

Reducing Bias in Preference Elicitation for  
Environmental Public Goods -  
**Supplementary Material**

November 2021

## Definition of Attributes:

*Reduction in Water Restrictions:* Large parts of New South Wales and Victoria, including the urban centers Sydney and Melbourne have been experiencing persistent droughts over the last 15 years. As a result, Australian regulators have implemented water restrictions that limit the use of outdoor water. Depending on the level of the water restriction, citizens are prohibited from watering their lawn, washing their cars etc. The status quo scenario (attribute level 1) is that every level of water restriction is applicable in the local area. Some water management initiatives can mean that the respondent household and all other households in a local area will be exempt from some (attribute level 2) or all water restrictions (attribute level 3) that are imposed in the future. This attribute was also described as an attribute where the likelihood of improvement can occur with a certain degree of uncertainty (40, 60, 80, 100% likelihood that the improvements will be achieved). Exemptions from water restrictions are granted to properties in close proximity, thereby facilitating the exclusion of outsiders. Therefore, this attribute has some features of a club good.

*Reduction in Flash Flooding:* In the surveyed areas the major flood risk stems from pluvial or street level flooding as opposed to riverine flooding or coastal floods associated with storm surges. Pluvial flooding can occur after heavy rainfall that is not absorbed into the ground or the drainage systems due to excessive water. In urban areas, this type of street level flooding is often the result of saturated green space or an overwhelmed drainage system. Urban water management can affect the number of times street level floods (pluvial or rainfall related floods) occurring in the local area. The status quo scenario (level 1) means that the average number of flash floods over a five year period will remain the same. Smaller water management projects (level 2) are able to reduce the number of flash floods by half, while larger water management projects (level 3) are able to reduce the number of flash floods to almost none.

*Improvements in Stream Health:* Urban water management can have a direct impact on the health of local waterways. Healthy waterways are described to the survey participants as streams that have a diverse stream community, natural channel form and function, few nuisance species (midges, mosquitoes), and that have iconic species (platypus, frogs, native fish). The status quo scenario (level 1) was defined as a poor quality stream, with banks actively eroding, moderate to high populations of nuisance insects (mosquitoes), iconic species largely absent and litter on banks. Medium improvements (level 2) from urban water management were defined as scenarios with high quality stream community, small amounts of


bank erosion, low-moderate populations of nuisance insects, some iconic species present and no litter. High improvements (level 3) can lead to situations with a diverse stream community, a natural channel form and function, low populations of nuisance insects, the presence of iconic species, no litter. Improvements in this attribute are subject to some probability of either 40, 60, 80, 100%. Arguably, compared to all other attributes in our study, improvements in stream health have more characteristics of a (local) public good and a good that has some non-use values.

*Improvements in Recreational and Amenity Benefits:* Urban water management can yield many recreational and amenity benefits: it influences for what activities the local waterway may be used (fit for swimming vs fit to paddle, vs not fit for contact), irrigation of local school and sports grounds during dry summers, watering of mature trees in streets and new trees planted. In the status quo scenario (level 1) the rivers are fit to paddle, sports grounds and parks are relatively dry during extended periods without rain, and street line vegetation (i.e. trees) is not watered. Medium level (level 2) recreational and amenity benefits include greener sports grounds and parks during extended dry period and permits watering of street line vegetation. High level benefits (level 3) would further make the local river fit for swimming and increase the amount of street line vegetation. Depending on the actual site (publicly accessible park vs. public sports ground with membership) this attribute has features of a public or a club good.

*Costs:* Costs were presented in A\$5 intervals and ranged between A\$0 and A\$30. The upper bound of the attribute (A\$30) was inferred from the costs of existing stormwater management pilot projects in various partner communities. Given that the costs would be added to the household's annual water bill, this range was also approved by practitioners from local water authorities. We used a computer program (NGene) to derive the final combination of choice sets in 4 different blocks of 10 choice sets each.

Figure A.1: Introduction Letter



A close-up photograph of a single water drop falling from a faucet, creating a clear, elongated shape.

Your household has been randomly selected to take part in an **important study about water**.

The interviewer will assist you with completing the study. It will take approximately **25 minutes** to complete.

Participation is **voluntary and confidential**. Your details will not be stored with your responses and will not be passed on to any third party. You will not receive any phone calls or junk mail as a result of participating.

#### Details of study

##### Title of study

Analysis of how individuals make decisions with respect to water management in Australia.

##### Benefits of the study

The findings from this study will be used to help design **water management policies** in your community and Australia in general. You will also receive a monetary amount to thank you for participating, in addition to a certain amount being contributed to a water project in your local community.

##### What you will need to do

There are three short components to this study:

**One and two:** Activities to examine how important the various benefits associated with different ways of managing water are to you and your community.

**Three:** A short questionnaire.

##### Researchers:

This study is being conducted by I-view on behalf of Monash University researchers

##### To find out more:

For more **information** on the study or to be informed of the findings after the project is complete, please contact [redacted] Monash University



If you have any **concerns** about how this study is conducted, please contact the **Executive Officer** at the Monash University Human Research Ethics Committee, quoting reference number: CF12/2511 – 2912001358:

☎ 03 9905 2025

✉ [muhrec@monash.edu](mailto:muhrec@monash.edu)



Figure A.2: Explanation Document

Explanation for Salient (without Risk) Group


ACTIVITY 1

Local water management initiatives can carry a number of benefits for residents. These benefits are improvements in five key attributes, which will be explained now. Note that the improvement in two attributes, water restrictions and stream health, can be subject to uncertainty due to climatic conditions. We have therefore included pie-charts (circles) that illustrate the likelihood of a successful improvement in these attributes. The implementation success of the remaining three attributes can be considered as certain.

[USE INSTRUCTIONS CHOICE SET 1 HERE AND EXPLAIN DIFFERENT ATTRIBUTE LEVELS]

We want to understand how important these different benefits are to you. You will now be asked to make a series of 10 choices between the current situation (Status Quo) and alternative options, which involve improvements in some or all of the attributes explained above.

Example: Here is an example of one choice set that you may see on the screen.

	Status Quo	Option A	Option B
<b>Water Restrictions</b> achieved with probability	All Apply Level 1 Level 2 Level 3 	Level 3 applies Level 1 Level 2 Level 3 	All Apply Level 1 Level 2 Level 3 
<b>Frequency of Flash Flood</b>	 No Change	 Half as often	 No Change
<b>Stream Health</b> achieved with probability	 	 	 
<b>Recreational &amp; Amenity</b>			
<b>Summer Temperatures</b>	 No Change	 No Change	 2 deg Cooler
<b>Cost</b>	 \$0	 \$5	 \$30

**Figure A.2:** Explanation Document (cont.)

	Status Quo	Option A	Option B
<b>Water Restrictions</b> achieved with probability	All Apply Stage 1 Stage 2 Stage 3 Stage 4 100 %	Stage 3 & 4 apply Stage 1 Stage 2 Stage 3 Stage 4 40 % 60 %	All Apply Stage 1 Stage 2 Stage 3 Stage 4 100 %
<b>Frequency of Flash Flood</b>	No Change	Half as often	No Change
<b>Stream Health</b> achieved with probability	100 %	100 %	80 % 20 %
<b>Recreational &amp; Amenity</b>			
<b>Summer Temperatures</b>	No Change	No Change	2 deg Cooler
<b>Cost</b>	\$0	\$5	\$30

- You can choose between the **Status Quo** option, **Option A** and **Option B** and you can only choose 1 option per choice set.
- The **Status Quo** option will mean:
  - No change in the current situation of water management in your council area.
  - The costs to you are zero.
- Option A** offers **two** benefits compared with the **Status Quo**:
  - One: there is a 40% chance (as indicated by the blue area in the circle) your neighbourhood will be exempt from all future [Stage 1 and 2 [IF VIC], Level 1 and 2 [IF NSW]] water restrictions that are imposed. But, a 60% chance (as indicated by the grey area in the circle) remains that all water restrictions will apply as they do currently.
  - Two: the number of flash floods occurring in your neighbourhood will be reduced by half.
  - Choosing **Option A** would increase your annual water bill by \$5. So, if this choice set were selected for payment today, \$5 would be taken off your total interview earnings.
- Option B** compared with the **Status Quo** this option
  - Carries no benefits in terms of improved water security or reduction in the frequency with which flash floods occur.
  - But, there is an 80% chance (as indicated by the blue area in the circle) that the condition of your local stream improves to medium health. A 20% chance (as indicated by the grey area in the circle) remains that there will be no improvement to local stream health compared with its current condition.
  - There are recreational and amenity benefits from keeping all local sportsgrounds and parks green and all local street trees watered during dry months.
  - Under **Option B** your local area would also be about 2 degrees Celsius cooler during the hot summer months.

## Figure A.2: Explanation Document (cont.)

- **Option B** would add \$30 to your annual water bill. If this choice set was randomly selected for payment today and you had chosen **Option B**, \$30 would be deducted from your interview earnings.
- Which Option would you choose? The **Status Quo**, **Option A** or **Option B**?

Your choices in this activity will help decision making on how water is managed within the community and Australia in general.

### **PLEASE TAKE IN TO CONSIDERATION THAT THERE ARE NO CORRECT OR WRONG DECISIONS. THESE DECISION PROBLEMS ARE NOT DESIGNED TO TEST YOU.**

However, we are interested in your truthful answer about your value for these different benefits. Therefore, you should make your decisions knowing that one of the 10 choice sets will be randomly drawn by you and your final payment from this survey will be your earnings so far minus the cost of the option you have selected. Your final pay-out will always be positive but can range between \$0.60 and \$53.10. The full amount of money subtracted from your earnings will be donated by CRC and Monash University towards [INSERT COUNCIL WATER PROJECT], which is a project in your local area. The total amount collected from all participants will be published in [INSERT LOCAL PUBLICATION AND ISSUE DATE].

After you have completed all activities in this survey, the interviewer will ask you to randomly draw a number between **1 and 10**. This number will indicate which choice set is selected for payment and the cost of your chosen option will be deducted from your interview earnings and be put towards [INSERT COUNCIL WATER PROJECT].

In this example, **your final earnings** would have been equal to the following:

If you had chosen the Status Quo:

Your final earnings: = initial payment– \$0.

If you had chosen Option A:

Your final earnings: = initial payment– \$5.

If you had chosen Option B:

Your final earnings: = initial payment– \$30.

**Do you have any questions?**

**Figure A.3:** Holt and Laury Lottery - Example of a Decision Problem

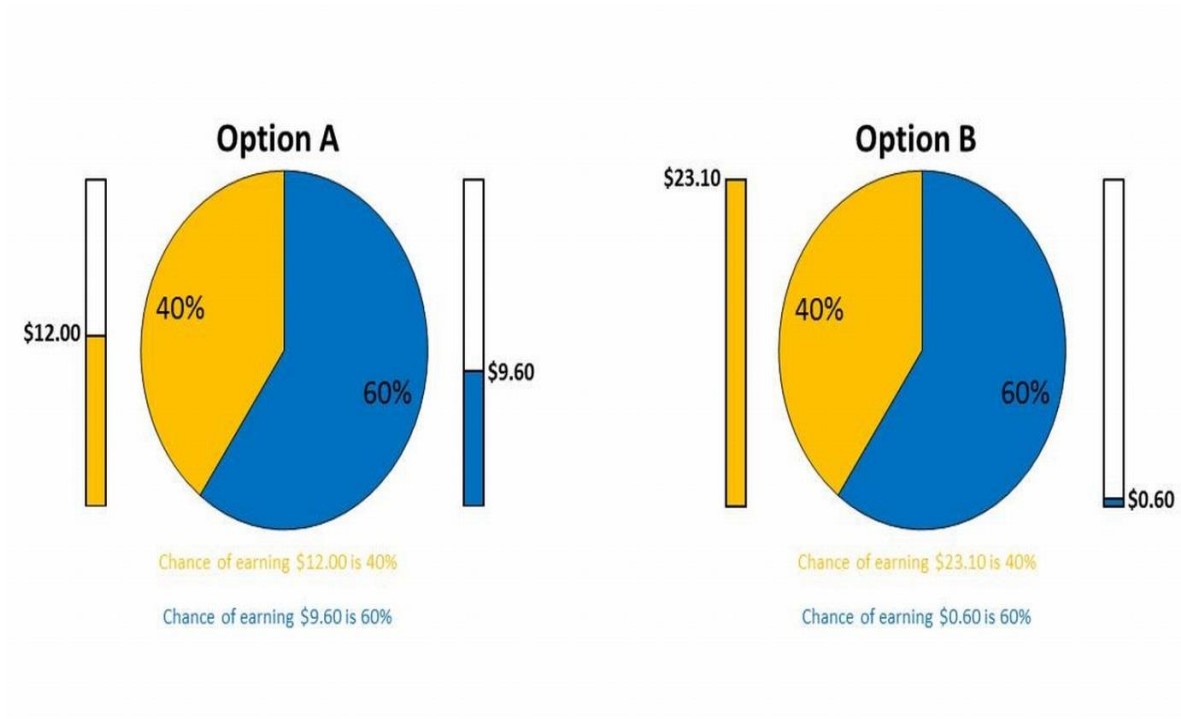































Figure A.4: Long Explanation Sheet

Benefit	Explanation	Levels	Visual Representation	Likelihood Improvement Occurs
Reduction in Water Restrictions	<p>&gt; Currently, every stage of water restriction is applicable in this local area.</p> <p>&gt; Some water management initiatives can mean that your and all other households in your local area will be exempt from some or all water restrictions that are imposed in the future.</p> <p>This benefit is <b>subject to uncertainty</b>:</p> <p>&gt; blue area in the circle illustrates how likely the improvement is</p> <p>&gt; grey area shows how likely the Status Quo (no improvement) is</p>	<p><b>Status Quo - All stages apply</b></p> <p>&gt; All stages of water restrictions apply in the same way as is currently the case to you and all other households in your local area.</p> <p><b>Stages 3&amp;4 apply</b></p> <p>If Stage 1 or 2 water restrictions:</p> <p>&gt; all households in your local area will be exempt.</p> <p>&gt; watering lawns, car washing and pool filling allowed anytime</p> <p>If Stage 3 or 4 water restrictions:</p> <p>&gt; all households in your local area need to comply as they do currently.</p> <p><b>None apply</b></p> <p>&gt; No water restriction stage ever applies to your or any other household in your local area.</p> <p>&gt; You could use water in the same way as if no restrictions were in place.</p>	<p><b>All apply</b></p>  <p><b>Stages 3&amp;4 apply</b></p>  <p><b>None apply</b></p> 	<p>Lowest</p>     <p>Less likely</p> <p>Certain</p>
Reduction in Flash Flooding	<p>Urban water management can affect the number of times street level floods (pluvial or rainfall related floods) occur in your local area.</p>	<p><b>Status Quo: No change</b></p> <p>&gt; There will be as many flash floods as there were on average in the last five years.</p> <p><b>Half as often</b></p> <p>&gt; means that there will be half as many floods on average as in the last five years.</p> <p><b>Almost never</b></p> <p>&gt; means that, in all likelihood, there will not be another flood in your local area.</p>	<p><b>No Change</b></p>  <p><b>Half as often</b></p>  <p><b>Almost never</b></p> 	<p>No uncertainty</p>
Improvements in Stream Health	<p>Urban water management has direct impact on the health of your local waterway.</p> <p>A healthy stream</p> <p>&gt; has diverse stream community</p> <p>&gt; natural channel form and function</p> <p>&gt; few nuisance species (midges, mosquitoes)</p> <p>&gt; has iconic species (platypus, frogs, native fish)</p> <p>This benefit is <b>subject to uncertainty</b>:</p> <p>&gt; blue area in the circle illustrates how likely the improvement is</p> <p>&gt; grey area shows how likely the Status Quo (no improvement) is</p>	<p><b>Status Quo:</b></p> <p>&gt; poor quality stream community,</p> <p>&gt; banks actively eroding,</p> <p>&gt; moderate to high populations of nuisance insects (mosquitoes),</p> <p>&gt; iconic species absent (platypus, frogs, native fish);</p> <p>&gt; litter on banks</p> <p><b>Medium:</b></p> <p>&gt; high quality stream community</p> <p>&gt; small amounts of bank erosion</p> <p>&gt; low-moderate populations of nuisance insects</p> <p>&gt; some iconic species present</p> <p>&gt; no litter</p> <p><b>High:</b></p> <p>&gt; diverse stream community,</p> <p>&gt; natural channel form and function,</p> <p>&gt; low populations of nuisance insects,</p> <p>&gt; presence of iconic species,</p> <p>&gt; no litter</p>	  	<p>Lowest</p>     <p>Less likely</p> <p>Certain</p>
Improvements in Recreational & Amenity Benefits	<p>Urban water management can yield many recreational and amenity benefits:</p> <p>&gt; it influences for what activities the local waterway may be used (fit for swimming vs fit to paddle, vs not fit for contact)</p> <p>&gt; irrigation of local school and sportsgrounds during dry summers</p> <p>&gt; watering of mature trees in streets and new trees planted</p>	<p><b>Status Quo:</b></p> <p>&gt; river fit to paddle,</p> <p>&gt; sportgrounds and parks brown,</p> <p>&gt; street trees not watered.</p> <p><b>Medium,</b></p> <p>&gt; river fit to paddle,</p> <p>&gt; sportsgrounds and parks green,</p> <p>&gt; trees watered.</p> <p><b>High,</b> river fit to swim, sportsgrounds and parks green, trees watered and new planted.</p>	  	<p>Lowest</p>     <p>Less likely</p> <p>Certain</p>
Cooler Summer Temperatures	<p>&gt; Temperatures above 36 degrees Celcius cause dramatic increases in heat related discomfort and health incidents.</p> <p>&gt; Urban water management has the capacity to cool urban areas by an average of 2 degrees Celcius over the summer months.</p>	<p><b>Status Quo: no change</b></p> <p>&gt; there will be no cooling in your area during summer from trees or water bodies</p> <p><b>2degC cooler:</b></p> <p>&gt; your area will be on average 2 degrees cooler on hot summer days</p>	<p><b>No Change</b></p>  <p><b>2degC cooler</b></p> 	<p>No uncertainty</p>
Cost	<p>These are the costs per household per year of providing the water management option. These costs would be added to your annual water bill</p>	<p><b>\$0,\$5,\$10,\$15, \$20,\$25, \$30</b></p>	 <p>\$0, ...</p>	<p>No uncertainty</p>

**Table A.1:** Difference in Probability of Choosing Status Quo

	Difference	SE
Nature	-0.12***	0.026
Restrictions	-0.10***	0.028
Water Quality	-0.13***	0.026
Flood Likely	-0.13***	0.027
Summer Heat	-0.15***	0.027

*Notes:* The rows represent subgroups of the population that affirmed preferences for certain environmental attributes. The difference is calculated as the proportion for the subgroup that indicated the preferences in the given row minus the subgroup without those preferences. Significance levels are from a two-sided equal proportion test and are denoted by \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A.2:** Cost of Selected Alternatives by Endowment

	Hypothetical	$N_H$	Salient	$N_S$	Difference	p-value
Level I (\$30)	13.76	647	13.17	67	0.59	0.6678
Level II (\$39)	13.76	647	13.19	99	0.58	0.1443
Level III (\$42)	13.76	647	13.29	84	0.47	0.5238
Level IV (\$53)	13.76	647	12.88	84	0.88	0.2110

*Notes:* The columns show the average contribution for the salient group and the hypothetical group as well as the difference in means and the p-value for a Mann-Whitney test. The rows designate the different endowments for the salient group.

**Table A.3:** Balance on Observables: Exclude High Income

	Mean <sub>C</sub>	N <sub>C</sub>	Mean <sub>T</sub>	N <sub>T</sub>	Difference	Std. Difference
Low Income	0.27	540	0.29	269	-0.01	-0.03
Medium Income	0.73	540	0.71	269	0.01	0.03
Age	55.27	540	54.06	267	1.21	0.07
Female	0.46	540	0.51	269	-0.05	-0.09
Nature	0.37	540	0.34	269	0.03	0.05
Restrict	0.24	540	0.21	269	0.03	0.0
Water Quality	0.34	540	0.37	269	-0.03	-0.06
Flood	0.31	525	0.31	261	0.00	0.00
Summer Heat	0.50	537	0.59	269	-0.09	-0.18

*Notes:* The columns shows the means and samples sizes for relevant demographic and attitudinal variables for both the salient group and the non-salient group, as well as the difference in means and the standardized difference in means. All variables except age are indicator variables and the means are sample proportions, and age is measured in years.

Table A.4: Specification tests

	(1) Normal		(2) Normal Corr	(3) Fixed		(4) Fixed*Income		(5) Lognormal	
	Mean	SD	Mean	Mean	SD	Mean	SD	Mean	SD
Status Quo	-0.9119*** (0.1237)		-2.0034*** (0.1462)	-0.4257*** (0.1270)		-0.4685*** (0.1314)		-1.6820*** (0.1116)	
Cost	-0.0221*** (0.0041)	0.0929*** (0.0057)	-0.0060** (0.0027)	0.0034 (0.0026)					
Restrictions 3,4	0.3530*** (0.0658)	0.8336*** (0.0775)	0.0336 (0.0702)	0.2798*** (0.0659)	1.3050*** (0.0814)	0.3115*** (0.0680)	1.2700*** (0.0822)	0.1724*** (0.0559)	0.4973*** (0.0736)
No Restrictions	0.2794*** (0.0613)	0.7290*** (0.0782)	0.0331 (0.0599)	0.1620** (0.0646)	1.3823*** (0.0777)	0.1907*** (0.0664)	1.3443*** (0.0793)	0.2057*** (0.0505)	0.4274*** (0.0763)
Flood Protection (Both)	-0.1897*** (0.0587)	0.5464*** (0.0874)	0.0159 (0.0587)	-0.2156*** (0.0624)	0.7340*** (0.0816)	-0.2408*** (0.0640)	-0.7237*** (0.0851)	-0.0155 (0.0457)	-0.2848*** (0.1007)
Stream High	0.3016*** (0.0685)	0.5251*** (0.0775)	0.0313 (0.0708)	0.2679*** (0.0714)	0.9955*** (0.0709)	0.2508*** (0.0717)	0.9311*** (0.0700)	0.1795*** (0.0598)	0.3227*** (0.0732)
Stream Medium	0.2748*** (0.0738)	0.6989*** (0.0724)	0.0518 (0.0834)	0.3040*** (0.0752)	0.9749*** (0.0862)	0.2802*** (0.0759)	0.8939*** (0.0849)	0.0997 (0.0659)	0.3781*** (0.0856)
Recreation (Both)	0.0644 (0.0611)	1.2209*** (0.0571)	-0.0747 (0.0609)	0.1437** (0.0622)	1.4166*** (0.0641)	0.1844*** (0.0640)	1.3875*** (0.0675)	0.0393 (0.0468)	0.7021*** (0.0502)
Temp -2	0.0772* (0.0418)	0.7757*** (0.0572)	-0.0037 (0.0379)	0.0341 (0.0454)	1.0666*** (0.0585)	0.0506 (0.0462)	1.0411*** (0.0589)	0.0820** (0.0333)	0.4704*** (0.0557)
Low Income*Cost						-0.0118** (0.0053)			
Med Income*Cost						0.0069** (0.0032)			
High Income*Cost						0.0207*** (0.0067)			
LN(Cost)								-9.2409*** (0.9033)	7.9718*** (1.1239)
Mean Cost								-6.114e+09	
Median Cost								-.00009699	
BIC/N	18		17	18		19		17	
AIC/N	18		16	18		18		17	
Observations	9,774		9,774	9,774		9,060		9,774	
Individuals	981		981	981		906		981	

Notes: All regressions are mixed logit model with random coefficients. Column (1) replicates the base regression in column (1) of Table ???. Column (2) estimates the same model but with correlated random parameters. Column (3) model the cost coefficient as fixed. Column (4) models the cost coefficient as fixed, but allows it to vary by income group. Column (5) models the cost as log-normally distributed. The mean and median of the underlying cost distribution are presented in the bottom panel of the table. Each regression has two columns: Mean and SD that refer to the mean and standard deviation of the random parameters. Fixed coefficients have no standard deviation. Significance levels are based on standard errors clustered at the respondent level that are reported in parentheses below the parameter estimate. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A.5: Robustness to seed**

	None		Salient Interactions					
	(1)		(2)		(3)		(4)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Status Quo	-0.9119*** (0.1237)		-0.9114*** (0.1237)		-0.9258*** (0.1285)		-0.9135*** (0.1237)	
Cost	-0.0221*** (0.0041)	0.0929*** (0.0057)	-0.0186*** (0.0047)	0.0928*** (0.0057)	-0.0115** (0.0054)	0.0872*** (0.0055)	-0.0221*** (0.0041)	0.0927*** (0.0057)
Restrictions 3,4	0.3530*** (0.0658)	0.8336*** (0.0775)	0.3530*** (0.0658)	0.8337*** (0.0774)	0.3732*** (0.0680)	0.8403*** (0.0804)	0.3344*** (0.0786)	0.8338*** (0.0776)
No Restrictions	0.2794*** (0.0613)	0.7290*** (0.0782)	0.2794*** (0.0613)	0.7284*** (0.0783)	0.2882*** (0.0632)	0.7407*** (0.0800)	0.3161*** (0.0732)	0.7258*** (0.0789)
Flood Protection (Both)	-0.1897*** (0.0587)	0.5464*** (0.0874)	-0.1899*** (0.0587)	0.5465*** (0.0876)	-0.2159*** (0.0605)	0.5378*** (0.0900)	-0.1801** (0.0700)	0.5485*** (0.0872)
Stream High	0.3016*** (0.0685)	0.5251*** (0.0775)	0.3015*** (0.0685)	0.5257*** (0.0773)	0.2761*** (0.0692)	0.5048*** (0.0814)	0.3532*** (0.0813)	0.5333*** (0.0768)
Stream Medium	0.2748*** (0.0738)	0.6989*** (0.0724)	0.2751*** (0.0737)	0.6968*** (0.0726)	0.2524*** (0.0749)	0.6649*** (0.0762)	0.3791*** (0.0886)	0.6897*** (0.0735)
Recreation (Both)	0.0644 (0.0611)	1.2209*** (0.0571)	0.0645 (0.0611)	1.2211*** (0.0571)	0.1205* (0.0630)	1.2119*** (0.0599)	0.0531 (0.0749)	1.2241*** (0.0572)
Temp -2	0.0772* (0.0418)	0.7757*** (0.0572)	0.0774* (0.0418)	0.7753*** (0.0572)	0.0865** (0.0429)	0.7683*** (0.0587)	0.0860* (0.0509)	0.7772*** (0.0573)
Cost*Salient			-0.0101 (0.0073)					
Low_Income*Cost					-0.0218* (0.0112)			
High_Income*Cost					0.0137 (0.0128)			
Cost*Salient*Low_Income					-0.0279* (0.0167)			
Cost*Salient*Med_Income					-0.0053 (0.0088)			
Cost*Salient*High_Income					0.0130 (0.0148)			
Flood (Both)*Salient							-0.0276 (0.1165)	
Restrictions_3,4*Salient							0.0541 (0.1246)	
Restrictions_None*Salient							-0.1081 (0.1217)	
Stream_medium*Salient							-0.3037** (0.1348)	
Stream_High*Salient							-0.1535 (0.1284)	
Recreation (Both)*Salient							0.0330 (0.1130)	
Temp_-2*Salient							-0.0259 (0.0867)	
BIC/N	18		18		18			
AIC/N	18		18		18			
Observations	29,322		29,322		27,180		29,322	
Individuals	981		981		906		981	

*Notes:* All regressions are mixed logit model with random coefficients. All random coefficients are normally distributed. Each regression has two columns: Mean and SD that refer to the mean and standard deviation of the random parameters. Fixed coefficients have no standard deviation. Significance levels are based on standard errors clustered at the respondent level that are reported in parentheses below the parameter estimate. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A.6: Robustness to starting values**

	(1) Start 0.25		(2) Start 0.33		(3) Start 0.5		(4) Start 1	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Status Quo	-0.9114*** (0.1237)		-0.9114*** (0.1237)		-0.9114*** (0.1237)		-0.9110*** (0.1239)	
Cost*Salient	-0.0101 (0.0073)		-0.0101 (0.0073)		-0.0101 (0.0073)		-0.0107 (0.0072)	
Cost	-0.0186*** (0.0047)	0.0928*** (0.0057)	-0.0186*** (0.0047)	0.0928*** (0.0057)	-0.0186*** (0.0047)	0.0928*** (0.0057)	-0.0183*** (0.0047)	0.0927*** (0.0057)
Restrictions 3,4	0.3530*** (0.0658)	0.8337*** (0.0774)	0.3530*** (0.0658)	0.8337*** (0.0774)	0.3530*** (0.0658)	0.8337*** (0.0774)	0.3532*** (0.0658)	0.8429*** (0.0788)
No Restrictions	0.2794*** (0.0613)	0.7284*** (0.0783)	0.2794*** (0.0613)	0.7284*** (0.0783)	0.2794*** (0.0613)	0.7284*** (0.0783)	0.2800*** (0.0612)	0.7319*** (0.0769)
Flood Protection (Both)	-0.1899*** (0.0587)	0.5465*** (0.0876)	-0.1899*** (0.0587)	0.5465*** (0.0876)	-0.1899*** (0.0587)	0.5465*** (0.0876)	-0.1928*** (0.0588)	-0.5646*** (0.0818)
Stream High	0.3015*** (0.0685)	0.5257*** (0.0773)	0.3015*** (0.0685)	0.5257*** (0.0773)	0.3015*** (0.0685)	0.5257*** (0.0773)	0.3009*** (0.0685)	0.5396*** (0.0745)
Stream Medium	0.2751*** (0.0737)	0.6968*** (0.0726)	0.2751*** (0.0737)	0.6968*** (0.0726)	0.2751*** (0.0737)	0.6968*** (0.0726)	0.2749*** (0.0738)	0.7012*** (0.0711)
Recreation (Both)	0.0645 (0.0611)	1.2211*** (0.0571)	0.0645 (0.0611)	1.2211*** (0.0571)	0.0645 (0.0611)	1.2211*** (0.0571)	0.0651 (0.0611)	1.2269*** (0.0580)
Temp -2	0.0774* (0.0418)	0.7753*** (0.0572)	0.0774* (0.0418)	0.7753*** (0.0572)	0.0774* (0.0418)	0.7753*** (0.0572)	0.0782* (0.0418)	0.7824*** (0.0569)
BIC/N	18		18		18		18	
AIC/N	18		18		18		18	
Observations	29,322		29,322		29,322		29,322	
Individuals	981		981		981		981	

*Notes:* All regressions are mixed logit model with random coefficients. All random coefficients are normally distributed. Each regression has two columns: Mean and SD that refer to the mean and standard deviation of the random parameters. Fixed coefficients have no standard deviation. Significance levels are based on standard errors clustered at the respondent level that are reported in parentheses below the parameter estimate. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1