualized in Figures 4 and 5 (Supplementary Tables 13-14 for regression output). In the figures, a baseline level is displayed at the top of each policy factor and subsequent colored dots indicate AMCE estimates compared to respective baseline values

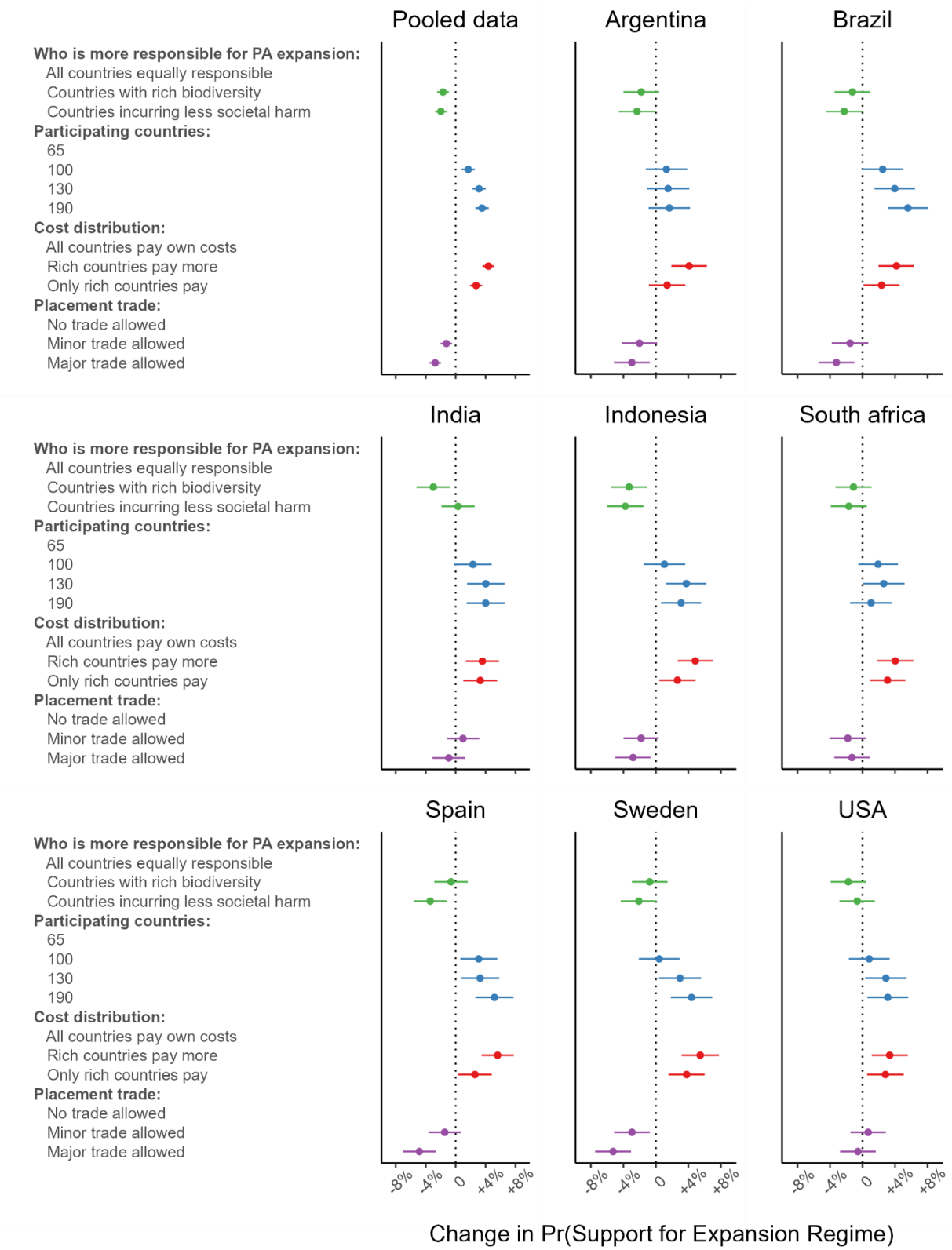

Figure 4. AMCE estimates for international-level conjoint experiment. Estimates show average marginal component effects with 95% confidence intervals for all countries separately (approx. 12 000 observations each) and pooled (97 056 observations). Estimates are based on Support for Expansion Regime regressed on binary indicator variables for policy design factors, with SEs clustered by respondent. The top level of each policy design factor indicates the reference category.

In the international-level conjoint (Figure 4), participants show sensitivity to variations in all policy factors included. In particular, expansion regimes are favored where rich countries pay a disproportionately high share of the costs associated with a global expansion of protected areas. Compared to a regime where all countries pay their own costs, having rich countries pay more for a global expansion leads to a 4.4% average increase in a regime being preferred (pooled sample). This effect is present and of a similar magnitude across all countries sampled, both more and less affluent ones. Similarly, regimes where only rich countries pay are preferred over an equal cost division almost unanimously across countries, leading to a 2.7% increase in likelihood that the expansion regime is preferred (pooled sample).

While expansion regimes with asymmetrical cost distributions are favored, respondents in our experiment generally prefer an equal, and non-negotiable, distribution of the responsibility to protect areas. This is shown in the top and bottom sections of Figure 4: the on average most preferred regimes are ones where all countries have an equal responsibility to protect areas, and where placement trade (an opportunity for countries to pay to place protected areas abroad) is not allowed. Notable exceptions are Indian and American respondents who are not deterred by placement trade opportunities but prefer them similarly to no trade.

The number of countries actively contributing to global expansion also matters for expansion regime support. Our results show that, compared to a baseline scenario where about one third of the world's widely recognized countries contribute, getting two thirds or more of the global community (130 countries) to actively contribute makes the regime 3.1% more likely to be preferred by respondents (pooled data). Stepping up to 190 contributing countries is, however, associated with only a modest additional increase of 0.4 percentage point.

In the domestic-level conjoint (Figure 5), we find generally weaker preferences between included policy factors and higher heterogeneity between countries. The strongest effect is found for what values that ought to guide placement and expansion of protected areas. Here, we find a preference for nature values: a regime prioritizing nature is 5.1% more likely to be preferred compared to a regime prioritizing economic values, and 2.8% more likely to be preferred compared to regime prioritizing social values (pooled sample). The effect vs. economic values is significant in each country, and the effect vs. social values is significant in all countries but Sweden and the US.

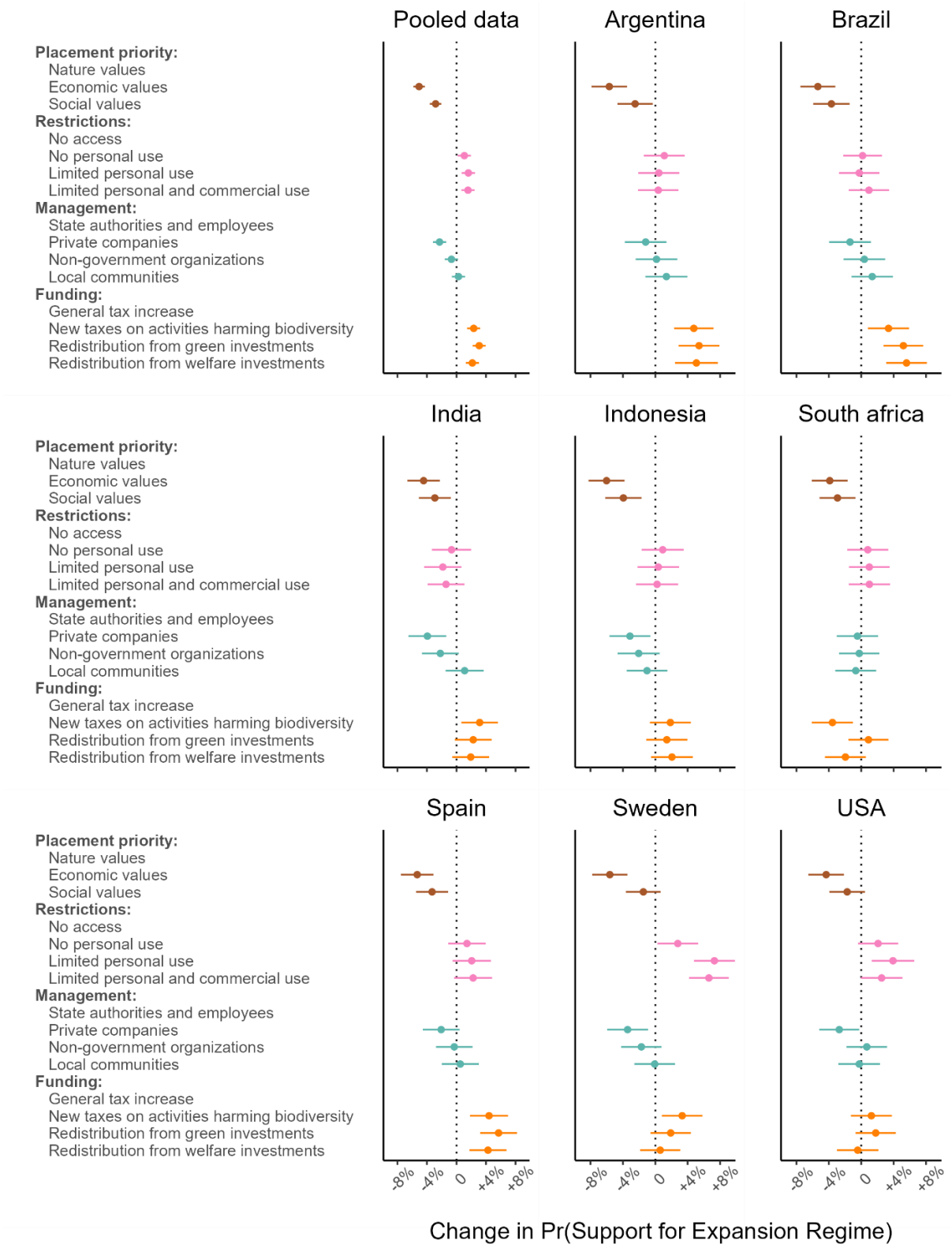

Figure 5. AMCE estimates for domestic-level conjoint experiment. Estimates show average marginal component effects with 95% confidence intervals for all countries separately (~12 000 observations each) and pooled (97 056 observations). Estimates are based on Support for Expansion Regime regressed on binary indicator variables for policy design factors, with SEs clustered by respondent. The top level of each policy design factor indicates the reference category.

Expansion regimes generally receive more support when funding is provided by taxes on activities harming biodiversity, or when funds are shifted from environmental or welfare investment (as compared to a general tax increase). However, heterogeneity between countries is evident. Indonesian, Swedish, and American samples show a weaker preference (generally not statistically significant), and for South Africa, adding new taxes to activities harming biodiversity is associated with less support for an expansion regime.

Protected area access restrictions, and management, matter less for preferences between expansion regimes in our experiment. Respondents from all countries but Sweden and the US are indifferent to the full range of restriction levels included. In particular for Swedes, however, designing an expansion regime with more lenient restrictions has a large positive effect. For management, Indian, Indonesian, Swedish, and US respondents are deterred by the possibility of protected areas being run by private companies.

Conjoint experiment robustness

The robustness of these results is explored in a series of additional tests. A notable finding from these analyses is that sensitivity to variations in the policy design factors included differs between respondents who support and oppose the 30-by-30-target overall (Supplementary Figure S11). In the international-level conjoint, respondents who oppose expansion are only influenced by how costs are distributed between countries, where expansion regimes where rich countries contribute the most are preferred (similarly to other respondents). In the domestic-level conjoint, the same group differ by putting a higher value on lenient restrictions (allowing sustainable commercial activity), and being indifferent between environmental, social and economic values guiding expansion efforts. We also find a similar pattern for rural respondents who, compared to other dwellers, put a higher value on all less restrictive access levels in our experiment, and appreciate social values equally to nature values in guiding expansion priority.

Besides these findings, however, results are highly consistent across heterogeneity in individual differences including for gender, age, income, education, urbanicity; attitudes towards income redistribution, environmental concern, and trust in government agencies; and perceptions of the societal impacts from protecting 30% of national areas (Supplementary Figures S1-S14).

Discussion

Successful implementation of the 30-by-30-target will be facilitated by, and sometimes possibly dependent on, broad public support. Our study provides two main results in this regard. First, mass opinion is strongly supportive of the "30-by-30"-target in the eight countries sampled. This suggests that while there may be many obstacles to this expansion, public opposition is currently not one of them. Second, views on how this expansion should be implemented are conditioned by policy design factors, many of which relate to fairness concerns. Our results suggest that, at the international level, support increases by countries dividing the responsibility to protect areas equally, by more countries actively contributing to the cause, and by not allowing countries to pay their way out of domestic protection and place protected areas in other countries. In particular, we also find a clear consensus across all countries in our sample that most of the costs needed to achieve the 30-by-30-target should be borne by richer countries. At the domestic level of implementation, designing current and future protected areas such that they benefit nature – rather than social or economic interests – induce less opposition. That is, people do not want "paper parks" but consider the environment fundamental even in trade-offs with other values. Among those opposing the 30-by-30-target, we find that cost dispersion and access restrictions are areas where policy design could increase support.

These results provide the first insights into how public opinion is affected by policy choice in expansion regime design. If an expansion of protected areas is perceived to impact countries unfairly, people in our experiments are less likely to support their country contributing. This speaks directly to ongoing efforts of financing global protected area expansion by means of an international fund:[38] according to the public, rich countries should stand for most of the funding. National governments will, however, also need to design national budgets to fund protected areas. Our results suggest that funding schemes relying on budget redistributions, or specific taxes on activities harming biodiversity, may generally increase public support. In addition, connecting to recent discussion about the benefits of privately governed protected areas, [39–42] we also find that this management form, compared to state governance, decreases public support for protected areas in most countries.

Apart from a novel focus on attitudes towards large-scale expansion of protection areas, our study's strengths lie in providing quantitative data from a relatively large and diverse set of countries, and a combination of cross-sectional and experimental methodologies. The study is, however, naturally also subject to limitations, and we have several suggestions for a research agenda that builds on this work. First, it is possible that many sampled respondents were not well-informed about the "30-by-30"-target before taking part in the survey. The relatively small effect sizes in our experiments could be interpreted as support for this assumption (the effect sizes are, however, comparable to previous research using similar methods[17-20]). Therefore, our results may be viewed as likely reflecting preliminary opinions which could develop with knowledge and potential politicization of the issue. Of note, however, is that our experiments show similar responses to variations in policy design between countries already close to 30% protected areas (Brazil, Spain) and others. This suggests that substantial protected area coverage does not necessarily change what policy priorities people prefer from political leaders. Thus, even if some respondent attitudes were formed in a naïve state, it is plausible they could mature without radical change. Future research should however track the development of political opinion as expansion efforts, and therefore knowledge and potentially polarization, ramp up. Second, we acknowledge that the benefit of designing a survey with a multi-country scope has the drawback of communicating a generalized and abstract picture of potential costs and trade-offs to respondents. For this reason, we urge future public opinion research to also study expansion attitudes in multiple local and contextualized settings (similar to previous research on attitudes toward existing protected areas), where societal goal conflicts may be more relatable. Third, while our focus is on mass support, we recognize that opposition to the 30-by-30-expansion could come from organized special interests or other groups perceiving protected areas as harmful.[27] Such actors may vary widely, from those whose livelihood is dependent on farming (an activity that in many places will face restrictions) to those living in communities that may face evictions. Future research could add valuable insight by targeting these groups explicitly, and for instance study what compensatory policies could mitigate opposition. Fourth, the 30-by-30-target have received criticism within conservation science for substituting quality of conservation with mere quantity of conservation.[43–45] In the present article we have focused on public opinion towards Target 3 of the GBF, as numerically defined. Naturally, efficient biodiversity

protection demands substantive measures of different sorts, and future research ought to extend the present work by taking a public opinion approach to studying these.

In conclusion, designing viable expansion policies is a necessary and urgent step for political leaders aiming to implement large-scale protected area expansion. Failure to implement the 30-by-30-target may come at dire costs, in the form of habitat destruction and rapid biodiversity loss; in the long run threatening continuation of life as we know it. Our results show that people across eight diverse countries are supportive of the 30-by-30-target, but that policy design choices can facilitate or hinder favorable public opinion towards protected area expansion. In line with previous research on environmental policy support, one of the strongest and most consistent underpinning themes is perceived fairness.

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Methods

Ethical considerations

The informed consent form, study materials and data collection procedures used for this study were reviewed and approved by the Swedish Ethical Review Authority (Dnr 2023-06835-01). The two conjoint experiments were preregistered (data collection procedure, stimulus materials, and analytic approach), and the registrations were followed unless otherwise noted (see below). The preregistrations can be found here (https://osf.io/v63a2) and here (https://osf.io/fhvub). All measures collected are reported, with the exception of questions posed later on in the survey (these are considered parts of other research projects).

Respondents and sampling procedures

Data collection commenced in mid-May 2024, approximately simultaneously for all sampled countries. Respondents were recruited through online panels maintained by Yougov (www.yougov.com), or local affiliates thereof, and paid according to internal standards. Samples were recruited to be representative, or online representative, with regards to age, sex, and region (applying demographic weights to analyses reported in the manuscript does not substantively change the interpretation of the results, unless otherwise stated). Demographics of the final sample are displayed in the Supplementary Materials (Table S1).

Survey materials

Participants answered an online questionnaire consisting of, in order: 1) background variables, 2) opinions about age compositions in political decision-making committees (5 items, not related to the present project), 3) conjoint experiment 1, 4) conjoint experiment 2, 5) questions on perceptions of and support for the 30-by-30-target. Presentation order of the conjoint experiments was counterbalanced. Before starting the conjoint experiments, participants were also generally informed about protected areas and presented the current percentage of terrestrial and marine protection in their country. Specifically, we stated in the survey that "Next we will ask you for your opinions about national parks, nature reserves, and other forms of protected areas.

Protected areas are geographical spaces created for the purpose of protecting biological diversity ("biodiversity"). They provide beneficial environments for animals, plants, and ecosystems, by putting limitations on human activity. In protected areas, businesses can typically operate only under strict sustainability regulations, or they are not allowed to operate at all. For individuals, hunting of animals and picking of plants is generally strictly limited or completely forbidden. Sometimes, access to parts of a protected area may not be allowed at all". Immediately after reading this information, respondents were required to confirm their comprehension by answering a comprehension check (see below).

Measures

In the background variables section, the following measures were included:

Measure	Item	Scale
Environmental concern	"Environmental goals should not stand in the way of economic progress"	1-5, Strongly disagree to Strongly agree (reverse coded)
Income redistribution	"Income differences in society should be reduced"	1-5, Strongly disagree to Strongly agree
Individual freedom	"The government should do more to advance society's goals, even if that means limiting the freedom and choices of individuals"	1-5, Strongly disagree to Strongly agree
Corruption perception	"*In [country] it is common that citizens have to use bribes to get access to public services that they are entitled to"*	1-5, Strongly disagree to Strongly agree
Trust in government	*"How much do you personally trust each of these institutions?" [Governmental agencies]*	1-10, Do not trust at all to Complete trust
Protected area proximity	*"How close to a protected area do you live?"*	10 km / 10 to 50 km / More than 50 km / Don't know

A second measure for environmental concern ("I am concerned about the environment") was included but dropped from subsequent analyses due to high skewed. A second measure of trust (in Parliament) was included but dropped from subsequent analyses from high consistency with trust in governmental agencies. Demographic information on respondents' age, gender, urbanicity, level of education, income, and region was additionally provided by Yougov.

After completing the conjoint experiments, participants answered the following items:

Measure	Item	Scale
3030 difficulty	"How difficult do you think meeting [the target of 30% protected area by year 2030] would be in [country]?"	1 - 7, Not at all difficult to Extremely difficult
3030 economic impact	"How do you think meeting [the target of 30% protected area by year 2030] would affect the economy in [country]?"	1 - 7, Very negatively to Very positively
3030 wellbeing impact	"How do you think meeting [the target of 30% protected area by year 2030] would affect the well-being of people in [country] in general?"	1 – 7, Very negatively to Very positively
3030 indigenous people wellbeing	"How do you think meeting [the target of 30% protected area by year 2030] would affect the well-being of indigenous peoples in [country]?"	1 – 7, Very negatively to Very positively
3030 overall opinion	"What is your overall opinion about the target of 30% protected areas by the year 2030? "	1 – 7, Strongly against to Strongly in favor

For parsimony and comparability with other research on public opinion for environmental policy measures, the measures on perceived societal impacts from the 30-by-30-target are not included in our main analyses of what explains Overall opinion of the target. Parallel questions were also asked for the 50-by-50-goal outlined in the Global Biodiversity Framework (results for these measures are reported elsewhere).

Data quality checks

In addition to the quality assurance measures taken by the survey panel provider, we also included two comprehension checks related to the survey materials. A first check verified respondents' understanding of "what is meant by a 'protected area' in this survey", and a second pertained to the instructions of the conjoint experiment task. These were posed in multiple choice-formats, and the results of our article only include answers from respondents correctly answering both.

Conjoint experiments

In the two conjoint experiments (focusing on international-level and domestic-level policy factors, respectively), respondents viewed pairs of conjoint profiles (hypothetical expansion regimes) and indicated their preference between them as a choice (no ratings of profiles were collected). For each conjoint experiment, every participant chose between 4 pairs of profiles (that is, were displayed a total of 8 profiles). Respondents completed both conjoint experiment upon taking the survey, with the presentation order counterbalanced between individu-

als. The two tasks were introduced individually and respondents were informed that their content was separate. Details on all conjoint attributes and levels are displayed in Table 1. As a part of the instruction before starting the conjoint experiment, participants were displayed a similar table but with the information on levels omitted.

Table 1. Policy design factors and values in conjoint experiments.

Panel A. International-level conjoint		
Conjoint attribute	**Attribute description**	**Conjoint attribute levels**
Distribution of protection responsibility	This says how the responsibility to protect 30% of the earth is divided between countries	1. All countries have an equal responsibility to protect areas 2. Biodiversity-rich countries have a higher responsibility to protect areas 3. Countries that can protect areas while incurring less harm to society have a higher responsibility to protect areas
Number of participating countries	This says how many countries join and actively participate in the agreement	1. 65 out of 193 2. 100 out of 193 3. 130 out of 193 4. 190 out of 193
Distribution of global expansion costs	This says how the costs of protected area expansions are distributed between countries	1. All countries pay their own expenses 2. Rich countries pay more than poor countries 3. Only rich countries pay
Placement trading between countries	This says if countries can pay other countries to protect areas for them	1. Countries cannot place their protected areas in another country 2. Countries can pay for a minor portion of their protected areas to be placed in another country 3. Countries can pay for a major portion of their protected areas to be placed in another country
Panel B. Domestic-level conjoint		
Conjoint attribute	**Attribute description**	**Conjoint attribute levels**
Protected area placement priority	This says what the state should prioritize when selecting new areas to protect	1. Prioritize what is best for nature 2. Prioritize what is best for the economy 3. Prioritize what is best for people
Restrictions on protected area use	The state will strive to run protected areas with this level of restrictions	1. No access allowed 2. No personal use allowed (no picking, hunting, fishing) 3. Limited personal use allowed (some picking, hunting, fishing) 4. Limited personal use AND sustainable commercial use allowed
Protected area management	This says who will be in charge of managing protected areas	1. State authorities and employees 2. Private companies 3. Non-government organizations 4. Local communities
National funding of protected areas	This says how funding for the expansion of protected areas will be provided	1. General tax increase 2. New special taxes on activities that harm biodiversity 3. Funds are shifted from other environmental investments by the state 4. Funds are shifted from welfare investments by the state

Conjoint data analysis

As preregistered, we took an exploratory approach to analyzing the conjoint experiment data and did not pose specific hypothesis about how variations in policy design factors would influence preferences for expansion regimes.

All policy design factors were split into binary indicator variables, with the first value (as listed in Table 1) treated as reference category. Regression analyses were conducted on the data by means of the cjoint package[46] for R. Standard errors were clustered at the individual level, and an alpha level of .05 (two-tailed) was used to infer statistical significance.

Deviations from preregistrations

In addition to the eight countries for which results are reported in the main text, our data collection also included a sample of 1000 respondents from Kenya. Due to low panel availability, we were informed beforehand by the market research company that it was not possible to guarantee the same level of data quality for this sample. We therefore received data for a total of 1003 respondents, *before* comprehension check exclusions were applied. Of these, only 269 passed the checks. Due to additional data quality concerns, and the marked difference in sample size compared to our samples from other countries, we have moved reporting of the Kenya sample results to the Supplementary Materials (Section 5).

Works Cited:

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Supplementary Materials: Mass support for conserving 30% of the Earth by 2030: Experimental evidence from five continents

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Section 1: Country Profiles

Argentina

% Protected Areas on land	% marine Protected Areas
8.69	11.77

Source: UNEP-WDPA, 2024, January

Argentina has a long history of conservation efforts. In 1922, the country established the first national park in Latin America, marking the beginning of its commitment to protecting biodiversity.[1] However, Argentina's biodiversity has faced significant threats over time. The country's economy is heavily reliant on large-scale agriculture, including soybean farming and livestock production. Argentina is also one of the world's largest beef exporters, a status that has contributed to widespread deforestation, particularly the loss of native forests. In 1997, 18% of the country's mammal species were considered threatened. However, there have been successes in conservation, such as the reduction in endangered amphibians from 32% to 29% between 2000 and 2012. Since 2014, research initiatives have also been launched to improve understanding of the country's marine resources.[2]

However, these conservation efforts are now facing significant challenges. The government of President Javier Milei has announced cuts to both environmental and scientific budgets, and the Ministries of Environment and Sustainable Development have been abolished.[3] These actions, combined with Argentina's profound economic struggles, pose a threat to ongoing preservation initiatives. While researchers have called for an expansion of protected areas to combat deforestation, the current president has voted against the creation of three new national parks, raising concerns about the future of Argentina's conservation efforts.

Brazil

% Protected Areas on land	% marine Protected Areas
30.62	26.84

Source: UNEP-WDPA, 2024, January

Since the early 1970s, remarkable growth in conservation awareness and science has taken place in Brazil, marked by the expansion of parks and reserves. Between 1976 and the 1990s, Brazil made an unparalleled commitment to protecting its natural heritage, establishing protected areas at federal, state, municipal, and private levels.[4] This effort far exceeded that of any other tropical country and was comparable to those of many developed nations.

As the most biologically diverse country in the world, Brazil is home to two biodiversity hotspots, six terrestrial biomes, and three large marine ecosystems. Despite these efforts, Brazil's biodiversity faces significant threats, including habitat fragmentation, species loss, invasive species, and unsustainable practices like monoculture and poorly planned reforestation programs. In response to these pressures, Brazil has developed innovative conservation strategies, such as creating ecological corridors and mosaics of protected areas. From 2006 to 2010, Brazil created more protected areas than any other country.[5]

However, conservation efforts often clash with agriculture, urbanization, and economic development. The Atlantic Forest, once covering 15% of Brazil's territory and now home to over 70% of its population. Only 12% of its original forest remains, resulting in the loss of species crucial for ecological functions like pest control.[6] For instance, São Paulo's proposal to create 110 new protected areas, covering 16,531 hectares, faces legal challenges, as it involves expropriating private land.[7] This highlights the ongoing tension between conservation goals, property rights, and economic interests, which complicate efforts to protect Brazil's rich biodiversity.

India

% Protected Areas on land	% marine Protected Areas
7.52	0.24

Source: UNEP-WDPA, 2024, January

India established its first national park, Corbett National Park, in 1936. Since then, the country has significantly expanded its network of protected areas, now comprising 104 National Parks and 551 Wildlife Sanctuaries.[8] By 2019, 214 community and conservation reserves had been designated, covering a total of 4,811 square kilometers, with over 70% of these reserves located in just three states: Meghalaya, Nagaland, and Jammu & Kashmir.

As one of the world's megadiverse countries, the country's varied climatic and topographic conditions have resulted in a wide range of ecosystems. Approximately 38% of India's land area is arid or semi-arid, with forests covering 23.39% of its geographical area and 6% of the country's plant species are endemic.[9]

Despite these efforts, biodiversity in India faces severe pressures from habitat fragmentation, degradation, resource overexploitation, and shrinking genetic diversity. Conflicting demands among various stakeholders further complicate conservation efforts.[9]

India's public discussion is going towards rethinking its conservation strategy, as only 15% of the country's top conservation priorities fall within legally protected areas.[10] Many of these priority regions are human-dominated landscapes, presenting a unique challenge. There is growing recognition that conservation in India must evolve, moving toward a model of land-sharing that includes participatory approaches. This need has become more urgent with recent changes, such as the Forest Conservation Rules of 2022, which removed the requirement for village council consent in forest-related decisions.

Indonesia

% Protected Areas on land	% marine Protected Areas
12.17	3.06

Source: UNEP-WDPA, 2024, January

Spread across 17,000 islands, Indonesia is one of the world's 17 megadiverse countries and home to 10% of the world's flowering species and 12% of its mammals.[11]

Indonesia's first Biodiversity Action Plan was introduced in 1993, followed by a second in 2003.[11] However, these plans have lacked comprehensive implementation and coordination. Lowland forests, the country's most biodiverse regions, are under constant pressure from land conversion, especially for oil palm plantations. Mangroves and coral reefs are also at risk, with 40% of coral reefs reported as damaged and large portions of mangroves degraded by destructive practices and infrastructure development.[12]

Biodiversity loss is driven by habitat fragmentation, overexploitation, pollution, and mining. Since 2015, land conflicts have doubled, with 40% linked to oil palm cultivation, highlighting tensions between conservation and economic priorities.[13] Indonesia's commitment to international conservation goals, like the Global Biodiversity Framework (GBF) adopted in 2022, has raised concerns. Indonesian authorities estimate that achieving the GBF's targets by 2030 would cost USD 700 billion, a heavy financial burden for a developing nation. They have called for more support from developed countries.[14] Indigenous communities also face challenges, with 17.7 million hectares of customary land yet to be recognized. There are growing calls for Indonesia to adopt more inclusive conservation models that integrate indigenous populations into these efforts.

South Africa

% Protected Areas on land	% marine Protected Areas
9.28	15.5

Source: UNEP-WDPA, 2024, January

South Africa is one of the most biologically diverse countries in the world. Although it covers just 2% of the earth's land surface, it is home to 10% of the planet's plant species and 15% of its marine species. However, this rich biodiversity has come under increasing threat in recent years. A National Spatial Biodiversity Assessment conducted in 2004 revealed alarming statistics: 82% of South Africa's major river ecosystems are endangered, and half of the country's wetlands have been destroyed. Many key sectors of South Africa's economy, such as fishing, livestock farming, and agriculture, rely heavily on native species. Together, these sectors account for 7% of the country's GDP.[15]

Since the 2004 assessment, South Africa has made notable strides in protecting its natural resources. As of 2024, the country has passed the halfway point toward its goal of conserving at least 30% of its land, inland water, and marine areas by 2030.[16] Despite this expansion significant challenges remain in managing them effectively. Establishing conservation areas in places where people live can limit their access to essential resources, leading to conflict between communities and conservation efforts. This is why South African policymakers stress the importance of involving local communities in the process, ensuring that it's not just about expanding protected areas, but also improving management and fostering co-ownership.[16]

In marine conservation, conflicts have stalled the progress, with consultations and stakeholder engagement often delaying the designation of protected zones. A case in point is the Prince Edward Island Marine Area, which took over a decade to officially proclaim.

Spain

% Protected Areas on land	% marine Protected Areas
28.12	12.79

Source: UNEP-WDPA, 2024, January

Spain has strong records of expanding protected areas to preserve its rich biodiversity. Over the past decades, the country has made significant strides in conservation, especially from 2009 to 2012, when protected areas increased by 3.1%, covering 17.3 million hectares. Spain's participation in the EU's Natura 2000 network has played a central role in this effort, making it the first EU member state to nearly complete its terrestrial Natura 2000 network, which covers 27.2% of its land area. Legal frameworks, such as Law 42/2007 on Natural Heritage and Biodiversity, have further reinforced the protection of natural spaces, guiding biodiversity conservation and the establishment of recovery plans for endangered species.[17]

Currently, Spain's protected areas include both terrestrial and marine environments. Notable areas include the Special Protection Areas (SPAs) and Sites of Community Importance (SCIs) under the Natura 2000 framework, which safeguard critical habitats for endangered species and ecosystems across the country, including regions like the Canary Islands and the Strait of Gibraltar.[17]

Despite these advancements, Spain faces several challenges in expanding and managing its protected areas. Habitat degradation, and invasive species remain major threats to biodiversity. Marine environments are particularly vulnerable, with coastal zones suffering from urbanization and pollution. Moreover, land-use conflicts of interests arise as Spain balances conservation efforts with economic interests, particularly in sectors like agriculture, tourism, and urban development. Tourism is increasingly at odds with land protection efforts, particularly in regions like Catalonia and the Canary Islands, where over tourism has caused significant environmental damage. In the Canaries, for example, tourism accounts for 35% of the Gross Domestic Product (GDP), yet it is a major driver of habitat destruction and threatens endemic species.[18] This conflict between the tourism industry and conservation efforts has sparked public debates, leading to anti-tourism protests not only in the Canary Islands but across Spain's major tourist hotspots.[19]

Sweden

% Protected Areas on land	% marine Protected Areas
15.43	15.82

Source: UNEP-WDPA, 2024, January

Historically, Sweden has been a leader in environmental policies, having established its first Biodiversity Strategy in 1995. However, the national 2007 assessment found that many habitats across all Swedish biogeographic regions have an unfavorable conservation status.

Sweden is a country rich in diverse ecosystems, with forests covering about 58% of its land and lakes and wetlands making up 9%. Semi-natural grasslands, which once spanned large areas, now cover only 8% of the country and have significantly diminished over the past century. Despite forests dominating the landscape, they continue to face challenges. Of the 23.75 million hectares of productive forest land, only around 900,000 hectares are legally protected.[20]

Efforts to protect these forests have sparked controversy, as landowners and policymakers clash over conservation measures. Many landowners dispute the risks faced by red-listed species and advocate for a balance between production and conservation that doesn't threaten private property.[21] Conservation policies, which restrict logging and impose land use regulations, have been seen by landowners as an infringement on their property rights. Swedish media has amplified these concerns, portraying land protection initiatives in various ways, which has fueled a divide in public opinion.

However, the Scandinavian country has made progress in establishment of marine nature reserves and no-fishing areas, particularly in response to the declining status of several species in the Baltic Sea. Efforts to create protected marine areas have been ongoing, alongside a focus on reducing illegal discharges of oil and overfishing.[20]

USA

% Protected Areas on land	% Protected Areas on land
12.94	19.12

Source: UNEP-WDPA, 2024, January

The United States, one of the world's 17 megadiverse countries, is home to diverse ecosystems, from tundra to forests and the Everglades. It has 432 mammal species, 800 bird species, 311 reptiles, 295 amphibians, and over 17,000 plant species. Despite this biodiversity, 42% of U.S. landscapes have been converted to nonnative habitats, placing a strain on native ecosystems.[22]

Many species and ecosystems in the U.S. are at risk, with 34% of plant species, 40% of animal species, and 41% of ecosystems threatened by extinction or collapse. Temperate grasslands are among the most vulnerable due to habitat destruction and degradation. Key threats to biodiversity include habitat loss, invasive species, agricultural expansion, and water management practices like dam construction.[23]

As the first country in the world to create a national park—Yellowstone in 1872—the U.S. has a long history of conservation.[24] Today, the U.S. government continues these efforts through

initiatives like the "America the Beautiful" program, which aims to conserve and restore the nation's lands and waters through locally led conservation projects.[25] However, the U.S. still hasn't joined the most important international agreement to conserve biodiversity, known as the Convention on Biological Diversity (CBD). Republican lawmakers have blocked ratification of the CBD, which requires a two-thirds Senate majority, revealing a political conflict of interest on the subject of conservation and limiting the U.S. role in global biodiversity efforts.[26]

More recently, concerns have been raised about some aspects of the Biden administration's conservation strategy. For instance, an initiative under review includes certain commercial fishing zones as protected areas, which some scientists argue contradicts conservation goals. High-impact commercial fishing in these zones threatens marine ecosystems.[27] Additionally, many national parks and reserves face increasing human pressure, with roughly one-third of protected areas under strain from human activities in 2018.[28]

Section 2: Support for national implementation of the 30-by-30-target

Table S2. Frequency distributions of 30-by-30-support, split by country

	Argentina			Brazil			India			Indonesia			South Africa		
Scale range	*Freq.*	*Perc.*	*Cum. Perc.*	*Freq.*	*Perc.*	*Cum. Perc.*	*Freq.*	*Perc.*	*Cum. Perc.*	*Freq.*	*Perc.*	*Cum. Perc.*	*Freq.*	*Perc.*	*Cum. Perc.*
1	12	0.83	0.83	13	0.88	0.88	2	0.14	0.14	1	0.07	0.07	8	0.54	0.54
2	12	0.83	1.65	7	0.47	1.35	8	0.54	0.68	5	0.34	0.40	16	1.09	1.63
3	26	1.79	3.45	27	1.82	3.16	25	1.69	2.36	15	1.01	1.42	37	2.52	4.15
4	126	8.68	12.13	101	6.80	9.97	134	9.05	11.41	148	9.99	11.40	231	15.72	19.88
5	196	13.51	25.64	195	13.13	23.10	298	20.12	31.53	349	23.55	34.95	304	20.69	40.57
6	260	17.92	43.56	235	15.82	38.92	424	28.63	60.16	374	25.24	60.19	364	24.78	65.35
7	819	56.44	100	907	61.08	100	590	39.84	100	590	39.81	100	509	34.65	100
Missing	54			44			38			21			36		
Total	1505			1529			1519			1503			1505		

Table S2, cont.

	Spain			Sweden			US			Pooled data (all countries)		
Scale range	*Freq.*	*Perc.*	*Cum. Perc.*	*Freq.*	*Perc.*	*Cum. Perc.*	*Freq.*	*Perc.*	*Cum. Perc.*	*Freq.*	*Perc.*	*Cum. Perc.*
1	18	1.25	1.25	75	5.49	5.49	102	7.19	7.19	231	1.99	1.99
2	17	1.18	2.42	71	5.20	10.70	41	2.89	10.08	177	1.53	3.52
3	48	3.32	5.75	106	7.77	18.46	69	4.86	14.94	353	3.04	6.56
4	138	9.56	15.30	208	15.24	33.70	197	13.88	28.82	1283	11.06	17.63
5	289	20.01	35.32	345	25.27	58.97	362	25.51	54.33	2338	20.16	37.79
6	349	24.17	59.49	191	13.99	72.97	279	19.66	74.00	2476	21.35	59.14
7	585	40.51	100	369	27.03	100	369	26.00	100	4738	40.86	100
Missing	74			166			103			536		
Total	1518			1531			1522			12132		

Table S3. OLS regression models predicting overall support for 30-by-30-target (Pooled sample, no sample weights)

	Model 1				Model 2			
Predictors	*Coeff.*	*SE*	*t*	*p*	*Coeff.*	*SE*	*t*	*p*
(Intercept)	6.52	0.09	72.00	<.001	4.11	0.11	35.97	<.001
Age	-0.01	<0.001	-6.23	<.001	-0.003	<0.001	-2.98	.003
Male	-0.20	0.03	-7.07	<.001	-0.16	0.03	-5.92	<.001
Urbanicity	0.06	0.01	3.88	<.001	0.03	0.01	2.11	.035
Education [bachelor]	0.07	0.03	2.11	.035	-0.01	0.03	-0.19	.850
Education [post bachelor]	0.01	0.04	0.28	.781	-0.11	0.04	-2.58	.010
Income [middle]	0.003	0.04	0.08	.932	0.01	0.04	0.25	.804
Income [high]	-0.04	0.04	-1.05	.294	-0.04	0.04	-0.94	.346
Income redistribution[a]					0.25	0.01	20.46	<.001
Environmental concern[b]					0.19	0.01	18.04	<.001
Individual freedom[c]					0.12	0.01	11.10	<.001
Corruption perception[d]					0.04	0.01	3.00	.003
Trust in government[e]					0.09	0.01	15.54	<.001
R2 adj.	.10				.23			
Observations	9257				8643			

Note. Variables with superscripts refer to agreement with the following items. Scale for items [a-d]: Strongly disagree (1) – Strongly agree (5). Scale for item [e]: Do not trust at all (1) – Completely trust (10)
[a] "Income differences in society should be reduced"
[b] "The government should do more to advance society's goals, even if that means limiting the freedom and choices of individuals" (reverse coded)
[c] "Environmental goals should not stand in the way of economic progress"
[d] "In [my country] it is common for citizens to have to use bribes to get access to public services that they are entitled to"
[e] "How much do you personally trust each of these institutions? – Government agencies"

Table S4. OLS regression models predicting overall support for 30-by-30-target (Pooled sample, sample weights applied)

	Model 1				Model 2			
Predictors	*Coeff.*	*SE*	*t*	*p*	*Coeff.*	*SE*	*t*	*p*
(Intercept)	6.51	0.09	71.72	<.001	4.11	0.11	35.80	<.001
Age	-0.01	0.00	-6.45	<.001	-0.00	0.00	-3.09	.002
Male	-0.20	0.03	-6.93	<.001	-0.16	0.03	-5.76	<.001
Urbanicity	0.06	0.01	3.93	<.001	0.03	0.01	2.16	.031
Education [bachelor]	0.07	0.03	2.05	.040	-0.01	0.03	-0.41	.685
Education [post bachelor]	0.03	0.04	0.74	.458	-0.10	0.04	-2.38	.017
Income [middle]	-0.00	0.04	-0.07	.948	-0.00	0.04	-0.13	.895
Income [high]	-0.05	0.04	-1.11	.267	-0.05	0.04	-1.27	.203
Income redistribution					0.25	0.01	20.40	<.001
Environmental concern					0.18	0.01	17.53	<.001
Individual freedom					0.12	0.01	11.11	<.001
Corruption perception					0.04	0.01	3.03	.002
Trust in government					0.09	0.01	15.41	<.001
R2 adj.	.10				.23			
Observations	9257				8643			

Table S5. OLS regression models predicting overall support for 30-by-30-target (Argentina sample)

	Model 1				Model 2			
Predictors	*Coeff.*	*SE*	*t*	*p*	*Coeff.*	*SE*	*t*	*p*
(Intercept)	6.14	0.16	38.76	<.001	5.01	0.25	19.98	<.001
Age	0.00	0.00	0.90	.367	0.003	0.002	1.32	.186
Gender	-0.07	0.07	-1.07	.284	-0.08	0.07	-1.09	.274
Urbanicity	-0.01	0.03	-0.18	.857	-0.02	0.04	-0.56	.573
Education [bachelor]	0.02	0.07	0.26	.794	-0.01	0.08	-0.09	.927
Education [post bachelor]	0.18	0.11	1.63	.103	0.08	0.12	0.68	.498
Income redistribution					0.11	0.03	3.98	<.001
Environmental concern					0.11	0.02	4.34	<.001
Individual freedom					0.10	0.02	3.90	<.001
Corruption perception					0.02	0.03	0.59	.555
Trust in government					0.03	0.01	2.21	.027
R2 adj.	.00				.04			
Observations	1429				1245			

Note 1: Due to a high number of missing data (603 observation, 40%), the income variable is excluded in the reported regression analyses. Overall interpretation is similar across both model specifications.
Note 2: For variable specifications, see Supplementary Table S3

Table S6. OLS regression models predicting overall support for 30-by-30-target (Brazil sample)

	Model 1				Model 2			
Predictors	*Coeff.*	*SE*	*t*	*p*	*Coeff.*	*SE*	*t*	*p*
(Intercept)	6.36	0.22	29.37	<.001	4.46	0.30	15.04	<.001
Age	-0.00	0.00	-1.07	.286	-0.00	0.00	-0.44	.659
Gender	-0.12	0.06	-1.83	.068	-0.07	0.06	-1.13	.257
Urbanicity	0.01	0.04	0.31	.753	0.02	0.04	0.66	.506
Education [bachelor]	0.11	0.07	1.52	.128	0.03	0.07	0.44	.659
Education [post bachelor]	0.11	0.13	0.82	.413	-0.03	0.13	-0.22	.824
Income [middle]	0.17	0.13	1.33	.184	0.15	0.13	1.21	.225
Income [high]	0.04	0.11	0.38	.704	0.05	0.10	0.50	.615
Income redistribution					0.21	0.04	5.68	<.001
Environmental concern					0.12	0.02	5.23	<.001
Individual freedom					0.04	0.02	1.68	.094
Corruption perception					0.01	0.03	0.31	.759
Trust in government					0.07	0.01	5.51	<.001
R2 adj.	.00				.08			
Observations	1369				1297			

Note. For variable specifications, see Supplementary Table S3

Table S7. OLS regression models predicting overall support for 30-by-30-target (Indonesia sample)

	Model 1				Model 2			
Predictors	*Coeff.*	*SE*	*t*	*p*	*Coeff.*	*SE*	*t*	*p*
(Intercept)	5.69	0.16	36.64	<.001	5.28	0.23	23.07	<.001
age	0.01	0.00	2.36	.019	0.00	0.00	1.32	.186
gender	0.05	0.06	0.86	.391	0.02	0.06	0.34	.737
education [bachelor]	-0.00	0.06	-0.01	.994	-0.01	0.06	-0.16	.875
education [post bachelor]	-0.11	0.15	-0.70	.482	-0.10	0.15	-0.67	.502
income [middle]	-0.03	0.08	-0.43	.665	-0.05	0.08	-0.61	.540
income [high]	-0.15	0.09	-1.59	.112	-0.13	0.09	-1.42	.155
Income redistribution					0.02	0.02	0.64	.521
Environmental concern					-0.04	0.03	-1.35	.177
Individual freedom					0.12	0.03	4.43	<.001
Corruption perception					-0.01	0.02	-0.50	.614
Trust in government					0.03	0.01	2.62	.009
R2 adj.	.01				.03			
Observations	1379				1350			

Note 1. Due to a high number of missing data (829 observation, 55%), the urbanicity variable is excluded in the reported regression analyses. Overall interpretation is similar across both model specifications.
Note 2. For variable specifications, see Supplementary Table S3.

Table S8. OLS regression models predicting overall support for 30-by-30-target (India sample)

	Model 1				Model 2			
Predictors	*Coeff.*	*SE*	*t*	*p*	*Coeff.*	*SE*	*t*	*p*
(Intercept)	6.28	0.19	33.59	<.001	4.95	0.28	17.54	<.001
Age	-0.00	0.00	-0.97	.330	-0.00	0.00	-0.97	.333
Gender	-0.11	0.06	-1.76	.078	-0.12	0.06	-1.98	.048
Urbanicity	0.01	0.03	0.23	.816	0.00	0.03	0.01	.991
Education [bachelor]	-0.06	0.08	-0.69	.493	-0.09	0.08	-1.06	.290
Education [post bachelor]	-0.01	0.09	-0.15	.883	-0.08	0.09	-0.89	.371
Income [middle]	-0.10	0.07	-1.50	.134	-0.06	0.07	-0.95	.345
Income [high]	-0.12	0.09	-1.32	.186	-0.08	0.09	-0.80	.422
Income redistribution					0.05	0.03	1.45	.147
Environmental concern					0.04	0.02	1.58	.115
Individual freedom					0.05	0.03	1.93	.054
Corruption perception					0.13	0.03	4.45	<.001
Trust in government					0.06	0.01	4.82	<.001
R2 adj.	.00				.04			
Observations	1374				1332			

Note. For variable specifications, see Supplementary Table S3.

Table S9. OLS regression models predicting overall support for 30-by-30-target (South Africa sample)

	Model 1				Model 2			
Predictors	*Coeff.*	*SE*	*t*	*p*	*Coeff.*	*SE*	*t*	*p*
(Intercept)	5.49	0.18	30.39	<.001	3.90	0.27	14.19	<.001
Age	0.01	0.00	2.22	.027	0.01	0.00	3.86	<.001
Gender	0.09	0.07	1.28	.201	0.01	0.07	0.19	.846
Urbanicity	-0.05	0.04	-1.46	.146	-0.05	0.04	-1.37	.170
Education [bachelor]	0.12	0.07	1.67	.096	0.05	0.07	0.75	.454
Education [post bachelor]	0.12	0.12	0.95	.340	0.08	0.12	0.69	.490
Income [middle]	-0.07	0.08	-0.92	.359	-0.03	0.07	-0.44	.663
Income [high]	-0.25	0.09	-2.77	.006	-0.12	0.09	-1.29	.198
Income redistribution					0.09	0.03	3.11	.002
Environmental concern					0.05	0.03	1.79	.073
Individual freedom					0.08	0.03	2.98	.003
Corruption perception					0.09	0.03	2.95	.003
Trust in government					0.07	0.01	5.07	<.001
R2 adj.	.01				.06			
Observations	1436				1412			

Note. For variable specifications, see Supplementary Table S3.

Table S10. Regression models predicting overall support for 30-by-30-target (Spain sample)

	Model 1				Model 2			
Predictors	*Coeff.*	*SE*	*t*	*p*	*Coeff.*	*SE*	*t*	*p*
(Intercept)	6.26	0.27	23.32	<.001	3.75	0.32	11.75	<.001
Age	-0.00	0.00	-0.57	.570	-0.00	0.00	-0.48	.628
Gender	-0.24	0.08	-3.16	.002	-0.13	0.07	-1.84	.066
Urbanicity	-0.01	0.04	-0.18	.853	-0.01	0.04	-0.29	.769
Education [bachelor]	0.03	0.09	0.37	.709	0.02	0.08	0.20	.845
Education [post bachelor]	0.16	0.11	1.47	.143	0.03	0.10	0.28	.782
Income [middle]	-0.00	0.12	-0.02	.986	-0.00	0.12	-0.00	.998
Income [high]	-0.03	0.14	-0.21	.833	-0.07	0.13	-0.52	.604
Income redistribution					0.28	0.03	8.17	<.001
Environmental concern					0.22	0.03	7.09	<.001
Individual freedom					0.11	0.03	3.75	<.001
Corruption perception					-0.05	0.03	-1.51	.132
Trust in government					0.10	0.01	6.43	<.001
R2 adj.	.01				.20			
Observations	1129				1094			

Note. For variable specifications, see Supplementary Table S3.

Table S11. OLS regression models predicting overall support for 30-by-30-target (Sweden sample)

	Model 1				Model 2			
Predictors	*Coeff.*	*SE*	*t*	*p*	*Coeff.*	*SE*	*t*	*p*
(Intercept)	6.41	0.25	25.31	<.001	2.70	0.35	7.82	<.001
Age	-0.01	0.00	-3.95	<.001	-0.01	0.00	-5.09	<.001
Gender	-0.71	0.10	-6.99	<.001	-0.33	0.09	-3.55	<.001
Urbanicity	0.03	0.05	0.56	.579	0.02	0.04	0.56	.579
Education [bachelor]	0.23	0.12	1.89	.058	0.04	0.11	0.40	.689
Education [post bachelor]	-0.14	0.14	-0.96	.339	-0.24	0.13	-1.86	.064
Income [middle]	0.33	0.11	2.98	.003	0.18	0.10	1.83	.068
Income [high]	0.55	0.17	3.28	.001	0.22	0.16	1.33	.184
Income redistribution					0.39	0.04	9.84	<.001
Environmental concern					0.38	0.04	10.23	<.001
Individual freedom					0.20	0.04	5.06	<.001
Corruption perception					-0.11	0.04	-2.42	.016
Trust in government					0.06	0.02	2.81	.005
R2 adj.	.08				.35			
Observations	1135				1002			

Note. For variable specifications, see Supplementary Table S3.

Table S12. OLS regression models predicting overall support for 30-by-30-target (US sample)

	Model 1				Model 2			
Predictors	*Coeff.*	*SE*	*t*	*p*	*Coeff.*	*SE*	*t*	*p*
(Intercept)	6.12	0.30	20.27	<.001	2.17	0.32	6.82	<.001
Age	-0.02	0.00	-7.40	<.001	-0.01	0.00	-3.32	.001
Gender	-0.44	0.10	-4.59	<.001	-0.27	0.08	-3.30	.001
Urbanicity	0.18	0.05	3.99	<.001	0.03	0.04	0.74	.461
Education [bachelor]	0.10	0.12	0.81	.416	-0.18	0.10	-1.70	.089
Education [post bachelor]	0.04	0.16	0.25	.804	-0.33	0.14	-2.39	.017
Income [middle]	0.17	0.16	1.02	.306	-0.07	0.14	-0.53	.598
Income [high]	0.13	0.17	0.75	.456	-0.10	0.14	-0.72	.474
Income redistribution					0.38	0.03	10.91	<.001
Environmental concern					0.33	0.03	10.58	<.001
Individual freedom					0.12	0.04	3.22	.001
Corruption perception					0.10	0.03	2.96	.003
Trust in government					0.18	0.02	9.97	<.001
R2 adj.	.08				.40			
Observations	1264				1131			

Note. For variable specifications, see Supplementary Table S3.

Table S13. Average marginal component effects for International-level conjoint experiment

	Coeff.	*SE*	*Z*	*p*
Who is more responsible for PA expansion (Baseline: All countries equally responsible)				
Countries with rich biodiversity	-.017	.004	4.25	<.001
Countries incurring less societal harm	-.020	.004	4.93	<.001
Number of participating countries (Baseline: 65)				
100	.017	.005	3.75	<.001
130	.031	.005	6.83	<.001
190	.035	.005	7.74	<.001
Cost distribution (Baseline: All countries pay own costs)				
Rich countries pay more	.044	.004	11.00	<.001
Only rich countries pay	.027	.004	6.81	<.001
Placement trade (Baseline: No trade allowed)				
Minor trade allowed	-.012	.004	3.11	<.001
Major trade allowed	-.027	.004	6.88	<.001
Number of obs. = 97056				

Note. Estimates are based on Support for Expansion Regime regressed on binary indicator variables for policy design factors, with SEs clustered by respondent. Pooled data set.

Table S14. Average marginal component effects for Domestic-level conjoint experiment

	Coeff.	*SE*	*Z*	*p*
Placement priority (Baseline: Nature values)				
Economic values	-.051	.004	12.81	<.001
Social values	-.028	.004	7.15	<.001
Restrictions (Baseline: “No access”)				
No personal use	.011	.005	2.34	.019
Limited personal use	.016	.005	3.50	<.001
Limited personal and commercial use	.016	.005	3.42	<.001
Management (Baseline: State authorities and employees)				
Private companies	-.023	.005	5.01	<.001
Non-government organizations	-.007	.005	1.50	.134
Local communities	.003	.005	0.59	.553
Funding source (Baseline: General tax increase)				
New taxes on activities harming biodiversity	.023	.005	5.14	<.001
Redistribution from green investments	.031	.005	6.84	<.001
Redistribution from welfare investments	.021	.005	4.69	<.001
Number of obs. = 97056				

Note. Estimates are based on Support for Expansion Regime regressed on binary indicator variables for policy design factors, with SEs clustered by respondent. Pooled data set.

Section 3: Motivation of policy design factors in conjoint experiments

The factors included in each conjoint were chosen based on previously theorized or empirically established associations with support for environmental policies. Others were included on grounds of prominence in current debates about protected area expansion.

Panel A international conjoint experiment: *distribution of (1) responsibility and (2) costs, (3) number of participating countries, and (4) trading opportunities*

Two factors regard the distribution of responsibility and cost; both of these are closely tied to questions of fairness and justice previously discussed by environmental justice scholars. These distribution attributes are a way to answer the question "*How should the responsibility to protect 30% of the earth's surface be distributed and funded among countries?"* There is a rich literature on people's perceptions of which countries should bear the climate mitigation and adaptation burdens,[29,30,30–32] but most conservation studies are still theoretical.[33] Research regarding perceptions towards who should pay or conserve the most is far more limited. Global biodiversity is far from equally distributed between countries, and a conservationist would favor species-rich countries taking on disproportionately large protection responsibilities.[34,35] Other possibilities include invoking fairness principles of capability (countries differ vastly, for instance, in population density making expansion of protected areas more or less of a challenge) or of equality (e.g., a flat-rate of 30% for all countries).[36]

Even if agreement would exist on distribution of responsibilities to protect land or sea, cost burden is an additional factor that likely impacts public opinion. There remains significant underfunding especially in low- and middle-income countries.[37] Market direct causal responsibility (who's share of the global biodiversity) and remedial responsibility (who should act or pay) is here a crucial watershed opening up for different attitudes in regard to who should pay for the protection. For example, it is fully possible to assert that richer countries should take the largest share of the economic burden of protecting biodiversity and this regardless whether these costs arise in the own country or in other (economically less well-off) countries – simply because they can (afford it).[38,39]

We ask about the number of participating countries to measure conditional cooperation which engages in a rich, comprehensive academic literature.[40] Most actors' propensity to cooperate to the benefit of a collective goal is determined by the number of other actors involved in doing the same. This bares out in lab[41,42] and field[43] experiments.

Finally, we have an attribute termed "placement trading between countries" to measure to what extent people care if countries can buy or sell their conservation burden to other countries. Since both land and biodiversity is unequally distributed across countries – which is often the case when it comes to natural resources – a common way of securing a country's "pro-environmental" performance is to open up for the possibility that a less environmentally-friendly country or actor can buy out their domestic environmental responsibility, e.g., by investing in other countries' environment, where it is often cheaper with protection. Examples are the UN-based CDM-mechanism and the REDD+ system allowing countries to create domestic carbon sinks by investing in the preservation of rainforest in other countries (but still claim the sink on their own behalf).[44–46] A similar system would be possible also in regards to biodiversity protection: rather than protecting own land for these purposes, a country's responsibility to protect 30% for biodiversity could conceivably be achieved by buying out protected areas in other countries. The possibility of such trade might be particularly influential on public opinion in rich or densely populated countries.

Panel B Domestic conjoint experiment: *(1) Placement priority, (2) restrictions on protected areas, (3) protected area management, and (4) national funding*

The first domestic attribute regards people's preference for protected area placement in terms of nature, the economy, or impact on people, though there are other protected area acquisition strategies.[47] Often environmental goals are put in contrast with economic growth.[48–50] Also, it appears that general environmental concern is contingent on times of economic prosperity.[51] Although the Kunming-Montreal Global Biodiversity Framework clearly state that biodiversity quality should inform the selection of areas to be protected, it is evident that such a priority might come in conflict with other societal goals and generating conflicting interests and potential resistance from the general public or from certain interest groups. It is thus important to investigate the degree to which people prefer protection of what is best for nature, compared to other potential priorities such as what benefit people or the national economy the most.

Property rights preferences are measured with the restrictions on protected area use. A common way of avoiding the overuse of a common pool resource, such as individual species or ecosystems, i.e., situations where the rivalrous characteristics of a natural resource ("the more I use, the less will be over for other users") in combination with difficulties to exclude actors from using the resource, is to "simply" transform the common good into more of a private good, thereby enabling an authority to put various restrictions on the usage of the resource.[52,53] This restriction can vary in level of ambition from regulating the access, the usage and/or the ownership of the resource.[54,55] The level of the regulatory ambition reasonably affects the public opinion.

Next, we measure an attribute called protected area management which reflects preference for which third party actor facilitates the collective goal of conservation. Many suggest that the state is the most likely third-party actor responsible for managing collective action and the commons,[56] but it is not strictly necessary in contexts of limited government capacity and especially for conservation.[57] Various actors who can be in charge of ensuring that a certain regime type is implemented and complied with, including the state, private companies, locally initiated organizations, NGOs or even the epistemic community. [58] There are many regime types in and through which the protection of land and biodiversity can be designed, top-down, bottom-up, through privatization or through various "golden middle ways".[59–61] For literature reviews of the forest sector management and conservation outcomes depending on regime type, see[62] and for protected area management and participation perceptions, see.[63] Each of these institutional arrangements might trigger positive and/or negative attitudes among the public.

Finally, the primary way that the public generally will be affected is how their taxes and resources will be allocated.[64] This is to say that we do not measure the primary stakeholders like landowners or local communities who would likely resist the property rights infringement. Rather the public may punish their politicians for misappropriation of taxes or government funds. This is especially important in developing countries where politicians must balance poverty alleviation with conservation funding.[65] Expansion of protected biodiversity and land comes with a cost (or multiple costs).[33] If the costs are too high and/or the funding is poorly sources, previous research establish that this can cause resistance against a policy.[66] This motivates a focus on the extent to which type of funding (e.g. different type of taxes or reallocations of existing public spendings) affects the public opinion about area-based conservation.

Section 4: Conjoint experiments robustness tests

Income

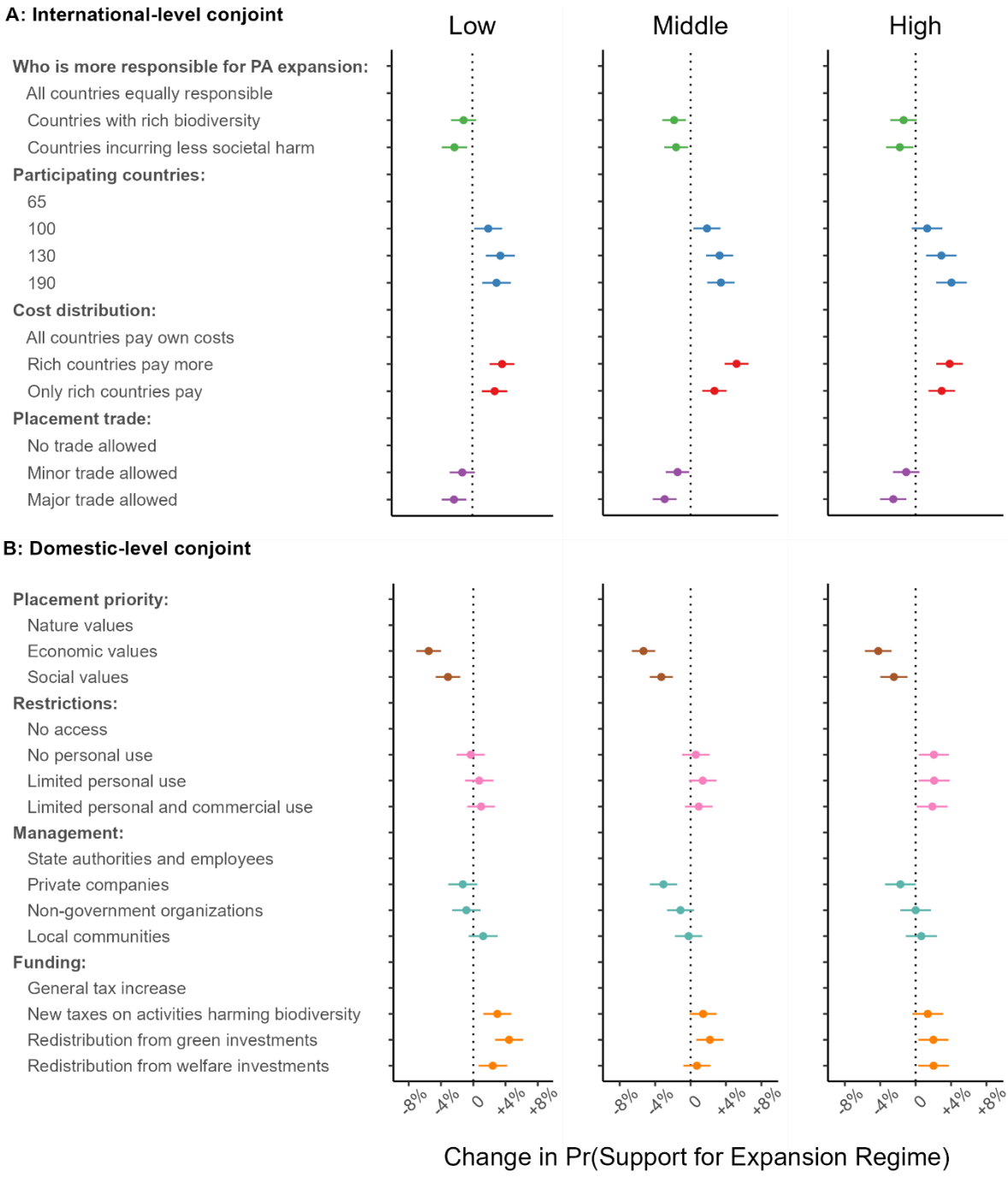

Figure S1. Income level interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by income category, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Education

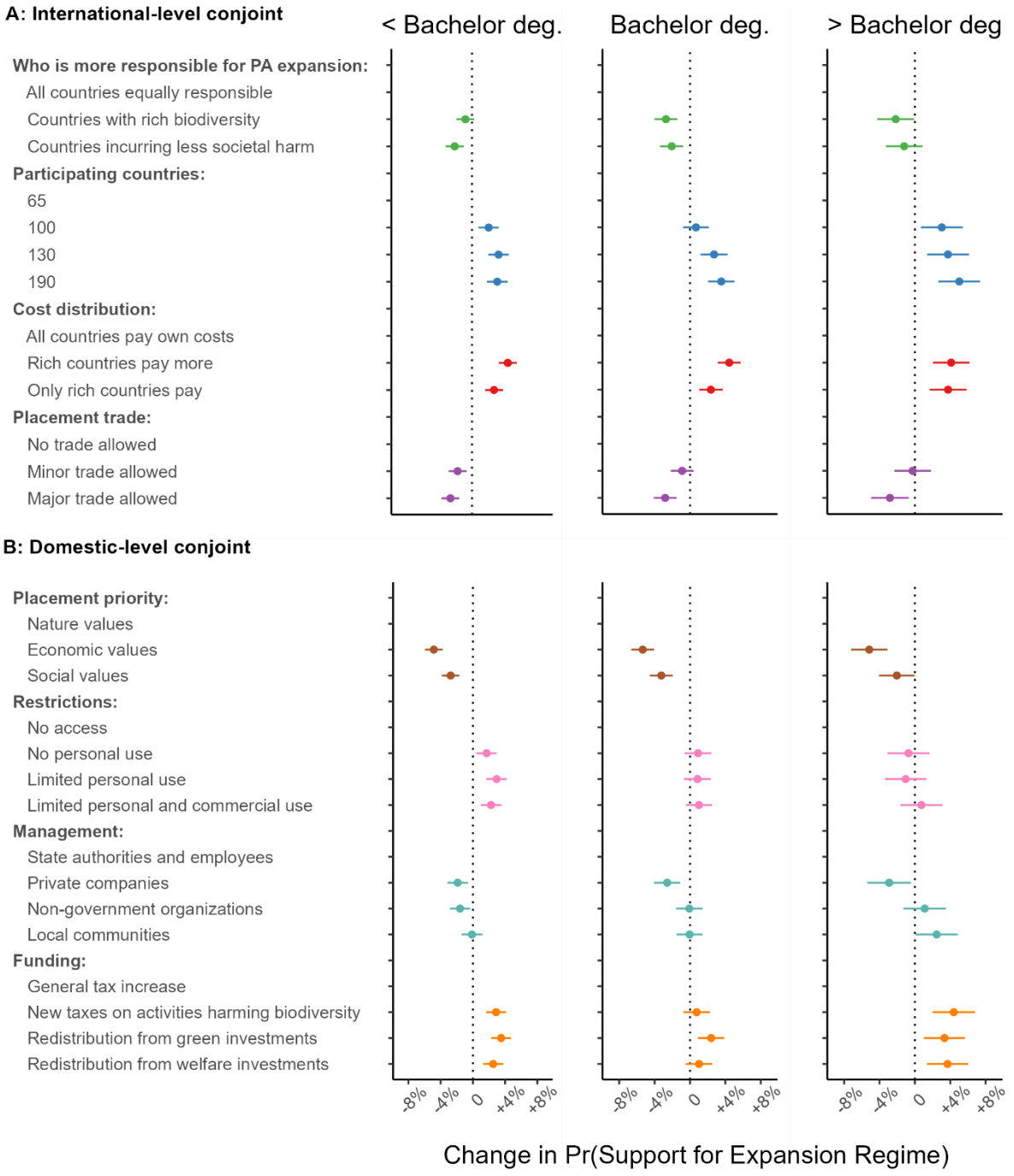

Figure S2. Education level interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by education level, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Urbanicity

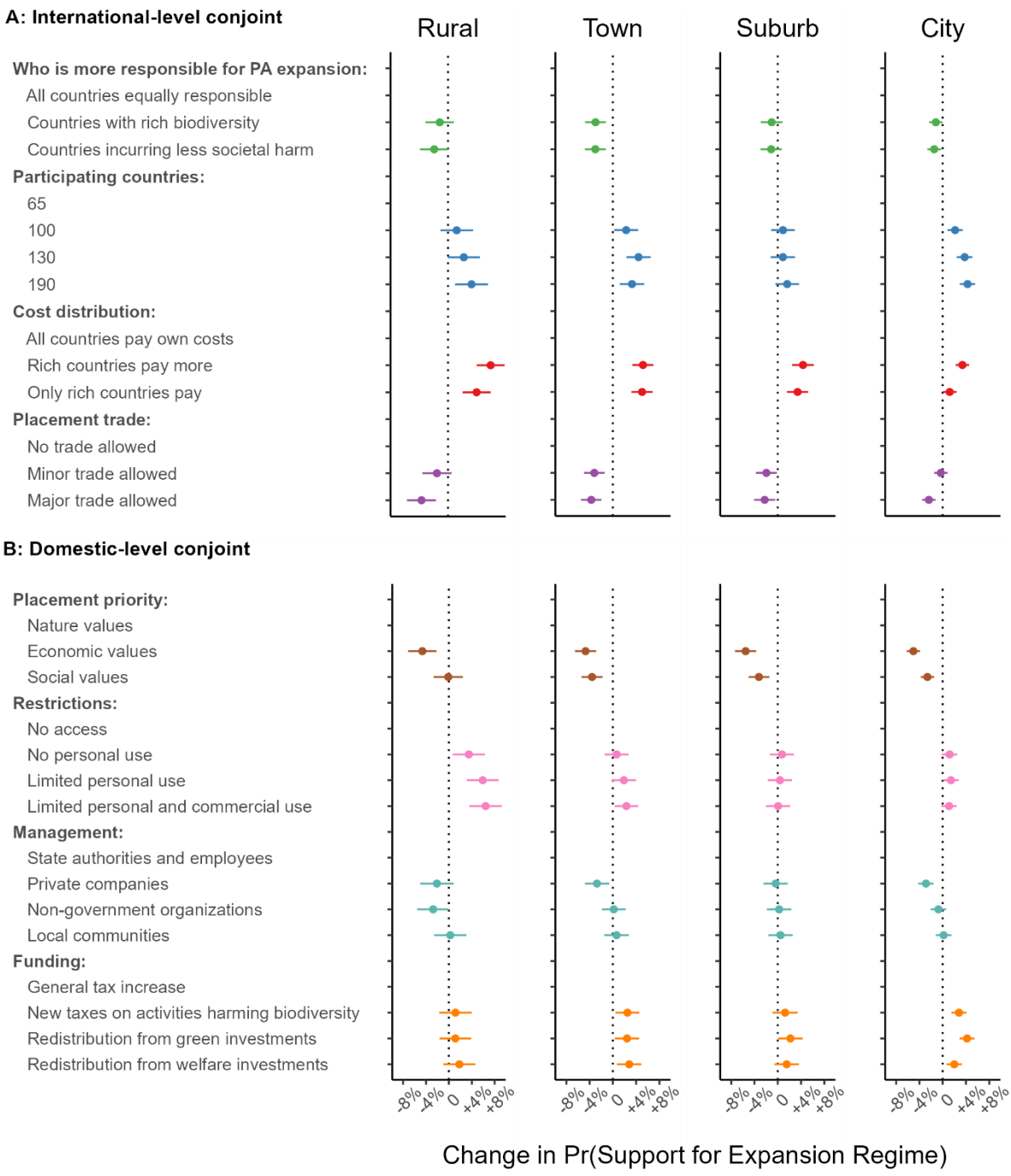

Figure S3. Urbanicity interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by urbanicity, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Gender

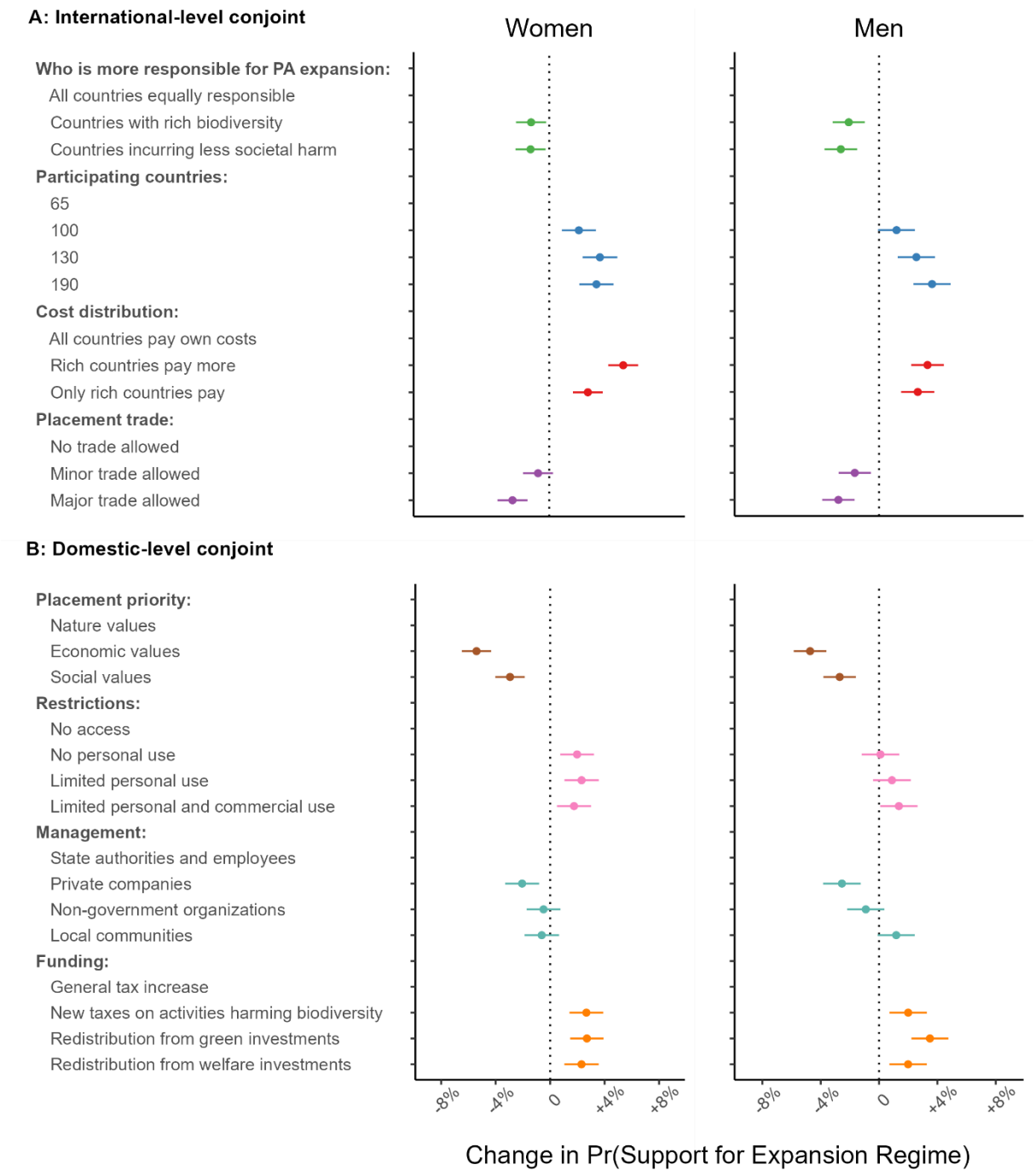

Figure S4. Gender interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by gender, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

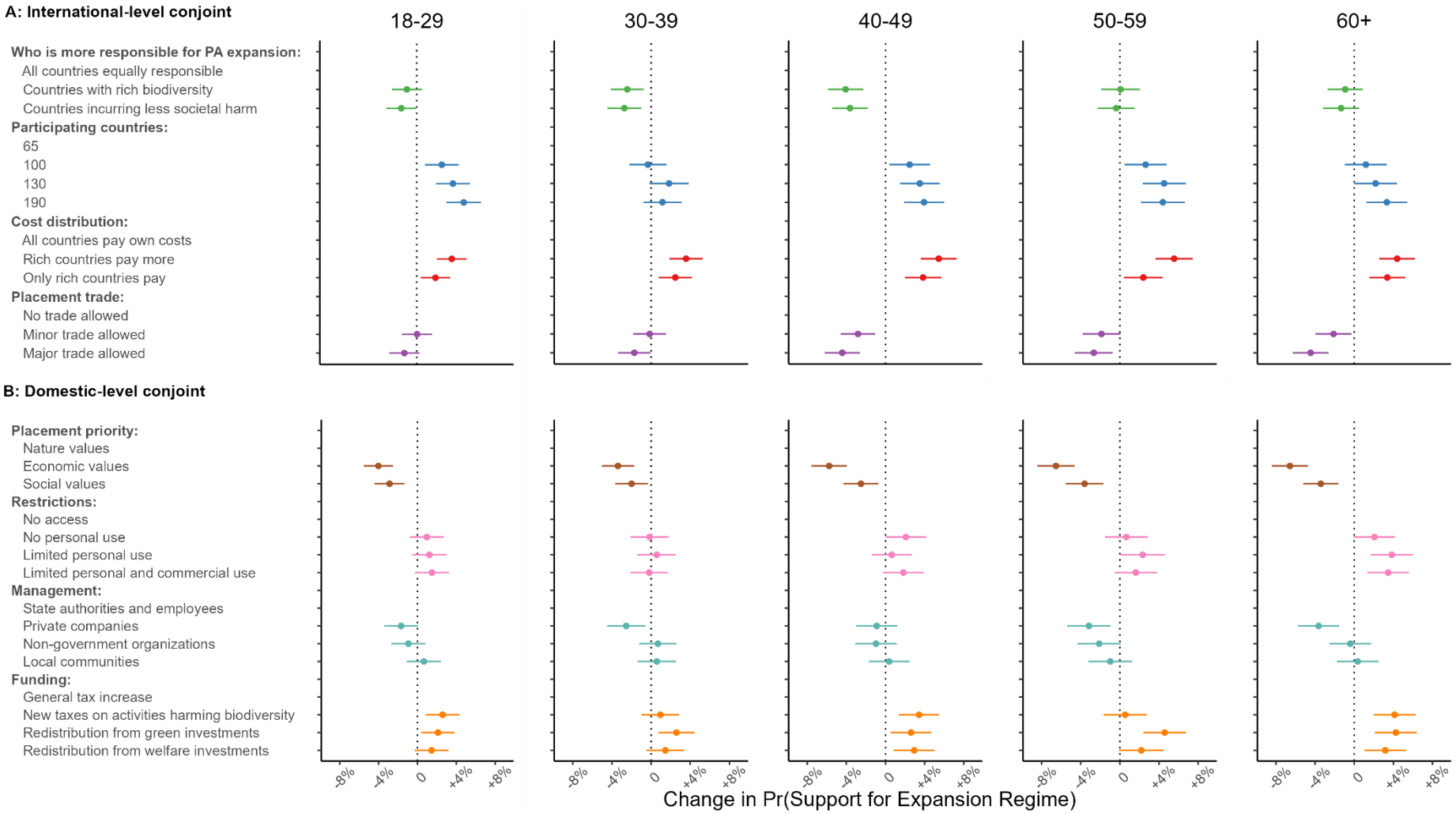

Figure S5. Age interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by age category, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Self-reported proximity to existing protected area

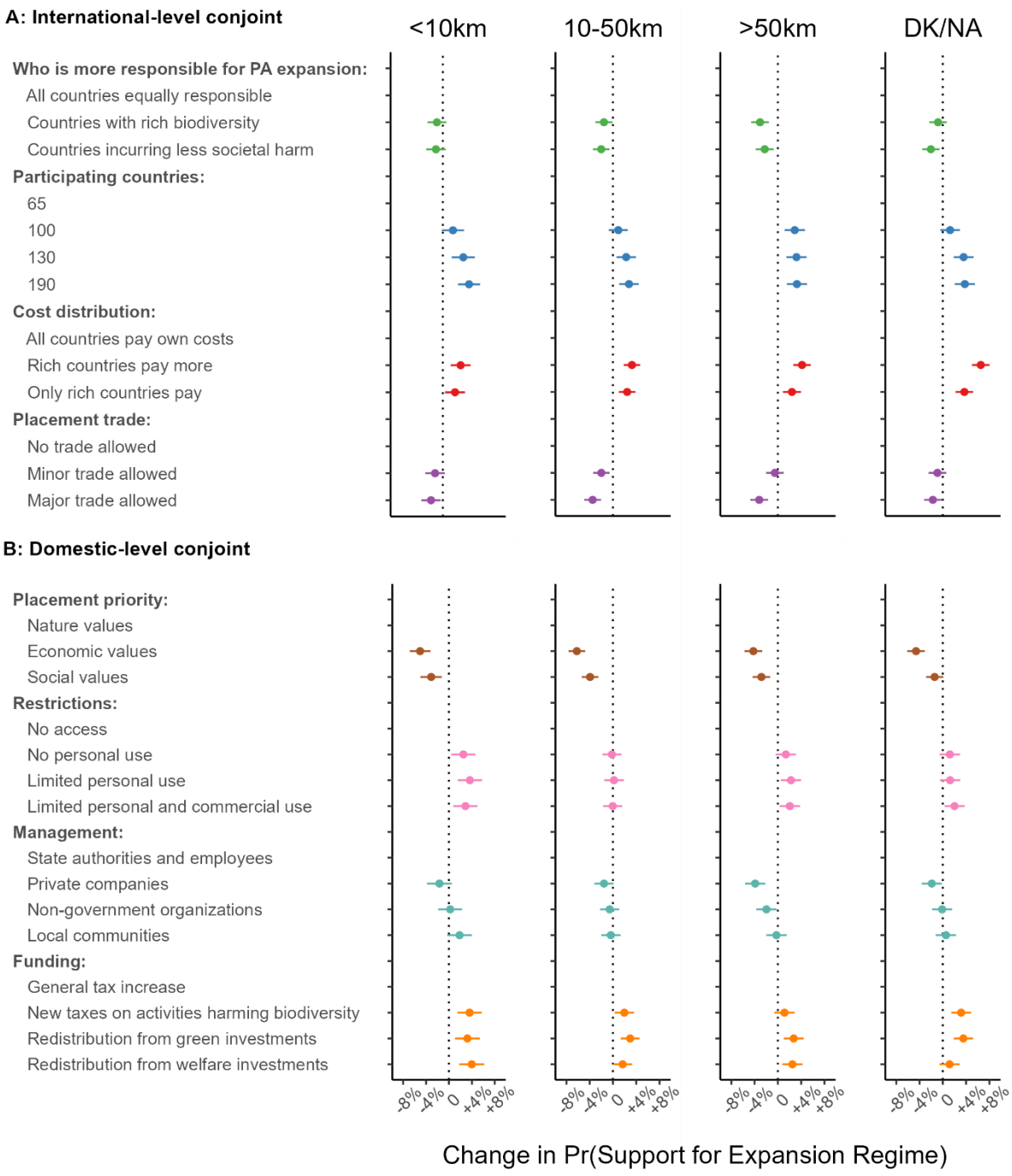

Figure S5. Self-reported protected area proximity interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by how close to an existing protected area the respondent lives (self-reported), with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Attitudes towards the environment

"Environmental goals should not stand in the way of economic progress"

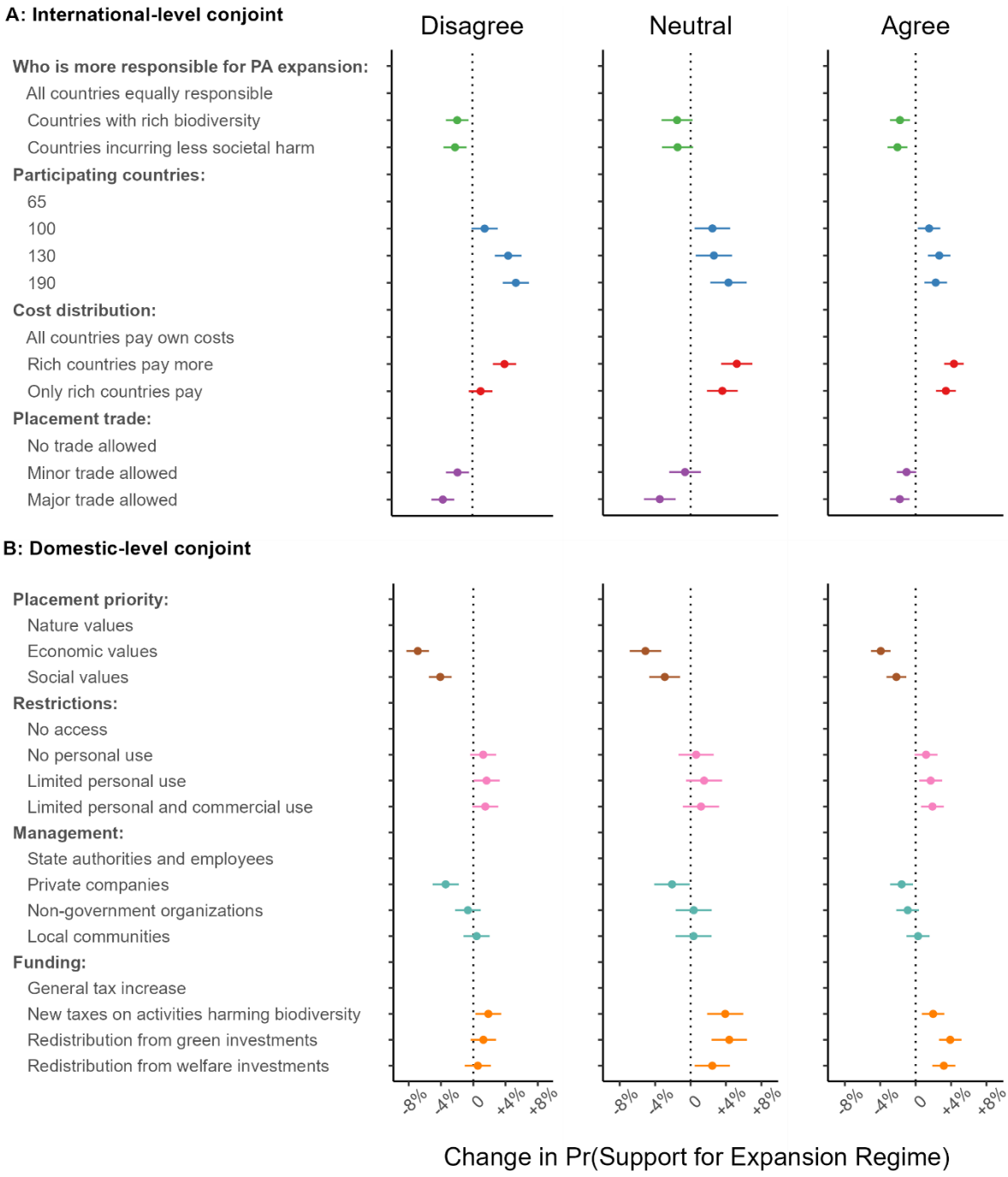

Figure S6. Environmental attitudes interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by environmental attitudes, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Attitudes towards income redistribution

"Income differences in society should be reduced"

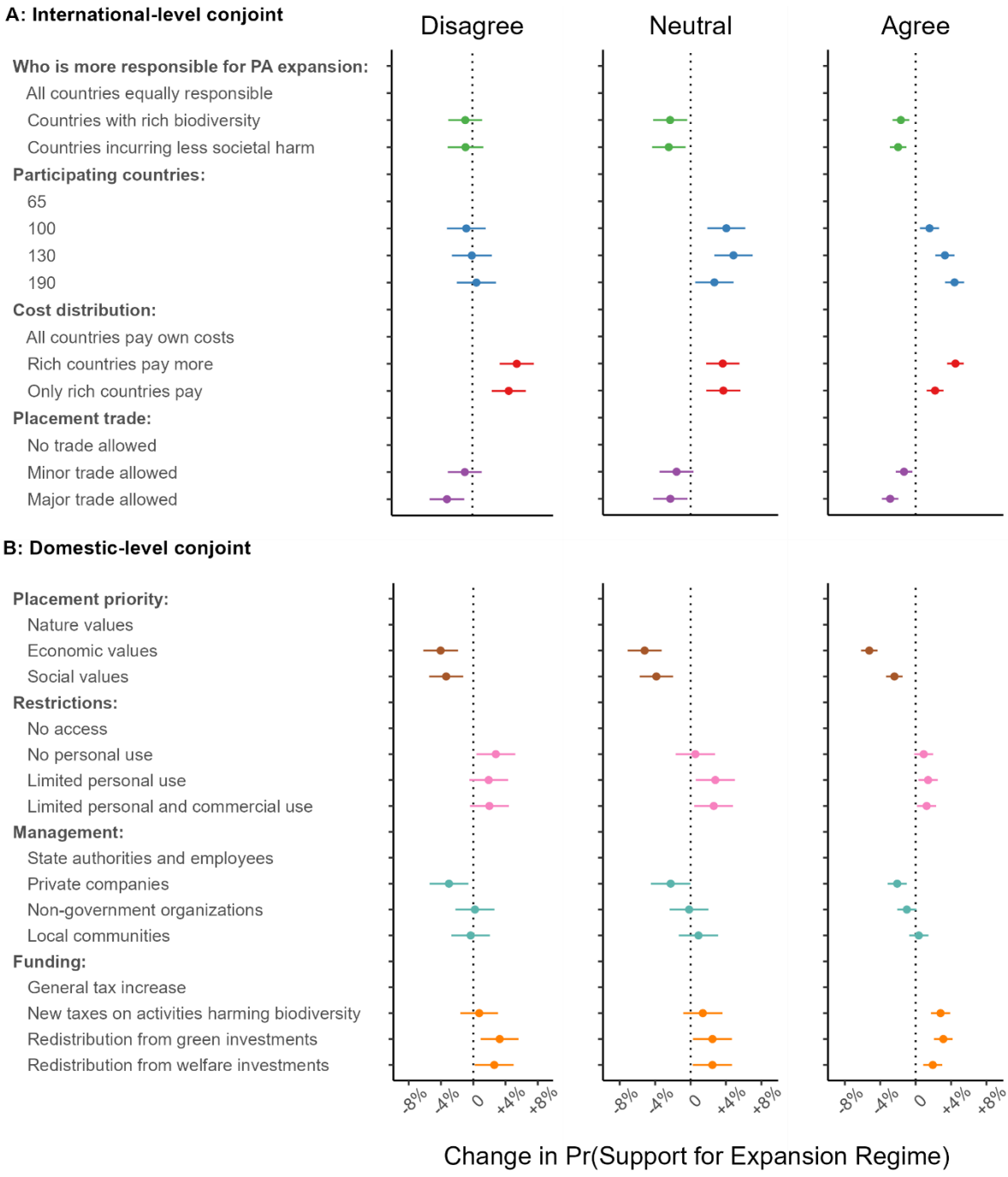

Figure S7. Attitudes towards income redistribution interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by income distribution attitudes, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Attitudes towards individual freedom

"The government should do more to advance society's goals, even if that means limiting the freedom and choices of individuals"

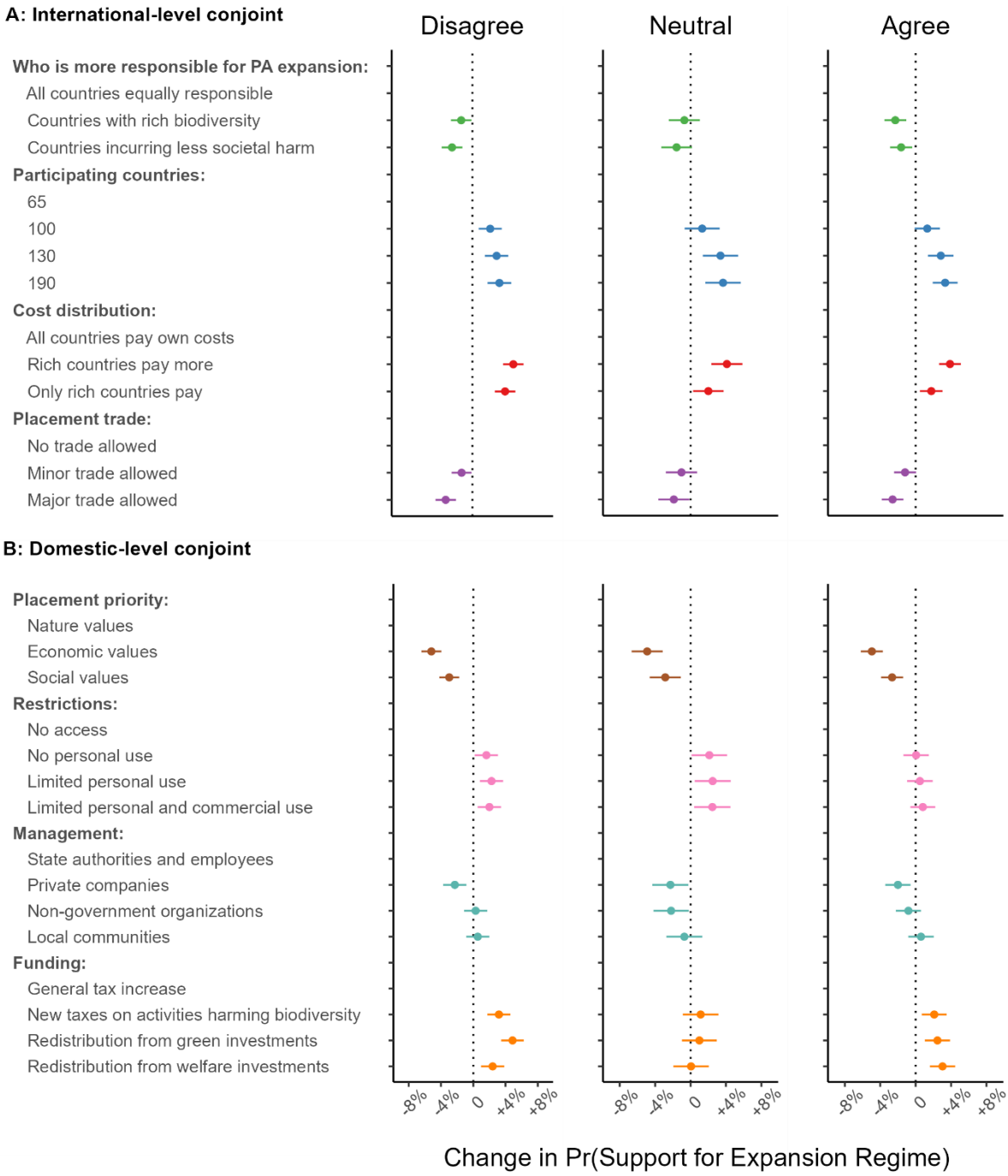

Figure S8. Attitudes towards individual freedom interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by individual freedom attitudes, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Corruption perception

"In [my country] it is common for citizens to have to use bribes to get access to public services that they are entitled to"

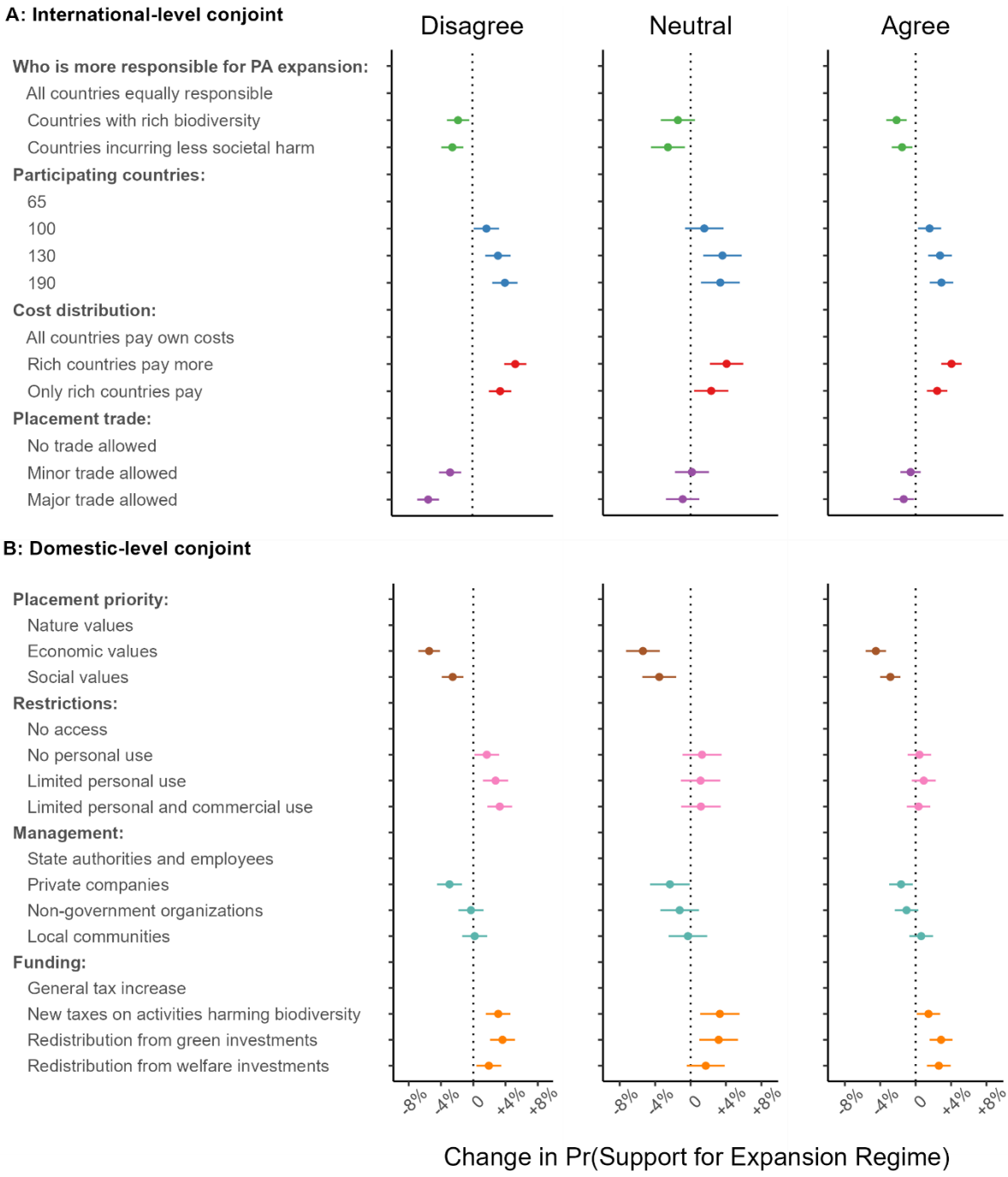

Figure S9. Corruption perception interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by corruption perceptions, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Trust in governmental agencies

"How much do you personally trust each of these institutions? – Government agencies"

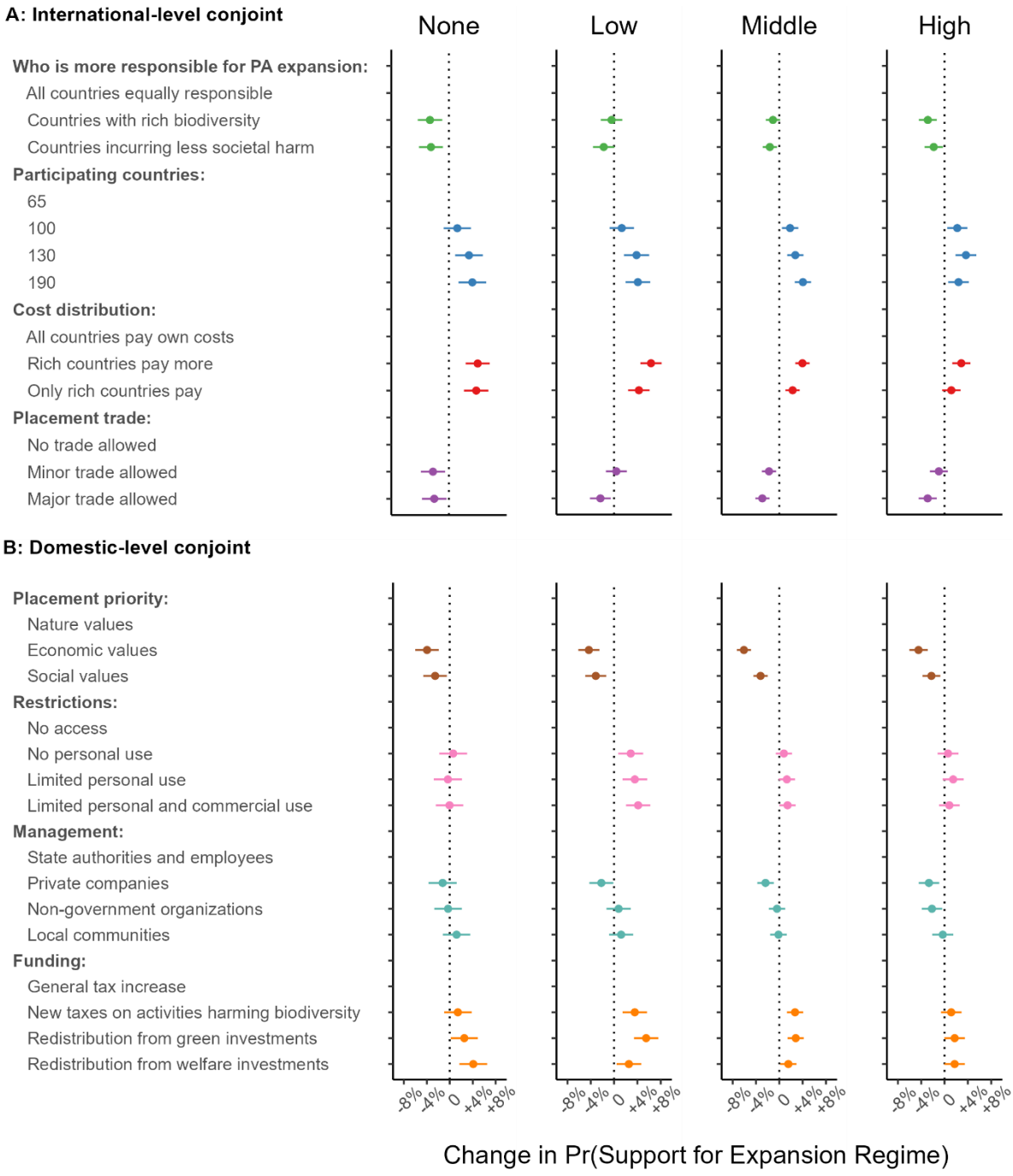

Figure S10. Corruption perception interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by trust in governmental agencies, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Support for the 30-by-30-target

"What is your overall opinion about the target of 30% protected areas by the year 2030? ""

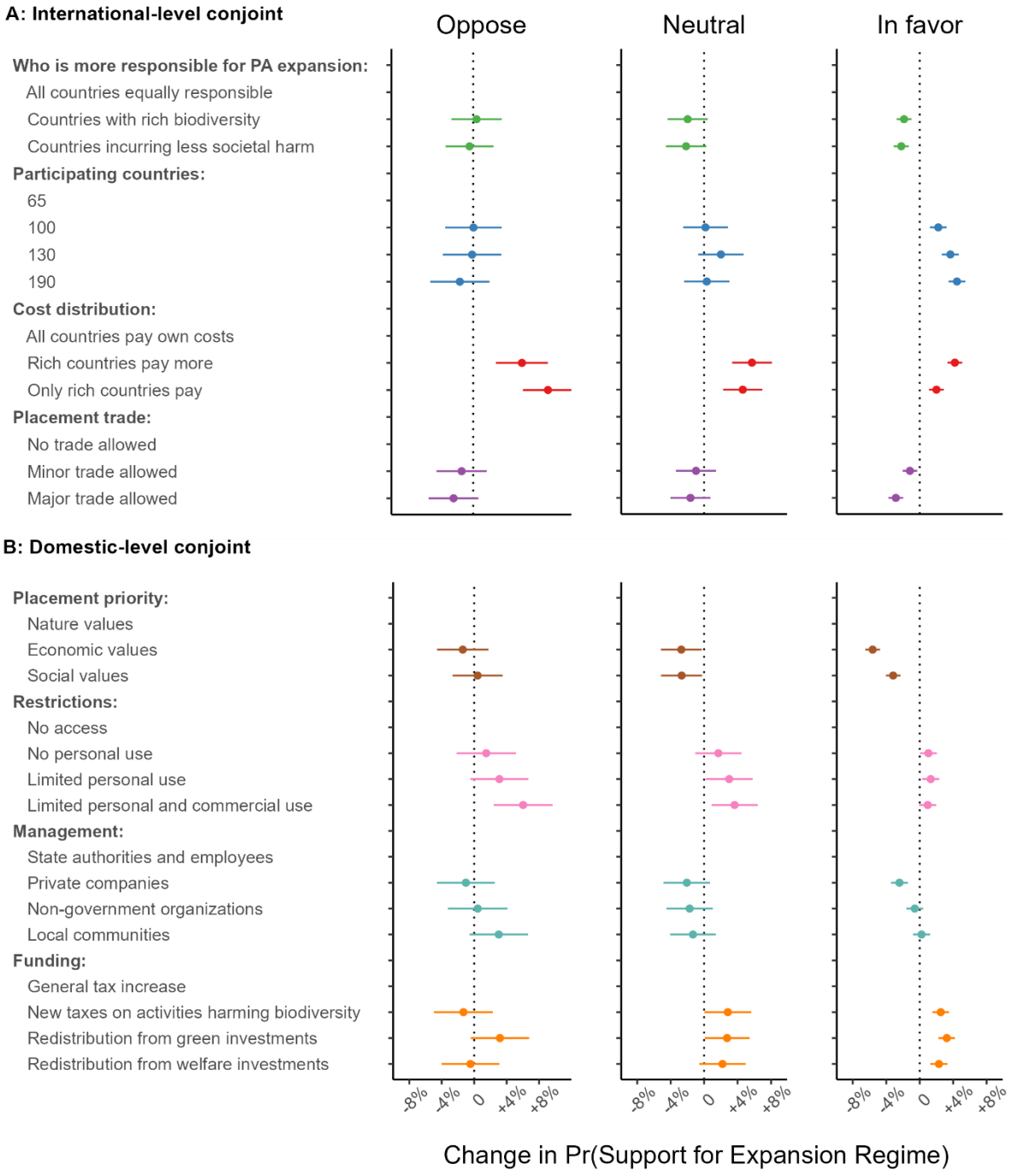

Figure S11. 30-by-30-support interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by support for the 30-by-30-target, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Perception of difficulty in national implementation of the 30-by-30-target

"How difficult do you think meeting this target would be in [country]?"

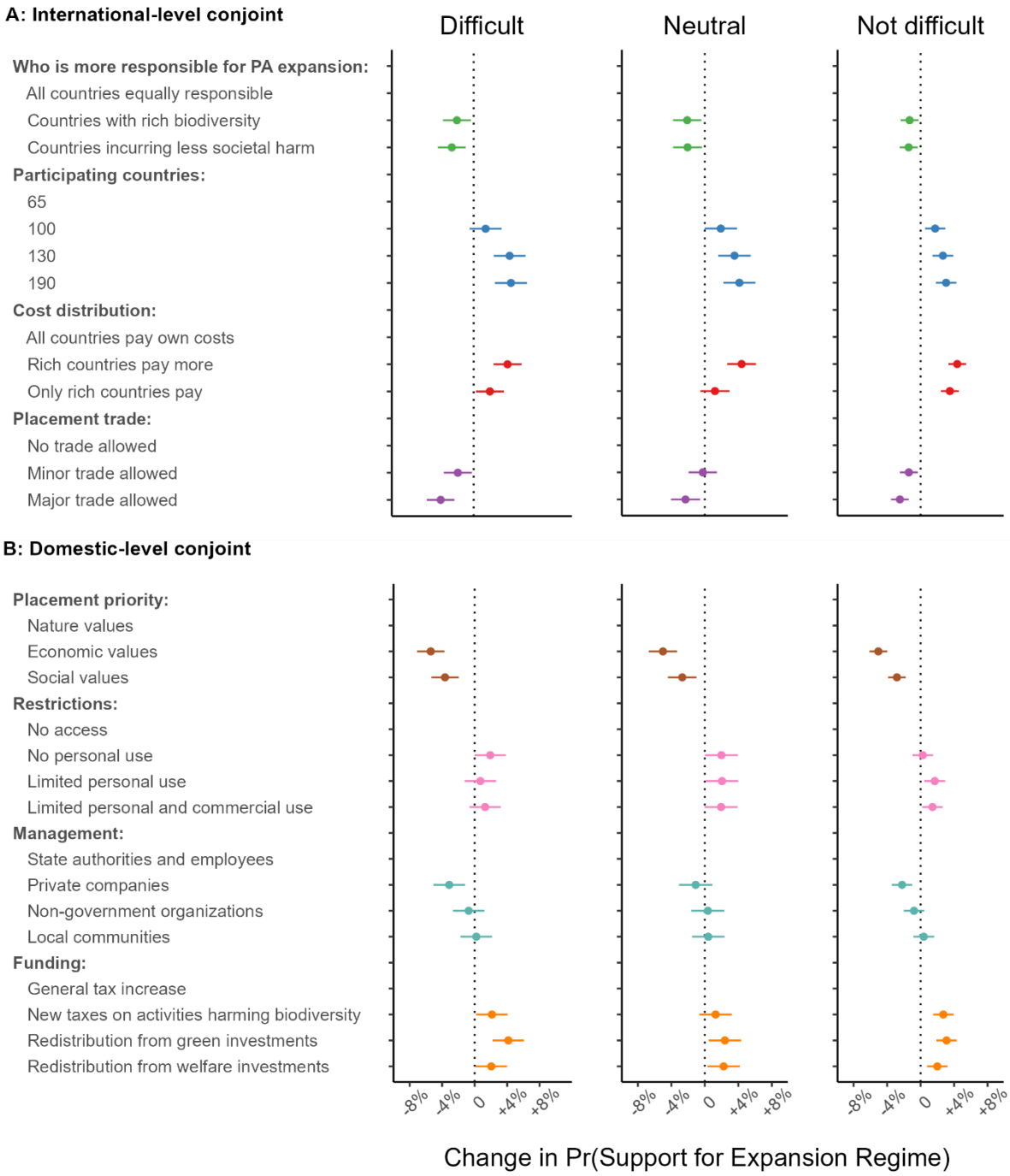

Figure S12. 30-by-30-difficulty interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by perceived difficulty of a national implementation of the 30-by-30-target, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Perception of economic impact from national implementation of the 30-by-30-target

"How do you think meeting this target would affect the economy in [country]?"

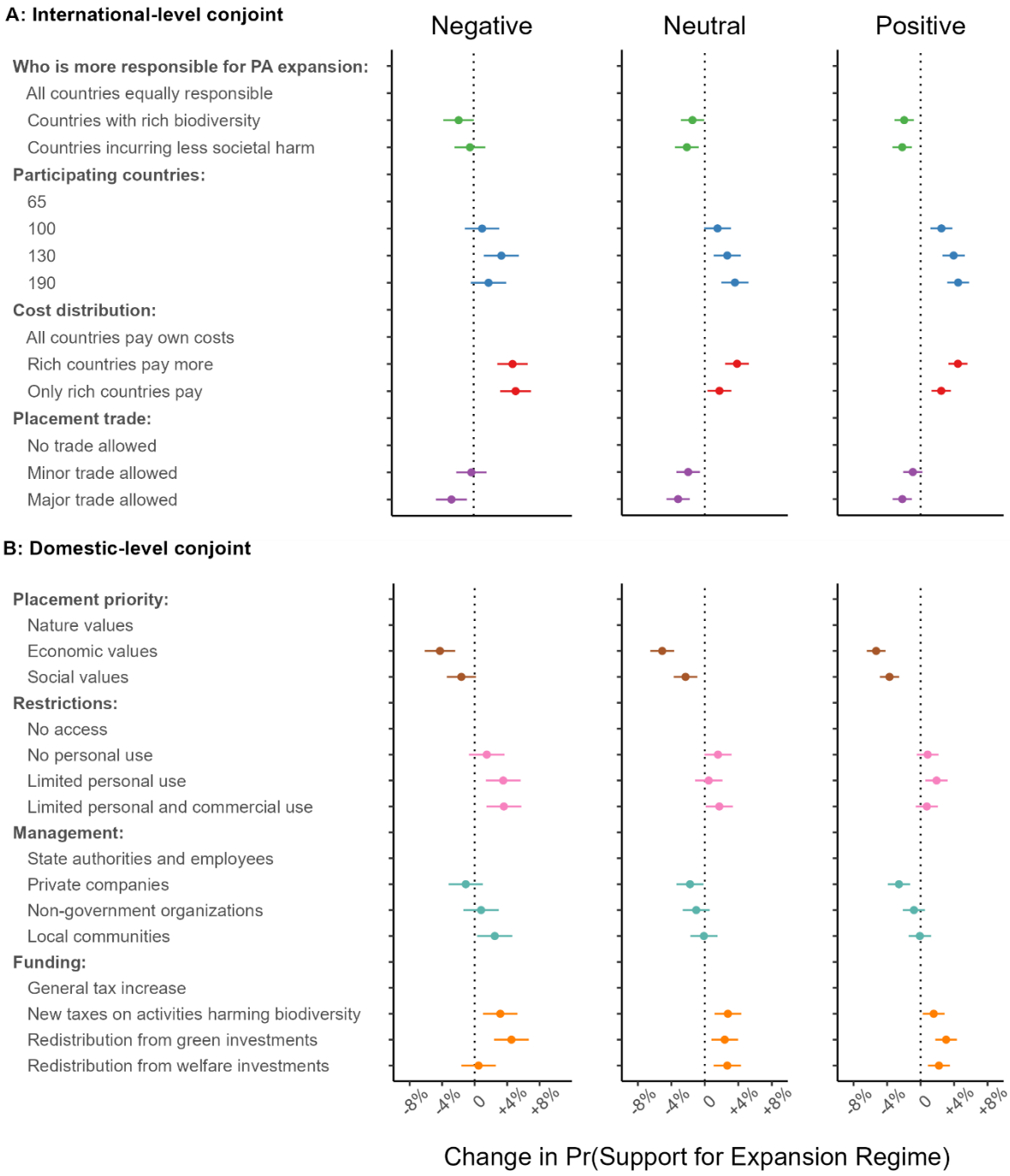

Figure S13. 30-by-30 economic impact interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by perceived economic impact of a national implementation of the 30-by-30-target, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Perception of economic impact from national implementation of the 30-by-30-target

"How do you think meeting this target would affect the well-being of people in [country] in general?"

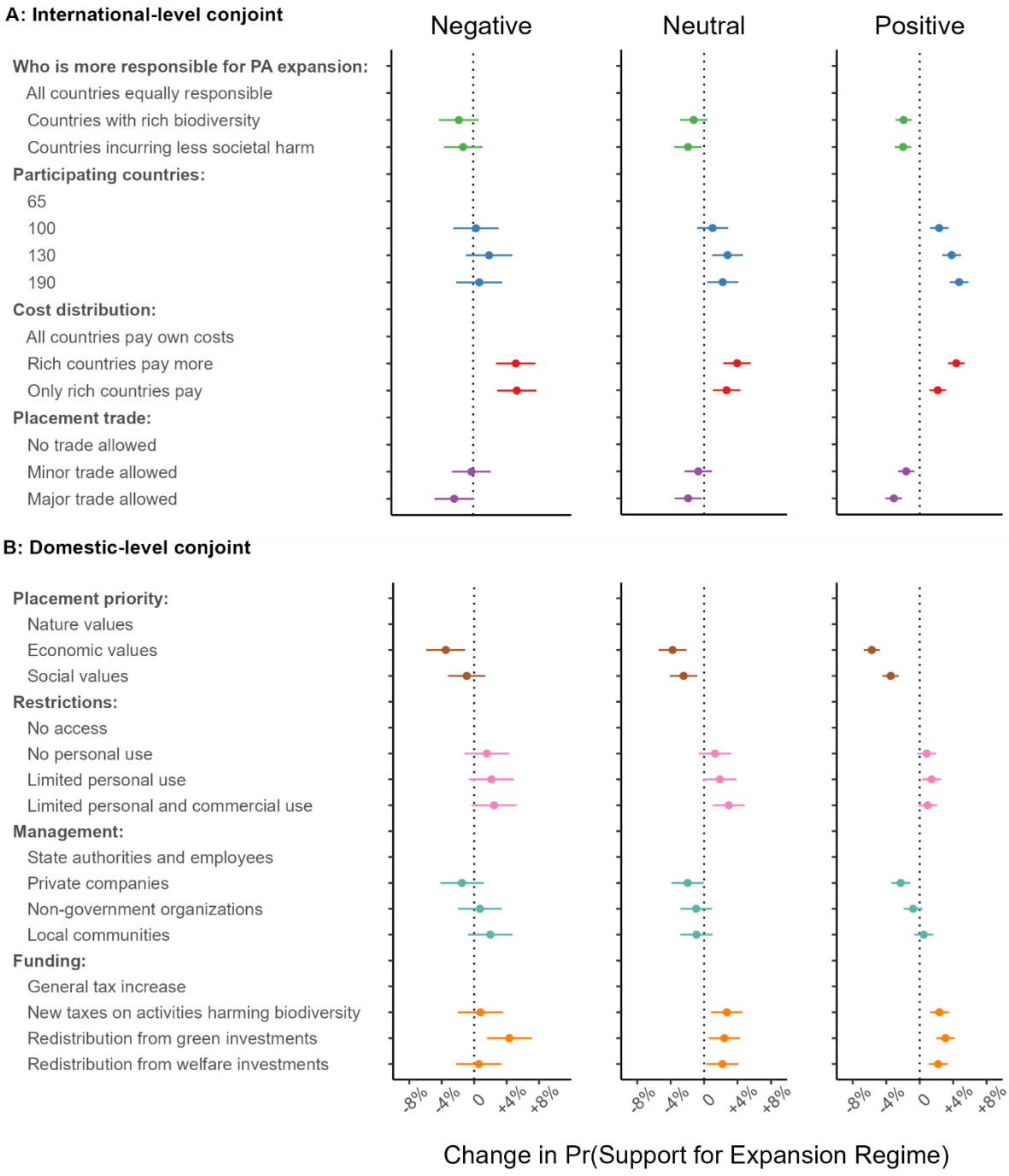

Figure S14. 30-by-30 wellbeing impact interaction with AMCE estimates for both conjoint experiments. Estimates show average marginal component effects split by perceived wellbeing impact of a national implementation of the 30-by-30-target, with 95% confidence intervals and SEs clustered by respondent. Panel A (top) shows results from the international-level conjoint experiment and Panel B (bottom) shows results from the domestic-level conjoint experiment.

Section 5: Kenya data

% Protected Areas on land	% marine Protected Areas
12.19	0.73

Source: UNEP-WDPA, 2024, January

While the biodiversity in Kenya appears to be in good condition in some areas, much of this understanding is based on assessments that are nearly two decades old. A more up-to-date picture is expected with the ongoing national wildlife census.[1] Kenya is home to a rich diversity of ecosystems, including lowland and mountain forests, wetlands, freshwater and saline ecosystems, and coral reefs along its coastline. These ecosystems play a crucial role in supporting Kenya's economy. Wetlands are particularly important, while Lake Victoria alone accounts for 90% of the country's total fish catch. Despite the high protection status of some areas, many regions of Kenya's biodiversity remain unprotected and in need of attention. Coastal and marine areas, such as mangroves and coral reefs, are known for their richness in biodiversity, with much of this habitat still largely untouched. However, forests, especially those located along the coast, are being eroded at an alarming rate, while high-altitude forests remain somewhat protected due to their isolation.[2]

Kenya faces several threats to its biological diversity, including high population pressure, land degradation, escalating conflicts, and poverty. Poor land use practices and a lack of clear land policies have led to land adjudication in fragile ecosystems, where there are no buffer zones to mitigate the effects of nearby development.[3]This has exacerbated environmental degradation and placed pressure on wildlife. Human-wildlife conflicts are a major issue, particularly in areas where the most diverse forests are located near human settlements. Population growth has led to increased encounters between humans and wildlife, with wild animals often preying on livestock. In response, protected species are sometimes killed by locals, creating further strain on conservation efforts.[4]

In 2024, Kenya Wildlife Service unveiled a new strategic plan aimed at promoting wildlife-based enterprises, improving marine reserve management, reducing biodiversity loss, and enhancing community engagement.[5] The goal is to ensure equitable access to wildlife

[1] Otieno, L. (2024) Why ongoing wildlife census is crucial, The Standard. Available at: https://www.standardmedia.co.ke/opinion/article/2001497611/why-ongoing-national-wildlife-census-is-crucial (Accessed: 7 October 2024)
[2] Convention on Biological Diversity, "Country Profiles: Kenya" Available at: https://www.cbd.int/countries/profile?country=ke (Accessed 7 October 2024)
[3] Convention on Biological Diversity, "Country Profiles: Kenya"
[4] Anyonge-Bashir, M. (2024) Collaboration key to resolving human-wildlife conflicts, The Standard. Available at: https://www.standardmedia.co.ke/article/2001501613/collaboration-key-to-resolving-human-wildlife-conflicts (Accessed: 8 October 2024)
[5] Wanga, S. (2024) KWS launches strategy to enhance wildlife conservation, socio-economic growth, The Standard. Available at: http://www.standardmedia.co.ke/environment-climate/article/2001503715/kws-launches-strategy-to-enhance-wildlife-conservation-socio-economic-growth (Accessed: 8 October 2024)

conservation benefits and address the ongoing conflicts between human populations and wildlife conservation efforts.

Table S15. Frequency distributions of 30-by-30-support, Kenya

	Raw sample			Cleaned sample		
Scale range	Freq.	Perc.	Cum. Perc.	Freq.	Perc.	Cum. Perc.
1	4	0.41	0.41	0	0.00	0.00
2	6	0.62	1.03	3	1.15	1.15
3	7	0.72	1.75	5	1.91	3.05
4	60	6.19	7.95	25	9.54	12.60
5	169	17.44	25.39	52	19.85	32.44
6	394	40.66	66.05	101	38.55	70.99
7	329	33.95	100	76	29.01	100
Missing	34			7		
Total	1003			269		

Table S16. Regression models predicting overall support for 30-by-30-target (Kenya sample, no attention check exclusions)

	Model 1				**Model 2**			
Predictors	*Coeff.*	*SE*	*t*	*p*	*Coeff.*	*SE*	*t*	*p*
(Intercept)	6.36	0.21	30.18	<.001	4.98	0.33	15.26	<.001
Age	-0.01	0.00	-3.49	.001	-0.01	0.00	-1.68	.093
Gender	0.19	0.07	2.75	.006	0.19	0.07	2.84	.005
Urbanicity	-0.03	0.04	-0.90	.368	-0.12	0.04	-3.34	.001
Education [bachelor]	0.20	0.08	2.60	.009	0.15	0.08	2.01	.045
Education [post bachelor]	-0.05	0.10	-0.47	.638	-0.14	0.10	-1.41	.160
Income [middle]	-0.31	0.08	-3.85	<.001	-0.29	0.08	-3.79	<.001
Income [high]	-0.50	0.10	-5.11	<.001	-0.33	0.10	-3.42	.001
Income redistribution					0.09	0.03	2.73	.006
Environmental concern					0.01	0.03	0.48	.632
Individual freedom					0.01	0.03	0.43	.665
Corruption perception					0.02	0.03	0.64	.522
Trust in government					0.12	0.02	6.58	<.001
R2 adj.	.08				.14			
Observations	959				936			

Note. For variable specifications, see Supplementary Table S3

Table S17. Regression models predicting overall support for 30-by-30-target (Kenya sample, with attention exclusions)

	Model 1				Model 2			
Predictors	*Coeff.*	*SE*	*t*	*p*	*Coeff.*	*SE*	*t*	*p*
(Intercept)	6.76	0.46	14.80	<.001	5.26	0.67	7.91	<.001
Age	-0.01	0.01	-2.42	.016	-0.01	0.01	-1.46	.145
Gender	0.09	0.14	0.62	.533	0.06	0.14	0.40	.687
Urbanicity	-0.17	0.08	-2.28	.023	-0.25	0.08	-3.20	.002
Education [bachelor]	0.22	0.15	1.45	.148	0.28	0.15	1.81	.071
Education [post bachelor]	0.24	0.23	1.05	.296	0.25	0.22	1.12	.266
Income [middle]	-0.28	0.20	-1.43	.153	-0.30	0.20	-1.51	.132
Income [high]	-0.17	0.22	-0.77	.440	-0.09	0.22	-0.41	.682
Income redistribution					0.07	0.06	1.17	.243
Environmental concern					0.08	0.05	1.43	.154
Individual freedom					0.02	0.06	0.28	.779
Corruption perception					0.03	0.06	0.48	.630
Trust in government					0.13	0.03	3.69	<.001
R2 adj.	.03				.07			
Observations	256				253			

Note. For variable specifications, see Supplementary Table S3.

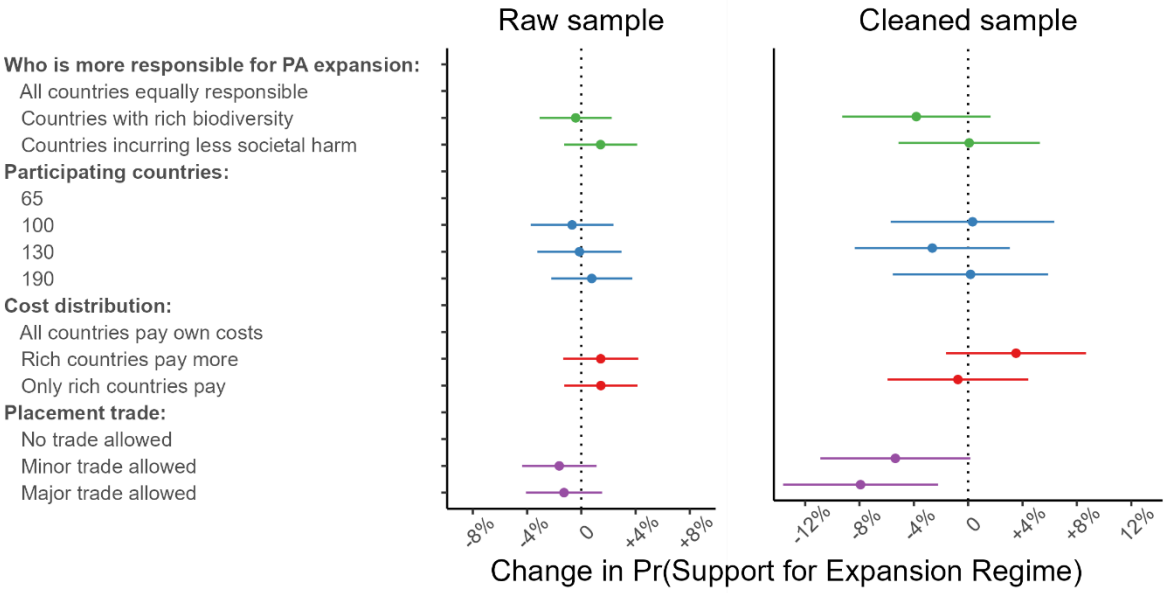

Figure S15. AMCE estimates for international-level conjoint experiment, raw and cleaned Kenya data. Estimates show average marginal component effects with 95% confidence intervals for raw and cleaned Kenya data. Estimates are based on Support for Expansion Regime regressed on binary indicator variables for policy design factors, with SEs clustered by respondent. The top level of each policy design factor indicates the reference category.

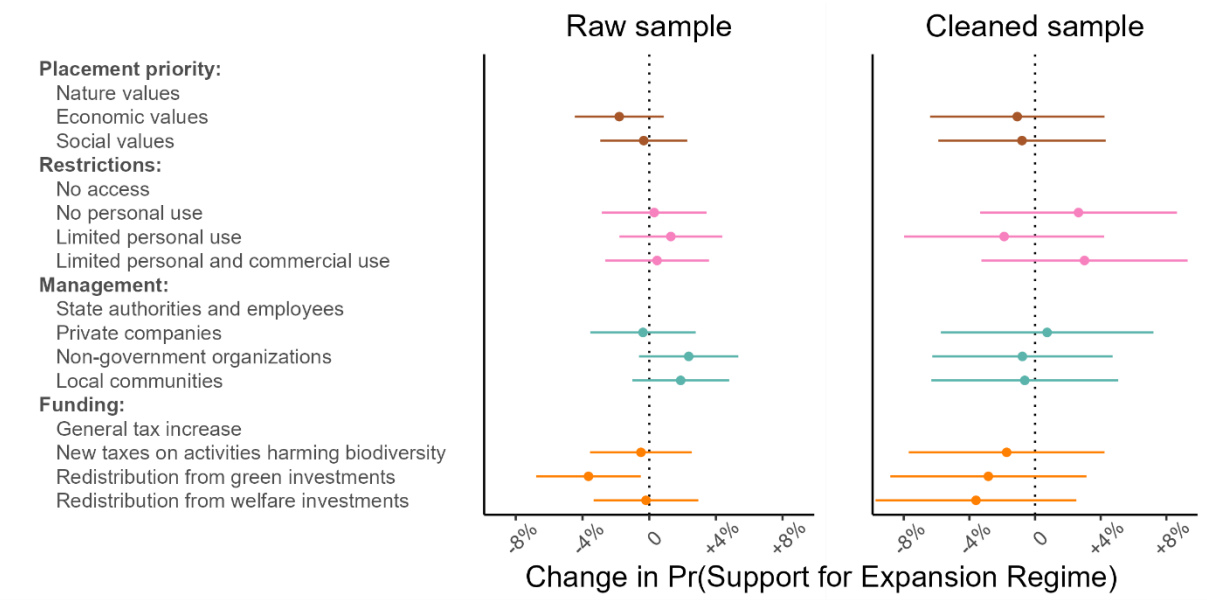

Figure S16. AMCE estimates for domestic-level conjoint experiment, raw and cleaned Kenya data. Estimates show average marginal component effects with 95% confidence intervals for raw and cleaned Kenya data. Estimates are based on Support for Expansion Regime regressed on binary indicator variables for policy design factors, with SEs clustered by respondent. The top level of each policy design factor indicates the reference category.

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