

ESS Round 8 Question Module Design Template¹

Module Title: Public Attitudes to Climate Change, Energy Security, and Energy Preferences

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SECTION A: Theoretical background

Background

Climate change is arguably the greatest environmental threat the world is currently facing. Warming of the climate system is now considered unequivocal and poses serious risks to both natural and economic systems (Stern, 2006; IPCC, 2007, 2013). Preventing a 'dangerous' level of anthropogenic interference with the climate system has become a major international policy objective. All European countries have ratified the Kyoto Protocol and agreed to jointly fulfil their required emission reduction targets. In 2014, the European Commission presented its new ambitious 2030 framework, aiming for a reduction in greenhouse gas emissions by 40% below 1990 levels, together with a target for renewable energy of at least 27% and a renewed focus on energy-efficiency policies (European Commission, 2014).

These ambitious targets require fundamental shifts in the way energy is used and produced and can only be met with sustained and widespread public support. The public will have to accept new energy technologies and facilities in order to decarbonise the energy they are using (Spence & Pidgeon, 2009). Supply side changes in themselves are however not sufficient. Individuals and communities will also need to drastically change their behaviour in order to play their part in the transition to a low-carbon society (Steg & Vlek, 2009). Domestic energy use and personal transport account for around half the energy demand in most industrialised countries, while embodied energy in consumer goods and services accounts for most of the remainder (Druckman & Jackson, 2010).

Decisions about decarbonising future energy supplies cannot be separated from other energy policy considerations, together known as the 'energy trilemma'. Ensuring a reliable and secure supply of energy has become increasingly important, as well as keeping energy affordable for all households. Many coal-fired and nuclear power facilities need to be replaced by other (low-carbon) energy production technologies that can deliver reliable, secure, and affordable energy. The internationalisation of energy markets has increased dependency on foreign energy imports, making Europe more vulnerable to interruptions of supply (Umbach, 2010); while rising energy prices and a prolonged economic crisis across parts of Europe has led to widespread fuel poverty and concerns about the affordability of energy (Boardman, 2010).

Aims and Objectives

This new module for the *European Social Survey* (ESS) makes a systematic and detailed comparison of *public attitudes to climate change, energy security and energy preferences*, and is specifically designed to fit within the core ESS questionnaire to increase our understanding of the situated nature of environmental attitudes in this area. The created dataset is amenable to a wide variety of analyses of interest to European academics and policy-makers working in energy and climate change. The module is designed to achieve four specific objectives:

Objective 1: Create a comprehensive theoretically-grounded cross-European dataset of public attitudes to climate change, energy security and energy preferences.

Existing research provides strong evidence of the necessity of making a theoretically-grounded systematic comparison across Europe. Clear diverging trends in perceptions of energy and climate change have emerged over the past decade. In Britain, levels of concern about climate change have gradually decreased since 2005 (Pidgeon, 2012), with climate scepticism (i.e. doubt about the reality, anthropogenic cause or seriousness of climate change) reaching an all-time high in 2010 (Poortinga et al., 2011). In contrast, concern about climate change and support for renewables have remained high in Germany, with very little climate scepticism (Engels et al., 2013). Other countries have seen reduced public support for renewables and other low-carbon energy sources, despite high levels of climate awareness

(Eurobarometer, 2014). High-profile events, such as the Fukushima disaster, have produced widely divergent public and policy responses. While the acceptability of nuclear power has risen in Britain in the wake of Fukushima (Poortinga et al., 2013), public opposition intensified in Germany leading to the policy decision to phase out nuclear power by 2022 (e.g. Pfister & Böhm, 2012). Furthermore, surveys have shown that carbon capture and storage (CCS) as a climate mitigation strategy is still unknown to a majority of Europeans, and that attitudes to unconventional fossil fuels, such as shale gas, are changing in certain countries (Poumadere et al., 2011; O'Hara et al., 2013). However, while attitudes to climate change and energy technologies have been well documented in individual European countries, and there have been a number of international opinion polls, no systematic or theory-based comparisons have been made at the European level.

Objective 2: Develop an understanding of how national-level socio-political, economic and environmental factors shape public attitudes to energy and climate change across Europe.

It is not possible to understand national climate and energy perceptions without taking the wider socio-political context into account. European countries have widely diverging energy infrastructures, policies and challenges, and the public are exposed to different political and media landscapes. This may impact on how people feel and think about climate change, energy security and different energy technologies. For example, in Germany, the high-profile *Energiewende* has helped to make great strides in the development of renewable energy sources. Germany's response to the Fukushima disaster has been explained by a history of well-organised public resistance to nuclear energy, intense media reporting, and trust in its own ability to develop sufficient renewable energy (Wittneben, 2012). Furthermore, low levels of climate scepticism have been linked to a lack of political representation for such views (Engels et al., 2013). In contrast, the UK media have provided a greater platform for sceptical voices (Painter, 2011), which is thought to be one of the reasons for continuing public uncertainty about the reality of climate change (Poortinga et al., 2011). Increased British support for nuclear power follows a shift in the framing of nuclear power as a necessary contributor to climate change mitigation, comprising 'elite cues' from policy-makers as well as from prominent environmentalists (Pidgeon et al., 2008; Poortinga et al., 2013). In France, where most electricity is derived from nuclear energy, the public place much greater confidence in nuclear operators as compared to other European nations (Poumadere et al., 2011). However, currently a steep transition away from nuclear is in place, with diminishing public support for the technology (ibid). In a recent international survey of six countries, engineering alternatives – including nuclear power – emerged as the least popular climate change mitigation policy options (Bostrom et al., 2012). Norway assumes a particularly interesting and ambivalent position with more than 99% of its electricity coming from hydropower whilst being one of the largest oil and gas producers in the world. Those with economic links to the fossil-fuel sector have been found to be less likely to view climate change as a problem than the population at large (Tvinnereim & Austgulen, 2013), showing the importance of economic dependency for public attitudes to energy technologies. The importance of socio-political context is further underscored by the fact that climate change directly competes for public attention with other day-to-day concerns, such as the state of the economy (Scruggs & Benegal, 2012). Finally, research indicates that climate conditions and extreme weather events (e.g. floods, storms, and heatwaves) can influence perceptions of climate change (Reser et al., 2014).

This module of the ESS constitutes the first ever systematic comparison of public attitudes to energy and climate change between European countries with different climate policies, energy infrastructures, economic circumstances, media landscapes, political parties and representations, and climatic conditions. This will help to develop a better understanding of how such contextual factors shape public attitudes to energy and climate change across Europe.

Objective 3: Examine the role of socio-political values and other individual-level factors in European attitudes to energy and climate change.

There are a number of theoretical approaches that can help to better understand individual climate risk perceptions. Self-transcendence values have consistently been found to play a central role in engagement with climate change and energy issues (Corner et al., 2014; Poortinga et al., 2012; Steg & De Groot, 2012). Similarly, 'cultural cognition' studies have shown that people with 'individualistic' values tend to be particularly sceptical about the risks of climate change, as climate mitigation policies involving the regulation of industry and individual action may threaten their identities and 'worldview' (Kahan et al., 2010; 2011). Research conducted in the US and Australia has repeatedly shown that beliefs about climate change are increasingly polarised along party political lines (McCright & Dunlap, 2011; Leviston et al., 2011). Although such strong polarisation has not been observed in Europe, Taylor (2012) found some partisanship effects, while Whitmarsh (2011) and Poortinga et al. (2011) showed that climate scepticism is concentrated in certain socio-demographic and politically conservative and disengaged groups.

Human values and political engagement have been routinely assessed as part of the ESS (e.g. Davidov et al., 2008). However, there has been no previous attempt to systematically link these to energy and climate change perceptions at the European level. Furthermore, the role of these factors may differ across different European countries. For example, there are indications that climate scepticism is largely an Anglophone phenomenon and is less common in many other European countries. It can be expected that polarisation is the greatest in countries where there is a political home for such views through continued media attention and political representation (Painter, 2011; Engels et al., 2013), as well as those with a greater economic dependency on fossil fuels (e.g. Tvinnereim & Austgulen, 2013).

Objective 4: Examine the relative importance of both individual-motivational factors and national circumstances in public preferences for different energy supply sources and demand reduction

An impressive body of work has accumulated over the past two decades regarding individual motivational factors underlying preferences for energy supply sources and demand-side behaviours, typically using standard social or environmental psychology models, such as the theory of planned behaviour (TPB; Ajzen, 1991) or the Value-Belief-Norm (VBN) model (Stern, 2000; Kaiser et al., 2005; Steg et al., 2005). An underlying but as yet untested assumption is that 'universal' conceptual models can be used irrespective of context. While their structures may be generalisable cross-culturally, it is likely that model factors' relative importance differs depending on specific national conditions (also see Objective 3). This module uses Stern's VBN model (2000) as a general framework to design the new module, based on the premise that human values, together with beliefs regarding climate change and feelings of personal responsibility drive personal preferences for energy supply sources and energy demand reduction (see *Section B*).

We hypothesise that (1) socio-political values and engagement shape beliefs and concerns about climate change and energy security, and preferences for associated technologies and policies; (2) personal values and concerns will only translate into action if individuals feel obliged (personal norms) and able (personal efficacy) to act (Steg & De Groot, 2010; Steg et al., 2005); and (3) social and institutional trust are critical for collective action (Lubell, 2002; Malka et al., 2009; White & Gatersleben, 2010). Even if individuals are concerned about climate change and feel personally responsible, they may not act if they think others will not play their part. A similar collaborative relationship has to be nurtured between individuals and national governments/institutions. Trust in governments (and other responsible institutions) to design effective climate change and energy policies is therefore a prerequisite for public support for individual action (Lorenzoni & Pidgeon, 2006).

The proposed module will further be used to examine the relative importance of individual-motivational and socio-political factors in public preferences for different energy supply sources and demand reduction. The resulting dataset can be combined with different contextual variables to develop a better understanding of

the situated nature of environmental attitudes. It is necessary to develop a set of national indicators to test the relationships – some of which are already collected as part of the ESS macro data. For instance, economic indicators (including GDP, economic growth, and unemployment) are needed to test the notion that during economic hard times concerns about the environment are crowded out and preferences for cheap and secure energy become more pressing. People may be more likely to express climate sceptical beliefs in recessions for fear of the costs of mitigation (Saad, 2009; Weber 2010). Higher levels of adult literacy and academic tertiary education in a country might generate a culture of belief in and concern about climate change that explains cross-national differences beyond individual-level associations between education and attitudes. The ESS media claims data will be useful for assessing the effects of media content on attitudes in this area. While the ESS codebook already covers claims made by environmental groups, codes have been added for climate change and energy content of the claims.

There are also contextual data from other sources that may be linked to the ESS data, especially those regarding energy consumption. National levels of carbon emissions per capita linked to our proposed ESS data would enable researchers to test claims that high carbon emitting countries report lower climate change concern, downplaying the problem to avoid acknowledging responsibility for the costs of climate-change mitigation (Dunlap & Mertig, 1995, Sandvik, 2008). Current carbon emissions per capita might also affect energy preferences, with preferences for greater use of low-carbon energy sources more muted where emissions are (already) relatively low. The profile of national energy usage should be associated with energy preferences: preferences may tend towards the status quo unless current usage is particularly controversial. The percentage of energy usage that is derived from foreign sources is most relevant to energy security. Those heavily dependent on energy imports, such as many Eastern and some Western European countries, may have publics more concerned about energy security, which may affect the link between climate change attitudes and energy preferences. There might be other such cross-level interaction effects as contextual factors may change the strength of the relationship between different types of attitudes. Levels of environmental concern expressed in election manifestos for political parties (Spoon et al., 2013) will be useful for testing the extent to which citizens' attitudes in this area respond to those of the parties they identify with. More generally, such Comparative Manifesto Project data (see <https://manifesto-project.wzb.eu>) can be used to create national averages as a measure of elite political opinion. The presence of such political representations may help explain national differences in public opinion, even including those who do not identify with any party. No such analyses have ever been done before.

SECTION B. Brief description of all the concepts to be measured in the module and their expected relationships

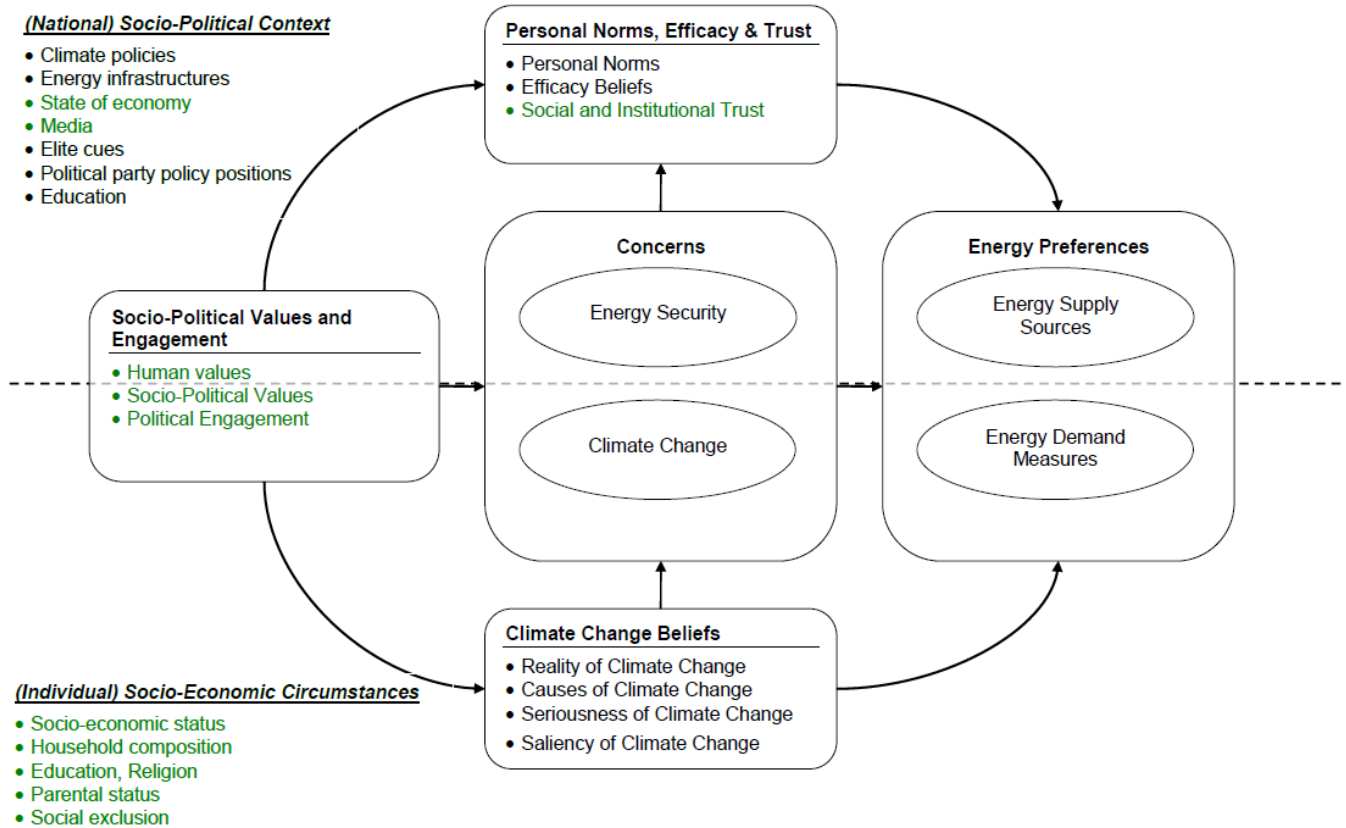


Figure 1: Conceptual framework of the proposal (concepts in green are part of the core ESS).

Stern's VBN model (2000) is used as a general framework for the new module, based on the premise that human values (Schwartz, 1992), together with beliefs regarding climate change and feelings of personal responsibility drive personal preferences for energy supply sources and energy demand reduction (see Figure 1).

The framework comprises five components, covering the broad areas of (1) *socio-political values and engagement*, (2) *beliefs about climate change*; (3) *concerns about climate change and energy security*; (4) *personal norms and efficacy beliefs*; and (5) *energy preferences, including preferences for energy supply sources and energy demand measures*.

The framework combines items from the new module (in black) with core elements of the ESS questionnaire (in green). As the concepts of *socio-political values and engagement* and *social and institutional trust* are already covered in the core ESS questionnaire, they will not be described in detail below.

Concept 1: Climate Change Beliefs [Complex]

Since the emergence of climate change as a major global environmental challenge, public awareness and knowledge of the issue have been rising steadily (Upham et al., 2009). However, despite strengthening scientific evidence and scientific consensus about the reality of anthropogenic climate change (IPCC, 2007, 2013), scientist and lay understandings of climate change have failed to converge (Weber & Stern, 2011).

A '*belief*' is a mental representation of a proposition about the world that may or may not correspond with reality. Analogous to Rahmstorf's (2004) climate scepticism framework, the module will make a detailed assessment of public views on the *reality*, *cause(s)*, and *seriousness* of climate change. This section covers the sub-concepts of "*beliefs in the reality of climate change*", "*beliefs in the causes of climate change*" and "*beliefs in the seriousness of climate change*". These items will be used to identify trend sceptical, attribution sceptical and impact sceptical beliefs, respectively: Trend scepticism is the belief that there is no upward trend in global temperatures; attribution scepticism is the belief that an upward trend in global temperatures is not caused by human activity; and impact scepticism is the belief that an upward trend in global temperatures does not lead to substantial detrimental impacts.

Concept 2: Climate Change Salience [Simple]

The 'climate change salience' concept is included in the module to =captures the amount of thought and consideration that the respondent gives to climate change.

Concept 3: Climate Change Concern [Simple]

A '*concern*' is a personal feeling of worry about something that is usually shared by multiple people. Climate change concern is closely related to but conceptually different from climate change beliefs. Whereas 'climate change beliefs' are propositional cognitions about the nature of climate change, 'climate concern' can be defined as affective evaluations of the seriousness of (the impacts of) climate change, reflected in personal feelings of worry about the issue (Steg et al., 2011).

Concept 4: Energy Security Concern [Complex]

Energy security is a highly complex and multi-faceted construct with different overlapping meanings (Chester, 2010; Winzer, 2011; Demski et al., 2014). Energy Security Concern is defined here as the affective evaluations of the seriousness of a range of risks or threats to energy security, that is, to the *uninterrupted availability of energy sources at an affordable price*², reflected in personal feelings of worry about the issue. This covers concerns about *general dependencies* within the energy supply system, as well as *specific threats* to a country's energy supply and concerns about *possible outcomes* (i.e., interruptions to domestic energy supply and price rises). Energy security concern therefore encompasses concerns about the outcomes of (1) interruptions to energy supply (energy reliability) and (2) the affordability of energy (energy affordability); (3) concerns about specific threats to the energy system, including external disruptions (external vulnerability) and internal disruptions (internal vulnerability); (4) concerns about a country's energy supply system being too dependent on energy imports (energy dependency), and (5) on fossil fuels (energy supply).

Together, *Concepts 3 and 4* reflect public affective evaluations of the '*energy trilemma*' of having to deliver affordable, reliable and low-carbon energy.

Concept 5: Personal Norms [Simple]

When studying the relationships of climate change and energy security concerns on the one hand and energy preferences on the other, it is important to understand the pathways through which they are linked. According to the VBN model (Stern, 2000), pro-environmental *personal norms* (sometimes referred to as *moral norms*) take centre stage in linking climate change concerns to energy preferences. Personal norms are generally defined as a person's expectation on how s/he should act in different situations, and includes *feelings of moral obligation or responsibility* to perform or refrain from specific actions (Schwartz & Howard, 1981). More specifically, personal norms can be defined as moral obligation or responsibility to perform or refrain from specific actions to contribute to the solution of a perceived problem. In the VBN model (Stern,

² <http://www.iea.org/topics/energysecurity>

2000), feelings of moral obligations are dependent on problem awareness (i.e. the perceptions that there is a problem) and the feeling that one is personally responsible for a specific behaviour (Schwartz, 1977). There is widespread evidence that a sense of personal obligation is essential for turning concerns into action (e.g. Steg & De Groot 2010), is a major correlate of support for energy policies and energy-related actions (e.g. Steg et al., 2005; Steg & De Groot, 2010), and explains the association between the willingness to accept demand-side and supply-side measures to reduce carbon emissions (Poortinga et al., 2012).

Concept 6: Efficacy Beliefs [Complex]

Given that climate change is a collective problem that can only be solved through collective action, beliefs about the effectiveness of individual and collective actions, as well as trust, are critically important for the willingness to engage in pro-environmental behaviour. According to the collective action model (Lubell, 2002), engagement in environmental activism is determined by *personal*, *collective*, and *institutional efficacy* beliefs, that is, by beliefs that personal actions make a difference in solving a collective problem (*personal efficacy*), that other people will contribute to the collective endeavour (*collective efficacy*), and that the government is capable and responsive to play their part (*institutional efficacy*). The personal efficacy concept consists of two sub-concepts: self-efficacy, which is the belief that one is able to perform behaviours needed to achieve a collective goal, and personal outcome expectancy, which is the belief that the behaviours contribute to the collective goal (cf., Bandura, 1994). Similarly, collective efficacy consists of the belief that others will cooperate (collective efficacy) and the belief that cooperation will be effective in solving the problem (collective outcome expectancy) (Koletsou & Mancy, 2011).

The importance of personal efficacy beliefs (i.e. self-efficacy and personal outcome expectancy) for pro-environmental behaviour has been well established in the literature (Meinhold & Malkus, 2005; Hanss & Böhm, 2010; Steg & De Groot, 2010). Collective and institutional efficacy have however received less empirical attention, even if there are indications that in certain contexts they may be more important than personal efficacy in certain situations (Hanss & Böhm, 2010; Homburg & Stolberg, 2006; Koletsou & Mancy, 2011).

In addition to newly developed *collective efficacy* and *collective outcome expectancy* measures, *social and institutional trust*, as well as *political efficacy*, are used as *proxy measures* for these concepts (see Lubell, 2002). Trust can be defined as a judgment about the honesty, integrity and reliability of others and is thought to facilitate community coordination and cooperation in addressing collective issues (Putnam, 1993). People are unlikely to act if they do not trust others to cooperate or the government to design effective policies (Lorenzoni & Pidgeon, 2006). Various studies have confirmed the role of social and institutional trust in environmental policy (Poortinga & Pidgeon, 2003; Barr et al., 2005; Lubell, 2002; Tjernström & Tietenberg, 2008). In addition, O'Connor and colleagues (1999) found that support for governmental policies on climate change was higher in Bulgaria than in the US due to Bulgarians having more trust in government institutions, whilst voluntary actions were more accepted in the US (also see Konisky et al., 2008).

Concept 7 & 8: Preferences for Energy Supply Sources [Complex] and Energy Demand Measures [Complex]

For the survey to be relevant to energy and climate change policy-makers across Europe, it is necessary to have a clear understanding of how the public thinks about different strategies to reduce energy-use and carbon emissions, as well as policies to achieve these goals.

Preferences for supply-side sources will cover different sources that can be used to decarbonise energy generation, including unconventional fossil fuel alternatives (with or without carbon sequestration), nuclear power, and various renewable energy sources. Previous quantitative and qualitative research has shown that the public have widely varying preferences for energy generation technologies (Poortinga et al., 2006;

Perlaviciute & Steg, 2014), with preferences for the different policy alternatives being rooted in different ways of causal thinking about climate change (Bostrom et al., 2012), in values (Perlaviciute & Steg, 2014), and concerns about energy security potentially affecting support for renewables and energy demand reduction (Lockwood, 2011; Poortinga et al., 2012).

Preferences for demand-side measures will cover the willingness to engage in *energy efficiency* (i.e. investments that lower energy use without sacrificing normal and desired activities or energy services) and to take *energy curtailment* (i.e. cutting down on normal and desired activities or energy services) measures (see Gardner & Stern, 2002). There are strong theoretical and empirical bases for such a distinction. Energy-efficiency and energy conservation are perceived as separate categories of behaviour (Whitmarsh & O'Neill, 2010), have different conservation potentials and psychological properties (Gardner & Stern 2002; Poortinga et al., 2003; Steg et al., 2006); and are influenced by different psychological and contextual factors (Poortinga et al., 2003; 2004; Barr et al., 2005; Whitmarsh & O'Neill, 2010).

Concept 9: Public-Sphere Behaviours [Complex]

Public-sphere behaviours refer to activist and non-activist behaviours that are conducted in public in support of the environment. Activist behaviours in the public sphere reflect advocacy actions to influence public policy and resource allocation decisions. Non-activist behaviours in the public-sphere reflect more tacit public support and acceptance of policies that are needed to address environmental problems such as climate change (Stern et al., 1999). This means that, in contrast to consumer behaviours that are conducted in the private sphere, public-sphere behaviours only have the potential to influence the environment indirectly (Stern, 2000).

SECTION C: Complex Concepts

COMPLEX CONCEPT NAME: CLIMATE CHANGE BELIEFS

Describe the concept in detail, outlining the various sub concepts it comprises

The concept of *Climate Change Beliefs* refers to propositional cognitions about the nature of climate change, covering people's views on the reality, cause(s), and impacts of climate change. The climate change belief concept is specifically aimed at capturing people's mental representation of the climate change phenomenon that they accept as true and their evaluative beliefs about the impacts. The concept is not intended to capture affective responses to the phenomenon, for example whether people are concerned, excited or indifferent about climate change.

Climate Change or Global Warming?

The terms of climate change and global warming are often used interchangeably, both in public and policy arenas. However, they refer to closely linked physical phenomena. Whereas global warming specifically refers to the rise in average global temperature as a result of increased greenhouse gas concentrations in the earth's atmosphere, climate change more broadly refers to long-term changes in the state of the climate system, which can be observed over longer periods of time at the local, regional and global level.

The aim of the module is to capture people's views on climate change rather than global warming, to account for the wider changes that may be brought about by the increased greenhouse gas concentrations in the earth's atmosphere. Note that, in addition to the technical differences between the two terms, there are national differences in the popular use of 'global warming' and 'climate change'. While the term global warming is used more commonly by the public, media and policy makers in the United States, the term climate change is more common in the United Kingdom (Lorenzoni et al., 2006). This means that, while climate change is the more technically correct term to refer to the multiple global changes resulting from increasing carbon dioxide concentrations, the term global warming could be used in certain countries for the module questions to be best understood by the respondents.

Expected relationship with other complex and simple concepts

Climate change beliefs are expected to be influenced by socio-political and human values, as well as by political engagement. Climate change beliefs are further expected to be linked to climate change concern, personal norms, and energy preferences. In particular climate sceptical beliefs (i.e. beliefs that the world's climate is not changing; climate change is not caused by human activity; and climate change does not have serious impacts) are linked to a lack of concern about climate change. Such beliefs are also expected to lower preferences for low-carbon energy supply sources and energy demand reduction measures.

SUB CONCEPT NAME: CLIMATE CHANGE REALITY

Describe the first sub concept in detail outlining any further sub concepts or specifying that it can be measured directly

Climate Change Reality refers to beliefs about the reality of climate change, that is, whether people think the world's climate is changing or not, irrespective of the possible perceived causes.

Expected relationship with other sub concepts

Beliefs in the reality, cause(s), and seriousness of climate change are expected to be moderately correlated. Those who think that the world's climate is changing are more likely to think that climate change is caused by human activity and to think that the impacts of climate change will be negative.

Final Question Wording:

D19 CARD 37 You may have heard the idea that the world's³ climate is changing due to⁴ increases in temperature over the past 100 years. What is your personal opinion on this? Do you think the world's

³ 'world's' in the sense of 'the Earth's'.

⁴ 'due to' in the sense of 'as a result of'.

climate is changing? Choose your answer from this card.

Definitely changing	1	
Probably changing	2	GO TO D21
Probably not changing	3	
Definitely not changing	4	ASK D20
(Refusal)	7	GO TO D21
(Don't know)	8	

SUB CONCEPT NAME: CLIMATE CHANGE CAUSE

Describe the sub concept in detail outlining any further sub concepts or specifying that it can be measured directly

Climate Change Cause refers to beliefs about the causes of climate change, that is, whether people think climate change is caused by human activity, natural processes, or a combination of the two.

Expected relationship with other sub concepts

The climate change cause concept is expected to be moderately associated with the climate change reality concept. Those who believe that climate change is (definitely) happening are more likely to think it is caused by human activity rather than natural processes. While it is possible that the climate change cause concept is not associated with the climate change impact concept, we still expect that respondents who think that climate change is caused by human activity are more likely to think that the impacts of climate change will be negative.

Final question wording:

D22 CARD 39 Do you think that climate change is caused by natural processes, human activity, or both?

Entirely by natural processes	01	
Mainly by natural processes	02	
About equally by natural processes and human activity	03	ASK D23
Mainly by human activity	04	
Entirely by human activity	05	
(I don't think climate change is happening)	55	GO TO D30
(Refusal)	77	ASK D23
(Don't know)	88	

SUB CONCEPT NAME: CLIMATE CHANGE IMPACT

Describe the concept in detail, outlining the various sub concepts it comprises

Climate Change Impact refers to evaluative beliefs about how positive or negative the impacts of climate change will be.

Expected relationship with other sub concepts

The climate change impact concept is moderately associated with the climate change reality and climate change cause concepts. It is expected that respondents who think that the world's climate is changing

and think that it is caused by human activity are more likely to think that the impacts of climate change will be negative.

Final question wording:

D25 CARD 42 How good or bad do you think the impact of climate change will be on people across the world? Please choose a number from 0 to 10, where 0 is extremely bad and 10 is extremely good.

Extremely bad

Extremely good

(Refusal)

(Don't know)

00 01 02 03 04 05 06 07 08 09 10 77 88

COMPLEX CONCEPT NAME: ENERGY SECURITY CONCERN

Describe the concept in detail, outlining the various sub concepts it comprises

Energy Security Concern is defined here as the affective evaluation of the seriousness of risks and threats to energy security, reflected in personal feelings of worry about the issue. This covers concerns about general dependencies within the energy supply system, as well as specific threats to a country's energy supply and concerns about their possible consequences (i.e., interruptions to domestic energy supply and price rises). Energy security concern therefore includes [A] concerns about the outcomes of (1) interruptions to energy supply (*energy reliability*) and (2) the affordability of energy (*energy affordability*); [B] concerns about specific threats to the energy system, including (3) internal and external disruptions (*internal and external vulnerability*); and [C] concerns about a country's energy supply system being too dependent on (4) foreign energy imports (*energy dependency*) and (5) fossil fuels (*energy supply*).

In this module the energy security concern concept will specifically focus on energy supplied for domestic purposes, including power and heating. These domestic energy services are in most countries mainly provided by electricity and natural gas. The energy security concern concept should reflect a personal relevance, preoccupation and/or feelings of worry regarding the issue of energy security, rather than the belief that it is a pressing issue that needs to be addressed.

Expected relationship with other complex and simple concepts

Energy security concerns are expected to be rooted in socio-political and human values and linked to political engagement and national-level contextual factors. Energy security concerns are further expected to affect energy preferences for energy sources depending on the specific national energy infrastructures and context. It is expected that energy security concern is largely unrelated to climate change concern, as they stem from different worldviews.

SUB CONCEPT NAME: ENERGY RELIABILITY

Describe the first sub concept in detail outlining any further sub concepts or specifying that it can be measured directly

This sub concept refers to concerns about the reliability of domestic energy supplies, that is, that energy is produced consistently and can meet demand.

Expected relationship with other sub concepts

The different energy security concerns (energy reliability, energy affordability, external vulnerability, internal technical vulnerability, energy dependency, and energy supply) are moderately to highly inter-correlated.

Final question wording:

D11 CARD 36 How worried are you that there may be power cuts⁵ in [country]?

⁵ 'power cuts' in the sense of 'interruptions to the electricity supply'.

Not at all worried	1
Not very worried	2
Somewhat worried	3
Very worried	4
Extremely worried	5
(Refusal)	7
(Don't know)	8

SUB CONCEPT NAME: ENERGY AFFORDABILITY

Describe the sub concept in detail outlining any further sub concepts or specifying that it can be measured directly

This sub concept refers to concerns about the affordability of energy as a result of price increases.

Expected relationship with other sub concepts

The different energy security concerns (energy reliability, energy affordability, external vulnerability, internal technical vulnerability, energy dependency, and energy supply) are moderately to highly inter-correlated.

Final question wording:

The next few questions are about energy people use at home for things such as heating, lighting, cooking and electrical appliances.

D12 STILL CARD 36 How worried are you that energy may be too expensive for many people in [country]?

Not at all worried	1
Not very worried	2
Somewhat worried	3
Very worried	4
Extremely worried	5
(Refusal)	7
(Don't know)	8

SUB CONCEPT NAME: INTERNAL AND EXTERNAL VULNERABILITY

Describe the concept in detail, outlining the various sub concepts it comprises

This sub concept refers to concerns about the domestic energy supply system being vulnerable to external events, such as natural disasters or terrorist attacks, as well as disruptive internal events, such as technical failures and accidents, causing interruptions to the supply of energy.

Expected relationship with other sub concepts

The different energy security concerns (energy reliability, energy affordability, internal and external vulnerability, energy dependency, and energy supply) are moderately to highly inter-correlated.

Final question wording:

STILL CARD 36 How worried are you that energy supplies could be interrupted... **READ OUT...**

		Not at all worried	Not very worried	Somewhat worried	Very worried	Extremely worried	(Refusal)	(Don't know)
D15	...by natural disasters or extreme weather?	1	2	3	4	5	7	8
D16	...and by insufficient power being generated?	1	2	3	4	5	7	8
D17	...and by technical failures?	1	2	3	4	5	7	8
D18	STILL CARD 36 And how worried are you <u>that energy supplies could be interrupted</u> by terrorist attacks?							
					Not at all worried	1		
					Not very worried	2		
					Somewhat worried	3		
					Very worried	4		
					Extremely worried	5		
							(Refusal)	7
							(Don't know)	8

SUB CONCEPT NAME: ENERGY DEPENDENCY

Describe the concept in detail, outlining the various sub concepts it comprises

This sub concept refers to concerns about the domestic energy supply being too dependent on energy imports.

Expected relationship with other sub concepts

The different energy security concerns (energy reliability, energy affordability, internal and external vulnerability, energy dependency, and energy supply) are moderately to highly inter-correlated.

Final question wording:

D13 STILL CARD 36 How worried are you about [country] being too dependent on energy imports from other countries?

- Not at all worried 1
- Not very worried 2
- Somewhat worried 3
- Very worried 4
- Extremely worried 5

(Refusal) 7
 (Don't know) 8

SUB CONCEPT NAME: ENERGY SUPPLY

Describe the concept in detail, outlining the various sub concepts it comprises

This sub concept refers to concerns about long-term dependencies on fossil fuels, and the lack of long-term investments in the development of new energy sources to meet long-term loss of supply.

Expected relationship with other sub concepts

The different energy security concerns (energy reliability, energy affordability, internal and external vulnerability, energy dependency, and energy supply) are moderately to highly inter-correlated.

Final question wording:

D14 STILL CARD 36 How worried are you about [country] being too dependent on using energy generated by fossil fuels such as oil, gas and coal?

- Not at all worried 1
- Not very worried 2
- Somewhat worried 3
- Very worried 4
- Extremely worried 5

- (Refusal) 7
- (Don't know) 8

COMPLEX CONCEPT NAME: EFFICACY BELIEFS

Describe the concept in detail, outlining the various sub concepts it comprises

The *Efficacy Beliefs* concept refers to the beliefs in the effectiveness of personal and others' actions contribute to a particular outcome or goal. In the context of climate change mitigation as a collective problem, and following Lubell's (2002) framework, this includes beliefs that personal actions can make a difference (*personal efficacy beliefs*), other people will contribute in the collective endeavour (*collective efficacy beliefs*), and that government will play their part in designing effective climate policies (*institutional efficacy beliefs*). The personal efficacy concept consists of two sub-concepts, as theorised by Bandura (1994): *self-efficacy* (the belief that one is able to engage in actions that contribute to a collective outcome or goal) and *personal outcome expectancy* (the belief that these actions contribute to the collective goal). The collective efficacy concept is similarly subdivided into two sub-concepts (see Koletsou & Mancy, 2011): *collective efficacy* (the belief that other people will perform behaviours needed to achieve a collective goal) and *collective outcome expectancy* (the belief that by acting collectively the collective goal can be achieved). The *institutional efficacy* concept refers to beliefs that relevant institutions, primarily national governments, will take effective action on climate change.

Expected relationship with other complex and simple concepts

Efficacy beliefs are expected to moderate the association between climate concern and the willingness to engage in energy demand reduction measures.

SUB CONCEPT NAME: SELF- EFFICACY

Describe the first sub concept in detail outlining any further sub concepts or specifying that it can be measured directly

Self-Efficacy refers to people's beliefs in their capabilities to engage in actions needed to attain a particular outcome or goal. In the context of a collective problem, such as climate change) this refers to people's beliefs that they are able to perform the actions (i.e. energy saving) that collectively contribute to a particular collective outcome or goal (i.e. climate change mitigation).

Expected relationship with other sub concepts

Self-efficacy is expected to be associated with personal outcome expectancy, collective efficacy, and collective outcome expectancy, but to be independent from institutional efficacy.

Final question wording:

D3 CARD 34 Overall, how confident are you that you could use less energy than you do now?

Not at all confident

Completely confident

(Refusal)

(Don't know)

00 01 02 03 04 05 06 07 08 09 10 77 88

SUB CONCEPT NAME: PERSONAL OUTCOME EXPECTANCY

Describe the first sub concept in detail outlining any further sub concepts or specifying that it can be measured directly

Personal Outcome Expectancy refers to people's belief that certain actions contribute to a particular outcome or goal. In the context of a collective problem, such as climate change, these are beliefs that individuals' engagement in certain actions has a potential incremental effect on attaining a particular collective outcome or goal. For climate change that refers to beliefs that individual engagement in energy saving has an incremental effect on climate change mitigation.

Expected relationship with other sub concepts

Personal outcome expectancy is expected to be closely associated with self-efficacy, collective efficacy and collective outcome expectancy, but to be independent from institutional efficacy.

Final question wording:

D29 STILL CARD 43 How likely do you think it is that limiting your own energy use would help reduce climate change?

Not at all likely

Extremely likely

(Refusal)

(Don't know)

00 01 02 03 04 05 06 07 08 09 10 77 88

SUB CONCEPT NAME: COLLECTIVE EFFICACY

Describe the first sub concept in detail outlining any further sub concepts or specifying that it can be measured directly

Collective Efficacy reflects beliefs that other people will engage in actions needed to attain a particular collective outcome or goal. In the context of this module it refers to beliefs that sufficient numbers of people will engage in actions (i.e. energy saving) needed for climate change mitigation.

Expected relationship with other sub concepts

Collective efficacy is expected to be associated with self-efficacy, personal outcome expectancy, and collective outcome expectancy, but to be independent from institutional efficacy.

Final question wording:

D27 STILL CARD 43 How likely do you think it is that large numbers of people will actually limit their energy use to try to reduce climate change?

Not at
all
likely

Extremely
likely

(Refusal)

(Don't
know)

00 01 02 03 04 05 06 07 08 09 10 77 88

SUB CONCEPT NAME: COLLECTIVE OUTCOME EXPECTANCY

Describe the first sub concept in detail outlining any further sub concepts or specifying that it can be measured directly

Collective Outcome Expectancy refers to people's belief that a particular collective outcome or goal can be attained by collective engagement in certain actions. In the context of this module that refers to beliefs that climate change can be reduced if enough people engage in energy saving actions.

Expected relationship with other sub concepts

Collective outcome expectancy is expected to be associated with collective efficacy, self-efficacy and personal outcome expectancy, but to be independent from institutional efficacy.

Final question wording:

D26 CARD 43 Now imagine that large numbers of people limited their energy use. How likely do you think it is that this would reduce climate change?

Not at
all
likely

Extremely
likely

(Refusal)

(Don't
know)

00 01 02 03 04 05 06 07 08 09 10 77 88

SUB CONCEPT NAME: INSTITUTIONAL EFFICACY

Describe the first sub concept in detail outlining any further sub concepts or specifying that it can be measured directly

Institutional Efficacy refers to beliefs whether relevant institutions, mostly national governments, will engage in actions needed to produce a particular (collective) outcome or goal. In the context of this module it refers to beliefs that sufficient numbers of governments will take effective action on climate change.

Expected relationship with other sub concepts

Institutional efficacy is expected to be independent from self-efficacy, personal outcome expectancy, collective efficacy and collective outcome expectancy.

Final question wording:

D28 STILL CARD 43 And how likely do you think it is that governments⁶ in enough countries⁷ will take action that reduces climate change?

Not at
all
likely

Extremely
likely

(Refusal)

(Don't
know)

00 01 02 03 04 05 06 07 08 09 10 77 88

⁶ National governments.

⁷ 'enough countries' to have an impact rather than the actual number of countries.

COMPLEX CONCEPT NAME: ENERGY SUPPLY SOURCES

Describe the concept in detail, outlining the various sub concepts it comprises

The *Energy Supply Sources* concept refers to preferences for different sources that can be used to generate domestic electricity. The preferences regard usage in the respondents' countries, not individual usage or national energy policy (since national energy consumption can also depend on consumer choices as well as government policy).

Expected relationship with other complex and simple concepts

Preferences for energy supply sources are expected to be associated with all the preceding model factors, including human values, climate change beliefs, climate and energy security concerns, and personal norms and efficacy, with stronger associations with proximal constructs, such as personal norms, than with more distal constructs, such as human values. Preferences for low-carbon energy supply sources, such as solar and wind power, are expected to be associated with the willingness to take energy efficiency and curtailment measures.

People concerned about climate change and thinking it is mainly the result of human activities should be less likely to want energy from sources that involve high carbon emissions (especially fossil fuels) and have a relative preference for renewables. People concerned about energy affordability are likely to prefer the cheapest energy sources, which will vary across the different ESS countries, but are more likely to be fossil-fuel based. Reliability concerns are likely to be negatively associated with preferences for renewable energy sources, as they tend to be perceived as less reliable (e.g. Poortinga et al., 2006; Perlaviciute & Steg, 2014). Those who are particularly concerned about dependency on fossil fuels (energy supply sub-concept) are more likely to want to use less of them.

The willingness to take energy efficiency and curtailment measures is expected to be associated with preferences for low-carbon energy supply sources, such as wind and solar power.

SUB CONCEPT NAME: PREFERENCES FOR ENERGY SUPPLY SOURCES

Describe the first sub concept in detail outlining any further sub concepts or specifying that it can be measured directly

The sub concept reflects preferences for specific sources to be used for generating domestic electricity. This includes fossil fuels, renewable energy sources, and nuclear power.

Expected relationship with other sub concepts

It is expected that preferences for fossil fuels are highly inter-correlated, and that preferences for renewable energy sources are highly inter-correlated. Preferences for renewable sources are expected to be negatively associated with preferences for nuclear power and fossil fuels.

Final question wording:

CARD 35 The highlighted box at the top of this card shows a number of energy sources that can be used to generate electricity⁸. Please take a moment to look over them.

INTERVIEWER: PAUSE TO ALLOW RESPONDENT TO READ THE LIST.

How much of the electricity used in [country] should be generated from each energy source? Please choose your answer from the options at the bottom of this card.

⁸ If countries feel there are major energy sources missing from this list, this must be discussed with ESS ERIC HQ, ess@city.ac.uk.

		A very large amount ⁹	A large amount	A medium amount	A small amount	None at all	(I have not heard of this energy source before)	(Refusal)	(Don't know)
D4	First, how much of the electricity used in [country] should be generated from coal? INTERVIEWER: if respondent queries which type of coal, please read out: 'Coal refers to all types of coal that can be used for generating electricity, including black coal ¹⁰ and brown coal ¹¹ .'	01	02	03	04	05	55	77	88
D5	And how about natural gas?	01	02	03	04	05	55	77	88
D6	And how about hydroelectric power generated by flowing water from rivers, dams and seas?	01	02	03	04	05	55	77	88
D7	How much of the electricity used in [country] should be generated by nuclear power?	01	02	03	04	05	55	77	88
D8	And how about sun or solar power?	01	02	03	04	05	55	77	88

⁹ 'amount' should be translated as 'quantity' and not as 'portion', 'part' or 'proportion'.

¹⁰ Black coal is used in the UK to refer to 'bituminous coal'. Please use the most common term for 'black coal' or 'bituminous coal' in your country.

¹¹ Brown coal is used in the UK to refer to 'lignite'. Please use the most common term for 'brown coal' or 'lignite' in your country.

D9	And how about wind power?	01	02	03	04	05	55	77	88
D10	And how about biomass energy generated from materials like wood, plants and animal excrement?	01	02	03	04	05	55	77	88

COMPLEX CONCEPT NAME: ENERGY DEMAND MEASURES

Describe the concept in detail, outlining the various sub concepts it comprises
<i>Energy Demand Measures</i> refers to behavioural willingness to engage in energy saving behaviours. This construct covers the willingness to take energy efficiency (i.e. investments that lower energy use without sacrificing normal and desired activities or energy services) and energy curtailment (i.e. cutting down on normal and desired activities or energy services) measures (see Gardner & Stern, 2002).
Expected relationship with other complex and simple concepts
The concept is expected to be associated with all the preceding model factors, including human values, climate and energy security concerns, and personal norms and efficacy, with stronger associations with proximal constructs, such as personal norms, than with distal constructs, such as human values. The willingness to take energy efficiency and curtailment measures is expected to be positively associated with preferences for low-carbon energy supply sources, such as wind and solar power.

SUB CONCEPT NAME: ENERGY EFFICIENCY

Describe the first sub concept in detail outlining any further sub concepts or specifying that it can be measured directly																												
<i>Energy Efficiency</i> refers to a willingness to engage in efficiency measures to save household energy, that is, investments that lower energy use without sacrificing normal and desired activities or energy services.																												
Expected relationship with other sub concepts																												
We expect positive correlations between the energy efficiency and energy curtailment concepts.																												
Final question wording:																												
D1 CARD 32 If you were to buy a large electrical appliance for your home, how likely is it that you would buy <u>one of the most</u> energy efficient ¹² ones?																												
<table border="0"> <tr> <td>Not at all likely</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Extremely likely</td> <td>(Refusal)</td> <td>(Don't know)</td> </tr> <tr> <td>00</td> <td>01</td> <td>02</td> <td>03</td> <td>04</td> <td>05</td> <td>06</td> <td>07</td> <td>08</td> <td>09</td> <td>10</td> <td>77</td> <td>88</td> <td></td> </tr> </table>	Not at all likely											Extremely likely	(Refusal)	(Don't know)	00	01	02	03	04	05	06	07	08	09	10	77	88	
Not at all likely											Extremely likely	(Refusal)	(Don't know)															
00	01	02	03	04	05	06	07	08	09	10	77	88																

¹² 'energy efficient' in the sense of 'using less energy'.

SUB CONCEPT NAME: ENERGY CURTAILMENT

Describe the sub concept in detail outlining any further sub concepts or specifying that it can be measured directly

Energy Curtailment refers to a willingness to engage in curtailment behaviours to save household energy, that is, cutting down on normal and desired activities or energy services.

Expected relationship with other sub concepts

We expect positive correlations between the energy efficiency and energy curtailment concepts.

Final question wording:

D2 CARD 33 There are some things that can be done to reduce energy use¹³, such as switching off appliances that are not being used, walking for short journeys, or only using the heating or air conditioning when really needed. In your daily life, how often do you do things to reduce your energy use?

Never 01
Hardly ever 02
Sometimes 03
Often 04
Very often 05
Always 06

(Cannot reduce energy use) 55
(Refusal) 77
(Don't know) 88

COMPLEX CONCEPT NAME: PUBLIC-SPHERE BEHAVIOURS

Describe the concept in detail, outlining the various sub concepts it comprises

The *Public-Sphere Behaviours* concept refers to activist and non-activist behaviours that are conducted in the public sphere. Activist behaviours in the public sphere reflect advocacy actions to influence public-policy and resource allocation decisions. Non-activist behaviours in the public-sphere reflect more tacit public support and acceptance of policies that are needed to address problems like climate change.

Expected relationship with other complex and simple concepts

Public-Sphere Behaviours are expected to be associated with all the preceding model factors, including human values, climate and energy security concerns, and personal norms and efficacy, with stronger associations with proximal constructs, such as personal norms, than distal constructs, such as human values.

SUB CONCEPT NAME: ACTIVIST BEHAVIOURS

Describe the sub concept in detail outlining any further sub concepts or specifying that it can be measured directly

Activist Behaviours in the public sphere reflect advocacy actions to influence public-policy and resource allocation decisions.

Expected relationship with other sub concepts

We expect positive correlations between activist and non-activist behaviours in the public sphere.

Final question wording:

¹³ 'energy use' in the broadest possible sense, not only electricity.

ASK ALL

There are different ways of trying to improve things in [country] or help prevent¹⁴ things from going wrong. During the last 12 months, have you done any of the following?

Have you... **READ OUT**...

		Yes	No	(Refusal)	(Don't know)
B15	...contacted a politician, government or local government official?	1	2	7	8
B16	...worked in a political party or action group?	1	2	7	8
B17	...worked in another organisation or association?	1	2	7	8
B18	...worn or displayed a campaign badge/sticker?	1	2	7	8
B19	...signed a petition?	1	2	7	8
B20	...taken part in a lawful public demonstration?	1	2	7	8
B21	...boycotted certain products?	1	2	7	8
B22¹⁵	...posted or shared anything about politics online, for example on blogs, via email or on social media such as Facebook or Twitter ¹⁶ ?	1	2	7	8

SUB CONCEPT NAME: NON-ACTIVIST BEHAVIOURS

Describe the sub concept in detail outlining any further sub concepts or specifying that it can be measured directly

Non-Activist Behaviours in the public-sphere reflect tacit public support and acceptance of policies needed to address climate change.

Expected relationship with other sub concepts

We expect positive associations between activist and non-activist behaviours in the public sphere.

Final question wording:**ASK ALL**

CARD 44 To what extent are you in favour or against the following policies in [country] to reduce climate change? **READ OUT EACH STATEMENT AND CODE IN GRID**

	Strongly in favour	Somewhat in favour	Neither in favour nor against	Somewhat against	Strongly against	(Refusal)	(Don't know)
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¹⁴ 'help prevent things going wrong' in the sense of help prevent serious problems arising.

¹⁵ **NEW CORE QUESTION** added in ESS8.

¹⁶ The examples given in the source question should be used where possible. However, if in [country] there are other social media platforms which would be more appropriate to include instead of or as well as Facebook and Twitter, please discuss with the translation team ess_translate@geis.org.

D30	Increasing taxes on fossil fuels, such as oil, gas and coal.	1	2	3	4	5	7	8
D31	Using public money to subsidise renewable energy such as wind and solar power.	1	2	3	4	5	7	8
D32	A law banning the sale of the least energy efficient household appliances.	1	2	3	4	5	7	8

SECTION D: Simple Concepts

SIMPLE CONCEPT NAME: CLIMATE CONCERN

Describe the concept in detail

Climate Concern is defined as an affective evaluation of the seriousness of the impacts of climate change, reflected in personal feelings of worry about the issue. The climate concern concept should reflect a personal relevance, preoccupation and/or feelings of worry regarding the issue of climate change, rather than the thought that it is a pressing issue that needs to be addressed.

Expected relationship with other complex and simple concepts

Climate concern is expected to be linked to human values, socio-political values, and political engagement, as well as climate change beliefs. It is expected that climate change concern is largely unrelated to energy security concern, as they stem from different worldviews. A positive relationship is expected between climate concern and preferences for low-carbon energy supply sources and the willingness to engage in energy demand reduction. These relationships are expected to be mediated by personal norms and moderated by efficacy beliefs, as well as by social and institutional trust.

Final question wording:

D24 CARD 41 How worried are you about climate change?

- Not at all worried 1
- Not very worried 2
- Somewhat worried 3
- Very worried 4
- Extremely worried 5
- (Refusal) 7
- (Don't know) 8

SIMPLE CONCEPT NAME: PRO-ENVIRONMENTAL PERSONAL NORMS

Describe the concept in detail, outlining the various sub concepts it comprises															
The <i>Pro-Environmental Personal Norms</i> concept reflects feelings of moral obligation or responsibility to perform or refrain from specific actions to contribute to the solution of a perceived collective problem.															
In this module we specifically focus on personal norms regarding climate change mitigation, in order to slow or prevent climate change, and not adaptation, as the latter will not address the problem itself.															
Expected relationship with other complex and simple concepts															
Positive relationships are expected between pro-environmental personal norms, climate change beliefs, and climate concern. Personal norms are also expected to be related to human values, socio-political values, and political engagement. Personal norms are further expected to be positively associated with preferences for low-carbon energy supply sources and the willingness to engage in energy demand reduction measures. Personal norms are expected to mediate associations between climate concern on the one hand and preferences for low-carbon energy supply sources and the willingness to engage in energy demand reduction measures on the other.															
Final question wording:															
D23 CARD 40 To what extent do you feel a personal responsibility to try to reduce climate change?															
Not at all								A great deal				(Refusal)		(Don't know)	
00	01	02	03	04	05	06	07	08	09	10	77	88			

SIMPLE CONCEPT NAME: CLIMATE CHANGE SALIENCE

Describe the concept in detail, outlining the various sub concepts it comprises																																		
<i>Climate Change Salience</i> refers to the importance of climate change to an individual, reflected in how much a person has thought about the issue.																																		
Expected relationship with other complex and simple concepts																																		
Climate change salience is expected to moderate the relationships between climate change beliefs, climate change concern and energy preferences. The more thinking a person has done on climate change, the stronger the relationships between the concepts.																																		
Final Question Wording:																																		
ASK IF DEFINITELY NOT CHANGING AT D19 (code 4)																																		
D20 CARD 38 How much have you thought about climate change before today?																																		
<table border="1"> <tr> <td>Not at all</td><td>1</td><td></td></tr> <tr> <td>Very little</td><td>2</td><td></td></tr> <tr> <td>Some</td><td>3</td><td></td></tr> <tr> <td>A lot</td><td>4</td><td>GO TO D30</td></tr> <tr> <td>A great deal</td><td>5</td><td></td></tr> <tr> <td>(Refusal)</td><td>7</td><td></td></tr> <tr> <td>(Don't know)</td><td>8</td><td></td></tr> </table>														Not at all	1		Very little	2		Some	3		A lot	4	GO TO D30	A great deal	5		(Refusal)	7		(Don't know)	8	
Not at all	1																																	
Very little	2																																	
Some	3																																	
A lot	4	GO TO D30																																
A great deal	5																																	
(Refusal)	7																																	
(Don't know)	8																																	

D21¹⁷ CARD 38 How much have you thought about climate change before today?

- Not at all 1
- Very little 2
- Some 3
- A lot 4
- A great deal 5
- (Refusal) 7
- (Don't know) 8

¹⁷ This is a duplication of D20 for routing purposes.

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