

## **SOCIETY AND CLIMATE CHANGE**

# Knowledge, assessments and behaviours in the Spanish population

2011

## **Executive Summary**

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#### SOCIETY AND CLIMATE CHANGE

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## **Executive Summary**

#### THE "SOCIAL FACTOR" IN CLIMATE CHANGE

The purpose of this study is to contribute to knowledge of the "social factor" in climate change (hereinafter, CC), considered to be a key variable in any society's response to the threats and risks associated with the alteration of the Earth's climate through human action. The term "social factor" refers to the set of beliefs, knowledge, assessments and representations being shaped by the Spanish population (in this case) in relation to the climate crisis. It will also be interesting to learn how this process could be altering the attitudes and behaviours developed in the face

of this threat, both in the personal sphere of lifestyle and in the more collective area of demand and support for the policy responses being developed. This study is a continuation of one presented in 2009, the fieldwork for which was conducted in 2008 (Meira, Arto and Montero, 2009).

The evidence base was obtained from a survey conducted on a representative sample of the population residing in Spain. Although the design of the 2009 survey has generally been maintained for comparative purposes, certain improvements have been made. The sample has been increased to 1,295 (from the 1,200 people in 2009) and now includes the island communities of the Balearic Islands and the Canary Islands and the populations of the autonomous cities of Ceuta and Melilla. The technical data are summarised in Table 1.

The dimensions covered by the study are:

- Knowledge and beliefs of the causes and consequences of CC.
- The relevance and level of the threat of CC, as viewed by the population.
  - Resources and sources of information on CC.
  - Knowledge and assessment of policy responses.

#### Table 1. Methodology overview

Universe: Spanish population of both sexes aged 18 years and over.

**Sample size:** 1,295 personal interviews.

Sampling points: 105 towns and 41 provinces or

autonomous communities.

Confidence level: 95% for p=q=0.5

Absolute sampling error: ±2.7%

**Allocation:** Proportional

**Sampling type:** Multi-stage sampling with stratification by proportionate share in terms of the autonomous community of residence, size of dwelling, sex and age of respondents.

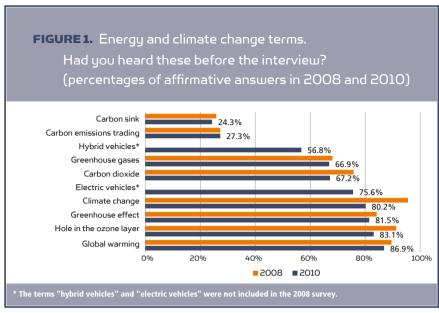
**Interview type:** Personal interviews at respondent's home using a semi-structured questionnaire.

**Information editing:** From the outset we checked the shares specified in the sampling plan, checked the coding of variables and edited the information collected to correct any errors. We then removed any inconsistent data and removed missing cases from the analysis.

Supervision: By phone on a total of 15% of interviews conducted.

**Pretest:** Pilot test to validate the questionnaire by conducting 25 interviews in Seville.

Completion of fieldwork: From 30 June to 17 July 2010.



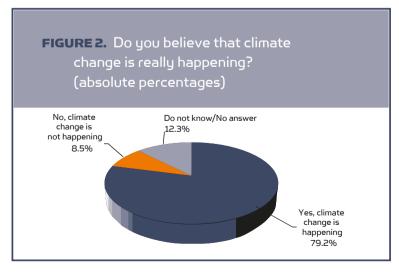
- Related behaviours and willingness to act in the interests of the climate.
- Segmentation of the Spanish population according to stance on CC.

For the contextualisation of the results, we must take into account the issues that were at the forefront of public opinion during the course of the fieldwork (conducted in June and July 2010). Surveys are known to be sensitive to how topical the subject under study is, especially when it is echoed in the media. Media attention

during this period was focused on the economic crisis and on the World Cup in South Africa. The last major peak in public attention to the subject of CC dates back to six months before completion of the fieldwork in December 2009, when COP15 was held in Copenhagen. Hence, the economic crisis and Spanish society's acute experience of this, together with the possible impact of the relative failure of COP15, are the cyclical factors that could have most strongly influenced the behaviour of the sample in this study.

#### KNOWLEDGE AND BELIEFS OF THE CAUSES AND CONSEQUENCES OF CLIMATE CHANGE

To explore the impact of a series of climate change concepts, respondents were given a list of terms and asked to say whether they had heard them before. Figure 1 summarises the results, representing the percentage of affirmative answers for each term and the corresponding score in 2008. As illustrated, the most familiar terms were "global warming" (86.9% affirmative answers), followed by "hole in the ozone layer" (83.1%), "greenhouse effect" (81.5%) and "climate change" (80.2%), with slightly lower recognition rates than in 2008.



In Spanish society, 8 out of 10 people believe that CC is happening (79.2%). Given that those who consider that it is "not happening" amount to just 8.5%, we must exercise caution in generalising about this minority. For example, contrary to what is seen in other countries, climate change denial does not appear to be associated with conservative political stances: 32.4% of those who do not believe that CC is happening are left-wing supporters, 36.2% are centralist and 31.4% are right-wing voters, with no statistically significant differences. The

relationship between political stance and the belief that CC is happening may explain why the percentage of people in denial of this phenomenon is lower in Spain than in other societies, especially Anglo-Saxon countries.

Although scepticism of CC has little support in Spanish society, less than one third of the population, 30.8%, believe that the scientific community is "quite" or "very much in agreement" on the causes of climate change, while the majority, 36.0% consider that there is "little" or "no agreement". A similar percentage, 33.2%, "do not know" or offer "no answer".

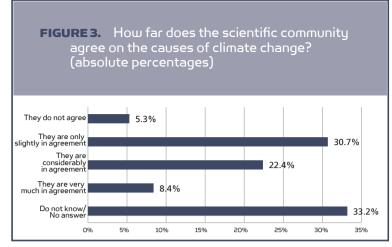
The respondents who believe that climate change is happening and consider that its causes are "exclusively" or "mainly"

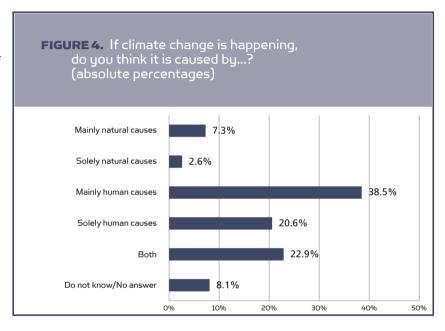
natural account for just 9.9% of the sample. In contrast, a large majority (82%) sees the influence of humans in the phenomenon, although it attributes varying levels of responsibility to them: 20.6% state that CC is caused by "solely human causes", 38.5% by "mainly human causes" and 22.9% by "both natural and human causes".

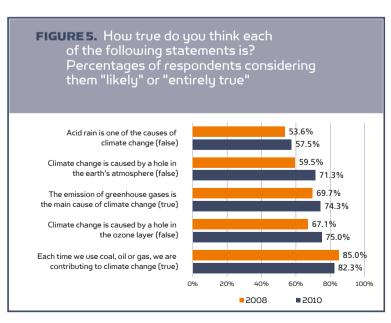
To explore knowledge of the causes of climate change, we asked respondents to score five statements on the issue according to how true they thought them to be. The results are similar to those of 2008 but there was a slight increase in respondents who regard as true possible causes of the climate crisis that are scientifically not so (acid rain, the

hole in the ozone layer, etc.) and there was a slight drop in those who identified the consumption of fossil fuels as a cause (see Figure 5).

In general, the comparison between 2008 and 2010 suggests a degree of reduction in the social relevance of climate change (e.g. fewer people stated that they had heard the term "climate change" before). Comparisons with earlier data also reveal a small increase in the number of individuals who believe that climate change is not happening, which is nonetheless verv distant from the development of climate change scepticism in other countries, mainly following COP15 in Copenhagen.





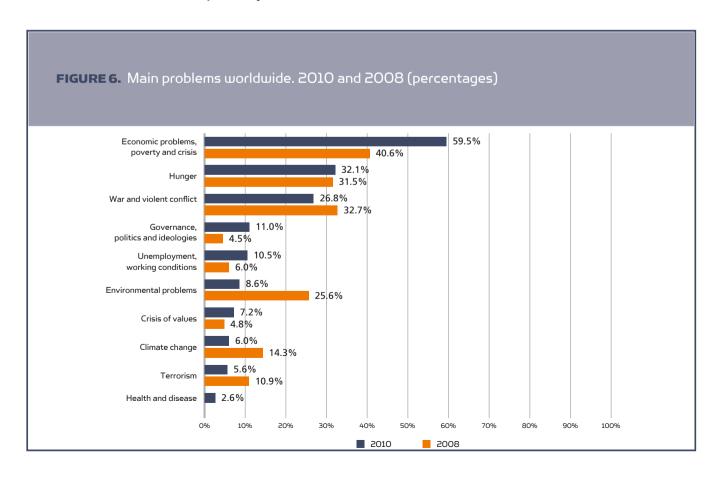


## RELEVANCE AND LEVEL OF THE THREAT OF CLIMATE CHANGE, AS VIEWED BY THE POPULATION

The three most relevant global problems spontaneously identified by the Spanish population are "economy, poverty and the crisis", "hunger" and "war and violent conflict". These categories appear in the top three positions of the ranking, both considering the percentage of the problems mentioned in first and second place and by adding up the total number of mentions. Along these lines, 6 out of 10 respondents refer to global problems linked to the economy, poverty and the crisis (59.5%), 3 out of 10 to malnutrition and hunger problems (32.1%) and 1 in 4 to war and violent conflict (26.8%). Secondary problems concern governance, politics and ideologies (11.0%), references to unemployment and working conditions (10.5%) and general environmental problems (8.6%). Climate change figures in a third group, occupying eighth place in the ranking with 6.0% of total mentions, immediately after references to a "crisis of values" (7.2%) and just slightly ahead of terrorism (5.6%).

These data reinforce the notion that the relevance of CC as a global threat for Spanish society is secondary in nature, compared to others that are perceived as more serious and immediate. Compared to 2008, the percentage of people who cite CC has fallen from 14.3% to 6.0%, representing a decline of 60%. **This decline puts CC** back in eighth place in the 2010 ranking of global issues, from fifth in 2008.

While the climate threat lost weight overall in Spanish society between 2008 and 2010, the perception of its relevance in Spain has plummeted to the point where any mention of it has disappeared. It does, however, appear as a problem at regional level and is mentioned by 1.2% of the sample, less than half the percentage it obtained in 2008 (2.7%). Locally, CC also disappears from the public perception of social opinion, although it had been cited by 2.5% of the sample two years earlier.

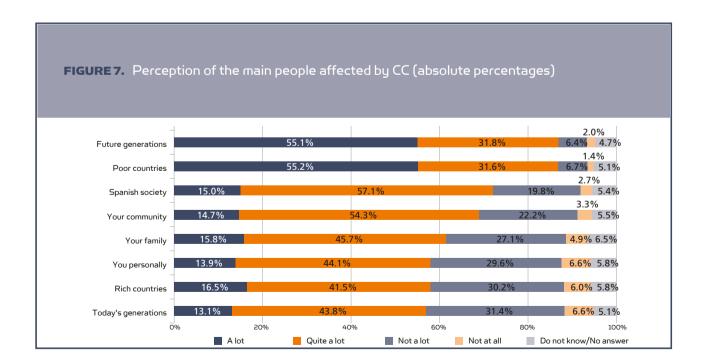


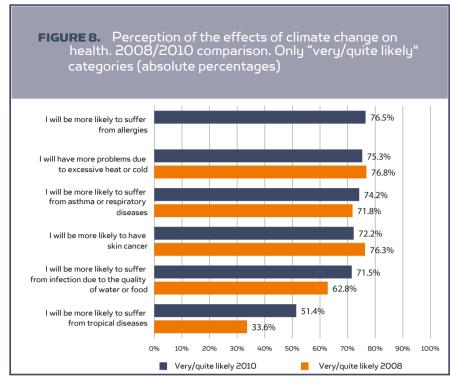
The global view provided by analysis of these issues again points to the loss of public relevance of climate change compared to the snapshot obtained two years ago. The economic crisis and its impact on Spanish society are the focus of the population's attention, in addition to the doubts generally cast on government institutions and political behaviour. Environmental issues, including climate change, have clearly been put on the back burner or have disappeared altogether.

This burnout is also observed when respondents are questioned directly about the relative importance of climate change for them. The percentage of those who consider that "it is afforded less importance than it has" dropped to 8.9 points: from 63.6% in 2008 to 54.7% in 2010. Part of this difference was transferred to respondents who consider that it is "afforded the importance it has", increasing from 15.4% to 22.3%. Those who see it as an exaggerated problem, affording it "more importance than it has", have increased by 0.4%, slightly less than the figure that increased the Do not know/No answer category. Again, the data reinforce the idea that CC is now less important and has lost relevance in Spanish society from 2008.

The impact of the climate crisis is seen as far off: 55.1% of the sample believes that it will affect "future generations" "a lot" and 31.8% "quite a lot". It is also seen as far off in spatial terms: 55.2% think that it will affect "poor countries" "a lot" and 31.6% "quite a lot". The perception of the risks associated with CC fades as the space/time circle draws nearer to the person and the present: the "a lot" category reaches

**TABLE 1.** Importance afforded to climate change. 2008 and 2010 (percentages, in brackets is the + or - difference in 2010 compared to 2008) **Less importance** The importance **More importance** Do not know/No answer than it has it has than it has 2010 54.7 (-8.9) 22.3 (+6.9) 12.8 (+0.4) 10.2 (+1.6) N=1295 2008 63.6 15.4 12.4 8.6 N=1200



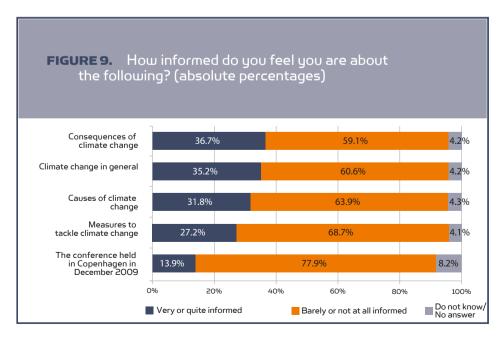


its lowest rates when the question asks about the impact on the person being interviewed (13.9%) or "current generations" (13.1%). In other words, the risks of the consequences of CC tend to be delayed in time and externalised in space, generating a representation that reduces its intensity and could weaken the motivation to act with the required urgency, given the seriousness of the threat.

Disease, migration and poverty, in this order, are the global issues that respondents consider most likely to worsen as a result of climate change. In all three cases, the "a lot" and "quite a lot" options account for over 70% of the sample. At a secondary level, we find war (52.1%), followed by

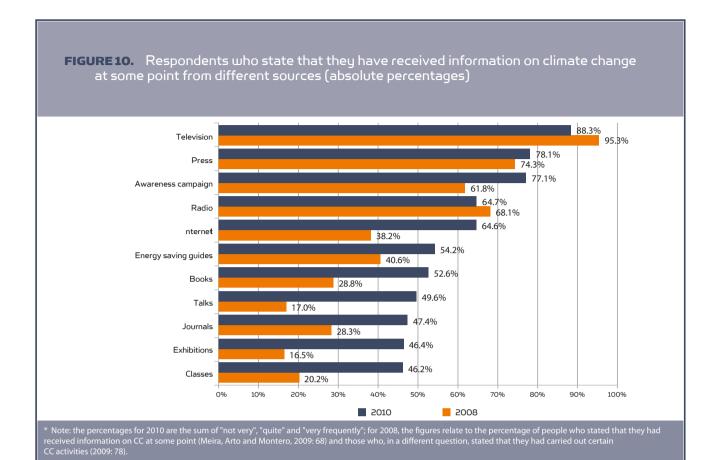
terrorism and illiteracy, as scourges whose link to the climate crisis is more difficult to establish: the bulk of the sample, 50.7% and 52.0%, respectively, consider that they will be barely affected.

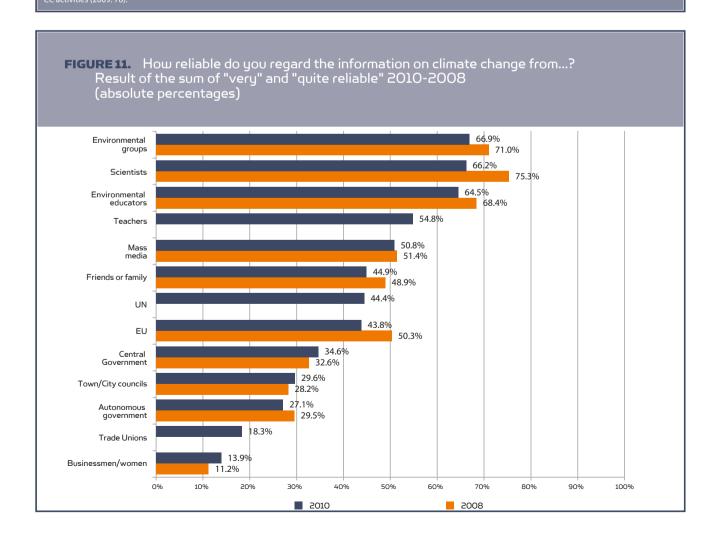
The possibility of "suffering from allergies" holds first place in the ranking of perceived threats to personal health: 76.5% of the sample consider that they are "very" or "quite" likely to suffer from allergies as a result of climate change. The differences between all the diseases mentioned are meagre: in general, 7 out of 10 people associate climate change with a greater likelihood of suffering from conditions due to excessive heat or cold, respiratory disease, infections due to deterioration in water quality or food and some form of skin cancer. The data are very similar to those obtained in 2008.



## SOURCES OF INFORMATION ON CLIMATE CHANGE

Six out of 10 people (59.1%)feel "barely informed" or "ill informed" about the consequences of climate change, about the climate change threat in general (60.6%) or about its causes (63.9%). A total of 68.7% state that they feel "barely not at or informed" about measures to combat climate change. A higher percentage, 77.9%, state that they have "little" or "no" information on the Copenhagen Conference held





in December 2009, which raises doubts about whether the negativity surrounding the event could have had a perceptible influence on the results of the study.

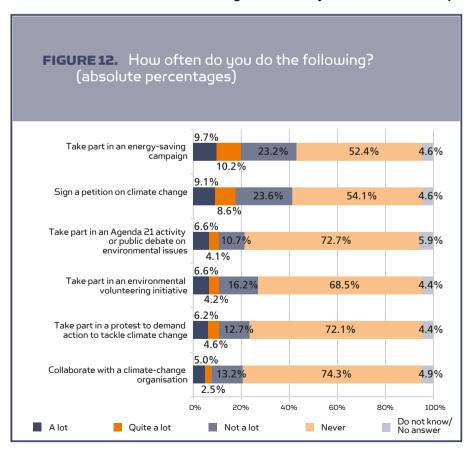
The bulk of the sample points to television (88.3%) as the main source of information on climate change, followed by newspapers (78.1%), awareness campaigns (77.1%) and the Internet (64.6%). If we compare the data from 2010 and 2008, the most striking trends are observed in the rising importance of awareness campaigns and the Internet as "sources of information" for the public, even unseating radio as the media references on the climate crisis.

"Environmental groups" (66.9%), "scientists" (66.2%) and "environmental educators' (64.5%) are the groups that generate the most confidence ("very reliable" or "quite reliable") as mediators of information on climate change. The results are similar to 2008, although "scientists" have been pushed into second place by "environmental groups". These are followed by "teachers" (54.8%), general "mass media" (50.8%) and a "friend or relative" (44.9%). In the latter two cases, the level of confidence has decreased slightly with respect to 2008. Confidence in government institutions is topped by the UN (44.4%) and the "European Union" (43.8%). The next group consists of "central government" (34.6%) and "town/city councils" (29.6%), whose confidence has increased slightly with respect to 2008. "Trade unions" (18.3%) and "Businessmen/women" (13.9%) are the agents inspiring the least confidence.

#### ATTITUDES AND BEHAVIOURS IN SPANISH SOCIETY VIS-À-VIS CLIMATE CHANGE

The results of exploring the behaviours and habits of the Spanish population with respect to climate change are very encouraging.

Involvement or participation in public activities and dynamics to combat climate change is minor: just 2 out of 10 respondents (19.9%) state that they



perform the most common behaviour, "participating in an energy-saving campaign", while barely 1 in 10 (7.5%) state that they perform the least common one "cooperating with an organisation working on CC".

The most widespread eco-friendly habits everyday life are those to reduce domestic electricity consumption: 81.8% say that they "always" or "almost always" turn off lights and appliances when not in use, and 7 out of 10 people say that they separate their glass or waste paper for recycling. The least common daily habits in this area relate to patterns of consumption, mainly foodrelated: buying organic is the least common behaviour among all respondents.

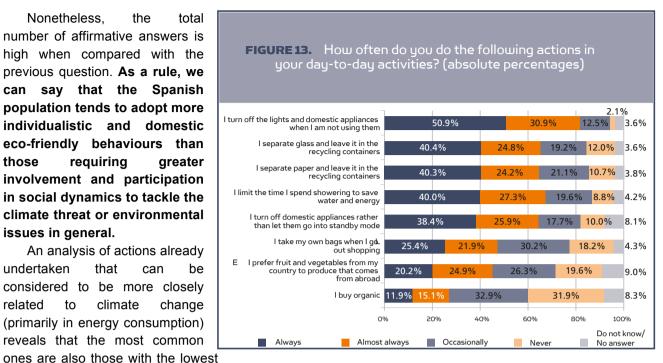
Nonetheless. the total number of affirmative answers is high when compared with the previous question. As a rule, we can say that the Spanish population tends to adopt more individualistic and domestic eco-friendly behaviours than requiring those greater involvement and participation in social dynamics to tackle the climate threat or environmental issues in general.

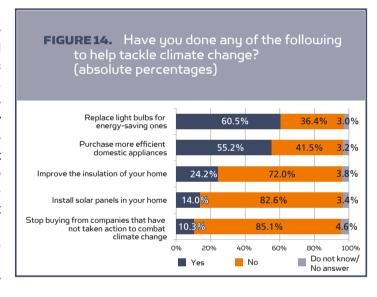
An analysis of actions already undertaken that can he considered to be more closely related climate change (primarily in energy consumption) reveals that the most common

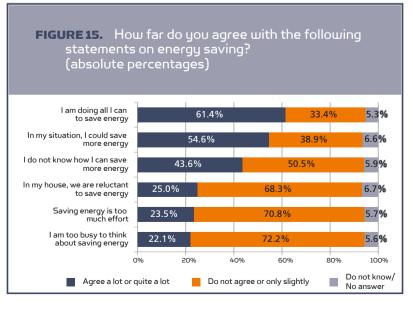
objective and subjective costs. For example, 60.5% and 55.2% of the sample claim to have installed energy-saving light bulbs and purchased more efficient domestic appliances, respectively, while just 24.2% and 14.0% state that they have improved the insulation of their home or installed solar panels, respectively. Only 10.3% admit to having stopped buying from companies that have not taken action to combat climate change. Although the percentages in these three cases are minor, they are still relevant from a social and economic point of view.

With regard to willingness to change energy consumption habits, six out of ten respondents consider that they are already

"doing everything they can to save energy" (62.4%). By contrast, over half of the respondents acknowledge that they "could save more energy" (54.6%). This apparent paradox can be attributed to the existence of subjective and objective barriers that impede making the desired change in many (perceived cases costs, inertia. misinformation, etc.). Indeed, four out of ten point to a lack of information or knowledge on how to save more energy (43.6%). Reluctance to save energy is in the minority: 23.5% claim that it requires too much effort and 22.1% cite a lack of time to think about it.







#### THE PERCEPTION OF MEASURES AND POLICY RESPONSES TO CLIMATE CHANGE

This section explores Spanish society's perception of policy responses to climate change, measures for their implementation and the potential role of different social actors in boosting their momentum.

The public perception of the level of responsibility of the different actors in the "causes" of CC ranks (as "a lot" or "quite a lot") large industries (86.3%), government (81.9%) and the European Union (73.6%) as the top three, in that order. In the study published in 2009, these three actors held the same positions in the classification. On a secondary level, we find the UN (67.5%), town/city councils (66.3%), scientists (66.2%) and citizens (65.6%). The media, at 55.3%, mark the transition to the actors who are attributed the least responsibility: environmentalists (47.5%), farmers (41.2%) and trade unions (36.6%).

Another question was asked about these same social actors and the responsibility that we can attribute to them in solutions to the climate crisis. In this case, ultimate responsibility rests with governments (84.0%) and large industries (82.4%). The most striking finding is that between 7 and 8 people out of every 10 interviewed tended to consider the responsibility of these actors in solutions as "a lot" or "quite a lot". This proportion drops significantly in the assessment of farmers (50.0%) and trade unions (46.3%). Just a quarter of the sample, 24.1% considered that public responsibility in finding solutions to tackle the climate threat is low or non-existent.

The order varies somewhat from the order of the results published in 2009 (Meira, Arto and Montero, 2009). Two years ago, first place was occupied by the European Union, which has now dropped to third. The UN also falls down the list from third in 2009 to fifth. The relevance of scientists has increased in this classification, as they move up from fifth to fourth place. This is also true of large industries, which climb from fourth to second position. The other actors maintain the positions they held two years previously.

Other questions track the support deserved by a series of response measures, some of which have already been implemented and others are being considered as potential measures as part of the policy to combat climate change at various government levels, primarily governmental and regional. The measures eliciting higher levels of acceptance are positive formulations that do not entail restrictions for the population: encourage public authorities to purchase more efficient items (totalling the "a lot" and "quite a lot" categories, 84.7% agree with this), subsidise the purchase of efficient domestic appliances (83.1%) and improve consumer information on the CO2 emissions of goods or services (80.5%).

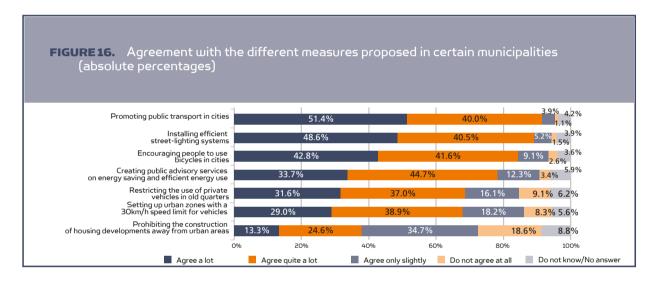
Proposals to allocate more funds to investigating CC (77.6%) and the provision of grants for housing insulation (72.9%) are also widely accepted. This second measure was assessed in the study published two years ago (Meira, Arto, Montero, 2009) and comparison with the previous assessment reveals that the level of agreement has fallen by almost 9 points: from 81.7% in 2008 to 72.9% in 2010.

A third set of measures was supported in the main, although significantly less than the ones above. Both are negatively formulated: raise taxes on more polluting cars (65.4% agree) and ban standby systems on appliances (64.6%). The first of these measures was also included in the 2009 study, when it received substantially less support, 58.7%, six points less than today's result.

There are two measures generating more disagreement than agreement. The first is the suspending of "the construction of new motorways," rejected by 6 out of 10 respondents (60.4%). The relevance of this mainly negative stance lies in the fact that it is probably one of the most structural measures analysed by the population. Its rejection may therefore indicate difficulties in giving up a model of mobility based on private road transport.

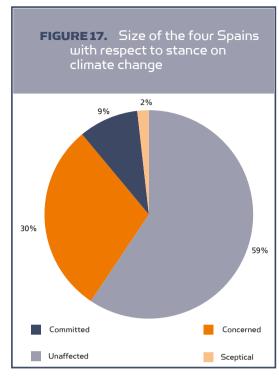
The most overtly rejected measure is the "construction of new nuclear power plants", which is an option challenged by 60.4% of the sample and accepted by just 28.1%. These data reflect the population's aversion to nuclear energy, a continuum of the trend of recent decades in Spanish public opinion.

The second set of measures whose social responsiveness is explored in the survey relates mainly to the local level. In six of the seven measures considered, the level of agreement amounts to more than 65% of the sample. The only one that breaks with this pattern is the prohibition on building housing developments away from urban areas: 53.3% of the sample state that they "only slightly agree" or "strongly disagree". Within this general trend, there are four measures attracting mass conformity: the promotion of public transport in cities (91.4%), the installation of efficient lighting systems on public streets (89.1%), encouraging the use of bicycles (84.4%) and the creation of advisory services to encourage energy saving (78.4%). The data are very similar to those recorded in 2008.



The bulk of Spanish society tends to support the implementation of the general and sectoral measures considered as a way to tackle the climate crisis. This support tends to wane in the sectors of the population on lower incomes, among the elderly and those living in single-family homes. By contrast, it tends to be higher among people who consider themselves politically left wing and who declare mid-high incomes. At government level, the measures that attracted the most rejection are the suspension of motorway construction and the approval of new nuclear plants. At municipal level, the only measure that was more widely rejected than it was accepted was the prohibition of building housing developments away from urban areas.

In general, Spanish society considers it necessary and appears willing to support and adopt actions taken by the government to tackle CC. Only 1 in 10 people think that "we should do nothing", while 2 in 10 expressed a certain resignation, arguing that "it does not matter what we do". Within the overall willingness to support the suggested measures and lines of action, doubts only arise when policies could come into conflict with the struggle against other problems that are perceived as "more important": in this case, 4 out of 10 respondents considered that these problems must be put before climate change. All of the measures suggested for the promotion of public transport by government authorities received the consistent support of the bulk of the sample.



#### THE FOUR SPAINS AND CLIMATE CHANGE

Is it possible to divide Spanish society into homogeneous population groups based on their response to the climate change phenomenon? To answer this question all the data was processed by multivariate analysis techniques, summarising the information collected in the survey as a series of "factorial axes" related to: concern for the impact of climate change; participation in the struggle against CC; belief in its potential threat; abstention to climate change; views on response measures, the level of information stated and the environmental behaviours of respondents.

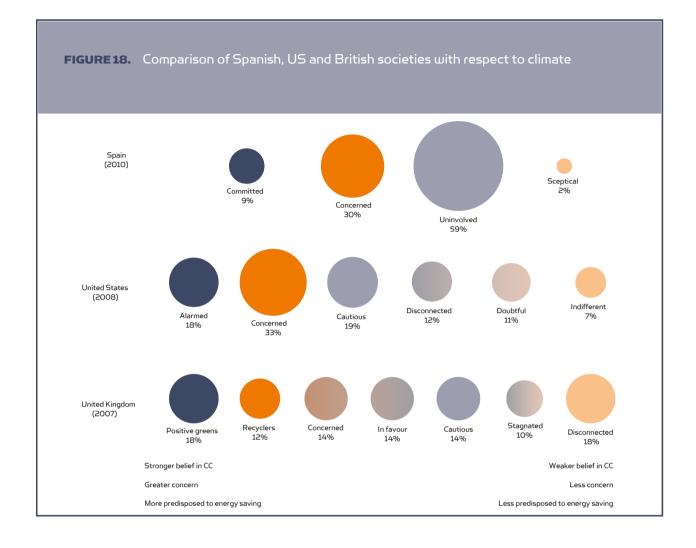
Based on the "closeness" or "remoteness" of interviewees to these factorial axes, we can establish four major groups that suggest the existence of: a majority *Spain* defined by its lack of involvement with CC (unaffected: 59.4%), a *Spain* showing signs of concern about the CC issue (concerned: 29.6%), a *Spain* with a firmer environmental commitment and participation (committed: 9.3%) and, lastly, a clearly minority *Spain* dominated by CC scepticism (sceptical: 1.8%).

The segmentation of the Spanish population according to its stance on climate change reveals that it is relatively more

homogeneous than other societies. The figure below compares similar segmentations carried out in the US and Great Britain to illustrate this point. The varying colours allow parallels to be drawn between the different population groups in each case. Spanish society appears to be more homogeneous with one group – the unaffected – accounting for almost 6 out of 10 people.

Although militant scepticism is not detected in Spain, CC is not considered a relevant, meaningful and motivating issue for the bulk of the population, concentrated into the group we have described as "unaffected". The main challenge for public policy and environmental communication lies in edging the unaffected towards more committed social stances and, most importantly, to stances that are more active and more militant against climate change, both on an individual basis and as part of the community.

TABLE 2. Size of the	e four Spains with respect	to climate change	
Committed Spain	Concerned Spain	Unaffected Spain	Sceptical Spain
9%	30%	59%	2%
Young population with university education	Active population in high-income family households	Active population in mid-income family households	Older population with no education
Progressive and secular ideology	Progressive and secular ideology	Christian/democrat ideology	Conservative and catholic ideology
More concern than knowledge	Balance between information and knowledge	Without much information or knowledge	Misinformed about the causes of CC
Worried and scared	Threatened but expectant	Neither certain nor anxious	Unconcerned and unconvinced
Ready to save energy	Willing to save energy	Reluctant to save energy	Underestimates energy saving
Active in the fight against CC	Interested but inactive in the fight against CC	Indifferent to the fight against CC	Not involved in the fight against CC
CC is a hot topic	CC is a warm topic	CC is a lukewarm topic	CC is a cold topic
Aligned with response measures	Receptive to response measures	Detached or far removed from the issue	Indifferent to the issue
Saving consumer	Consumer in favour but lacking in incentive	Cautious and inhibited consumer	Lost consumer



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