

## MEASURING AWARENESS OF CLIMATE CHANGE

### Report on Stage 1 of ESPACE project *Adapting to Climate Change: Raising Community Awareness in West Sussex*

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## **1 INTRODUCTION**

### **1.1 Aim of research**

Rossllyn Research Ltd has been commissioned by West Sussex County Council to measure awareness of climate change amongst residents and businesses of West Sussex. The aim of the research is to provide quantifiable measures of awareness across different geographic and demographic segments of the West Sussex population, and simultaneously to provide pointers as to how climate change communications can best be planned by the Council. In other words, the aim is firstly to explore what the concept of climate change means to the various strands in the community and secondly to match this concept-set against the expert community's interpretation and detailed expectations of climate change.

### **1.2 Methodology**

In logistical terms, the backbone of the research is quantitative. Two large-scale surveys of c. 1,500 residents - mainly street interviews, with some telephone interviewing in addition - have been scheduled. The first of these has already been undertaken (in May 2004), and the second survey is planned for 2005. But the initial research phase was qualitative – a series of focus group discussions and in-depth interviews. The aims of this qualitative phase were:

- To provide insight into the issues surrounding the phrase “climate change” and the actual phenomenon itself
- To provide guidance on the quantitative phase of the research: to suggest what should be asked and how

### **1.3 Contents of this report**

This report will discuss, sequentially, the qualitative and quantitative phases of the research. Conclusions will be of two sorts:

- Preliminary findings which, it is intended, will be of immediate relevance to the final project aims
- Findings on the success to date of the project and recommendations for its future development.

## **2 QUALITATIVE RESEARCH**

### **2.1 Methodology**

Three focus groups were organised in April 2004, and in-depth interviews with representatives of the business community were organised in April-May. The focus groups took place in Crawley, Midhurst and Worthing. Participants were recruited by telephone; in the recruitment process, care was taken to ensure a roughly representative spread of ages, income levels, and other demographic variables. The three locations were chosen to provide a good geographic spread, with Crawley chosen as an urban area, Midhurst as rural and Worthing as a coastal area.

Group discussions followed a preplanned structure. The discussions aimed to cover such areas as:

- Participants' interpretations of the phrase "climate change"
- Observed and expected changes in the local and global climate
- Perceived causes and expected impacts of climate change, globally, nationally and locally
- Responsibility for addressing the issue of climate change, in particular the balance between personal, political and corporate responsibility

Groups had 8-10 participants, and lasted two hours.

### **2.2 What is happening?**

#### **2.2.1 What does "climate change" mean?**

Overall, "climate change" as a phrase out of the blue calls up two concepts again and again: "global warming" and "hole in the ozone layer".

The starting point of all the discussions was "is global warming actually happening?" Global warming is seen as the official version of events, and is treated as such. Older people and farmers tend to be much more sceptical as to whether global warming is actually happening, and as to whether it has much to do with human activity if it is happening at all. But across all ages, there is plenty of caution with regard to the idea:

*"Well on a historical basis I think we have seen climate change in the past when you look at the late 1700s and the very cold period we had then, the swings of weather. It is difficult to know, you can only look at pictures can't you? But if you are looking at immediate climate change, so called global warming, there are a number of different aspects to it and you can accept that the climate may be warming. After all as I understand it we are still in the warmer stages of a cold spell generally. We are not in a warm spell in terms of the planet."*

*“I was brought up on the 11-year sunspot cycle as a farmer and it is true. There is a definite cycle of sunspots. You get a string of cold winters like we had in the war.”*

*“I feel global warming is slightly over-hyped, and again it probably comes back to the fact that it gives the papers something to talk about.”*

*“I think if you are running a newspaper you have got to sell it and so you have got to be sensational about it. In general terms sensation sells newspapers and that is what it is all about. You can get a newspaper story and it says it is reported that, well it could be the office boy saying I heard it from so and so.*

*And so you can hype it up but I think in the background there probably is something there.”*

*“Weather patterns have always gone in cycles though. I think weather records will prove that. There are cycles within cycles, there are times when things are generally warmer and times when things are generally colder and I’m not convinced in my mind that what we are seeing at the moment isn’t perhaps a warm cycle and who knows what our kids will think of how things used to be. I’m not convinced that global warming is as concrete a fact as they say it is.”*

### **2.2.2 Direct and Indirect Evidence**

Many participants share a carefully nuanced opinion as to whether global warming is happening. Their opinion is based on a mix of personal observation, knowledge of expert/official opinion, and judgment as to the trustworthiness of expert/official opinion:

- *personal observation* – winters here have been warmer recently than they used to be, and to a lesser extent summers also
- *expert opinion* – global warming is a reality
- *judgment on that opinion* – there’s probably something in it, but “they” (i.e. government and the media) have their own agendas.

Overall then, there is felt to be strong first-hand evidence of local warming and second-hand evidence of global warming. But on the other hand, there is a counter-feeling that what looks like a long-term trend may in fact be a misreading of the “noisy” data. Everyone is well aware that British weather is erratic by world and even European standards; this country’s population is perhaps not particularly receptive to the message that there are big, consistent weather trends which can explain what they are seeing outside their front doors:

*“The global temperature of the Earth is rising, but when you actually look at those figures it is very small fractions of a degree and the problem is that we are aware of that happening and so we interpret things that we see[here in the UK] in the light that it is down to global warming.*

*“If I’m honest I think I don’t think about global warming much as an issue that I would really give my attention to. I just look upon the weather as being hot or cold, or seasons are not really consistent to what I was used to as a kid.”*

### **2.2.3 Ozone hole vs. global warming**

There is a stark contrast between the participants' attitudes to the two top-of-mind concepts, "global warming" and "hole in the ozone layer". Global warming, as discussed above, is generally seen as a tendentious reading of some quite confusing statistics. The hole in the ozone layer, by contrast, is universally taken to be a something that scientific observation has proved.

The associated higher risk of skin cancer is the single most pressing personal concern for most of the participants. Concepts like "global warming" or "climate change" tend to merge in participants' views with very general feelings that "the time is out of joint"; the hole on the ozone layer is seen as proved and ominous, whereas the more long-term threats posed e.g. by rising sea levels are harder to see as personal threats in the here-and-now.

And even amongst the minority who feel personally exercised by all aspects of climate change and global warming, there is such a pervasive feeling of impotence that the overwhelming wider issues often fade away in comparison to the limited issue of the ozone hole. It's there, it is scientifically understood, it poses certain very definite dangers to human health, and there are certain definite measures you can take to avert those dangers.

## **2.2.4 Reality of climate change**

Participants are much readier to agree that the local climate is changing than that the global temperature is rising.

The mainstream opinion is that, irrespective of the worldwide question of global warming, things are getting warmer locally and the local climate has changed in other ways. Most salient for the participants is that winters are warmer and wetter.

*“The winters are definitely getting warmer, because when I started this job we had at least a month where you’d need 3 pairs of socks and a pair of long johns and a pair of over trousers or you’d freeze yourself; and now I think I’ve worn long johns twice, if that.”*

*“I think we are getting more of the rainy days; I do think we are having more grey days”*

Mixed in with this impression of warmer winters, there is also the feeling that the seasons are getting less distinct:

*“I’ve worked in the last few years with my job travelling around a bit in the car and again I used to have to wear leg warmers and fur boots and I’ve found that over the years it has changed, the winters are getting warmer. And for the last 10 years, I don’t even have my central heating on a timer, I put it on as and when I need it. Years ago if you had central heating it would go on in the winter and stay on until the spring, but I think they all mingle into each other, was it 2 weeks ago, was it a Monday we had that scorching hot day and then the next day it was freezing cold and raining as well.”*

*“The seasons merge into each other now, there is no definite. Many years ago you would be able to see spring and then summer and then autumn and then winter, but now they are all intermingled.”*

*“The seasons overlap quite a lot.”*

## **2.3 Consequences**

### **2.3.1 Extreme Weather**

There is widespread agreement that extreme weather events are becoming more common, especially strong winds and floods. Flooding is seen as the biggest single danger nationally and locally:

*“I think what [climate change] means at a local level, an every day level, perhaps the biggest threat to us here is increased flooding. The weather might be wetter, it might be hotter but the real things we are seeing are floods and certainly it seems that that is the biggest threat to the people of Britain and the unpredictability of it as well”*

Unsurprisingly, the Worthing group is the most concerned of all by the threat of flooding:

*“when I go over [to Broadlands] to think that when they had those floods that it came down that steep hill, you can’t think about that. Tthe lady that worked for me, she said she was up in her bedroom window having a conversation with a friend of hers and said “My god, the bank’s gone, the river has gone!” and within 5 minutes her friend’s house was up to the ceiling in water.”*

*“it gets flooded and it’s got worse over the time I’ve been here”*

*“I’ve had where their gardens are completely flooded I’ve had to wade up there to post their letters.”*

But concern about flooding is expressed everywhere. Flooding is particularly alarming not only in its own right, but also because it is seen as a symptom of British society’s inaction in the face of growing danger. Floods are attributed to human mismanagement of the changing climate as much as they are to the changing climate in itself. The problem is universally seen to be that drainage is getting worse while rains are getting more intense. Above all, across all groups, there is concern about the UK government’s perceived imposition of housebuilding on flood plains. But there is more general concern also about the seemingly inexorable increase in the amount of metalled surface with the consequent strain on the drainage system:

*“Already there are wetter winters and hot dry summers and of course a lot of concrete and hard surface spread about more and more so that you get a lot of run off and not enough drains and ditches or at least ones that contain it”*

*“Around here the hedgerows have gone. They never flooded when I first came here.*

*“And it floods down the main road and where does it end up? In the houses at the bottom.*

*“We had hedges all around the back of Mill Lane and they have all gone so Mill Lane is an absolute right off as a road now because every time it rains the road surface disintegrates even more!”*

### **2.3.2 Disease and Depression**

Increased risk of skin cancer is the next highest concern – this is seen as a direct personal threat, and understandably looms large. Amongst the generally cloudy notions of climate change and its probable effects, the increased threat from the sun stands out starkly. The graphically vivid image of a hole on the ozone layer, and the fact that the phenomenon is seen as definitely proved, combine to make this a stark concern for most participants.

Increase in disease is cited by many; because the seasons are disrupted and the winters are warmer, there is an expectation that there will be more “bugs” surviving and thriving.

One concern, which has not as far as we know ever been considered as a policy issue, is depression caused by endless grey wet winter days. This concern was mainly raised by older participants and especially older women. They see it not only in terms of SAD but also in terms of the restrictions on being able to get around that constant rain would impose. Many other participants also voiced more general concerns that periods of heavy rain might restrict their movements; or that children would be unable to play for long periods during the winter.

### **2.3.3 Other Outcomes**

Insurance premiums are a general concern, but were particularly strongly raised by local business participants in the one-on-one interviews. Insurance is so to speak part of the financial environment, and it comes naturally to see the effect of extreme weather as being a matter of a worsened financial environment.

Agriculture is very widely expected to change. New crops will replace the old as the climate changes. But this, interestingly, is perceived neutrally. People are expecting these changes but in fact by no means fear them. Similarly, to a small degree, participants in the coastal group expressed some hope that warmer weather would improve the tourist trade.

## 2.4 What to do and who to do it?

On the grandest scale, the attitude is resigned and pessimistic. If people are directly asked, “Can anything be done to really get to grips with this problem?”, they will pretty universally answer “No”. Participants feel that they are living through a dispiriting period where everyone can see that something is wrong – even if the details are beyond them - but there are no political structures to address the problems. Blame is interchangeably laid at the doors of the USA and the unregulated capitalist/consumerist economy. Participants agree that businesses need to be regulated into lower energy consumption, but no one expects this to happen any time soon:

*“There is no incentive to any of these corporations to clean up their acts. Manufacturing uses energy and there are ways and means to reduce that but there aren’t any incentives for corporations to do that at the moment. There is no global environmental legislation. There is nobody speaking for the whole globe in terms of what we are doing to it. There are plenty of people with good intentions but there is no legislation to make them do anything.”*

In this context of the inability of political action to address the big issues, some participants are prepared to give some rueful thought to doing their bit personally. But the consensus is that it won’t make a significant difference:

*“All you can be responsible for is what you do; and what you can do is very little.”*

*“It does make you wonder why you should bother doing anything. Why you should bother recycling or using your car less etc etc. If the States isn’t going to do it what difference is Britain going to make, let alone an individual?”*

The idea that climate change could be mitigated by voluntary self-restraint on the part of individuals is seen as unrealistic, or even as misguided. Many participants insist that if certain damaging goods or activities are out there in the marketplace, the only solution is to tackle the supply rather than the demand.

*“With advertising the way it is, it is very difficult for you not to want what is put in front of you.”*

*“if you can’t get these things available on the shelves then you can’t have them. If we didn’t have cigarettes to smoke, you couldn’t get them off the shelf, children wouldn’t be able to pick up the habit.”*

Ultimately, participants don’t see how the logic of a consumerist system can allow for concerted action to address the root causes of climate change. At the same time, though, there is a widespread feeling that governments can help populations to tackle those causes of climate change that lie within their own personal activities and orientations. Inasmuch as participants can suggest any way forward, they see government- or media-led social change as the answer.

*“we have only just recently got the red boxes for recycling the paper stuff...”*

*“That has been amazing...*

*“It said in the paper, I think 15000 trees have been saved just from recycling the paper”*

*“You have to make it so it is not acceptable to do anything else. For example a few years ago nobody took any notice of the speed limits and now people do. Because it has become socially unacceptable to go screaming through a 30 mile limit at 50 miles an hour. And you know there is peer pressure and all sorts of pressure that comes onto people to conform. I think it may take a bit longer but somehow that is the way it has to come”*

It is highly significant, for the overall purposes of the project, to note that almost no connection at all is made between recycling and addressing climate change. Recycling is seen by respondents as a paradigm of successful communal action. But they don't know of any connection between this and the issue of climate change.

Between the deeply-concerned on the one hand and the sceptics on the other, the mainstream attitude seems to be that:

- The first hints of what will one day be a severe problem can already be seen in the here and now
- “Everyone” – the world, the developed world, the population of the UK – will start pulling together when the crisis comes
- Market forces will force people into less irresponsible behaviour, in particular they will use less energy when it costs much more
- For the moment the rulers of the world aren't doing anything about it, so why should I?

### **3 QUANTITATIVE RESEARCH**

#### **3.1 Methodology**

Part 2 of Stage I consisted of 1,350 personal interviews with residents and businesses in West Sussex and 200 residents of Hampshire. In addition, 200 interviews were undertaken with residents of Belgium (RLZZZ region), covering four different residential areas. Data from the RLZZZ survey will be discussed where appropriate.

West Sussex was divided into 4 areas [A 23 corridor/Rural/ Coastal East and Coastal West]

- 1,050 interviews with residents with quotas by age and gender
- 440 urban/ 370 small town/ 330 rural
- 210 interviews with businesses with quotas by 6 industry sectors.
- 100 interviews with the farming community
- “Control” sample of 200 residents in Hampshire

#### **3.2 Questionnaire**

In essence there were four types of question asked:

1. demographic questions
2. cause and effect questions, to establish what constitutes climate change in the opinion of respondents, and whether they think climate change is occurring
3. quantitative questions, to find out how close the match is between people’s expectation of temperature and rainfall changes and the best estimates of experts
4. policy and communication questions – who should lead and who should communicate on the issue?, is enough being done?, etc.

##### **3.2.1 Demographics**

The demographic questions form the basis for analysis of the answers. Respondents were categorised according to:

- Type (farming, business, residential, non-West Sussex)
- Gender
- Age
- Household size and number of children
- Home ownership
- Type of residence
- Location of residence (urban/rural, coastal/valley/plain/hills)
- Socio-economic grade

### **3.2.2 Cause and effect**

In the focus groups, with people discussing the issue at much greater length and in more detail than most of them would normally do, it appeared to us that climate change as a phenomenon was seen as very blurred around the edges in terms of cause and effect. This of course is very much in line with expert opinion. At the core, as it seemed to us, is the idea that greenhouse gas emissions are causing the earth's temperature to rise. But around this core, participants express all sorts of wider ideas of cause and effect: pollution in general, human greed, overpopulation, the world going out of joint.

So one thing we wanted to test in the quantitative survey was the extent to which these various themes are seen as central or peripheral. In particular, since many participants in the groups had explicitly said that it's hard to distinguish cause and effect in this area, we wanted to explore that issue quantitatively.

This was tested by presenting number of possible causes and effects of climate change to respondents. These were rated by respondents "out of 10":

- For causes, '1' indicated that "it has no impact at all on climate change" and '10' that "it is a major cause of climate change".
- For effects, '1' indicated that "it won't happen or doesn't matter" and '10' that "it is or will be a major effect of climate change".
- Therefore, the higher the rating, the more important is the factor as a perceived cause of effect of climate change.

The possible causal factors which respondents were asked to rate were:

- Hole in the ozone layer
- Too much building/ construction on flood plains
- Deforestation in the UK
- Pollution by industry
- Cutting down of rain forest in South America and Asia
- Pollution caused by cars
- Greenhouse gas emissions/greenhouse effect
- Lack of recycling of household waste
- Overpopulation

These factors were chosen to represent a mixed bag of generally-agreed causes, wider contributory factors, and factors which might better be seen as exacerbating factors rather than causes of climate change.

The possible effects were:

- Hotter summers
- Wetter winters
- New diseases, e.g. malaria
- Droughts
- Floods
- Changes in planning laws
- Changes in agriculture
- Wetter summers
- Warmer winters

### **3.2.3 Causes**

The evidence from the large-scale survey is in fact that people in general have a reasonably accurate picture of the underlying causes and major expected and observed effects. Deforestation and greenhouse gas emissions are identified as major causal factors.

In the details, though, some systematic inaccuracies can be seen. In particular, “pollution caused by the car” is rated as more significant than “greenhouse gas emissions”. This suggests that the more general, and highly emotive, concept of pollution looms larger as a factor in the minds of the general West Sussex population than it does for the expert community. Similarly, the ratings for “cutting down of rainforest in South America and Asia” and for “hole in the ozone layer” are higher amongst the general public than they would be amongst the expert community. These are both highly pictorial and emotive factors, and it is noteworthy though not surprising that they loom larger as causes of climate change amongst the general public.

The other major discrepancy between public and experts is in their estimation of the relative impacts of industry and transport. Overall, respondents rate “the car” (and by extension, perhaps, all transport based on fossil fuels) as a more significant causal factor than industry. This is not correct – not yet, at any rate, though the relative contribution of transport is growing year-on-year. Younger people are particularly likely to overestimate the causal impact of cars, and so are owners of 2 or more cars! The business subgroup – especially those from larger organisations - are particularly likely to underestimate the impact of industry.

Amongst West Sussex residents, those in social grades A/B come closest to the expert consensus. These respondents also make the clearest distinctions between major causes of climate change and attendant or contributory factors.

The Belgian respondents also come closer to the expert consensus. They still overrate the hole in the ozone layer (even more than the UK respondents); but their ranking of industry, transport and deforestation in that order is in line with the expert consensus. Interestingly, there is a huge gap for the UK respondents between rainforest deforestation (rated as the most important factor) and deforestation in the

UK (rated as least important); whereas in Belgium local and global deforestation are rated pretty equally as factors causing climate change.

Across the board, RLZZZ respondents tended to rate the suggested factors at a much lower level. This may reasonably be taken as a measure of overall concern about the issue (notoriously it is more reliable to measure levels of concern like this than to ask outright "how concerned are you?"). So, overall, we can say that the RLZZZ group is better informed about the causes of climate change, but less concerned about the issue.

Within the UK survey, there are similar discrepancies in overall scoring:

- Men rate factors higher than women
- Farmers rate factors much lower than other groups
- West Sussex residents rate factors slightly above average
- Businesses rate factors lower, but above farmers
- The control group of Hampshire (interviewed in urban areas) rate the factors highest of all and often by a substantial margin.

Also, there are interesting and statistically significant differences on particular factors. For example, the under-19 age group scores most factors lower than other age groups; but for deforestation in the UK and pollution caused by cars, the situation is reversed. Overall it appears that the 31-50 age group is most concerned. Urban residents generally are more concerned than rural or small-town residents (though the hole in the ozone layer seems a particular area of concern for rural residents).

### **3.2.4 Effects**

Again, the survey results show that broadly the public expectation of climate change is in line with expert consensus. The four most prominent expected effects, in descending order, are:

- Floods
- Wetter winters
- Hotter summers
- Warmer winters

The overall absolute scoring for effects is considerably lower than for causes. This would confirm the findings of the qualitative survey: that there is considerable doubt and disagreement as to what climate change will actually bring; but there is slightly stronger expectation of extreme weather than of any long-term increase in temperatures.

The least-expected effect is that there will be changes in planning laws. This may be considered an interesting indication of how little public awareness there is of the notion of long-term adaptation to climate change.

There is far less divergence between sub-groups than there is in opinions about causes.

### **3.2.5 Correlations of expected causes and effects**

We also analysed the patterns of correlation in the scoring of possible causes and effects. The aim of this analysis (known as multidimensional scaling) is to find out what sets of opinions tend to group together.

Overall, this analysis confirms the general match between popular and expert opinion. The “mainstream” causes (pollution, deforestation, greenhouse gas emissions) correlate closely with the “mainstream” effects (floods, wetter and warmer winters). This strongly suggests that there is a systematic theory of climate change amongst the sample population.

A very noticeable secondary set of correlations can also be seen, amongst the lower-scoring causes and effects. Overpopulation and local deforestation (as perceived causes) are strongly correlated with changes in planning laws (as a perceived effect). This again is of significance for the ESPACE project as a whole. We have already noted that changes in planning laws are overall the least expected consequence of climate change. This correlation suggests that, to the extent that people expect spatial planning to respond at all to climate change, they expect it as an emergency response to local environmental degradation and social crisis. It is clear that the adaptation message has not yet been delivered successfully.

Also, we can see here the way in which climate change is perceived by different groups of people according to different thematic strands. Broadly speaking, we can see already in the different estimations of cause and effect that for some respondents the issue is more a matter of weather and for others it is more a matter of social change. These insights will be further developed in the next section.

## **How will climate change affect you?**

Here we again asked respondents to give a score of 1 to 10 to express how important various possible effects of climate change are to them. The possible effects were:

- Increased coastal flooding
- Warmer and wetter winters
- Warmer and drier summers
- Increased river flooding
- Better weather
- Water shortages
- Increased risk of severe storms
- Greater fluctuation and changes in weather patterns/ less predictable weather
- More people taking summer holidays on the South Coast
- Higher household insurance premiums
- Deterioration in health due to wetter and warmer winters (e.g. more bugs around)
- Lower heating costs due to warmer winters
- Advantages to agriculture in the UK, e.g. more and better vineyards, better fruit in general
- Hosepipe bans
- Higher fuel prices

Here, as can readily be seen, there is a mix of positive and negative outcomes, of varying degrees of seriousness. Also, the outcomes spread across a wide variety of types of change: general climatic changes, social changes, and microeconomic changes.

Applying a similar technique of examining correlations between answers, we found a clear pattern of expectation. That is to say, the expected outcomes tend to fall into four groups; if a respondent strongly sees better weather as an outcome that will personally affect them, they are very likely also to expect warmer and drier summers. That is an unsurprising correlation, but the full grouping is interesting.

The four factor groups proved to be:

- Increased river flooding
- Increased coastal flooding
  
- Warmer and wetter winters
- Warmer and drier summers
- Better weather
  
- Increased risk of severe storms
- Greater fluctuation and changes in weather patterns
- Water shortages
  
- Higher household insurance premiums
- Deterioration in health due to wetter and warmer winters (e.g. more bugs around)

- Lower heating costs due to warmer winters
- Advantages to agriculture in the UK, e.g. more and better vineyards, better fruit in general
- Hosepipe bans
- Higher fuel prices
- More people taking summer holidays on the South Coast

This is a crude but reliable snapshot of the four different ways in which people in West Sussex conceptualise climate change:

- Floods
- Warmer weather
- Extreme weather
- Social changes (mainly deteriorations)

Certain demographic factors cut across this – for example, people living on the coast are much more likely to expect to be affected by increased coastal flooding and by an increase in the number of people taking holidays on the south coast. For another example, older people are much less likely to be concerned about a deterioration in health due to warmer and wetter winters. But in general there are clear patterns of expectation.

### **3.2.6 Quantitative questions**

We asked in detail how much warmer and wetter the weather had become over the last ten years, in summer and winter, and how much warmer and wetter the weather was expected to be in ten years' time.

Here, people agree with expert opinion on the yes-or-no questions. The winters have been and will continue to be warmer and wetter; this is the strongest opinion, and the warmth and wetness of winters are strongly correlated in people's opinions. Farmers in particular are even surer of this than the general population. To a slightly lesser extent there is a belief that summers will be warmer too.

Naturally, amongst the majority who think that the weather has in general got warmer and that winters have got wetter, there is an expectation that this trend will continue. But the level of expected increase is wildly out of kilter with the expert consensus. On average, people expect the summer temperature to increase by 1.4 degrees and the winter temperature by 1 degree over the next 10 years. This is far higher than the mainstream expert predictions. From a communications point of view, this is a strong indicator of how trivial the observed and predicted increases in temperature seem to the general public. They know that there is an expert expectation of global warming, and they believe it themselves to be real. But it is actually happening at such an unexciting rate that they wildly overestimate how much temperatures are likely to rise in the next 10 years.

The actual degree to which warming is thought to have occurred and is expected to continue over the next decade is much higher than expert opinion. Here we can see one of the major communication problems about the issue of climate change. It is

happening more gradually, less excitingly, than our culturally-created concept of “news” can allow for. So, to the extent that people believe that global warming and climate change are occurring, they overestimate the speed and intensity of the process.

### **3.2.8 Policy and Communication**

We asked whether enough was being done to address climate change. In general, the sense that enough is being done is much higher for local physical measures than for worldwide political measures. It seems that easily visible grand engineering measures are strongly reassuring to people even though they know that these do not tackle the root causes of climate change. So there is a relatively strong sense that coastal defences are sufficient (which ties in with the way the coastal defences are mentioned in the focus groups as evidence that something is being done). But there is an equally strong feeling that far too little is being done to tackle greenhouse emissions or to offer alternatives to using the car.

National governments are expected to lead on the issue. Across the board this is seen as something that national governments rather than local or supranational authorities need to take a lead on.

Television is the essential information source on weather and climate change. It would take very considerable additional effort to elevate other media to the same level. But above television as a medium, or media organisations as institutions, the lead is expected from central government for communication as much as for policy.

## 4 SUGGESTIONS FOR COMMUNICATION

Two pairs of unsuccessful and successful communication styles are suggested repeatedly by participants in the focus groups:

	<b>Successful</b>	<b>Unsuccessful</b>
<b>Mood</b>	Realistic	Sensational
<b>Focus</b>	Personal	Abstract

### 4.1 Mood

This is an information society. From every side, people are bombarded with information. They have to develop filters, so that they can discriminate amongst the excess of messages coming at them. In particular, people are always ready to discount or completely ignore a message, for either of two reasons:

- The source isn't trusted, there is some hidden motivation
- The message isn't for them, it has no practical import for them

There may be a temptation to shout about climate change in order to get the message across, but the likelihood is that the message will be discounted or ignored. Described in sensational terms, a climate change message will fail the "antihype" test, and will be discounted as untrustworthy and most likely motivated (e.g. by the need to sell papers, the desire to make the public submissive to the authorities, the desire to justify higher insurance premiums). But also it's likely to be ignored: if the problems are presented as insurmountable, then there's nothing to be done, so there's no practical import in the message.

### 4.2 Focus

Participants frequently refer to "global warming" as a familiar theme in the media. But it's one of those themes that is always around but isn't very gripping:

*"We feel personally that it is like a gradual thing and you don't sort of think about it as an imminent problem. We know that it is a problem but perhaps we might think that perhaps it is not going to affect us"*

As a news story, it lacks colour; there are no individual players in the story, the action is slow and inconclusive, and in the end the story appears to be based on a mass of numbers which the experts are arguing about anyway. This ties in with the way that in the survey there is a massive overestimation of the expected increase in temperature in the next 10 years. Non-experts simply cannot believe that the expected rate of average temperature increase is big enough to be a serious problem. Since they know that the experts do think there is a problem, they infer that the expected temperature increase is something exciting.

For both adaptation and mitigation messages, participants are unanimous. They want to see vivid examples of people and organisations doing something about climate change. The essentials are:

- the purpose of the action should be presented vividly. For example, many participants mention that recycling could be backed up with vivid communication about cause and effect:

*“I think it would be encouraging if they was to put it on local TV you know, so that the children can see it... You know, they could show all the trees that have been chopped down and if you have these put into you over and over and over again these are the amount of trees and all the rubbish that you have collected this is how many trees you have saved.”*

*“The government do adverts don't they, about “It is your money, take it”. So they could do one on the effects of recycling and the effects on using sprays and whatever”*

- real people, or better still super-real people like footballers and political leaders, should be shown doing what anyone else might and should also do:

*“TV is a powerful weapon, especially when it's done by people who are regarded in society as opinion formers like your footballers. If they behaved themselves what a difference it would make, because all the kids would start behaving themselves.”*

*“It's about encouragement rather than punishment. And leading by example. If the government... a prime example is John Prescott and his fleet of Jaguars, that is not sending out the right signal about how to behave. I would like to see them all cycle in. Apart from Blunkett.”*

When they are talking about the possibility of promoting environment-friendly behaviour, participants consider both the carrot and the stick. Broadly speaking, they claim to be receptive to a stick in the form of regulation (national or preferably global) and a carrot in the form of positive communication, “encouragement rather than punishment”. But the examples of successful communication campaigns that they cite suggest a slightly different attitude. It's always the campaigns against irresponsible driving and against smoking that participants refer to as possible models for good climate-change communications.

The conclusion, maybe, is that messages do indeed need to be encouraging and positive, but that people are perfectly ready to respond to the message that some self-restraint can make you feel good! In other words, though it may be absolutely true that a “sackcloth-and-ashes” type call to give up every climate-threatening behaviour will be rejected by most people, nevertheless it may be that an appeal to enlightened self-interest and responsible behaviour can be made to work.

### 4.3 “Climate Change” as a label

Overall, the research suggests that so far there have been mixed results for the government and scientific community’s attempts to shift the focus of public attention away from “global warming” towards the wider notion of “climate change”. The phrase “global warming” is still much more familiar. In fact, a significant minority of the focus-group participants (older and less well-educated) are quite unsure of the meaning of the word “climate”. On the other hand, there is a much stronger feeling that the climate is changing than they are to the idea that the world in general and over the long run is getting warmer.

In communication terms, climate change is the right message, but “climate change” is the wrong phrase.

It’s the right message because:

- The concept is wider in its scope than the concept of global warming, and is a more accurate summary label for the scientific community’s best guesses about the medium-term future
- The concept resonates with UK residents’ experiences. In particular there is wide agreement amongst the participants that winters are warmer and wetter and that storms are more frequent.

But “climate change” as a phrase is problematic. For one thing, as mentioned above, there is a significant group of people who find the actual terminology confusing.

*“Is it to do with new developments and things like that?”*

*“Is that about the weather?”*

*“The environment means the area”*

*“How the town is actually developing”*

Apart from that, there is the problem that the phrase is neutral, when people do believe that climate change is happening and regard the phenomenon with varying degrees of fear. Indeed one of the causes of fear, especially amongst those who express great fear, is that no-one in authority seems to take the issue seriously enough. If the experts choose such an ostentatiously neutral term, the opportunity is being missed to mobilise people by means of a more urgent rallying-cry. And they are for the most part quite anxious to hear that cry, quite disturbed that the experts are describing this with such a gentle phrase. The blandness of the phrase is of a piece with the perceived lack of leadership from the government.

*“we have done remarkably little considering what we know, what the scientists are telling us”*

*“Our energy consumption goes up year on year and energy is cheap. We are not really told to watch what we use at home or make sure this is turned off. No, it’s free, go ahead and use it and there is no end in sight. That seems a bit reckless I think.”*

So, we have seen at one extreme that “climate change” is a somewhat unfamiliar phrase still. But even those who don’t clearly understand the phrase are well aware of the phenomenon both locally and globally and of the debates around it. It is so large a phenomenon, though, and has such a complicated structure of cause-and-effect, conjecture-and-fact, that most people have only vague and general notions of what might be done to address it.