Supplementary Information for
Public Views on Conservation-Development Tradeoffs

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Materials and Methods

1. Main Study

1.1. Pre-registration (hypotheses, deviations)

This study was pre-registered prior to data collection on OSF:
https://osf.io/bx4c2/?view_only=0c035f22dff14d60acfd3484022b73ae

The pre-registration included details about hypotheses, experimental design, sample size, power analysis, inclusion and exclusion criteria, analysis plan as well as exploratory analysis. Parts of this content are included in this document with more clarity and detail. However, for a comprehensive pre-registration content, please refer to the link above.

1.1.1. Hypotheses

Here is the list of hypotheses (which have been slightly rephrased for clarity; see pre-registration for original phrasing):

> **H1:** Participants will be more likely to choose conservation (a habitat for an endangered species) over development (using the land for human benefit).

This reflects increasing support for biodiversity conservation, particularly when endangered species are involved [1,2]. We expected this preference to emerge regardless of other factors in the scenarios.

> **H2:** Participants will be more likely to choose the default option (preserve an existing habitat or land use), over the non-default option (repurpose a space to a habitat or human use).

The tendency to preserve the status quo aligns with prior research on decision inertia [3], loss aversion [4], and omission bias [5].

> **H3:** The gap in support between the default and the non-default options will be greater for land use scenarios than habitat scenarios. In other words, participants will show a larger difference in willingness to preserve a land use rather than repurposing a space for human use, compared to the difference in willingness to preserve a habitat rather than repurposing a space to a habitat.

This asymmetry reflects a higher sensitivity to disrupting human-centred activities, which may be perceived as having more immediate or tangible impacts.

> **H4:** Participants will be less likely to support conservation if the habitat contains only 10% of the remaining species, compared to if it contains 100% of the remaining species.

This relates to the concept of extinction debt, where destroying a habitat—even partially—can lead to delayed species extinctions. While the long-term impact of losing 50–90% of a habitat may resemble that of total loss, people may react more strongly to definite, complete extinctions. This could be shaped by loss aversion [4], as well as diffusion of responsibility [6].

> **H5:** Participants will be more likely to support development if the project benefits 10,000 people, compared to if it benefits only 100 people.

This hypothesis draws on utilitarian preferences – actions resulting in the wellbeing of more people are perceived as more morally permissible than actions resulting in the wellbeing of fewer people [7].

1.1.2. Deviations from pre-registration

Below are the deviations from our pre-registered plan.

- Our target sample size was 1,000 participants based on a power calculation. To reach this, we planned to recruit and pay 1,250 participants, assuming that 80% would pass both attention checks (based on at least one passing check). This estimate was lower than the passing rates in our two pilot studies (92% and 84%). However, the actual passing rate after collecting data from 1,250 participants was only 65%. Our pre-registration did not specify what to do in this case, so we recruited 250 more participants. The final number of valid participants was 976.
- Two of the five hypotheses did not produce significant results, contrary to our expectations. Our power analysis showed we had enough power to detect effects as small as $d = 0.15$, and the observed effects for these two hypotheses were smaller than that. We had pre-registered that, in the absence of significant results, we would conduct an equivalence test. We used $d = 0.15$ as the equivalence bound, but the results were inconclusive. Our power calculation focused on detecting effects of $d = 0.15$ but did not account for the specific power needed to conclude equivalence.
- Although we pre-registered that we would interpret results using the categories of "supportive evidence" ($p < 0.005$, corrected to 0.0025 for H2–H3) and "suggestive evidence" ($p < 0.05$, corrected to 0.025 for H2–H3), following [8], we did not apply this distinction in the paper. This is because all significant results had *p*-values smaller than 0.001, and all non-significant results had *p*-values larger than 0.05, making the further categorisation unnecessary.

1.2. Participants

Inclusion criteria: Participants have completed the survey, answered all questions, agreed to take part in the research, are over 18 years old, and passed an attention check. Out of 1658 participants who attempted the survey, 1501 completed it fully (and received payment). This sample was nationally representative of the UK population in terms of age levels, gender (male and female), and simplified ethnicity. Prolific handled the sampling and used data from the UK Office for National Statistics to match national proportions as closely as possible across these three demographics. Of those, 976 participants fit the inclusion criteria and were included in the main analysis.

1.3. Experimental Design

Mixed design with the following factors between subject:

1. Default: Conservation (the space is designated for conservation of an endangered species by default) vs. Development (the space is designated for human/land use by default)
2. Named: one of the two types of entity is always named while the other is not specified: Species (10 named species vs. one generic land use) vs. Land use (10 named land uses vs. one generic species). Depending on this, participants are divided into:
3. When species are named – Percentage out of all remaining individuals from this species in the world (that is/would be in the space): 100% (control), 50%, 10%
4. When land uses are named – Effectiveness (number of humans [potentially] benefiting): 100 people (control), 1000, 10,000

The following is within subjects:

- Named Species – 10 different species
    - Parrot
    - Pigeon
    - Snake
    - Rat
    - Gorilla
    - Panda
    - Tiger
    - Bumblebee
    - Scorpion
    - Tea
- Named Land uses – 10 different land uses
    - Heritage Site
    - Night Club
    - Railway Station
    - Water Purification Facility
    - Nursing Home
    - Hospital
    - Mental Health Unit
    - Prison
    - Bank
    - Food And Beverage Production

Table S1 shows the number of participants allocated to each condition.

Table S1. Number of participants in each group.

ConditionNamed	ConditionDefault	Percent	Benefit	n
Building	Building		10,000	74
Building	Building		100	84
Building	Building		1000	89
Building	Species		10,000	82

Building	Species		100	78
Building	Species		1000	84
Species	Building	10		78
Species	Building	100		89
Species	Building	50		82
Species	Species	10		70
Species	Species	100		90
Species	Species	50		76

1.4. Demographics

Table S2 summarises the breakdown of participants in different demographic variables.

Table S2. Demographics of main study. A total of 976 participants were paid and included in the main analysis. Number of participants and share of participants (%) reported for levels within the following variables: age group, gender, number of children, employment, income, and education.

Characteristic	**N = 976 (100%)**
Age Group	
18-24 years old	89 (9.1%)
25-34 years old	158 (16%)
35-44 years old	169 (17%)
45-54 years old	177 (18%)
55-64 years old	284 (29%)
65+ years old	99 (10%)
Gender Identity	
Female	495 (51%)
Male	473 (48%)
Non-binary / third gender	4 (0.4%)
Prefer not to say	2 (0.2%)
Prefer to self-describe	2 (0.2%)
Number of Children	
0	706 (72%)
1	122 (13%)
2	111 (11%)
3	32 (3.3%)
4	5 (0.5%)
Employment	

Working full-time	472 (48%)
Working part-time	199 (20%)
Unemployed and looking for work	40 (4.1%)
A homemaker or stay-at-home parent	47 (4.8%)
Student	41 (4.2%)
Retired	136 (14%)
Other	41 (4.2%)
Income	
Less than $25,000	162 (17%)
$25,000-$49,999	314 (32%)
$50,000-$74,999	185 (19%)
$75,000-$99,999	137 (14%)
$100,000-$149,999	70 (7.2%)
$150,000 or more	31 (3.2%)
Prefer not to say	77 (7.9%)
Education	
Some Primary	0 (0%)
Completed Primary School	4 (0.4%)
Some Secondary	8 (0.8%)
Completed Secondary School	195 (20%)
Vocational or Similar	162 (17%)
Some University but no degree	80 (8.2%)
University Bachelor's Degree	352 (36%)
Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS)	166 (17%)
Prefer not to say	9 (0.9%)

1.5. Attention and Comprehension Questions

Attention Questions. Two attention checks were used. In alignment with the rules of Prolific, surveys that last more than 5 minutes should include at least two attention questions and participants can only be excluded if they fail both questions. Prolific rules also mandate that the answer to the attention question should be presented on the same page. We asked the following two questions (the first appeared immediately before the first task, and the second appeared immediately after the second task):

Attention Question 1:
"At the beginning of the next section, you will encounter the first of several dilemmas about species conservation and land use. To proceed to the next page, please select biodiversity hotspots from the options below.

Which type of habitat do you think is most underrepresented in conservation efforts?"

- ☐ Forests
- ☐ Wetlands
- ☐ Oceans
- ☐ Grasslands
- ☐ Biodiversity hotspots
- ☐ Mountains

Attention Question 2:
"In studies like ours, there are sometimes a few people who do not carefully read the questions they are asked and just quickly click through the survey. These random answers are problematic because they compromise the results of the studies. It is very important that you pay attention and read each question. Please answer YouTube in the question below, to show that you read our questions carefully (and regardless of your own opinion).

When an important event is happening or is about to happen, many people try to get informed about the development of the situation. In such situations, where do you get your information from?"

- ☐ TV
- ☐ X (formerly Twitter)
- ☐ Facebook
- ☐ YouTube
- ☐ Reddit
- ☐ Radio
- ☐ Newspaper
- ☐ Tiktok
- ☐ Other

Comprehension Questions. Participants were asked two comprehension questions after reading the instructions. The aim was to check whether they understood both the default use of the space (if no change occurred) and the proposed repurposing.

Comprehension Question 1:

"Q1. What is the current status of the space in question?"

- ☐ It is one of the last habitats for an endangered species
- ☐ It is utilised for a land use project that is one of the last of its type in the area
- ☐ It is an undeveloped urban area

Comprehension Question 2:

"Q2. What is unique about the proposed change to the space?"

- ☐ It will be a temporary use of the space
- ☐ It will be one of the first land use projects of its type in the area
- ☐ It will be one of the first habitats for an endangered species

The instructions and the correct answers depended on the default use of the space (habitat or land use). We did not use these questions to filter out participants, but rather to check and ensure their understanding of the survey by providing the correct answer afterwards.

When habitat is the default condition.

- Instructions: there were two sets of instructions in this condition: one when species are named and one when land uses are named.

> <u>Named Species</u>
> **"In the following pages, you will see information about 10 endangered species, including both animals and plants.**
>
> For each species, you will need to decide on a course of action for a green space that serves as one of the last habitats for this species. This space is being considered for a land re-use that will benefit humans who live nearby and will be one of the first of its type in the area.**"**
>
> <u>Named Land Uses</u>
> **"In the following pages, you will learn about 10 different ways land can be used, such as for buildings.**
>
> For each type of land use, you will need to decide on a course of action for a green space that is one of the last habitats for an endangered species. This space is being considered for redevelopment into the land use you're reviewing, that will benefit humans who live nearby and will be one of the first of its type in the area.**"**

The two comprehension questions were then shown, followed by a screen displaying the correct answers.

> "The correct answers are:

Q1. What is the current status of the space in question?
Answer: It is one of the last habitats for an endangered species

Q2. What is unique about the proposed change to the space?
Answer: It will be one of the first land use projects of its type in the area"

Table S3 shows the proportion of participants who answered each question correctly.

Table S3. Comprehension checks – default is habitat. A total of 480 participants were paid and included in the main analysis and assigned to the "default is habitat" condition. Number of participants and share of participants (%) reported for levels for the two comprehension questions.

Characteristic	**N = 480**
Q1. What is the current status of the space in question?	
Correct	385 (80%)
Incorrect	95 (20%)
Q2. What is unique about the proposed change to the space?	
Correct	398 (83%)
Incorrect	82 (17%)

When land use is the default condition.

- Instructions: there were two sets of instructions in this condition: one when species are named and one when land uses are named.

Named Species
"In the following pages, you will see information about 10 endangered species, including both animals and plants.

For each species, you will need to decide on a course of action for a space that is currently utilised for a land use project that benefits humans who live nearby and is one of the last of its type in the area. This space is now being considered to be repurposed to create one of the first habitats for that species.**"**

Named Land Uses

“In the following pages, you will learn about 10 different ways land can be used, such as for buildings.

For each type of land use, you will need to decide on a course of action for a space that is currently utilised for the land use you are reviewing, which benefits humans who live nearby and is one of the last of its type in the area. This space is now being considered to be repurposed to create one of the first habitats for an endangered species.**”**

The two comprehension questions were then shown, followed by a screen displaying the correct answers.

“The correct answers are:

Q1. What is the current status of the space in question?
Answer: It is utilised for a land use project that is one of the last of its type in the area

Q2. What is unique about the proposed change to the space?
Answer: It will be one of the first habitats for an endangered species”

Table S4 shows the proportion of participants who answered each question correctly.

Table S4. Comprehension checks – default is land use. A total of 496 participants were paid and included in the main analysis and assigned to the “default is land use” condition. Number of participants and share of participants (%) reported for levels for the two comprehension questions.

Characteristic	**N = 496**
Q1. What is the current status of the space in question?	
Correct	384 (77%)
Incorrect	112 (23%)
Q2. What is unique about the proposed change to the space?	
Correct	334 (67%)
Incorrect	162 (33%)

1.6. Analysis

All the details below are included in the pre-registration and were followed accordingly. Refer to section 1.1.2 for any deviation from analysis.

Data exclusion.

- Before data collection: participants who participated in the pilot studies of this project or some of the other pilot studies by our team on Prolific will be excluded from taking our survey on Prolific.
- During data collection: In order to be compensated, participants will have to 1) provide platform ID, 2) complete the study (answering all questions), and 3) pass at least one attention check. All the rest are excluded from completing the study and their data will be removed.

- During analysis: Participants who failed any attention check are excluded from the main analysis to ensure attentiveness.

Transformations. To fit the data for conjoint analysis [9], the data was reshaped as follows:
1. Participant-Level to Dilemma-Level: The data was transformed from the participant level (N rows) to the dilemma level (10 x N rows), where each dilemma represents a choice between two options.
2. Dilemma-Level to Choice-Level: The data was then reshaped to the choice level (20 x N rows), where each row corresponds to one of the two options (e.g., Conservation of Species or Development of Land Use) in a given dilemma.
These transformations resulted in each dilemma being represented twice and each participant 20 times (20 × N rows), creating dependencies within the data. The approach to handling these dependencies varies depending on the hypotheses:

- For H1 and H2: The transformed data (20 × N rows) were used, and participant-level clustered-robust standard errors will account for within-participant dependencies.
- For H3: Participant-level clustered-robust standard errors were also used here to account for within-participant dependencies. However, clustering alone was not enough here, due to use of interactions between the default choice and entity type. Here, only one choice per dilemma will be retained (10 × N rows). Specifically:
    - If the Named entity in the dilemma is "Species," the choice corresponding to "Species" (chosen or not) was retained.
    - If the Named entity in the dilemma is "Building," the choice corresponding to "Building" (chosen or not) was retained.
- For H4 and H5: Participant-level clustered-robust standard errors were also used here to account for within-participant dependencies. However, clustering alone was not enough here, since these hypotheses focus on different manipulated factors for Named "Species" and Named "Buildings". Here, a subset of the data from H3 was used. Specifically:
    - Data relevant to Named "Species" resulted in approximately half of participants (thus 10 × N/2 rows) for H4.
    - Data relevant to Named "Buildings" resulted in approximately half of participants (thus 10 × N/2 rows) for H5.

Statistical models. Using transformed data (see previous section), we used the following models to test the five hypotheses:

H1: We estimated the Average Marginal Component Effect (AMCE) of the "Entity Type" (Building vs. Species) using conjoint analysis [9], pooling data across all other attributes. Model: Using a Linear Probability Model (LPM), we included the dummy variable “Entity Type” to estimate the difference between "Building" and "Species”. The AMCE was tested by examining whether the coefficient for “Species” (as compared to building) is positive and significantly different from zero.

H2: We estimated the Average Marginal Component Effect (AMCE) of the "Default" (No vs. Yes) using conjoint analysis, pooling data across all other attributes. Model: Using a Linear Probability Model (LPM), we included the dummy variable “Default” to estimate the difference between "Non-default" and "Default”. The AMCE was tested by examining whether the coefficient for “Default” (as compared to Non-default) is positive and significantly different from zero.

H3: We estimated the Average Component Interaction Effect (ACIE) of the interaction between the "Default" (No vs. Yes) "Entity Type" (Building vs. Species) using conjoint analysis. Model: Using a Linear Probability Model (LPM), the interaction term “Entity Type” x “Default” was included to estimate the differential effect of "Default" depending on whether the entity is building or species. The coefficient of the interaction term was interpreted as the ACIE, representing the difference in effects between species and buildings. The ACIE was tested by examining whether the coefficient is negative and significantly different from zero.

H4: We estimated the Average Marginal Component Effect (AMCE) of the "Percent" (100% vs. 10%) using conjoint analysis, pooling data across all other attributes. Model: Using a Linear Probability Model (LPM), we included the dummy variable “Percent” to estimate the difference between "100%" and "10%”. The AMCE was tested by examining whether the coefficient for “100%” (as compared to 10%) is positive and significantly different from zero.

H5: We estimated the Average Marginal Component Effect (AMCE) of the "Benefit" (100 vs. 10,000) using conjoint analysis, pooling data across all other attributes. Model: Using a Linear Probability Model (LPM), we included the dummy variable “Benefit” to estimate the difference between "100" and "10,000”. The AMCE was tested by examining whether the coefficient for “10,000” (as compared to 100) is positive and significantly different from zero.

In all hypotheses, participant-level clustered standard errors were used to account for correlations within participants.

Inference criteria. Following [10] we used family-wise correction to account for dependencies within the following families of hypotheses: family 1 (H1), family 2 (H2-H3), family 3 (H4), and family 4 (H5). Given this, correction was only applied to family 2 (H2-H3). No correction will be applied to family 1 (H1), family 3 (H4), or family 4 (H5).

In the case of no significance, we conducted a Two One-Sided Tests (TOST) procedure [11]. This was the case for H4-H5.

1.7. Robustness analysis

- Following pre-registration, and to establish robustness of the results, we conducted two secondary analyses identical to the main ones:

1. Including all participants who received payment [N=1,501 participants]. I.e., those who passed at least one of the two attention checks and answered all questions, to maintain sample representativeness.
2. Excluding participants who failed any comprehension questions (in addition to those that failed any attention check), even though they were provided with correct answers after responding [N=704 participants].

The results show no change from the main analysis.

2. Pilot studies

2.1. Pilot 1

2.1.1. Participants.

This study recruited US-based participants who were at least 18 years old and speak English. Out of 513 participants who attempted the survey, 484 completed (and received payment), and 441 participants passed both attention checks.

2.1.2. Experimental Design.

First, participants were allocated into one of the following two conditions: 1) Species condition (60% of participants) and 2) Building condition (40% of participants). Then, based on each condition, they were further allocated into one of 5 groups (see below).

- Species condition and questions: We used 40 species in total. Each participant in this condition saw 10 species and provided ratings for each species. The ratings were on a scale of 1 to 10, for the following characteristics: Charismatic, Beautiful, Cute, Rare, Endangered, Dangerous, Impressive, Intelligent, Ecologically Important, Familiar, and Likable. In addition, participants

also answered a dilemma question (see below). Participants were allocated into one of the following five groups:

- No percentage information (control): one third of participants in the species condition.
- Small percentage information: one third of participants in the species condition. They were further allocated to 1% or 5% of species in the green space out of all remaining species.
- Large percentage information: one third of participants in the species condition. They were further allocated to 50% or 75% of species in the green space out of all remaining species.

We presented the dilemma question as follows:

> *"Imagine a green space that is one of the last sanctuaries for the endangered species above. ${e://Field/PercentStatement}*
>
> *Recently, you learned about a plan to repurpose this space into a land use that is expected to benefit humans.*
>
> *What should happen to this green space?"*

Participants choose one answer of the following:

- *Green space should be preserved*
- *Green space should be repurposed into a land use*

The ${e://Field/PercentStatement} refers to a factor in which we either showed nothing (control; no percentage information), or showed a percentage of species in the green space out of all remaining species (1%, 5%, 50%, 75%): "It has 1% of all remaining individuals of this species."

- Buildings (Land uses) condition questions: We also used 40 buildings (land uses) in total. Each participant in this condition saw 16 buildings and provided ratings for each building. The ratings were on a scale of -5 to +5, for the following characteristics: Environmental impact, Economic impact, Social impact, Historical and Cultural impact, and Aesthetic impact. In addition, participants also answered a dilemma question (see below). Participants were allocated into one of the following five groups:

- No effectiveness information (control): one third of participants in the building condition.
- Small effectiveness information: one third of participants in the building condition. They were further allocated to 100 or 500 of humans benefiting from the building.

- Large percentage information: one third of participants in the building condition. They were further allocated to 10,000 or 50,000 of humans benefiting from the building.

We presented the dilemma question as follows:

> *"Imagine a green space that is one of the last sanctuaries for an endangered species.*
>
> *Recently, you learned about a plan to repurpose this area into the construction project above which is expected to benefit humans. ${e://Field/BenefitStatement}*
>
> *What should happen to this green space?"*

Participants choose one answer of the following:

- *Green space should be preserved*
- *Green space should be repurposed into the project above*

The ${e://Field/BenefitStatement} refers to a factor in which we either showed nothing (control; no effectiveness information), or showed number of humans benefiting from the building (no information, 100, 500, 10,000, or 50,000): "The new project is expected to benefit 100 persons."

2.1.3. Demographics.

Table S5 summarises the breakdown of participants in different demographic variables.

Table S5. Demographics of Pilot 1. A total of 441 participants were paid and included in the main analysis. Number of participants and share of participants (%) reported for levels within the following variables: age group, gender, number of children, employment, income, and education.

Characteristic	**N = 441 (100%)**
Age Group	
18-24 years old	23 (5.2%)
25-34 years old	115 (26%)
35-44 years old	112 (25%)
45-54 years old	102 (23%)
55-64 years old	65 (15%)
65+ years old	24 (5.4%)
Gender Identity	
Female	202 (46%)

Male	233 (53%)
Non-binary / third gender	5 (1.1%)
Prefer not to say	1 (0.2%)
Number of Children	
0	275 (62%)
1	72 (16%)
2	65 (15%)
3	23 (5.2%)
4	5 (1.1%)
6	1 (0.2%)
Employment	
Working full-time	275 (62%)
Working part-time	62 (14%)
Unemployed and looking for work	30 (6.8%)
A homemaker or stay-at-home parent	29 (6.6%)
Student	5 (1.1%)
Retired	27 (6.1%)
Other	13 (2.9%)
Income	
Less than $25,000	46 (10%)
$25,000-$49,999	88 (20%)
$50,000-$74,999	96 (22%)
$75,000-$99,999	82 (19%)
$100,000-$149,999	71 (16%)
$150,000 or more	53 (12%)
Prefer not to say	5 (1.1%)
Education	
Some Primary	0 (0%)
Completed Primary School	5 (1.1%)
Some Secondary	7 (1.6%)
Completed Secondary School	45 (10%)
Vocational or Similar	33 (7.5%)
Some University but no degree	72 (16%)
University Bachelor’s Degree	165 (37%)

Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS)	107 (24%)
Prefer not to say	7 (1.6%)

2.1.4. Results.

Conservation Ranking. Figure S1 shows how species rank, based on probability of preservation of their habitat. The results below pool over all percentages together. All error bars in this document represent 95% confidence intervals.

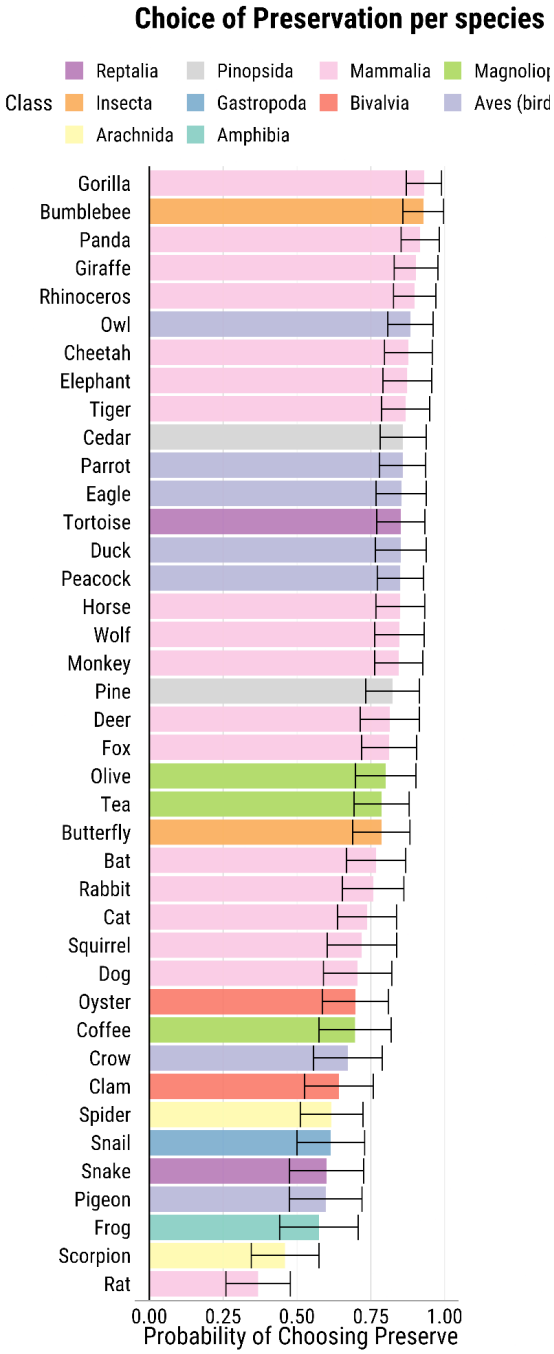

Figure S1. Species ranking. Species are ranked based on the probability of choice of preserving habitat.

Effect of percentages. Figure S2 shows the effect of including percentage information (pooling over all species). We chose the control condition as the baseline and calculated the effect of showing percentage information on the probability of preservation of the last haven. This is basically calculated as the difference between the probability of preservation in the control condition and the probability of preservation in the percentage information condition. i.e.,

$$\Delta P = P(chose\ preserve \mid showing\ 1\%\ percentage) - P(chose\ preserve \mid no\ information)$$

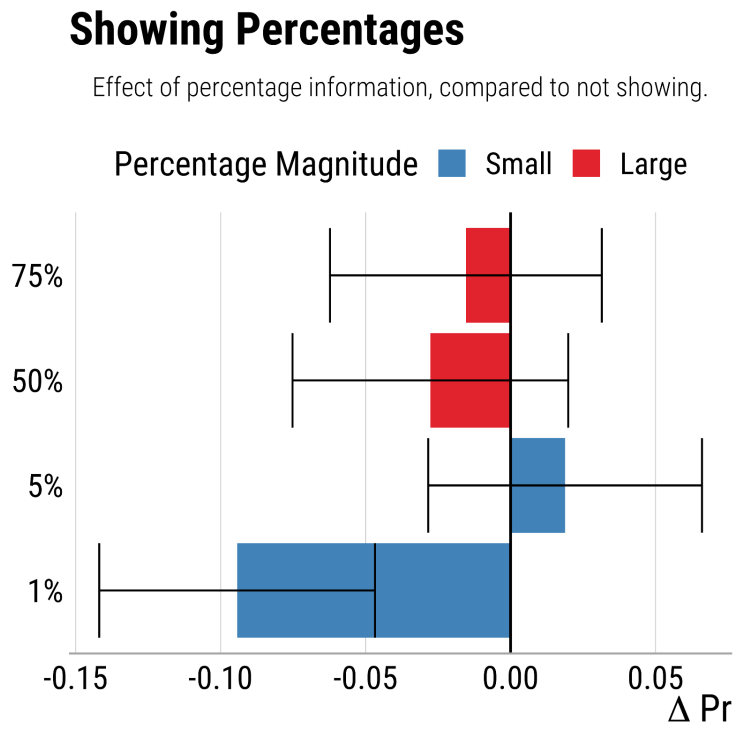

Figure S2. Effect of percentages. Effect of showing each percentage information compared to not showing such information (baseline).

Species ratings questions. Figure S3 shows the top 5 rated species for each question

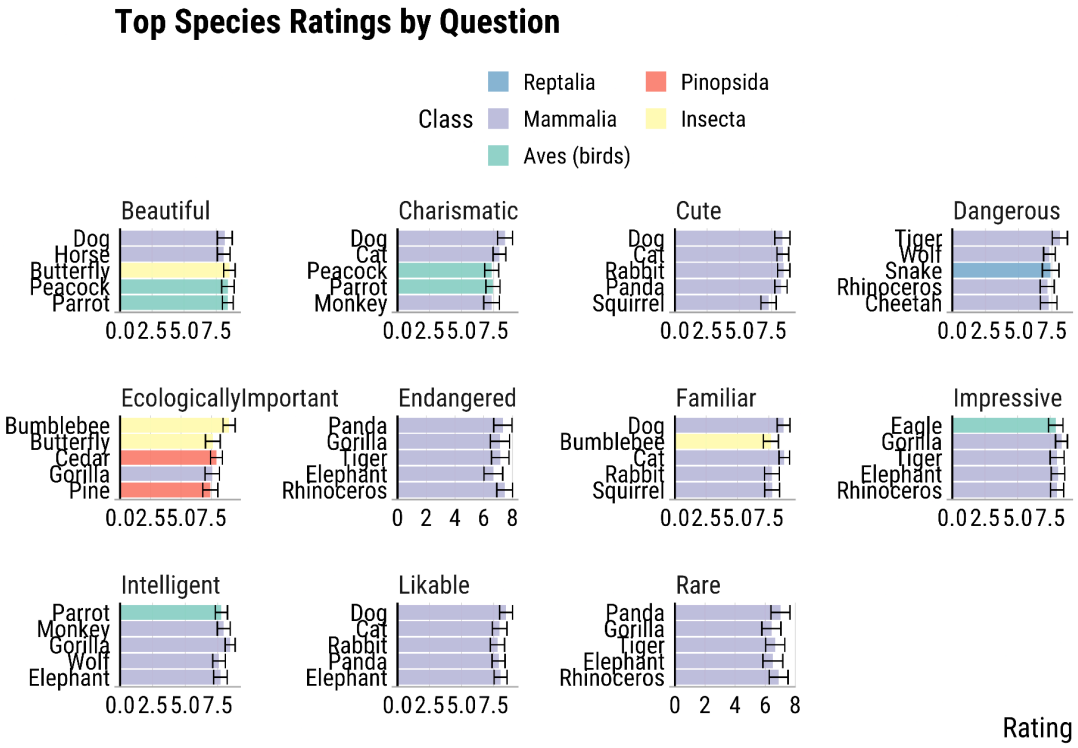

Figure S3. Top 5 species rating by Question. The top 5 species per each of the 11 rating questions: beautiful, charismatic, cute, dangerous, ecologically important, endangered, familiar, impressive, intelligent, likability (how much they like it), and rare.

Association between the conservation decision and species ratings. Using a simple linear probability model with the choice of preservation as dependent variable and each of the 11 ratings as independent variables (including percentage information as covariate), we can see the association between the ratings and the choice of preservation. To account for non-independence of observations, we used clustered standard errors at the participant level and species level. The plot below shows the coefficient values for each of the ratings.

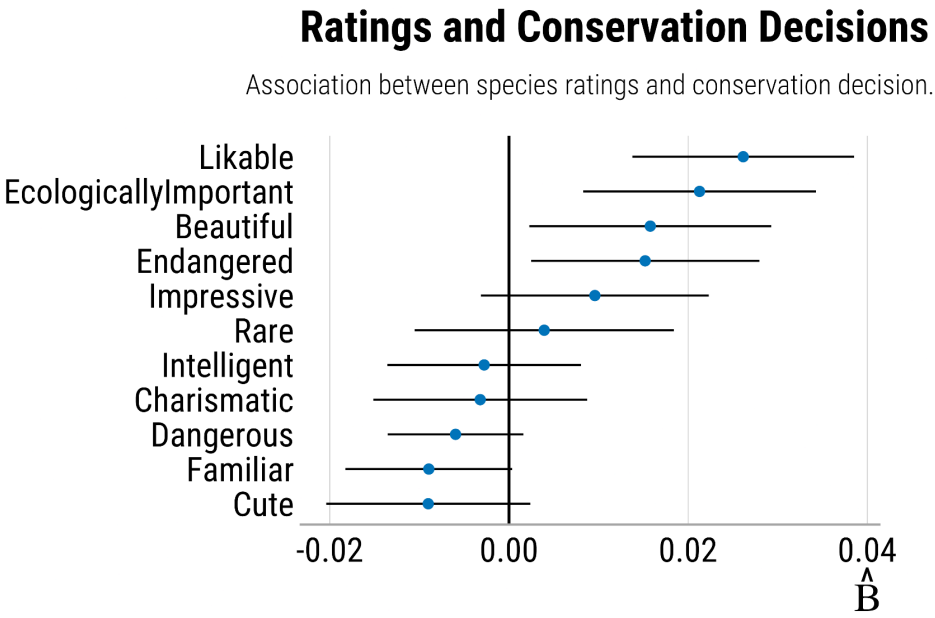

Figure S4. Association between species ratings and conservation decisions. Point estimates and error bars represent the coefficients and 95% confidence intervals (calculated from cluster-robust standard error) of one linear probability model that has conservation decision (binary) as dependent variable and all rating questions and percentage information as independent variables.

All pairs correlations between species ratings.

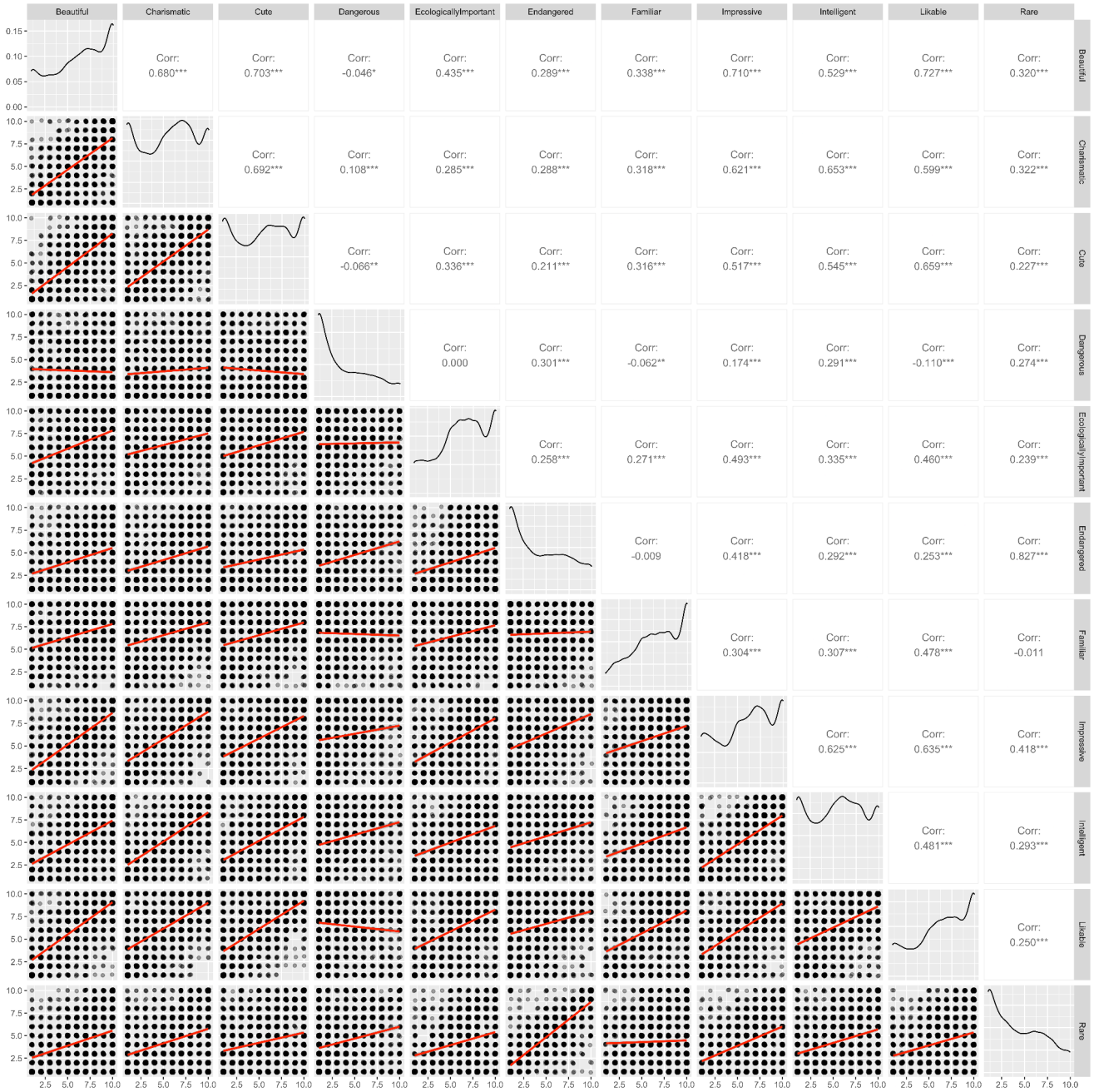

Figure S5. Pairwise correlations between all 11 species ratings.

Development Ranking. Figure S6 shows how land uses rank, based on probability of choosing to repurpose the habitat. The results below pool all percentages together. All error bars in this document represent 95% confidence intervals.

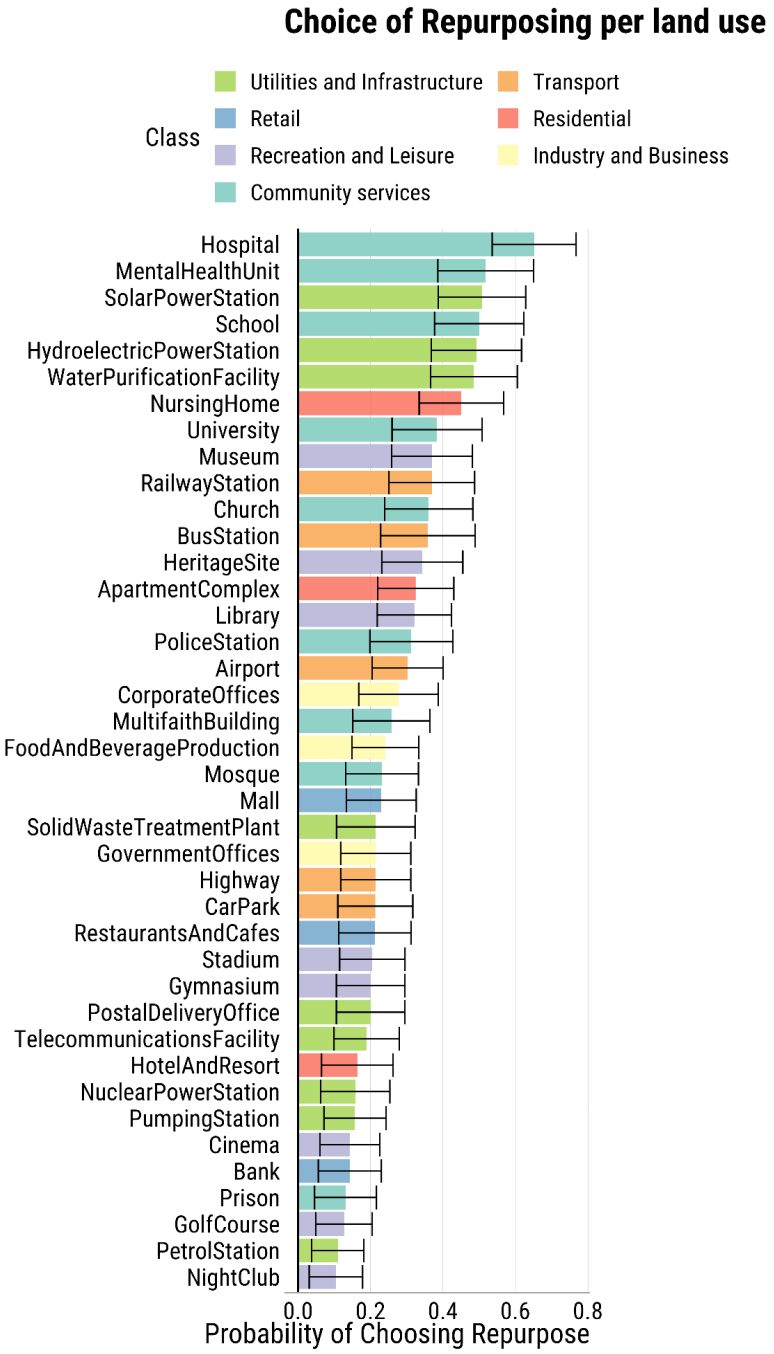

Figure S6. Land Use ranking. Land uses are ranked based on the probability of development choice.

Effect of effectiveness (benefit to humans). Figure S7 shows the effect of showing effectiveness information (pooling over all land uses). We chose the control condition as the baseline and calculated the effect of showing percentage information on the probability of repurposing the habitat. This is calculated as the difference between the probability of repurposing in the control condition and the probability of repurposing in the effectiveness information condition. i.e.,

$$\Delta P \;=\; P(chose\ repurpose \mid showing\ 100\ humans) \;-\; P(chose\ repurpose \mid no\ information)$$

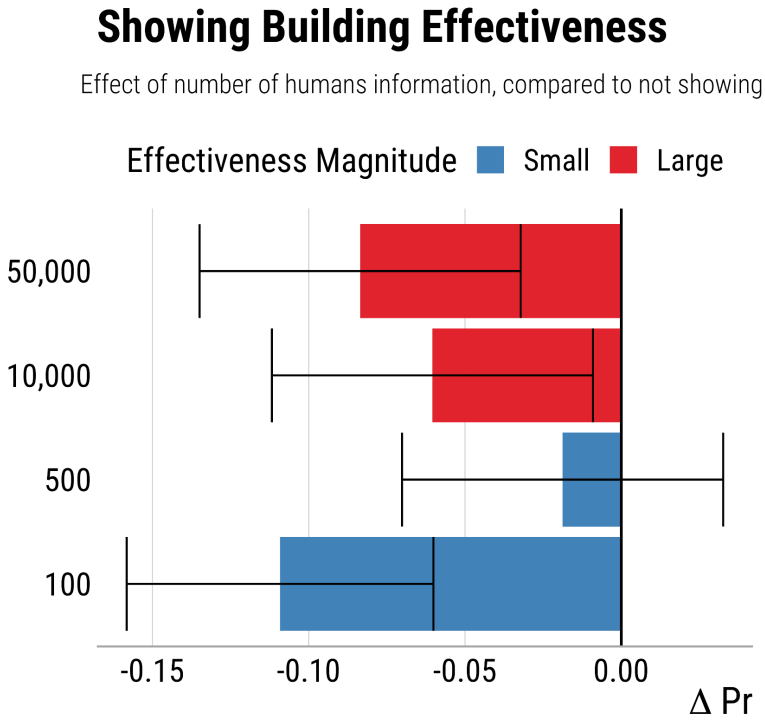

Figure S7. Effect of effectiveness. Effect of showing each effectiveness (number of humans benefiting from the land use) information compared to not showing such information (baseline).

Species ratings questions. Figure S8 shows the top 5 rated buildings for each question.

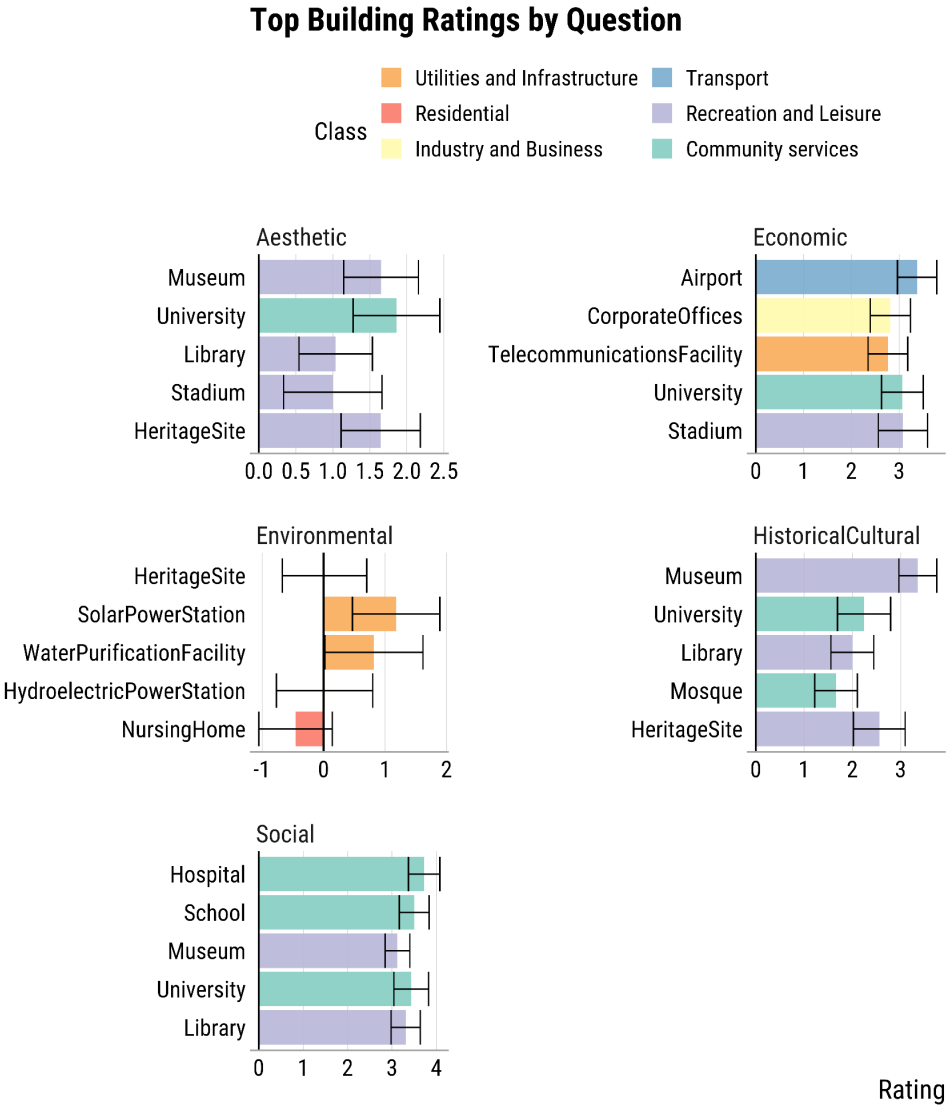

Figure S8. Top 5 land use rating by Question. The top 5 land uses per each of the 5 rating questions: aesthetic impact, economic impact, environmental impact, historical and cultural impact, and social impact.

Association between the development decision and land use ratings. Using a simple linear probability model with the choice of repurposing as dependent variable and each of the 5 ratings as independent variables (including effectiveness information as covariate), we can see the relationship between the ratings and the choice of preservation. To account for non-independence of observations, we used clustered standard errors at the participant level and land use level. The plot below shows the coefficient values for each of the ratings.

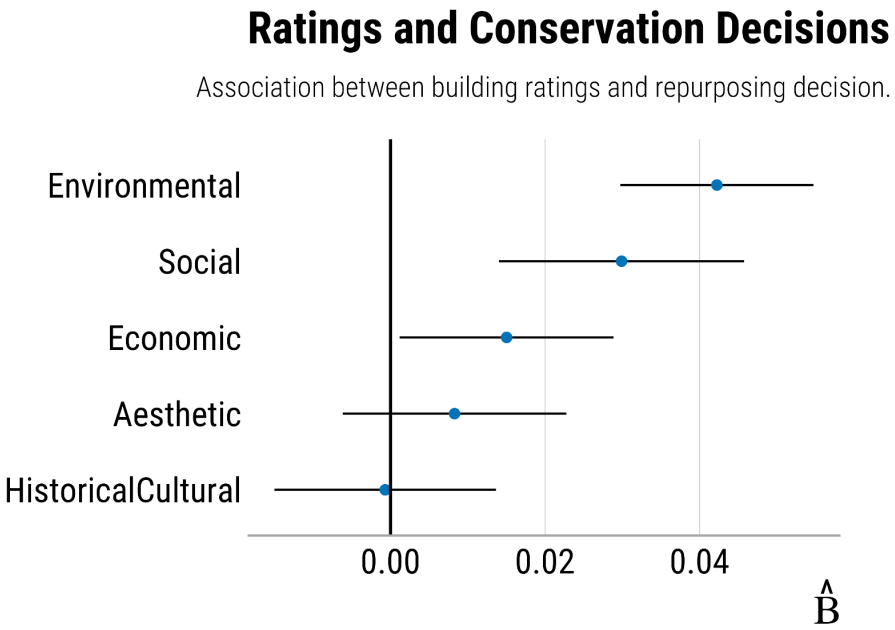

Figure S9. Association between land uses ratings and development decisions. Point estimates and error bars represent the coefficients and 95% confidence intervals (calculated from cluster-robust standard error) of one linear probability model that has conservation decision (binary) as dependent variable and all rating questions and effectiveness information as independent variables.

All pairs correlations between land use ratings.

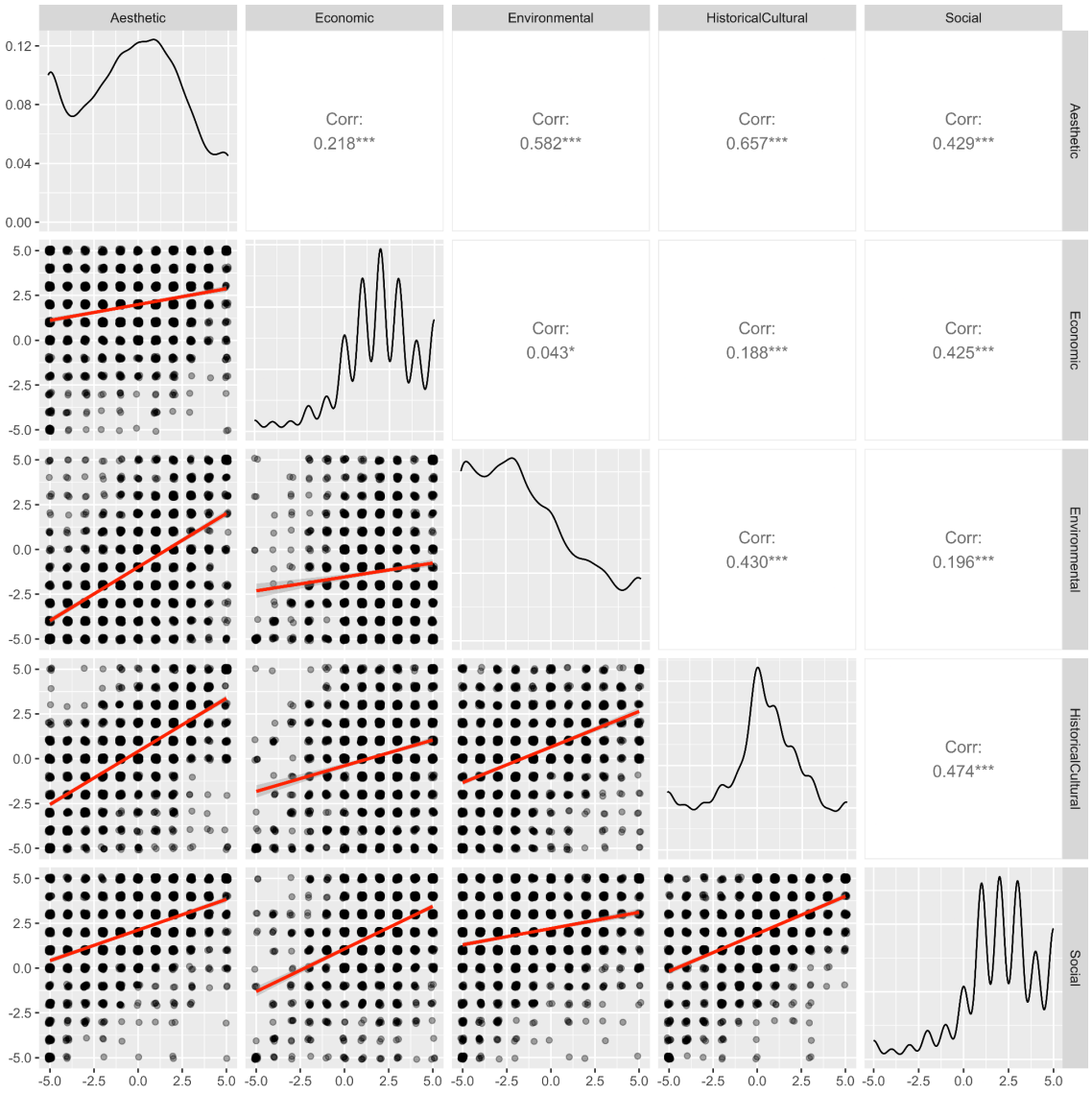

Figure S10. Pairwise correlations between all 5 land use ratings.

2.2. Pilot 2

2.1.1. Participants.

Inclusion criteria: Participants have completed the survey, answered all questions, agreed to take part in the research, are over 18 years old, and passed an attention check. Out of 671 participants who attempted the survey, 600 completed (and received payment) and met the inclusion criteria. The sample was nationally representative of the US population in terms of age levels, gender (male and female), and simplified ethnicity. Prolific handled the sampling and used data from the US Census Bureau to match national proportions as closely as possible across these three demographics. Of those, 508 participants passed both attention checks.

2.1.2. Experimental Design.

Experimental design for this pilot was very close to the main study. The main changes relate to the percentage factor and effectiveness factor. Both factors had three different values in the main study but here they included two values in addition to not showing any value as a baseline level. The percentage and effectiveness values in this pilot are also different from those in the main study. Another difference in this study is that this pilot used iconic LLM-generated images for species and land uses while the main study used 2D art images by a paid designer that followed a unified style. Finally, this pilot was run with US-based participants, unlike the main study which was run with UK-based participants.

First, participants were allocated into one of the following conditions:

- Named Species & Default use is for Habitat
- Named Species & Default use is for Land use
- Named Building & Default use is for Habitat
- Named Building & Default use is for Land use

Then, based on each condition they were further allocated into one of three groups (see below).

Named Species condition and questions: We have 10 species in total. Each participant in this condition saw all 10 species and answered one dilemma question (see below). Participants were allocated into one of the following three groups:

- No percentage information (control): one third of participants in the species condition.
- Small percentage information: one third of participants in the species condition. It showed that species in the green space represent 1% out of all remaining species.
- Large percentage information: one third of participants in the species condition. It showed that species in the green space represent 75% out of all remaining species.

We presented the dilemma question as follows:

Default is species habitat.

> *"Imagine a green space that is one of the last habitats for the endangered species mentioned above. ${e://Field/PercentStatement}*
>
> *Recently, you learned about a plan to repurpose this space into a land use project, which will be the first and only of its type in the area and is expected to benefit humans.*
>
> *What should happen to this green space?"*

Participants choose one answer of the following:

- *Green space should be preserved*
- *Green space should be repurposed into a land use project*

Default is land use.

> *"Imagine a space currently utilised for a land use project that is the last of its type in the region.*
>
> *Recently, you learned about a plan to repurpose this area into a habitat, which will be the first and only haven for the endangered species mentioned above.*
> *${e://Field/PercentStatement}*
>
> *What should happen to this space?"*

Participants choose one answer of the following:

- *Space should be preserved*
- *Space should be repurposed into a habitat for the species above"*

The ${e://Field/PercentStatement} refers to a factor in which we either showed nothing (control; no percentage information), or showed a percentage of species in the green space out of all remaining species (1% or 75%): "It has 1% of all remaining individuals of this species."

<u>Buildings (Land uses) condition questions:</u> We used 10 buildings (land uses) in total. Each participant in this condition saw all 10 buildings and answered a dilemma question (see below). Participants were allocated into one of the following five groups:

- No effectiveness information (control): one third of participants in the building condition.
- Small effectiveness information: one third of participants in the building condition. They were shown that 500 humans are or would be benefiting from the building.
- Large percentage information: one third of participants in the building condition. They were shown that 50,000 humans are or would be benefiting from the building.

We presented the dilemma question as follows:

Default is species habitat.

"Imagine a green space that is one of the last habitats for an endangered species.

Recently, you learned about a plan to repurpose this area into the construction project mentioned above, which will be the first and only of its type in the area and is expected to benefit humans. ${e://Field/BenefitStatement}

What should happen to this green space?"

Participants choose one answer of the following:

- *Green space should be preserved*
- *Green space should be repurposed into the project above*

Default is land use.

"Imagine a space currently utilised by the land use project mentioned above, which is the last of its type in the region. ${e://Field/BenefitStatement}

Recently, you learned about a plan to redevelop this area into a habitat, which will be the first and only haven for an endangered species.

What should happen to this space?"

Participants choose one answer of the following:

- *Space should be preserved*
- *Space should be repurposed into a habitat*

The ${e://Field/BenefitStatement} refers to a factor in which we either showed nothing (control; no effectiveness information), or showed the number of humans benefiting from the building (500 or 50,000): "The new project is expected to benefit 500 persons."

2.1.3. Demographics.

Table S6 summarises the breakdown of participants in different demographic variables.

Table S6. Demographics of Pilot 2. A total of 508 participants were paid and included in the main analysis. Number of participants and share of participants (%) reported for levels within the following variables: age group, gender, number of children, employment, income, and education.

Characteristic	**N = 508 (100%)**
Age Group	
18-24 years old	52 (10%)
25-34 years old	90 (18%)
35-44 years old	95 (19%)
45-54 years old	79 (16%)
55-64 years old	126 (25%)

65+ years old	66 (13%)
Gender Identity	
Female	253 (50%)
Male	251 (49%)
Non-binary / third gender	3 (0.6%)
Prefer to self-describe	1 (0.2%)
Number of Children	
0	350 (69%)
1	62 (12%)
2	56 (11%)
3	30 (5.9%)
4	8 (1.6%)
5	1 (0.2%)
8	1 (0.2%)
Employment	
Working full-time	249 (49%)
Working part-time	97 (19%)
Unemployed and looking for work	42 (8.3%)
A homemaker or stay-at-home parent	29 (5.7%)
Student	20 (3.9%)
Retired	58 (11%)
Other	13 (2.6%)
Income	
Less than $25,000	77 (15%)
$25,000-$49,999	109 (21%)
$50,000-$74,999	98 (19%)
$75,000-$99,999	79 (16%)
$100,000-$149,999	93 (18%)
$150,000 or more	43 (8.5%)
Prefer not to say	9 (1.8%)
Education	
Some Primary	1 (0.2%)
Completed Primary School	14 (2.8%)
Some Secondary	10 (2.0%)

Completed Secondary School	61 (12%)
Vocational or Similar	56 (11%)
Some University but no degree	89 (18%)
University Bachelor's Degree	189 (37%)
Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS)	87 (17%)
Prefer not to say	1 (0.2%)

2.1.4. Results.

Conservation Ranking. Figure S11 shows how species rank, based on probability of preservation of their habitat conditional on the default choice . The results below pool all percentages together. All error bars in this document represent 95% confidence intervals.

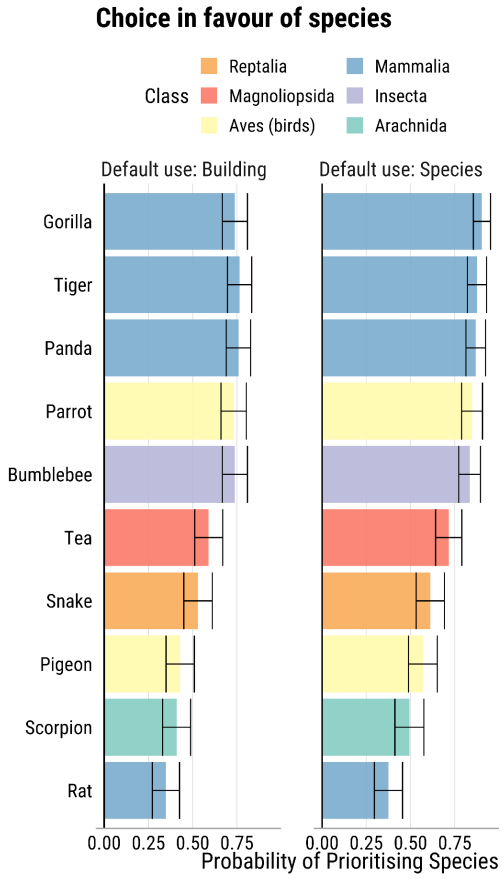

Figure S11. Species ranking. Species are ranked based on the probability of prioritising habitat split by default use of space: species vs. building (land use).

Effect of default on conservation. Figure S12 shows the effect of default option (species vs. land use) on the conservation choice.

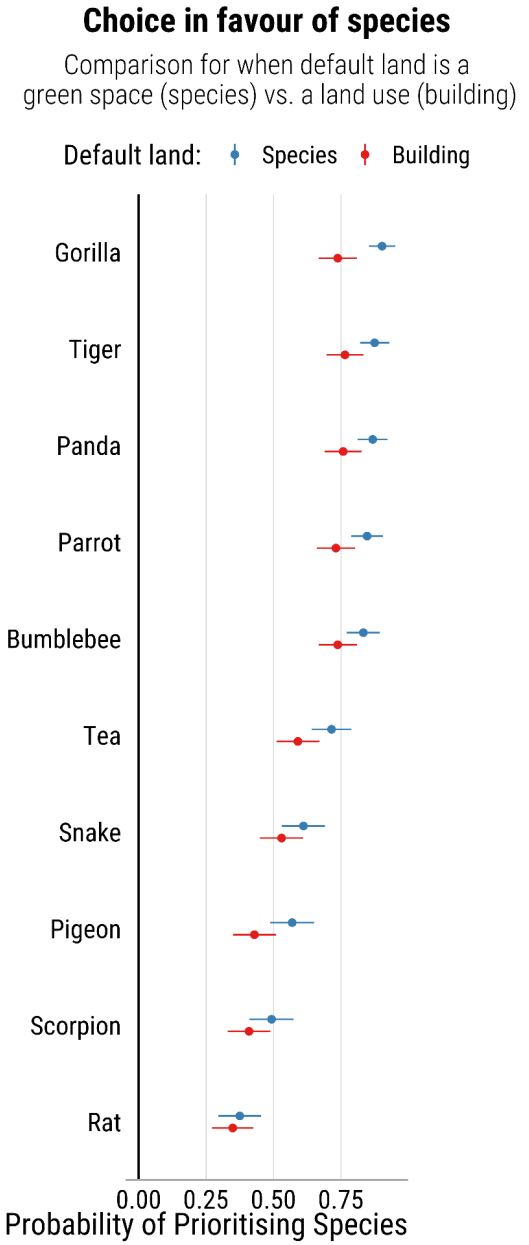

Figure S12. Effect of default on species ranking. Similar to the previous figure but highlighting how the probability of prioritising habitat changes based on the default use of space: species vs. building (land use).

Effect of percentages. Figure below shows the effect of showing percentage information (pooling over all species). We chose the control condition as the baseline and calculated the effect of showing percentage information on the probability of conservation of the habitat. This is basically calculated as the difference between the probability of prioritising conservation in the control condition and the probability of prioritising conservation in the percentage information condition. i.e.,

$\Delta P = P(chose\ conservation \mid showing\ 1\%\ percentage) - P(chose\ conservation \mid no\ information)$

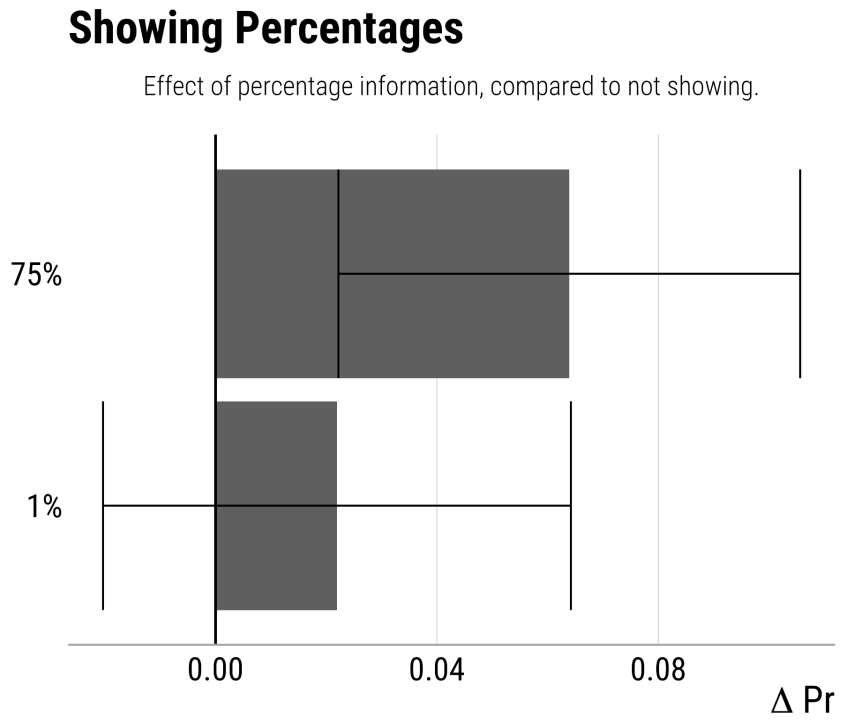

Figure S13. Effect of percentages. Effect of showing each percentage information compared to not showing such information (baseline).

Effect of percentages per each species and default.

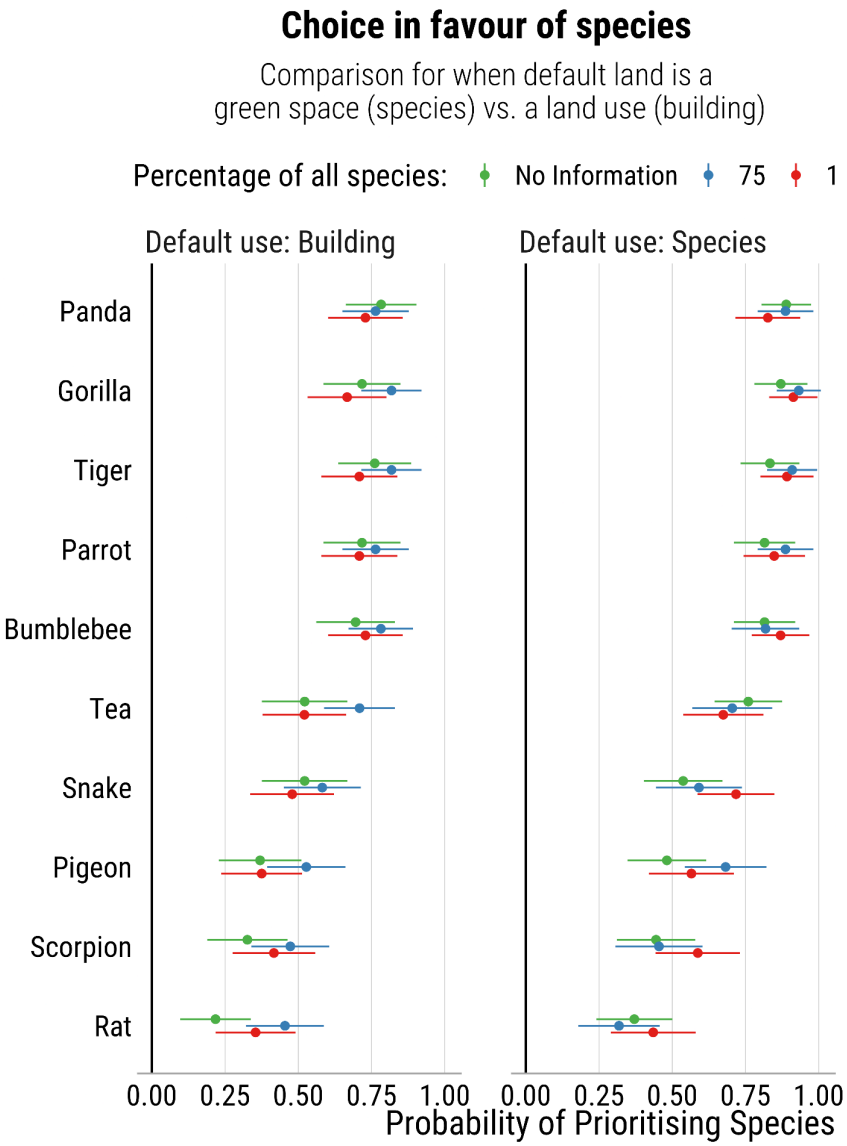

Figure S14. Effect of percentages split by default and species. Effect of showing each percentage information compared to not showing such information (baseline) for each species and for each default use.

Development Ranking. Figure S15 shows how land uses rank, based on probability of choosing to repurpose the habitat. The results below pool all percentages together. All error bars in this document represent 95% confidence intervals.

Figure S15. Land use ranking. Land uses are ranked based on the probability of prioritising development split by default use of space: species vs. building (land use).

Effect of default on development. Figure S16 shows the effect of default option (species vs. land use) on the development choice.

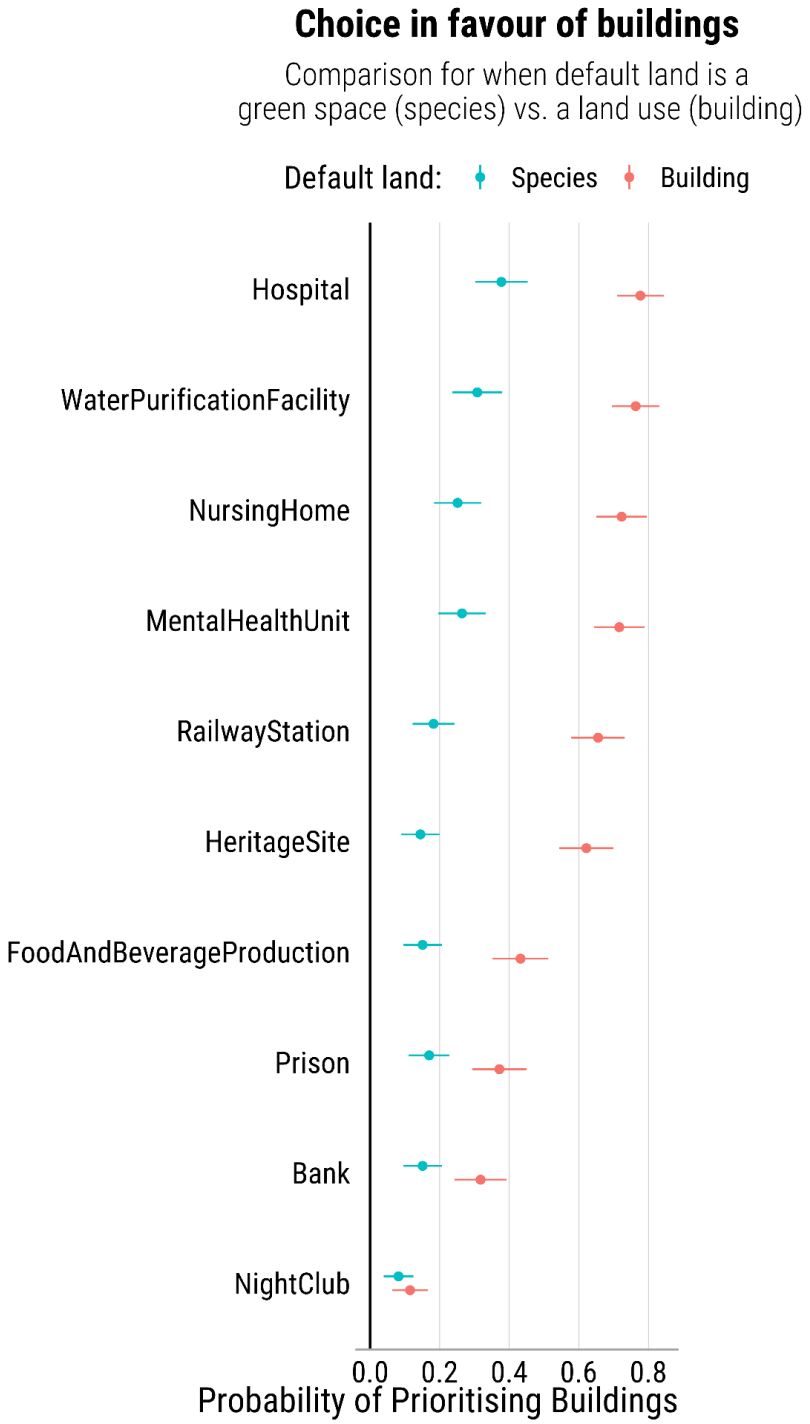

Figure S16. Effect of default on land uses ranking. Similar to the previous figure but highlighting how the probability of prioritising development changes based on the default use of space: species vs. building (land use).

Effect of effectiveness (benefit to humans). Figure S17 shows the effect of showing effectiveness information (pooling over all species). We chose the control condition as the baseline and calculated the effect of showing percentage information on the probability of prioritising development. This is calculated as the difference between the probability of prioritising development in the control condition and the probability of prioritising development in the percentage information condition. i.e.,

$$\Delta P = P(chose\ development \mid showing\ 100\ humans) - P(chose\ development \mid no\ information)$$

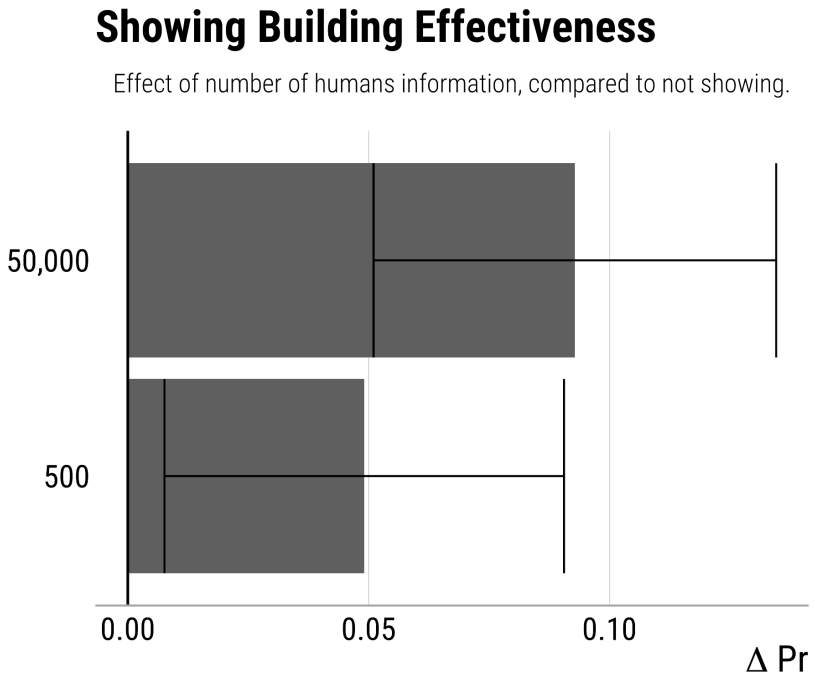

Figure S17. Effect of effectiveness. Effect of showing each effectiveness (number of humans benefiting from the land use) information compared to not showing such information (baseline) on prioritising development.

Effect of percentages per each land use and default.

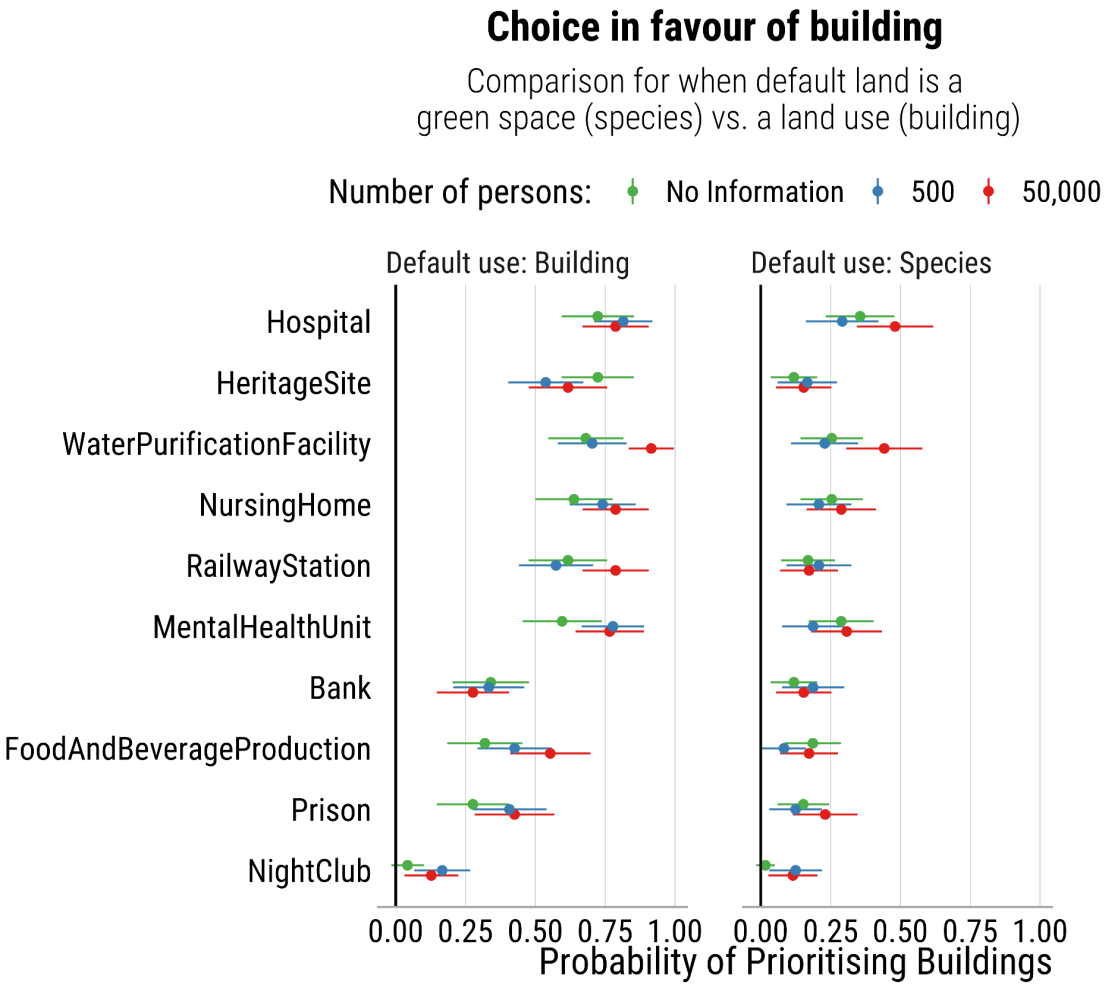

Figure S18. Effect of effectiveness split by default and species. Effect of showing each effectiveness (number of humans benefiting from the land use) information compared to not showing such information (baseline) for each land use and for each default use.

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