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FD2638: UKCP09 and Communities at Risk of Coastal Flooding and Erosion

Final Project Report

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Maslen Environmental (Part of the JBA Group)
Salts Mill
Victoria Road
Saltaire
Shipley
West Yorkshire
BD18 3LF

Project Manager

Steve Maslen

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This report describes work commissioned by Defra in November 2009. Defra's representative for the contract was Katy Parish of Defra.

Prepared by ....Steve Maslen BSc MPhil MLI

....Janet Spence Dip

....Joanne Harvatt BA MSc PhD

Purpose

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Contents

List of Tables

List of Figures

Abbreviations

Defra	Department for Environment, Food and Rural Affairs
UKCP09	United Kingdom Climate Projections 2009
SMP	Shoreline Management Plan
CAPE	Community Adaptation Planning and Engagement
SEG	Socio Economic Group
DECC	Department of Energy and Climate Change
CLG	Communities and Local Government
NAI	No Active Intervention
HTL	Hold the Line
MR	Managed Realignment

Executive Summary

Context

Defra is working with a range of organisations to develop approaches to support communities which face risks of coastal erosion and coastal flooding, in adapting to these risks, particularly in the light of climate change, which could exacerbate flooding and coastal erosion risk.

Community participation in planning for and managing adaptation to coastal change is a key part of this, and adapting to climate change is a key feature of Defra's Coastal Change Policy and supports a number of studies that have been undertaken during the last decade.

Whilst undertaking this work Defra identified a knowledge gap relating to climate change impacts amongst coastal communities, which could be a barrier to the communities' understanding of risks and necessary adaptation to future changes.

It identified a particular challenge in engaging communities in areas where coastal change posed a long-term rather than immediate threat.

To date most research in the UK has examined public responses 'after an event' and focused on one hazard - flooding.

Defra therefore wished to examine how to better understand and engage people who lived in areas of high risk where the effects of sea level rise, flooding and erosion could be exacerbated by climate change.

Study Aims and Objectives

The key aim of the project was to identify effective approaches to engaging coastal citizens, communities and the third sector with UKCP09 projections.

It was considered from the outset that the research needed to focus on citizens and groups who would not be regarded as 'the usual suspects', i.e. those individuals and organisations who were not actively involved in environmental activities. The research was therefore directed at those less likely to be well informed and traditionally hard-to-reach groups.

The third sector was considered an important potential tool for communication and formed a key element of the research.

The study aimed to:

- Ascertain current levels of knowledge and the perceptions of potentially affected coastal communities;
- Examine what would motivate them to become better engaged in future climate change adaptation and mitigation;
- Identify barriers to engagement with UKCP09 projections and their messages, and how they might be overcome;
- Consider different engagement approaches;
- Produce recommendations for coastal practitioners on the most appropriate ways to engage coastal citizens, communities and the third sector with UKCP09 projections.

The research outcomes should be of use in supporting the work of 'Pathfinder Authorities', the ongoing communication and delivery of second generation Shoreline Management Plans (SMPs), the application of the CAPE Approach, the communication of UKCP09 projections and coastal stakeholders who are involved in the development of partnership projects requiring public communication.

Research Methodology

The research was divided into three phases.

Phase One involved baseline research and planning for the overall project.

This included desk research to establish existing approaches to communication and engagement. Questionnaires and selective telephone interviews were also carried out to gain insight into the experiences and opinions of organisations and groups currently involved in communicating coastal and climate change issues with communities.

It examined key relevant messages arising from UKCP09 for coastal communities related to sea level rise, temperature and rainfall.

This laid the ground for the locations, messages and research carried out with targeted focus groups in Phase Two.

Phase Two of the research involved the delivery of 12 focus groups at locations considered to be at long-term risk due to climate change and involving citizens and third sector groups representing a broad socio-economic mix.

The focus group discussions provided an insight into:

- Current levels of knowledge and attitudes towards climate change and the UKCP09 projections;
- Key sources of information about climate change;
- Which climate change 'messengers' were most trusted;
- Opinions on where responsibility should lie for mitigation and adaptation;
- Personal attitudes and behaviour related to climate change mitigation and adaptation;
- Responses to different types of climate change message in terms of language, imagery and methods of delivery; and
- Barriers to communication and engagement.

Phase Three of the project involved evaluating the feedback from the focus groups and all other project research to provide a basis for guidance and recommendations on effective methods of engagement with citizens and third sector groups in at-risk communities.

Key Findings

People want to receive concrete facts about climate change, not projections. The link between climate change, sea level rise and flooding should be explained to the public as this is not clear to some.

The majority of people get most of their information on climate change from the TV and newspapers, the BBC is seen as a trusted source.

There is a greater acceptance that climate change is happening when people are presented with global scale impacts such as polar bears losing their habitats and melting ice caps. Conversely, sea level rise at up to 3mm a year was not enough to register much significance and this led people to question the significance of sea-level rise locally.

People respond better to global issues, 'shock tactics' and emotive images, and references such as children and animals than to facts and figures. Therefore, mitigation and adaptive behaviours can be encouraged by suitable images of animals and references to future generations.

Third sector and local 'champions' offer the prospect of being trusted local messengers.

Hard to reach groups were as receptive as any other segment to the messages and equally understood the issues.

Messages relating to adapting to sea-level rise and coastal erosion are likely to be better received if they are separated from climate change messages.

Climate change messages should be focused on the impacts of climate change both locally and globally.

People are generally aware of climate change and its impacts but will look for reasons to be sceptical or to not take action. These include conflicting or confusing information in the press, issues of timescale of affects, lack of direct or local impact on their life, weather changes not reflecting 'climate change' messages.

It was evident that the propensity of thinking was towards mitigation rather than adaptation, with very few individuals involved in any specific adaptive behaviour.

People want to hear what solutions there might be and what they can do to help.

People feel that any decisions made about adapting at a local level should have contributions from groups with local knowledge or expertise, as well as community or voluntary groups.

If the tools and systems are placed at their disposal people appear willing to take action.

Recommendations to Improve Engagement

Clear Messages

- Any messages to the public should be written in plain English and not be too technical or contain too many figures. They should be informative and factual. Many people are sceptical about the reliability of evidence following negative climate change news coverage. Where possible use facts and proven scientific evidence rather than probabilities and projections. Do not use the UKCP09 wording verbatim. The UKCP09 data should not be relayed directly to the public it needs to be tailored appropriately.

- Avoid complicating messages with climate change projections. The link between climate change, sea level rise and flooding can be explained, but may not be fully accepted by many people. Some refuse to believe in global warming, particularly in light of the recent cold winter.

- By focusing on communicating the impacts of climate change such as flooding and coastal erosion rather than the causes, this will assist in avoiding unnecessary public confusion and scepticism about the causes of climate change. Examples from coastal erosion and flooding incidents should be drawn.

- People prefer simple pictures that can be easily digested to sophisticated imagery that involves more intellectual processing. Images of animals resonate with people and could be used to highlight the effect of climate change and the need to take action at an individual level.

- Messages should focus on the local impact of climate change. Graphics showing the local potential impacts of climate change over the short and long term are likely to be more effective than more complicated maps, graphs and plans.

Trusted Messengers

- When considering messengers some of the key attributes are local knowledge, recognised expertise, no financial vested interest, community interest and established trusted relationships.

- Clarification on roles and responsibilities of organisations involved in coastal planning would help with public understanding and build trust. At a community level people are unsure of Defra and its role. Defra would benefit from raising its profile at a local level.

- Trust is easily lost, faith in some messengers in particular localities may have been lost and therefore less suitable for conveying difficult messages. Tailored messages using local information sources and to specialist interest groups such as golfers or anglers, could prove to be a valuable vehicle to highlighting climate change flooding and coastal erosion issues and would help to build trust and raise awareness of authorities work locally.

- Local newspapers need to be assessed as how trusted and useful they might be to any campaign.

- People trust and pay attention to messages delivered through national TV news and documentaries. These could usefully support adaptation through placed features/programmes.

Means of Communication

- Face-to-face, grass roots communication should take place wherever this is practical and viable.

- Consultation events could take a similar format to the focus groups, which were well received.

- Third sector groups can provide a trusted local resource for disseminating information. Local climate change ambassadors and/or trained community members could be used to deliver climate change messages to local residents. A train-the-trainer toolkit could be developed.

- Locally produced and relevant information, for example leaflets/brochures are generally well received, however their effectiveness is dependent on how trusted the messenger is.

- Messages relating to adaptation need to be targeted according to locations and audiences.

Encouraging Personal Responsibility and Engagement

- To encourage personal responsibility UK Government and responsible agencies should continue to lead by example and promote appropriate actions. The importance of efforts already being made by local people and groups should be acknowledged at every opportunity.

- Third Sector groups are keen to be involved in communication activities about climate change. Their involvement in local networks, knowledge of other networks, local communities and direct and indirect interests provide the basis of a trusted communications conduit and means of engagement.

- A significant number of people are engaged in some climate change mitigation activities, e.g. recycling, but very few described being involved in any adaptive actions.

- Encouragingly most people want to know what adaptive actions they can take. Defra and responsible organisations should focus awareness raising on what adaptation means and what can be implemented at a local level and how individuals can adapt (for those who are engaged the mitigation behaviour is already understood).

- To encourage actions to adapt to climate change, communications should focus on climate change impacts such as flooding, rather than temperatures and rainfall.

- Across the groups flooding was considered a significant issue affecting their natural environment. In Louth, Skegness and Hastings respondents discussed the need for plans to prevent flooding. When engaging people with flooding issues suggest practical ways that residents and third sector groups can be involved, for example in preparing local emergency plans, increasing preparedness and property resilience.

- Suggestions for action to mitigate should be linked to cost savings to individuals where appropriate.

1. Background and Context

1.1 FD2638 Research Aim and Background

The overall aim of the research project was to recommend improved methods to engage citizens, communities and the Third Sector with UK Climate Projections 2009 (UKCP09) in locations at risk of coastal flooding and erosion. The UK Climate Projections (UKCP09)[1], launched on 18 June 2009, were developed to help the UK plan for a changing climate. UKCP09 has used the latest scientific understanding to summarise observed and predicted climate change.

Defra identified a knowledge gap relating to climate change impacts amongst coastal communities, which could be a barrier to the communities' understanding of risks and necessary adaptation to future changes. The aim of this study was to identify important steps in engaging coastal communities with UKCP09 projections so these can be embedded into future coastal change policy development.

To date, considerable research in the UK has examined public responses 'after an event' and focused on one hazard (flooding). There is limited work examining the understanding and potential responses of people who are at risk but who have no recent direct experience of the effects of sea-level rise, flooding and erosion. As most people living in high-risk areas are yet to experience the risk associated with sea-level rise and coastal erosion, work in relation to this aspect has the added element of complexity of public uncertainty. As the risks of coastal erosion and coastal flooding resulting from climate change are less well known and experienced in the UK, people commonly draw on other sources of information such as media coverage to formulate their understanding of the issues.

A key aim of this research project was to understand the current levels of knowledge and the perceptions of potentially affected coastal communities and what will motivate them to become better engaged in future climate change adaptation and mitigation.

1.2 Research Objectives and Methods

The overall approach involved three phases of work. Broadly, the first phase of work encompassed research and planning, the second phase of the work involved focus groups to explore current awareness and understanding and the third phase of work involved evaluation and providing recommendations and guidance.

The research plan set out a number of objectives for each phase of work:

Phase 1 - Research and Planning

- To define the UKCP09 key messages which will drive the project;
- To identify and engage with coastal stakeholders to identify recent communication of 'climate change' messages to communities;
- To research recent reports and initiatives relating to climate change communication and coastal community engagement;
- To identify the range and types of communities at risk; and
- To identify representative locations in England for targeted focus groups to explore UKCP09 and climate change understanding on an in-depth basis.

Phase 2 - Road Testing and Case Studies

- To schedule and recruit for focus group events;
- To engage hard-to-reach citizens and third sector organisations in identified locations;
- To produce materials to support events; and
- To evaluate and summarise focus groups case studies.

Phase 3 - Evaluation and Guidance

- To produce recommendations for coastal practitioners;

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[1] http://ukclimateprojections.defra.gov.uk/

100526 SEF UKCP09 and Communities at Risk_Final

- To apply recommendations to potential coastal community scenarios;
- To disseminate and communicate findings;
- To produce ideas to bring this work to a wider audience; and
- To make recommendations for future work.

1.3 The Phased Approach

Phase One researched and developed the background for the targeted focus groups. This Phase included consultation with a range of coastal organisations and groups currently involved in communicating coastal and climate change issues with communities. This work was undertaken via questionnaires and selective telephone interviews.

It was considered from the outset that the research needed to focus on citizens and groups who would not be regarded as 'the usual suspects', i.e. those individuals and organisations who were not actively involved in environmental activities. The research was directed at those less likely to be well informed and traditionally hard-to-reach groups.

The research was to pay specific attention to third sector organisations as well as individual citizens.

The Phase One activities informed the rationale and planning of the Phase Two focus groups. Phase One explored:

- Potential approaches for engaging citizens and hard to reach communities and third sector organisations;
- The Key messages for coastal communities arising from UKCPO9;
- The specific goals and objectives for the focus group discussions; and
- Set out an Action Plan for the focus group activities and localities.

Phase Two involved the delivery of 12 targeted focus groups at locations around England and the preparation of focus group case study reports for each in accordance with the Action Plan.

Phase Three involved the evaluation of all the project research, with recommendations to improve future engagement with citizens and third sector organisations.

1.4 Research Need

1.4.1 Climate Change Projections

The UKCP09 projections represent a step-change in the availability of climate change information to support adaptation decisions, and provide an opportunity to review the way climate change projections are used in policy and practice. UKCP09 provides more detailed data for the UK than previously available. It also introduces a more sophisticated analysis of uncertainty by delivering, among other products, probabilistic climate change projections. UKCP09 also extends the scope of the earlier UKCIP climate change scenarios, by including more information on the marine environment.

An important aspect of the UKCP09 philosophy is to present climate change projections as a range of possible futures rather than as a single prediction, to reflect uncertainty about future climate. The way in which the projections are put together and delivered is technical.

UKCP09 is an important body of work which will shape the way in which those organisations that make long term infrastructure investments, those charged with protecting life or the natural environment, those that rely on weather such as the agriculture industry, those that provide or support critical infrastructure, and those that set the technical standards used across industries such as civil engineering, conduct their business and invest in the future. It was not created to be used by the third sector or the general public, although they are its indirect target audience.

The research project aimed to explore the level of understanding of UKCP09 and its effects on the daily lives of ordinary citizens and third sector organisations. The research also sought to establish whether there were any variations between geographic locations and/or particular social groups (segments).

> **The research outcomes are intended to support the communication of UKCP09 climate change projections.**

1.4.2 Coastal Policy and Communication

Defra is working with a range of organisations to develop approaches to support communities that face risks of coastal erosion and coastal flooding[2]. This work aims to ensure that communities and infrastructure are more resilient to the impacts of coastal change. Community participation in adapting to coastal change is a key feature of Defra's Coastal Change Policy and supports a number of studies that have been undertaken during the last decade.

In 2000 Defra and the National Assembly for Wales commissioned the development of Futurecoast, a new way of predicting shoreline evolution. It gives a better understanding of coastal systems and their characteristics, and has been used to inform SMPs.

The Foresight Future Flooding study (2004) analysed future risks of flooding and coastal erosion, examining what might happen in the UK over a 30- to 100-year timescale to help inform long-term coastal policy.

As part of the Pitt Review following the floods in the summer of 2007, the Foresight Study was revisited and updated using information that was not available in 2004.

One of the main findings is that future coastal flood risk is still the most important concern in flood risk management.

In March 2010 Defra published "Adapting to Coastal Change: Developing a Policy Framework" which represents a staging post in the evolution of a policy framework on supporting communities in adapting to coastal change[3]. A key element of Adapting to Coastal Change is a strong emphasis on community adaptation planning and engagement.

A separate guidance document on "Community Adaptation Planning and Engagement "(CAPE) on the Coast[4] was published alongside "Adapting to Coastal Change". The guidance outlines a framework which local authorities and other bodies can use to support their community engagement process.

As part of Defra's ongoing support to local authorities in coastal locations, on 1 December 2009 15 local authorities were announced as coastal change pathfinder authorities[5]. These authorities have been awarded funding for a programme of work to explore new approaches to planning for, and managing, adaptation to coastal change in partnership with their communities. The pathfinder programme will run until spring 2011 and includes a number of projects involving community engagement.

Defra identified in the R&D specification for this research (FD2638) that engagement on issues relating to longer-term coastal change - where the hazard of flooding events and the threat of coastal erosion does not threaten coastal communities for several decades – was a particular challenge. Specifically, how can communities be motivated to communicate with the responsible authorities? Additionally the research could help with the communication of SMPs and associated coastal erosion risk mapping information, to be published on the Environment Agency's website.

Responsible authorities such as the Environment Agency and a few local authorities have been involved in pilot projects seeking to improve engagement with coastal communities. For example, the Interreg IIIB North Sea Region project ComCoast, a Europe-wide programme of measures to develop solutions for flood protection in coastal areas, includes a particular emphasis on stakeholder engagement and resilience. A number of these projects were researched as part of the Phase One desk research activities. See Section 2.3 for further details.

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[2] http://www.defra.gov.uk/environment/flooding/manage/coastalchange.htm
[3] http://www.defra.gov.uk/environment/flooding/manage/coastalchange.htm
[4] http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=16353&FromSearch=Y&Publisher=1&SearchText=FD2624&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description
[5] http://www.defra.gov.uk/environment/flooding/manage/pathfinder/index.htm

100526 SEF UKCP09 and Communities at Risk_Final

The research outcomes are intended to support the work of "Pathfinder Authorities", the application of the CAPE Approach and coastal stakeholders who are involved in the development of partnership projects requiring public communication.

1.4.3 Shoreline Management Plans

Shoreline Management Plans provide large-scale assessments of the risks associated with coastal processes and outline a long term policy framework to reduce these risks to people and the developed, historic and natural environment in a sustainable manner.

The first SMPs were produced in the mid 1990s. Each length of shoreline is currently managed in a particular way, according to the policies set out in the SMP. Since the 1990s a number of studies have provided new information affecting the SMPs, including Futurecoast, Foresight and the UK Climate Impacts Programme

Some issues arising from these studies affecting SMPs include:

- Predictions of sea level rise due to climate change have increased dramatically since the first round of SMPs, and need to be incorporated into the second generation;
- The current defences may have a limited life and improvements may not be economically, socially, technically or environmentally practical;
- Changes in the shoreline may result in new approaches being necessary to manage future risks.

This information has resulted in the development of a second generation of SMPs (SMP2s), covering the 6000 kilometres of coast in England and Wales.

The SMP2s will provide a 'route map' for local authorities and other decision makers to move from the present situation towards meeting future needs, identifying the most sustainable approaches to managing coastal risks in the short term (0-20 years), medium term (20-50 years) and long term (50-100 years). The SMPs set out appropriate policies for different parts of the coastline against these timeframes. These policies include:

- Hold the Line - The current position of the shoreline will be maintained. Where artificial defences are in place, these will be maintained or replaced to maintain the standard of protection. Sometimes, the type or method of defence may change to achieve this result.
- Managed Realignment - Allowing the shoreline to move naturally, but managing the process to direct it in certain areas. This is usually done in low-lying areas, but may occasionally apply to cliffs.
- No Active Intervention - There is no investment in defending against flooding or erosion, whether or not an artificial defence existed previously.

The SMP2s will also include an action plan that prioritises the work needed to manage coastal processes into the future, and where it will happen. A key element of the SMP2 development process includes public consultation and engagement.

The research outcomes will support the ongoing communication and delivery of SMP2s.

2. Findings and Analysis

2.1 Qualitative Research

The combination of desk research, questionnaires, and focus groups provided an effective methodology to explore issues relating to complex behaviour or motivation (and also lack of it). Focus groups are effective in exploring issues, however these often require further exploration with more quantitative based surveys to measure, quantify and validate responses and attitudes and provide greater confidence. The exploratory and creative nature of the group discussion allows the researcher to generate ideas and hypotheses on the subject under investigation.

The 12 focus groups conducted as part of this research provide a relatively robust indication of the range of opinions and any consensus around the topics discussed, however the number of groups and attendees do not lend the work to statistical analysis.

2.2 UKCP09 Messages for Coastal Communities

UKCP09 was researched in depth to establish the key messages arising for coastal communities. These are set out below.

Sea level rise - In UKCP09, projections in global sea level rise give an estimated range for sea level increase of 18 to 59 cm between present day and 2090-2099. The central estimates for sea level change at four locations around the UK are supplied for the three emissions scenarios of Low, Medium and High, giving a range of central estimates over all scenarios of a rise from 1990 to 2080 of 19.6 to 43.3 cm. The full range of estimates over all emissions scenarios of absolute global sea level rise are given as 11.6 to 75.8 cm for the period 1990 to 2090-2099.

Ice processes represent a major source of uncertainty in mean sea level change. Therefore, a low probability H++ sea level range is defined in UKCP09, based on observations of the past and plausible constraints on ice sheet dynamics. This comprises an absolute sea level rise estimate for the UK of 93 cm to 1.9 m by 2100.

Wave height - The UKCP09 marine projections include changes in the winter mean wave height that are projected to be between –35 and +5 cm with changes in the annual maxima projected to be between –1.5 and +1 m. However, it is noted that the analysis of uncertainty in wave climate is more limited than for some other variables. Furthermore, inter-annual variability is so large that the UKCP09 Marine Projections Report considers comparisons between 30-year time horizons to be of limited value, suggesting that accounting for variability based on recent climate may be more important than accounting for climate change.

Water temperature - Since the 1980s the sea surface temperature of the seas around the UK have risen at a rate of about 0.2–0.6ºC, and seven of the warmest years in UK coastal waters since records began in 1870 have occurred in the last decade.

The most noticeable and robust impact of climate change on shelf seas around the UK in the next century is a temperature increase. This amounts to about 1.5ºC–4ºC, depending on location, by the end of the 21st century in the medium emission scenario with the increase being larger in shelf seas than the open ocean. A reduction in salinity of ~0.2 p.s.u. is also suggested, but higher uncertainties in the forcing (precipitation, evaporation and river flows) and the ocean-shelf transport mean this conclusion is less robust than the projected temperature increase.

Wetter/Drier seasons - UKCP09 indicates a warming across the UK of between 2° and 3°C by 2050 (relative to 1961-1990), an increase in winter rainfall of 10-20% (lower in the uplands), and a decrease in summer rainfall of 10-20% (more in the south west). Although it is difficult to make direct comparisons, first indications are that the UKCP09 projections are broadly consistent with the UKCIP02 scenarios.

The UKCP09 scenarios do not provide outputs for possible changes in year-to-year climatic variability, such as altered frequencies of successive dry winters.

Extreme surges - In UKCP09, projected long-term trends in storm surges are small everywhere around the UK, and largely masked by natural variability. There are no projections made within UKCP09.

Storminess - The effects of climate change on rainfall and storminess are not apparent yet, because natural year-to-year variability is large, but this does not mean that rainfall and storminess are not being affected by climate change. The UKCP09 scenarios do not provide outputs for changes in wind speeds and windstorm severity and frequency. There are no projections made within UKCP09.

These key messages have potential consequences both for the coastal environment and for coastal communities. The messages have been used to populate a communication 'logical framework' which was developed to assist in the preparation of the focus group presentations. This framework is set out in Section 3 - Recommendations and Guidance of this report. It highlights the need for considerable further research; however, it does provide a useful tool to assist in targeted communication and engagement.

Table 1 UKCP09 Climate Change Coastal Impacts

UKCP09 Projected Changes	Potential consequences for the coast	Potential effects on coastal communities	Potential locational responses
Sea level rise	Flooding Erosion	√	√√
Extreme surges	Little additional impact compared with recent past.	√	√√
Wave height	Uncertainty about future change means that understanding 'present day' impact is more important.	√	√√
Storminess	No information specific to coasts other than storm surge projections.	√	√√
Wetter/Drier seasons	Erosion and/or ground stability	√	√√
Water temperature	Ecological impacts (would require a substantial work to clarify these). Possible effects on bathing waters in terms of temperature and water quality - again there is no summary of such impacts provided with UKCP09.	√	√√
√ - requires further detailed research			
√√ - need to be planned			

2.3   Existing Coastal Stakeholder Questionnaires

An early project task (November/December 2009) involved consultation with local authorities and representatives of local interest groups in coastal locations in England, via a questionnaire and telephone interviews, to gather information relating to their experiences of communicating climate change issues and UKCP09. The descriptions of attitudes and behaviours in Section 2.2 draw upon the questionnaire responses as the principal source of evidence. This is not an exhaustive questionnaire of all coastal stakeholders, but is sufficient to inform the following research stages.

Working with the Secretary to the English and Welsh Coastal Groups, over 100 questionnaires were sent to known contacts and stakeholders involved in coastal flooding and erosion and/or climate change communication in the coastal environment. A copy of the questionnaire can be found in Appendix A.

The questionnaire requested responses on personal perspectives to provide an overview of current approaches to communicating climate change (and any communication relating directly to UKCP09 if there was any).

Of the 29 questionnaire responses received, 16 respondents suggested that their organisation had been involved in communicating climate change messages to the public. Messages were communicated through a variety of methods including public meetings and events hosted by Local Authorities, the Country Land & Business Association, the Royal Yachting Association, through SMP consultation and Environment Agency partnerships and special interest group meetings.

Climate change is firmly embedded in all flood and coastal risk communications involving the Environment Agency, from corporate strategy down to individual schemes. In North Norfolk reference to climate change, including recently UKCP09, has been communicated for over 20 years. However, typical of the comments received were that UKCP09 had not been referred to specifically in any recent climate change communication work.

Information on climate change has been made available through a range of media including press releases, leaflets and FRM Strategies and Plans.

When asked, 'Has your organisation been involved in communicating climate change messages to the public in coastal localities?' If 'yes' 'what public / community responses did you get to the 'climate change 'element of any communications?'. Organisations provided a range of responses, including the fact that there was an awareness of the issues, but some degree of scepticism about the rate of change. Scepticism was expressed as an issue in a number of the questionnaire responses. An interesting related comment was that **"there tends to be a lot of interest when it involves speakers or presenters who are experienced in talking to 'regular' people."**

Most respondents indicated that they would be including climate change messages in future communications or felt they should but that they would need to be provided with the relevant information.

When considering barriers to communicating climate change projections it was pointed out that even among knowledgeable people in the field there were misconceptions about what UKCP09 is for. Also, over-emphasising the projections themselves created a barrier to effective communication of risk.

"I think that you will lose people if you focus too much on the projections."

Consistency of predictions and data was raised as a communication problem:

"Above all, messages must suit the people you're talking to. If you're communicating with people who are not familiar with climate science, I think you will fail to achieve understanding if you allow yourself to get bogged down in the complicated issues of uncertainty and probability. UKCP09 can be difficult to grasp, even for those of us who work on climate change every day. And even among some knowledgeable people in the field (e.g., environment officers in local authorities), there are still misconceptions about what UKCP09 is for - what it will do for you and what it won't. It's crucial that communicators understand just what they're trying to communicate, and in this case, understand that the projections are only a small part of the picture. I think of it like a dictionary. You can open it at page 1 and start reading, and you will learn something. But, it's most useful when you know what you're looking for. And that means doing the groundwork and setting the context. I suppose what I'm trying to say is that overemphasising the projections themselves will create a barrier to the effective communication of risk from weather - which is, in the end, what we're talking about."

The timescale of changes was also highlighted as a barrier, with some changes being of a very slow and insidious nature; people see no direct evidence that sea levels have necessarily changed during their lifetimes. Some felt that people were generally interested in the present and immediate future and how this impacted on them.

When asked about potential risks of communicating climate change messages with citizens and communities in coastal locations, a variety of responses was received. Some respondents felt there was a danger of creating a feeling of concern and panic, particularly among vulnerable community members, whilst others felt that lack of acceptance would be a potential barrier. Issues of trust and the timing of consultation were raised as important aspects of achieving successful communication.

It was felt that third sector organisations in coastal locations should have an interest in communicating climate change issues, but that currently those most likely to be engaged would include environmental and coastal interest groups.

Early discussions and findings indicated that local authorities are very keen to see the outcomes of this project, particularly those that are *coastal change pathfinder authorities.*

Another finding of the research team from their work with local authority contacts was the difficulty in explaining how the research would fit among lots of other coastal related projects and communication activities. Specifically the team found it difficult to keep the local authority consultees focused on UKCP09 and climate change projections. For example, they wanted to link it to their own local initiatives. For example: "How does this project fit with the CAPE Roadmap?"

Discussions between the research team members and various stakeholders were undertaken; these stakeholders included local authorities and a few specialist projects pertinent to the research.

2.4 Desk Research and Reviews

During the desk research a number of documents and websites were reviewed, both to inform the research as a whole and to help specifically with the planning of the focus groups. Summaries of particularly relevant published reports are set out below:

1. Defra 2009 Survey of Public Attitudes and Behaviours towards the Environment[6]
2. Are Flood Victims More Concerned about Climate Change than Other People? The Role of Direct Experience in Risk Perception and Behavioural Response, Journal of Risk Research[7].
3. Measuring Awareness of Climate Change. Report on Stage 1 of ESPACE project Adapting to Climate Change: Raising Community Awareness in West Sussex[8].
4. The Psychology of Climate Change Communication: CRED Guide (Centre for Research on Environmental Decisions) 2009, The Trustees of Columbia University in the City of New York[9].
5. Ipsos MORI Survey: Tipping Point or Turning Point? Social Marketing & Climate Change, July 2007[10].
6. Defra 2008 A Framework for Pro-Environmental Behaviours
7. Guidance for Community Adaptation Planning and Engagement (CAPE) on the Coast[11].

Defra 2009 Survey of Public Attitudes and Behaviours - Summary

The survey follows from previous environmental surveys run by Defra and its predecessors in 1986, 1989, 1993, 1996-7, 2001 and 2007. The 2009 survey was commissioned jointly by Defra and the Energy Saving Trust and consisted of 2,009 face-to-face interviews with additional questions included in an omnibus survey.

The findings indicated that most people say they have some knowledge of climate change. Knowledge of the term 'carbon footprint' has increased. Most people agree there is an environmental challenge and that it is not too late to do something about it. However, about a quarter of people disagree that their lifestyle contributes to climate change. Fewer people, compared with two years ago, say they find it hard to change their habits to be more environmentally friendly.

A quarter of people surveyed feel climate change is a distant to worry them. A majority of people believe businesses and Government should set examples in tackling climate change.

Journal of Risk Research - Summary

Research by the Tyndall Centre for Climate Change Research, University of East Anglia involved interviews and a larger scale postal survey. The survey, conducted in the south of England, indicated that while the perceived likelihood of a risk increases if it has been experienced or can be readily imagined, flood victims differ very little from other participants in their understanding of, and responses to, climate change.

Flood victims were more likely than non-victims to agree that they tend to look at climate change information when they come across it. They were less likely to agree with the statement 'Flooding is not increasing,

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[6] http://www.defra.gov.uk/evidence/statistics/environment/pubatt/download/090923stats-release-pubatt.pdf
[7] Whitmarsh, L. 2008. Are flood victims more concerned about climate change than other people? The role of direct experience in risk perception and behavioural response. Journal of Risk Research Vol. 11, No. 3, April 2008, 351–374
[8] http://www.espace-project.org/publications/library/ESPACE%20Stage%201%20report%20for%20web.pdf
[9] http://www.cred.columbia.edu/guide/pdfs/CREDguide_full-res.pdf
[10] Tipping Point or Turning Point? Social Marketing & Climate Change, Ipsos MORI, published July 2007:http://www.ipsos-mori.com/researchpublications/publications/publication.aspx?oItemId=1174
[11] http://www.scottwilson.com/news.aspx

100526 SEF UKCP09 and Communities at Risk_Final

there is just more reporting of it in the media these days' and less likely to say that the effects of climate change will be catastrophic.

Personal observation was evidently the most trusted source of information on the causes of flooding. Blocked ditches and drains, road resurfacing and local development were considered the primary causes of local flooding, and weather patterns only indirectly contributing to flood risk.

Report on Stage 1 of ESPACE project - Summary

The aim of Stage 1 of ESPACE was to guide the later research stage by gaining an insight into public perceptions of the term 'climate change'. The team conducted a large-scale survey of approximately 1,500 residents via face-to-face street interviews, with some telephone interviewing in May 2004, with a further study the following year.

This work found that people were unsure of the meaning of the word 'climate', but understood the consequences of climate change. Flooding was seen as the biggest single danger nationally and locally, and coastal participants were the most concerned overall by the threat of flooding.

People generally felt unsure what governments were doing and, while some felt that personal actions wouldn't make much difference, others though that causes of climate change lay with individual personal activities and orientations. Social segments A/B had the closest to expert consensus on the issues. Successful communication was realistic and personal rather than sensational and abstract. Adaptation messages have not yet been delivered successfully.

The Psychology of Climate Change Communication - Summary

This guide is based on research amongst the American public. CRED and other researchers have shown that most Americans do not feel a personal connection to climate change. In order for climate science information to be more fully absorbed it must be actively communicated with appropriate language, metaphor and analogy, combined with story telling; made vivid through visual imagery, experiential scenarios; balanced with scientific information and delivered by trusted messengers in group settings.

Tipping Point or Turning Point? - Summary

This was a report on social marketing undertaken by Ipsos MORI. Of those polled, 45% see climate change as the most serious threat to the future wellbeing of the world; but only 19% see it as the most important issue facing Britain. When questioned on local priorities only 25% of the public raised climate change as a priority. However, the same survey indicated that 44% of the public are very concerned about climate change and 63% agree they need more information to form a clear opinion on the subject.

A Framework for Pro-Environmental Behaviours - Summary

Defra sets out a framework for Pro-environmental behaviours'[12]. This pulls together evidence on public understanding, attitudes and behaviours, indentifying behavioural goals; and draws conclusions on the potential change across a range of behavioural groups. Based on people's responses to a broad range of attitudinal questions, Defra defines seven segments of the population these include:

- Positive Greens;
- Waste Watchers;
- Concerned Consumers;
- Sideline Supporters;
- Cautious Participants;
- Stalled Starters; and
- Honestly Disengaged.

The report focuses on behaviours which have an impact on carbon saving and therefore link to climate change mitigation. It is suggested that future work is required on identifying and prioritising such behaviours that will have a positive impact on the natural environment.

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[12] http://www.defra.gov.uk/evidence/social/behaviour/

2.4.1 Timeline of Media Influence

To understand and interpret more fully the discussions in the focus groups the research team considered the potential for media influence leading up to the focus group events. These included for example media scepticism about the science, scepticism about the scientists involved in climate change research, the Copenhagen Climate Change summit and the coldest winter in recent history. The research included documenting the media coverage of significant events that might influence the focus groups. These are set out in summary in a timeline In Figure 1.

2.5 Focus Groups Selection Process

2.5.1 Planning

Twelve focus groups were planned with up to 10 individuals attending each.

A key challenge set by this project was engagement with people on a subject they may know little about, avoiding reliance on people or organisations that were well informed about the research subject.

A recruitment questionnaire was prepared for each location and focus group and was used by an experienced recruiter to undertake interviews to fulfil the pre-agreed quotas, deliberately focusing on 'ordinary citizens' who were not representing the views of any organisation or anyone other than themselves. The baseline desk research and previous experience indicated that attitudes and behaviour were influenced by people's age, type of housing and socio-economic group (SEG).

When recruiting third sector participants the research sought to recruit organisations, charities and groups which target or represent a range of social issues including:

- Children and families;
- Health and wellbeing;
- Education or training;
- Elderly issues;
- Work with disabled or vulnerable people; and
- Trade associations.

The research project also sought to recruit some third sector groups with coastal interests such as fishing, yachting or golf, ensuring a good balance of organisations was represented within each focus group.

Third sector organisations were selected from local contacts and desk research. A recruitment questionnaire was prepared for third sector organisations and used by an experienced recruiter to conduct telephone interviews.

Recruitment included offering a small sum of money to compensate participants for their time and help meet costs associated with attending events, such as travel and childcare. This would act as an incentive to help attract groups who would not normally be inclined to attend consultation events.

Figure 1 Timeline of Significant Events

Emails from the Climatic Research Unit (CRU) appear on the internet

15 successful coastal change pathfinder authorities announced by Defra 01/12/09

Significant Events

Copenhagen December 7th-18th 2009

3 weeks of freezing weather

Our Focus Groups

Focus Groups

1 - 6 02/02/10 to 04/02/10

7 - 12 09/02/10 to 10/02/10

23/11/2009 | 30/11/2009 | 07/12/2009 | 14/12/2009 | 21/12/2009 | 28/12/2009 | 04/01/2010 | 11/01/2010 | 18/01/2010 | 25/01/2010 | 01/02/2010 | 08/02/2010

Climate change scientists reject claims they manipulated' data to prove global warming is caused by humans - Daily Mail 23/11/09

The e-mail system of one of the world's leading climate research units has been breached by hackers.- BBC News 20/11/09

Scientist in climate change data row steps down - BBC News 01/12/09

Protests held before climate summit - Daily Express 05/12/09

Jurassic coast gets climate fund - BBC News 05/12/09

U-turn on climate change 'cover up' as university says it will publish leaked email data - Daily Mail 29/11/09

Climate change maybe real, but it's still not easy being green - Times 03/12/09

Leaked document starts climate row - Daily Express 09/12/09

Copenhagen climate change summit: Up to 1,000 arrested and two Britons deported as rioters clash with police - Daily Mail 13/12/09

Climate Change 'Lies' - Daily Express 17/12/09

Climate change scandal deepens as BBC expert claims he was sent leaked emails six weeks ago - Daily mail 18/12/09

Climate change summit was all arguing - and dozing - Daily Express 21/12/09

Why did Copenhagen fail to deliver a climate deal? - BBC News 22/12/09

Copenhagen ends with anti-climax - Daily Express 19/12/09

Media Responses

World media reacts to climate deal - BBC News 19/12/09

'Lukewarm' climate change deal in Copenhagen - Times 19/12/09

The Climate Has The Last Laugh On The Scientists - Daily Express 06/01/09

We got it wrong: UN climate change scientists admit error over Himalayan glacier report - Dailymail 20/01/10

Climate change experts say sorry - Daily Express 21/01/09

Climate Change Chief Says Sorry Over 'Melting Ice' Lie - Daily Express 22/01/09

Climate Change Industry is now in deep trouble - Daily Express 29/01/10

How Climategate Boss broke rules by hiding key data - Daily Express 29/01/10

UEA e-mails leak climate scientist defends his work - BBC News 02/02/10

Bogus Flood Claims Fuel Global Warming 'Lies' - Daily Express 25/01/09

Climate Change Cynicism a tragedy says Lord Smith - Daily Express 04/02/09

Scepticism About Man-made Climate Change On The Rise - Daily Express

They're all ignoring political climate change - Times 09/02/09

2.6 Focus Group Locations

The desk research, questionnaires and discussions with responsible authorities identified four localities in England which could provide a representative spread of coastal issues and environments where community engagement had been undertaken to varying degrees and was likely to be required in the near future. The four regional localities were: Yorkshire and Lincolnshire, Norfolk and Suffolk, North West England and the South East Channel Coast.

All these localities are currently regarded as being at very high or extreme risk of coastal erosion or flooding.

In choosing specific locations it was agreed that at least one local authority area should not be a coastal change pathfinder, there would be at least three urban focus groups and at least two citizen focus groups from communities which were set back from the immediate coast but at potential long-term risk (See Appendix B for focus group selection criteria). The finalised locations for the focus groups were:

- Skegness (coastline between Mablethorpe and Skegness);
- Louth (non-coastal comparative group);
- Hastings (to include Fairlight Cove and Cliff End);
- Formby Point; and
- Felixstowe.

2.7 Focus Group Segmentation – Third Sector

The Department of Communities and Local Government (CLG) defines the third sector as non-governmental organisations that are value driven and which principally reinvest their surpluses to further social, environmental or cultural objectives[13].

The Office of the Third Sector defines this sub-set of society as 'a diverse, active and passionate sector.'[14] Organisations in the sector share common characteristics:

- Non-governmental;
- Value-driven; and
- Not-for-profit / have strategies to reinvest financial surpluses into further work.

The term encompasses voluntary and community organisations, charities, social enterprises, cooperatives and mutuals both large and small. This is regarded as a broad, vital section of British society.

Due to their non-profit, sometimes apolitical stance, charitable and social organisations may have a great deal to offer the discussion about issues relating to climate change.

2.8 Focus Group Segmentation - Citizens

Greater depth and understanding can be gained through the stratification of groups on key factors. Due to the desire to engage with so-called 'hard-to-reach' groups and the less informed, the research team recommended that focus group respondents should include specific attendees from socio-economic group C2DE, which incorporates the skilled working class (skilled manual workers), working class (semi and unskilled manual workers) and those at the lowest level of subsistence (casual or lowest grade workers, pensioners and others who depend on the welfare state for their income).

The main stratification for the focus groups was based on life stages as follows:

1. Empty nesters/retired
2. Adults with children living at home
3. Young U35 singles with no children

Groups would contain a mix of gender and housing type to ensure a broad spread of people was included in the research.

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[13] http://www.communities.gov.uk/communities/thirdsector
[14] http://www.cabinetoffice.gov.uk/third_sector/about_us.aspx

Respondents were recruited by an experienced recruiter via face-to-face screening. .

2.9   Focus Group Format and Presentations

All materials used in the consultation process included key messages drawn from the evaluation of UKCP09 in Phase One.

The twelve focus groups were planned to provide representative qualitative evidence across a range of social segments, organisational levels and geographic areas.

The format comprised presentations to each focus group to build capacity to consult and road-test 'key messages', without pre-determining the findings of the consultation. These presentations included verbal, graphical and textual messages to assess the success of each delivery format.

Discussions at the outset explored the groups' baseline understanding of climate change and coastal issues. Following each of the presentations the facilitator explored issues arising from the presentations.

The format for each focus group was set out in the Action Plan as a discussion guide. These are set out in Appendix D. In summary the format was as follows:

- Introductions;
- Exploration of the group's current understanding of climate change and coastal issues;
- Presentation 1 - themed around UKCP09 climate change projections messages, presented using images and language from UKCP09 website;
- Group feedback on Presentation 1;
- Presentation 2 - themed around UKCP09 messages and coastal messages, presented in plainer English;
- Group feedback on Presentation 2;
- Presentation 3 - a series of presentation boards - visual presentation of climate change and coastal messages and messengers to explore issues such as local and global relevance, emotions, trust in the message, trust in the messenger;
- Group feedback on Presentation 3; and
- Summary discussions and feedback session - exploring themes of responsibility, messages, communicating with Government.

2.10   Focus Group Feedback and Analysis

2.10.1 Introduction

The 12 focus groups were conducted between 2 February 2010 and 10 February 2010. The nine citizens' focus groups were attended by 66 individuals - 34 male, 32 female. The attendance ranged from four to 10; the two lowest attendance figures being associated with particularly bad weather, including deep snow in Hastings.

The three third sector focus groups were attended by 21 individuals representing 20 third sector organisations. The attendance figures were seven, eight and six. The attendees comprised 14 males and seven females.

Three events were attended by a single observer from the Defra research Steering Group. It should be noted that the Defra attendees were acknowledged and their attendance at the focus groups was appreciated by the attendees.

The local authorities in the vicinities of the focus groups were invited to send observers. The descriptions of attitudes and behaviours in this chapter draw upon the focus group discussion as the principal source of evidence[15]. Each focus group has been recorded as a summary case study; these can be found in Appendix G.

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[15] Focus group data are quoted with reference to the place and segmentation.

2.11 Awareness and Understanding of Climate Change, Flooding and Coastal Erosion

2.11.1 Understanding of Climate change

Overall all groups were aware of climate change issues on a global, regional and local scale; however they were generally more inclined to knowledge of issues on a global scale (see Table 2 for a summary of respondent's constructions of climate change).

Table 3 Citizen and Third Sector Constructions of Climate Change

Group	Location	Constructions of climate change (unprompted)
Under 35 Singles	Formby	• Global warming • Flooding • Ice caps melting • Carbon footprint • Changes in weather • More extreme conditions
Families	Hastings	• Warmer weather – milder winters • Extreme weather • CO_2 • Too many cars on the road and too many aeroplanes • Too many people – not enough birth control • Sustainable living • Flooding • Coast erosion – "there is a lot less cliff and beaches than there used to be" • Farms struggling to grow crops
	Formby	• Polar bears • Ice melting • Flooding • The weather • No seasons • Unpredictable weather
	Felixstowe	• Big changes to everybody's life • Global warming • Greenhouse gases • Rising temperatures • Melting icecaps • Scaremongering? • A natural process?
	Skegness	• Ice caps melting • Rising sea levels • Pollution/CO_2 emissions • Carbon footprint • The Day After Tomorrow
Empty Nesters/ Retired	Louth (Non-coastal comparative group)	• Rain and water • Confusion about the facts • Carbon footprints • Denial • Cold winters • Recycling
	Hastings	• Change in weather • Changes in seasons - have seen local effects on wildlife and flowers • So much contamination that mother nature can't balance easily • Deforestation • People cutting down trees • Burning too much oil – need to use of alternative sources of energy • Melting glaciers • South Pole degenerating

Group	Location	Constructions of climate change (unprompted)
		• Global population increasing • High CO^2 levels
	Formby	• Weather is getting warmer • A natural phenomenon
Third Sector	Hastings	• Shingle movements • Weather anonymities • Extreme weather • Raising sea levels • Ice caps • Polar bears • Seals and dolphins around the south coast • Tectonic plates displacement • Countries disappearing
	Felixstowe	• Sea level – felt the level within the area has changed dramatically over the last few years • Melting ice caps • Extreme weather (freak rain, freak drought, more extreme events) • Changes in agriculture and land use due to the changes in climate
	Skegness	• Enhanced/agitated by man from CO_2 (not necessarily believable) • Recycling • Rising sea • Melting glaciers • Forests being destroyed • Global – not just local or national • Recycling

People were less inclined to view climate change as being relevant to their locality, particularly in terms of potential sea level rise, flooding and coastal erosion, although these impacts did feature in some of the unprompted constructions of climate change (see Table 2).

Respondents were interested in finding out more about climate change, its consequences and how they could adapt. Despite high level of awareness of climate change there was a general air of scepticism and disbelief. Men were more inclined to be more sceptical than women. In general, older respondents were as sceptical as younger respondents, but this scepticism was less likely to deter any actions they might take. The ABC groups were on the whole better informed about climate change, but also more sceptical. The responses of the Felixstowe ABC1 Families group were influenced significantly by the opinions of two respondents who were actively sceptical and very vocal.

Third sector groups did not show any heightened awareness of climate change issues. None referred to having a mission statement or policies regarding climate change. Awareness was on an individual scale.

The non-coastal comparative group (Louth) didn't show any difference in levels of awareness of climate change and had an equal level of interest as other groups (subsequent follow up work found that Louth is likely to be an investment/development beneficiary as a result of displacement from the coast and as such the community may have an enhanced appreciation of coastal issues locally – per comms.).

 "You can see changes but you never know whether it's man-made changes or due to the environment." (Felixstowe ABC1 Families)

"I think it's all hyped up and it's just a natural state of events." (Formby C2DE Families)

"When you first said 'What does climate change mean to you?' I immediately thought about floods in Bangladesh and the Maldives sinking. The rest of the world have got it pretty bad." (Louth C2DE Empty Nesters/Retired)

 "Climate change is a natural phenomenon that politicians have jumped upon. The globe is actually getting cooler." (Formby ABC1 Empty Nesters/Retired)

"Nobody minds it being a bit warmer." (Formby ABC1 Empty Nesters/Retired)

"Climate change has been going on from the start, it's just all of a sudden the big bandwagon that all of the governments have got to jump onto." (Felixstowe C2DE Empty Nesters/Retired)

"It's not a local problem – it's more of a world-wide problem." (Formby U35 Singles)

"Being green is a useful political tool which detracts from other things they're (the politicians) not doing correctly." (Skegness Third Sector)

2.11.2 Understanding of flooding and coastal erosion

In the focus groups introductory sessions respondents were asked to discuss their local environment. The non-coastal comparative group (Louth) felt that flooding was the most important issue affecting the local environment. Similarly in Skegness both the Families group and Third Sector group agreed that flooding and coastal erosion were the biggest problems for the area (particularly as some of the participants lived in bungalows), and this, they said, was tied in with rising sea levels. The Families group in Skegness had concerns about rising sea levels locally and sea water coming up over the flood barriers. Some respondents felt there was a need for better flood defences and flood warning systems. The Third Sector group in Skegness also commented that the sea defences were inadequate as they only covered small parts of the coastline.

Respondents in Formby and Hastings consider old drainage systems as posing a greater risk of flooding than climate change, for example,

"Flooding could be associated with climate change but it could also potentially be due to 'bad planning' and old drainage systems that cannot cope with the demand, they felt this is exacerbated by the increase number of new houses being built in the area" (Hastings Third Sector)

The Third Sector groups in Hastings and Felixstowe demonstrated a heightened knowledge about the links been planning policy, building in the floodplain, climate change and flooding. For example in Hastings climate change impacts were linked to "**bad planning**" (Hasting Third Sector) and in Felixstowe local authorities were criticised for the flooding problems due to building in the floodplain. This led to a sense of helplessness e.g:

"What's the point of individuals trying to do something when local authorities are still building on flood plains...The governments are not protecting these areas by river walls or banks…I think as an organisation as we are we don't have enough to put forward and don't have the power to do it" (Hastings Third Sector).

Changes to the coast and flood protection were considered important issues at Formby. It was recognised that the sea wall at Southport and sand dunes provide protection against flooding, e.g:

"In Southport they have built a sea wall because of flooding. When the tides are high it can flood over the top of the defence. But, you very rarely see a high tide as the tide is so far out. Possibly in the future with climate change and sea level rise there will be more obvious changes to the coast, and this will lead to the moving backwards of the dunes. Maybe for the next generation Formby might not be here" (Formby Singles).

There was some scepticism amongst the groups in Felixstowe, Formby and Hastings regarding the links between climate change and coastal erosion, e.g:

"Things that happen like coastal erosion are not necessarily climate change…There's always been movement along the coast here" (Formby ABC1 Empty Nesters/Retired).

"Some of the erosion would happen naturally regardless of climate change" (Hastings C2DE Families).

One of the Third Sector groups in Felixstowe expressed a heighted awareness of Defra and the local council's policy for flood and coastal erosion management and defences on the Suffolk and Norfolk coast. The comments made reflect l concern in the local management of the coast: e.g.,

"They (*organisation's members*) would be sceptical regarding receiving local messages as they feel that parts of the coast (e.g. Happisburgh in North Norfolk and south of Lowestoft) have and are being deserted by Defra and Suffolk County Council and are going to be lost to the sea and they feel that is wrong and they are very angry about it" (Felixstowe Third Sector).

Respondents felt that local efforts should be focused on building members' trust in Defra and the local council. The Third Sector representative suggested this could be achieved by Defra promoting the "**good**

work" that they do in the area, for example by writing an article for the Archant Press Suffolk to rebuild trust and raise awareness (Felixstowe Third Sector).

2.12 UKCP09 Presentation 1 Responses

Presentation 1 was written with factual language and supported with boards using terms/images derived from the UKCP09 website.

PRESENTATION 1
CHANGE IN ANNUAL MEAN TEMPERATURE (°C)
HIGH EMISSIONS SCENARIOS
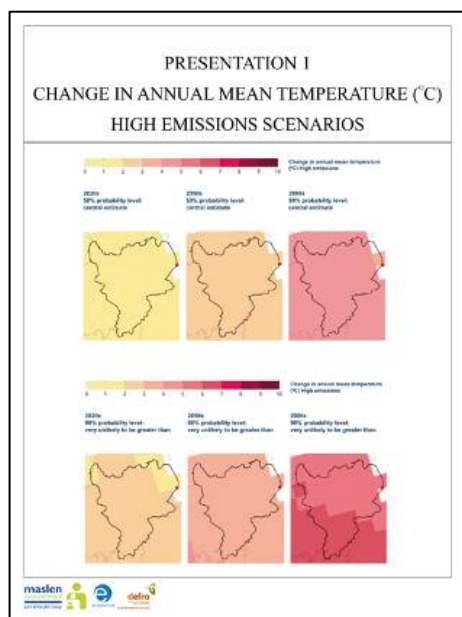
U35 Singles

This group found the information in the presentation easier to understand than other groups. There was no confusion over the language or content.

They agreed that the content was good to know but not necessarily good to hear, however most indicated that they were not alarmed by the information.

"There's too many theories. You don't know what's going to happen." (U35 Singles)

"There's a lot of evidence supporting each side of the argument so it's hard to decide…It's hard to quantify what you actually believe because you've heard so many different theories. You don't know whether to take it seriously or not because you've heard so many versions of the same thing." (U35 Singles)

When provided with regional information about climate change projections people did not find this striking, "**What's 3mm? It's nothing. We might as well carry on the way we are.**" (U35 Singles)

Families

All the family groups found some aspects of this presentation confusing, for example due to the language used, such as 'water-stressed' or 'CO2 levels' (Hastings C2DE Families), the amount of figures used (Formby C2DE Families) or the actual content, for example the use of metric rather than imperial measurements (Hastings C2DE Families).

Nobody across any group was aware of UKCP09, though one respondent had heard of global projections through the Al Gore film 'An Inconvenient Truth' (Formby C2DE Families).

With one exception (who felt sea levels were rising faster than depicted), people in the C2DE family groups seemed to accept the validity of information given in Presentation 1, while the ABC1 respondents were far more inclined to scepticism about the content.

Overall the presentation made the family groups think, but all said it would not spur them to take action.

"(UKCP09 is) probably one of those government think-tanks that'll make them a bit of money." (Felixstowe ABC1 Families)

"I don't know where they get their figures from, these people." (Skegness C2DE Families)

"It's just possibilities, it's nothing definite." "It's not factual, its opinion isn't it?" (Felixstowe ABC1 Families)

"I don't think for me that information would (encourage them to make lifestyle changes) because it didn't really include what changes to make." (Formby C2DE Families)

"People either don't think about it or don't care. All they're interested in is money, two and half kids, house, mortgage - nothing else." (Hastings C2DE Families)

"If you don't see it it's harder to believe." (Formby U35 Singles)

"The information might be a bit scary but you just carry on don't you? We evolve with the changing climate." " What could you actually do?" (Felixstowe ABC1 Families)

100526 SEF UKCP09 and Communities at Risk_Final

Empty Nesters/Retired

None of the respondents had heard of UKCP09 though some of the Louth group (non-coastal comparative group) were vaguely aware of the idea behind it.

As a whole these groups were very willing to engage in discussion about climate change and its potential impacts, but there was some confusion about the content of the presentation many were reluctant to take the facts and figures at face value, particularly the statistics.

Some people found elements of the presentation quite scary or worrying.

A significant representation (Felixstowe, Formby) saw a rise in temperatures as being a potential positive impact of climate change at a more local level.

While people generally agreed they had been given 'food for thought', the overall inclination was not to take action, largely due to a sense that nothing would make a difference at a local level.

Some felt the information given would need to be far more shocking to prompt people to take mitigating action.

"I don't necessarily believe it, particularly in terms of the information relating to the weather." (Felixstowe C2DE Empty Nesters/Retired)

"I'd like to know where the facts and figures actually came from." (Felixstowe C2DE Empty Nesters/Retired)

"Like a pretty girl in a bikini they reveal what is interesting but hide what is vital." (Louth C2DE Empty Nesters/Retired)

"Our children and grandchildren are going to be in a mess." (Formby ABC1 Empty Nesters/Retired)

"If the temperature goes up then a lot of us will be quite pleased." (Formby ABC1 Empty Nesters/Retired)

"It would be nice to think we could control it but we've just seen how impotent we are in Haiti." (Formby ABC1 Empty Nesters/Retired)

"I can't see as an individual you can do much about things." (Felixstowe C2DE Empty Nesters/Retired)

"Nothing really comes across to make us feel how desperate it is." (Hastings ABC1 Empty Nesters/Retired)

Third Sector Groups

None of the respondents had heard of UKCP09 - one respondent suggested the name was part of the problem. None of the groups had a mission statement relating to the environment.

Presentation 1 prompted wide-ranging discussion by these groups, often involving what they felt the public's attitude to climate change was.

Opinions put forward included the welcoming of hotter summers by British people - a typical beneficiary being golf clubs, for example - general scepticism among the public and mistrust of scientific data (Felixstowe, Hastings).

Regarding the presentation itself, there was some confusion about the use of more than one outcome scenario (Felixstowe) or the use of averages.

Some felt it was too threatening and failed to focus on the positive examples of climate change mitigation or adaptation, such as wind farms (Skegness).

Some groups (Hastings, Skegness) felt man's role in climate change had been 'overemphasised by the government' or 'not proven'.

There was no suggestion from any group that people would be prompted to take action as a result of the information presented. Some felt action needed to be taken at a global rather than local level.

"(The UK public) will see nothing but good in the fact that it's getting warmer." (Felixstowe Third Sector)

"We as individuals have done many fantastic things. We've got a windfarm out there and 30 years ago you wouldn't have had that. So we are doing things. We will adapt. We always have." (Skegness Third Sector)

"Fifty percent probability of something happening means it could go either way - it's like spinning a coin. If you said 95% I'd start taking notice." (Skegness Third Sector)

2.13 Presentation 2 - Responses

Similar content to presentation 1 written in much more engaging and simpler fashion with graphics associated with climate change projections taken from Met Office website.

U35 Singles

100526 SEF UKCP09 and Communities at Risk_Final
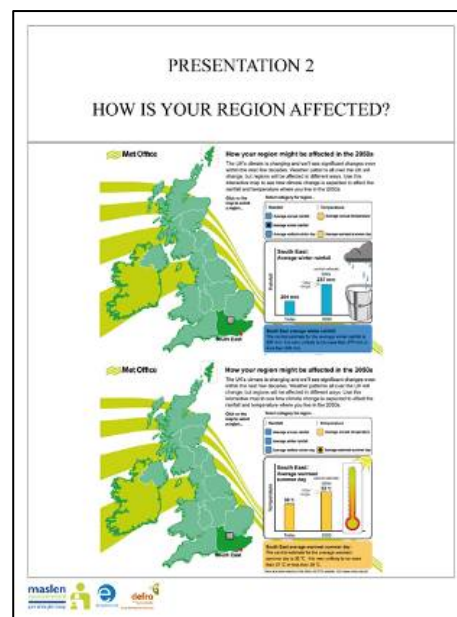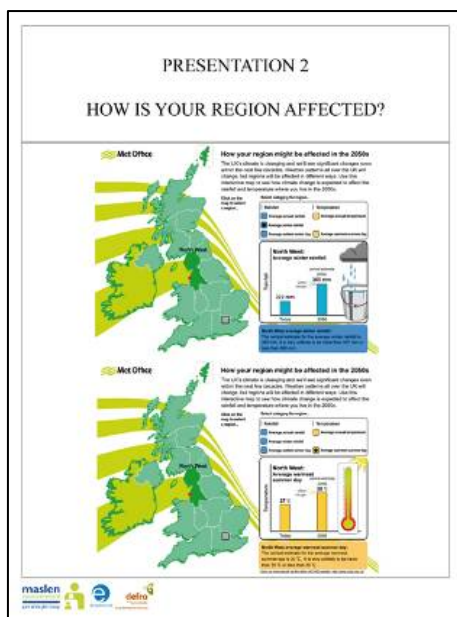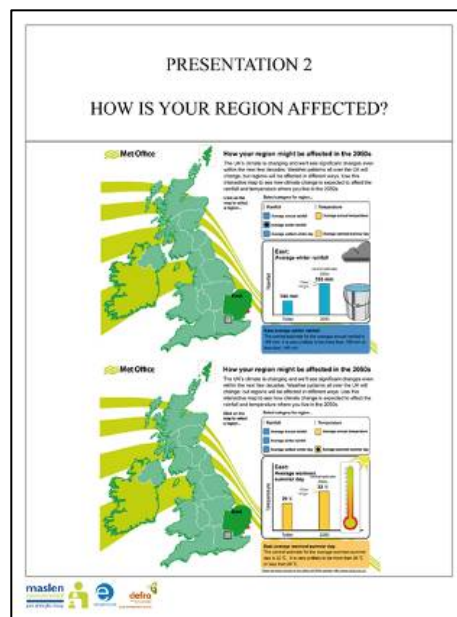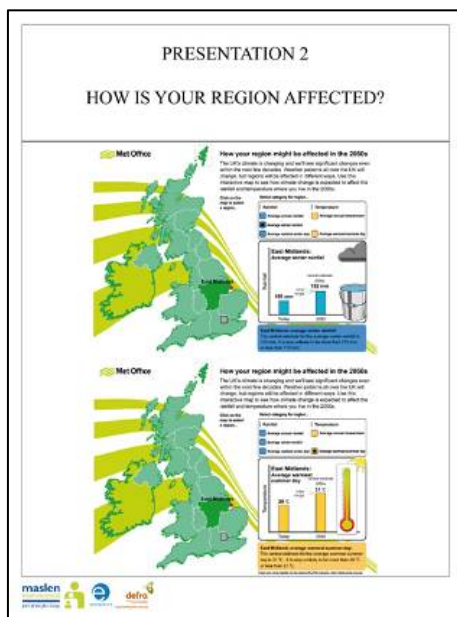
The majority of the under 35 Singles group found this presentation easier to understand and appreciated the inclusion of regional figures. However, they acknowledged that the local figures would have less impact on them as they were not as shocking as global figures.

"I'm more concerned about the ice caps melting. It (climate change) might not make much of a difference here, but it will in the arctic." (Formby U35 Singles)

One respondent felt that figures alone did not have enough impact - the presentation would benefit from showing people the tangible effects of climate change.

"I'm more concerned about the ice caps melting. It (climate change) might not make much of a difference here, but it will in the arctic." (Formby U35 Singles).

Families

The C2DE Family groups (Hastings, Formby, Skegness) preferred this presentation. They found the language easier to understand, the graphics helpful and they welcomed the inclusion of more local information. Some felt it explained climate change better and found the information more 'believable' than that in Presentation 1.

"It's got a more positive outlook knowing you can do something about it rather than the other one which says there's nothing you can do about it...It's easier to understand…It's more friendly." (Hastings C2DE Families)

"That was more understandable than the first one and it gave you a better outlook of the situation." (Skegness C2DE Families)

Two of the Family C2DE groups (Hastings and Skegness) expressed confusion about the term 'greenhouse gases'.

As with Presentation 1, the ABC1 Family group (Felixstowe) was more sceptical. They felt it was similar to Presentation 1 but was designed to make them feel 'guiltier' about climate change.

There was a general sense among the C2DE groups that they would like to hear more information about what individuals can do to mitigate the effects of climate change. However, all groups expressed a sense of helplessness - that nothing they could do would make a difference in the grand scheme of things, for example when the actions of industries and countries such as China and the USA were taken into account.

"They're both messages based on assumptions about what people think is going to happen, not factual facts." (Felixstowe ABC1 Families)

"I do make a point of going round and switching everything off but my husband just won't because he doesn't see the point when all the offices in town leave their lights on." (Formby 2CDE Families)

"How can you compare me with someone who uses lots of electric, has two cars - how can you judge it?" (Felixstowe ABC1 Families)

Empty Nesters/Retired

All Empty Nesters / Retired groups preferred this presentation, with the exception of Formby, who felt it might appeal better to a younger audience such as school children and that it didn't tell people what they could do to combat climate change.

Overall the other groups preferred that the information was simpler to understand and more locally focused.

Yet there was a general feeling across all groups that the problem was a global one rather than being local to the UK and that local action would have little or no impact. This didn't stop people wanting more information on what they could do to mitigate climate change.

"We feel very helpless because it's global." (Hastings ABC1 Empty Nesters/Retired)

"When do we get to the tipping point when it's too late to do something about global warming?" (Felixstowe C2DE Empty Nesters/Retired)

Third Sector Groups

All third sector groups preferred Presentation 2 to Presentation 1, feeling it was more personal, less alarmist and less technical, though some thought the content needed to be even simpler to be understood by all members of their organisations, particularly young people.

They welcomed the use of graphics. Respondents felt they understood better that, if they took action to mitigate climate change, the model would change. People generally wanted to see more solutions suggested in the presentation.

The response to more localised information was universally favourable but there was some scepticism expressed about how much impact any local actions would have on climate change (Felixstowe, Skegness).

Some respondents felt that messages relating specifically to their locality, for example the Sussex Coast, would be more likely to galvanise their members to take action (Hastings).

"I think the national thing is irrelevant, I think the regional thing is irrelevant. Many of our members wouldn't be too bothered if Eastbourne was flooded permanently. It has to be much more local." (Hastings Third Sector)

"If you could get a graph of the south east and pinpoint where people live, then get a computerised image to show where you expect sea levels to rise to and say 'you could be underwater by now if this was 2050' ... that would be very hard hitting and make people think 'Oh really!'" (Hastings Third Sector)

"Think globally, act locally." (Felixstowe Third Sector)

"(If information about climate change was more localised)...a town like Skegness would take a stand." (Skegness Third Sector)

2.14 Presentation 3 – Message Boards

The following message boards were prepared to test the focus groups' responses to a range of images combined with simple messages. They were presented to collect immediate reactions. They were not presented to stimulate in-depth debate and discussion.

Summary of message boards:

Board 1 - Message saying Rising Sea Levels – picture of icebergs

Board 2 - Message saying Rising Sea Levels – picture of a beach

Board 3 - Message saying Extreme Weather Conditions – a picture of boats and cars stuck in the mud

Board 3b - Message saying Extreme Weather Conditions – picture of woman being rescued from a flood

Board 4- Message saying Extreme Weather Conditions – picture of two men standing in their doorway with flood defence

Board 5/A - Picture of a news reader saying sea levels are rising

Board 6/B - Picture of the front page of the daily mail with headline sea levels are rising

Board 7/C - Picture of a grandma talking to a young people with a baby saying there's definitely been some coastal change round here

Board 8/D - Picture of a local authority fact sheet with the heading sea level change

Board A – News headlines - Fear/shock

Board B - News headlines Call to act/think of future generations

Board C - News headlines - Doubt/scepticism/factual inaccuracy

Board 12 - Cartoon picture with lots of writing with the butcher, the cook the candlestick maker, sitting in a tin bath on a river with loads of debris floating around them.

Board 13 - Picture of a planet - message says you control climate change

Board 14 - Thermometer with a cactus at the top (pointing north) and an icicle at the bottom (pointing south).

Board 15 - Film poster – with chimneys, says –'An Inconvenient Truth'

Board 16 - A giraffe up to its neck in water – says the Copenhagen conference and has a timeline from 2009 to 2050 up the side

Board 17 - Polar bear on a melting ice cap

Rising Sea Levels and Extreme Weather Conditions (boards 1 – 4)

Board 1 This image drew little response and was generally not linked to climate change. It prompted some discussion about sea level rise (Skegness C2DE Families, Skegness Third Sector, U35s), but people wanted more concrete facts about the implications of sea level rise.

"If it didn't say rising sea levels about it I wouldn't have know that's what it's about - it's just a nice image." (U35 Singles)

"It makes you think about the ice melting but your thoughts would probably stop there." (Formby C2DE Families)

"Sea level rise means it's happening, it's definitive; sea level change could mean anything." (Skegness Third Sector)

Board 2 This image drew little response and was generally not considered to have any relevance to rising sea levels or the impacts **"Looks like a nice place to go on holiday. If it was lapping round the steps of houses it would mean something."** (Formby ABC1 Empty Nesters/Retired)

Boards 1 and 2 were removed for the second week of focus groups.
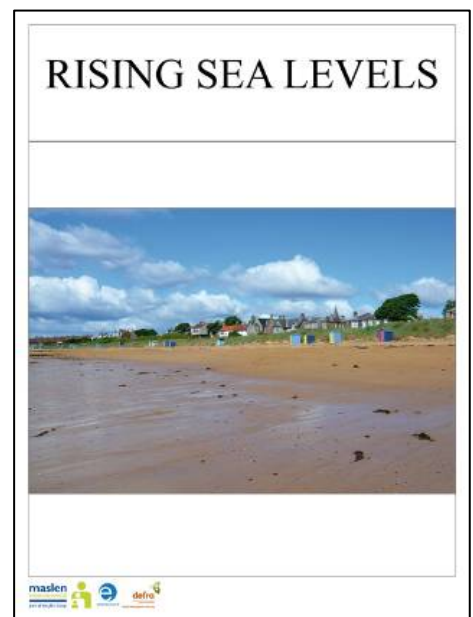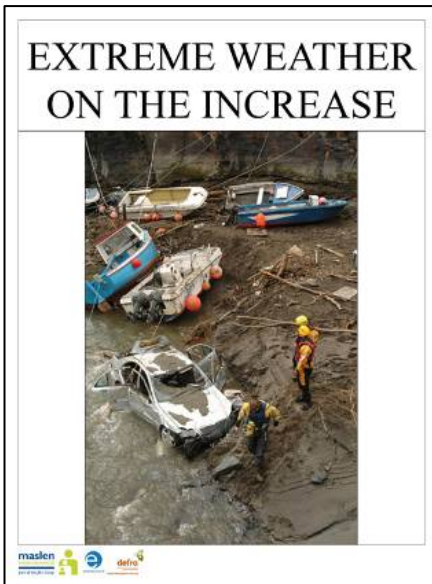
Board 3a This image was considered more shocking and alarming but people were generally sceptical about its possible messages. They considered it a result of a freak occurrence (Hastings ABC1 Empty Nesters/Retired) or associated it with incidents that might happen abroad (Formby C2DE Families) and not in their locality. They did not associate it with climate change.

"They are trying to say climate change is responsible for extreme weather, which is responsible for that. Whether it's true or not is another matter." (Hastings C2DE families)

**"I wouldn't immediately link that to climate change."** (Formby C2DE Families).
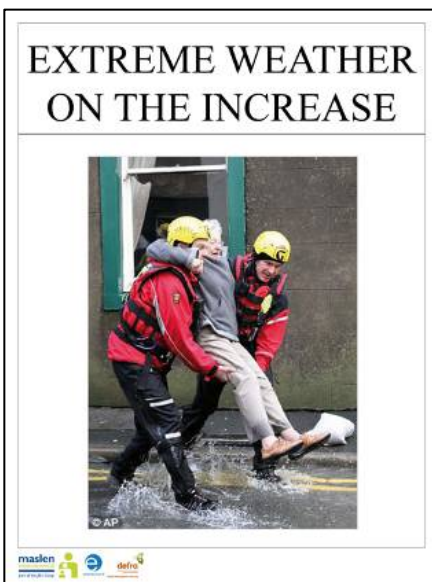
Board 3b. One respondent (Hastings ABC1 Empty Nesters/Retired) thought the image of the elderly woman being rescued in this image drew attention to the vulnerability of different age groups during floods. Generally, however, this image wasn't considered shocking enough to alert people to potential risks.
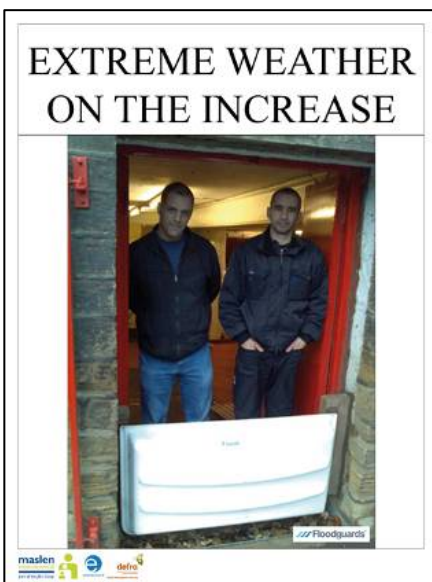
Board 4. Just one respondent (Formby C2DE Families) related the home flood proofing measure on this image to taking personal action to defend your home. Without explanations participants couldn't relate to this image.

Boards 5, 6, 7 and 8 (A, B, C, D) were all shown together.
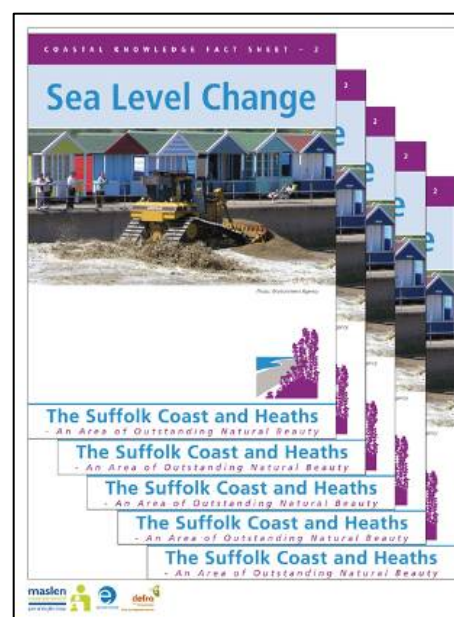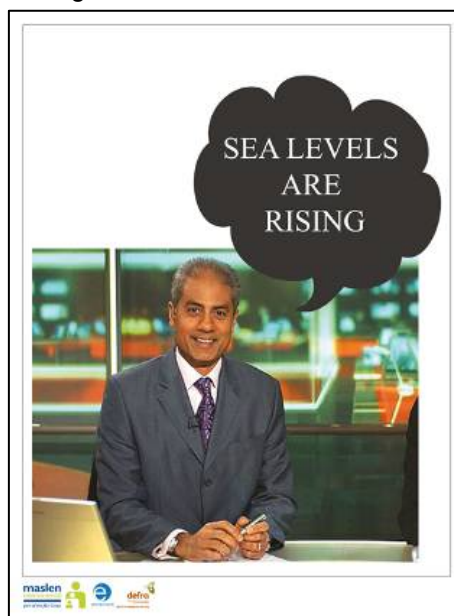
Most people trusted TV news and newspapers but were less inclined to trust 'red top' publications such as The Sun or Star.

"Depends on the papers, like if it's the Star (I would trust it less)." (Felixstowe Third Sector)

A broad representation of people (Hastings ABC1 Empty Nesters, Felixstowe C2DE Empty Nesters, U35 Singles, Hastings C2DE Families, Skegness C2DE Families, Formby C2DE Families, Skegness Third Sector) were inclined to trust locally produced fact sheets, though some said much would depend on the actual content. The reputation among local people and trust in the local authority is a strong factor in whether people trust the messenger.

"You get the (factsheet) information from local people who know the area and have personal experience." (Felixstowe C2DE Empty Nesters/Retired)

"(Local fact sheets would contain information) that could actually affect me." (U35 Singles)

One group (Felixstowe ABC1 Families) said they would prefer a scientist to talk to them about the facts about climate change in a similar format to the focus group.

No-one trusted word of mouth.

'Media Headlines' (boards 9A - 11C)

HEADING TOWARDS THE PERFECT STORM
CLIMATE CHANGE, POPULATION & FOOD PRODUCTION

EARTH 'IS IN IMMINENT PERIL FROM SEA LEVEL RISE'

MELTING ICE SHEETS CAUSED BY RISING TEMPERATURES WILL PUT MILLIONS AT RISK OF FLOODING, EXPERTS SAY

THERE IS NO PLANET B

'IT'S OUR CHILDREN WHO WILL SUFFER'

CLIMATE CHANGE BEGINS AT HOME

CLIMATE CHANGE - THE FUTURE IS IN OUR HANDS

NEW SCANDAL OVER CLIMATE CHANGE 'LIES'

100 REASONS WHY GLOBAL WARMING IS NATURAL

'GLACIERGATE' SCANDAL REVEALED

UN REPORT THAT SAID HIMALAYAN GLACIERS WOULD MELT WITHIN 25 YEARS WAS ALL HOT AIR

These were read separately then shown together. The headlines were themed as follows:

Board A - Fear/shock Board

Board B - Call to think/act for future generations

Board C - Doubt/scepticism/factual inaccuracy

Generally, Board B provoked the strongest positive response from most groups and prompted some (Skegness C2DE Families, Skegness Third Sector) to question why more information was not available on what action people could take.

It's the important message. It's for the children - it's about them, not us." (U35 Singles)

"It's realistic." (Felixstowe C2DE Empty Nesters/Retired)

"There is nowhere else for us to go and it's our children who are going to suffer." (Skegness C2DE Families)

"They're all doom and gloom and they don't tell you what you can do about it." (Skegness C2DE Families)

"If it's true and we need to do something about it then we need to see something on the front page of every newspaper. If we need to do something about our homes then I'd like to see that on the front page of every newspaper." (Skegness Third Sector)

There was some appreciation shown for the negative headlines in Board C (Felixstowe ABC1 Families, U35 Singles)

"It's got the magic word on it - lies." (Felixstowe ABC1 Families)

'Campaigns' (boards 12 - 17)

Board 12 Only the U35 Singles group reacted positively to this board, liking both the design and the depth of information provided. The other groups felt it was aimed at children (Felixstowe ABC1 Families, Hastings ABC1 Empty Nesters/Retired, Felixstowe C2DE Empty Nesters/Retired) and was not striking or hard-hitting enough (Formby C2DE Families, Felixstowe ABC1 Families, Hastings C2DE Families).

"You need a more serious picture for it to have any impact." (Formby C2DE Families)

"Something where lives are in terrible danger." "They're trying to target you as if you're a child." (Felixstowe ABC1 Families)

"It's not severe enough." (Hastings C2DE Families)

"It does not have any impact." (Felixstowe ABC1 Empty Nesters/Retired)

"We don't need cartoon characters." (Skegness Third Sector)

Note – On the 17 March 2010, this poster was found to be in breach of the Advertising Standards Authorities Advertising Codes. Specifically they said 'we concluded that the claim "Extreme weather events such as storms, floods and heat waves will become more frequent and intense" in ad (b) (this particular poster) should have been phrased more tentatively. However, we considered that the imagery of UK flooding in ad (b) and of a drought in ad (c) were not themselves (and particularly not in the context of a nursery rhyme "what if" presentations) exaggerated or misleading.' The possible implications of this ruling on communications methods is discussed further in Section 3.3 of this report.

Board 13 This resonated strongly with the U35 Singles group because it explained how you could make a difference as an individual and where to get more information.

The message was generally understood and in some cases welcomed (Skegness C2DE Families, Formby ABC1 Empty Nesters/Retired, Hastings ABC1 Empty Nesters/Retired).

However, some people also reacted defensively or expressed a lack of ability to take the message on board (Formby C2DE Families, Hastings C2DE Families, Felixstowe C2DE Empty Nesters/Retired).

"It immediately makes you think on a global scale." (U35 Singles)

"It looks like the type of thing you'd like to listen to." (Skegness C2DE Families)

"I know what it's representing but ... the UK is already doing their bit, it's the rest of the world that needs to (do theirs)." (Hastings C2DE Families)

"We want to do the things that it suggests but sometimes you can't." (Formby C2DE Families)
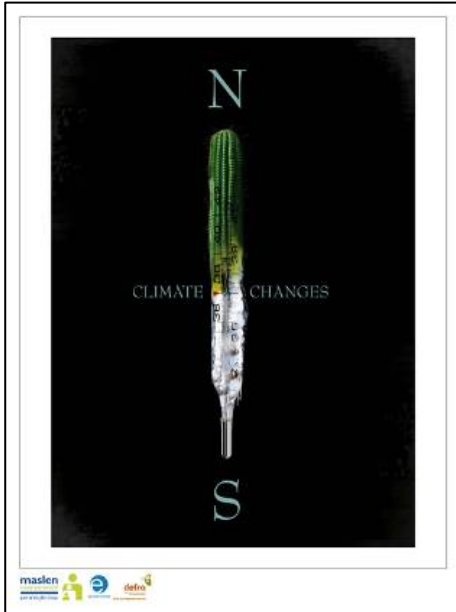
Board 14 This board was rejected across all groups as being too complicated.

"People wouldn't get it." **(**U35 Singles)

"It's not direct and it isn't telling us anything." (Formby C2DE Families)

"It's too difficult to understand." **(**Skegness Third Sector)

This board was removed for the second week of focus groups.

Board 15 This board provoked negative responses or had little impact across all groups, who felt it was irrelevant to them. Just one respondent felt it issued a message about adapting to climate change.

"It's more of a message to industry so there's nothing for us to do." (U35 Singles)

"If I was passing it at a train station I'd just walk past." (Formby C2DE Families)

"It connects with me what we're being told about solar power and wind power." (Formby ABC1 Empty Nesters/Retired)
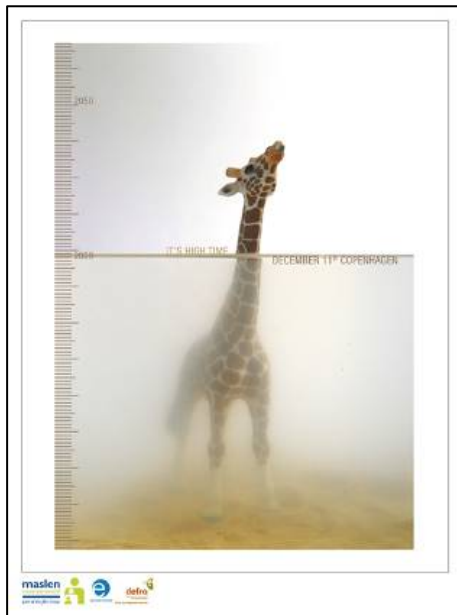
Board 16. The image of the giraffe provoked emotional responses in a number of groups (Skegness C2DE Families, Formby C2DE Families, Hastings C2DE Families, Felixstowe C2DE Empty Nesters/Retired).

It made many think, or want to know more, but didn't prompt anyone to talk about taking action or making changes.

The Formby C2DE Families group felt any poster would have greater impact if an image of a red squirrel - a local threatened species - was used.

The U35 Singles group understood the message about sea level rise but felt it lacked adequate information.

"If it's that bad for an animal what's a small kid supposed to do?" (Skegness C2DE Families)

"Things around the world that have got no control over what we're doing are going to be suffering." (Hastings C2DE Families)

"People are interested in wildlife, especially the British." (Felixstowe C2DE Empty Nesters/Retired)

"Climate change is going to affect them before it affects us." (Felixstowe ABC1 Empty Nesters/Retired)
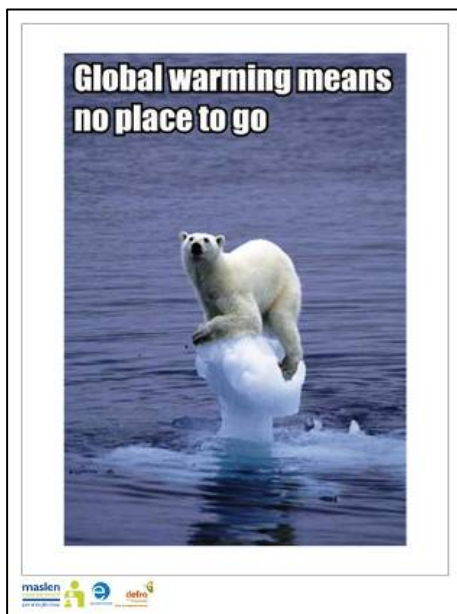
Board 17. The image of a polar bear on a shrinking ice cap was well received by all groups. There was a general agreement that the UK public always respond well to images of animals.

It was considered visually impressive and simple and to the point in conveying the message about melting ice caps and global warming.

Though the poster generally instilled shock and concern, only two people (both of whom had 'adopted' polar bears) said it would prompt them to take action.

"Absolutely captures it. The public will understand it. It's got the aaah factor." (Skegness Third Sector)

"That's pretty good - polar bears are mentioned all the time in terms of the environment." (Hastings C2DE Families)

"Good I think because it might affect people who are more of an animal lover than I am." (Formby ABC1 Empty Nesters/Retired)

"Good visual message." (Skegness C2DE Families)

"It makes you feel dreadful." (Hastings C2DE Families)

"The ice is melting and it will affect the polar bears." (Formby ABC1 Empty Nesters/Retired).

3. Outcomes and Recommendations

## 3.1 Motivational Drivers and Blockers - A Conceptual Model

Following the completion of the focus group case studies the research team found it helpful to develop a simple conceptual model relating to the motivational 'blockers' and 'drivers' which appeared to affect whether an individual's behaviour responded to climate change messages, i.e. they sought to mitigate climate change and/or were involved in adaptation responses.

This model is set out in Figure 2 and provides a short summary classification for many of the responses recorded. It demonstrates how particular drivers appear to successfully lead some individuals into taking actions to mitigate climate change. Some responded to and were perhaps drawn in by emotional messages, and if they trusted the messenger and message they were responding voluntarily with behaviour that helped to mitigate against man-made climate change. They were not being compelled to do this but were doing this voluntarily.

However, very few individuals, even those involved in mitigating behaviours, are yet involved in any adaptive responses. The principal blockers appear to focus around the question: what can we do? This ranged from the desire for practical advice to helplessness.

The descriptions of attitudes and behaviours in this Chapter draw upon the focus group discussion as the principal source of evidence[16].

Figure 2 Drivers and Blockers to Individual Understanding and Behavioural Responses
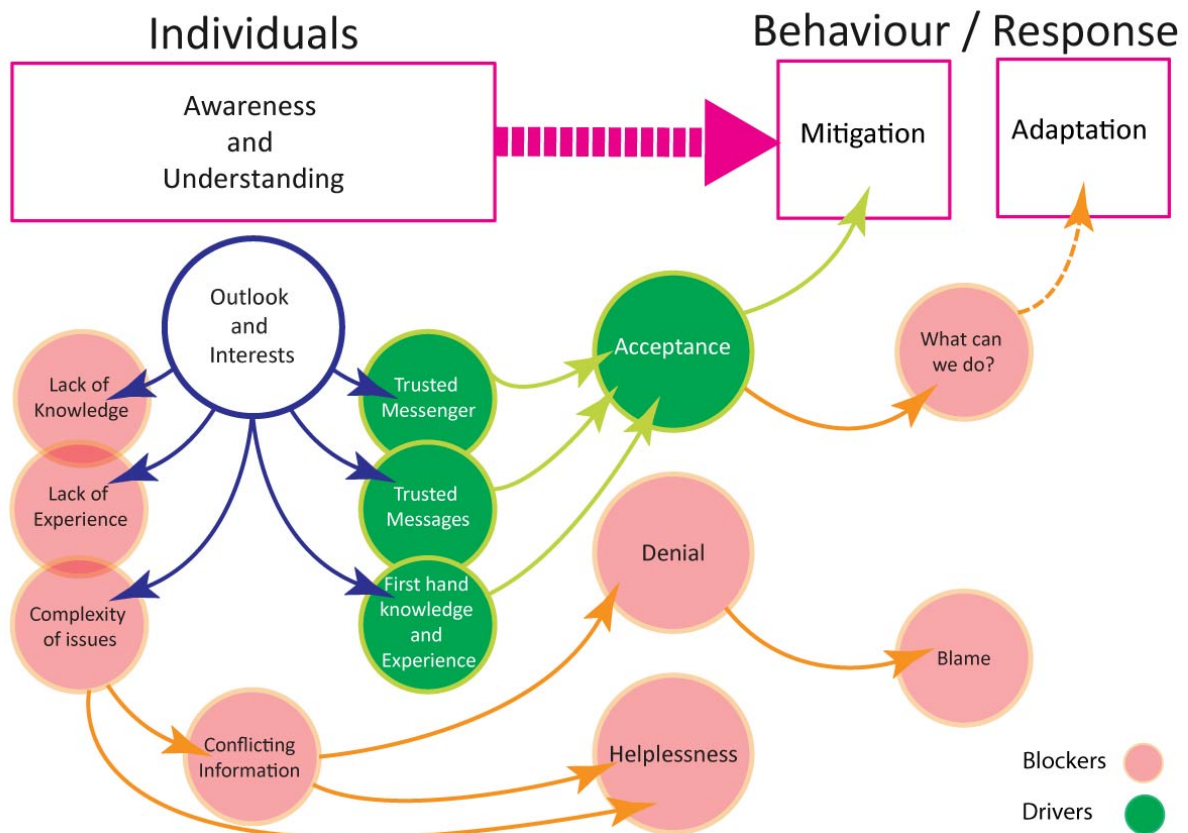
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[16] Focus group data are quoted with reference to the place and segmentation.

100526 SEF UKCP09 and Communities at Risk_Final

3.2 Sources of Information / Message and Messengers

The majority of people get most of their information on climate change from the TV and newspapers, with a stronger element of trust in broadsheets and the Daily Mail than in 'red tops' such as The Sun or Star.

Out of 12 groups only two individuals referred to obtaining information from the internet.

Generally people want messages about climate change to be clear, realistic and if necessary shocking (U35 Singles, Formby C2DE Families).

They want to receive concrete facts about the impacts of climate change - both global and with relevance to their local area (Formby C2DE Families, Skegness C2DE Families, (Felixstowe C2DE Empty Nesters/Retired, Hastings Third Sector). There was often greater acceptance of global information than regionalised information.

There was a suggestion that effective use could be made by targeting the web sites or publications of individual groups or associations (Hastings Third Sector).

People would be less likely to respond negatively if they felt that solutions were being suggested alongside the 'problems' brought about by climate change.

Generally people believe that Government and local authorities should be responsible for delivering messages about climate change (U35 Singles, Formby C2DE Families, Skegness C2DE Families, Hastings ABC1 Empty Nesters/Retired). However this is dependent on the level of trust or respect people feel for their local authority (In Hastings this was notably low across different sectors).

Many people believe there should be a strong input from bodies with specialist knowledge (Felixstowe ABC1 Families, Hastings ABC1 Empty Nesters/Retired, Felixstowe C2DE Empty Nesters/Retired) as well as local groups.

"We need to know if we did nothing what would happen to our area in ten years' time because I don't know." (Formby C2DE Families)

"We should be notified more about the situation and informed more about what is happening in our local area." (Skegness C2DE Families)

"The information (on climate change) needs to come from many reliable organisations. (Skegness Third Sector)

3.3 Engagement

Overall, all age and social groups engage positively with strong visual images involving animals. The 'polar bear on a shrinking ice cap' remains a pertinent image, possibly because it has a long association in people's minds with global warming and is accepted as a concrete fact rather than a potential scenario. Conversely, sea level rise at up to 3mm a year was not enough to register much significance. However, suitably developed locally relevant images illustrating flooding and flood proofing could make projections much more resonant.

Messages that make people think about children, or future generations, generally strike a chord. Responsibility is a strong motivator.

Regardless of age, people prefer simple pictures that can be quickly digested to sophisticated imagery that involves more intellectual processing.

Headline messages accompanying the image need to be short and to the point. Plain language wins out over clever word play. Subtlety is not essential. Shock tactics are acceptable to many.

Whilst communications should be informative and factual, people are put off by too much technical data or figures. Our focus groups findings support research on the Psychology of Climate Change Communication (CRED, 2009, p.2) that: "In order for climate science information to be more fully absorbed it must be actively communicated with appropriate language, metaphor and analogy, combined with story telling; made vivid through visual imagery, experiential scenarios; balanced with scientific information and delivered by trusted messengers in group settings."

People want posters or advertisements to include details of where to get further information, e.g. a web site address. This does not necessarily lead to them actively seeking further information - though the younger and older/retired groups may be more open to this.

Most people want to know what action they can take but are quick to react defensively or 'pass the buck' if they feel they are being told what to do or that they are failing to play their part.

People will engage emotionally or intellectually with messages but there is little to suggest that even the most high-impact campaign will induce them to take action.

The acceptance of messages with clear, uncomplicated visuals and blunt, hard-hitting language was universal, and would suggest this as a sound basis for delivering messages. However, the recent negative ruling by the Advertising Standards Authority on the Act On CO_2 advert (see 2.13, Message Board 12) highlights the precarious nature of balancing these messages and the presentation of climate change information.

The timing of engagement to encourage personal action needs to be considered. Any high profile poster or media climate change campaign could be more effective if run in conjunction with local 'on-the-ground' projects and local SMP consultation events. These provide tangible opportunities for personal engagement. However, any campaign on climate change needs to be supported with engagement materials that convey a balanced message and do not unnecessarily create obstacles for the 'on-the-ground' projects.

3.4   Personal and Third Sector Actions

When focus group respondents were asked, *'Can you talk about any action that you have taken or have considered taking to respond to climate change impacts such as flooding / coastal erosion'*, very few discussed being involved in any adaptive activities. It was evident that the propensity of thinking was towards mitigation rather than adaptation, including composting, recycling, driving less, buying fresh produce to minimise the amount of packaged foods they buy, and shopping locally (Felixstowe C2DE Empty Nesters/Retired, U35 Singles, Hastings Third Sector).

Mitigation

People overwhelmingly want to see action taken on climate change - they just do not want to take it themselves.

Quite often action is being taken but out of habit, e.g. recycling, cycling, using the car less, but the onus is on Government, foreign countries and industry to take a strong lead.

People are broadly sceptical about what impact, if any, their actions might have in mitigating climate change (Felixstowe ABC1 Families, Skegness C2DE Families, Formby C2DE Families, Formby ABC1 Empty Nesters/Retired).

"I'm not going to spend the rest of my life worrying about everybody else. Until someone can tell me exactly what would happen I won't change what I'm doing and put my life on hold." (Felixstowe ABC1 Families)

"The whole world has got to change radically but no one wants to do it. Would you want to give anything up?" (Hastings ABC1 Empty Nesters/Retired)

"It doesn't make any difference what we do, unless the big contributors do something." (Formby ABC1 Empty Nesters/Retired)

"If they (the Government) mean business we'd think 'right, we'll come in with you. Other than that we're very selfish." (Hastings ABC1 Empty Nesters/Retired)

"There's nothing we can do that will make a difference until people in other countries do the same." (Felixstowe ABC1 Families) They feel that any action they are advised to take would have more impact if it involves a financial incentive (Felixstowe ABC1 Families, Hastings ABC1 Empty Nesters/Retired, Hastings Third Sector).

"Financial incentives might encourage people to start doing something." (Felixstowe ABC1 Families)

100526 SEF UKCP09 and Communities at Risk_Final

"If it's going to hit them in the pocket then yes, they will be interested." (Skegness Third Sector)

> **Financial gain/cost-cutting is seen as a potential motivator to action.**

Older people and those representing the Third Sector groups seem generally more open to taking action that mitigates climate change, irrespective of their opinions about climate change itself.

"(It's important to) take some preventative action, just in case." (Hastings Third Sector)

Adaptation

Most people are aware of the risks associated with climate change, but are unaware of how they could adapt to the changes. None of the Third Sector groups referred to having a mission statement or policies regarding climate change. Many sense a general threat but do not regard this as a personal risk and adaptation is not currently being thought of as a local issue.

Most people want to know what adaptive actions they can take but are quick to react defensively or 'pass the buck' if they feel they are being told what to do or that they are failing to play their part.

It was clear that people need to understand the implications of any actions (e.g. what effect their actions will have).

Most people welcome being given advice about what they can do as an individual to respond to climate change and adapt (U35 Singles, Felixstowe ABC1 Families, Formby C2DE Families).

"It's not clear what the government want people to do in response". (Formby C2DE Families).

A focus group respondent from the Citizens Advice Bureau commented that **"if people cannot visualise global change or rising sea levels they are unlikely to be interested"** (Skegness Third Sector). It was thought that climate change must be made personal to people in order for it to have any impact and encourage people to act.

> **Generally, people respond less to climate change information involving temperature and rainfall (i.e. changes in climate), than they do to climate change information relating to coastal erosion and flooding (i.e. the impacts of climate change). This suggests that to encourage action to adapt to climate change, communications could focus on climate change impacts such as flooding and coastal erosion, rather than temperatures and rainfall.**

Whilst the majority of respondents had not taken adaptive measures to reduce their risk interestingly, one respondent in Hastings commented that individuals and communities need to write down their own plans and contingency arrangements in case of an emergency on the coast.

One respondent described how she felt anxious when watching the film 'An Inconvenient Truth', especially as she then lived in a low-lying area. The film had partly persuaded her to move up the hill to reduce personal risk of flooding (Hastings, Third Sector).

It was felt that in time people would adapt as they always have.

"We as individuals have done many fantastic things. We've got a wind farm out there and 30 years ago, you wouldn't have had that. So, we are doing things. We will adapt. We always have". (Skegness Third Sector)

3.5 Relationship with Responsible Authorities

Responsibility for taking action both to reduce emissions and to adapt is considered out of individual control. People are looking to the Government and other major players such as industries to take a more visible stand in mitigating and adapting to climate change.

People overwhelmingly believe that responsibility for taking the lead on climate change should lie with Government and national agencies, though there is a lack of knowledge about the roles of agencies such as Defra.

Blame was centred on everyone, but particularly on the inadequate control of carbon emissions in other countries.

"We do our bit but it's down to the companies to do it too". (U35 Singles)

""I can't see as an individual you can do much about things." (Felixstowe Empty Nesters)

"The Environment Agency should be responsible because they've got all the information and they will know the best solutions." (Formby C2DE Families)

"There's nothing we can do that will make a difference until people in other countries do the same." (Felixstowe ABC1 Families)

"If they (the Government) mean business we'd think 'right, we'll come in with you. Other than that we're very selfish." (Hastings ABC1 Empty Nesters/Retired)

Concern was expressed that those with responsibility should not stand to gain financially (Hastings C2DE Families, Felixstowe C2DE Empty Nesters/Retired).

Local involvement is generally considered a good thing (Formby ABC1 Empty Nesters/Retired, Felixstowe C2DE Empty Nesters/Retired, Hastings Third Sector).

People feel that any decisions made about adapting at local level should have contributions from groups with local knowledge or expertise, as well as community or voluntary groups, and that the general public should be consulted (Hastings C2DE Families)**.**

There was a suggestion that a climate change 'toolkit' could be created for use when training people to become leaders of community or voluntary organisations.

Appointing 'community champions' to promote climate change adaption and mitigation at a grass roots level was also suggested (Hastings Third Sector). Most people have a desire to see communication between Government and local communities about climate change. This suggests that messages about climate change adaption and mitigation should come from third sector groups in conjunction with the local authority.

Face-to-face contact is by far the most preferred method, though the third sector groups acknowledged the problem of time constraints with this.

Discussion groups similar to the focus groups were favoured by most people. Questionnaires and exhibitions in locations such as local shopping centres were also mentioned (Skegness C2DE Families, Hastings ABC1 Empty Nesters/Retired).

3.6   Barriers to Communication and Engagement

One of the most effective barriers to engaging people in the debate about climate change and the need to mitigate and adapt to it is - the term 'climate change'. It would appear that the term has been effectively sullied in the public's mind by both negative press coverage and admissions of inaccurate data.

Whilst people seem happy to accept the term 'global warming' and appreciate what it means, the same does not appear to be true of 'climate change'. This could be because people consider the negative impacts of global warming to be distant, i.e. melting polar ice caps, but are inclined to view the local impacts in terms of positives, i.e. warmer summers.

Even to people who live on the coast it seems the projected sea level rise figures are simply not large enough, or clear-cut enough, to give them real concern. The climate change versus natural change argument is also a factor.

A barrier to engagement that was evident across all focus groups is that people will actively, even if subconsciously, latch onto reasons to doubt that climate change is happening and, especially, not to act.

These include:

- The 'ostrich' response - climate change is too big and scary a concept
- More immediate concerns in a time of economic uncertainty, e.g. debt, redundancy
- Conflicting or confusing information
- Selfishness - 'it won't happen in my lifetime'; 'it won't affect me directly'
- Powerlessness - 'nothing I do will make any difference'
- Defensiveness - 'it's not my problem, it's Government/industry/other countries'

"What's the point of me (taking action to reduce emissions) when you've got India and China belching out tonnes of emissions." (Felixstowe Third Sector)

3.7   Discussion

Choice

Choice plays a significant part in the way people respond to climate change issues and they are often contradictory in their behaviour. For example, they react positively to localised information but choose to see climate change as being a global issue. They accept that polar ice caps are melting but welcome the prospect of warmer summers in the UK.

The ESPACE (2005) research on Adapting to Climate Change: Raising Community Awareness found that people were unsure of the word 'climate' but understood the consequences of climate change. Flooding was seen as the biggest single danger nationally and locally, and coastal participants were the most concerned overall by the threat of flooding. Our focus group participants often reflected these same views, however they were generally reluctant to acknowledge any direct correlation between flooding and climate change, particularly at a local level.

Householders and the Third Sector say they want absolutes, not estimations, when it comes to scientific data about rates of sea-level rise, often choosing to question or reject established climate change facts. They will latch onto any report of inaccuracies in climate change data as 'proof' that much of the other data is unreliable.

Participants hear and understand messages but often choose not to act. Conversely, many people have made some lifestyle choices that mitigate against climate change despite saying that nothing they can do will have any effect. Recycling is the most obvious example and suggests that if the tools and systems are placed at their disposal (e.g. recycling bins and collections) people will take action. This example also supports the common message that people are willing to take action to reduce emissions themselves, provided the authorities (Government, local authorities and businesses) are seen to be taking action first.

Scepticism towards climate change was a dominant theme in the focus groups (shown in Figure 2). People who are sceptical towards climate change messages are often those who are well informed and have actively sought information. These active sceptics are therefore one step closer to undertaking adaptive behaviours than those who are uninformed and unengaged. Efforts should be focused towards gaining the trust of these sceptical people and interest groups and engaging them early on in any decision making process. Note: There is further evidence that this approach is effective from recent engagement activities associated with coastal protection schemes. For example, early in the development of a recent Coastal Defence Improvement Scheme there was strong opposition. Efforts were made to engage the opposing group and local people and they eventually went on to form their own local community partnership and have become strong advocates of the scheme (per comms FD 2635).

The evidence suggests that this almost casual manoeuvring by people between notions of fact, fiction, opinion or misinformation has real implications for the effective communication of issues surrounding climate change and in engaging people in adaptation. For example, how the uncertainty which forms part of the UKCP09 projections is expressed and how local facts are presented.

Challenges to Communication

Key challenges to communicating effectively on the implications of climate change include convincing people to accept that future risk isn't absolute fact, nor is it just vague opinion - it is based on a series of highly developed and informed scientific tests.

For people living in coastal areas at risk it is particularly pertinent to make the link in people's minds between climate change and coastal erosion and flooding - yet climate change appears to be, in and of itself, one of the key barriers. A question that might be asked, therefore, is: Does it matter whether people accept that climate change per se could have implications for their coastline, provided they accept that future risks exist and engage, mitigate and adapt accordingly?

Third Sector

When trying to engage local communities about climate change issues the third sector could play a pivotal role in creating lines of communication and bridges to action between the public or specialist authorities and the person on the street. For example, their involvement in local networks, knowledge of other networks and direct and indirect interests provide the basis of a useful communications conduit and means of engagement.

'Shaping our Future'[17] has been published as a result of a joint government and third sector task force brought together to explore how the third sector can support action on climate change issues. The task force comprised representatives from Defra, Department of Energy and Climate Change (DECC), the Cabinet Office's Office of the Third Sector (OTS), and the Department of Communities and Local Government (CLG), as well as a mix of 16 third sector leaders. The publication explores the opportunities that tackling climate change offers to the third sector: the opportunity to show leadership, to build resilient communities, to develop and provide sustainable public services, to secure green jobs and to encourage and support individual and community level behavioural change.

A challenge met by the research team, which will also be faced by others in developing and utilising third sector organisations, relates to engaging them. Specifically, much of the information that is readily available about the organisation, as well as details of who is the responsible contact person, is out of date. Organisation members change frequently. Approximately 50% of the researched relevant third sector organisations were uncontactable for the following reasons: telephone call went straight to voicemail and calls not returned; contacts no longer relevant (one had left six years previously); individuals were no longer involved in the organisation; the organisation no longer existed.

3.8   Key Findings

Key Findings - UKCP09

People want to receive concrete facts about climate change, not projections.

The majority of people get most of their information on climate change from the TV and newspapers.

Surprisingly the internet is not a key source of information on climate change. Some local authorities are trusted sources. The BBC is seen as a trusted source.

There is a greater acceptance that climate change is happening when people are presented with global scale impacts such as polar bears losing their habitats and melting ice caps. Conversely, sea level rise at up to 3mm a year was not enough to register much significance and this led people to question the significance of sea-level rise locally.

People are generally aware of climate change and its impacts but will look for reasons to be sceptical or to not take action. These include conflicting or confusing information, timescale, lack of direct or local impact on their life, weather changes not reflecting 'climate change' messages.

It was evident that the propensity of thinking was towards mitigation rather than adaptation, with very few individuals involved in adaptive behaviours.

People want to hear what solutions there might be and what they can do to help.

Third sector and local 'champions' offer the prospect of being trusted local messengers.

Global warming is a better understood and more accessible term than climate change.

Individuals understand the distinction between the weather and climate change when it is explained simply.

People respond better to global issues, 'shock tactics' and emotive images, and references such as children and animals than to facts and figures. Therefore, mitigation and adaptive behaviours can be encouraged by suitable images of animals and references to future generations.

Hard to reach groups were as receptive as any other segment to the messages and equally understood the issues.

Messages need to signpost where further information is available.

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[17] http://www.green-alliance.org.uk/uploadedFiles/Our_Work/Final%20Task%20Force%20Report%2012.3.10.pdf

100526 SEF UKCP09 and Communities at Risk_Final

Key Findings - Coastal Change

People want to receive concrete facts about coastal changes and sea-level rise. The link between climate change, sea level rise and flooding should be explained to the public as this is not clear to some.

Messages relating to adapting to sea-level rise and coastal erosion are likely to be better received if they are divorced from climate change messages (which invoke scepticism and are seen as less local). If the emphasis is placed on flooding, and coastal erosion, adaptive actions are more likely to be forthcoming.

On the subject of adaptation a regular question was 'what can we do? This raises two important issues relating to communication and engagement. Firstly, being able to offer an answer to the question and secondly not starting the communication and engagement until one is able to offer answers, even if it is unpalatable. This accords with the later stages of the CAPE process.

Messages should be focused on the impact of climate change both locally and globally. Locally maps need to show the potential impacts of climate change on coastal erosion.

Messages should explain the amount of change, particularly on the coast, which can be attributed to climate change and that which is due to natural change.

Messages relating to adaptation to coastal change need to be targeted at specific audiences and relate to specific locations and circumstances. The presence or absence of defences and timescales for changes in SMP or other policies will dictate the timeframe for communicating adaptation messages.

People feel that any decisions made about adapting at local level should have contributions from groups with local knowledge or expertise, as well as community or voluntary groups.

Even to people who live on the coast it seems the projected sea level rise figures are simply not large enough, or clear-cut enough, to give them real concern.

Householders and the third sector say they want absolutes, not estimations, when it comes to scientific data but often choose to question or reject established climate change facts.

If the tools and systems are placed at their disposal people will take action.

3.9 Recommendations to Improve Engagement

Clear Messages

- Any messages to the public should be written in plain English and not be too technical or contain too many figures. They should be informative and factual. Many people are sceptical about the reliability of evidence following negative climate change news coverage. Where possible use facts and proven scientific evidence rather than probabilities and projections. Do not use the UKCP09 wording verbatim. The UKCP09 data should not be relayed directly to the public it needs to be tailored appropriately.

- Avoid complicating messages with climate change projections. The link between climate change, sea level rise and flooding can be explained, but may not be fully accepted by many people. Some refuse to believe in global warming, particularly in light of the recent cold winter.

- By focusing on communicating the impacts of climate change such as flooding and coastal erosion rather than the causes, this will assist in avoiding unnecessary public confusion and scepticism about the causes of climate change. Examples from coastal erosion and flooding incidents should be drawn.

- People prefer simple pictures that can be easily digested to sophisticated imagery that involves more intellectual processing. Images of animals resonate with people and could be used to highlight the effect of climate change and the need to take action at an individual level.

- Messages should focus on the local impact of climate change. Graphics showing the local potential impacts of climate change over the short and long term are likely to be more effective than more complicated maps, graphs and plans.

Trusted Messengers

- When considering messengers some of the key attributes are local knowledge, recognised expertise, no financial vested interest, community interest and established trusted relationships.

- Clarification on roles and responsibilities of organisations involved in coastal planning would help with public understanding and build trust. At a community level people are unsure of Defra and its role. Defra would benefit from raising its profile at a local level.

- Trust is easily lost, faith in some messengers in particular localities may have been lost and therefore less suitable for conveying difficult messages. Tailored messages using local information sources and to specialist interest groups such as golfers or anglers, could prove to be a valuable vehicle to highlighting climate change flooding and coastal erosion issues and would help to build trust and raise awareness of authorities work locally.

- Local newspapers need to be assessed as to how trusted and useful they might be to any campaign.

- People trust and pay attention to messages delivered through national TV news and documentaries. These could usefully support adaptation through placed features/programmes.

Means of Communication

- Face-to-face, grass roots communication should take place wherever this is practical and viable.

- Consultation events could take a similar format to the focus groups, which were well received. These should be delivered in the community by trusted local messengers.

- Third sector groups can provide a trusted local resource for disseminating information. Local climate change ambassadors and/or trained community members could be used to deliver climate change messages to local residents. A train-the-trainer toolkit could be developed.

- Locally produced and relevant information, for example leaflets/brochures are generally well received, however their effectiveness is dependent on how trusted the messenger is.

- Messages relating to adaptation need to be targeted according to locations and audiences.

Encouraging Personal Responsibility and Engagement

- To encourage personal responsibility UK Government and responsible agencies should continue to lead by example and promote appropriate actions. The importance of efforts already being made by local people and groups should be acknowledged at every opportunity.

- Third Sector groups are keen to be involved in communication activities about climate change. Their involvement in local networks, knowledge of other networks, local communities and direct and indirect interests provide the basis of a trusted communications conduit and means of engagement.

- A significant number of people are engaged in some climate change mitigation activities, e.g. recycling, but very few described being involved in any adaptive actions.

- Encouragingly most people want to know what adaptive actions they can take. Defra and responsible organisations should focus awareness raising on what adaptation means at a local level and how individuals can adapt (for those who are engaged the mitigation behaviour is already understood).

- To encourage actions to adapt to climate change, communications should focus on climate change impacts such as flooding, rather than temperatures and rainfall.

- Suggestions for action to mitigate should be linked to cost savings to individuals where relevant.

- Across the groups flooding was considered a significant issue affecting their natural environment. In Louth, Skegness and Hastings respondents discussed the need for plans to prevent flooding. When engaging people with flooding issues suggest practical ways that residents and third sector groups can be involved, for example in preparing local emergency plans, increasing preparedness and property resilience.

3.10 Applying the Findings to Engagement Scenarios

3.10.1 Introduction

This section sets out how the research findings might be applied to engagement activities in three different coastal situations - scenarios. These scenarios are based around theoretical SMP policies. The engagement and communication approaches outlined below are underpinned by the evidence from the focus group work. The aim was to establish which images and messages resonate strongly with the climate change related messages, including the impacts, mitigation, and need for adaptation. The focus group discussions did not examine perceptions of existing or future standards of protection nor did it focus on perceptions of SMP policies, these are theoretical examples from similar situations around our coastline.

For these scenarios we have assumed the SMP policies are following a process of consultation. The approaches suggested under the scenarios generally equate to Steps 4, 5 and 6 of the CAPE Guidance methodology.

The key message to take forward is that UKCP09 projections should not be a lead message in initial communication work. The projections should be used with a 'light touch' with messages localised and tailored.

3.10.2 Shoreline Scenarios

The shoreline management policy options most applicable to the coast, as defined by Defra, are:

> ➢ Hold the line (HTL): maintain or upgrade the level of protection provided by defences or natural coastline.

> ➢ Managed realignment (MR): manage the coastal processes to realign the 'natural' coastline configuration, either seaward or landward of its present position.

> ➢ No active intervention (NAI): a decision not to invest in providing or maintaining defences or natural coastline.

These policy definitions only tell part of the story. It is the way in which these policies are implemented and in particular over time that is most important to coastal communities and stakeholders

The SMPs establish which of these policy options is most suitable for a particular part of the coast over time, or epochs. It is not unusual for the SMPs to foresee the currently most appropriate policy changing over time. For example a Hold the Line (HTL) being replaced with Managed Realignment (MR) in 2055. The SMP Policy choices and the likelihood that in certain locations these will change are reflected in the following scenarios. This adds an additional layer of complexity to engagement activities and in particular when engagement should be undertaken.

The hypothetical scenarios with their policy frameworks will be familiar to many locations around the coast. It is quite likely that for each scenario there are already a number of potential case studies that could be used as a learning tool.

The shoreline scenarios consider the follow the timeframes and epochs used in SMPs:

- Present day - 2025
- 2025 - 2055
- 2055 - 2105

Scenario One - This considers a location where the current appropriate policy is Hold the Line, although the most suitable policy beyond 2025 is Managed Realignment. The scenario considers significant future losses of land, loss of businesses and the loss of several isolated properties, including ones of local cultural value.

Scenario Two - This considers a location where the current defences provide an appropriate level of protection to a small town. The SMP policy choice from the present day onwards is for these defences to continue to be maintained without improvement on the existing alignment. As a result the community is faced with an increasing risk of flooding as a result of sea level rise. The current level is 1 in 200 likelihood of an event occurring in any year. This is a variation of the Hold the Line policy.

Scenario Three - This considers a location where the SMP policy is immediately No Active Intervention is immediately the most appropriate policy and as a result individual scattered homes and a small community will live with increasing risks from flooding and the loss of land to coastal erosion.

3.10.3 Engagement and Communications Approach   Scenario One

Description

This considers a location where the current appropriate policy is Hold the Line, although the most suitable policy beyond 2025 is Managed Realignment. The scenario considers significant future losses of land, loss of businesses and the loss of several isolated properties, including ones of local cultural value.

Key questions

- What do you want people to do?
- What do you want to achieve from the communications?

Assumptions

- Bunds will not be viable for long-term maintenance. New defences are proposed but these are set back from the current line.
- There are 15 years in which to prepare individuals within the locality.
- This 15 year period also presents opportunities to investigate adaptations.

Likely concerns and issues

- Why me? Why us?
- Why can't you afford to maintain the defences?
- What support/help will we get?

Strategic approach to communications

The communications approach in this scenario lends itself to micro-communications using Environment Agency/Defra/local authority representatives. Thought needs to be given to who is the most trusted messenger within the locality. There is some evidence from the focus groups that local authorities might not be the most appropriate in some cases. The messenger is crucial to this approach. The approach requires working at grass roots level, possibly via SMP actions, to communicate on a one-to-one or very small scale level; to build up trust with people likely to be at risk; to explain the options available (eg self-defence, adaptation), offer mentoring and advice.

Thought needs to be given to the initial contact, using existing trusted contacts, for example NFU, FWAG, third sector, established heritage organisation.

Communication of climate change projections shouldn't be a key message but one of a suite of supporting messages.

In this scenario the strategic approach would require a commitment to early engagement and a 15 year commitment to build and maintain trust and encourage the community to adapt to changes, which will require an appropriate funding commitment.

The communications and engagement approach should take account of current best practices as outlined in CAPE Guidance, Building Trust with Communities and updated as guidance changes.

Currently best practice involves:

- Listening to stakeholders and their concerns;
- Explaining and ensuring understanding;
- Honesty, clarity and managing expectations; and
- Providing opportunities for involvement and participation.
- Providing feedback.

Specific communication activities - timeline

Stage 1 – immediately inform and start engagement.

Stage 2 – stakeholder capacity development (years 1 to 5).

Stage 3 – longer-term support for stakeholder adaptation (year 6 onwards).

Identify the most trusted messenger(s)

Whilst the underlying message is that existing properties and businesses are threatened in the longer-term there is the opportunity to deliver potentially positive messages through a consultation process. Case study examples of successful adaptation elsewhere should be a key feature. To decide on adaptations that are possible within an area, this will require research by the lead partner. The UKCP09 website[18] now provides some useful examples that could be drawn upon where relevant to the local areas.

The hypothetical 15 year timescale must be capitalised on with regard to planning the transition and possible negative media coverage. It would make sense to be open, honest and not too fearful of publicity, even if it is negative, from the outset.

Climate change projections do not need to feature in early communications, although they will become more relevant during the transition period, particularly when considering relevant adaptations. The evidence from the focus groups is that it will create a barrier to engagement. Over the 15 year period there is an opportunity to introduce the concepts of increasing risk as a result of climate change.

Even if there is a strong reaction from people/businesses at risk, with reports in the local press, it must be remembered that a potential nightmare scenario (e.g. local landmark/Grade I Listed Building falls into the sea) is diluted if:

a. It's not happening imminently.

b. As and when it does happen people/action groups/the media have had 15 years of drip-fed awareness that it will happen and it's not technically 'new' news. The 'shock-horror scenario' could become 'sad inevitability' with time - provided people are forewarned.

Get the key messengers briefed and the message out locally before coastal change occurs. Ensure the local community is aware that they will be involved in the transition process.

Fairlight Cove (5 miles east of Hastings) provides an example of organisations working in partnership to secure local funding and manage coastal erosion. The Fairlight Cove Coastal Protection Scheme which was completed in 2008, providing the community with protection for the next 50 years. The partners include Fairlight Cove Preservation Trust (Residents Group), Rother District Council, Natural England, Defra, Fairlight Parish Council and Fairlight Residents Association, Terry Oakes Associates, Hastings Geological Society and the contractors).

In Hastings respondents spoke favourably of the management practices for this stretch of coast and authorities engagement with the local community (see photographs below). The long term future protection for the community cannot be guaranteed, however the partnership that has been established at Fairlight Cove can be usefully drawn upon to provide key messages ready for when the community has to adapt to the eroding coastline (over the next 50 years).

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[18] The full suite of adaptive activities were not displayed on the UKCP09 website during the development stages of this project, thus were not used in the focus group presentations to test messages.

100526 SEF UKCP09 and Communities at Risk_Final

Stakeholder consultation and community involvement. Problems with cliff failure at Fairlight Cove (left) and Natural England explaining the archaeological issues to local residents. Source: Terry Oakes Associates

Establishing a local stakeholder group would give time to engage with the local residents and businesses to explore localised adaptation and mitigation opportunities. The engagement process should involve appropriate specialists, and individuals with experience from other areas.

Create link between the local stakeholder group and the local authority. Create links between the local stakeholder group and wider interests such as NFU, FWAG, Ramblers Association, Business Link, Wildlife Trust, RSPB, BASC, heritage groups and any other locally active Third Sector organisations. These organisations may provide long-term support for adaptations.

Engage farming interests through NFU and FWAG on possible ways to adapt farming practices using case studies.

Provide case studies examples of land management change, heritage buildings being preserved through resilient adaptations, local community defences to reduce risk. Arrange site visits to demonstrate how positive change might be achieved.

Establish if needed smaller specialist Working Groups to look at specific aspects such as land management and site conservation.

Opportunities relevant to the locality should be explored as stakeholder interest and trust is developed, these might include farm diversification, alternative land uses, new habitat creation opportunities, leisure and tourism, new business opportunities.

It is important to develop trust with the affected individuals and community and regular stakeholder meetings should be held to maintain interest and momentum throughout the transition process.

Information regarding progress should be disseminated through community consultation events, regular newsletters and attendance at Parish Council meetings, etc.

Graphics and images

It is suggested that to help with explanations, both initially and throughout the process simple graphics and the use of local photographs and easily understandable plans are used. In this particular scenario as there is time for the community to adapt there is no need to use any shock or emotional tactics to engage. In this scenario those affected are likely to be shocked and emotionally engaged without the need to grab their attention with particularly graphic images. Simple and locally relevant 'real' images, examples below include images from the Alkborough realignment on the Humber which illustrate positively where managed realignment and land management changes have successfully been integrated:

Scenario 1

Existing Defence

Current - 2025

New Land Uses

New Defence

2025 onwards
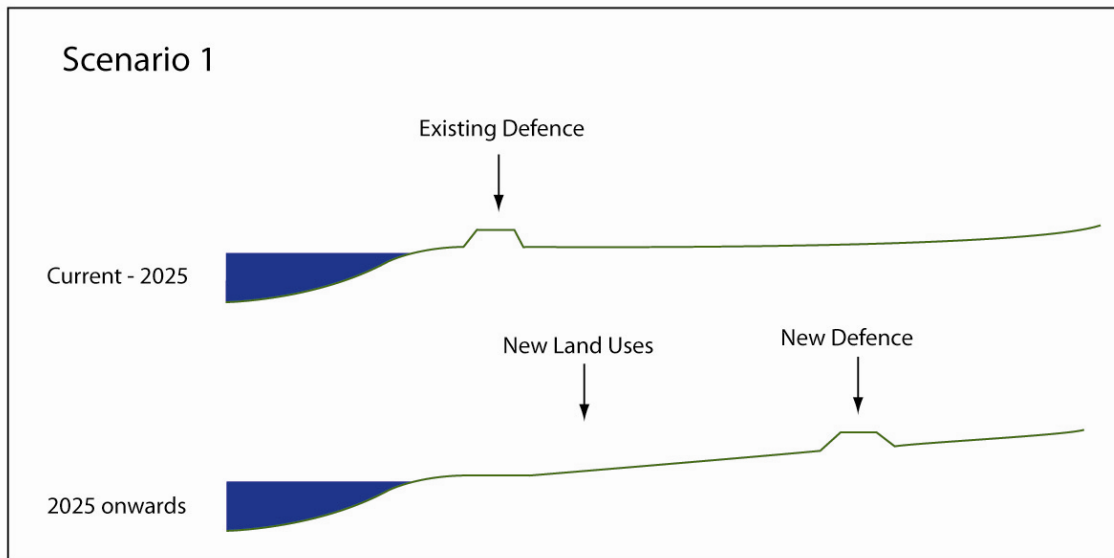
Simple illustration of realignment with defences set back

Before (left) and after (right) managed realignment – Alkborough Flats

3.10.4 Engagement and Communications Approach - Scenario Two

Description

This considers a location where the current defences provide an appropriate level of protection to a small town. The appropriate policy choice from the present day onwards is for these defences to continue to be maintained without improvement on the existing alignment. As a result the community is faced with an increasing risk of flooding as a result of sea level rise. The current level is 1 in 200 likelihood of an event occurring in any year.

Key questions

- What do you want people to do?
- What do you want to achieve from the communications?

Scenario assumptions

- Small coastal town with sea defences not being upgraded, despite the risk of flooding due to 3mm sea level rise due to climate change.
- Cost is a key factor in the communications.
- You cannot engage with individuals on a one to one basis, this scenario deals with a whole community showing a diverse range of social, economic, ethnic and environmental interests.

Likely concerns and issues

- Why me? Why us?
- Why stop defending now?
- Why can't you afford to maintain the defences?
- What does increasing risk mean?
- What support/help will we get?

Strategic approach to communications

Get the bad news out early in this scenario - the scale of the localities affected - ie whole towns, means communication would inevitably have to be on a more broad public scale so managing negative publicity is a real issue.

This scenario would benefit from a pyramid approach to the dissemination of information, starting with politicians/key players at local level through briefings just prior to any announcements. They will doubtless make more noise than most, but, being in charge of budgets themselves, will at least be able to grasp the financial implications.

Cost will be a key issue for the public and a significant communication issue for explanation. Be honest and upfront about costs and link them to changes in risk.

A challenge for this community is to understand and grasp changes in risk. Evidence suggests a sea level rise of 3mm per year is not regarded as being significant to some. A 1 in 200 event and the fact it hasn't happened yet, could be cause for complacency. Also any exacerbation of risk in these terms will be very difficult to understand. A reduction say to 1 in 150 would be difficult to comprehend as being significant by some; conversely by others any reduction could be used for scaremongering.

The communications needs to be planned on a long-term basis.

Good visuals and graphics could provide the opportunity for people to successfully understand changes in risk and promote preparedness and resilience.

The communications and engagement approach should take account of current best practices as outlined in CAPE Guidance, Building Trust with Communities and updated as guidance changes. Currently best practice involves:

- Listening to stakeholders and their concerns;
- Explaining and ensuring understanding;
- Honesty, clarity and managing expectations;
- Providing opportunities for involvement and participation; and
- Providing feedback.

Specific communication activities - timeline

Stage 1a – identify and brief key high-level stakeholders, including local politicians and local media immediately.

Stage 1b – public announcement (concurrent with 1a), providing factual information.

Stage 1c – 'firefight', be prepared to rebut, explain, provide further substantive evidence.

Stage 2 – long-term community support for community adaptation and resilience.

Identify the key high-level stakeholders, politicians, local authority officers, media.

Identify the most trusted local messenger(s) and experts to substantiate the message.

Any strategy that clearly states that it is not sustainable to defend is unlikely to have any public support. This should be accepted, along with media fallout.

UKCP09 climate change projections do not need to figure strongly in any initial messages and rebuttals. Experts need to keep messages simple and local with references for example to measured sea level rises along that specific piece of coast and any supporting photographs.

Supportive campaigns on community flood risk plans, individual householder resilience plans, sustain media interest in pro-active support for adaptation. Campaigns could include householder leaflets, exhibitions, public meetings, briefings and training for active Third Sector groups to enable them to support their community of interest. This is a long-term commitment to maintaining awareness and continuity. A focus for this long-term commitment could be working with local secondary schools and colleges. UKCP09 projections could form a supporting strand of information to all this work.

Graphics and images

Some simple graphics could help explain the initial announcements, for example see Scenario 2 below. Also local evidence of sea level rise, ideally supported by photographs, would be valuable. Easily understood local maps and plans should be used.

**Simple illustration of realignment with defences set back**

Formby Point
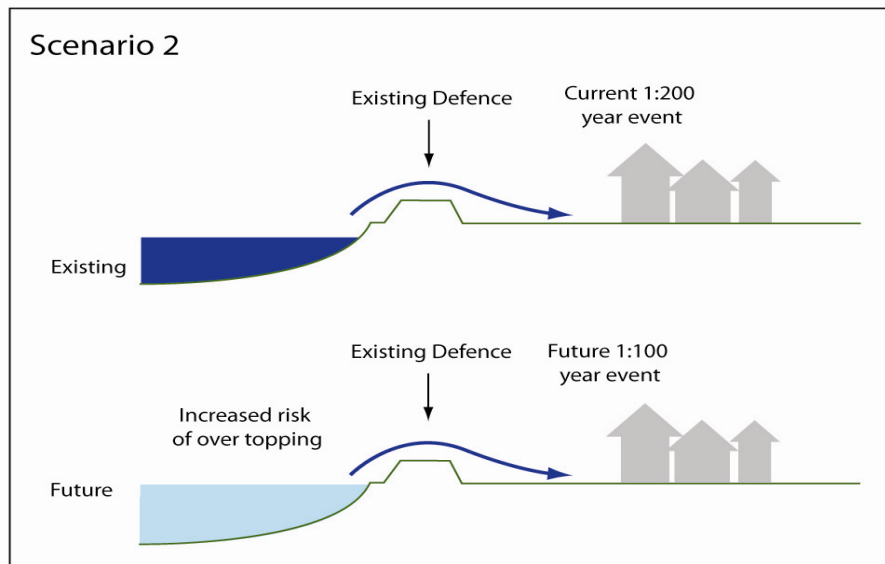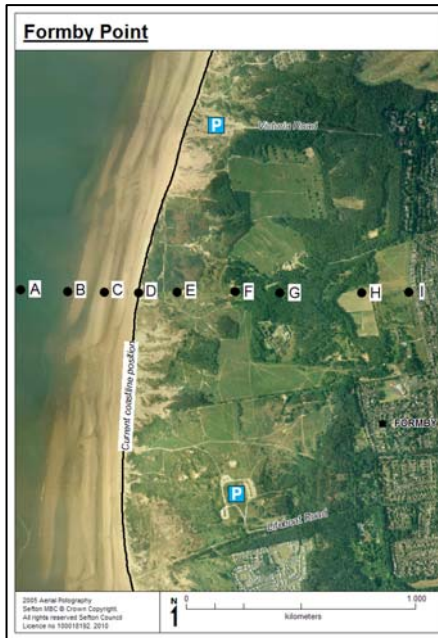
As part of the Pathfinder programme, Sefton Coastal Partnership has been using maps and coastal change questionnaires to gauge the local community's baseline understanding of where the coast was 150 years ago and where it will be in the next 150 years (see image below). Once the baseline public understanding has been established through research methodologies, adaptation messages could be tailored accordingly.

For the longer-term campaigns to engage people in the need to consider preparedness and resilience use of simple emotive images would be valuable, for example children and animals (see image to the right).

100526 SEF UKCP09 and Communities at Risk_Final

The focus group research findings indicated that local information from trusted local sources was more favourably received. Messages that are a call to action, 'climate change begins at home', 'the future is in our hands' are likely to be more favourably received.
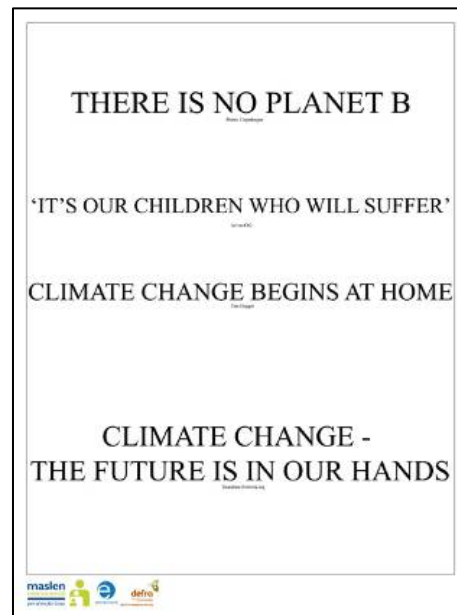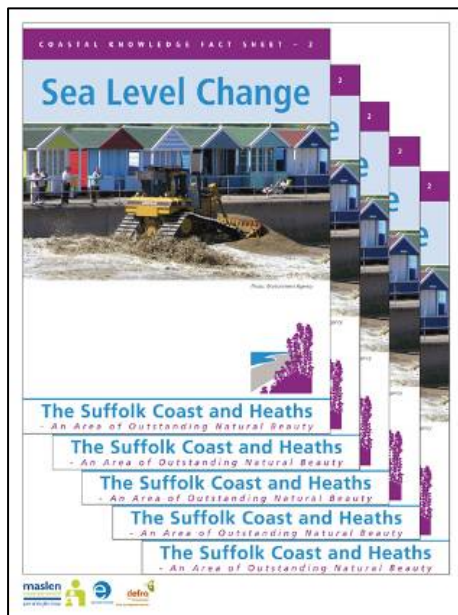
3.10.5 Engagement and Communications Approach - Scenario Three

Description

This considers a location where No Active Intervention is immediately the most appropriate policy and as a result individual scattered homes and a small community will live with increasing risks from flooding and the loss of land from coastal erosion.

Key questions

- What do you want people to do?
- What do you want to achieve from the communications?

Scenario assumptions

Similarities to scenario one, however, increasing risk starts immediately.

Likely concerns and issues

- Why me? Why us?
- Why won't you intervene?
- Why can't you afford to protect me?
- What does increasing risk mean?
- What support/help will we get?

Strategic approach to communications

It is likely that this community will already be aware of the potential threats arising from coastal processes.

The communications approach in this scenario necessitates micro-communications using Environment Agency/Defra/local authority representatives.

North Norfolk's current Pathfinder programme provides an example of where micro-scale engagement approaches are being used deliver adaptive solutions. Property advisors are working one-to-one with people in the community of Happisburgh to support continuity and address the dereliction caused by coastal change.

Thought needs to be given to who is the most trusted messenger within the locality. There is some evidence from the focus groups that local authorities might not be the most appropriate in some cases. The

100526 SEF UKCP09 and Communities at Risk_Final

messenger is crucial to this approach. The approach requires working at grass roots level to communicate on a one-to-one or very small scale level; to build up trust with people likely to be at risk; to explain well in advance of the threat becoming real or imminent what options are available (eg self-defence, adaptation, leave), offer mentoring and advice.

Keep the initial messages factual and relate to natural coastal processes rather than over complicate with climate change projections.

The communications and engagement approach should take account of current best practices as outlined in CAPE Guidance, Building Trust with Communities and updated as guidance changes.

Currently best practice involves:

- Listening to stakeholders and their concerns
- Explaining and ensuring understanding;
- Honesty, clarity and managing expectations;
- Providing opportunities for involvement and participation; and
- Providing feedback.

Specific communication activities - timeline

Stage 1 – inform and engage immediately.

Stage 2 – immediate and ongoing support for individuals and groups of individuals.

Identify and involve the most trusted messenger(s).

Explain timescales and the changes most likely to occur.

Be honest and clarify why these decisions are made and explain why the community is faced with this particular situation.

Signpost where support might be available, for example counselling, stress management, citizens advice, debt management, housing and benefits.

If managing some of the flood risks is a local community option then provide support to investigate this.

Graphics and images

Use of simple graphics and photos to explain the coastal erosion and processes to the community. The photographs (below) were used to raise awareness of the coastal erosion issues facing Fairlight Cove. These types of photographs can be useful to explain the potential local impacts of climate change and coastal processes.

Coastal erosion at Fairlight Cove an example of a no active intervention scenario. Source: Terry Oakes Associates

If timescales are the critical issue then the use of oblique aerial photographs showing increasing risk could be valuable. The use of historic local photographs and plans could support the evidence base for natural coastal change and are likely to be appreciated by the local community, for example Sefton Coastal Partnerships have been raising awareness of the historical past, present and future changes to the coastline and these images (below) are well received and understood by the public.

Presentation slides – To improve understanding and explain the need for adaptation in Sefton. Source: Sefton Coastal Partnership

A series of photographs and visualisations have been successfully used at Fairlight Cove to demonstrate the past, present and future 'no active intervention' future scenarios (see three photos below).

Cliff exposed to wave attack and erosion (2004). Source: Terry Oakes Associates

100526 SEF UKCP09 and Communities at Risk_Final

Cliff top position 1988 to 2004. Source: Terry Oakes Associates

No active intervention scenario – Prediction for Long Term Recession (1998 aerial). Source: Terry Oakes Associates

Appendices

A. Stakeholder 'Communicating Climate Change' Questionnaire

Communicating Climate Change Questionnaire

Introduction

Defra is exploring the best ways to engage individual citizens, communities and the third sector[19] with the UK Climate Change projections (UKCP09). This particular piece of research is concerned with communities who could be affected by coastal change. The work involves exploring the most appropriate messages for particular citizen segments and the possible barriers to understanding UKCP09 (further details are attached at the end of the questionnaire).

As a first piece of the work we are seeking to better understand how some of the major stakeholders in these localities are being, or have recently been, communicating UKCP09 to local communities. This questionnaire will help us with this work and your assistance would be greatly appreciated. We will feed back to you the results of our work, which we hope will assist you in your future work.

Questionnaire

Organisation description (please describe below)

Contact details (please provide below)
Name:
Address:
Email:
Tel:

Has your organisation been involved in communicating climate change messages to the public in coastal localities

Yes ☐	No ☐ (please go to Question 4)

If you answers 'Yes' to Question 3 please state: Where was this?

If you answers 'Yes' to Question 3 please state: When this was? (if after 2009 did you refer to UKCP09)

If you answers 'Yes' to Question 3 please state: Are the materials (publications / press releases etc) available?

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[19] The Third Sector is a subset of society comprising organisations, which are non-governmental, value driven, and not for profit. They are characterised by their diversity and passion.

If you answers 'Yes' to Question 3 please state:
What public / community responses did you get to the 'climate change 'element of any communications?

Do you have any plans which involved communicating messages which include UKCP09 to the public or communities in coastal localities in the next six months?

Yes ☐   No ☐ (please go to Question 5)

If you answers 'Yes' to Question 4 please describe the plans:

What do you consider to be (based on your own personal experience) the barriers which might limit understanding of climate change projections? (please describe below)

Do you consider (again from your own personal experience) that there might be risks associated with communicating UKCP09 climate change messages to citizens and communities in coastal localities? (Please could you describe these below)

Are there any 3rd Sector Organisations in your locality which you think should have an interest in the climate change and coastal change agenda? (please could you list these below)

Thank you for your time. If you would be willing to spend a further 10 minutes in a telephone conversation with one of our team to explore further some of your answers please indicate below.

Yes   ☐
No   ☐

B. Selection of Focus Group Locations

Location	Region/county	Pathfinder / non pathfinder	Authorities	Type of area, rural / urban / coastal	hazard / risk	Contacts	Other comments	Non-coastal comparative group
Coast line between Mablethorpe and Skegness	Lincolnshire	Pathfinder	Lincolnshire County Council	Coastal towns and rural communities	Very vulnerable from both coastal erosion, sea-level rise and flooding from the sea	Recommended by Defra, also contacts in North East Lincolnshire DC and Lincolnshire County Council	Coastal regeneration area. People move here to retire. The Environment Agency have a 50 years programme of beach recharge planned for coastal protection. Caravan sites located at risk.	Yes- non-coastal comparative group likely to be inland from Mablethorpe
Hastings, Fairlight Cove and Cliff End	East Sussex	Pathfinder	Hasting Borough Council	Small coastal fishing town, and rural areas (Fairlight Cove and Cliff End)	At risk from both coastal erosion (Cliff End), sea-level rise and coastal flooding (Fairlight Cove and Hastings)	Very good contacts (including Climate South East, ESPACE and subcontractors), willingness to help	Good mix of potential participants, including those likely to have heightened knowledge who are part of the Fairlight Cover Presentation Trust. High proportions of retirees. They have been lobbying government to get a scheme in place. They secured the scheme with major flood defences at Cliff End. Heavily defended at Hastings with Groynes and harbour itself.	No
Formby Point and Southport, Sefton	North West	Pathfinder	Sefton Borough Council	Rural	Low-lying at risk from sea-level rise and sea flooding. Dune systems provide the protection.	Good contacts	Active dunes system. Sefton protected by dune system, but much of the area behind dunes below mean sea level.	No
Felixstowe	Suffolk	Non - pathfinder	Suffolk Coastal District Council	Urban area and port	At risk from both coastal erosion, sea-level rise and sea flooding	Excellent contacts, easy to set up focus groups	Commercial relationship with the sea. Biggest UK port and major employer. Badly affected in 1953. Full range of communities can be identified.	No

C. Focus Group Timetable and Locations

Defra: UKCP09 & Communities at Risk of Coastal Flooding and Erosion - Citizen Focus Group Composition

Group No.	Locations	Venue, Date & Time	Quotas
1	Louth (non-coastal comparative group)	The Beaumont Hotel 66 Victoria Road Louth LN11 0BX Tuesday 2nd February 2010 2.30-4pm	C2DE Empty nesters/retired Gender mix
2	Skegness (and surrounding coast line)	The Vine Hotel, Vine Road, Seacroft, Skegness, Lincolnshire PE25 3DB Tuesday 2nd February 2010 6-7.30pm	Socio economic mix Families Gender mix
3	Formby (and surrounding coast line)	Formby Library Meeting Room Duke Street Formby L37 4AN Thursday 4th February 2010 2.30-4pm	ABC1 Empty nester/retired Gender mix
4	Formby (and surrounding coast line)	Formby Library Meeting Room Duke Street Formby L37 4AN Thursday 4th February 2010 6-7.30pm	C2DE Families Gender mix
5	Formby (and surrounding coast line)	Formby Library Meeting Room Duke Street Formby L37 4AN Thursday 4th February 2010 8-9.30pm	Socio economic mix Young singles Gender mix
6	Felixstowe (and surrounding coast line)	Felixstowe Town Hall Council Chamber, Undercliffe Road West, Felixstowe, IP11 2AG Tuesday 9th February 2010 2.30-4pm	C2DE Empty nesters/retired Gender mix
7	Felixstowe (and surrounding coast line)	Felixstowe Town Hall Council Chamber, Undercliffe Road West, Felixstowe, IP11 2AG Tuesday 9th February 2010 6-7.30pm	ABC1 (possible mix including C2DE) Families Gender mix
8	Hastings (and surrounding coast line)	The Bridge Community Centre 361 Priory Road Hastings TN34 3NW Wednesday 10th February 2010 2.30-4pm	C2DE Empty nesters/retired Gender mix
9	Hastings (and surrounding coast line)	The Bridge Community Centre 361 Priory Road Hastings TN34 3NW Wednesday 10th February 2010 6-7.30pm	C2DE Families Gender mix

Third Sector Focus Groups

Group No.	Location	Venue, Date & Time
1	Skegness (and surrounding coast line)	The Vine Hotel, Vine Road, Seacroft, Skegness, Lincolnshire PE25 3DB Tuesday 2nd February 2010 8-9.30pm
2	Felixstowe(and surrounding coast line)	Felixstowe Town Hall Council Chamber, Undercliffe Road West, Felixstowe, IP11 2AG Tuesday 9th February 2010 8-9.30pm
3	Hastings(and surrounding coast line)	The Bridge Community Centre 361 Priory Road Hastings TN34 3NW Wednesday 10th February 2010 8-9.30pm

D. Focus Group Discussion Guide

D.1 Public Focus Group Discussion Guide

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

General Public Focus Group Discussion Guide

Please note this is intended as a guide to the moderator only. Sections could be subject to change during the course of the focus groups if, for example, certain questions do not illicit useful responses.

Also as the programme of focus groups progresses it is likely that the presentations will be amended to test alternative approaches.

Introductions (5 mins) (Claire)

My name is Claire, I work for a research agency, and this is my colleague Joanne. Defra, the part of the UK government that deals with the environment has asked us to work on a project to help them better understand how to inform people and communities about how climate change is likely to affect the UK, and its possible effects in coastal areas. To make this possible, we need to ensure that people can get the most helpful information and advice, in the right ways and places, so they can understand how climate change might affect them and their community.

Also present is Allen (Tuesday) / Katy (Wednesday) from Defra who is here because she/he is interested in listening first hand to the focus group discussion. She/he is only here as an observer. If you have any specific comments or feedback for Defra, we have time some time at the end of the focus groups and we will collate these comments from you.

We are going to be talking about your understanding of climate change and the potential risk of coastal flooding and coastal erosion. We'll be asking for your ideas and views on how information on this can be improved. This will be fed back to Defra.

Nothing you say during this session will be linked to your name and your details are not passed on to anyone. There are no right or wrong answers – I just want to hear your views. We are all well aware that there are a range of opinions and debates around Climate Change so please say what you think, I want to hear all your opinions, but please try to talk one at a time.

I will be recording the session so I do not need to take notes as you are talking. However, the recording is used purely to help me write my report. The recording is never handed on to anyone else.

Health & safety introduction – point out fire escape routes. (Claire)

The focus group will be broken up into different sections to focus our discussions on particular topics. After the introductions and opening discussions Joanne will talk you through 3 short presentations, about 5 minutes each. After each I will be asking for your comments and thoughts and I have a few specific questions which we are interested in knowing your response to. After the 3 presentations we will have some further discussions around some further specific questions I would like to ask you.

The session will last about 1.5 hours. Do you have any questions before we begin? (Claire)

Respondent Introductions (5 mins) (Claire)

- Can you please introduce yourselves? Can you tell me your first name?
- Tell me a bit about yourself:

- Where are they from?
- How long have they lived in the area?
- What do they do for a living (if working)?
- Family circumstances/living arrangements
- How would they describe the area in which they live?

Climate Change Awareness (5 mins) (Claire)

- We're going to start off by discussing your local environment. What do you think are the most important issues for your local environment? *Moderator to write issues on cards.* PROMPT flooding and coastal erosion if not mentioned.
- What do you know or believe about each of these issues?
- Where do you get your information from?
- Are some issues more important than others? *Respondents to put the cards in order of importance.*
- Where does climate change fit in, if at all, amongst the main issues within your area?
- Why do you say that?

Knowledge of Climate Change (10 minutes) (Claire)

We're now going to talk a bit more about climate change.

When you hear the words 'climate change', what does it make you think of? *Flipchart word association exercise. (Prompt about sea level rise to see what they know about coastal erosion, flooding, changes to beaches increases in summer temperatures.)*

Do you think of it only in terms of this area where you live, or do you think of it as a national or even global issue? (Based on the location the moderator will be given specific prompts relevant to the local region, for example Formby sand dunes, Hastings beach erosion/cliff erosion).

Repeated later - Where do you get your knowledge or information about climate change from? (prompt newspapers/television/ internet/involvement in action groups/local authority)

Do you think that climate change is having, or might have in the future, any effect on you, your family and the places where you live? *(Prompt for changes in the area, e.g. beaches, coastline (same comment as above re relevance to local region).*

Presentations (3 presentations with feedback sessions after each, 10 – 15 minute slots)

Introduction to presentations by Claire, re introducing Joanne. Reminder 3 presentations are planned with gaps between each for feedback to be captured on each – ask them not to go for a comfort break during a presentation because these are important parts of the focus group for them to discuss.

Presentation 1 (5 minutes) (Joanne)

This first presentation is an introduction to what are called the UK Climate Projections. This is the most up to date and cutting edge scientific information about how the climate in the UK is likely to change and it's available on Government websites. The aim of this first presentation is to find out if you were aware of the UK Climate Projections and how relevant, if at all, you think they are to you and your community.

Presentation 1 Feedback (5 minutes) (Claire)

- What are your immediate reactions to the information given?
- How would you describe the messages; confusing, simple to understand, makes them think, good to hear, to alarmist, scary, worrying, not believable, demoralising.
- Were you aware of the UKCP09 Climate Projections before this presentation?
- What was the most important message you gained from this presentation?
- Is this information of interest to you? Which parts specifically?

- Would this information lead you to take any action or make any changes?
- Who is most likely to understand these messages, who might this type of message work for?
- Do you understand the terms used for example what about greenhouse gasses?

Presentation 2 (5 minutes) (Joanne)

Presentation 2.

Presentation 2 Feedback (10 minutes) (Claire)

- What are your immediate reactions to the information given?
- How would you describe the messages; (PROMPT - confusing, simple to understand, good to hear, makes them think, alarmist, scary, worrying, not believable, demoralising).
- What was the most important message you gained from this presentation?
- Did you find this presentation easier to understand or more interesting?
- Which bits of the information did you not understand?
- Did the graphics help?
- Would this information lead you to take any action or make any changes?

Presentations Feedback – Examining Message Tone (10 minutes) (Claire)

- Which presentation of the two opening presentations did you prefer? Why? (Prompt on the tone of the messages)
- Was this information of interest to you? Which parts specifically?
- Which bits of the information did you not understand - What, if anything, needs to be clarified? / Which parts are new information to you?

Presentation 3 (Joanne and Claire in combination)

Joanne: This presentation will show you some examples of how the climate and climate change is being portrayed from a range of different sources

Board 1 & 2 Scale and relevance (show alone)

- What is your immediate relation?

Board 3 & 4a, 4b Emotion and action (show alone)

- What is your immediate relation?

Board 5, 6, 7, 8 Trust in the messenger (show all together, these are labelled a, b, c, d)

Who's message would you be more likely to trust? And why?

Boards 8, 10, 11 headlines (show alone, then all together, labelled 1, 2, 3)

- Which set of headlines are you most likely agree with? And why?
- Which headlines do you disagree with and why?
- Which of these would you take more notice of / read? And Why?

Joanne: Say this is an example of a local authority fact sheet

Boards 12 (show alone, time deepening)

- What is your immediate reaction?
- Have they seen this act on CO2 messages or any other act on CO2 messages?

Boards 13, 14, 15, 16, 17 (show alone)

- What is your immediate reaction?

Feedback Overall - (15 minutes) (Claire)

Responsibility for the messages

- In your opinion, who do you think should be responsible for letting you know about the information just given to you?
- Which sources of information on local climate change issues have you used to date?
- Which sources of information on Climate Change do you most trust?

Messages

- What do you believe should be the **main message** which is communicated regarding climate change and coastal localities?
- What do you believe should be the tone of the climate change message, eg scare or gently inform? What language should be used, eg basic or technical?
- If you were in charge, what is the main thing you would **do** to let people like you know about climate change and coastal risks?
- If you were in charge, what would be the main thing you would **say** to let people like you know about climate change and coastal change? Think about real life, think about the people you know, think about you, what message would get through?
- (PROMPT) How would you let people know?
- (Prompt) What types of communication would you use? Why do you prefer these types?

Personal Responsibilities and action

- Are there things that you think you could do differently as a result of the presentations
- Are you already taking personal measures to reduce your carbon footprint / emissions?
- Can you talk about any action that you have taken or have considered taking to respond to climate change impacts such as flooding / coastal erosion?
- Would this information lead you to take any action or make any changes?

Communicating with Government

- Do you want more involvement in decision-making on climate change related issues
- What would help to communicate your views and questions on climate change to government?

Responsibility

- Who do you think should make the decisions about adapting to climate change on the coast? PROMPT; Local Authority, Central Government, Environment Agency, Defra, Community and Voluntary Organisations

Summary of Discussion and Close (5 mins) (Claire)

What do you believe are the most important issues we have discussed tonight/this afternoon?

Is there anything else which we have not discussed tonight/this afternoon which you think is important to mention to Defra? If so, what?

Thank respondents and close group (Claire)

- If you are interested in finding out more then we have provided a one page document with key sources and contacts

Claire informs respondents that Joanne will be available for a further 15 minutes to discuss any matters in a little bit more detail for any interested respondents and provide details of where participants can get further information.

We will take names of addresses of any interested attendees and provide feedback at the end of the project.

D.2 Third Sector Focus Group Discussion Guide

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

Third Sector Focus Group Discussion Guide

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Introductions (5 mins) (Claire)

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Also present is Allen (Tuesday) / Katy (Wednesday) from Defra who is here because she/he is interested in listening first hand to the focus group discussion. She/he is only here as an observer. If you have any specific comments or feedback for Defra, we have time some time at the end of the focus groups and we will collate these comments from you.

We are going to be talking about your understanding of climate change and the potential risk of coastal flooding and coastal erosion. We'll be asking for your ideas and views on how information on this can be improved. This will be fed back to Defra.

Nothing you say during this session will be linked to your name and your details are not passed on to anyone. There are no right or wrong answers – I just want to hear your views and the views of your organisations. We are all well aware that there are a range of opinions and debates around Climate Change so please say what you think, I want to hear all your opinions, but please try to talk one at a time.

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The session will last about 1.5 hours. Do you have any questions before we begin? (Claire)

Respondent Introductions (5 mins) (Claire)

This information is to be collected and included in a focus group report.

- Can you please introduce yourselves? Can you tell me your first name and the organisation you represent?
- Tell me a bit about you and your organisation :
- Where is it based?
- How long have they lived in the area?

- Please tell me briefly about the organisation that you represent and what it does?
- Are you a paid member of staff or a volunteer for this organisation?

Climate Change Awareness (5 mins) (Claire)

- We're going to start off by discussing your local environment. What do you think are the most important issues for your local environment? Moderator to write issues on cards. PROMPT flooding and coastal erosion if not mentioned.
- What do you know or believe about each of these issues?
- Are some issues more important than others? Respondents to put the cards in order of importance.
- Where does climate change fit in, if at all, amongst the main issues within your area?

Knowledge of Climate Change (10 minutes) (Claire)

We're now going to talk a bit more about climate change.

- When you hear the words 'climate change', what does it make you think of? Flipchart word association exercise. (Prompt about sea level rise to see what they know about coastal erosion, flooding, changes to beaches increases in summer temperatures.)
- Do you think of it only in terms of this area where you live, where your company operates or do you think of it as a national or even global issue? (Based on the location the moderator will be given specific prompts relevant to the local region, for example Formby sand dunes, Hastings beach erosion/cliff erosion).
- Repeated later - Where does your organisation get your knowledge or information about climate change from? (prompt newspapers/television/ internet/involvement in action groups/local authority)
- Do you think that climate change is having, or might have in the future, any effect on you and/or organisation? (Prompt for changes in the area, eg beaches, coastline (same comment as above re relevance to local region).

Presentations (3 presentations with feedback sessions after each, 10 – 15 minute slots)

Introduction to presentations by Claire, re introducing Joanne. Reminder 3 presentations are planned with gaps between each for feedback to be captured on each – ask them not to go for a comfort break during a presentation because these are important parts of the focus group for them to discuss.

Presentation 1 (5 minutes) (Joanne)

This first presentation is an introduction to what are called the UK Climate Projections. This is the most up to date and cutting edge scientific information about how the climate in the UK is likely to change and it's available on Government websites. The aim of this first presentation is to find out if you were aware of the UK Climate Projections and how relevant, if at all, you think they are to you and your community.

Presentation 1 Feedback (5 minutes) (Claire)

- What are your immediate reactions to the information given?
- How would you describe the messages; confusing, simple to understand, makes them think, good to hear, to alarmist, scary, worrying, not believable, demoralising.
- Were you aware of the UKCP09 Climate Projections before this presentation?
- What was the most important message you gained from this presentation?
- Is this information of interest to your organisation/you? Which parts specifically?
- Would this information lead you / your organisation to take any action or make any changes?
- **Would your members understand these messages**, who might this type of message work for?
- Do you understand the terms used and do you think your organisation will understand the terms used or example what about greenhouse gasses?

Presentation 2 (5 minutes) (Joanne)

Presentation 2.

Presentation 2 Feedback (10 minutes) (Claire)

- What are your immediate reactions to the information given?
- How would you describe the messages; (PROMPT - confusing, simple to understand, good to hear, makes them think, alarmist, scary, worrying, not believable, demoralising).
- What was the most important message you gained from this presentation?
- Is this information of interest to your organisation's work? Which parts specifically?
- Did you find this presentation easier to understand or more interesting?
- Do you understand the terms used and do you think your organisation will understand the terms used?
- Did the graphics help?
- Would this information lead you to take any action or make any changes?

Presentations Feedback – Examining Message Tone (5 minutes) (Claire)

- Which presentation of the 2 opening presentations did you prefer? Why?
- **Do you think your own perspective would be the same as the organisation that you represent?** (Prompt on the tone of the messages)
- Was this information of interest to you? Which parts specifically?
- Which bits of the information did you not understand - What, if anything, needs to be clarified?

Presentation 3 (Joanne and Claire in combination)

Joanne: This presentation will show you some examples of how the climate and climate change is being portrayed from a range of different sources

Board 1 & 2 Scale and relevance (show alone)

- What is your immediate relation?

Board 3 & 4a, 4b Emotion and action (show alone)

What is your immediate relation?

Board 5, 6, 7, 8 Trust in the messenger (show all together, these are labelled a, b, c, d)

Whose message would you be more likely to trust? And why?

Boards 8, 10, 11 headlines (show alone, then all together, labelled 1, 2, 3)

- Which set of headlines are you most likely agree with? And why?
- Which headlines do you disagree with and why?
- Which of these would you take more notice of / read? And Why?

Joanne: Say this is an example of a local authority fact sheet

Boards 12 (show alone)

- What is your immediate reaction?
- Have they seen this act on CO2 messages or any other act on CO2 messages?

Boards 13, 14, 15, 16, 17 (show alone)

- What is your immediate reaction?
- After seeing this information, is there anything your organisation or yourself you know could know do differently?
- Would this information lead to action changes?

Responsibility for the messages about climate change and coastal flooding - (15 minutes) (Claire)

- Which sources of information on local climate change issues has your organisation used to date? (prompt newspapers/television/ internet/involvement in action groups/local authority)
- Does your organisation have a mission statement or an environmental policy in relation to climate change or flooding?
- Do you think that people you deal with through your organisation's work would be interest in these issues?
- What form would your organisation prefer to receive climate change information in (probe, training, leaflets, video, websites, local authority representatives)
- What types of communication would your organisation use?
- Who do your organisations members receive information from?
- From whom would you like to receive information about climate change, flooding and coastal erosion?
- Which sources of information on Climate Change does your organisation most trust?
- What do you believe should be the main message, which is communicated to an organisation such as yours regarding climate change and coastal localities?
- What do you believe should be the tone of the climate change message, eg scare or gently inform? What language should be used, eg basic or technical?
- If you were in charge, what is the main thing you would do to let organisations like yours know about climate change and coastal risks?
- If you were in charge, what would be the main thing you would say to let organisations like you know about climate change and coastal change?

Responsibilities and action taking

- To date, have you or anyone in your organisation been involved with any consultations with regard to emergency planning in your area, flooding, climate change or plans such as SMPs.
- In your opinion, who do you think should be responsible for letting your organisation know about climate change, coastal flooding and coastal erosion?
- Is your organisation already taking personal measures to reduce your carbon footprint / emissions?
- Can you talk about any action that you have taken or have considered taking to respond to climate change impacts such as flooding / coastal erosion?

Communicating with Government

- Do you or your organisation want more involvement in decision-making on climate change related issues
- What would help to communicate your views and questions on climate change to government?

Responsibility

- Who do you think should make the decisions about adapting to climate change on the coast? PROMPT; Local Authority, Central Government, Environment Agency, Defra, Community and Voluntary Organisations

Summary of Discussion and Close (5 mins) (Claire)

- What do you believe are the most important issues we have discussed tonight/this afternoon?
- Can you describe anything else which we have not discussed tonight/this afternoon which you or your organisation would think is important to mention to Defra?

Thank respondents and close group (Claire)

If are interested in finding out more then we have provided a one-page document with key sources and contacts.

Claire informs respondents that Joanne will be available for a further 15 minutes to discuss any matters in a little bit more detail for any interested respondents and provide details of where participants can get further information.

We will take names of addresses of any interested attendees and provide feedback at the end of the project.

E. Focus Group further information guide

If you would like to find out more we have put together a number of contacts and relevant websites

Websites and national contacts

- You can reduce your greenhouse gas emissions in a number of ways (such as switching off appliances when not in use, turning your thermostat down and walking instead of driving), for more information about how you can act go to: http://actonco2.direct.gov.uk/actonco2/home.html, or call the Energy Saving Advice Line on: 0800 512 012 to find out more
- The Energy Saving Trust offers a home energy check go to their website: www.energysavingtrust.org.uk to find out more
- Useful information on how the climate might change is available at Defra's website go to: http://www.defra.gov.uk/environment/climate/adaptation/how.htm to find out more
- To find out what's happening in your region to adapt to climate change go to Defra's website: http://www.defra.gov.uk/environment/climate/action/regions/ to find out more
- The Environment Agency has the strategic overview for the coast but, in practice, responsibilities for managing flood and coastal erosion risk are shared between local authorities and the Environment Agency. To find out more about coastal change go to the Environment Agency website: http://www.environment-agency.gov.uk/homeandleisure/107495.aspx to find out more, or for general enquiries call 08708 506 506

Environment Agency Floodline: call 0845 988 1188

Met Office website see: www.metoffice.gov.uk

UKCP09 website see: http://ukclimateprojections.defra.gov.uk/

Climate Change Network website see: www.climnet.org

Local contacts for further enquires

Felixstowe - Suffolk Coastal District Council General enquiries: 01394 383 789, website: http://www.suffolkcoastal.gov.uk, email: customerservices@suffolkcoastal.gov.uk

Skegness and Mablethorpe - Lincolnshire County Council Customer Services: 01522 552 222, website: http://www.lincolnshire.gov.uk/, email: customer_services@lincolnshire.gov.uk

Hasting, Fairlight Cove and Cliff End - Hasting Borough Council Customer Services: 0845 274 1066, website: http://www.suffolkcoastal.gov.uk, email: hbc@hastings.gov.uk

Formby Point, Sefton - Sefton Council General enquiries: 0845 140 0845, website: http://www.sefton.gov.uk, email: contact@sefton.gov.uk

If you have any further comments that you wanted us to record as part of our research, but would prefer to make these in confidence please feel free to contact the project team via email: j.harvatt@maslen-environmental.com or by calling Joanne Harvatt at the Maslen Environmental office on: 01274 714269

F. Presentations

F.1 Presentation 1

UKCP09 & communities at risk of coastal flooding & erosion- J Harvatt

This is the first of two scripts that I will be presenting. We are interested in finding out your **understanding of the key terms** used, the **messages**, and the relevance of this information to you and your area / your organisation.

I will start by **introducing the UK Climate Projections** and their role in climate change, before I move on to the **impacts of climate change** at the global, national and region scales.

Climate change is perhaps the biggest threat that humanity faces and addressing climate change is one of the most important issues that **we face**.

Predicting how the climate might change is not an accurate science. But what **we can do is** use scientific records to look **at how the climate has changed in the past**. We can look at what human activity has caused some of those changes – in particular our increased production of greenhouse gases.

And we can use this information to make reasoned judgements about what the climate will look like in the future.

This is the approach the Government has used to produce the **UK Climate Projections, which are also known as UKCP09**.

They provide us, not with absolute predictions about how the climate might change, but with a range of potential outcomes based on future levels of greenhouse gas emissions – whether that be high, medium or low.

This information is important because it helps organisations and individuals make informed decisions about how to adapt to the changes in climate **that can't be avoided because of greenhouse gas emissions in the past**.

I'll explain in a bit more detail what the UK Climate Projections might mean to your area, but first I want to give you some facts and figures about climate change.

Firstly, let's look at the global picture

- The average global temperature has **risen by** 0.8 ºC since the late 19th century.
- Global sea-level **rise** has also accelerated between the **mid-19th and mid-20th** centuries and is now about 3mm a year.
- The world's leading panel of climate scientists, the United Nations Intergovernmental Panel on Climate Change , or the **IPCC**, agree that man-made greenhouse gas emissions, mostly from the consumption of coal and oil, caused most of the observed temperature **rise** since the mid 20th century

This same pattern is reflected in the UK.

- Every region has experienced an increase in annual average temperatures since1961. These increases have typically been between 1 and 1.7 °C and tended to be largest in the south and east of England and smallest in Scotland.
- **Sea level around the UK** rose by about 1mm a year over the past century and the rate for the 1990s and 2000s has been higher than this.
- Over the past 30 years **sea-surface temperatures around the UK** coast have risen by about 0.7 ºC.
- **Annual average rainfall** has not changed significantly since records began but all UK regions have experienced **wetter winters** over the past 45 years, with drier summers in most regions.

Now let us turn our attention to the impacts of climate change

UK coastal areas have been changing for centuries as part of natural processes. But the consequences of climate change, **such as a rise in temperatures and sea levels**, will have further impacts on them. There will be some potential benefits to the local environment and communities, but there will also be negative impacts.

Here are just some of the areas where climate change could have an impact:

- Coastal erosion and flooding
- Water supply and quality
- Biodiversity
- Services
- Transport
- Construction and
- Leisure

We all need to be part of the solution to climate change by mitigating any future emission. We also need to adapt to changes caused by greenhouse gas emissions in the past because these changes now can't be avoided.

The UK Climate Projections can help you understand **what impact greenhouse gas emissions could have**, and are likely to have, in your region up to the end of the century.

Now I would like to give you some examples of the UK Climate Projections.

The UK Climate Projections' **medium emissions** scenario shows that by the **2080**s - we could be faced with:

- **Sea level rise** of 36cm.
- An increase in **average summer temperatures** of between 2 and 6 degrees C in the South East;
- A 22% **decrease in average summer rainfall** in the South East - which is already water stressed - and
- an increase of 16% in **average winter rainfall** in the North West, with increases in the amount of rain on the wettest days leading to a higher risk of flooding; and
- If emissions get higher, temperatures **would rise even more** and could be up to 12 degrees C warmer on the hottest summer days, with peak summer temperatures in London regularly hitting over 40 degrees.

This would lead to an increase in **water shortages, heat stress and floods**. All of these could have a severe impact on people's health and quality of life, the economy and the natural environment.

I will end my presentation with some examples of the climate projections for the High emissions scenarios for your region

The UK Climate Projections maps for the **North West** show that there is a 50% probability that **annual mean temperature** will increase by between 1 and 2 degrees centigrade by 2020, by between 2 and 3 degrees centigrade by 2050, and by between 3 and 5 degrees centigrade by 2080.

The UK Climate Projections maps for the **East of England** show that there is a 50% probability that **annual mean temperature** will increase by between 1 and 2 degrees centigrade by 2020, by between 2 and 3 degrees centigrade by 2050, and by between 5 and 6 degrees centigrade by 2080.

The UK Climate Projections maps for the **South East of England** show that there is a 50% probability that **annual mean temperature** will increase by between 1 and 2 degrees centigrade by 2020, by between 2 and 3 degrees centigrade by 2050, and by between 4 and 5 degrees centigrade by 2080.

The top three maps for the **East Midlands** show that there is a 50% probability that **annual mean temperature will increase** by between 1 and 2 degrees centigrade by 2020 by between 2 and 3 degrees centigrade by 2050, and by between 4 and 5 degrees centigrade by 2080.

F.2 Presentation 2

The script I will be presenting to you reflects similar information to the previous but it is told in a slightly different way.

Again we are interested in finding out your **understanding of the key terms** used, the **messages**, and the relevance of this **information to you and** your area / your organisation.

I will use this opportunity to outline the **differences between weather and climate**, describe the government's climate projections and highlight some of the key messages in relation to climate change. At the end the presentation I would like to provide with some examples of **Climate Projections for your region**.

Firstly, lets turn **our** attention to the weather, it's one of our favourite topics of conversation in the UK isn't it?

White Christmas, early spring, barbecue summer, glorious Autumn – the beauty of having four seasons is that we get four chances a year to talk about whether the weather has lived up to expectations.

And if there's one thing even the forecasters will agree with, it's that the UK weather can be very unpredictable.

Now if that's the case, you might ask, how come there's so much talk these days about climate change – global warming and rising sea levels, and all the potential disasters that are in store for us in years to come, such as flooding, coastal erosion and extreme weather.

How can the experts be certain that our climate will get hotter in future years if we can't predict with absolute certainty whether it will rain next week?

The simple answer is that they can't.

But by using a combination of current and historic data and the most **advanced analytical systems and expertise**, we can make informed and realistic judgements about what is most likely to happen to our climate in the future.

It would probably help if I try to clarify what is meant by the word '**climate**' and explain that in relation to the '**weather'**.

First of all, climate and weather differ, the weather is what you get on the day, be it sunshine, rain or snow.

Whereas, climate is the picture you build up when you study the weather over a long period of time – the standard scientific timeframe used is 30 years.

If you look closely and scientifically at the weather over long periods of time you can pick up trends and work out averages for things like temperatures or the amount of rain that falls.

The unusually cold and snowy weather we've just experienced over Christmas doesn't mean that, over the long term, the winter climate is not getting warmer over all.

Over long periods of time it's also possible to establish other factors that have an effect on the climate – and what we're really talking about here are the rising levels of carbon dioxide, or CO2.

By the way, you might be interested to know that over 40 per cent of CO2 emissions in the UK come directly from people like you and I, just going about our daily lives, using electricity in the home, and driving cars.

And the overwhelming majority of the **world's climate change experts** agree that there is a clear link between this increase in the amount of carbon dioxide that we humans are releasing into the atmosphere and global warming and sea level rise.

As I mentioned earlier, climate scientists **will not make absolute predictions** about increasing temperatures and rising sea levels.

But if they -

- Take the best available climate information from around the world,
- Take into account **external factors** such as increased carbon dioxide levels,
  And
- Use the most advanced systems and practices to analyse that information

They **can** provide us with a range of examples of how our climate might change in future years, both on a global scale and at a localised level.

Not only does this method produce a variety of possible scenarios for different regions, based on a range of potential future greenhouse gas emissions, it also suggests which **one is the most likely to happen**.

That means that the Government, local authorities and other interested bodies like environmental organisations - or indeed you and I can make informed decisions about what, if any, action to take to adapt to the changes and try and reduce greenhouse gas emissions.

The name given to these calculations is the UK Climate Projections, or UKCP09. A bit of a mouthful but worth remembering as they offer the most reliable and up to date information **about how our climate is likely to change over the rest of this century**.

To end my presentation I'm going to show you some examples of UK Climate Projections for your region.

[Show Met Office graphs and explain impacts on the region]

NB mention that Coastal change has been occurring naturally for centuries, but some impacts, such as coastal erosion and flooding could be made worse by sea level rise.

The world's leading panel of independent scientists – the United Nations Intergovernmental Panel on Climate Change, or the IPCC - tell us that to avoid the worst effects of climate change **we have to stop the world getting more than 2 degrees warmer**.

After that sea level rises, flooding and coastal erosion become more extreme.

It's up to us as individuals and communities to decide what, if anything, we do to try and achieve this.

G. Focus Group Case Studies

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

Louth C2DE Empty Nesters/Retired

Introduction

Attendees:

- Female, lives locally in Louth, now retired. She is not originally from the area but has lived there for over 40 years.
- Male, is a resident of Louth but has not always lived there. He is retired and thinks that he is very familiar with the local area.
- Female, has lived in Louth for 18 years. She has three children and is near to retirement but still working.
- Female, has lived in Louth for the past 2 years. She previously lived in London and is still working, self employed with her husband.
- Male, has lived in Louth since 2000.
- Female, has lived in Louth for 55 years. She has worked as a nurse at the local hospital for 25 years.

They all agree that they live in very rural areas and live near to parts of Louth that flooded recently.

Current levels of knowledge and understanding of Climate Change

Important Issues for the Local Environment

- Flooding:

  The respondents all brought this up as the first issue of their local environment stating that flooding has had a big impact on the region recently.

  "Will it happen again, and what was the reason for it in the first place?"

  The group discussed the issues that flooding has on the region, such as the damage the homes, house buying/selling, knowing which areas are at risk of flooding, insurance issues, and plans to prevent flooding again [Note there was a local history of interest in flooding problems].

  They said that it has become hard to sell homes which are in areas that have previously flooded, and it is also now hard to buy in the area.

  One respondent said that the Environment Agency maps do not show clearly which areas are at risk of flooding, meaning that there is uncertainty when buying houses in areas where there have recently been floods.

  The group discussed what they felt was a lack of planning from the Council to combat floods – the area had previously flooded in 2007 and no plans were made afterwards to prevent it from happening again. However, one respondent disagreed and said that there had been some improvements and measures put in place, but agreed that more needed to be done.

- Climate change:

  Respondents discussed things that they knew or had heard about relating to climate change.

  Wetter weather is set to come, which will mean rising sea levels which in turn will lead to more and more flooding in their region.

- Cars and their impact on the environment – Some respondents in the group felt that this would be less of an issue if there was more/better public transport.

The group agreed that flooding and climate change were the most important issues affecting the local environment in Louth, but that these were linked together. They indicated that they get most of their information about these issues of flooding and climate change from

newspapers and the news on television. One respondent said that she also got her information through word of mouth, and also stated that "I wouldn't go out purposefully and look things up though." All respondents in the group said that they would not use the internet to find out information about climate change.

Information on and Knowledge of Climate Change

When asked what words come to mind when they hear the term 'climate change', the group thought of (unprompted):

- Rain and water
- Confusion about the facts - "Experts seem to differ in the messages that they are giving out."
- Carbon footprints
- Denial
- Cold winters
- Recycling

This led to discussions about rising sea levels and coastal erosion. Respondents stated that there had not been much flooding along the coast for a long time, but that they had noticed some erosion.

"It's horrible to see houses falling into the sea, but I don't know much about it."

One respondent described how she recently revisited an area of Norfolk where she used to go on holiday and could not believe how much the coast had eroded. "*It was absolutely phenomenal, places that I used to walk are not longer there, and that's happened just in my lifetime.*"

The group felt that climate change was more of a global issue rather than local or national.

"When you first said "what does climate change mean to you?" I immediately thought about floods in Bangladesh and the Maldives sinking. The rest of the world have got it pretty bad."

Presentation 1

One respondent immediately said that she was shocked that temperatures could rise to 40 degrees and said that she wouldn't be able to stand it. In this way she found the presentation quite alarming. The rest of the group agreed saying that the information was potentially worrying, but only if it was correct. However, several in the group explained that the scenarios described in the presentation would not affect them so they were not too concerned.

The respondents felt that the presentation was a little confusing in the figures it presented such as the temperatures and the years provided. When talking about the language used in the presentation, the group indicated that statistics are not easily digested and that as there are lots of them in the presentation it is quite confusing. One respondent stated that statistics do not always show you exactly what the situation is;

"Like a pretty girl in a bikini they reveal what is interesting but hide what is vital." He felt that statistics and figures like the ones used in the presentation would be too easily manipulated.

The group felt that it was quite unlikely that they as individuals could have any impact on the figures that they had heard in the presentation and that this needs to be put in the hands of governments and decision makers. A respondent suggested that, as the presentation was quite difficult to understand due to the number of figures used, it would benefit from being a more visual presentation.

No one in the group has heard of the term UKCP09, but some were vaguely aware of the idea of it.

Presentation 2

Everyone in the group seemed to prefer the second presentation, stating that it was much clearer than the first as it actually tells you what you need to do. *"It has a clearer message."*

Respondents did not find it as confusing as the first presentation and felt it was simpler to understand, but still made them think. They also said that it was not quite as alarmist as the first, but that the information was still worrying if true – "You have to believe the experts."

"I was more alarmed by the first presentation, but I think I understood the second presentation better."

The group also agreed that they could relate to the second presentation more than the first, saying that they liked how it had relevance to England and not the Earth as a whole. One respondent stated that the first presentation was a bit 'over her head' and that if it had been written down or as a video then it might have been easier to take in.

"It's easier to absorb figures if you have something to look at."

One respondent indicated that the presentation had a bad colour scheme which made it so he could not see the detail.

Presentation 3

Board 1:

This board did not seem to have a great impact on respondents overall, they felt it did not communicate a message as such to them. One respondent said it depicted the ice age but generally others felt *"it doesn't say a thing."*

Board 2:

Again, respondents struggled to take away any message from this board, they felt that the title should them that sea levels are rising, "*but it could be tidal and it doesn't mean a thing really."*

Board 3:

Generally, respondents again did not provide a call to action, respondents associated the board with

"floods and devastation".

Board 4:

Respondents were aware that it is a flood barrier, but indicated that it does not make them think anything at all.

Trust the Messenger Boards

The majority of the group indicated that they would be more likely to trust the information provided in boards A and B, saying that the message is clearer and more trustworthy.

One respondent, however, indicated that she would trust board D as it looks very official, and that the news (A and B) is often more about drama, meaning that the information could be sensationalised. Others did not agree with this saying that that they do not always believe what the government tells them.

No one in the group said that they would trust word of mouth information as shown in Board C, saying that they do not believe just anybody and that they would be more likely to believe the information if it came from someone in a position of authority.

Headlines Boards

Boards B and C seemed to be most popular amongst the group, with respondents indicating that they would find these more believable.

One respondent said that he was not sure whether he would believe the headlines on Board A, giving the example of the 'perfect storm' headline as he did not like the way that it was written.

Board B seemed to be most appealing to respondents. They would be most encouraged to read the stories that followed the headlines as they were short and to the point, and were also relating to protecting children and future generations which they felt was important.

One respondent said that he thought climate change is always something that has been happening, but the only difference is that now it receives more attention in the media.

Board 12:

The group were not sure what this board was supposed to be telling them. They felt it was a nice picture but that it had no impact on them.

Board 13:

This board went down well with respondents. They explained that it had good imagery and liked that it was short, snappy and to the point.

Board 14:

This board was not well received by the group as they were unsure what it was trying to say. They felt that it was too cryptic. Only one respondent in the group liked this board.

Board 15:

The group were aware that this board was concerned with the effects of pollution but felt that it was irrelevant for this country.

Board 16:

Respondents seemed to like this group, with one even describing it as "spot on". They liked that it was big, simple, and that you could connect with it. They also suggested that it would be good for animal lovers.

Climate Change Messages

The group agreed that they wanted to receive messages about climate change which explained how it would directly affect them and their families. They would like to hear specifics and details about what will happen in the future concerning climate change.

One respondent explained that the messages that were given out needed to in some way shock the public in order to have any kind of impact.

"We need to be shocked, but not necessarily scared, but only if the things are true. Not just guesses."

They felt that the language and tone in which the message are provided needs to be basic and not too technical. The group also indicated that the messages needed to be tangible for individuals, informing them of what they can actually do to help the situation.

One respondent explained that she would be happy to make changes to her lifestyle to prevent climate change but would first need to see proof that it would make a difference. She explained that she is happy to recycle and would consider travelling less if there was proof that it would help the situation.

Another respondent pointed out that it was hard to relate to or care about climate change until it effects you directly in some way, for example if there is a 'big event' or if it is all over the papers.

"It's easy to forget about it. It's not something that, most of the time, has a big impact on our lives."

The group also indicated that they would probably be more concerned about climate change if they lived closer to the coast.

Responsibilities

The group agreed that climate change was the responsibility of central government and local authorities. One respondent suggested that national messages about climate change should

come from central government, and local messages should come from local government in order to keep things simple.

Respondents felt that when the flooding occurred in their area it was not easy to work out who was taking responsibility – which department, national or local? They indicated that local government might be in the best position to take responsibility as they could be more objective.

Generally the group seemed to think that when it came to climate change, the effect an individual could actually have was minimal, and that it was up to governments and world leaders to make a difference. Respondents seemed to think that individual responsibility for climate change was just a 'drop in the ocean'.

"I find it annoying when it's put on us as individuals as our responsibility when the major responsibility is on corporations and countries and people who can make these huge decisions and yet we're made to feel guilty if we put something in the wrong bin."

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

Skegness C2DE Families

Introduction

Attendees:

- Male, father of 2 twin girls, thinks Skegness is in a very vulnerable place in terms of the environment. "I could see it being flooded again. In 50 years time Skegness might not be here." Unemployed, carer. Lives right on the sea-front.
- Male, lives with partner and brother in an industrial area not too close to the coast. Has lived in Skegness for 15 years. Currently unemployed, but as he usually works on the land he felt he has seen how things have changed due to the environment over the years.
- Female, mother of 2 young children, lived in Skegness for about 8 years. Currently unemployed.
- Female, mother of 1 boy, not working but attends college. Thought that the effects of the flooding were terrible.

Current Levels of Knowledge and Understanding of Climate Change

Important Issues for the Local Environment

- Flooding:
  Overall, respondents got their information from television and news reports. There seemed to be discontent about a lack of information about local flooding:
  "You don't hear from the papers, the papers are a waste of time."
  "You usually hear about it the next day."
  "I sometimes hear about it on the radio."
- All respondents agreed that they were unaware what warning signals are in place in the event of flooding in the area, and that this is a serious concern. They had never had it explained to them whilst living in the area.
- The cold/snow/bad weather:
  Respondents felt that the Council did not send out the gritters early enough.
  Also issues surrounding the inclement weather affecting seasonal work.
- The beaches:
  Respondents described them as disgusting and polluted.
- Rising sea levels:
  Respondents had concerns about the rising sea levels and sea water coming up over the barriers, knocking people into the sea.
- Less people coming to visit Skegness

Respondents said that this could be due to the credit crunch, but this also has been affected by the weather.

The group agreed that flooding was the most important issue affecting the local environment in Skegness and that there is a need for better flood defences and warning systems. They were concerned about the problems that flooding causes such as shortages of food, clean water and sand bags, and homes being destroyed.

Information on and Knowledge of Climate Change

There was understanding of ice caps melting and rising sea levels, but some confusion about why it is happening. One respondent seemed to think that global warming was caused due to the sun moving closer to the Earth.

There was awareness that sea levels are rising faster than originally predicted and some knowledge of terms such as pollution, carbon footprint, and CO_2 emissions.

Respondents seemed to see climate change as more of a global issue rather than a local issue, yet there was an understanding that it affects some areas more than others such as coastal regions, but other areas are already affected.

Generally, respondents got their information about climate change issues from TV, books, films, radio, magazines and newspapers. One respondent referred to the film *The Day After Tomorrow* but seemed to be under the impression that this was accurate depiction of things to come.

Concerns were raised about the effect climate change will have on future generations, especially for children. Respondents said that there needs to be change now to make things better for future generations, and that it is down to the government and politicians to do something.

When respondents were asked what they themselves could do, actions such as recycling, turning electrical appliances off and walking instead of using cars were suggested.

Presentation 1

One respondent explained that he did not believe all the information, and thought that the figures did not reflect the reality of the situation. He thought that sea levels were rising much faster than the presentation depicted. *"I don't know where they get their figures from these people."* However the rest of the group all found the information believable.

When asked if they found any of the information confusing, some respondents felt that some of the information was a little confusing, but that most of it was simple to understand and also quite interesting. However, one respondent stated that *"after a couple of minutes you started to wander off."*

They felt that the presentation was good to hear, but that some of the information was scary and worrying. It was suggested that updates like this would be useful every six months to keep them abreast of the situation. One respondent said *"You hear bits of information about it in the news and on the TV but sometimes you don't understand it."* Another explained *"It makes you feel worried, not just for yourself but for your kids."*

When asked how they think this information would be best delivered to the public, it was suggested that it should be in the form of a booklet or leaflet which people could pick up at read at their leisure, and that things should not be exclusively online. *"Still not a lot of people have the internet, I don't have it. You probably hear a lot about it on there but the people who aren't as well off as everyone else don't get to hear things."*

No one in the group was aware of the term UKCP09.

They felt that the most important message that they had gained from the presentation was that everything was on the increase – temperatures, sea levels and climate change.

Presentation 2

On the whole the group preferred this presentation to the first, giving reasons that it was more understandable and generally more believable. They liked that it gave more explanation for climate change rather than just presenting facts and estimated figures.

"That was more understandable than the first one and it gave you a better outlook of the situation."

"You'd do well with that one, if everyone saw something like that."

One respondent found parts of the presentation hard to understand, particularly the section about greenhouse gases as she was unaware of what they were. Despite this, the majority of the group said that they did not find the presentation confusing and that they thought people would be more likely to listen to and understand this presentation rather than the first.

The group explained that they felt the important message from the presentation was that climate change is happening all around the globe and that it affects some areas a lot more than others.

"It's down to the government to let everybody know and to have a big shake up before individuals will do anything."

Presentation 3

Board 1:

After seeing the board the group immediately began to discuss the melting of the polar ice caps due to rising temperatures, and understood that this would result in rising sea levels.

"It looks quite bleak because of the dark clouds."

Board 2:

"Where's that? It's not Skegness!" This board made the respondents think about how climate change might affect sea life as they thought the things washed up on the beach were fish. They also thought it was showing how far the sea levels have risen up the coast.

Board 3:

Respondents thought it looked like the aftermath of a natural disaster such as a tsunami or a mudslide, but that it was an image from abroad and was not something that would occur locally.

Board 4:

The group understood that it is a flood barrier, although at first there was confusion as to whether it was an electric heater.

Trust the Messenger Boards

When asked which source of information they would most trust the group had differing opinions. One respondent preferred the Local Authority fact sheet (board D), giving reasons that they are always readily available and that they can read leaflets in their own time as many times as they need to. She explained that if the information was just presented in the news you might miss it, or forget it if you only hear it once. She also explained that a leaflet would be useful as it could be more specific to the local area.

Board C made one respondent think about houses and hotels that are falling off the edges of cliffs due to costal erosion. The group seem to agree that word of mouth information does not have as much of an effect as hearing things from people in authority or on the news, and they would therefore be more likely to listen to the news reader in board A or the newspaper in board B.

Headline Boards

One respondent said that he most agreed with the headlines from board 3 (New scandal over climate change 'lies').

Another respondent said that he was most likely to agree with boards 2 and 3, because whilst he is aware that climate change is a problem, he sometimes thinks *"Is it fear mongering? Are they making a big deal out of it when it's just something that happens every thousand years or something?"*

Other respondents stated that board 2 made them think of other people and how climate change will affect them – it makes them think about their children and the situation that they will face in the future. *"They're all doom and gloom and they don't tell you what you can do about it."*

When reading the *"There is no Planet B"* headline, a respondent said that it made them think *"there is no where else for us to go, and it's our children who are going to suffer."*

One respondent stated that he would be more likely to read the stories from the headlines on board 1 because of how shocking they were. *"It's shocking and in your face so you'd probably read on."*

Board 12:

The group agreed that they would not take much notice of this board and would probably just walk past it, saying that it provided them with no real information. They also said that it was not relevant for this area as Skegness would not flood in that way.

Board 13:

Everyone in the group reacted positively to this board, saying that if it was a leaflet they would pick it up and read it. *"It looks like the type of thing you'd want to listen to."*

Board 14:

Respondents explained that they felt it was not clear what this board was trying to say. *"You can sort of see what it's getting at but it's not clear."*

Board 15:

Most respondents were unaware that this board was a film poster. They said that it looked like it was trying to get across the message about the problems of pollution. One respondent knew that it was a film but said that as a board he would be more likely to look to the previous ones.

Board 16:

"I think that it is horrible and shocking." Most in the group understood what the board was trying to say and seemed to be shocked by it. They explained that it would make you want to know more about the situation. *"If it's that bad for an animal, what's a small kid supposed to do?!"*

Board 17:

This board received a similar reaction to the previous board with a sympathetic reaction. Respondents say that it acts as a *"good visual message"* to show the affects of global warming.

The group agree that the most effective boards were boards 16, 17 and 14 as they would be more likely to take notice of these if they saw them in their local area.

Climate Change Messages

Locally, respondents said that the radio and billboards would be the most appropriate methods which useful information about climate change could be given to the public, such as letting people know about contact numbers to find out more.

When asked what sources of information on climate change they had used previously, one respondent said that there are leaflets at the library and at the council which she has seen. In terms of which sources of information they would most trust, some respondents say that it would be the television and news broadcasts. One respondent, however, said that she would be more likely to trust something from a book.

The group felt that the Environmental Agency, local authorities and central government should all be involved in giving the public information about climate change – there should be involvement at all levels.

"We should be notified more about the situation, and informed more about what is happening in our local area."

The group felt that changing their behaviour would not have a real effect on climate change because it needs to involve everyone to have any real impact. One respondent said "*If I drove I would drive less, but I don't.*"

Communication with Government

There was a general consensus in the group that having more involvement in decision making on climate change issues would be a good thing. It was suggested that there should be more direct contact with members of the public on these issues through things like meetings and questionnaires.

Some respondents wanted to know where they could get more information about local issues. They feel unsafe as they do not know anything about the flood warnings that are in place in Skegness. Respondents were told about the Environment Agency who would be able to provide them with the information they need, or to sign up to "Flood Warning Direct" who send out text messages.

Responsibilities

The group felt that it was the government's responsibility to let people know about national climate change information. They explained that this could be done via television broadcasts of documentaries rather than news reports, the radio, and articles in the press.

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

Skegness Third Sector

Introduction

Respondents included:

- Male Manager for Skegness Citizens Advice Bureau (CAB). He works there full-time and this is a paid role. There are three bureaus in the region and many of the clients live along the coast. The CAB help people with any subject they bring to them. He has lived in the Skegness area for 24 years.

- Female works with Volunteers and Active Members and Skegness Youth Service. She runs a youth group once a month and does work in a local school.

- Male representing the Rotary Club of Skegness and is also founder of Natureland Seal Sanctuary, which is on the northern end of Skegness sea front.

- Female representing Skegness U3A, which is an international organisation catering for people who are retired and aged 50+. She works for U3A on a voluntary basis.

- Female Manager for the Girls Friendly Society Platform, based in Skegness. She works primarily with teenage pregnant mums, who live along the coast. She is new to the area

- Female Coordinator at the Linsey Blind Society in Skegness. She is a paid member. The Society looks after old people who are blind or partially sighted in the area. They run clubs and various other things.

- Male Manager at Seacroft Golf Club in Skegness, which is a European Special Site of Interest. He's a paid employee and has lived in the town for 30+ years. He was very interested in coastal erosion because if their golf course goes they will have nothing left.

Current levels of knowledge and understanding of Climate Change

Important Issues for Local Environment

- Rising sea levels (particularly as they all live in bungalows)

- Property prices
- Flood warning system, or lack of
- Unemployment
- PE25 postcode doubling home insurance premium, though there hasn't been any flooding for a long time
- Inappropriate building of property in areas that are at risk of flooding

Prompted;

- Coastal erosion eroding the dunes
- All the sea defences only being in one part of the coast.

After some discussion, the group agreed that coastal erosion is the biggest problem for the area and this, they say, is tied in with rising sea levels. There was some debate in the group as to whether this is caused by climate change, and no conclusion is reached. A respondent argued that there are two sides to the story of climate change: those who believe we are causing climate change and those who believe it's a natural occurrence.

One respondent commented that climate change was not new to the area, neither is it of great concern – *"we've been flooded in the past and we've got over it"*. This stimulated further debate about what causes flooding, with a group member reporting that the flooding Skegness experienced in 1952 was a result of a surge which, he said, was different to a permanent rise in the sea level which is what the main problem on the Skegness coast is now. This was confirmed by the founder of the seal sanctuary who is involved in abstracting sea water from the beach. This respondent reported that the main problem in Skegness is surges and high tides. Further to this, he explained that he checks the beach five times a week, as part of his work at the seal sanctuary, and has done for 45 years; he has seen the sea level at various heights during this time. He went on to explain that gabions are now used on the beach to prevent flooding. In his opinion, the biggest threat to Skegness is a tidal surge.

Information on and Knowledge of Climate Change

Respondents were asked where they get their information from about climate change. The main source given is the media, which they commented is the only source available to the general public. Some respondents thought that it was difficult to tell what information they receive is correct and others suspect that much of what they are exposed to has political undertones.

"Being green is a useful political tool which detracts from other things they [politicians] are not doing correctly".

Other respondents feel that it was important that all of the information given on climate change must be taken seriously, however, there was debate on this within the group

"You've got to take the science seriously. If you don't, climate change will happen and it will be too late. 90% of the scientists think that global climate change is happening".

The main issue with the information that is available at present was that people do not know which ones to trust.

One respondent, who appeared to be knowledgeable about the environment, was sceptical about climate change, he commented;

"Over 100 years, the sea is going to rise and we need to accept that but that isn't going to affect us with the defences we have at present. It's the tidal surge that's going to affect us but that isn't an effect of global warming, that's just a natural thing".

Other respondents felt they know very little about climate change and its effects locally, which causes them to question why information is not publicly available.

"This is the first time I've heard of anything like a tidal surge and I do read I do know what's going on. I don't know what the situation is locally. I have no idea".

"When I first moved to Skegness about two years ago, there was a big thing going on about sea defences but I haven't heard anything since".

There was an assumption from some respondents that flooding in the area was not an issue due to the lack of information provided.

"You assume nothing's going to happen [flooding] because no one's ever brought it up".

Some respondents thought the Internet is possibly the best source of information but should be used in conjunction with other sources.

"You can only believe what you hear from the media and you have to make your own mind up".

Words associated with climate change included:

- Enhanced/agitated by man from CO_2 (not necessarily believable)
- Recycling
- Rising Sea
- Melting glaciers
- Forests being destroyed
- Global – not just local or national
- Recycling.

In the main, respondents felt that information on climate change should be made more local. At present, it is too remote.

"It must be more local so that people know what changes they need to make locally. They just go round saying we should recycle but they don't tell us why, bring it closer to home".

Respondents thought the shock of a flood would bring the issue of climate change to the forefront of people's minds.

"The best thing to focus people's minds is if we had a flood".

There was then some discussion around flood warning mechanisms as apparently, the sirens will no longer be used and people will receive a text message instead. The majority of respondents did not agree with this method.

The respondent from the Girls Friendly Society Platform comments, *"I haven't got a clue what I would do with those young girls and their children if there was a flood".*

A sample of comments from the Linsey Society for the Blind and U3A are shown below.

"In my area, there's 500 blind or partially sighted young people if I said to them global warming all this is going to happen, it would panic them completely. Someone would have to go to each house that could be flooded and we would have to look at it with someone from Defra and tell them how to do it. If there was a flood, we'd called on the Rotary for help. If you can't see it's frightening".

"We- [U3A] are an international organisation and we have some frail people. We'd want to be able to inform people what to do".

Presentation 1

Several respondents were annoyed by this presentation as they thought it assumed that people are not going to do anything about climate change/coastal erosion.

"We as individuals have done many fantastic things. We've got a wind farm out there and 30 years ago, you wouldn't have had that. So, we are doing things. We will adapt. We always have".

The general consensus was that the presentation provided information they had heard before. The part of the presentation which seemed most relevant was the local information.

One respondent thought the information given was misleading as it insists that man is affecting climate change through CO_2 emissions but he believes this has not been proven.

Some respondents thought this presentation was "too threatening" and failed to provide examples of what citizens like them could do to combat it. Respondents here wanted more examples of how people are already adapting presented in a positive light.

"It [the presentation] *was enough to put the fear of God into people"*

No one was aware of the UKCP09 Climate Projections. There was some comment that the name of this was part of the problem.

"It's one of the problems that the climate scientists have; they can't find the right language to communicate with normal people".

Respondents felt that the most important messages gained from the presentation were:

"*We need to reduce the global population then there would be no problem."*

"50% probability of something happening means it could go either way – it's like spinning a coin. If you said 95% I'd start taking notice".

Presentation 2

Respondents generally thought this was more understandable than the first presentation. It was described *as "not quite as committed - the use of maybe and could happen – it's not as scary".*

They understood that as soon as people do something about it (climate change), by recycling "or whatever," then the model changes.

Several respondents commented that this presentation would benefit from including positive messages back to people, for example, showing what has been achieved already, in the tone of 'if you hadn't done that, we wouldn't be here'.

Respondents also thought the information given needed to be more localised as *"a town like Skegness would take a stand* [against climate change]".

There was some suspicion from respondents about how much impact they could actually have on climate change. For example, some were sceptical as to whether the waste they recycled was actually going to landfill.

The group generally preferred presentation two as it felt friendlier and they thought they would be more likely to remember it. Presentation one, on the other hand, was too much a statement of facts.

The way the information was presented was too technical for the respondents, even with the diagrams. The respondents thought it would need to be vastly adapted to be understandable, particularly for young people.

Presentation 3

Board 1:

"I'm surprised there isn't a polar bear on it – it's what they've been stuffing down our throats for ages." Overall, there was confusion about what the board was saying, they wished to be told the impact of sea level rise.

"Sea level change doesn't mean anything is it going up or down?"

"Sea level rise means it's happening its definitive, sea level change could mean anything"

Board 2:

Overall, respondents felt this board depicted a nice impact of a place for people to go on holiday and provides no further message.

Board 3:

Overall, respondents were unclear what the image on the board was trying to represent.

"It could be landslide – it's not clear"

Board 4:

Respondents were not totally convinced by this board and were confused about what message it was trying to convey.

"That was on the TV tonight with those two chaps – what message is it supposed to get across? Don't those boards keep the rats out?"

"There needs to be some water"

Trust the Messenger Boards

Overall, the boards B and D were the most trusted sources for respondents.

Headlines Boards

Board B:

"It's repeating what we keep being told. If it's true and we need to something about it, then we need to see something on the front page of every newspaper. If we need to do something about our homes then I'd like to see that on the front page of every newspaper".

Several respondents liked this board because they felt it was localised and poignant - they considered their children suffering. One respondent felt it was not enough, however, to just give these messages without any actions being taken as a result to address the issues.

Board C:

In the main, most respondents agreed with this board, they felt it gives them the facts, which they thought was good.

Board 12:

Overall, this board was not favourably received by the group. One respondent, for example, felt it was *"pitiful – we don't need cartoon characters".*

Board 13:

Respondents said they would pick it up and might pass it onto their kids. They considered this board to be *'better than some of the others'*

"Interesting"

Board 14:

Respondents felt the board needed further explanation. The message it was trying to convey was not simple enough.

"I'd pick it up just to find out what it is about, it's too difficult to understand".

Board 15:

Some respondents were not sure what it was trying to say "it's a bit obscure", however, others seemed to like the board.

 "It's quite poignant – I'd like it if there was an exclamation mark alongside it".

"That could go on your bathroom wall".

Board 16:

A number of respondents recognised the board as the advertisement for Copenhagen summit.

"Forget it, it didn't work".

This board had to be explained to people, some respondents associated it with images of the polar bear on the ice cap.

Board 17:

Overall, this board was received positively by respondents. One respondent, commented that when considering the climate change message the board *"absolutely captures it – the public will understand it. It's got the Ah factor"*.

Climate Change Messages

One respondent compared the UK with America in terms of its focus on climate change and felt that people in the UK have been overloaded with news about climate change in this country and the result is that *"it goes in one ear and out of the other"*. This respondent believed that unless someone can demonstrate that climate change is happening then no one will totally believe it.

Two final comments were given by respondents regarding the delivery of messages:

- For blind people, messages should be audio as not a lot of people know Braille.
- The tone of the message should not be scare mongering as this just panics people.

Responsibilities

The group discussed where the climate change information might be available and conclude that it is probably available from the Environment Agency, but that they would have to proactively seek it out because climate change information was not a priority for the Environment Agency who *"seem to be more interested in waste and issues like that"*.

Respondents knew very little about Defra but were sceptical about information that was given via a government department as they believe it is too politically driven. They commented that Defra's profile simply is not sufficiently high to disseminate the information about climate change; they commented *"do you ever see anyone on the telly from Defra talking about the problems?"* Further to this, there was perception that the information provided by Defra was not simple enough for people to understand. [Note: DECC was not referred to by the researchers, nor was it ever brought up by members of any of the focus groups].

"Defra does a lot of good work, but hides its light under a bushel too often. It needs to come out with something that the layman can understand".

Several respondents suggested that representatives from Defra should come into the local community and involve people like them in passing on messages regarding climate change. They further suggested that young people could become involved in communicating messages to people.

Each respondent was then asked what their organisation could do regarding climate change.

The respondent from the CAB commented that if people cannot visualise global change or rising sea levels then they are unlikely to be to be interested. He thought climate change must be made personal to people in order for it to have any impact.

"If it's going to hit them in their pocket then yes, they will be interested."

CAB has two arms to their aims and goals, one is to provide people with information and the other is to influence social policy. They have quite a large group nationally who try to influence parliament. If the community was affected by a particular issue, for example, wheelie bins being collected fortnightly instead of weekly, or post office closures, for example, that is something CAB would campaign against. They would campaign against climate change if *"you could dream up a scenario that affects us locally…."*

One respondent pointed out there was some past issues around wind farms in the area, however, these were overcome and the wind farms were built. This respondent suggested investigating the approach that was used here to the combat anti wind farm campaigns.

Information could be disseminated via the Rotary club as it is a large organisation. The representative from here claimed they would take things seriously and not be swayed by the media.

"The information [on climate change] *needs to come from many reliable organisations"*.

Some respondents thought information should come from the local council re what to expect as a result of climate change and what warnings will be given and what they are doing about it.

"The Council should lead on telling them what to do to combat climate change. We all do our bit…recycling and light bulbs".

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

Felixstowe ABC1 Families

Introduction

Attendees:

- Male, lived in Felixstowe all his life in locations close and further away from the coast. Currently lives in land. Works as a van driver.
- Male, has lived in the area for 15 years. Has always lived near to the coast. Works as a mechanic and is married with four children.
- Male, lived in Felixstowe all his life. Lives with his son.
- Female, originally from Wales. Has lived in the area for about 15 years. Lives with her husband and three children.
- Male, has lived in the area for 18 years. Works as a cook. Very familiar with Felixstowe.
- Female, has lived in the area for 25 years and has lived on the sea front. Lives with her husband and son.
- Female, she lives in Walton. Has lived in the area for all her life. She lives with her husband and her son.
- Female, has lived in Walton all her life. Works as a barmaid. She lives with her husband and 2 daughters.
- Female, lives with her 2 daughters. Is a financial director of a local company.

Important Issues for the Local Environment

- Nicer summers
- Changing weather
- Changes to the sea front
- Damage to walkways along the sea front
- Sea moving inland – coastal erosion
- Not prepared

Current Levels of Knowledge and Understanding of Climate Change

When asked what words come to mind when they hear the term 'climate change', the group thought of (unprompted):

- Big changes to everybody's life
- Global warming
- Greenhouse gases
- Rising temperatures
- Melting icecaps
- Scaremongering?
- A natural process?

Some respondents were not sure how much of what they see is down to climate change.

"You can see changes but you never know whether its man-made changes or due to the environment."

The group seemed to feel quite sceptical towards climate change in terms of recycling and other countries polluting more than the UK.

Information on and Knowledge of Climate Change

Overall, the respondents indicated that they got their information about climate change from:

- National TV news
- The discovery channel
- Documentaries
- Newspapers – national

No one indicated that they received any information locally about climate change. The only thing they received information about was recycling.

One respondent was quite interested in climate change and looked up information on the internet.

One respondent thought that people are much more aware of climate change now than they were 20 years ago due to increased press coverage. Due to it being fashionable and because of scare tactics.

The group thinks that the local council seems to panic about flooding and erosion, and that it is unjustified – e.g. moving people out of their homes on the sea front, placing boulders on the beach which have made it unsafe.

"It's as though they've not sat down and really thought about it."

"The sea is so powerful it doesn't matter what they do."

"On a daily basis you don't really notice anything."

One respondent thought that they are pushing the climate change message too much in schools.

"He's coming home from school and all he's talking about is climate change and what is going to happen. But I think that's wrong. He should be going out and enjoying himself at his age."

"The government is pushing it towards our children and there's nothing we can do about it."

"They're children, they don't need to worry about climate change at their age."

One suggested that they should send a letter home informing parents that they will be teaching them about climate change as they do with sex education.

Presentation 1

"It only focuses on negative aspects, even though it said there is positives."

"It's just possibilities, it's nothing definite."

The group are very sceptical about the presentation.

One respondent found the first part of the presentation quite confusing, but that as it progressed it improved.

They agreed that it was simple to understand but that it was too one-sided as it did not express views from the other side of the argument.

"It's very Al-Gore-ish."

No one was aware of the term UKCP09. One respondent said it was *"probably one of those government think-tanks that'll make them a bit of money."*

"It's not factual, its opinion isn't it?"

No one in the group said that the information in the presentation would lead them to take any action or change their behaviour.

"The information might be a bit scary but you just carry on don't you. We evolve with the changing climate."

"What could you actually do?"

The group discussed that it is more important to target big factories and businesses, not individuals.

"We're just ordinary people getting on with our lives. There's nothing we can do."

One respondent was quite adamant that she would not change her behaviour and would continue to drive her large engine 4x4.

"I don't want a little one litre car. When people ask me 'don't you worry about the environment?' I say bring it on, I like warm summers!"

Presentation 2

Overall, respondents did not believe the presentation. They felt that the presentation was quite similar to the first, and reacted in a similar sceptical way.

 "It's not factual."

"Who's to say what will happen in the next 30 years."

Several respondents in the group agree that they would quite like to have hotter summers and colder winters.

They felt that the second presentation tried to make you feel guiltier than the first, but that they were very similar.

"They're both messages based on assumptions about what people think is going to happen, not factual facts."

"There needs to be more specific facts, not just opinions."

One respondent says that she uses as little electric as possible, does not drive, and feels that the does not contribute much to the effects of global warming.

"How can you compare me with someone who uses lots of electric, has two cars… how can you judge it?"

Presentation 3

Board 2:

Respondents could not relate to images of flooding at all and felt that the board should be targeted to individuals who live in areas of high flood risk.

"It's personal choice if you live in areas where it floods."

Board 3:

One respondent felt that the image was trying to make people feel about climate change when in fact the picture could be from anywhere and could have been caused by anything.

"It's just a car in a river."

"People shouldn't live near anywhere where there's flood warnings."

Respondents felt the board was trying to make people know that they should be more prepared.

Board 4:

Respondents understood that it is a flood guard, but did not seem to read anything else into the board.

Trust the Messenger Boards

One member of the group indicated that he would not trust any of the boards and would want to see scientific fact.

Another respondent said that the local Council fact sheet *"will be full of predictions again, it won't actually be facts."*

They explained that they would prefer a scientist to come to their local area and tell them, in a similar format to a focus group, what the actual facts are.

"They wouldn't exaggerate everything."

Headline Boards

Everyone in the group preferred Board C.

"That's what you're going to see in years to come."

"It's got the magic word on it – lies!"

Board 12:

The group felt the board was aimed more at children.

"They're trying to target you as if you're a child."

One respondent said there needed to be a more shocking image shown *"Something where lives are in terrible danger."*

Board 13:

Several respondents indicated that, as they pay for their own heating, they should be allowed to have it no as much as they like.

"I have my heating on 24/7 at the moment. If we're paying for what we use then what harm is it doing other people."

However, one respondent said *"I think it's a good poster. It just tells you and it's simple."*

Board 14:

The majority of respondents were confused what message the board was trying to convey to them.

"What is it??"

Board 15:

Some respondents were aware that it was a film poster.

"I watched it and yeah, some of what he was saying was the truth, but a hell of a lot of it was exaggerated."

Board 17:

It affected some of the respondents who are animal lovers. However, they then said that it affects the polar bears so gradually that they will move on and adapt.

Climate Change Messages

There was a very sceptical atmosphere towards climate change within the group. They indicated that they do not really trust the government.

"What change is there that climate change is actually happening?"

They explained that they would want to have facts and figures from an independent body, not from the government.

When asked about what sort of messages should be given out about climate change the group agreed that, whatever messages went out, there should be some financial incentive that went along with them.

"There needs to be something that would give people the incentive to make a difference."

They explained that they struggle with the fact that there are no real incentives and that they cannot see what difference their actions actually make.

"Financial incentives might encourage people to start doing something." For example, those who recycle more could receive reductions on their council tax.

There was also a lot of discussion about how much of a difference people in the UK can actually make to the effects of climate change.

"There's nothing we can do that will make a difference until people in other countries do the same."

"We're all doing our own bit, recycling and things, but then you've got big factories and industry doing what they're doing. So what can we really do about it?"

One respondent explained how none of the issues that had been discussed will affect them, but they will be affecting their children and grandchildren, and that it should be those people who are being educated about climate change.

Communication with Government

Respondents were personally not sure they wanted to be involved in decision making, but that some local people should be consulted. They also suggested that discussion groups could be held that people could attend so that those who are more concerned can find out more information.

Responsibilities

The group said that they thought the responsibility for climate change messages should not be with the local council. Instead they suggested that a 'proper geologists' who have specialist knowledge should be in charge - someone independent. They also thought they could involve people with local knowledge.

As the group had been very sceptical about climate change, they were not particularly ready to accept any personal responsibility or change their behaviour.

"I'm not going to spend the rest of my life worrying about everybody else. I'm going to enjoy what time I've got here. Until someone can tell me exactly what would happen I won't change what I'm doing and put my life on hold."

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

Felixstowe C2DE Empty Nesters/Retired

Introduction

Although not prompted to do so the respondents commented about climate change and the local area when introducing themselves to the group.

Respondents included:

- Male, has lived in Felixstowe since 1958, used to live in Norwich. He lives in the ferry end of the town. His main hobby is fishing. He has noticed some erosion on the coastline in the last 10 years.

- Male, has lived in Felixstowe since 1974, used to live in Cambridge. He lives close to the middle of town. He is retired. Used to fly over and sail round the area so feels he is able to comment on changes in the area over the years. He commented about the change in movement of the buoys and the tides around the coastline and near the harbour, and the changes to the coast near the ferry entrance,

- Female, has lived in Felixstowe since 1982. She used to live in London. She lives in Old Felixstowe, away from coast, so felt she was not affected by coastal erosion. Over the last 30 years she has noticed the beaches changing.

- Male, has lived in Felixstowe for seven years. He is retired and used to live in Essex. He felt he has noticed a difference in the weather over the years.

- Male, is 65 and has lived in Felixstowe all his life. Over the years he felt he has noticed changes to the beach as well as light and air pollution in the area. He welcomed the opportunity to *'be involved in a discussion where people are going to take notice of things'*.

- Female, has lived in Felixstowe since 1956, she lives between the coast and town. She has two children and works in town.
- Female, has lived in Felixstowe for 18 years. The main change she has noticed in 18 years is the beach. She lives in the centre of town, on a hill, and reports not feeling threaten by flood risks.
- Female, has lived in Felixstowe since 1984. She used to live in Wales. When she first moved to the area she lived on the beach and enjoyed bringing her children up on the coast. She has moved further in land now and only occasionally visits the coast to walk along the beach at the weekend. She reported not noticing a big change in the beaches over time.
- Female, lives in the town centre, therefore did not feel that she is affected by flooding. She has lived in Felixstowe for 20 years. She felt she did not know much about climate change or coastal flooding, however, would be interested in learning more.
- Male has lived in Felixstowe since the 1950s. He is retired. He used to live in Bawdsey and felt he noticed the most coast change in this area compared to Felixstowe. He has also seen a lot of shingle movement at Felixstowe ferry port.

Current Levels of Knowledge and Understanding of Climate Change

Words associated with climate change included:

- Weather
- No extreme seasons anymore – milder, wetter winters
- Tides
- Flooding
- Air pollution
- Severe floods – tend to be in the North
- Ice caps melting
- Water levels rising
- The Maldives disappearing under water

A discussion about the weather developed and respondents recalled severe winters they had suffered with in the past and flooding which has occurred. Some respondents seemed to feel that the winters were colder they found it difficult to accept the weather is getting warmer overall.

Overall, respondents agreed that some of the changes to the climate had been happening over thousands of years.

Interestingly, even though the majority of respondents mentioned changes to the local physical environment and seemed to infer they were due to climate change during the introductory section of the discussion, when probed further, they felt that these changes were not dramatic changes and as such could not necessary be a direct result of climate change. Many attributed these changes to be because of dredging by the local boating industries and changes to the flow of water.

Overall, respondents agreed that they consider climate change on all levels; global, national and local.

When asked to discuss the issue of flooding, the majority of respondents did not feel this was a major issue in the area. They discussed the flooding in the 1950s and the inaccurate wide public perception that the flooding occurred from the sea, rather than from the River Orwell. They believed this flood was due to extreme weather and not due to climate change.

Respondent could recall areas outside Felixstowe where water bailiffs were in operation. They felt these individuals played an important role in monitor water levels in order to pre-empt flooding and inform the public about areas susceptible to flooding. A minority of respondents felt that this information in the past prevented properties being built in areas at risk of flooding, however they were unhappy that currently properties are being built in

inappropriate low lying areas with high flood risks, and problems with drainage systems are exacerbating the problem of flooding.

Information on and Knowledge of Climate Change

When asked where respondents gain their knowledge regarding climate change, respondents highlighted documentaries, TV both local and national, word of mouth from friends and families, local and national newspapers and the Internet. None of the respondents sourced information from local action groups, local fact sheets or via their Local Authority.

Overall, respondents felt that the weather was very unpredictable and they were unhappy that the weather forecasts often were inaccurate.

The majority of respondents did not consider the affect of climate change on themselves as individuals and their peers; they considered the impact on their children and future generations. A minority did, however, feel that they could potentially be affected by climate change if they were involved in a 'freak event'.

"It's only the last 10, 15 years that we're getting climate change shoved down our throat and I don't think climate change is something new. Climate change has been going on from the start, it's just all of a sudden it's just the big bandwagons that all of the governments have got to jump onto…They've got to have something to have a go at the great British public about, it's never their fault"

When asked why they considered there to be an increased focus on climate change, respondents struggled to provide a reason. One respondent suggested the idea that the air had been made too clear after the use of coal and other pollutants was reduced and therefore more sun was able to filter through the sky. The majority of respondents, however, felt confused about climate change and believed they had received mixed messages about climate change recently.

There was general consensus within the group that in addition to individuals take action to affect climate change a more global approach should be undertaken. They believed that countries such as China and India should be reducing their emissions.

When asked which sources of information they would trust, or trust more, there was a strong reaction from some respondents. These respondents were adamant that they would not trust any source and would rely on personal judgement, and would not be told what to do.

"I don't trust anyone. I do my bit. I've got a conscience; I do what I can do. If any local or central government tell me it was raining, I would look out the window to check."

"We all do our bit in terms of recycling and things like that"

Interestingly, the majority of these respondents were engaging in environmentally friendly actions, such as recycling, something which they felt was an intrinsic action something that their upbringing had instilled in them. Other respondents discussed composting and not using pesticides when gardening.

Presentation 1

Respondents seemed to wish not to believe the information given. They did not want to because it was too frightening to do so, or because they were wary about the reliability of the data. Respondents would like to be given the source of the material so they can gain to judge how reliable the information was.

"I don't necessarily believe it – particularly in terms of the information relating to the weather"

"I'd like to know where the facts and figures actually came from"

"It's frightening if you believe it"

The messages *'made them think'* and made them consider the role that each of the countries across the world need to play.

Respondents were interested to hear what the potential benefits of an increase in global temperature could have.

"Can't see as individual you can do much about things"

Overall, respondents would like to be told the impact of the sea levels rising by what they felt to be a rather small amount.

None of the respondent were aware of the CP09 projections prior to the presentation.

Presentation 2

Overall, respondents felt the presentation was easy to understand, however, they wished to raise a number of questions regarding some of the topics covered in the presentation as a result. For example, one respondent wished to know how urgent it was to take action to counter climate change.

"When do we get to the tipping point when it's too late to do something about global warming?"

They also wished to understand how the water cycle works, how the rising sea level would actually affect the world and the gulf stream.

Again, respondents struggled to see the impact individuals could make to adapt their behaviours when some of the larger countries in the world were not mediating their emissions and deforestation was not been controlled. However, they did feel that this presentation was more focused on the actions that individuals should undertake. Again, respondents discussed the actions they were currently undertaking, including composting, not using pesticides when gardening, buying fresh produces to minimise the foods they buy with packaging, and shopping locally. They discussed the limitations of the local transport system and therefore the need to use their cars. Respondents were, however, willing to use public transport if it was improved.

The messages in the presentation were found to use less jargon.

Respondents commented that it was good that the presentation was on a more local level, but it did not particularly stand out and make them think.

Respondents felt the basic information was in the content of the presentation but they would like to be directed to information sources if they had any additional queries.

Presentation 3

Board 3:

Whilst the majority of respondents found the image on the board 'unpleasant', they mainly felt the incident was due to flooding and heavy rain which they believed were not necessarily due to climate change.

"Caused by heavy raining"

"Flooding"

"It's unpleasant"

"Make's you think"

"It's happening in this country"

Overall, respondents emphasised the fact that any actions on an individual level would not be able to stop flooding

Board 3b:

This board made respondents consider the location of properties and the financial cost of flooding. As all the respondents did not consider themselves to live in an area of high flood risk, they tended to dissociate themselves from the image.

"They're building housing on flood plains."

"The individuals that live in the area, the difficultly they will have when getting insurance in forthcoming years"

"It makes you think of the financial cost of flooding"

Board 4:

Again, respondents considered the location of properties and the sheer impact of flooding in terms of protecting themselves.

"Those replace sandbag"

"That system is never going to work"

"It's sad, but again, its propaganda again, it's flooding. It's not our fault it's flooding. Houses shouldn't be allowed to be built on flood plains"

Trust the Messenger Boards

All the respondents felt they would be more likely trust board D.

"You get the information from local people who know the area and have personal experience"

Board C:

Overall, respondents felt "*word of mouth is not very effective" and messages can get "changed from one person to the next" resulting in "Chinese whispers"*

Board A:

The only comment received in relation to this board was that *"all that one does it panic people"*

Board B:

Respondents seemed to take a dislike to the Daily Mail newspaper depicted on the board inferring that the messages were not necessarily constructive.

"The Daily Mail would probably say it's the fault of the immigrants and Lady Diana".

Headlines Boards

All of the respondents felt they would be more likely to agree with board B. They felt this board was more likely to reflect their beliefs.

"It's factual"

"It's realistic"

Board 12:

None of the respondents had seen the Act on CO2 campaign material and felt the board was not very striking and did not seem real to them.

"It does not have any impact"

"It's just like a fairytale"

Respondents considered their use of cars and again, struggled to consider using their cars less, because they were either using the car as little as they could already or the public transport system in the area was not good enough.

Overall, respondents felt the board should be more targeted at children because of the images, however, they did not feel that the board would resonate particularly well with this group

Board 13:

They felt that most of the actions the board was suggesting were out of their control. This board led respondents to discuss food wastage and the role of supermarkets in minimising this waste.

Board 15:

Overall, respondents like this board. They felt that people were more likely to notice the board because there was an animal on it

"People are interesting in wildlife, especially the British"

"Climate change is going to affect them before it affects us"

They felt that again, it would not necessarily lead people to take action because on the limited effect individuals can have.

Climate Change Messages

Respondents felt that the main messages regarding climate change should focus on any changes to the environment as a consequent of climate change, particularly in the local area.

Communication with Government

Respondents were asked to consider the actions they would ensure happen if they were in charge, the actions they outlined were both global, national and local:

- Reduce the amount of packaging
- Put pressure on the countries that cause the most effect, for example, China, America and Russia
- Improve the local transport system
- Target any campaign materials and 25 to 40 year olds because 'they are the future'

Respondents felt in order to communicate their views to government and contribute to decision making it would be beneficial to have discussion groups such as the one they were in with a local MP even though only one respondent had actually spoken with her MP in the past.

They discussed existing routes to communicate their views and highlighted council meetings they could potentially attend even though they felt these meetings were often over attended by council workers. They felt potentially they could communicate their views via the Internet, but in the main, preferred face-to-face contact.

Respondents welcomed the opportunity to contribute to the focus group.

Responsibilities

When asked who they considered should be charged with making decisions on climate change, a number of suggestions were made, these included independent scientists with no political affiliations and no financial interests, and the Environment Agency. A few respondents were hesitant about trusting messages from the government. Respondents also felt that community organisations and local groups should be involved in decision making.

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

Felixstowe Third Sector

Introduction

Respondents included:

- Male representing Suffolk preservation Society. The society covers the whole of Sussex. The aim of the society is to preserve the rural tranquillity of the area. Also sits on the committee of the Ipswich Rural Society which has a similar remit. Lives in Ipswich, felt that he knows Felixstowe well. He is a volunteer
- Male representing Felixstowe Area Community Transport Scheme. The scheme runs a 'dial-a-ride' service for elderly, mobility impaired and disabled residents within the Felixstowe area. He is paid part-time.
- Male Manager of the Felixstowe Ferry Golf Club. Lived in Felixstowe for 25 years. Approx 85% of members are from the Felixstowe area. The golf club is situated on the coast
- Male representing Felixstowe Ferry Golf Club, He works as a green keeper and has worked there for 16 years. He has lived in the Ipswich area all his life (approximately 30 years). He has seen changes to the environment he works in which have had a knock-on effect on his approach to maintain the green.

- Male representing Suffolk Naturalists Society. He is a volunteer and the acting Chair. He felt he is less familiar with the Felixstowe area.
- Male representing Felixstowe Sea Angling Society. He has lived in the Felixstowe area for over 50 year. He has been a member of the society for 38 years. He also is a member of the CCTV group in Felixstowe
- Male representing 1st Felixstowe Sea Scouts. He has lived in Felixstowe for 25 years. He is a volunteer
- Male representing Suffolk Beach Anglers. He is the secretary of the society and is a volunteer. He was born in Felixstowe and lives in Ipswich now.

Current Levels of Knowledge and Understanding of Climate Change

Words associated with climate change included:

- Sea level – felt the level within the area has changed dramatically over the last few years.
- Melting ice caps
- Extreme weather; Freak rain, freak drought, more extreme events – after probing they associated this with flooding in the area
- Changes in agriculture and land use due to the changes in climate

There was a general consensus amongst the group that they see issues related to climate change at global, national and local levels.

A number of respondents could see changing to the sea banks and vicinity of the river to the sea wall resulting in erosion. There was agreement that this could be caused by tidal change and relocation of groynes. The group as a whole were not sure whether the sea level changes can be full attributed to climate change, some felt it could be due to natural changes or dredging due to the shipping lanes.

A minority of respondents suggested another possible cause of these changes to sea banks was because of the South East of England sinking and the North West of England rising. This suggestion was greeted with scepticism and respondents joked that this could be explained by the fact that more houses are being built in the South East, so the UK is tipping.

Information on and Knowledge of Climate Change

Respondents reported gaining their knowledge regarding climate change via national newspapers and TV. One of the respondent works for the Essex Wildlife Trust so felt he was *'immersed in all things environmental'*. Prior to the group, one respondent had visited the Defra website and found it to be informative and easy to use.

None of the respondents reported receiving any information via local TV, local newspapers, or the Local Authority.

There was general agreement that it is important to consider the term 'climate change' rather than 'global warming', due to the natural fluctuations in the weather. In addition they thought that the weather may get colder and wetter so temperatures were not necessarily rising all through the year. Respondents believed that the UK public be could potentially just focus on the benefits of climate change in terms of increase temperature in the UK and hotter summers.

From an individual perspective, respondents overall, felt that climate change was more likely to affect the next generation. From an organisation perspective, respondents struggled to think of the future effect of climate change on their organisation.

None of the organisations had a mission statement relating to environmental policies.

Presentation 1

Respondents believed that the UK public could be potentially just focus on the benefits of climate change in terms of increase temperature in the UK and hotter summers.

"They will see nothing but good in the fact that it's getting warmer".

There was a feeling that some members of the public could not believe the information and that climate change is not actually happening. This disbelief, respondents felt, was exacerbated by 'the UEA data fiasco' and 'false information'; they felt that the public are quick to ridicule scientists and scientific reports so any element of doubt they may have about the sources of data, will discourage people from believing in climate change being real.

Respondents agreed that the messages were confusing because they provided two scenarios.

Respondents felt that there has been more press lately in terms of climate change because of the Climate Change Summit, but climate change has been happening for years.

"The ice caps have been melting for years, but we've only just started getting more discussion about climate change over the last couple of years."

Overall, respondent felt the presentation would not necessarily lead them to take action. This was partly due to the fact they would struggle to know what actions they could take. For example, one respondent recalled in the 1950s when people had coal fires and chimneys which were replaced by central heating for environment reasons. This, he felt, was an action which could have affected global warming, however, he struggled to gauge the size of the effect.

The group were in agreement that a presentation format without visual aids was not necessarily the best way to present the information and engage the public.

Members of the golf club, believed climate change could have an impact on their organisation. They explained that hotter summers would mean more people would wish to play golf, however, the potential for increased flooding from the sea could potentially led to their courses being more waterlogged as the club is below sea level.

The Suffolk Naturalists Society member, could see an impact of climate change in terms of natural history study, he speculated whether new insects would appear in the UK because of the changed climate.

The contact from the Felixstowe Area Community Transport Scheme explained that the vehicles they are using are not environmentally friendly, however, their organisation would be unable to afford to replace their vehicles with more environmentally friendly ones even though he would like to be able to do so.

There was general consensus within the group that in addition to individuals take action to affect climate change a more global approach should be taken. They believed that countries such as China and India should be reducing their emissions. In addition, deforestation should be reduced.

"What's the point of me doing that [taking action to reduce their emissions], *when you've got India and China belching out tons of emissions".*

Generally, respondents felt that young people were more informed regarding the climate change than other groups of the population because of the education they receive in school.

None of the respondent were aware of the CP09 projections prior to the presentation.

A suggestion was made to translate some of the figures into a pictorial representation of these on the Felixstowe coast. For example, showing how much the beachfront could reduce by.

Presentation 2

"A more gentle, personal approach"

They welcomed the more local focus because it showed that East Anglia has different weather to the rest of the UK.

When directly asked if the presentation would lead individuals to take action, whilst the respondents did not necessarily agree or disagree, the general discussions after the

presentation were more related to actions that individuals could or that respondents were actually currently taking. For example, respondents discussed participating in recycling, changing light bulbs to more energy efficient ones, turning down thermostats and driving less.

The main messages respondents gained from the presentation were:

"As an individual what can you do"

"Think globally, act locally".

"We've all got a part to play in the way that we use the resources that are available to use and what we do with the resources that we get, like recycling".

There was some suspicion from respondents about how much impact they could actually have on climate change. For example, some were sceptical as to whether the waste they recycled was actually going to landfill.

Respondents felt it was unusual not to see a presentation with graphics, and like the inclusion of graphics in this presentation.

Presentation 3

Board 3:

Generally respondents struggled to relate the situation shown on the board to themselves and their local area, therefore the image did not really resonate with them. They felt the incident was caused by flooding or a freak weather occurrence. The only action people considered as a result was that the government should not allow properties to be built on flood plains. As individuals and organisations, however, they could not see any actions they could take.

"I would say it's Cornwell"

"Doesn't feel local"

"I think it looks like Linton in North Cornwell"

"Could be an isolated incident"

"Flooding"

"Makes them consider the fact that people are building on flood plains".

"What's the point of individuals trying to do something when Local Authorities are still building on flood plains"

"A lot of people are talking about building on the flood plains and there is nowhere for a lot of water to go, and all this business, creating these tunnel effects which could cause this. And the governments are not protecting these areas by river walls or banks, because they build that there then further down they have to do certain other things"

Board 3b:

Some respondents considered the impact of flooding on the capacity of emergency services

"Poor nurses and medics"

They felt the board represented the effects of flooding on individuals because they could see *'a house and the street'*

Trust the Messenger Boards

Messages B and D are the most trusted.

The golf club representative explained that the golf club members read papers and indeed there was a feeling in the group that *"the public are very persuaded by headlines".* There was a comment, however, in the group regarding which newspapers could be trusted.

"Depends on the papers, like if it's the Star [they would trust it less]"

In terms of board D, respondents felt *""Local discussion could be good to start debates".*

The Suffolk preservation Society contact explained that its Members were concerned about coastal erosion, some belonging to a group in the Blyth estuary whose aim is to build a coastal defence regardless of Defra's involvement. They do not want to see the A12 be turned into a causeway road. They would be sceptical regarding receiving messages such as D, as they feel that *"parts of the coast are being deserted by Defra and the Local Authority and they feel that is wrong".* They are considering using their own money to build defences. He felt a lot of work needs to be done by Defra and the Local Authorities to build his members' trust.

Climate Change Messages

Respondents generally felt that messages should focus on individuals all 'doing their little bit'. They felt that people will never take actions if they only think about the global affect (especially if other countries are not taking action to reduce their emissions), instead the focus should be on the affect that people could gain in terms of their quality of life and the local environment in which they live.

Respondents felt that messages should focus on making a local difference and people would then think *"if it reduces [global] climate change it is almost a positive bonus"*

There was a perception that if the general public could see the governments across the world taking action to reduce their emissions they would be more likely to do so themselves, especially if they were incentivised to do so.

The contact from the Felixstowe Area Community Transport Scheme felt that his members would struggle to understand the messages in the presentation, particularly as many people he deals with have dementia. One respondent felt that messages should be adapted to reach people with disabilities.

Only one member recalled their organisation sourcing information regarding climate change. The Suffolk preservation Society contact mentioned in articles written by the Ipswich Society. The articles, however, are based on personal opinions.

Contacts from the various societies said what they would be interested in, in relation to climate change:

- The fishing society members have an interest in studying tide levels, they could be interested in the projections, the contact felt, because of the changes to the sea and changes to the sea stock.
- The scouts work to gain badges; some of these badges involve conservation work. The contact suggested developing a local conservation badge for the scouts to gain.
- The Suffolk preservation Society contact explained that a number of his members had concerns with offshore wind pylons being built in areas of outstanding natural beauty.

Overall, respondents felt that their members would not be interested in seeing the presentations or discussing any of the issues raised by the boards shown during the group discussion. However, some of the contacts were happy to become involved in the communication of climate change messages should Defra wish to link in with their organisation in the future. The following suggestions were made:

- The golf club offered to place leaflets at the golf club.
- The scout contact was happy for Defra to sponsor a local conservation badge
- The fishing contact was happy to send something out to his members

Respondents suggested placing targeted articles in specialist interest magazines in order to engage people's attention regarding a specific issue of interest which is being affected by climate change, thus promoting the need for them as individuals to take action. They felt that it is important that people receive the messages in a format they can trust.

A number of examples of magazines and articles were given:

- In golfing magazines an article could be written about how sea level rises could affect some of the courses round the UK

- For organisations such as the Suffolk Naturalist Society or the Suffolk Wildlife Trust an article in their magazine could be written about the impact of climate change in the local area.
- In fishing magazines an articles could be placed describing how fish stocks in the North Sea are being affected by climate change.
- The Suffolk Naturalists Society contact felt its members would be interested in reading an article about salt marshes declining due to climate change this means that the number of a particular species of bee declining.

The golf club contacts wished to emphasis the fact that they operate a business and any messages they present should not scare their members and dissuade them from attending the club in any way.

Communication with Government

None of the respondents had been involved with any local action groups, been involved with the Local Authority regarding climate change issues or had been involved in SMPs. Only the contacts from the golf club had emergency planning in place, this was with Defra and involved building sea wall defences.

Respondents felt that if residents in the local area wished to become involved in decision making in climate change and communicate their views to government this should be done via some of the local organisations such as the Felixstowe Ferry Forum who have an active interest in the local area and via local councillors. In turn, these organisations and well-known individuals in the community could communicate the messages regarding climate change to local residents. A suggestion was made for Defra to set up a climate change area at a local level.

Responsibilities

Respondents felt there needs to be a local climate expert to contribute to any information produced to distribute locally. Indeed, local organisations should be involved in decision making about climate change and coastal risks. Respondents felt the local experts and organisations should work with Defra and the Environment Agency to make the most appropriate decision about changes to the area

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

Formby Singles

Introduction

Attendees:

- Male, does not live that close to the coast. Currently a student and has lived in the area for 6 years.
- Female, self-employed, lives 10 minutes away from the beach. Has lived in the area for 6 years.
- Male, lives 10 minutes away from the beach. Student and also works part time. Has lived in Formby for about 6 years.
- Female, works as a quantity surveyor, lives a couple of miles away from the coast.
- Male, lives in Formby village, works as a carer. Recently moved from Scotland
- Male, self-employed window cleaner. Has lived in Formby for 26 years.
- Male, currently works in a call centre and lives close to the coast.
- Male, lives a mile from the beach. Has lived here for 18 years and is currently a student.
- Male, lives about a mile from the beach and is also a student.
- Male, lived here for 15 years, a mile from the beach. He is currently unemployed as he has just made redundant.

Current Levels of Knowledge and Understanding of Climate Change

When asked what words come to mind when they hear the term 'climate change', the group thought of (unprompted):

- Global warming
- Flooding
- Ice caps melting
- Carbon footprint
- Changes in weather
- More extreme conditions

Important Issues for the Local Environment

- Too much rain and flooding.

  Respondents seemed to think that this might be more of a problem with the drainage system in Formby rather than climate change.

  "This place could be underwater if things keep going the way that they are."

  Other respondents stated that they have never really noticed it so are not really too worried about flooding. They said that they would only worry if things were going to get worse, and they felt that being close to the coast it could be an issue in the future.

- Changes to the coast.

  A couple of respondents had noticed that some local areas now had flood and sea defences in the form of walls to protect from flooding.

  "You very rarely see a high tide. It doesn't really come in so much."

  One respondent had noticed changes to the sand dunes and other local landmarks, but the group agreed that this was nothing drastic. Possibly in the future there could be more obvious changes, but they all felt that they would not be around to see them so were not worried.

  "Maybe for the next generation Formby might not be here."

  Several respondents indicated that they did not think that living close to the coast made a difference to the way that they thought about climate change, and that they felt quite safe. This was also backed up by the fact that they thought they would not be around when any effects of climate change start to be seen. However, one respondent disagreed with this, saying that no one knows exactly what is going to happen and things could be worse than predicted.

There was a general consensus that climate change does not really affect them much around their area so they do not see it as a hugely important issue.

Information on and Knowledge of Climate Change

Respondents indicated that they get their knowledge and understanding of climate change from newspapers and the television – specifically national newspapers, television news reports, and from documentaries on channels such as Discovery. One respondent also stated that she briefly learnt about basic climate change issues as part of her university degree.

When asked which sources of information they would most trust, the respondents indicated that they would trust news broadcasts on the TV. One respondent asked why they should not trust any sources of information about climate change and seemed confused as to why this kind of information might be deceptive. *"Why shouldn't we trust it?"* Others, however, said that it depended where it comes from as sometimes it can be contradictory.

The group said that they saw climate change as a national or global issue rather than a local issue.

"I think we get off quite lightly in this area. It's always somewhere else in the country."

"It's not a local problem it's more of a world-wide problem."

Presentation 1

One respondent explained how she was shocked by the presentation, saying "*It's quite shocking, you don't think about things like that really*" in relation to the rising temperatures that were covered in.

The group all indicated that they found the information in the presentation easy to understand, with one respondent saying that it was *"quite self-explanatory."* They did not find it confusing and thought that the language was not too technical for them. The group felt that the information was good to know, but not necessarily good to hear.

The group discussed the various theories about climate change and how they viewed them. One respondent said that she had heard that things would get colder, where as the presentation had informed her that temperatures would be rising.

"There's too many theories, you don't know what's going to happen."

One respondent stated that he had heard that climate change could be completely natural, not just due to human activity. He said he did not know which theory to believe because they both offer good arguments.

"There's a lot of evidence supporting each side of the argument so it's hard to decide."

"It's hard to quantify what you actually believe because you've heard so many different theories. You don't know whether to take it seriously or not because you've heard so many versions of the same thing."

One respondent heard in the local paper about turning the car off when waiting at train crossings. Questioning how they would enforce it. Also recycling locally promoted. All respondents claim to recycle. One recycled food but stopped due to poor collections. *"I don't recycle as much as I probably should."*

The group indicated that they did not find the information scary, with one respondent saying *"What's 3mm? It's nothing. We might as well carry on the way we are."* One respondent thought that because people are now more aware about reducing their carbon footprint the predictions are not going to be as bad in reality.

"It's not necessarily going to go the way it's predicted."

Another respondent had a differing view, believing that most of the damage has probably already been done, meaning that any action we take now won't really make a difference to climate change.

The group felt that the most important message of the presentation is that climate change is having a real effect on the world, and that there are projections of what might happen, but that it is hard to see what the reasons are behind those projections.

Presentation 2

After listening to the presentation, one respondent stated that he did not agree with that is being said because he felt that the planet goes through different stages and that we do not have any choice in the matter. He felt that there may be a need to cut down on emissions, but that whatever people do it will not make a difference on global warming. *"It's just delaying it; we won't be able to stop it."*

Another member of the group indicated that she found the presentation quite confusing, saying that there was a bit too much information to take. However, the majority of the group seemed to find the second presentation easier to understand. One respondent stated that the second presentation would be better if a person knew nothing about the subject of climate change.

"The second one was far easier to understand. But the first one was more informative."

The group liked that the presentation provided regional figures, but that these were not as shocking as the global figures, and that it was the shocking figures that they were more likely to take notice of.

"I'm more concerned about the ice caps melting. It [climate change] might not make much of a difference here, but it will in the arctic."

There was a suggestion that the presentation could benefit from showing the effects of climate change so that those viewing it could have something tangible to actually show them what is happening rather than just explain it with figures and projections. The figures alone do not have enough impact.

"If you don't see it it's harder to believe."

The group also indicated that they would prefer to be told concrete facts rather than predictions and projections so that they can be sure about what is going to happen in the future.

"Tell me what's going to happen, not what might happen."

When discussing what they could do to prevent climate change, several members of the group felt that their individual efforts would ultimately be meaningless and would not make a difference. They can turn off their lights and recycle on a local level, but globally there are countries creating huge amounts of waste and pollution far greater than that of the UK.

"*You can't just look at what can we do, you need to look at it as the whole world."*

"I could say that I ride my bike twice a week because the government initiative said so to reduce my carbon footprint but then you think that there's a factory in China that's producing more emissions a day. They're obviously not bothered about it so why should I be?"

Another respondent informed the group of a similar scenario where she always makes an effort to switch her lights off but then sees that lots of businesses and shops leave there lights on all the time, so feels disheartened.

One respondent thought that the government needed to invest in other forms of energy before there will be a difference such as nuclear power, as she is still going to use the same amount of energy and is not prepared to change.

There was a general consensus within the group that people would do what they could to prevent climate change, but would not be prepared to go out of their way to do it. One respondent developed this, saying that people will only really act on climate change if it means that they can save a bit of money, such as turning down the heating. Some respondents, however, indicated that they would still do what they could as individuals to prevent climate change without having any hard proof as they still felt it was a serious issue.

Presentation 3

Board 1:

The groups indicated that the board was depicting the polar ice caps melting and pointed out that if climate change theories are correct, they might not be there in years to come. One respondent stated that this is a familiar image, but that *"If it didn't say rising sea levels about it I wouldn't have know that's what it was about. It's just a nice image."*

Board 2:

Respondents thought that this board just looked like a picture of a normal coast line, and that it didn't really have any kind of impact on them. They said that it could have an impact on those who live very close to the coast, and that it might work better if there were before and after shots to show how much sea levels have risen.

Board 3:

The group felt that this board was more shocking and 'in your face'. Respondents said that it has the shock factor as it is something that has actually happened. However, the board does not show how it has happened and does not give any explanation, meaning that it is not necessarily related to flooding.

Board 4:

Some respondents were aware that this was a flood barrier, but others were not. The group were sceptical as to whether they would work properly.

"I've seen much more shocking pictures of flooding on the news. They'd work better than this."

Others suggested that it looked more like an advert for flood guards than a climate change message. *"It's not relevant to us around here."*

Trust the Messenger Boards

The group indicated that they would be more likely to trust messages about climate change from boards A and B. One respondent said that if it was a news broadcast from the BBC then it was very trustworthy, and that if it was the local news then it would be more specific to their region. They felt that board B was more shocking, and one respondent stated *"I'd trust the Independent more than I'd trust the Sun"* due to its reputation and where it gets its information from.

Board D was also highlighted by some members of the group as being a trustworthy source of information as it would be more relevant to the local area if it came from the local authority. Boards A and B would be more national, where as board D would have specific things *"that could actually affect me."* However, another respondent said that if she received something like board D through her door she would throw it in the bin with the rest of her junk mail.

Board C was not chosen by any respondents, with one member of the group saying *"you're less likely to believe your mate than something you've heard on the tely."*

Headline Boards

Board A:

The group described these headlines as 'more shock tactics'.

Board B:

Most respondents seemed to favour this board. *"It's the important message, it's for the children. It's about them not us."*

Board C:

Some respondents preferred the headlines on this board, with a respondent stating *"I want to see both sides of the story."*

Board 12:

One respondent thinks he has seen this advert before on a train. He felt that this poster summed up the presentations but with less information. The group seemed to think this was a good design and that they would take notice of it, and that it was good to have to option to read in more detail if you wanted to.

Board 13:

"It immediately makes you think on a global scale."

The group felt that this board was useful as it showed you something you can do to make a difference straight away, and also where you can go to get more information (web address). Message to turn your heating down – giving you ideas of things that you can actually do as an individual.

Board 14:

The group were confused about the board's message. "People wouldn't get it." They felt that it needed too much interpretation to be effective and they were not sure whether it had much relevance in the UK.

Board 15:

Some respondents were aware that it was a film poster, but all were aware of the message of pollution - pollution leading to bad weather and global warming. *"It's more of a message to*

industry so there's nothing for us to do." One respondent suggested that it might work better if it showed a local power station.

Board 16:

The group felt that this board would be more effective if it showed you the levels from previous years. They indicated that the main message was that sea levels were rising, but that there was not much other information on the board.

Board 17:

This board was well received by the group. They said that it was simple and straight to the point, and got the message about melting ice caps and global warming across easily.

"We can do out bit but it's down to the companies to do it too." - recycling and walking, but not much else they feel they can do to make a difference.

Climate Change Messages

The main message going out to the public needs to be practical – more what you can do rather than what causes global warming.

The group felt that this would be best communicated to people through a combination of shock tactics and explaining what you can do as an individual.

The group discussed recycling and how that could have an impact on climate change. It was also highlighted that now after several years, lots of people recycle out of habit. Therefore other messages about climate change and personal responsibilities could have the same effect on people's behaviour.

One respondent said that she would try to drive less, and several respondents indicated that they already cycle instead of driving.

Communication with Government

Respondents suggested that a questionnaire might be a good idea to get peoples opinions on climate change and would work well as a way of getting people involved in the decision making process.

Responsibilities

Respondents in the group felt that Liverpool Council or the national government should take responsibility for climate change messages, and that they should be able to get information on local climate change issues from the council website.

The group suggested that only those who '*know what they're talking about'* should have a role in decision making about climate change - those with specialist knowledge.

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

Formby C2DE Families

Introduction

Attendees:

- Female, housewife, husband is a teacher. Lives in Southport. Has 2 children aged 16 and 14.
- Male, lives in Formby and has done practically all his life, about a mile from the sea.
- Female, married with an 8 year old son, lives in Churchtown. Her in-laws live on the coast.
- Female, married with 1 child, works part time as a civil servant. Lives in Freshfield about ½ mile from the sea.
- Male, married with 2 boys. Works as a landscape gardener. Lives about ½ mile from the sea.

- Female, married with 6 children. Lives in Formby near Redgates, 45 minutes walk from the coast.
- Female, married with 2 children about 2 miles from the beach. Works as a physio.
- Male, lives about ½ mile from the beach and works in training.

Current levels of Knowledge and Understanding of Climate Change

When asked what words come to mind when they hear the term 'climate change', the group thought of (unprompted):

- Polar bears
- Ice melting
- Flooding
- The weather
- No seasons – hard to tell them apart now
- Unpredictable weather

Important Issues for the Local Environment

- The weather affecting the local wildlife, especially birds
- The beach seems to be disappearing, possibly returning to its natural habitat. The beach is becoming grassy.
- The sand dunes are becoming less and less every year.
- The paths along the beach are changing.

Information on and Knowledge of Climate Change

One respondent believed that the change in the local environment was due to glaciers melting which causes the sea levels to rise, which in turn causes coastal erosion. Another respondent, however, disagreed with this.

"I think it's all hyped up and it's just a natural state of events."

The group agreed that climate change was a global issue, not just local or national. They also agreed that they have started to hear a lot more about climate change in the press and media and that everyone is a lot more aware than they used to be.

None of the respondents thought that their homes were at risk of flooding. They explained that they get their knowledge about climate change from their children who have learnt things at school – some of their children are on the 'Eco Committee'. They thought that their children were much more aware than they are. Another respondent stated that she watched a lot of documentaries so gets information from them about climate change, and also from her husband who is very interested in politics and global affairs. Television, newspapers and the internet were also given are sources of information.

One respondent recalled a postcard that was given out to residents about flooding from the local authority. The group also said that they found things out in local newspapers and from local political parties.

Presentation 1

A number of unprompted comments were made by respondents. These included:

"It's a lot to take it, there's lots of figures."

"I like the idea of hotter summers."

Respondents found it interesting when it was specific to the UK.

"It's going to affect us more because we're on sea level. It's something we really need to look at."

A couple of respondents were trying to work out how old their children would be during the different years mentioned in the presentation. *"I'm thinking about their future, not about how it will effect me personally."*

The group thought it was a lot to take in during a short space of time, but that it was still understandable.

No one was aware of the term UKCP09. However, one respondent knows of some global projections which she had heard from the Al Gore film 'An Inconvenient Truth'.

Several respondents agreed that they would have preferred to have a script, slides or some information in front of them during the presentation to make it easier to digest. *"I probably took in about a sixth of it, if that. I prefer slides."*

However, this was not the case for everyone in the group:

"I wouldn't listen to it if it was written down. I prefer to listen to someone."

They felt that the most important message of the presentation was that global warming is happening and you can't ignore it.

When asked if the information would encourage them to make any changes to their lifestyle the group felt that it wouldn't necessarily.

"I don't think for me that information would because it didn't really include what changes to make. It seemed to be information that I've heard before, it wouldn't make me go away and think."

The group agreed that more useful information would be better with suggestions for action to take, and that it would be improved if it was more local to Formby.

Presentation 2

"It's a bit more user-friendly."

Respondents thought that seeing the graphics of the presentation helped to make it easier to understand.

They all agreed that it was easier to understand compared to the first presentation. They much preferred the fact that it contained some local information, and felt that the first presentation was a little bit too 'science-based'.

The group felt that the most important message of the presentation was to do things to stop the temperatures rising such as driving less, switching things off when they are not in use etc.

One respondent, however, points out that whatever they do will not make a difference in comparison to the amount of energy that counties such as USA and China use. They are aware that 'every little helps'.

"I do make a point of going round and switching everything off but my husband just won't because he doesn't see the point when all the offices in town leave their lights on."

Respondents thought that it's down to the government to put measures in place to prevent coastal erosion and flooding.

"They could try flood barriers made of cement if they want to stop it from flooding."

Presentation 3

Board 1:

Some in the group thought it would be more effective if it showed the effects on wildlife such as polar bears – something dropping off and breaking down.

"It makes you think about the ice melting, but you thoughts would probably stop there."

"Without the title I would wonder what it was about."

Board 2:

"It looks fine to me. It just looks like a nice beach."

Respondents thought that if you didn't have the text on there you wouldn't think that anything was wrong.

"You need the sea actually up to peoples houses – make it really obvious because that just looks like a calendar shot."

Board 3:

Respondents were unsure where the picture is of, but felt that it has a bigger impact that the other boards. It showed the chaos and destruction that global warming can bring.

However it did not make them think of local issues and they felt that it is somewhere else in the world, so would be less likely to take any action. *"It would bring it home more if it was a local picture."*

One respondent just thought it was a car accident, nothing to do with the weather.

"I wouldn't immediately link that to climate change." – Others in the group agreed with this.

Board 4:

The group were aware that they are flood barriers, but had not seen them before in their local area.

One respondent thought that the board was giving the message that if you do live in flooding areas there is a solution and something that you can do.

They pointed out that it looks like there is a gap at the bottom and thought it would be better if it showed it in action, with people dressed for wet weather.

No one in the group thought that the board is relevant to the local area.

Trust the messenger Boards

One respondent indicated that she thinks the Daily Mail would have the most reliable information. Several agreed with this saying that they tend to trust the information they read in newspapers. However, another disagreed and says that she never believed a word that the Daily Mail says and would be more inclined to believe it if it was written in the Independent.

Other respondents felt that they would also trust the news on the television as it tended to be reliable.

No one indicated that they would trust the message from local people *"I wouldn't trust the old lady because she might have got her facts wrong."*

With regards to D, the local leaflet, respondents said that it would depend what kind of information it contained.

"I'd read it and perhaps take not more than a national leaflet."

"You pay more attention to something that's local."

The group tended to agree that local news would be better to promote messages about climate change than national news.

Headline Boards

Board A:

One respondent suggested that these headlines look like something that would be seen perhaps in 20 years time when the situation is worse.

Board B:

The group thought that these headlines are more relevant to today's situation.

Board C:

The group found these headlines interesting, as they think it is strange that people can deny climate change and would like to know why.

Board 12:

No one recognised the board. There were mixed feelings about its effectiveness.

"You need a more serious picture for it to have any impact."

"If it's a repetitive message then it will have an effect. Say if it was repeated on the radio every half an hour."

Board 13:

One respondent thought that instead of scrapage schemes the government should issue everyone with a bike to reduce climate change.

The board seemed to be quite well received and its message was clear to respondents.

"We want to do the things that it suggests but sometimes you can't." – they explained that they try to recycle as much as possible but that plastics are not collected in their area, meaning that they have to drive to the tip which causes more emissions.

"Can't supermarkets reduce their packaging?"

Board 14:

Unsure as to what the board was showing them, they said that it didn't make them think about climate change. They thought it needed improvement to express its message more clearly.

"It's not direct and it isn't telling us anything."

Board 15:

One respondent was aware that it is a poster for the film.

"It's quite depressing isn't it?"

"If I was passing it at a train station I'd just walk past it."

The group agreed that the emissions from factories and industry are something that is out of their control and therefore the message was not directed to them.

"If governments can't get them to stop then we don't stand a chance."

Board 16:

This board was very well received by the group – they thought that it has shock value and the 'aww factor'. However they also felt that it was quite distant to them as it featured a giraffe.

"It's a shock, but then you walk away and forget."

They thought that if it was local and aimed at people in Formby it would be more effective – for example if it featured a red squirrel.

Board 17:

This board was also well received. Two respondents have adopted polar bears for their children. They both agree that this image or something similar has encouraged them to take action because they did this.

The group was aware that polar bears are falling into the sea because the ice is melting.

"If the ice melts then all sea levels rise because all waters are connected."

One respondent said that the board needs some additional information on it telling you what you can actually do to prevent this. "*What can you actually do? There's no point in doing things if you don't know what the effects are."*

Climate Change Messages

When discussing how the messages should be delivered, the group seemed to agree that gentle persuasion would not work as it hasn't already, and that it is probably too late for that.

They felt that messages needed to be more shocking and realistic, and that realistic images are shocking anyway and would therefore be effective.

One respondent said that, if the government is going to have any impact on people's behaviour, they need to put specific laws in place to actually change the way people behave e.g. how much petrol you can use, how much electricity you can use.

She also suggested that there should be a climate change department set up within the government.

"If you live on the coast you've got to think about it haven't you?"

They think that, because they haven't had anything affecting them, they don't really think about it.

There was a feeling within the group that there actions might not really matter in the scheme of things due to the huge effect that larger countries are having on the environment.

"The things that we do aren't going to change anything. It's the big countries."

"England can make the changes, but if other countries can't why should we bother?"

Even though respondents indicated that their efforts might not make any difference, they all agreed that they would like to receive clearer messages about what they can actually do to prevent climate change.

They also wanted to receive more information specific to their local area about climate change and the effects that it will have.

The group felt that there needs to be more information provided about what they can actually do to prevent or slow climate change.

"We need to know if we did nothing what would happen to our area in 10 years time because I don't know."

Communication with Government

They felt that local people should be involved, and that they should be able to give their suggestions about the environment to affect decision making at a local level – e.g. recycling issues. It was also suggested by one respondent that there could be a local website or local contact number where views about climate change could be expressed to the local council. However, one respondent disagreed with this idea. *"This is not a local issue. It's a national one and it should be dealt with by central government."*

Responsibilities

It was suggested by some respondents in the group that the Environment Agency should be responsible for all climate change messages.

"The environment agency should be responsible because they've got all the information and they will know the best solutions."

One respondent thought that each local council should have someone who interacts with the Environmental agency – some kind of community leader.

"You can't just leave it to the government, they should hand it down to us the people."

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

Formby ABC1 Empty Nesters/Retired

Introduction

Attendees:

- Female, lives in (inaudible), three miles from Formby towards Liverpool – lives right by the sea. Was a secretary but is now retired.
- Female – two sons and three grandchildren (rest is inaudible)

- Female, lives in Formby. Retired. She lives about two miles from the coast
- Female, lives in Formby for 16 years. Retired
- Female, lived in Formby all her life. She lives at the side of the old Council offices. Retired
- Male, retired engineer lived in Formby since 1962. He has four children who have all left the area
- Female, lived in Formby for 32 years. Never worked –bringing her children up.
- Female, lived in Formby for 35 years, she still works and has two sons and four grand children.
- Male, redundant field technologist. He has lived in Formby for 12 years, and previously lived in Liverpool. He has one daughter and five grandchildren. He lives a mile from the coast.

Current levels of knowledge and understanding of Climate Change

Important issues for the local environment

- Flooding

  "We had a situation last year, where the water was coming up the path to our house. It was quite severe and it happened quite quickly"

- A change to the beaches – there has been a lot of erosion. They worried that they want to chop down trees which were put there to stop erosion and go back to sand dunes.

- Red squirrels dying out – need for protection. They were told trees were being chopped down for biodiversity but it seems it was more commercial reasons.

The most important issue to respondents was flooding, but this, they said, depends on where you live. Respondents commented that all of the issues are interlinked, so it was quite hard to pick just one.

Information on and Knowledge of Climate Change

Apparently, Formby has a very active Civic Society; there is an amenities secretary who has done a lot of work on the High Town Pumping station, which they are worried about as the pumps are getting to then end of their life. One of the respondents reported getting technical information about it at meetings she goes to.

The other local society is Coastwatch. Ainsdale Nature Reserve said the trees were stopping the sand dunes from being mobile.

The parish council send newsletters and if there's anything on the agenda about the coast, they would find out that way. They also received political newsletters through their doors that sometimes discuss coastal erosion.

The coastal management people also produce something which is available in the library but you have to seek out information like this – it's not generally provided, although sometimes there is information in the local paper, the Formby Times.

There was some scepticism in the group about climate change and its link to coastal erosion.

"*Things that happen like coastal erosion are not necessarily climate change – it's just a thing that's going to happen anyway".*

"When I was a small child, during the war, the houses at Hall Road were falling into the sea. There's always been movement along the coast here".

Climate change to some meant the weather is getting warmer. A respondent commented, *"We used to get snow every winter, but we hardly ever get it in Formby now. In 30 years, we've had it twice".*

However, one respondent was sceptical about this alleged sign of climate change.

"Climate change is a natural phenomenon that politicians have jumped upon. The globe is actually getting cooler".

There was then some discussion around whether global warming is actually happening – some believed it was and others did not. Examples were given of when misleading information had been provided in the past, eg East Anglia University, did not release information.

An example debate between respondents was:

Respondent 1: *"You must admit that the weather has changed"*

Respondent 2: *"Yes, but it's always continually changed".*

The main thing for the respondents was how climate change will affect them locally, eg sand being eroded in Formby. Though they commented that given their age, they are unlikely to see any dramatic effects of climate change, *"at my age climate change isn't going to affect me".* Others did not think the effects of climate change of necessarily negative - *"Nobody minds being a bit warmer".*

On reflection, respondents thought the main affect of climate change would be people having to move properties if they are at risk. This will affect what they will be able to leave their children.

Respondents did not think they are particularly at risk in Formby.

"It will affect other countries more than us, and down south. They were worse affected by the floods".

They also commented that as the changes are so gradual it is hard to pinpoint exactly what they are.

"Climate change is such a gradual thing it's hard to notice what the changes are. There used to be a caravan site down by the beach and if it was still there, it'd be in the sea, literally".

Presentation 1

A respondent disputed the information given in this presentation as he thought it was out of date. He, commented that he thinks the 36 degree rise was debunked a couple of weeks ago and that the global temperature has dropped by five degrees since 1997. This respondent thought the presentation is not balanced, as it only showed one side of the argument with regard to climate change.

Others thought *"it was fine"*, though there seems to be considerable confusion about the information given. For example, one respondent thought the sea level has always gone up and down therefore it is cyclical rather than related to climate change.

Some respondents did not seem to think it is particularly bad news that the temperature will increase.

"If the temperature goes up, then a lot of us will be quite pleased".

They all thought the presentation was easy to understand, though they commented that there was nothing new in the presentation, except the figures but the general gist of it they have heard before.

The respondents thought that there is little to scare them in this presentation, rather they think it is America and China who should be worried.

The most important message they gleaned was that *'our children and grandchildren are going to be in a mess".*

Ultimately, the presentation caused them to believe that there is nothing they, as citizens of Formby, can do about climate change.

"It would be nice to think we could control it, but we've just seen how impotent we are in Haiti".

Presentation 2

The group are in agreement that the presentation was far too long. They generally thought that the first presentation was "much more sensible". However, presentation two might appeal to schools, as it was not as scientific as the first.

"This one might be right for certain groups but it put me to sleep".

The main criticism of this presentation was that it does not tell people what they can do to combat climate change.

Respondents thought the government needs to more to make it easier for residents to address climate change. For example, improve public transport to get the cars off the roads and stop lorries- use rail instead.

"What can we do about that? We can't do anything".

"People have got to get to work; they've got to use a car. There doesn't seem to be a way round it nowadays. Try getting a bus anywhere and it's going to add two hours to your day".

The main message respondents got from the presentation was that Britain does not cause much of the problem.

The presentation was not particularly worrying to respondents and does not really make them think. Generally, they said they had 'heard it before' and it was 'nothing new'.

Some respondents said they could not really see the graphics in the presentation. Those that could see it found it hard to understand – they would prefer a handout. They found the scale a little misleading, they felt it would be better to see percentage increases.

All respondents preferred the first presentation. They stated that the second could have been improved with handouts.

Presentation 3

Board 1:

Overall, respondents were unclear what message the board was trying to convey to them.

"It's just an iceberg. Is it the white cliffs of Dover? What is it? It doesn't really see anything?"

Board 2:

The majority of respondents did not feel the image on the board was severe enough to relate to the heading.

"Looks like a nice place to go on holiday. If it was lapping round the steps of houses it would mean something".

Board 3:

The image on the board tended to shock the group, whilst they stated that it sends them a shocking message, they did not discuss and actions they would take as a result.

"Disaster – aftermath of flooding".

"Horrible image – it sends a shocking message".

Board 4:

Some respondents felt the board related to flooding, others just thought *"they look like they're standing outside the pub having a smoke".*

As a poster, overall, the respondents did not understand it.

Trust the Messenger Boards:

Several respondents were most likely to trust the newsreader and there was a general lack of trust in newspapers. Overall, respondents were concerned that issues come and go according to what is on the current political agenda.

Headline Boards

Boards A:

Several respondents liked this one

Board B:

This one was the most popular.

Board C:

One respondent who is suspicious of climate change preferred this one.

Board 13: This was a popular board, they felt it was easy to understand, and they would take action. *"The writing's good but you can't see the people on bikes at the bottom very well"*.

"I'm not keen on those windmills".

Board 16:

Little comment was made by respondents in relation to this board. One respondent felt the message was *'rising sea level'*.

Board 17:

All respondents agreed that this board was *"the best one"*. They explained *"the ice is melting and it will affect the polar bears"*

Climate Change Messages

Respondents felt that the television should be the medium used to deliver messages – *"as most people watch it"*. They suggested that perhaps the BBC are more trustworthy as people pay for the and all newspapers have too much bias.

Respondents did not really trust the government *"they all have their own little quangos that have their own interests at heart"*.

They concluded the local authorities should perhaps inform them regarding climate change issues, though they comment that the local authorities were generally not very good at communicating with them.

Respondents wished to *know "what are they doing on a global level because we are a minor contributor to it? We are doing our part, but what is the rest of the world doing?"* A suggestion was made that the public should start boycotting Chinese goods because they are big contributors to global warming.

"It doesn't make any difference what we do, unless the big contributors do something".

In addition, there was some discussion around supermarkets shipping food in rather than growing it locally *"the big supermarkets have a lot to answer for"*.

Communication with Government

Overall, respondents felt that they should be given a chance to input into the decisions being made, especially if they impacts on residents

Responsibilities

In terms of decision making about climate change, overall, respondents felt that decisions need to be made locally rather than by outsiders. They felt that older people who know Formby well do not get listened to. In addition they believed it was impossible to find someone who does not have an agenda to make a decision on climate change based on the facts.

When given the list of potential agencies and asked who should be responsible for making climate change decisions the overall feeling was that it should be a mix of the various agencies working together. Overall, respondents were not sure what Defra did so felt unable to comment on what their role should be.

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

Hastings C2DE Families

Introduction

Attendees:

- Female, lived in Hastings for 23 years, has come to the area from London. Lives 20 minutes walk from the coast. Works part time. Lives with three daughters
- Male, lives in St Leonards has lived there for 20 years. He lives approximately 1.5 miles from the coast and is an out of work precision engineer. He said he loves the coast, loves going fishing, and is very interested in climate change
- Male is a builder, builds eco-houses. He has lived in Hastings for about 20 years 'off and on'. He lives approximately 1.5 miles from the coast
- Male, has lived in Hastings for 7 years. He lives about 0.5 miles away from the coast. He is an unemployed docker.
- Male, has lived in Hastings for 40 years. He lives with partner and two children. He lives around 5 minutes from the coast
- Male, lives in St Leonards. Works for Mercedes. He has two children. He lives about 30 minutes walk from the coast

Current levels of Knowledge and Understanding of Climate Change

When asked what words come to mind when they hear the term 'climate change', the group thought of (unprompted):

- Warmer weather – milder winters, generally more wet
- Extreme weather
- CO2
- Too many cars on the road and too many airplanes
- Too many people – not enough birth control
- Sustainable living
- Flooding
- Coast erosion – "there is a lot less cliff and beaches than their used to be"
- Farms struggling to grow crops – there was a debate whether this was due to climate change or European restrictions on how to grow the crops

The majority of respondents felt that some of the erosion would have happened naturally regardless of climate change. Indeed, they explained that extreme weather can date back many years also so they were unsure whether this could be attributed to climate change. A few felt they were receiving mixed messages about climate change from the government and scientists.

Overall, there was a consensus that respondents would like to be told what is being done to prevent the coast erosion which is happening in Fairlight.

Respondents debated why there had been an increase in awareness of climate change in recent years and decided that it was because of the increase in the global population.

Information on and Knowledge of Climate Change

Respondents gained their knowledge regarding climate change from newspapers and TV. They do not get any information about climate change locally, via action groups or the local authority.

One respondent said his partner was interested in sustainable living and felt it was important that people consider sustainable living in the future. He talked about various examples of sustainable living in practice.

Presentation 1

"The first thing that got to me is the bit that says 'these changes now can't be avoided'" - the respondent disagreed with this statement he felt that if people make changes, climate change can be avoided. Respondents debated whether planting trees to absorb CO2 would have an effect, some felt it would and others were sceptical.

Some of the respondents worried about whether the public really care about climate change.

"People don't either don't think about it or don't care. All they're interested in is money, two and a half kids, house, and mortgage – nothing else"

In addition, they felt it would be 'pointless' if restrictions controlling emissions were put in place in the UK if other countries, for example China and America, did not have any restrictions of their own in place.

Respondents also felt unhappy that they were asked by the government to 'do their bit' and did so by recycling, whereas the corporations are not forced to control the amount of packaging possible to be recycled.

Respondents were also concerned that food was being transported across the world to be consumed in the UK. They believed food should be produced in the UK.

Some of the terms used in the presentation were confusing to respondents, for example water-stressed and CO2 levels. Some of the older respondents did not consider measurements using the metric system and struggled to convert 36cm to an imperial measure.

In addition, some of the respondents struggled to gauge the implications of CO2 levels rising especially when accompanied with relatively small numbers. An observation was also made that the figures were based on averages, and could range considerably. This, they thought, could effectively mean that the projections are higher than stated.

One respondent explained that because of the conflicting messages received from the media she has stopped feeling so worried about the implications of climate change.

"It was [worrying] *20 years ago when we heard this kind of stuff"*.

All respondents had not heard of the UKCP09 projections.

The presentation would not lead the respondents to take action or make any changes.

Respondents felt that the presentation would not be understood by children as it was too technical.

Presentation 2

"It's more dumbed down"

"It's got a more positive outlook knowing you can do something about it rather than the other one which says there's nothing you can do about it"

"It's easier to understand" – Respondents were happy there were less figures

"It's more friendly"

Overall, whilst respondents seemed to prefer presentation 2, they felt that the presentation did not provide solutions it just provided 'statements'. They commented that any presentation needs to motivate people to make changes and take actions. They felt it could be improved by including more visual aids. It did not provide any new information for respondents.

Respondents discussed some of the actions that could be taken. Locally, respondents could see a benefit in introducing more environmentally friendly public transport system. Another suggestion was for energy companies to offer energy saving devises, for example, free light bulbs. They felt people would like to see the cost savings they could make in these instances.

Respondents did not understand some of the terms used in the presentation, for example greenhouse gases.

Presentation 3

Board 3:

Overall, respondents did not particularly like the images shown on the board.

"It's awful"

They felt that it could not be linked with a particular location which seemed to limit the amount the image was able to resonate with them.

"It doesn't really show you anything"

"It could be anywhere"

One respondent was unsure how much this natural occurrence could be linked to climate change.

"They are trying to say climate change is responsible for extreme weather, which is responsible for that. Where it's true or not is another matter"

Overall, respondents felt the board would not lead them to take any actions or make any changes.

"It's not like wearing a seatbelt, for example, preventing yourself from going through the windscreen. It just says extreme weather is on the increase"

Board 3b:

The majority of respondents reacted negatively to this board dismissing the severity of the situation. They struggled to be able to relate to the board and as such felt the board would not lead them to take any actions or make any changes.

"It's a bit extreme isn't it? She's being lifted out of about 6 inches of water"

"There's nothing extreme about that picture"

Trust the Messenger Boards

Overall, respondents were more likely to trust D – because it is local and the authority are trying to inform the residents.

One respondent felt he would be more likely to trust Greenpeace rather than any of the boards.

Headline Boards

All respondents felt board 2 most reflected their beliefs – *"because it says your children will suffer"*

Board 12:

The majority of respondents were unsure what the board was trying to tell them and felt the board was not striking enough.

"If I was sitting on a tube and it was there outside the window, I'd have nothing else to do but look at it"

"It's not severe enough"

One respondent said the nursery rhyme intrigued her.

Overall, the confusion of the message led respondents to feel that the board would not lead them to take any actions or make any changes.

Board 13:

Overall, this board was received negatively by the majority of respondent. They were clear that the board was asking them to take actions to save energy; however, they were annoyed that it was directed at individuals. They felt that a more global approach to tackle climate change should be undertaken.

"That's just awful it's not got any impact"

"I know what it's representing but what we've already said the UK is already doing their bit it's the rest of the world that needs to [do theirs]*"*

Respondents were confused what the bottom of the board was trying to represent. They felt the message was clear but it did not necessarily tell them what action to take.

Board 16:

All the respondents reacted positively to this board. They felt it was more striking and made them consider the impact their behaviour was having on helpless animals.

"That's much better"

"It's quite a striking headline"

"Things around the world that we've got no control over what we're doing are going to be suffering"

"If you took the heading from the last one (board 13) and put the heading with the globe round it [it would be better]*"*

Overall, respondents felt the board would not lead them to take any actions or make any changes if they were not already doing things. They felt the government should support the public to make it easier to take actions.

Board 17:

Again, an image of an animal seemed to shock respondents to consider the impact of climate change on animals.

"*That's pretty good; polar bears are mentioned all the time in terms of the environment"*

"It makes you feel dreadful"

It made them think about the impact, but still felt that the government should do more to help the public take action.

Climate Change Messages

One respondent was dissatisfied with the Act on CO2 TV adverts which he felt were aimed at children. He felt they scared children too much.

Communication with Government

Respondents were asked what changes they would make in terms of climate change if they were in charge. One respondent said he would meet with all the energy companies and discuss ways they can support *'turning the UK into a more environmentally friendly environment'.* Others discussed making improvements to the recycling systems and to public transport, and planting trees, and having incentive schemes.

Some of the respondents wished to contribute to decision making, however, they were worried about becoming too much involved and had perceptions of having to contribute to street cleaning. They joked that they should get paid to contribute to decision making.

Respondents felt that local residents should be invited to attend meetings to get across their viewpoints or ask questions relating to climate change issues. The meetings should be advertised through leaflets through their door. Some respondents were worried about the time investment they could make to attending meetings.

None of the respondents had been involved in local shoreline management meetings.

Responsibilities

Respondents were asked who they felt should be in charge of making decision making in relation to adapting to climate change and the coast. They felt that this should be partly local community groups and the government. Some respondents were hesitant about involving the local authority because they 'have destroyed this town'. They discussed the lack of

investment the local authority they believed they had made to the area and the money they thought they had been wasted.

When asked if the Environment Agency and Defra should be involved in decision making, respondents struggled to say. They questioned if they were involved already. Overall, approximately half of the group had heard of the two agencies before and the remainder had not.

Respondents commented that in order to make the best decisions to 'save the environment' anyone making decisions should not have a financial stake in any decisions.

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

Hastings Empty Nesters/Retired

Introduction

Attendees:

- Female, has lived in the area since 1955, she lives around a mile from the coast. She lives at Fairlight. She is retired, when she worked she mainly worked with animals
- Male, has been living in the area since 1957. He is retired he used to work for the prison service. He lives in Fairlight. He lives about 35 metres from the coast. He has seen 'quite a lot of erosion to the coast in Fairlight'.
- Female, moved to Hastings from Brighton nine years ago. She chose her property because it is on a hill and she was conscious about being flooded. She is a retired probation officer. She currently works in merchandising and travels round the country as part of her job
- Male, has lived in Fairlight for 14 years. He is retired and used to be in the air force. He has also worked for British Telecom and the Environment Agency in a role around water quality. He has an interest in local geography.

Current levels of Knowledge and Understanding of Climate Change

When asked what words come to mind when they hear the term 'climate change', the group thought of (unprompted):

- Change in weather
- Changes in seasons - has seen the effect on wildlife and local flowers

  "So much contamination that mother nature can't balance easily, instead of the seasons being in rotation"

- *Reforestation – "those rainforests are there for a reason, to breakdown the carbon emissions."*
- People cutting down trees –*"because they are not fashionable"*
- Burning too much oil – use of alternative sources of energy
- Melting glaciers - South Pole degenerating
- Global population increasing – *"the planet won't be able to sustain us indefinitely"*
- High CO2 levels

Respondents could see the effects of the sea levels rising on the coast line in their area as well as the flooding across the country. One respondent felt that recently tidal changes were caused by the land dropping rather than due to climate change. They also extended their discussion to consider the affect of events abroad which could potential affect England. For example one respondent discussed the Gulf stream and El Nino.

Information on and Knowledge of Climate Change

Generally, all the respondents appeared to take an active interest in climate change and related issues. One respondent explained that *'we are a generation that have been educated'* and as such felt that they were able to understand climate change issues.

Respondents gained their knowledge and found information via TV, mainly national programmes. Others read newspapers and books about the subject matter, even though they were sceptical about how much they can trust articles in newspapers.

"Newspapers are all very critical of other people; it seems to be the way to sell newspapers"

One respondent explained how when he was interested in particular issues he would tend to research them on the Internet rather than trust the newspapers.

Respondents stated that they did not access any information about climate change locally via local action groups or from their local authority. One respondent believed there must be local emergency plans in place for local services such as lifeboats, paramedics and fire brigades, in relation to flooding and extreme temperatures. The majority of respondents felt these plans should be better communicated to residents.

There was a general discussion about the cause of climate change and there was a debate within the group about whether it was man-made or a natural phenomenon. When discussing issues around the man's role in effecting climate change they considered the impact of aeroplanes. They felt dissatisfied that individuals were told to adapt their behaviour to cause less emissions when nationally the use of aeroplanes is not being curtailed, the use of aeroplanes, they explained, could even be expanding.

"We're [individuals] *the easy targets"*

Respondents were frustrated that nothing was achieved at the climate change summit. There was a perception that the politicians who attended the summit *'were just playing games'*. Whilst in one respect they felt that major decisions about climate change should be made, they also were sceptical that any changes could be made to curtail or reverse the effects of climate change particularly in the next 50 years.

"Nothing can be done to make a blind bit of difference"

Respondents felt it was important to consider the impact of climate change in the future

"It's much bigger, you've got to look ahead at what's going to happen as well as what's happening now"

Presentation 1

After hearing the presentation, respondents initially discussed water storage to counter any national water shortages.

"We need great water storage and copy the Romans and build viaducts from the areas that have a heavy rainfall [to those with low rain fall]*"*

Respondents also discussed the effects of the rise in global population. They felt there should be restrictions in place regarding the number of children per family.

Overall the respondents found the presentation easy to understand, and believable. However, no information was new to them and it would not necessarily lead them to take any actions. They felt the presentation was aimed at other groups of the population, for example, one respondent suggested children, who they felt would accommodate adaptations more easily. They felt that messages should get people to consider the consequences of climate change, for example, what would happen if 'the sea level rises' or *'the world runs out of fossil fuels'.*

Whilst they found some of the messages somewhat scary and worrying, overall they discussed how people would just adapt to the environment they found themselves in, for example if there is a temperature rise. They felt that the presentation should be more shocking this would lead people to take actions to curtail their emissions.

"Nothing really comes across to us to make us feel how desperate it is"

Presentation 2

Respondents felt that this presentation confirmed their beliefs that any actions should be taken globally.

"We feel very helpless because it's global"

However, one respondent again wished to emphasis the need to make emergency plans for themselves and their community to respond to any situation.

Respondents felt that the presentation was better than the first because it was more locally focused and less technical. Compared to the first presentation they felt that the second was less scary

None of the information was deemed to be new to the respondents.

Respondents were fairly neutral when asked if the graphics help the presentation at all. Generally, respondents felt, however, that pictures were often effective when conveying any messages.

Presentation 3

Board 3:

Respondents felt less likely to take any action as a response to the board, considering the picture to show a freak occurrence in the weather rather than an event caused by global warming.

Board 3b:

The board made them think of preparations that people could make generally, the location of properties and age groups who are aimed at

"It draws your attention to age groups who are particularly vulnerable"

"There are sand bags there so they were expecting it"

"They need better advice about how to stop the water getting into their houses"

Board 4:

In the main, respondents considered the impact that preparing for floods could have in terms of house insurance and felt it was a good idea for people in high risk flood areas to prepare for floods.

"That would be a good idea but again it's down to expense"

One respondent struggled to understand what the board was trying to convey.

"Unless they say what that thing is, I'd be blank about it"

Trust the messenger Boards

Respondents felt they would be more likely to trust B and D, they felt these were more factual and less likely to be based on an individual's opinion.

Board 12:

None of the respondents had seen the act on CO2 campaign before. They felt the board was more targeted at children, however wondered if they would read it. Overall, they felt it does not suggest any actions to take.

Board 13:

Whilst respondents felt it was encouraging that the board tells them they "can do something about it" and makes people think they can take action, they felt it was more targeted at teenage boys

"[Teenage boys] they're into their space age and computer games"

Board 15:

Overall, this board was received favourably, the respondents felt *"It's a good message"*. It made them consider the impact of emissions and alternative sources of energy.

"That's what we are putting out into the world gases which are going to cause harm"

"It connects with me what we're told about solar power and wind power".

Board 16:

Whilst respondents liked the image of the giraffe, they did not feel the board conveyed a message to them or suggested any actions to take.

"Lovely, isn't he?"

"To me it doesn't convey much"

Board 17:

Overall, the majority of respondents felt the image was striking and were concerned about how wildlife could be affected by climate change.

"This is in Canada; the polar bears are starving because they can't find sufficient ice to walk on"

"Well, good I think because it might affect people are more of an animal lover than I am"

"It emphasis the whole feels that we have about climate change"

One respondent felt that polar bears would be able to evolve to fit their environment should this change.

Climate Change Messages

In terms of climate change messages, the respondents felt that on an individual level, people should be told what actions they could make. Messages around financial incentives for adopting particular behaviour were deemed popular. For example, one respondent suggested people putting a meter on electrical appliances to able to see how much electricity they are using and take action to use less electricity.

At the moment, some respondents felt they are receiving mixed messages from the government. One gave an example of being told to use more energy efficient light bulbs by government, but also being 'told to use computers' which she feels use far more electricity than light bulbs.

One respondent felt that individuals should make plans for themselves in case of any emergency. She explained that she got this idea after receiving a leaflet through her door which suggested that people keep tinned goods, bottled water, dried goods; generally plenty of food supplies. These plans should be done, respondents felt, on an individual level and as a community.

One respondent felt that the only way people would be encouraged to take action would be if the government were to set an example, for example reduce the amount of air traffic and road traffic.

"If they [the government] *mean business, we'd think right we'll come in with you, other than that we're very selfish"*

Respondents felt that coastal erosion was not going to worry people in their local area, so messages around this issue were unlikely to resonate with residents and lead them to take actions.

Communication with Government

Respondents felt they should be provided with the opportunity to put across their views and questions across to the government. This could be achieved through Defra coming to the local area for meetings or exhibitions, for example at the local shopping centre.

Responsibilities

Overall, when asked who should be responsible for delivering climate change messages, respondents felt the government. This should be undertaken in conjunction with government advisors such as Defra, even though some respondents were not totally clear about Defra's

role. One respondent spoke favourably about his opinion of Defra in relation to their dealings with the community within Fairlight area of Hastings when dealing with coastal erosion. In his opinion, Defra were very accommodating to suggestions and communicated well with the community.

Overall, respondents felt that the local authority should 'definitely not' be in charge of making decisions about climate change and the coast. They felt it should be more the role of local government as long as they know the residents' viewpoints. Decisions should go through an advisory body of experts.

Generally, respondents felt making changes to stop climate change was a huge task to achieve and that it was everyone's responsibility to make changes even though they may not wish to do so.

"The whole world has got to change radically, but no one wants to do it. Would you want to give anything up?"

We all think leave it to the boffins they'll find an answer for use"

UKCPO9 & Communities at Risk of Coastal Flooding & Erosion

Hastings Third Sector

This group was shorter than planned due to the weather; therefore some elements outlined in the discussion guide have not been covered.

Introduction

Respondents included:

- Male representing Hastings Campaign For Nuclear Disarmament – Has lived in Hastings for 30 years, about a mile from the coast. The Hastings Campaign For Nuclear Disarmament is an organisation which is interested in the affects of radioactivity and nuclear power. Has campaigned about nuclear power in Hastings because they are only a few miles from one of the biggest reactors in the country. Is a volunteer
- Female representing St Clements Church. She lives in the old town, 200 yards from the coast. Has living in Hastings since she was four (approximately 50 years). Is a volunteer
- Male representing Hastings Old Town Residents Association. Has lived in the Hastings area for 20 years, lives about 150 metres from the coast. Is a volunteer.
- Male representing Hastings Youth Council. Has lived in Hastings for 5 years, lives 'just a couple of footsteps from the coast'. Is a volunteer.
- Female representing Hastings Fishermen's Protection Society. Has lived in the area for 30 years, 'a few hundred yards from the sea'
- Female representing Polish Association – Hastings. Has lived in Hastings for 3.5 years. She lives approximately half a mile from the coast. Is a volunteer

Current Levels of Knowledge and Understanding of Climate Change

Words associated with climate change include:

- Shingle movements
- Weather anonymities
- Extreme weather
- Raising sea levels
- Ice caps
- Polar bears
- Seals and dolphins around the south coast
- Tectonic plates displacement
- Countries disappearing

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Words associated with climate change include:

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- Ice caps
- Polar bears
- Seals and dolphins around the south coast
- Tectonic plates displacement
- Countries disappearing

After prompting respondents felt that flooding could be associated with climate change but it could also potentially be due to 'bad planning' and old drainage systems that cannot cope with the demand, they felt this is exacerbated by the increase number of new houses being built in the area. One respondent believed people are quick to remember 'momentous' flooding events, however, he felt these could just have been caused my natural fluctuations in the weather and it is difficult to attribute these events to climate change.

Information on and Knowledge of Climate Change

Respondents reported gaining their knowledge regarding climate change via national newspapers, magazines and documentaries. There was general consensus that they would not rely on local newspapers as a source of information as these *'could not be relied upon'*. Anecdotal information about the weather was received by the Fisherman's Protection Society contact via local fishermen. A minority felt that the impact of climate change could be witnessed in the local environment.

Whilst some of the respondents struggled to see any direct effects on their organisations they could see the wider impact of climate changes on residents within the East Sussex area.

One respondent described how she felt anxious about watching the film 'An Inconvenient Truth', especially as she currently lives in a low lying area. The film has partly persuaded her to move up the hill, none of the other respondents appeared to have seen this film.

Whilst there was no general consensus regarding whether climate change is real and is actually happening. One respondent felt that it was important to *'take some preventative action just in case'*. None of the other respondents disagreed with this course of action.

Local information was sourced by a few respondents via the Environment Agency. The information these individuals sourced related to flood defences.

None of the organisations had a mission statement in relate to the environment. The Youth Council contact explained that his organisation conducts an annual environment-related survey of its young people. This year, for example, it related to waste disposal.

Presentation 1

Respondents talked about adaptations that are necessary, and thought the presentation was more aimed at younger audiences who will find adaptation easier. A minority of respondents struggled to 'process' the averages given in the presentation. Whilst the majority of respondents believed the messages in the presentation they struggled to hear this information without further details regarding the actions the UK were taking as a result. For example information regarding water shortages in the south east were greeted with suggestions that water should be supplied to these areas from areas of the UK not suffering from such shortages, for example Wales through a viaduct system, something, however, deemed unlikely whilst water companies are privatised. One respondent felt that some of his members (resident's association members) may greet the information with a degree of cynicism for these reasons.

One respondent highlighted, what he felt was a growing debate about the contributions of man in terms of affecting climate change. He felt the government over emphasised the role individuals could have in affecting climate change and could see how people were more disbelieving about man's role to play

In order to best engage with young people, the Youth Council representative felt that presentations

should highlight the impact of climate change on issues over the last 20 years, so that these young people could relate it back to something they are familiar with. He felt messages should focus on changes retrospectively rather than projections in the future.

No one was aware of the UKCP09 Climate Projections. "UKCP09, what is that?"

Presentation 2

 "It was more punchy, it was less figures bound".

A number of members of the group struggled to understand some of the terms and felt that some of their members would also do. Some of these terms include 'standard scientific time frame' . When probed they felt that this could be better explained by saying 'over a time period of 30 years'

The Youth Council representative felt that if the graph shown during the presentation was not local enough for some of the messages about rising water levels to fully resonate with people.

"If you could get a graph of the south east, and pinpoint where people live, then get a computerised image to show where you expect sea levels to rise to, and say 'you could be underwater by now if this was 2050', coz that would be very hard hitting and make people think 'oh really'."

The majority of respondents felt agreed that local impacts of climate change would resonate better with their members.

"I think the national thing is irrelevant, I think the regional thing is irrelevant, many of our members wouldn't be too bothered if Eastbourne was flooded permanently. It has to be much more local".

Interestingly, when asked how this could be achieved if these projections are not available at such a local level, they initially stated that they would go by the average, and then reverted back to providing information at a regional level.

They felt that any messages should be hard hitting to resonate best with people and shock them to take action. There was general agreement that any information which related to the local area, ie the Sussex coast, would be better received by members and members would be more likely to take action.

One respondent explained that if people could see the areas they frequent changing or even disappearing they would be more likely to act:

*"If people think I walk there (*they would be more likely to take act)".

Whilst the presentation highlights the problems, they felt it should go further and suggest some of the solutions, so people know how to act.

A suggestion was made that messages should highlight the problem locally initially then extrapolate the problem to a more national and global level.

"This isn't just gonna happen here in Hastings it's gonna happen everywhere".

They felt that examples throughout the world of countries worse affected by climate change were likely to resonate emotionally with some people.

Generally, respondents felt that the two presentations were 'too wordy'. One respondent stated that the language level would only be understood, he felt, *'by the top 15% of the residents in Hastings in terms of ability'*

Climate Change Messages

In the main, respondents felt that as an organisation they actively sourced climate change related information:

- The representative from the Youth Council explained that he regularly actively sought up-to-date climate change information to relay to his members.

- The Hastings Fishermen's Protection Society contact regularly sourced information regarding the height of tides and the level of shingles as these are important for fishermen's daily work. Fishermen also attend whelk summits where they discuss the shell fish and the effect of the movement of shingle, work with CEFAS (Centre for Environment, Fisheries and Aquaculture Science) and shingle companies.

- The contact from St Clements Church who came into contact with members of varying ages felt that the young members were best informed regarding climate change because of the information they received at school, these members in turn were able to inform older members of the organisation.

- The respondent from Hastings Campaign for Nuclear Disarmament sourced information regarding alterative sources of energy.

Further solutions could then be suggested at a more local level for all the UK public. One respondent highlighted an example she had seen on the news in which a child took action to save energy as well as money within his home by turning off lights and switches off at the wall. This child then encouraged his family and extended family to take action as a well as the wider community. Overall, respondents agreed that this provided a good example of how a tangible benefit such as cost savings could lead people to change their behaviour in terms of mediation against climate change.

Respondents agreed that messages should be 'short and punchy'. For example, one respondent recalled an Act on CO2 message relating to people driving a few less miles a week which was 'punchy' and got the message across quickly and easily.

There was general consensus that all members of the organisations would be interested in receiving information regarding climate change. They were asked to suggest ways in which they could receive this information. The following suggestions were made:

- The Polish Association felt that a JPEG would be good to put on their website.

- The Hastings Fishermen's Protection Society contact suggested an article in Fishing News, a national newspaper. For those members with reading problems, she struggled to think of the best method of communication, however, felt that pictorial messages could sometimes be patronising and did not advocate any messages of this format.

When prompted to indicate their preference to a number of formats of communications, such as training, videos, Local Authority talks. In the main, respondents felt that people lead busy lives and would struggle to find time to accommodate messages like these.

One respondent felt that a tool kit with core information about the issues relating to climate change and some possible actions people could take to reduce their emissions. This toolkit could be used to training individuals such as those leading community and voluntary organisations to deliver to members. Further discussion, led to the idea that these individuals could act as 'community champions'. Overall, respondents felt that people were more likely to trust people they know, rather than the government.

Overall, respondents felt that it was important to take actions to mediate against climate change 'just in case climate change is real and actually happening'.

Communication with Government

The majority of respondents wished to be involved in decision making about climate change and the local area. They explained they would like to be offered to give their viewpoint on any proposed actions or changes in the area. They acknowledged the difficulty they may have, however, in terms of the time they would be able to commit to contributing to any proposed actions or changes, but felt that something advertised on the regional weather forecast would be an effective way to communicate to residents in local areas if any

consultation is planned. Events, like The Race for Life could be organised across the country to highlight climate change.

The Hastings Fishermen's Protection Society contact felt fisherman can easily contribute to decisions which affect coast communities in Europe compared to the UK.

"Interesting, fisherman work with Europe and European coast communities, and they seem to be more switched on over there, than we are in our own backyard".

Responsibilities

Respondents felt that any information regarding climate change should come from government and national and local environmental agencies, however, it should be presented to residents in the local area from high profile individuals in the area. Respondents agreed that people are more likely to trust the message if it was delivered from local representatives as long as they were provided with all the information not any figures which have been skewed to represent a particular opinion. A suggestion was also made to have a climate change consortium of trusted bodies in the area.

They felt that sometimes it may be difficult too reach consensus on decisions regarding actions *'as even the top scientists in the area struggle to make decisions'.*

Respondents felt that there should be a consensus of opinion across national and local partners including Local Authorities when making decisions about changes to the coast.

H. Thank you letter for participants

Our Ref: JH\100526 SEF UKCP09 and Communities at Riskv04.doc

11 March 2010

Dear

Focus Groups - United Kingdom Climate Projections 2009 & Communities at Risk of Coastal Flooding & Erosion

I am writing to you on behalf of Defra, the part of the UK government that deals with the environment to thank you for your participation in the focus group discussions.

Your contributions in the focus group discussions will help Defra to understand how to improve the communication of climate change, both generally and in the context of flooding and coastal erosion risk management.

Thank you again for your time and contribution.

Yours sincerely,

Dr Joanne Harvatt

Social Scientist

j.harvatt@maslen-environmental.com

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