A Comprehensive Model to Explain Europeans' Environmental Behaviors

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Supplementary Materials

Table S1. Descriptive statistics for the individual-level environmental factors.

Item	Mean	SD	Skewness	Kurtosis
QD5.1 As an individual, you can play a role in protecting the environment in (country).	3.32	0.74	−0.97	0.68
QD5.2 The big polluters should be mainly responsible for making good the environmental damage they cause.	3.65	0.57	−1.59	2.62
QD5.3 Environmental issues have a direct effect on your daily life	3.25	0.79	−88	0.28
QD5.4 You are worried about the impact on your health of everyday products made of plastic.	3.13	0.86	−0.74	−0.17
QD5.5 You are worried about the impact on the environment of everyday products made of plastic	3.38	0.72	−1.07	0.95
QD5.6 You are worried about the impact on your health of chemicals present in everyday products.	3.34	0.77	−1.07	0.71
QD5.7 You are worried about the impact on the environment of chemicals present in everyday products	3.43	0.7	−1.15	1.16
QD9.1 EU environmental legislation is necessary to protect the environment in (country).	3.28	0.77	−0.97	0.67
QD9.2 The EU should be able to check that EU environmental laws are being applied correctly in (country).	3.29	0.77	−1.02	0.78
QD9.3 The EU should assist non-EU countries to improve their environmental standards.	3.29	0.77	−1.02	0.84
QD15.1 Local authorities should provide more and better collection facilities for plastic waste	3.5	0.65	−1.22	1.45
QD15.2 People should be educated on how to reduce their plastic waste	3.5	0.67	−1.31	1.57
QD15.4 Industry and retailers should make an effort to reduce plastic packaging	3.6	0.6	−1.47	2.21
QD15.5 Products should be designed in a way that facilitates the recycling of plastic	3.64	0.58	−1.54	2.44

Mean inter-item correlation = 0.305, Cronbach's α = 0.859.

Results of the common variance method tests

  a) *Harman's single factor test with no rotation*

Eco-friendly purchasing: 1st factor explains 29% of variance

Public transport use: 1st factor explains 30% of variance

Reduced resource consumption: 1st factor explains 30% of variance

  b) *Cross-loading examinations*

c)

Table S2. Exploratory factor analysis for the main constructs of the responsible environmental behavior (REB) model plus environmental behaviors with varimax rotation (extraction method: principal component analysis).

Items	Factor loadings				
Environmental factors and eco-friendly purchase behavior items	Factor (1)	Factor (2)	Factor (3)	Factor (4)	Factor (5)
QD5.4. You are worried about the impact on your health of everyday products made of plastic.	0.81				
QD5.6. You are worried about the impact on your health of chemicals present in everyday products.	0.83				
QD5.7. You are worried about the impact on the environment of chemicals present in everyday products.	0.80				
QD5.3. Environmental issues have a direct effect on your daily life.	0.74				
QD5.5. You are worried about the impact on the environment of everyday products made of plastic.	0.76				
QD15.1. Local authorities should provide more and better collection facilities for plastic waste.	-	0.70			
QD15.2. People should be educated on how to reduce their plastic waste.	-	0.69			
QD15.5. Products should be designed in a way that facilitates the recycling of plastic.	-	0.79			
QD15.4. Industry and retailers should make an effort to reduce plastic packaging.	-	0.77			
QD9.2. The EU should be able to check that EU environmental laws are being applied correctly in (country).	-		0.84		
QD9.1. EU environmental legislation is necessary to protect the environment in (country).	-		0.84		
QD9.3. The EU should assist non-EU countries to improve their environmental standards.	-		0.69		
QD5.2. The big polluters should be mainly responsible for making good the environmental damage they cause.	-				
QD5.1. As an individual, you can play a role in protecting the environment in (country).	0.46				
QD4.2. Avoided buying overpackaged products				0.54	
QD4.3. Avoiding single-use plastic goods other than plastic bags or bought reusable plastic products				0.76	
QD4.8. Buying local products					0.81
QD4.7. Buying products marked with an environmental label					0.54
Environmental factors and public transport behavior items	Factor (1)	Factor (2)	Factor (3)	Factor (4)	Factor (5)
QD5.4. You are worried about the impact on your health of everyday products made of plastic.	0.83				
QD5.6. You are worried about the impact on your health of chemicals present in everyday products.	0.83				
QD5.7. You are worried about the impact on the environment of chemicals present in everyday products.	0.77				
QD5.3. Environmental issues have a direct effect on your daily life.	0.75				
QD5.5. You are worried about the impact on the environment of everyday products made of plastic.	0.73				
QD15.1. Local authorities should provide more and better collection facilities for plastic waste.		0.77			
QD15.2. People should be educated on how to reduce their plastic waste.		0.75			
QD15.5. Products should be designed in a way that facilitates the recycling of plastic.		0.70			
QD15.4. Industry and retailers should make an effort to reduce plastic packaging.		0.68			
QD9.2. The EU should be able to check that EU environmental laws are being applied correctly in (country).			0.84		
QD9.1. EU environmental legislation is necessary to protect the environment in (country).			0.84		

Item	Factor (1)	Factor (2)	Factor (3)	Factor (4)	Factor (5)
QD9.3. The EU should assist non-EU countries to improve their environmental standards.			0.70		
QD5.2. The big polluters should be mainly responsible for making good the environmental damage they cause.			0.75		
QD5.1. As an individual, you can play a role in protecting the environment in (country).			0.48		
QD19.3. Frequently using public transport or biking or walking instead of using a car					0.79
QD4.1. Choosing more environmentally friendly travel (walking, biking, public transport)					0.77
QD4.9. Using your car less by avoiding unnecessary trips					0.63

Environmental factors and reduction of resources behavior items	**Factor (1)**	**Factor (2)**	**Factor (3)**	**Factor (4)**	**Factor (5)**
QD5.4. You are worried about the impact on your health of everyday products made of plastic.	000.80				
QD5.6. You are worried about the impact on your health of chemicals present in everyday products.	0.83				
QD5.7. You are worried about the impact on the environment of chemicals present in everyday products.	0.81				
QD5.3. Environmental issues have a direct effect on your daily life.	0.74				
QD5.5. You are worried about the impact on the environment of everyday products made of plastic.	0.74				
QD15.1. Local authorities should provide more and better collection facilities for plastic waste.		0.69			
QD15.2. People should be educated on how to reduce their plastic waste.		0.69			
QD15.5. Products should be designed in a way that facilitates the recycling of plastic.		0.80			
QD15.4. Industry and retailers should make an effort to reduce plastic packaging.		0.78			
QD9.2. The EU should be able to check that EU environmental laws are being applied correctly in (country).			0.84		
QD9.1. EU environmental legislation is necessary to protect the environment in (country).			0.84		
QD9.3. The EU should assist non-EU countries to improve their environmental standards.			0.69		
QD5.2. The big polluters should be mainly responsible for making good the environmental damage they cause.	0.47				
QD5.1. As an individual, you can play a role in protecting the environment in (country).	0.47				
QD4.5. Cutting down on water consumption					0.90
QD4.6. Cutting down on energy consumption (turning down air conditioning or heating, not leaving appliances on stand-by, buying energy-efficient appliances)				0.62	
QD19.2. Replacing older energy-intensive equipment (hotwater boiler, oven, dishwasher, etc) with more energy efficient equipment (e.g., labelled A+++)				0.82	

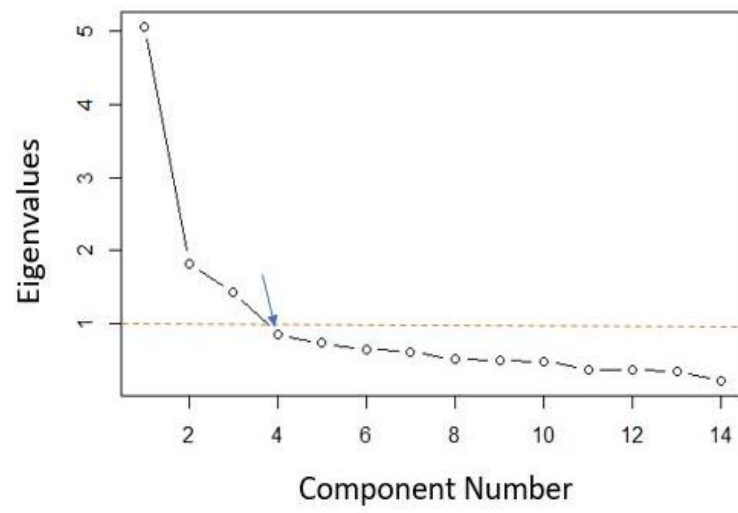Note: Items with factor loading lower than .04 are not shown.

Figure S1. Scree test for 14 individual-level environmental factors.