



# **CLIMATE CHANGE KNOWLEDGE, ATTITUDES AND BEHAVIOURAL PRACTICES IN THE OECS**



## **REPORT ON THE KAP SURVEY OF SIX PARTICIPATING MEMBER STATES**

**FINAL REPORT  
VOLUME ONE: MAIN REPORT**

**July, 2013**

# **CLIMATE CHANGE AWARENESS, ATTITUDES AND BEHAVIOURAL PRACTICES IN THE OECS: A KAP SURVEY OF SIX MEMBER STATES**

## **FINAL REPORT VOLUME ONE – MAIN REPORT**

### **Submitted to:**

Project Director, RRACC Project  
Social and Sustainable Development Division  
OECS Secretariat, Morne Fortuné  
P.O. Box 1383, Castries, Saint Lucia  
Phone: 758 455 6365/6363/6369; Fax: 758 453 1628

### **Submitted by:**



### **KAIRI CONSULTANTS LIMITED**

14 Cochrane Street, Tunapuna, Trinidad and Tobago  
Phone: 868-663-2677/1442; Facsimile: 868-663-1442  
Email: mail@kairi.com; Website: www.kairi.com



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## ACRONYMS AND ABBREVIATIONS

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ABS	-	Antigua and Barbuda Broadcasting Service
CARICOM	-	Caribbean Community and Common Market
CBOs	-	Community-based organizations
CI	-	Confidence intervals
CSO	-	Central Statistical Office
CSS	-	Caribbean Super Station
DBS	-	Daher Broadcasting Service
Dominica DBS	-	Dominica Broadcasting Services
ESDU	-	Environment and Sustainable Development Unit
GBN	-	Grenada Broadcasting Network
GHGs	-	Greenhouse Gases
IPCC	-	Intergovernmental Panel on Climate Change
KAP	-	Knowledge Attitudes and Practices
NGOs	-	Non-governmental Organizations
OECS	-	Organization of Eastern Caribbean States
PMS	-	Participating Member States
RRACC	-	Reducing the Risks to Human and Natural Assets Resulting from Climate Change
SIDS	-	Small Island Developing States
SPSS	-	Statistical Package for the Social Sciences
SVG TV	-	Saint Vincent and the Grenadines Television
UNECLAC	-	United Nations Economic Commission for Latin America and the Caribbean
UNFCCC	-	United Nations Framework Convention on Climate Change
USAID	-	United States Agency for International Development
USAID	-	United States Agency for International Development

# EXECUTIVE SUMMARY

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*Climate change is expected to result in widespread environmental, social and economic impacts worldwide, affecting sustainable human development and changing the way of life as we know it.*

This report presents the results of a Survey of Knowledge Attitudes and Practices (KAP) towards climate change that was carried out during the period June 2012 to June 2013, in six Participating Member States (PMS) of the Organization of Eastern Caribbean States (OECS).

The PMS are:

- Antigua and Barbuda;
- Dominica;
- Grenada;
- Saint Kitts and Nevis;
- Saint Lucia; and
- Saint Vincent and the Grenadines

Two surveys were conducted concurrently in each PMS: one targeted households (one respondent per household) and the other targeted staff at institutions that work in climate-related sectors. Only in Saint Vincent and the Grenadines were the two surveys not conducted concurrently due to logistical issues.

The structured questionnaire for the household survey collected data on:

- Residents' perceptions of climate change in relation to other problems;
- Residents' perceptions of the seriousness of climate change;
- The extent to which residents feel informed about climate change – its causes, consequences and ways of fighting it;
- Residents' attitudes towards energy conservation;
- Whether residents feel that climate change is stoppable or has been exaggerated, and what organizations in their country, including government agencies, are doing in relation to climate change;
- Whether residents have taken personal action to fight climate change; and
- What residents think should be done to deal with the consequences of climate change.

The information collected from staff at organizations in climate-related sectors sought to gather the views and opinions of the staff members themselves rather than being representative of the agency or department.

The structured instrument for the institutional survey collected data on:

- Staff perception - whether their work is directly related to climate change;
- Whether staff think that they are informed about the causes, consequences and ways of dealing with climate change;
- Perceptions of staff about the financial and other adverse consequences of climate change; and
- Current actions being taken by organizations to conserve energy and recycle waste.

## RESULTS

### Key Findings from the Household Survey

- Unemployment, crime and violence, and poverty are perceived as the three most serious problems facing the Caribbean today.
- Less than 2 percent of all respondents across 6 OECS countries listed climate change as the most serious issue facing the Caribbean.
- Few respondents considered climate change to be among the top three most important issues facing the Caribbean. When considering all 8,952 valid responses that were obtained, climate change was mentioned only 282 times (3.2%) compared to the 2,216 times (24.8%) for unemployment and 2,013 times (22.5%) for crime and violence.
- In general, OECS residents disagreed with the suggestion, “persons engaged in climate change work are making a big deal of nothing”; 66.2 percent of respondents disagreed (either strongly or somewhat) with the statement while 13.5 percent was undecided.
- More than 50 percent of OECS residents feel that they are informed about different aspects of climate change; 70.0 percent assert that they are either “very well informed” or “somewhat informed” about the **causes** of climate change, while 72.9 percent said they feel “very well informed” or “somewhat informed” about the **consequences** of climate change, and 64.1 percent report that they feel “very well informed” or “somewhat informed” about **ways of fighting it**. However, for all three aspects of climate change, more than 1 in 4 respondents (25.0%) feel that they are “not at all informed.”

- Women feel less informed than men about the causes and consequences of climate change and ways it could be reduced.
- The group of older respondents (aged 55+) feels significantly less informed than its younger counterparts about the causes and consequences of climate change.
- The self-perceived level of information on issues related to climate change increases with the level of education of respondents.
- A large proportion of OECS residents (28.5%) share the perception that Caribbean countries are not responsible for **causing** climate change, and about 12.8 percent are undecided.
- Of those who claimed to have taken some action in the past 6 months to protect their homes against hurricanes and storms, more than half said they had cut trees and branches, while more than 4 in 10 persons said they had either cleaned drains, strengthened the roof or purchased torchlights.
- More than 6 in 10 persons (67.5%) reported a lack of awareness of ANY organization that is actively dealing with climate change in their country.
- The question “How do you feel about climate change?” elicited a variety of reactions. Respondents expressed feelings of fear (24.2%), hope (35.1%), confusion (17.6%) and even powerlessness (19.1%). However, the dominant feeling among at least half of all respondents was, “I need more information!”

### Institutional Survey

- Unemployment and crime were perceived as the two most serious problems in the Eastern Caribbean at the time of the survey. Climate Change ranked third among respondents of the institutional survey; 14.5 percent of respondents in the institutional survey listed climate change as being among the top three issues facing the Caribbean. Their association with an organization engaged in the environmental sector might have accounted for their placing climate change as an area of major concern, compared to the rest of the population.
- Water shortages/drought (21.8%), more severe storms/hurricanes (19.6%) and food shortages (19.1%) were rated as the top three greatest concerns related to climate change.
- Close to 40 percent of respondents said that their organizations had started incorporating climate change impacts into planning for future activities. About one

third of all workers did not know whether or not their organization had begun implementing changes.

- A mere 4 percent of workers readily acknowledged that their countries were prepared for the impacts of climate change. In Antigua and Barbuda no-one thought (100% No response rate) that their country was prepared. Most respondents indicated that their countries were not prepared to handle the impacts of climate change (70.7%).

The main thrust of the report is that OECS residents generally feel that they need more information on climate change – its causes and effects, and ways to combat (mitigation) or better prepare for it (adaptation).

In response to the question “What could be done to protect against climate change?” the most popular responses included increasing public education and awareness (85.6%), enforcing environmental laws (84.5%), protection of coastal areas (83.5%), and encouragement of conserving and recycling water (81.0%).

Feedback from survey respondents suggests at least three possible strategies in moving forward:

- a. Caribbean countries should work together on climate change issues;
- b. People need more information on climate change; and
- c. Children should be taught about climate change in school.

An overwhelming majority of respondents (95.4%) felt that Caribbean countries should work together on climate change issues, and of these, more than 75 percent felt strongly that it is the way to go.

Any public awareness and education campaign for the OECS sub-region should take the following into account:

1. The reality that social issues preoccupy the minds of the population – unemployment, crime and violence and poverty. Climate change is relatively low on the scale of critical issues, generally. It would be important to show the link between current social and environmental issues and climate change.
2. The public education programme should have a component which targets persons working in sectors that would be hard-hit by climate change. At present, there seems to be a perception that climate change is an environmental issue. However, it is critical for the population to understand the far-reaching potential of climate change to impact Caribbean societies.

3. Age, level of education and socio-economic status are intervening variables in the level of concern about climate change. While the entire population should be targeted, special efforts should be made to pitch the messages of climate change to women, persons with low educational levels and the elderly in the public education programme.
4. Information on the use of the electronic media in reaching the population provides useful leads in most of the countries. Popular local television channels and radio stations shows, and certain radio and TV personalities are conduits to be explored in bringing information to the population.
5. In improving awareness of issues relating to the environment, it will be necessary to develop a strategy for lower socio-economic groups in the OECS. The radio may be the most efficacious medium in that regard, and the message must be configured for a clientele largely engaged in commuting to and from work.
6. Internet use is increasing and through information centres can be accessible to the general public. It should be remembered however, that 1 in 5 persons considers that the climate change information found online is too technical and therefore the educational material (both online and offline) should be simple and relate to the everyday lives of individual learners.
7. Cellular phones have penetrated the OECS market and are now in widespread use. Smart phones are gaining in popularity. It may be possible among OECS countries for the cellular phone to be used in getting targeted messages to the population. Mobile app technologies can also be used to tailor specific messages to the younger population. Governments can make the provision of free messaging about climate change and other important environmental concerns a condition for the granting of telecommunications licences.
8. A similar public interest principle can be made to apply to radio stations and the providers of local television and cable services.
9. Morning radio can be used in the first instance, as a way to inform, without compromising on the need to be engaging, rather than lecturing to the population on the commute.
10. Almost 25 percent of the population never listens to the radio, and a significant share does not read newspapers. These cohorts will have to be closely studied in order to design a media campaign to reach them.

11. Given that television is the second most popular mass medium, it will be important to target favourite television channels and personalities in conveying the message about climate change. The survey results do provide some insight into viewers' preferences that can be incorporated into the campaign.
  
12. It would be important to explore and research the use of participatory methodologies which have proven to be highly effective in conveying messages to targeted segments of the Caribbean population.

## CHAPTER 1 INTRODUCTION

This **Knowledge Attitudes and Practices (KAP) Survey on Climate Change** forms part of a series of initiatives to be undertaken under the project titled, “*Reducing the Risks to Human and Natural Assets Resulting from Climate Change (RRACC)*,” which is currently being implemented by the Organization of Eastern Caribbean States (OECS) Secretariat, in partnership with the United States Agency for International Development (USAID).

### WHY SUCH CONCERN ABOUT CLIMATE CHANGE?

Climate change, the result of increased concentrations of anthropogenic greenhouse gases (GHGs) as an outcome of trends in energy consumption and population expansion over the last century, is manifested as variations in the distribution of weather patterns and changes in environment-related phenomena (Doran and Zimmerman, 2009<sup>1</sup>; Anderegg *et al.*, 2010<sup>2</sup>). These changes are expected to result in widespread adverse environmental, social and economic impacts worldwide, posing a serious threat to sustainable human development.

It is predicted that if current consumption trends are maintained, the earth will warm by 3°C over this century (Intergovernmental Panel on Climate Change (IPCC), 2007).<sup>3</sup> However, even with a temperature rise of 1.0°C – 2.5°C there could be serious effects, including water shortages and reduced crop yields leading to food shortages and increased risk of hunger, spread of climate-sensitive diseases such as malaria, and an increased risk of extinction of several plant and animal species (United Nations Framework Convention on Climate Change (UNFCCC)).<sup>4</sup>

For the Small Island Developing States (SIDS) of the Caribbean, including the OECS Member States, the threat is even more severe because the biophysical and socioeconomic characteristics of these countries make them especially vulnerable. Many of the OECS islands lie in the hurricane belt and their populations and

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<sup>1</sup> Doran, P., and Zimmerman, M. K. (2009). Examining scientific consensus on climate change. *Eos*, 90, 22-23.

<sup>2</sup> Anderegg, W.L., Prall, J. W., Harald, R., & Schneider, S. (2010). Expert Credibility in Climate Change. *PNAS*, doi: 10.1073/pnas.1003187107.

<sup>3</sup> IPCC, 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, UK: Cambridge University Press.

<sup>4</sup> UNFCCC undated. Climate Change: Impacts, Vulnerabilities and Adaptation in Developing Countries. Online at: <http://unfccc.int/resource/docs/publications/impacts.pdf>.

economic infrastructure are concentrated in coastal zones. Additionally, OECS Member States tend to be dependent on a narrow range of economic activities, including agriculture and tourism, which are intimately linked to the environment, making them highly susceptible to external shocks and, in particular, natural disasters (United Nations Economic Commission for Latin America and the Caribbean (UNECLAC), 2010).<sup>5</sup>

Several adverse effects are already being experienced throughout the region and these are expected to worsen over the coming decades. Already, the devastating impacts of more frequent and intense hurricanes are being felt in the islands, posing a constant threat to those who live in coastal zones and low-lying areas, with associated risks to life and livelihoods. Accompanying storm surges increase the incidence of flooding in coastal zones and low-lying areas, with greater destructive impact when storm surges are accompanied by strong winds and large onshore waves.

Sea level rise and the consequent beach erosion and coastal inundation pose a significant economic and physical threat since many hotels and resorts are beachfront properties and are likely to suffer extensive damage, resulting in major losses to the tourism sector. Further declines in the health of coral reefs and degradation of the aesthetically pleasing environmental conditions, on which the tourism product is based, will have far-reaching consequences. Housing and transportation systems, port facilities and other infrastructure are also at risk because they are located on the coastline. Some low-lying small islands states may possibly face complete inundation.

Climate change is also regarded as a major threat to food security. Rising temperatures could result in reduced yields for several crops, while providing an environment conducive to proliferation of pests and diseases. Changes in precipitation patterns are likely to increase the likelihood of short-run crop failures and long-run production declines. Thermal stress may also result in large-scale losses of livestock due to increased mortality and decreased reproduction rates. The increased intensity of extreme events such as floods, droughts, heat waves and windstorms are likely to lead to even greater production losses, with wider economic implications.

## **OBJECTIVE OF THE SURVEY**

Recognizing the potential implications of climate change for Member States, the OECS conducted this KAP survey to assess people's knowledge of, attitudes towards and practices in relation to climate change. The results of the survey will

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<sup>5</sup> ECLAC, 2010. Annual Economic Survey of Latin America and the Caribbean.

inform the development of a regional awareness strategy and action plan for improving public awareness and education on the potential impacts of climate change and the importance of implementing measures for adaptation and resilience.

## **WHY A KNOWLEDGE, ATTITUDES AND PRACTICES SURVEY?**

This KAP survey is a vital component of the activities related to the OECS response to climate change for three main reasons. First, developing countries face the burden of having fewer resources (including financial, technological and physical land) to adapt to the effects of climate change; secondly, there is a strong body of evidence that attributes climate change to human activities; and thirdly, knowledge and behavioural change when combined represent a powerful adaptation strategy, which is central to reducing vulnerability to climate change and building resilience among people and within communities.

In this regard, determining the extent to which persons are aware of the possible implications of climate change for their livelihoods and for their country and region as a whole, and the ways in which their current environmental and other behavioural practices contribute to climate change is a vital imperative.

Unveiling the overall attitude of persons towards reducing vulnerability and building resilience against related impacts at the community level are also important, since this will ultimately affect the long-term viability of any adaptation or mitigation strategy.

## **METHODOLOGY**

The KAP survey was implemented using a two-pronged approach: households and institutions were surveyed concurrently in six Member States. The Participating Member States (PMS) for this KAP Survey were:

- Antigua and Barbuda;
- Dominica;
- Grenada;
- Saint Kitts and Nevis;
- Saint Lucia; and
- Saint Vincent and the Grenadines.

Households were surveyed to gather the following kinds of information:

- Basic information about occupants and their household;
- Whether occupants have ever heard about climate change;

- What they know about climate change and their general attitude towards climate-related issues;
- What actions they have taken or consider useful in relation to climate change mitigation and adaptation; and
- General media preferences and practices.

At the same time, staff at institutions that work in areas related to climate change or in sectors that are likely to be impacted by climate change were surveyed to determine their level of knowledge about climate change and its potential impacts as well as their general perception of the importance of climate change and the degree to which the institution engages in related public awareness activities.

### Training of Enumerators

Experienced enumerators were selected and trained to conduct the fieldwork. A manual was produced which was to serve as a reference for enumerators in the field. It provided information on how to select a member of the household to respond to the questionnaire; correctly defines terms that may be either ambiguous or technical; and provides help with classifying answers that may be given by respondents.

The training provided *inter alia*:

- General Information and guidelines for enumerators and supervisors;
- Instructions for selecting the appropriate member of the household using the Kish Grid;
- Details on conducting the Interview using the household questionnaire; and
- An opportunity for enumerators and supervisors to ask questions related to the conduct of the fieldwork.

## SURVEY DESIGN

### Household Survey

The KAP surveys done in the Member States of the OECS countries were selected based on a representative sample of residents of the chosen OECS Member States. A minimum age of 15 years was set for the target population of the survey and persons were selected at random from the selected households based on this criterion. This ensured that representative samples from all age groupings were drawn. In the execution of the survey, our team worked closely with members of staff of the Central Statistical Office (CSO) and Statistics Departments. This allowed the team to leverage the knowledge and experience inherent in the CSO team of enumerators.

The sample selected was based on the 2010/2011 Census datasets in all of the countries participating in the survey since this information was available at the community level and by extension, the district level in all of the selected OECS Member States. The listing of total households by community was the basis for the creation of a sample frame of households. The sample frame at the community level was stratified using the average household size of the community. The stratification of the sample ensured that all socio-economic groups would be represented amongst the respondents chosen. Utilizing a two-stage, systematic, stratified random sampling procedure, communities (which are geographically based) were chosen from this sample frame with probability proportional to the size of the selected community and within these selected communities a non-compact systematic cluster of households was selected.

From these selected households, a respondent was selected using a modified version of the Kish grid. This procedure ensured that each household had an equal non-zero chance and that the same held true for each selected respondent in the household. These procedures ensured that the sample of respondents was self-weighting and accurately represented the population of the island state.

Respondents were selected within selected households, one from each household, using a Kish grid of ages ranging across the target age range of 15 years and over. The Kish grid allowed a scientific quota sample to be chosen, using random means dictated by population demographics while at the same time getting around the bias associated with interviewing the first person that answers the door or a respondent based on the preference of the interviewer. Consequently, persons belonging to different age groupings, sex, education, occupation and socio-economic background were respondents to the survey in proportion to their representation in the population of the country.

**Table 1.1: Target Countries, Sample Sizes and Confidence Intervals**

Country	Total Population	Target Population	Sample (N)	Confidence Interval (percentage points) <sup>6</sup>
Antigua and Barbuda	80,000	56,000	500	4.3
Dominica	80,000	56,000	500	4.3
Grenada	105,000	74,000	500	4.4
Saint Kitts and Nevis	40,000	28,000	500	4.3
Saint Lucia	170,000	120,000	500	4.4
Saint Vincent and the Grenadines	110,000	78,000	500	4.4

Count=N

<sup>6</sup> Confidence intervals (CI) were calculated using Creative Research Systems' sample size calculator (<http://www.surveysystem.com/sscalc.htm>). In making CI calculation, the confidence level was set at 95% and the baseline percentage was assumed to be 50%.

## Institutional Survey

The institutional survey is a non-probability survey, with a somewhat subjective sample of respondents. An attempt was made to capture the largest possible sample from the population of Government departments and other agencies that are deemed to be of relevance. The main means for the identification of respondents for the survey was via the contacts made at the initial stakeholders meeting held in the respective countries.

Because climate change impacts are wide-ranging and other sectors and ministries are likely to be indirectly affected, organizations working in the following areas were included:

- a. Environment;
- b. Agriculture;
- c. Tourism;
- d. Health;
- e. Coasts and Marine;
- f. Water;
- g. Finance;
- h. Energy;
- i. Physical Planning; and
- j. Social Development.

The exact names of agencies to be surveyed were determined in collaboration with the Country Focal Point.

A self-administered online survey was made available to decision-makers and members of staff in all relevant government departments, as well as relevant non-governmental organizations (NGOs) and community-based organizations (CBOs), so as to cover as wide a grouping as possible. This web-based survey required the respondents to have internet access: this was not a significant problem in offices in the OECS countries. A greater challenge was the process of encouraging participation in the survey and this required a good deal of follow-up.

The use of the web-based survey allowed the maximization of outreach and efficiency in the collection of the survey responses. The web-based survey was supported by telephone calls to heads of department to encourage them to get their staff members to complete the online form (and could be supported by face-to-face interviews in the event that technology was unavailable to some required target groups), since the survey instrument was delivered via a link in an email. On clicking this link the survey form was displayed and the respondent was required to complete the online form. Upon completion of the online form and clicking on the word **submit**, the results were stored in a secure online database for retrieval and processing by the consultant. The dataset generated from the online form is easily integrated into SPSS for analysis.

The online survey was developed using one of the preferred online web survey development platforms referred to as Survey Monkey Professional (Gold) and online delivery was via weblinks.

## DURATION OF FIELD WORK

### Household Survey

The fieldwork for the household survey took place during the period June to August, 2012. The Saint Vincent and the Grenadines household survey was delayed due to technical reasons and conducted during February, 2013. Table 1.2 below shows the timing of the fieldwork in each of the five countries.

**Table 1.2: Duration of Survey Data Collection and Processing by Country**

COUNTRY	JUNE 2012				JULY 2012				AUGUST 2012				FEBRUARY 2013			
	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 1	Wk 2	Wk 3	Wk 4
Antigua and Barbuda																
Dominica																
Grenada																
Saint Kitts and Nevis																
Saint Lucia																
Saint Vincent and the Grenadines																

A total of 2,984 households were surveyed across 6 OECS Member States. The average number of respondents in the PMS was 500, with a range from 487, in Antigua and Barbuda, to 512 in Saint Lucia.

**Table 1.3: Number of Responses by Country**

Number of Responses	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
Total (N)	487	502	497	495	512	491	2,984

### Institutional Survey

The targeted Institutions/agencies and those that participated in the survey are detailed by country and indicated in Appendix 2. In addition to the survey instrument, representatives of the organizations that agreed to participate also completed an additional semi-structured instrument, which sought to collect responses to questions about the organization’s role and level of involvement in climate change work.

The period for which the survey was accessible online in a particular country coincided with the fieldwork for the household component of the survey, except in two cases. In Antigua and Barbuda, the launch of the online survey was delayed and consequently the survey was accessible for a two-week period beyond the household survey. In Saint Vincent and the Grenadines the online survey was launched in May

2013, three months after the completion of the household survey. These differences were due to logistical limitations on the ground in the PMS.

Only in the case of Saint Vincent and the Grenadines was the timing of the survey expected to affect the results, due to the fact that during the lapsed time, a media education and awareness campaign was launched in that country.

A total of 292 responses were obtained from the six countries, with marked differences in the response rates from the respective PMS.

## **ORGANIZATION OF THE REPORT**

Hereafter, the report is presented in three Sections. Section 1 presents the research findings from the Household component of the survey, while Section 2 presents the findings from staff members of Institutions whose work is related in some way to climate change. Section 3 of the report concludes with a discussion of the current media practices within the PMS, which provides a launching point for designing a Climate Change Public Awareness and Education Campaign for the OECS.

## SECTION 1

# FINDINGS FROM THE HOUSEHOLD SURVEY

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## CHAPTER 2

### DEMOGRAPHIC COMPOSITION OF RESPONDENTS

The household component of the survey was targeted at persons 15 years and above. Each of four age groups was equally represented among respondents, both across and within countries.<sup>7</sup> Each age group accounted for about 20 percent of respondents on average in every country, except for 15-24 year olds being slightly under-represented in Antigua and Barbuda (Table 2.1). Variations in the age groups represented in the survey occur largely on account of the actual distribution in the population of those islands.

**Table 2.1: Distribution of Respondents by Age and Country**

Which Category Below Includes Your Age?	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
15-24	14.8	26.6	20.7	21.0	22.7	24.3	21.7
25-39	31.8	28.0	34.9	33.2	34.0	30.0	32.0
40-54	30.9	27.1	24.3	28.5	24.0	24.9	26.6
55+	22.4	18.3	20.1	17.4	19.3	20.9	19.7
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Overall, 49.7 percent of all respondents were men and 50.3 percent were women (Table 2.2).

**Table 2.2: Sex Distribution of Respondents within Country**

Sex	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Male	48.2	50.6	51.0	48.5	49.2	50.6	49.7
Female	51.8	49.4	49.0	51.5	50.8	49.4	50.3
Both Sexes	100.0	100.0	100.0	100.0	100.0	100	100

About one half of all respondents (44.2%) reported a medium level of education (meaning they had either completed secondary level education or trade/vocational training); 34.2 percent reported low education levels (no formal schooling or at most primary level schooling); and 21.7 percent reported high education levels (meaning they had obtained some form of post-secondary level training, including university degrees).

<sup>7</sup> The balancing of age groups was deliberate and was achieved with the application of a Kish Grid as described in the Methodology and Technical Appendix.

As highlighted in Table 2.3, there were marked differences in the education profiles of respondents from different countries. Among the PMS, Saint Vincent and the Grenadines had the highest proportion of respondents with low levels of education (67.6%) and the lowest proportion of medium educated respondents (7.4%). By contrast, in Saint Kitts and Nevis, only 5.8 percent of respondents had low levels of education, and 26.5 percent were educated to a high level.

**Table 2.3: Distribution of Respondents by Level of Education and Country**

Level of Education	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	%
<b>Low</b> (No formal school, Primary incomplete and primary complete)	20.8	34.2	42.0	5.8	34.4	67.6	34.2
<b>Medium</b> (Secondary incomplete or complete, Trade and vocational)	51.1	45.3	44.2	67.8	49.2	7.4	44.2
<b>High</b> (Post secondary diploma, associate degree, college, University, Graduate school)	28.1	20.5	13.8	26.5	16.5	25.0	21.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Respondents also came from a relatively balanced mix by household size, although larger household sizes were more prevalent in Dominica, Saint Vincent and the Grenadines and Grenada compared to the other countries (Table 2.4). In each case, only one member of the household participated in the survey.

**Table 2.4: Distribution of Respondents by Household Size and Country**

How Many Persons Currently Live in this Household?	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	%
1 (Only me)	19.7	13.9	16.7	19.0	11.9	15.2	16.0
2	19.9	14.4	17.2	17.8	17.5	18.8	17.6
3	22.0	20.2	14.0	19.9	22.4	16.8	19.2
4	13.9	20.2	18.0	16.3	20.8	19.6	18.2
5	11.8	15.1	13.3	12.8	12.5	12.7	13.0
6+	12.6	16.2	20.8	14.2	14.8	17.1	16.0
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0

About 3 out of every 10 respondents (31.2%) refused to answer the question about earnings, and in some countries the refusal rate was as high as 35 or 38 percent as in the case of Dominica and Saint Vincent and the Grenadines, respectively (Table 2.5).

**Table 2.5: Distribution of Respondents by Monthly Household Income and Country**

What Is the Average Monthly Income for Your Household in EC Dollars?	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Less than \$500	4.1	13.9	16.0	4.6	11.2	6.8	9.5
\$500 to \$999	8.8	20.8	22.6	7.5	16.0	12.8	14.8
\$1,000 to \$2,999	21.4	18.9	21.2	20.8	26.7	28.6	22.9
\$3,000 to \$4,999	17.9	6.8	4.2	21.8	15.3	10.4	12.7
\$5,000 to \$6,999	7.0	3.3	1.0	11.2	4.4	2.5	4.9
\$7,000 or more	8.0	1.5	1.2	7.9	4.8	1.3	4.1
Refuses to answer	32.8	34.8	33.9	26.3	21.6	37.6	31.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

A household wealth index was constructed and used in place of the income variable due to the low response rate on that question. Since it is widely known that income and education levels are linked and move in a similar direction, missing income data were inferred based on education levels.<sup>8</sup> The wealth index is used to separate households into quartiles representing socioeconomic strata (Table 2.6).

**Table 2.6: Distribution of Respondents by Index of Household Wealth and Country**

Index of Household Wealth	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Lowest	15.8	34.8	40.2	7.3	25.8	28.4	25.5
Q2	23.8	25.9	30.7	19.7	26.5	23.9	25.1
Q3	27.8	22.5	16.1	40.3	29.5	25.1	26.8
Highest	32.6	16.8	13.0	32.7	18.3	22.5	22.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

In general, households participating in the survey had good access to information and technology (Table 2.7). Most households owned radios (76.1%); televisions, with or without cable (92.7%); computers, with or without Internet (60.6%); and cellular phones, with or without Internet (93.3%).

<sup>8</sup> In this case households with missing income, data were assigned to the lowest wealth quartile unless the respondent had a level of education that was either medium or high, in which case they were assigned to the second (median) quartile.

**Table 2.7: Distribution of Respondents by Access to Information and Technology and Country**

Percentage of Households Possessing Various Household/Personal Effects	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Radio	79.7	59.6	77.4	88.0	77.0	75.3	76.1
TV, with cable	82.8	80.5	52.9	82.1	90.1	52.0	73.4
Cellular phone without internet	51.4	51.0	58.8	59.3	52.2	55.9	54.8
Computer with internet	53.1	40.3	32.5	68.9	49.1	43.0	47.7
Cellular phone with internet	44.1	37.9	22.7	48.6	44.0	36.9	39.0
TV, without cable	14.7	9.4	34.7	11.0	6.5	39.6	19.3
Computer without internet	16.5	15.1	8.5	11.0	9.9	16.7	12.9

\*The survey did not specifically ask whether respondents had more than one cellular phone. In cases where cellular phones with and without Internet sum to more than 100% (such as in Saint Kitts and Nevis) respondents may have had two phones - one phone with and another without Internet.

The use of solar water heaters in the OECS was notably low (Table 2.8). In all countries, except Saint Lucia, less than 10 percent of households had solar water heaters. The proportion of households with solar heaters in Dominica, Grenada, Saint Kitts and Nevis and Saint Vincent and the Grenadines was less than the OECS average of 6.5 percent (Table 2.9).

**Table 2.8: Proportion of Households with or without Solar Heaters**

Household Solar Heater	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	195	6.5	6.5	6.5
No	2,821	93.5	93.5	100.0
Total	3,016	100.0	100.0	

**Table 2.9: Proportion of Households with or without Solar Water Heater by Country**

Households with Solar Water Heater	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Yes	7.4	6.0	1.3	4.2	13.8	6.1	6.5
No	92.6	94.0	98.7	95.8	86.2	93.9	93.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

On average, across all participating member states, 25.0 percent of households had water tanks (Table 2.10). Interestingly, the highest proportion of households with water tanks was noted in Antigua and Barbuda (63.2% of households), which

traditionally is classified as a water-scarce country<sup>9</sup> and households are required by law to have water storage systems. On the other hand, in Saint Kitts and Nevis, another water-scarce territory, only 15.8 percent of households had water tanks; well below the recorded OECS average (Table 2.11). In Dominica, however, a country known for its abundant water resources, 9.2 percent of households had tanks compared to Saint Lucia, another water-rich country, where a little over 36 percent of households had tanks.

**Table 2.10: Proportion of Households with and without Water Tanks**

Household Water Tanks	Frequency	Valid Percent	Cumulative Percent
Yes	759	25.2	25.2
No	2,257	74.8	100.0
Total	3,016	100.0	

**Table 2.11: Proportion of Households with and without Water Tanks by Country**

Households with Water Tanks	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Yes	63.9	9.2	16.9	15.8	36.1	10.1	25.2
No	36.1	90.8	83.1	84.2	63.9	89.9	74.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>9</sup> Food and Agriculture Organization of the United Nations (2003). Water Reports: Review of World Water Resources by Country. <ftp://ftp.fao.org/agl/aglw/docs/wr23e.pdf>. The reports noted that the figure of 1,000 m<sup>3</sup>/inhabitant/year is usually used as an indicator of water scarcity. Antigua and Barbuda (776 m<sup>3</sup>/inhabitant/year), Saint Kitts and Nevis (576 m<sup>3</sup>/inhabitant/year) along with Barbados (313 m<sup>3</sup>/inhabitant/year) are the highest water scarce countries in the Caribbean region.

## CHAPTER 3 PERCEPTION OF CLIMATE CHANGE

### THE MOST SERIOUS PROBLEMS FACING THE CARIBBEAN TODAY

Unemployment, crime and violence and poverty top the list of most serious problems facing the Caribbean today.

When respondents were asked “what is the most serious issue facing the Caribbean today?” 39 percent said unemployment, 23.0 percent said crime and violence and 13.1 percent said poverty (Figure 3.1). Health and disease (6.5%), the global economic downturn (5.6%) and corruption (4.6%) were among the other responses. Less than 2 percent of all respondents across six OECS countries listed climate change as the most serious issue facing the Caribbean.

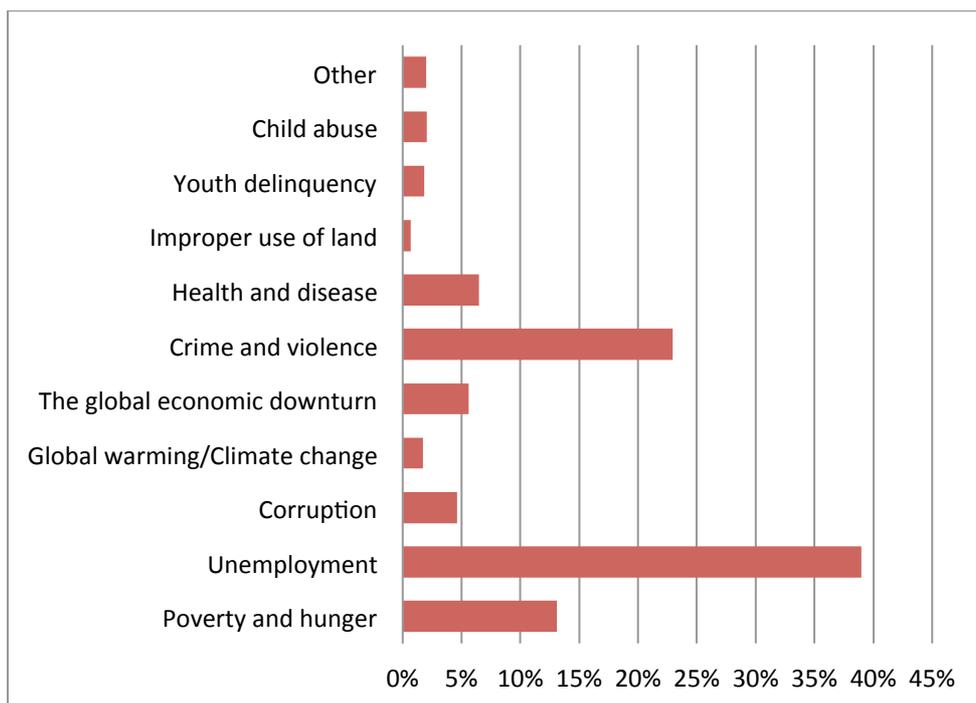


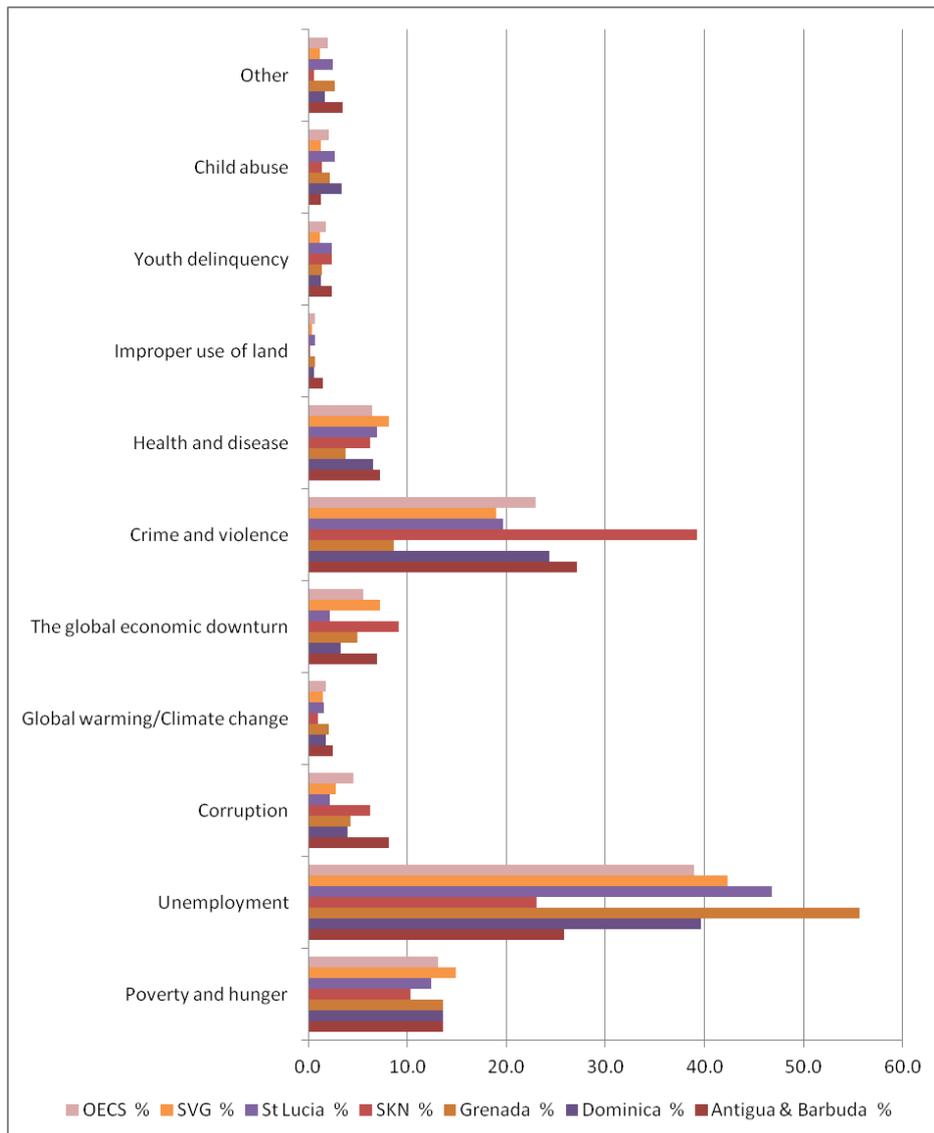
Figure 3.1: Most Serious Problems Facing the Caribbean in 2012

These three responses (unemployment, crime and violence and poverty) were universally the highest ranked problems across the OECS and were consistent regardless of the country under consideration, or the age, sex or education of the respondent.

There were, however, some minor variations in the degree to which the highest ranked responses were weighted against each other. For example, in Saint Kitts and Nevis, crime and violence was listed as the most serious problem by 39.3 percent of respondents, while unemployment was considered the second most serious problem by 23.1 percent of respondents. In contrast, 55.7 percent, 46.8 percent and 42.3 percent of respondents in Grenada, Saint Lucia and Saint Vincent and the Grenadines, respectively listed unemployment as the most serious issue. Some 19.7 percent in Saint Lucia and 19.0 percent in Saint Vincent and the Grenadines selected crime and violence, and 13.6 percent in Grenada selected poverty and hunger as the second most serious issue (Table 3.1).

**Table 3.1: Most Serious Problems in the Caribbean by Country**

Most Serious Problem	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	OECS
<b>Poverty and Hunger</b>	13.6	13.6	13.6	10.3	12.4	14.9	13.1
<b>Unemployment</b>	25.8	39.6	55.7	23.1	46.8	42.3	39.0
<b>Crime and violence</b>	27.1	24.4	8.7	39.3	19.7	19.0	23.0
Health and disease	7.3	6.6	3.8	6.3	6.9	8.2	6.5
The global economic downturn	6.9	3.2	5.0	9.1	2.1	7.2	5.6
Corruption	8.1	4.0	4.3	6.3	2.2	2.8	4.6
Global warning/Climate change	2.5	1.7	2.1	1.0	1.6	1.5	1.7
All other responses	8.6	35.1	6.9	35.6	7.0	22.8	4.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

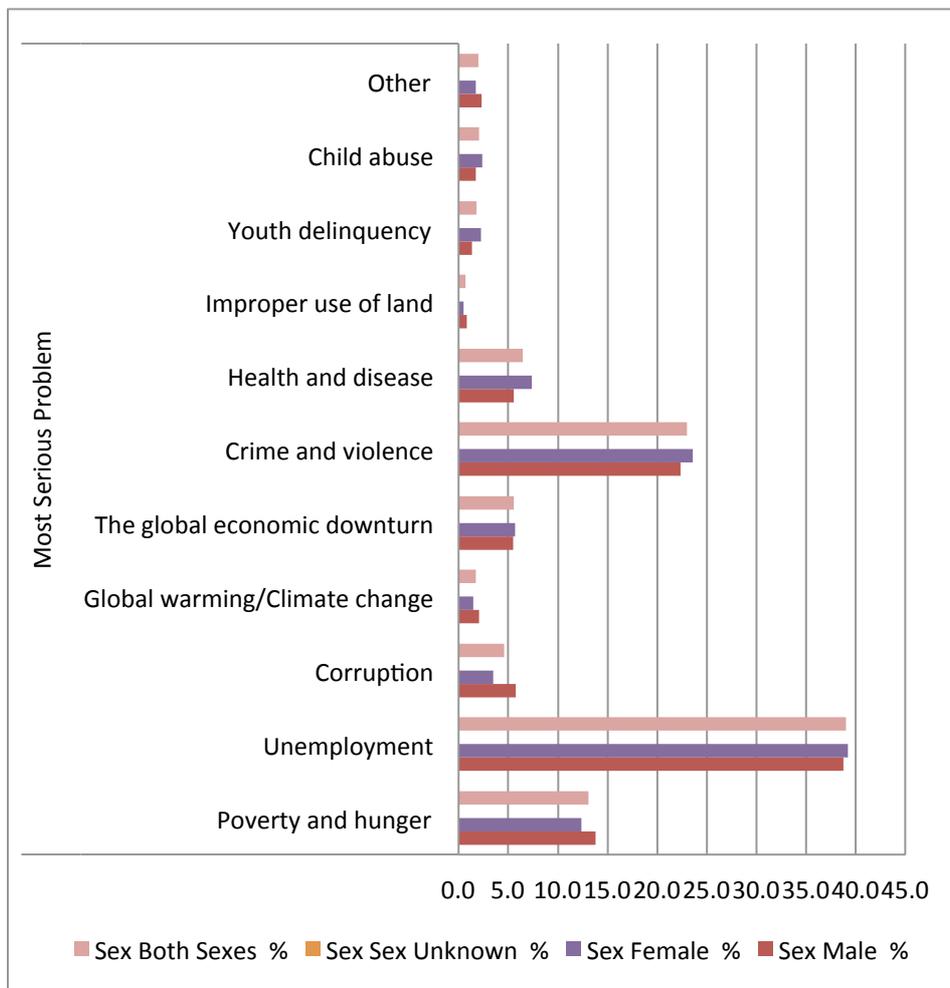


**Figure 3.2: Most Serious Problems Facing the Caribbean by Country**

Similarly, men and women were equally likely to report the highest ranked responses (Table 3.2), but women were more likely than men to cite child abuse, youth delinquency and health and disease. These differences are likely that women and men are motivated and affected by different issues and this is a case in point.

**Table 3.2: Most Serious Problems in the Caribbean by Sex of Respondent**

Most Serious Problem	Sex		
	Male	Female	Both Sexes
	%	%	%
Poverty and hunger	13.8	12.4	13.1
Unemployment	38.8	39.2	39.0
Crime and violence	22.4	23.6	23.0
Health and disease	5.6	7.4	6.5
The global economic downturn	5.5	5.7	5.6
Corruption	5.8	3.5	4.6
Global warming/Climate change	2.0	1.4	1.7
Child abuse	1.7	2.4	2.1
Youth delinquency	1.4	2.3	1.8
Improper use of land	0.8	0.5	0.7
Other	2.3	1.7	2.0
Total	100.0	100.0	100.0

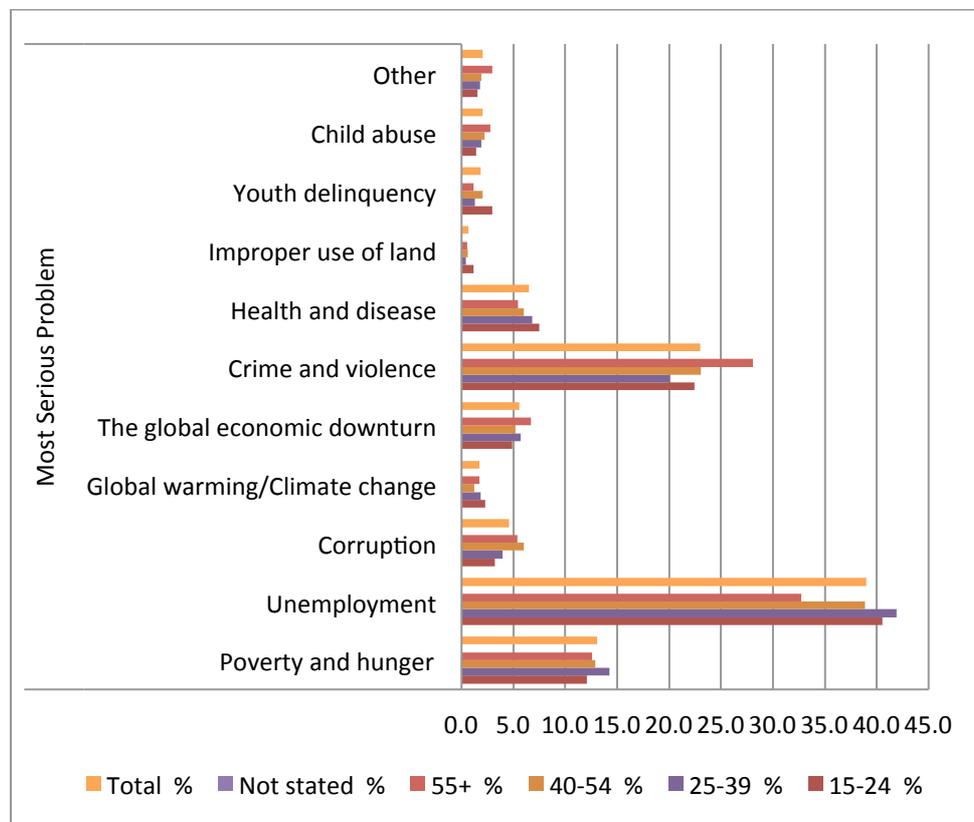


**Figure 3.3: Most Serious Problems facing the Caribbean by Sex of Respondent**

Respondents from all age groups agreed that unemployment was the most important issue facing Caribbean countries. This was the response of 40.5 percent of youths (15-24 years old); 41.9 percent of those 25-39 years old; 38.8 percent of 40-50 years old; and 32.7 percent of persons 55 years and over. This latter group (55 years old and over) was however more likely than any other group to cite crime and violence as the most important issue facing the Caribbean today.

**Table 3.3: Most Serious Problems in the Caribbean by Age of Respondent**

Most Serious Problem	Age			
	15-24 %	25-39 %	40-54 %	55+ %
Poverty and hunger	12.1	14.2	12.9	12.6
Unemployment	40.5	41.9	38.8	32.7
Crime and violence	22.4	20.1	23.1	28.1
Health and disease	7.5	6.8	6.0	5.5
The global economic downturn	4.9	5.7	5.2	6.7
Child abuse	1.4	1.9	2.2	2.8
Youth delinquency	3.0	1.3	2.0	1.1
Corruption	3.2	3.9	6.0	5.4
Global warming/Climate change	2.3	1.8	1.2	1.7
Improper use of land	1.2	0.4	0.6	0.6
Other	1.6	1.8	1.9	3.0
Total	100.0	100.0	100.0	100.0



**Figure 3.4: Most Serious Problems by Age of Respondent**

Although unemployment was still the most frequently cited when analyzed by highest education level of the respondents, more highly educated respondents were less likely to cite unemployment as the most important issue, than less educated respondents – 32.6 percent of those with high levels of education compared to 43.8 percent of those with the lowest level of education. Respondents with a high level of education were also more likely to cite the global economic downturn or health and disease as key issues compared to their less educated counterparts (Table 3.4).

**Table 3.4: Most Serious Problems in the Caribbean by Education Level of Respondent**

Most Serious Problem Facing the Caribbean	Level of Education		
	Low %	Medium %	High %
Unemployment	43.8	38.4	32.6
Crime and violence	21.6	25.3	20.5
Poverty and hunger	14.2	12.5	12.5
Health and disease	5.2	6.4	8.6
The global economic downturn	3.9	5.2	9.1
Corruption	3.5	4.9	5.8
Global warming/Climate change	1.3	1.7	2.5
Child abuse	2.7	1.6	1.9
Youth delinquency	1.1	2.3	2.0
Improper use of land	0.7	0.3	1.3
Other	2.1	1.4	3.3
Total	100.0	100.0	100.0

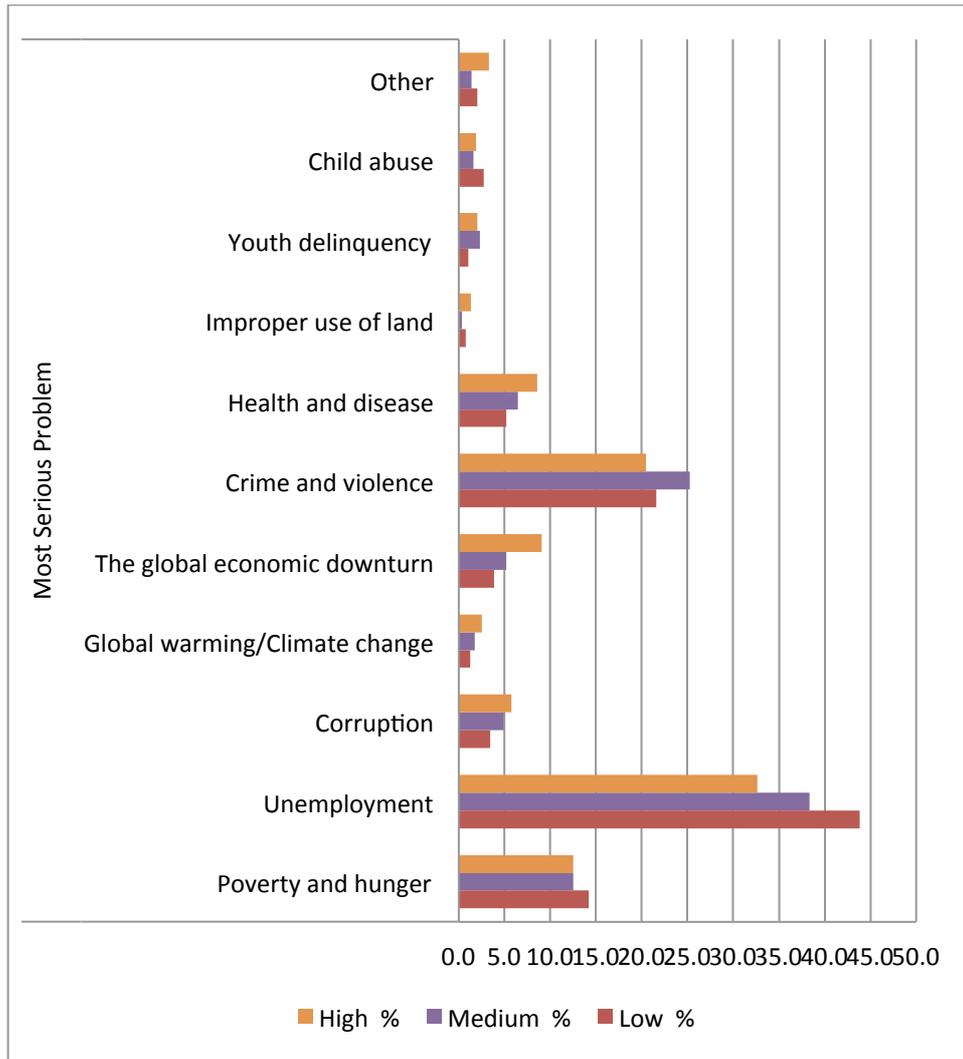


Figure 3.5: Most Serious Problems by Level of Education of Respondent

In addition to identifying the most important issue facing the Caribbean, respondents were asked to say what two other problems they considered to be important. Considering all 9,047 valid responses that were obtained (sum of all issues listed among the three most important issues), climate change was mentioned only 292 times compared to the 2,230 times for unemployment and 2,031 times for crime and violence.

**Table 3.5: Frequency of Listing the Three Most Serious Problems in the Caribbean**

Three Most Serious Issues Facing the Caribbean Today	Responses	
	Count (N)	Percent (%)
Unemployment	2,230	24.6%
Crime and violence	2,031	22.4%
Health and disease	996	11.0%
Poverty and hunger	986	10.9%
Corruption	555	6.1%
Child abuse	547	6.0%
The global economic downturn	515	5.7%
Youth delinquency	415	4.6%
Improper use of land	294	3.3%
<b>Global warming/Climate change</b>	<b>292</b>	<b>3.2%</b>
Other	155	1.7%
Not stated	31	0.3%
Total	9,047	100.0%

In response to the question “Have you ever heard that the Earth's climate or its weather patterns are changing”, 85.7 percent of all respondents answered in the affirmative (Table 3.6). However, there was some variation by country: respondents in Dominica had the lowest level of awareness of changing weather patterns (20.0% of respondents had not heard that weather patterns were changing), while awareness in Grenada was highest (89.0%), followed by Saint Kitts and Nevis (87.5%).

**Table 3.6: Heard Climate or Weather Patterns Are Changing by Country**

Ever Heard that the Earth's Climate, or Its Weather Patterns Are Changing?	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent of the Grenadines	
	%	%	%	%	%	%	
Yes	86.1	80.0	89.0	87.5	85.7	86.0	85.7
No	13.9	20.0	11.0	12.5	14.3	14.0	14.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

A further analysis of the response to this question by demographic characteristics, confirms that there is no difference in awareness between men and women, but young persons (15-24) and older persons (55+) were less likely than persons of other age groups to have heard about the changing climate. Additionally, more educated persons were significantly more likely to have heard about the changing climate than their less educated counterparts – 95.8 percent and 80.9 percent, respectively (Table 3.7).

**Table 3.7: Heard that the Earth's Climate Is Changing by Socio-demographic Category**

Socio-demographic Characteristic	Percentage of Group	
	Yes	No
<b>All Groups</b>	<b>85.7</b>	<b>14.3</b>
<b>Sex</b>		
Male	86.6	13.4
Female	84.8	15.2
<b>Age</b>		
15-24	82.8	17.2
25-39	87.1	12.9
40-54	87.3	12.7
55+	84.5	15.5
<b>Level of Education</b>		
Lowest	80.9	19.1
Middle	84.5	15.5
Highest	95.8	4.2

Respondents were asked whether they had personally noticed any specific changes in weather patterns in recent times. Most persons reported having experienced changes in rain patterns and in temperature (hotter days and nights), viz. 72.4 percent and 80.3 percent of all respondents respectively (Table 3.8). Respondents in Grenada were least likely to report having experienced hotter days/nights than in any other country despite the fact that they recorded the highest level of awareness of changing weather patterns: 74.9 percent of Grenadians said they had observed or experienced hotter days/nights, compared to the OECS average of 80.3 percent.

Overall, about 17.2 percent of respondents had experienced or noticed that storms/hurricanes were either more frequent or were stronger, but there was significant variation by country, with some countries that had suffered significant damage from hurricanes in the recent past – such as Saint Kitts and Nevis and Saint Lucia – at the top of the range. However, respondents from Antigua and Barbuda, where there have been a number of recent storms which caused substantial damage, did not reflect similar experiences. Table 3.9 shows the tropical storms and hurricanes affecting OECS countries between 2002 and 2011.

**Table 3.8: Observed Changes in Weather Patterns by Country**

Changes in Weather Patterns	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
More rain/ less rain/ unpredictable rain patterns	66.7	64.9	83.1	66.0	78.8	74.8	72.4
More storms/hurricanes	12.2	10.2	13.6	20.0	26.6	15.3	16.3
Stronger storms/hurricanes	15.9	10.8	7.6	22.9	27.5	18.9	17.2
Hotter days/nights	89.6	81.3	74.9	88.8	83.2	64.4	80.3
Other Changes in Weather Patterns	4.5	2.3	3.3	7.3	5.1	10.0	5.4
Not stated	0.5	0.9	0.2	0.0	0.2	0.6	0.4
OECS	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**Table 3.9: Tropical Systems that Have Impacted the OECS Participating Member States**

Country	Name	Type of Storm	Year
Antigua <sup>1</sup> and Barbuda <sup>2</sup>	Jeanne <sup>1</sup>	Tropical storm	2004
	Carl <sup>2</sup>	Tropical storm	2006
	Olga <sup>2</sup>	Tropical storm	2007
	Erika <sup>1</sup>	Tropical storm	2009
	Earl <sup>1,2</sup>	Hurricane (Cat 2)	2010
	Fiona <sup>2</sup>	Tropical storm	2010
Dominica	Dean	Hurricane (Cat 2)	2007
	Omar	Tropical storm	2008
	Erika	Tropical storm	2009
	Earl	Tropical storm	2010
	Ophelia		2011
Grenada	Lili	Tropical storm	2002
	Earl	Tropical storm	2004
	Ivan	Hurricane (Cat 4)	2004
	Emily	Hurricane (Cat 1)	2005
	Felix	Tropical storm	2007
Saint Kitts <sup>3</sup> and Nevis <sup>4</sup>	Jeanne <sup>3,4</sup>	Tropical storm	2004
	Olga <sup>3</sup>	Tropical storm	2007
	Erika <sup>3,4</sup>	Tropical storm	2009
	Earl <sup>3</sup>	Hurricane (Cat 2)	2010
Saint Lucia	Claudette	Tropical storm	2003
	Dean	Hurricane (Cat 2)	2007
	Tomas	Hurricane (Cat 2)	2010
Saint Vincent and the Grenadines	Lili	Tropical storm	2002
	Claudette	Tropical storm	2003
	Tomas	Hurricane (Cat 2)	2010

Source: <http://stormcarib.com/climatology/>

1, 2 = systems affecting Antigua and Barbuda

3, 4 = systems affecting Saint Kitts and Nevis

## CHAPTER 4

### AWARENESS OF AND ATTITUDES TO CLIMATE CHANGE

Most persons in the participating countries (86.5%) had at least heard mention of the term ‘climate change’. Respondents’ answers to the question “Have you ever heard mention of the term climate change?” are defined as their level of “awareness” of climate change. The awareness level varied significantly by country, with lows of 80.5 percent in Saint Lucia and 80.0 percent in Dominica and highs of 91.7 in Antigua and Barbuda and 90.2 in Saint Kitts and Nevis (Table 4.1). It is noteworthy that Dominican respondents also had the lowest level of awareness of changing weather patterns.

**Table 4.1: Heard Mention of the Term Climate Change by Country**

Have You Ever- Heard Mention of the Term Climate Change?	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	%
Yes	91.7	80.0	89.8	90.2	80.5	87.3	86.5
No	8.3	20.0	10.2	9.8	19.5	12.7	13.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Levels of awareness of climate change did not vary by sex, but variations were evident between respondents of different age groupings and education levels. Specifically, awareness increased with education: respondents with a high level of education were more likely than their less educated counterparts to have heard mention of the term ‘climate change’. Awareness was also lowest among respondents 55 years and older compared to all other age groupings (Table 4.2).

**Table 4.2: Heard Mention of the Term Climate Change by Socio-demographic Category**

Ever-Heard Mention of the Term Climate Change?	Percentage of Group	
	Yes	No
Socio-demographic Characteristic		
<b>All Groups</b>	<b>86.5</b>	<b>13.5</b>
<b>Sex</b>		
Male	86.9	13.1
Female	86.2	13.8
<b>Age</b>		
15-24	87.1	12.9
25-39	88.6	11.4
40-54	87.8	12.2
55+	80.9	19.1
<b>Level of Education</b>		
Lowest	78.0	22.0
Middle	87.5	12.5
Highest	98.1	1.9

### HOW THEY HEARD ABOUT CLIMATE CHANGE?

Most respondents, irrespective of country or sex, had heard about climate change either on the radio or on television (Table 4.3). Younger persons were more likely than persons 55 years and older to have heard about climate change on the internet, in school or in a movie (Table 4.4).

**Table 4.3: Where Respondents Heard/Read about Climate Change by Country**

Place Heard/Read About Climate Change	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Local Radio	65.3	71.7	63.3	61.5	66.7	67.1	65.8
Foreign Radio	30.3	20.6	14.2	38.8	21.4	18.0	24.0
Local TV	54.0	49.9	62.8	46.6	66.5	62.0	56.9
Foreign TV	54.2	38.3	32.7	70.0	46.1	35.1	46.2
In a Movie	13.7	5.4	2.6	9.8	9.6	3.3	7.4
On the Internet	28.5	30.9	13.5	43.4	33.5	25.3	29.1
In school	18.6	28.2	18.4	26.7	27.4	26.1	24.1
At work	12.7	11.4	2.9	17.3	17.2	8.0	11.5
Other Place Heard of Climate Change	5.9	7.7	9.8	5.9	7.1	9.4	7.7
Not stated	0.3	0.2	0.0	0.4	0.0	0.0	0.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 4.4: Where Respondents Heard/Read about Climate Change by Age of Respondent**

Place Heard/Read About Climate Change	Age				
	15-24 %	25-39 %	40-54 %	55+ %	All Ages %
Local Radio	51.2	61.9	75.3	76.1	65.8
Foreign Radio	17.0	23.7	25.7	30.3	24.0
Local TV	50.0	55.8	62.4	58.9	56.9
Foreign TV	34.8	48.1	52.3	47.5	46.2
In a Movie	8.1	11.8	5.6	1.3	7.4
On the Internet	36.0	35.4	27.3	12.0	29.1
In school	63.6	23.8	6.7	3.2	24.1
At work	7.1	14.7	15.0	5.8	11.5
Other Place Heard of Climate Change	5.6	8.2	7.7	9.1	7.7
Not stated	0.0	0.0	0.3	0.4	0.1
Total	100.0	100.0	100.0	100.0	100.0

Of those who indicated having used the Internet to source information on climate change, most reported no difficulties in accessing and using information on climate change from the Internet. However, a significant proportion of respondents reported that the information was either too technical/difficult to understand (15.7%) or that poor internet connectivity (5.0%) affected their searches. These results differed significantly by country (Table 4.5).

**Table 4.5: Level of Difficulty Encountered Using the Internet to Research Climate Change by Country**

Difficulty Encountered Using the Internet	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	%
None	71.0	66.6	72.8	75.5	81.5	73.8	73.4
The information is too technical/ difficult to understand	12.4	21.1	13.1	19.9	9.6	15.5	15.7
Poor internet connectivity/ no internet access	2.2	9.0	4.9	4.9	1.5	6.7	5.0
Could not find information	3.2	0.0	0.0	2.0	0.0	3.4	1.6
Don't have access to a computer	.6	3.3	1.3	0.0	0.0	0.0	.8
Don't know how to use the computer	0.0	0.0	1.3	0.0	0.0	1.0	.3
Other	8.5	3.0	4.4	3.2	2.0	6.1	4.6
Not stated	4.8	0.0	5.4	0.0	5.3	0.7	2.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

## PERCEPTION OF THE SERIOUSNESS OF CLIMATE CHANGE

For clarification in continuing the survey, respondents were provided with a definition of climate change as “*the changes in weather patterns that have been observed in recent times.*” Given this definition, respondents were asked to consider the seriousness of climate change.

Most respondents considered climate change to be either a fairly serious (31.4%) or very serious (55.2%) issue. There was some notable variation between countries: for example, in Antigua and Barbuda, where levels of awareness were highest, levels of concern also tended to be highest (Table 4.6). However, there were no notable differences in the levels of concern expressed by men compared to women, nor among respondents of different education levels (Table 4.7).

**Table 4.6: Level of Concern for Climate Change by Country**

Level of Concern For Climate Change	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Not a serious issue	11.8	13.6	10.6	15.5	12.6	16.4	13.4
A fairly serious issue	25.4	37.4	36.8	34.2	25.9	28.5	31.4
A very serious issue	62.7	49.0	52.6	50.3	61.5	55.2	55.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**Table 4.7: Level of Concern about Climate Change by Socio-demographic Category**

Socio-demographic Characteristic	Percentage of Group			
	Not A Serious Issue	A Fairly Serious Issue	A Very Serious Issue	Total
<b>All Groups</b>	<b>13.4</b>	<b>31.4</b>	<b>55.2</b>	<b>100.0</b>
<b>Sex</b>				
Male	14.4	29.9	55.7	100.0
Female	12.4	32.9	54.6	100.0
Both Sexes (total)	13.4	31.4	55.2	100.0
<b>Level of Education</b>				
Low	16.4	33.1	50.4	100.0
Middle	12.5	33.3	54.2	100.0
Highest	10.5	24.9	64.6	100.0
Total	13.4	31.4	55.2	100.0

The data suggest that the level of respondent’s perception of the seriousness of climate change is higher when they perceived their communities were susceptible to natural disasters. The more natural disasters a respondent perceived the community to be susceptible to, the higher their concern for climate change was likely to be (Table 4.8).

**Table 4.8: Perception of Seriousness of Climate Change by Number of Community Natural Threats**

Perception of Seriousness of Climate Change	Number of Natural Threats to which the Community Is Considered to be Susceptible									Total
	None	One	Two	Three	Four	Five	Six	Seven	Eight	
	%	%	%	%	%	%	%	%	%	
Not a serious issue	23.2	15.7	14.5	9.8	8.6	11.7	6.7	0.0	0.0	13.4
A fairly serious issue	37.3	36.1	30.1	31.7	23.3	18.2	19.5	29.8	0.0	31.4
A very serious issue	39.5	48.2	55.4	58.5	68.1	70.1	73.8	70.2	100.0	55.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

## ATTITUDES TO CLIMATE CHANGE

In general, OECS residents disagreed with the suggestion that “persons engaged in climate change work are making a big deal of nothing.” Of all respondents across the six countries, 66.4 percent disagreed (either strongly or somewhat) with the statement, while 13.2 percent was undecided.

Respondents in Dominica and Saint Kitts and Nevis were more likely than in any other country to support the view that persons working in climate change were making a big deal of nothing - one in four respondents from these Member States agreed (either strongly or somewhat) with the statement (Table 4.9).

**Table 4.9: Perception of Persons Working in Climate Change Work by Country**

Persons Engaged in Climate Change Work Are Making a Big Deal of Nothing	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Strongly agree	6.8	14.4	8.1	8.2	8.3	4.1	8.3
Somewhat agree	8.9	10.8	10.6	16.4	13.5	10.3	11.8
Neither agree nor disagree	10.2	8.9	12.7	18.0	15.7	13.8	13.2
Somewhat disagree	23.8	17.1	19.4	21.2	26.0	20.3	21.3
Strongly disagree	49.5	48.7	49.1	36.1	36.4	50.9	45.1
Not stated	0.9	0.0	0.0	0.2	0.0	0.7	0.3
OECS	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Men were more likely than women to disagree strongly with the suggestion that persons working in climate change are making a big deal of nothing: 46.5 percent of all men disagreed strongly with the statement compared to 43.7 percent of women (Table 4.10).

**Table 4.10: Perception of Persons Working in Climate Change Work by Sex**

Persons Engaged in Climate Change Work Are Making a Big Deal of Nothing	Sex		
	Male	Female	Both Sexes
	%	%	%
Strongly agree	9.6	7.1	8.3
Somewhat agree	10.8	12.7	11.8
Neither agree nor disagree	11.7	14.7	13.2
Somewhat disagree	21.0	21.5	21.3
Strongly disagree	46.5	43.7	45.1
Not stated	.3	.2	.3
Both Sexes	100.0	100.0	100.0

More than 20 percent of respondents across the OECS agreed with the statement “Climate Change is not affecting us” and while most respondents (70.6%) disagreed with the statement, responses to this question varied widely by country (Table 4.11).

**Table 4.11: Perception of Climate Change Affecting OCES Countries by Country**

Climate Change Is Not Affecting Us	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Strongly agree	10.3	14.8	10.6	10.8	10.0	8.2	10.8
Somewhat agree	10.7	7.9	8.0	18.3	12.9	11.7	11.5
Neither agree nor disagree	6.8	5.4	8.9	7.5	4.9	7.0	6.7
Somewhat disagree	20.6	18.7	17.1	18.7	23.4	25.4	20.6
Strongly disagree	51.6	53.0	55.5	44.1	48.7	47.5	50.0
Not stated	.6	.2	0.0	.6	0.0	.2	.3
OECS	100.0	100.0	100.0	100.0	100.0	100.0	100.0

A large proportion of OECS residents also shared the perception that Caribbean countries were not responsible for causing climate change. On average, about 29.1 percent of all respondents across the six Member States agreed with the suggestion and another 12.4 percent were undecided (Table 4.12). The range of responses for this question varied markedly by country, with as many as 34.5 percent of respondents in Dominica, and 35.8 percent of respondents in Saint Kitts and Nevis agreeing with the statement. It should be noted however, that more than 58.0 percent of respondents somewhat disagreed or strongly disagreed with the statement.

**Table 4.12: Caribbean Countries Are Not Responsible for Causing Climate Change**

Caribbean Countries Are Not Responsible for Causing Global Climate Change	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Strongly agree	13.8	17.5	11.3	16.7	12.4	9.6	13.6
Somewhat agree	16.3	17.0	7.0	19.1	15.1	18.5	15.5
Neither agree nor disagree	11.3	10.9	14.3	13.1	13.3	11.8	12.4
Somewhat disagree	28.6	24.8	22.1	26.9	30.0	25.3	26.3
Strongly disagree	29.3	28.7	44.9	23.8	28.6	34.4	31.7
Not stated	.7	1.1	.5	.3	.6	.4	.6
OECS	100.0	100.0	100.0	100.0	100.0	100.0	100.0

In terms of finding solutions to the problems posed by climate change, OECS residents largely disagreed with the proposal that “We are way too small to do anything about climate change.” More than 65 percent of all respondents across the PMS disagreed with the statement, with as much as 78.3 percent of respondents in Grenada in disagreement.

**Table 4.13: We Are Way Too Small to Do Anything about Climate Change**

We Are too Small to Do Anything to Stop Climate Change	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Strongly agree	14.5	23.9	8.5	15.3	12.4	7.3	13.7
Somewhat agree	14.4	8.8	5.2	10.4	12.0	11.0	10.3
Neither agree nor disagree	7.2	8.9	7.7	10.1	9.1	8.6	8.6
Somewhat disagree	21.4	18.2	18.6	22.5	25.9	25.8	22.0
Strongly disagree	42.1	39.8	59.7	41.6	39.3	47.2	45.0
Not stated	.3	.4	.2	.2	1.3	.2	.4
OECS	100.0	100.0	100.0	100.0	100.0	100.0	100.0

With regard to the suggestion that technology provides the solution to the problems posed by climate change, most OECS residents were not convinced. The largest percentage of respondents (46.5 %) strongly disagreed with the suggestion that “we can fix the damage to the environment with technology” (Table 4.14).

**Table 4.14: We Can Fix Damage to the Environment with Technology**

We Can Fix Any Damage to the Environment with Technology	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Strongly agree	7.3	11.0	8.5	9.6	9.8	6.8	8.8
Somewhat agree	11.3	9.6	13.5	11.2	16.4	11.1	12.2
Neither agree nor disagree	11.7	10.8	12.5	15.6	13.6	14.7	13.1
Somewhat disagree	21.2	15.3	13.7	17.5	22.0	22.0	18.6
Strongly disagree	47.7	52.6	51.3	45.2	37.5	44.7	46.5
Not stated	.8	.7	.7	.9	.7	.8	.8
OECS	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The question “How do you feel about climate change?” elicited a variety of reactions. Respondents expressed feelings of fear (23.8%), hope (34.9%), confusion (17.1%) and even powerlessness (19.3%). However, the dominant feeling was that “I need more information.” At least half of all respondents felt that they needed more information on climate change, irrespective of the country under consideration. These trends did not change when the analysis was considered by sex, age or highest level of education of the respondent.

**Table 4.15: Feeling about Climate Change by Country**

Feeling about Climate Change	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Fearful/afraid	20.7	21.0	28.7	23.2	27.5	21.8	23.8
Confused	13.8	20.3	13.1	17.5	20.5	17.6	17.1
Angry	4.1	3.5	3.3	3.7	4.7	3.3	3.8
Powerless, I cannot do anything	25.2	17.9	10.7	23.0	25.5	13.7	19.3
Hopeful - we can do some things to help protect ourselves against climate change	41.2	29.2	17.3	44.0	36.1	42.5	34.9
Sad, because we might lose our way of life	23.7	14.6	18.2	23.7	28.2	25.0	22.2
I need more information	44.6	49.3	45.1	59.9	48.8	45.6	48.9
People are making a big deal about nothing	1.6	2.1	2.4	5.3	4.9	1.3	2.9
I don't care about climate change	2.0	4.2	2.0	3.2	5.2	6.0	3.8
Other feeling	2.6	6.4	3.7	3.1	3.1	3.3	3.7
Not stated	1.7	.7	.4	0.0	.5	.2	.6

## CHAPTER 5

### KNOWLEDGE ABOUT CLIMATE CHANGE

#### SUBJECTIVE KNOWLEDGE OF CLIMATE CHANGE ISSUES

*Respondents were asked, “How informed do you personally think you are about the causes, potential effects and ways of reducing climate change?”*

More than half of OECS residents felt very well or fairly well-informed about different aspects of climate change; 70.8 percent confirm that they were either very well or somewhat informed about the causes of climate change, while 73.6 percent said they felt very well or somewhat informed about the consequences of climate change; 64.6 percent reported that they feel very well or somewhat informed about the ways of fighting it. However, for all three aspects of climate change, more than one quarter of all respondents (25%) felt that they are not at all informed.

#### Causes of Climate Change

Residents of Antigua and Barbuda, Grenada and Saint Kitts and Nevis felt the best informed about the causes of climate change; at least 70.8 percent of respondents in those countries feel informed about the causes of climate change. Residents in Saint Lucia felt least informed about the causes of climate change – more than 34 percent of respondents from that country felt they were not at all informed about the causes of climate change (Table 5.1).

**Table 5.1: Levels of Information about the Causes of Climate Change (subjective) by Country**

What Is Causing the Climate to Change?	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Not at all informed	27.4	30.5	28.1	26.9	34.4	27.3	29.1
Somewhat informed	58.1	55.6	56.8	62.4	54.8	61.2	58.1
Very well informed	14.4	14.0	15.0	10.7	10.9	11.3	12.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

From a socio-demographic point of view, as shown in Table 5.2, it was found that:

- ✓ Men feel better informed than women about the causes of climate change.

- ✓ The proportion of respondents who were informed declined with age. The group of older respondents (aged 55+) feels significantly less informed than its younger counterparts about the causes of climate change.
- ✓ The self-perceived level of information among respondents increases with their levels of education.

**Table 5.2: Knowledge of What Is Causing Climate Change by Socio-demographic Category**

Socio-demographic Characteristic	Percentage of Group		
	Not At All Informed	Somewhat Informed	Very Well Informed
<b>All Groups</b>	<b>29.1</b>	<b>58.1</b>	<b>12.7</b>
<b>Sex</b>			
Male	25.2	58.9	15.9
Female	33.0	57.3	9.7
<b>Age</b>			
15-24	21.7	59.6	18.7
25-39	23.9	63.0	13.1
40-54	31.8	57.3	10.8
55+	42.1	49.7	8.3
<b>Level of Education</b>			
Lowest	45.3	47.7	6.8
Middle	27.1	60.5	12.4
Highest	7.6	69.7	22.7

## Consequences of Climate Change

OECS residents feel better informed about the consequences of climate change than they did about what causes it; 15.0 percent of all respondents across the OECS felt very well informed about the consequences of climate change and an additional 58.6 percent felt that they were somewhat informed. Residents of Saint Lucia were more likely to express the feeling that they were not at all informed about the effects of climate change, as compared to any other country. This was in keeping with the survey finding that one fifth of respondents of Saint Lucia indicated that they had not heard about climate change.

**Table 5.3: Levels of Information about Effects of Climate Change (subjective) by Country**

Possible Effects of Climate Change	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Not at all informed	26.3	26.3	28.7	22.8	28.9	25.1	26.4
Somewhat informed	57.4	54.8	56.8	65.1	57.3	60.5	58.6
Very well informed	16.3	18.9	14.4	12.1	13.8	14.2	15.0
Total	26.3	26.3	28.7	22.8	28.9	25.1	26.4

Similar to the levels of subjective knowledge about the causes of climate change, from a socio-demographic point of view, as shown in Table 5.4, it was revealed that:

- ✓ Men feel better informed than women about the consequences of climate change than women.
- ✓ The degree to which respondents feel informed about the consequences of climate change is inversely related to their age. The group of older respondents (aged 55+) feels significantly less informed than its younger counterparts.
- ✓ The self-perceived level of information among respondents increases with their levels of education.

**Table 5.4: Knowledge of the Consequences of Climate Change by Socio-demographic Category**

Socio-demographic Characteristic	Percentage of Group		
	Not At All Informed	Somewhat Informed	Very Well Informed
<b>All Groups</b>	<b>26.4</b>	<b>58.6</b>	<b>15.0</b>
<b>Sex</b>			
Male	23.4	58.7	17.9
Female	29.3	58.6	12.0
<b>Age</b>			
15-24	20.2	56.4	23.4
25-39	22.1	62.3	15.6
40-54	28.6	58.9	12.4
55+	37.2	54.8	8.1
<b>Level of Education</b>			
Lowest	40.3	51.5	8.1
Middle	25.1	60.2	14.7
Highest	7.1	66.7	26.2

There also appears to be some correlation between the level of concern for climate change and the level of knowledge about its potential consequences. Respondents who felt very well informed about the consequences were more likely to have rated climate change as a very serious issue, compared to their less informed counterparts (Table 5.5).

**Table 5.5: Knowledge of Specific Aspects of Climate Change by Perceived Seriousness**

Level of Concern for Climate Change	Possible Effects of Climate Change			
	Not At All Informed	Somewhat Informed	Very Well Informed	Total
	%	%	%	%
Not a serious issue	24.5	9.1	10.9	13.4
A fairly serious issue	35.4	32.3	21.1	31.4
A very serious issue	40.0	58.7	68.0	55.2
Total	100.0	100.0	100.0	100.0

## Practices to Reduce Climate Change

OECS residents were less confident about their level of knowledge in relation to what can be done to reduce climate change, than they are about its effects. More than 30 percent of respondents in each country felt that they were not at all informed about what can be done to reduce climate change (Table 5.6).

**Table 5.6: Knowledge of What Can Be Done to Reduce Climate Change by Country**

What Can Be Done to Reduce Climate Change	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Not at all informed	33.8	35.7	35.6	33.0	37.9	35.2	35.2
Somewhat informed	53.2	47.0	50.2	55.4	50.8	53.8	51.7
Very well informed	13.0	17.3	14.2	11.6	11.3	9.8	12.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

In terms of the socio-demographic distribution of knowledge regarding what can be done to reduce climate change, it was found that:

- ✓ 49.0 percent of persons in the age group 55 years and above felt they were not at all informed about what can be done to reduce climate change.
- ✓ Men felt significantly more informed about what can be done to reduce climate change than women.
- ✓ More than half of respondents with low levels of education felt they were not at all informed about what can be done to reduce climate change.

**Table 5.7: Knowledge of What Can Be Done to Reduce Climate Change (Subjective) by Socio-demographic Category**

What Can Be Done to Reduce Climate Change	Percentage of Group		
	Not At All Informed	Somewhat Informed	Very Well Informed
Socio-demographic Characteristic			
<b>All Groups</b>	<b>35.2</b>	<b>51.7</b>	<b>12.9</b>
<b>Sex</b>			
Male	32.5	51.1	16.0
Female	37.9	52.3	9.8
<b>Age</b>			
15-24	31.5	50.8	17.3
25-39	29.3	56.0	14.6
40-54	35.0	52.7	12.1
55+	49.0	44.5	6.4
<b>Level of Education</b>			
Lowest	50.8	40.6	8.2
Middle	34.2	52.7	13.1
Highest	12.5	67.1	19.9

Similar results were obtained for the question “How informed do you think you are about things that can be done to protect yourself and your family from climate change.” As indicated in Table 5.8 and Table 5.9 more than 1 in 3 respondents felt they were not at all informed, and this varied by sex (men felt better informed), age (older age groups felt less informed) and education (more educated respondents felt better informed).

**Table 5.8: Knowledge of Things that Can Be Done to Protect Themselves and their Family from Climate Change**

Things that Can Be Done to Protect Themselves and their Family from Climate Change	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Not at all informed	35.0	32.5	30.7	36.0	34.2	32.1	33.4
Somewhat informed	52.3	49.0	50.9	54.0	53.8	57.3	52.9
Very well informed	12.7	18.5	18.4	10.0	12.0	10.2	13.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**Table 5.9: Knowledge of Things to Protect against Climate Change (subjective) by Demographic Characteristic**

Socio-demographic Characteristic	Percentage of Group		
	Not at all informed	Somewhat informed	Very well informed
<b>All Groups</b>	<b>33.4</b>	<b>52.9</b>	<b>13.7</b>
<b>Sex</b>			
Male	32.1	52.0	15.9
Female	34.7	53.7	11.5
<b>Age</b>			
15-24	32.4	50.2	17.4
25-39	29.6	55.7	14.7
40-54	31.1	55.4	13.4
55+	43.8	47.8	8.4
<b>Level of Education</b>			
Lowest	42.3	45.7	11.8
Middle	33.6	52.5	13.9
Highest	18.9	64.8	16.3

## OBJECTIVE KNOWLEDGE OF CLIMATE CHANGE ISSUES

When asked what was the “main cause of climate change”, most respondents (41.0%) said, “people’s use of electricity and burning of fuels”, while at least one half of the respondents felt that these are just “natural changes” or “acts of God” (Table 5.10). The response to this question was very closely related to the level of education of the respondent (Table 5.11).

**Table 5.10: Main Cause of Climate Change by Country**

What Do You Think Is the Main Cause of the Climate Changing?	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
These are just natural changes	20.5	29.0	26.6	25.5	26.1	23.1	25.2
The changes are acts of God	19.2	27.1	25.0	22.1	25.6	26.1	24.2
People's use of electricity and burning of fuels	49.4	37.0	36.7	41.3	38.6	43.2	41.0
I don't believe the climate is changing	.7	1.1	.2	1.5	1.1	.4	.8
Other	8.3	5.5	11.0	8.8	8.1	6.3	8.0
Not stated	2.0	.3	.4	.8	.5	.9	.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**Table 5.11: Main Cause of Climate Change by Level of Education of Respondent**

What Do You Think Is the Main Cause of the Climate Changing?	Level of Education			
	Low	Medium	High	All Levels
	%	%	%	%
These are just natural changes	25.6	28.3	18.1	25.2
The changes are acts of God	37.4	20.5	11.0	24.2
People's use of electricity and burning of fuels	29.9	42.1	56.1	41.0
I don't believe the climate is changing	1.2	.6	.9	.8
Other	5.5	7.4	13.1	8.0
Not stated	.5	1.1	.7	.8
Total	100.0	100.0	100.0	100.0

When asked whether a list of socio-environmental events were possible effects of climatic change in their country, most persons felt that all of the activities presented were manifestations of climatic changes. It is unclear from the data whether the “yes” responses can strictly be interpreted as “knowledge” or are simply “guesses”, since the questions taken in context may have led the respondents to believe that the options given were in fact ALL actual potential effects (Table 5.12).

It was noted that when the responses were analyzed by highest level of education of the respondent, the proportion of “don’t know” responses was highest for the least educated group and decreased as education level increased (Table 5.13).

**Table 5.12: Knowledge of the Effects of Climate Change**

Effect	Response	All Participating Member States	
		Total	%
<b>Drought (harsh dry periods)</b>	<b>Yes</b>	<b>84.1</b>	
	No	7.0	
	Don't know	8.9	
	Total	100.0	
<b>Sea level rise/sea level getting higher</b>	<b>Yes</b>	<b>83.4</b>	
	No	6.1	
	Don't know	10.5	
	Total	100.0	
<b>Stronger hurricanes and storms</b>	<b>Yes</b>	<b>83.2</b>	
	No	7.7	
	Don't know	9.1	
	Total	100.0	
<b>Loss of food crops/plants/trees</b>	<b>Yes</b>	<b>81.0</b>	
	No	8.7	
	Don't know	10.3	
	Total	100.0	
<b>Flooding</b>	<b>Yes</b>	<b>79.3</b>	
	No	9.2	
	Don't know	11.5	
	Total	100.0	
Loss of different types of plants and animals	Yes	73.5	
	No	13.2	
	Don't know	13.3	
	Total	100.0	
Loss of buildings close to the sea/coast	Yes	68.8	
	No	16.6	
	Don't know	14.6	
	Total	100.0	
Loss of coral reefs	Yes	68.3	
	No	10.2	
	Don't know	21.4	
	Total	100.0	
Earthquakes	Yes	67.1	
	No	16.4	
	Don't know	16.5	
	Total	100.0	
More diseases	Yes	54.7	
	No	22.9	
	Don't know	22.4	
	Total	100.0	

**Table 5.13: Knowledge of Effects of Climate Change by Level of Education of Respondent**

Effect	Response	Level of Education		
		Low %	Medium %	High %
Stronger hurricanes and storms	Yes	79.6	84.1	87.0
	No	8.9	7.7	5.8
	Don't know	11.5	8.2	7.2
	Total	100.0	100.0	100.0
Loss of different types of plants and animals	Yes	68.0	73.8	81.3
	No	15.2	13.0	10.4
	Don't know	16.8	13.1	8.2
	Total	100.0	100.0	100.0
Sea level rise/sea level getting higher	Yes	79.9	82.2	91.5
	No	7.7	6.4	3.2
	Don't know	12.5	11.4	5.3
	Total	100.0	100.0	100.0
Drought (harsh dry periods)	Yes	78.1	84.9	92.0
	No	9.4	6.7	3.8
	Don't know	12.5	8.4	4.2
	Total	100.0	100.0	100.0
Loss of coral reefs	Yes	62.9	67.6	78.4
	No	11.7	11.3	5.9
	Don't know	25.3	21.2	15.7
	Total	100.0	100.0	100.0
Earthquakes	Yes	64.3	71.1	63.4
	No	17.6	14.6	18.3
	Don't know	18.1	14.3	18.3
	Total	100.0	100.0	100.0
More diseases	Yes	56.5	54.1	53.0
	No	22.7	23.1	22.9
	Don't know	20.8	22.9	24.1
	Total	100.0	100.0	100.0
Loss of buildings close to the sea/coast	Yes	67.9	66.5	74.9
	No	17.2	17.4	13.8
	Don't know	14.9	16.1	11.3
	Total	100.0	100.0	100.0
Loss of food crops/plants/trees	Yes	78.0	81.0	85.9
	No	9.3	8.8	7.5
	Don't know	12.8	10.2	6.6
	Total	100.0	100.0	100.0
Flooding	Yes	77.4	78.2	84.6
	No	9.3	10.6	6.1
	Don't know	13.3	11.2	9.3
	Total	100.0	100.0	100.0

## CHAPTER 6 BEHAVIOURAL PRACTICES

### PERSONAL ACTIONS

About one third of all respondents (34.1%) claimed to have taken personal measures to guard against climate change, while 65.9 percent said they have not. In response to the question “Have done anything in past six months to protect against a hurricane or storm?” at country level, Table 6.1 shows that the largest proportion of persons claiming to have done something to protect their household could be found in Saint Lucia (38.2%), followed by Antigua and Barbuda; and the lowest proportion in Grenada (28.3%). Further studies would be needed to determine the reasons for the differences noted.

**Table 6.1: Respondents Taking Action in Past Six Months to Protect against Hurricane or Storm**

Done Anything that Would Protect You and/or Your Family from a Hurricane or Storm?	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Yes	37.4	33.1	28.3	35.1	38.2	32.8	34.1
No	62.6	66.9	71.7	64.9	61.8	67.2	65.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Analysis by level of concern for climate change reveals that persons who regard climate change as a very serious issue were significantly more likely to have done something to guard against hurricanes or storms than persons who had a lower level of concern for climate change (Table 6.2).

**Table 6.2: Respondents Taking Action in Past Six Months to Protect Against Climate Change by Perceived Seriousness**

Done Anything that Would Protect You and/or Your Family from a Hurricane or Storm?	Level of Concern for Climate Change			Total
	Not a Serious Issue	A Fairly Serious Issue	A Very Serious Issue	
Yes	27.7	30.2	37.9	34.1
No	72.3	69.8	62.1	65.9
Total	100.0	100.0	100.0	100.0

Further disaggregation by socio-economic variables confirms that:

- ✓ An increase in respondents’ age increases the likelihood that they have taken personal action.
- ✓ Men were more likely to claim, “taking personal action”, than women.
- ✓ “Taking personal action” is significantly more common among respondents with higher levels of education.
- ✓ Respondents in higher wealth brackets were more likely to claim having taken personal action compared to their less fortunate counterparts.

**Table 6.3: Taken Actions in Past Six Months to Protect against Climate Change by Socio-demographic Characteristics**

During the Past Six Months, Have You Done Anything that Would Protect You and/or Your Family from a Hurricane or Storm?	Percentage of Group	
Socio-demographic Characteristic	Yes	No
<b>All Groups</b>	<b>34.1</b>	<b>65.9</b>
<b>Sex</b>		
Male	35.3	64.7
Female	33.0	67.0
<b>Age</b>		
15-24	26.7	73.3
25-39	33.5	66.5
40-54	38.7	61.3
55+	37.0	63.0
<b>Level of Education</b>		
Lowest	30.9	69.1
Middle	33.1	66.9
Highest	41.3	58.7
<b>Index of Household Wealth</b>		
Lowest	30.6	69.4
Q2	32.5	67.5
Q3	33.1	66.9
Highest	41.1	58.9

Taking a closer look at what specifically was done as a means of protection against hurricanes or storms, respondents were asked to identify the types of actions taken to protect their households. Of those who claimed action in the past six months, more than one half said they had cut trees and branches, while more than four out of every 10 persons said they either cleaned drains, strengthened the roof or purchased torch lights (Table 6.4).

At the country level, these results varied widely; in Antigua and Barbuda, respondents were more likely to say they had installed hurricane shutters (33.2%) compared to any other country, while Dominicans were more likely to have bought torch lights, Grenadians were more likely to have strengthened roofs and Saint Lucians more likely to have cleaned drains. The reasons for taking such varied actions should be further explored before any conclusion can be drawn.

In terms of a socioeconomic breakdown, respondents with higher levels of education were more likely to have purchased house insurance as a form of protection than their less educated counterparts – 16.9 percent and 3.6 percent respectively (Table 6.5). There were no notable differences in responses by sex.

**Table 6.4: Action Taken in Past Six Months to Protect Against Climate Change by Country**

Actions Taken to Protect Family	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Purchased Torch Lights	44.0	59.8	37.5	52.6	44.4	34.8	45.7
Cleaned Drains	32.5	42.8	35.9	25.4	67.3	49.3	42.6
Cut trees and branches	57.8	53.5	43.0	60.4	64.2	52.1	55.8
Strengthened roof	47.0	44.0	45.5	42.1	39.2	44.6	43.6
Stocked canned foods	35.8	37.5	40.1	40.5	35.1	43.6	38.6
Bought House Insurance	14.2	7.5	1.8	16.4	12.3	8.8	10.5
Put on/Installed hurricane shutters	33.2	18.7	12.2	25.9	7.8	6.2	17.6
Did other things done to protect self/family from hurricane/storm	8.4	8.5	14.8	10.6	11.2	6.2	9.9
Not stated	.9	1.2	1.7	1.0	0.0	.5	.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**Table 6.5: Action Taken in Past Six Months to Protect Against Climate Change by Level of Education of Respondent**

Actions Taken to Protect Family	Level of Education			
	Low	Medium	High	All Levels
	%	%	%	%
Purchased torch lights	42.1	45.7	50.2	45.7
Cleaned drains	50.1	37.4	42.4	42.6
Cut trees and branches	51.5	57.3	58.4	55.8
Strengthened roof	42.9	44.4	43.3	43.6
Stocked canned foods	37.2	38.3	40.6	38.6
Bought house insurance	3.6	11.7	16.9	10.5
Put on/Installed hurricane shutters	13.7	20.5	17.4	17.6
Other	9.4	10.4	9.6	9.9
Not stated	.9	.9	.8	.9
Total	100.0	100.0	100.0	100.0

## ENERGY CONSERVATION AND RECYCLING

OECS residents generally claimed to employ a wide range of energy conservation actions (Table 6.6). Most respondents indicated that they turn off lights when not in use (95.0%); use energy saving light bulbs (84.7%); switch off standby devices (66.6%) or re-use or recycle waste whenever possible (64.5%).

**Table 6.6: Actions Currently Taken by Households to Conserve Energy**

Actions Currently Taken by Household	Percentage of Responses
Turn off lights when not in use	95.0
Use energy saving light bulbs	84.7
Switch off standby devices	66.6
Re-use or recycle waste when possible	64.5
Use public transportation to save gas	52.5
Use energy saving appliances	45.5
Defrost refrigerator/freezer often	43.7
Car pool (share)/travel with friends to save gas	22.9
Buy from companies that sell or produce environmentally friendly/climate friendly goods and services	22.2
Use a solar water heater	8.3
Other things done	1.4
Total	100.0

Analysis of conservation actions by country suggested that all countries practice the full range of energy saving strategies, but some were preferred to others depending on the social context.

More highly educated respondents were more likely to engage in all forms of energy conservation compared to their less educated counterparts, except car-pooling and defrosting freezers.

**Table 6.7: Energy Consumption Actions Currently Taken in Respondents' Households by Country**

Actions Currently Taken by Household	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Turn off lights when not in use	96.5	92.2	94.9	95.0	95.0	96.8	95.0
Use energy saving light bulbs	85.5	85.8	76.5	82.4	87.8	90.1	84.7
Switch off standby devices	58.2	71.5	65.7	60.6	77.1	66.2	66.6
Re-use or recycle waste when possible	72.6	58.9	66.0	69.2	58.7	61.9	64.5
Use public transportation to save gas	34.4	60.7	61.0	39.0	66.5	53.1	52.5
Use energy saving appliances	48.0	46.8	37.3	45.7	51.7	43.5	45.5
Defrost refrigerator/freezer often	46.3	49.3	42.0	36.9	47.6	39.9	43.7
Car pool (share)/travel with friends to save gas	26.0	31.9	18.1	21.6	26.0	13.8	22.9
Buy from companies that sell or produce environmentally friendly/climate friendly goods and services	22.0	20.1	20.9	23.0	30.0	17.1	22.2
Use a solar water heater	7.7	8.8	4.7	4.4	15.5	8.3	8.3
Other things done	1.7	1.8	.2	1.4	2.0	1.5	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**Table 6.8: Energy Consumption Actions Taken by Households and Education of Respondent**

Actions Currently Taken by Household	Level of Education			
	Low	Medium	High	All Levels
	%	%	%	%
Turn off lights when not in use	94.8	95.3	95.0	95.0
Use energy saving light bulbs	82.2	84.3	89.4	84.7
Switch off standby devices	65.5	66.6	68.4	66.6
Re-use or recycle waste when possible	57.5	66.7	71.1	64.5
Use public transportation to save gas	56.2	51.8	48.2	52.5
Use energy saving appliances	38.1	46.3	55.4	45.5
Defrost refrigerator/freezer often	44.8	44.6	40.2	43.7
Car pool (share)/travel with friends to save gas	17.2	23.4	30.8	22.9
Buy from companies that sell or produce environmentally friendly/climate friendly goods and services	17.5	22.4	29.1	22.2
Use a solar water heater	6.6	8.0	11.2	8.3
Other things done	1.2	1.7	1.4	1.4
Total	100.0	100.0	100.0	100.0

## HOUSEHOLD WATER CONSERVATION

When asked about their patterns of saving water in their homes, respondents provided a number of insightful responses. About 80 percent of respondents said that they talk about saving water often (58.2%) or sometimes (20.8%). A look at the data by country suggests that households in Antigua and Barbuda (83.0%) and Grenada (82.6%) more often spoke about saving water compared to the other OECS countries (Table 6.9).

**Table 6.9: Conservation of Saving Water in Households by Country**

Saving Water in Households	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Often	67.4	51.3	62.6	56.6	55.3	56.0	58.2
Sometimes	15.2	20.9	20.4	23.3	22.9	21.9	20.8
Rarely	8.7	13.6	8.3	10.3	11.1	11.6	10.6
Not At All	8.7	14.2	8.7	9.8	10.7	10.5	10.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Women were more likely than men to talk about saving water in the home. This is probably due to the significant role traditionally played by women in the home performing housework and as primary caregivers (Table 6.10)<sup>10</sup>. On average across all countries, 82.9 percent of all female respondents said they spoke about saving water either often or sometimes, compared to 75.0 percent of their male counterparts.

**Table 6.10: Conservation of Saving Water in Households by Sex**

Sex	How Often Do Members of the Household Talk about Saving Water				Total
	Often	Sometimes	Rarely	Not At All	
	%	%	%	%	
Male	52.5	22.5	11.6	13.5	100.0
Female	63.8	19.1	9.7	7.5	100.0
Both Sexes	58.2	20.8	10.6	10.4	100.0

Respondents who felt they were “very well informed” about the effects of climate change were more likely to talk about saving water in the home compared to

<sup>10</sup> United Nations Economic Commission for Latin America and the Caribbean, 2007. The Contribution of Women to the Economy and Social Protection Especially in Relation to Unpaid Work Performed by Women in the Caribbean. Prepared for the Caribbean Subregional Preparatory Meeting for the Tenth Session of the Regional Conference on Women in Latin America and the Caribbean, St. John’s, Antigua and Barbuda 22-23 May 2007. Website source: <http://www.eclac.org/publicaciones/xml/4/28924/L.118.pdf>.

respondents who felt that they had little or no knowledge about the effects of climate change (Table 6.11).

**Table 6.11: Conservation of Saving Water in Households by Knowledge of Effects of Climate Change**

Knowledge about the Effects of Climate Change	How Often Do Members of Household Talk about Saving Water				Total
	Often	Sometimes	Rarely	Not At All	
	%	%	%	%	
Not at all informed	53.7	19.5	11.3	15.4	100.0
Somewhat informed	59.0	21.7	10.7	8.6	100.0
Very well informed	62.8	19.5	9.0	8.7	100.0
Not stated	100.0	0.0	0.0	0.0	100.0
Total	58.2	20.8	10.6	10.4	100.0

Respondents with low levels of education were just as likely as respondents with higher levels of education to talk about saving water in the home (Table 6.12).

**Table 6.12: Conservation of Saving Water in Households by Level of Education of Respondent**

Highest Level of Education	How Often Do Members of the Household Talk about Saving Water				Total
	Often	Sometimes	Rarely	Not At All	
	%	%	%	%	
Low	57.2	18.3	11.3	13.2	100.0
Medium	59.0	20.7	10.4	9.9	100.0
High	58.0	24.8	9.9	7.3	100.0
Total	58.2	20.8	10.6	10.4	100.0

A household wealth index was constructed and used in place of the income variable due to the low response rate on that question. Since it is widely known that income and education levels are linked and move in a similar direction, missing income data were imputed based on education levels.<sup>11</sup> The wealth index is used to separate households into quartiles representing socioeconomic strata. Respondents belonging to households in the poorest quartile were less likely than respondents from any other quartile to speak about saving water in the home (Table 6.13). More than 25 percent of respondents from the poorest households said they either rarely spoke about saving water (10.9%) or not at all (19.2%).

**Table 6.13: Conservation of Saving Water in Households by Index of Household Wealth**

Index of Household Wealth	How Often Do Members of Household Talk about Saving Water				Total
	Often	Sometimes	Rarely	Not at all	
	%	%	%	%	
Lowest	52.0	18.0	10.9	19.2	100.0
Q2	61.0	18.9	10.6	9.5	100.0

<sup>11</sup> In this case households with missing income, data were assigned to the lowest wealth quartile unless the respondent had a level of education that was either medium or high, in which case they were assigned to the second (median) quartile.

Q3	60.2	23.1	10.5	6.2	100.0
Highest	59.7	23.1	10.5	6.7	100.0
Total	58.2	20.8	10.6	10.4	100.0

## ADAPTATION BY HOUSEHOLDS TO CLIMATE CHANGE

In all cases, more than 70 percent of respondents answered favourably to the suggested actions to protect their households against climate change. The five actions most favoured were: preparing households for disasters/hurricanes (93.5%); maintaining soil cover around the yard and home garden (89.4%); installing water tanks and other water storage system in the home (87.2); collecting and using rainwater (86.9%); and conserving and reusing of water (85.2%) (Table 6.14).

It is interesting to note that in most cases there were generally less than 10 percent of respondents who did not know whether the particular proposed action would protect them against climate change.

**Table 6.14: Useful Ways for Households to Adapt to Climate Change**

Response	Frequency	Percent
<b>Preparation for Disasters/Hurricanes</b>		
Yes	2,821	93.5
No	82	2.7
Don't know	113	3.7
Total	3,016	100.0
<b>Keep Vegetation, Trees and Plants in Yard and Garden to Protect Soil</b>		
Yes	2,696	89.4
No	127	4.2
Don't know	193	6.4
Total	3,016	100.0
<b>Install a Water Tank/Water Storage System</b>		
Yes	2,630	87.2
No	175	5.8
Don't know	211	7.0
Total	3,016	100.0
<b>Collect and Use Rainwater</b>		
Yes	2,621	86.9
No	207	6.9
Don't know	187	6.2
Total	3,016	100.0
<b>Conservation and Reuse of Water</b>		
Yes	2,570	85.2
No	248	8.2
Don't know	197	6.5
Total	3,016	100.0
<b>Build Further Away from the Coastline/ Shoreline/Rivers</b>		
Yes	2,550	84.6
No	173	5.8

Response	Frequency	Percent
Don't know	292	9.7
Total	3,016	100.0
<b>Construct Homes According to Government Building Rules</b>		
Yes	2,388	79.2
No	281	9.3
Don't know	347	11.5
Total	3,016	100.0
<b>Move to Higher Ground/Further Inland</b>		
Yes	2,381	79.0
No	297	9.9
Don't know	337	11.2
Total	3,016	100.0
<b>Get Home/Property Insurance</b>		
Yes	2,172	72.0
No	453	15.0
Don't know	391	13.0
Total	3,016	100.0

Given that adaptation to climate change may be an expensive exercise and may require householders to seek financial and other assistance, respondents were asked to state their likely sources of such funding/assistance. More than one fifth of respondents said they would most likely seek the assistance of either their family (22.4%); the government (21.5%); or would apply for a bank loan (18.1%) (Table 6.15).

**Table 6.15: Sources of Funding to Assist Households to Adapt to Climate Change**

Percentage saying "Yes" to the following options	Frequency	Percent
Get help from family	989	22.4%
Go to the Government	950	21.5%
Get a bank loan	797	18.1%
Get together/pool within the community	697	15.8%
Other sources of funds to adapt to climate change	671	15.2%
Get help from the Church	269	6.1%

## ORGANIZATIONS WORKING ON CLIMATE RELATED ISSUES

Awareness of organizations doing climate change work was low in the OECS; more than 6 in 10 persons (67.5%) reported a lack of awareness of any organization that was actively dealing with climate change in their country (Table 6.16).

**Table 6.16: Awareness of Agencies Doing Climate Change Work**

Are You Aware of Any Organizations that Are Active in Dealing with Climate Change Issues in Your Country?	All Participating Member States
	%
Yes	32.0
No	68.0
Total	100.0

Considering the influence of demographic characteristics on awareness of actors involved in climate change work, it was found that:

- ✓ Awareness levels were similar for men and women; only 3 out of 10 persons were aware of agencies doing climate change work.
- ✓ Awareness levels were lowest among 15-24 year olds and persons in the over 55 age groups compared to middle aged persons.
- ✓ Awareness increased significantly with education; more educated respondents were more aware (44.1%) compared to their less educated counterparts (24.5%).

**Table 6.17: Awareness of Agencies Doing Climate Change Work by Socio-demographic Category**

Are You Aware of Any Organizations that Are Active in Dealing with Climate Change Issues in Your Country?	Percentage of Group	
	Yes	No
Socio-demographic Characteristic		
<b>All Groups</b>	<b>32.0</b>	<b>68.0</b>
<b>Sex</b>		
Male	31.5	68.5
Female	32.4	67.6
<b>Age</b>		
15-24	30.6	33.8
25-39	33.8	66.2
40-54	35.0	65.0
55+	26.5	73.5
<b>Level of Education</b>		
Lowest	24.5	75.5
Middle	31.7	68.3
Highest	44.1	55.9

As expected, respondents who perceived climate change as a serious issue had a much greater level of awareness of the organizations that are active in dealing with climate change issues (36.1%) than their counterparts who perceived climate change as not being a serious issue (23.0%) (Table 6.18).

**Table 6.18: Awareness of Agencies Doing Climate Change Work by Perceived Seriousness**

Are You Aware of any Organizations that Are Active in Dealing with Climate Change Issues in Your Country?	Level of Concern for Climate Change			Total
	Not a Serious Issue	A Fairly Serious Issue	A Very Serious Issue	
	%	%	%	%
Yes	23.0	28.5	36.1	32.0
No	77.0	71.5	63.9	68.0
Total	100.0	100.0	100.0	100.0

Among the organizations listed by those who expressed some level of awareness, the relevant National Disaster Management Agency was usually the organization identified (Table 6.19). Other agencies cited include, *inter alia*, the Ministry/Department of Physical Planning, the Red Cross, the National Trust and churches.

**Table 6.19: List of Organizations by Frequency of Mention**

Organizations Dealing with Climate Change	Frequency
National Disaster Management Agency (NaDMA)	217
National Emergency Management Organization (NEMO)	36
Nevis Natural Disaster Management (NEMA)	30
Disaster Management	25
Environmental Coordinating Unit	24
Red Cross	14
EAG Rotary Antigua Sundown	13
Nevis Historical and Conservation Society	9
Department of Physical Planning and Development	9
NODS National Office of Disaster Service	7
National Trust	6
Church Committee Service	5
Ministry of Sustainable Development and Forestry	3
Marine Protective Areas	3

When asked whether “the government was doing anything to reduce the effects of climate change”, more than half of respondents across the OECS (55.4%) said they “Don’t know”. Only 16.7 percent of respondents felt that the governments were doing anything to deal with the effects of climate change (Table 6.20).

At the country level, respondents in Saint Vincent and the Grenadines were more likely than respondents in any other country to lack awareness about whether government was doing anything to reduce the effects of climate change (57.8%), compared to the others. Saint Lucians were the most likely to say “no”, government was not doing anything to reduce the effects of climate change.

**Table 6.20: Government Addressing Climate Change by Country**

Is the Government Doing Anything to Reduce the Effects of Climate Change?	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Yes	15.8	16.7	13.7	19.3	17.0	18.0	16.7
No	28.8	26.4	33.5	22.9	37.0	18.3	27.8
Don't know	55.4	56.9	52.8	57.8	46.0	63.8	55.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Among respondents who answered favourably, the four main actions they felt that governments were taking included “improving the environment”, “international relations”, “educating people”, and “conducting radio/television” programmes.” But a significant proportion of persons who said “yes, government is doing things to reduce the effects” declined to say what they felt or knew the government was doing (6.4%) (Table 6.21).

**Table 6.21: Actions Taken by Governments to Reduce the Effects of Climate Change?**

What is the Government Doing to Reduce the Effects of Climate Change?	Share of Respondents (%)
Improve Environment	2.2
International Relations	2.0
Educate/inform people	1.9
Programmes on radio, TV, Internet on climate	1.7
Development of footpaths, roads, drains	0.7
Consider renewable energy options	0.6
Build shelters	0.6
Go green	0.2
Monitoring ozone depleting substances	0.2
Organize Rescue Shelters	0.2
Government funding to clean environment	0.2
Laws to reduce deforestation	0.1
Upgrade disaster management	0.1
Youth Involvement	0.1
Have laws about environment	0.1
Energy saving bulbs	0.1
Other	0.6
Not Stated	6.7
Total	100.0

Respondents had several ideas about what their Governments should be doing in order to reduce the effects of climate change. Most persons (75.6%) said that government should provide more information/increase public awareness on the issue (Table 6.22). Other responses include replanting of trees/introducing reforestation programme (56.7%); regular maintenance of roads/bridges (55.5%); improving waste/garbage collection (52.0%); promoting rainwater harvesting and the wise use

of water (44.4%); updating/enforcing relevant legislation (41.1%); and conducting more research (36.9%).

**Table 6.22: Suggestions for Government Actions by Frequency of Response**

Things Government Should Do to Reduce the Effects of Climate Change	%
Give people more information/ increase public awareness	75.6
Replant trees/ introduce reforestation programme	56.7
Regular maintenance of drains/roads/bridges	55.5
Ensure waste/garbage is collected or disposed of/thrown away from property	52.0
Promote rainwater collection and use water wisely	44.4
Enforce existing laws/create new environmental laws	41.1
Conduct more research	36.9
Give benefits for buying items that are environmentally friendly	33.5
Do not import goods that damage the environment, e.g. leaded gasoline	26.3
Charge higher taxes on goods that are not environmentally friendly	16.0
Nothing/Government is already doing all it can	4.3
Not stated	4.1
Total	100.0

Analysis of this data by country confirms that requests for Government to provide more information was more prevalent among residents from Saint Kitts and Nevis and Antigua and Barbuda (Table.6.23). Additionally, respondents with a high level of education were also more likely than those of low education to request more information on the issue (Table 6.24).

**Table 6.23: Persons Requiring More Information/Public Awareness from Government by Country**

Give People More Information/ Increase Public Awareness	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Yes	79.7	69.4	76.7	81.4	70.1	76.4	75.6
No	20.3	30.6	23.3	18.6	29.9	23.6	24.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

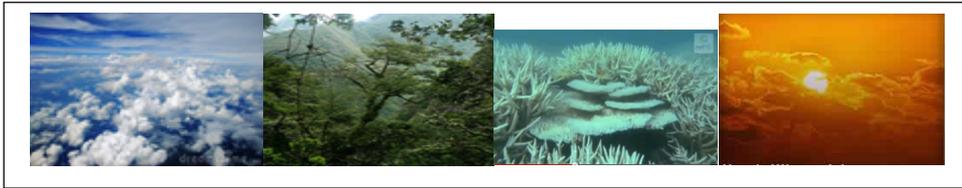
**Table 6.24: Persons Requiring More Information/Public Awareness from Government by Level of Education of Respondent**

Give People More Information/ Increase Public Awareness	Level of Education			
	Low	Medium	High	Total
	%	%	%	%
Yes	71.1	76.1	81.6	75.6
No	28.9	23.9	18.4	24.4
Total	100.0	100.0	100.0	100.0

## SECTION 2

# FINDINGS FROM THE SURVEY OF INSTITUTIONS

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## CHAPTER 7

### PROFILE OF RESPONDENTS FOR THE INSTITUTIONAL SURVEY

Responses from a total of 297 respondents, representing 12 different sectors, were obtained from the six PMS, with wide variation in the response rates by country. Among the PMS, Saint Kitts and Nevis had the highest proportion of respondents (26.6%) followed by Saint Lucia (25.6%), while Antigua and Barbuda and Grenada suffered poor response rates and accounted for 6.1 percent and 6.4 percent of respondents, respectively (Table 7.1).

**Table 7.1: Respondents of Online Survey by Country**

Country	Percent of Total	Cumulative Percent
Antigua and Barbuda	6.1	6.1
Dominica	15.2	21.2
Grenada	6.4	27.6
Saint Kitts and Nevis	26.6	54.2
Saint Lucia	25.6	79.8
Saint Vincent and the Grenadines	20.2	100.0
Total	100.0	

About 50 percent of the respondents worked with Ministries or Departments of the National Government (50.2%) and over 76 percent of respondents were affiliated with either local or national Government agencies. Non-Governmental organizations (NGOs) and private companies accounted for 11.4 and 9.6 percent of respondents respectively, while CBOs, Regional Organizations and University/Research Institutes were only marginally represented, accounting for 2.5 percent of all respondents (Table 7.2).

**Table 7.2: Respondents by Type of Organization**

Type of Organization You Work With?	Percent	Cumulative Percent
National Government	50.2	50.2
Local Government	25.8	76.0
Non-governmental Organization (NGO)	11.4	87.5
Private Company	9.6	97.0
Community Based Organization (CBO)	0.4	97.4
Regional Organization	1.8	99.3
University/Research Institute	0.7	100.0
Total	100.0	

Survey respondents worked mainly in the Environment/Natural Resources Management/Physical Planning/Disaster Management Sector (35.7%), Agriculture/Fisheries/Marine Resources (13.8%), and Meteorology (10.8%). Sectors such as Health (2.4%), Water (1.3%) and Education (1.0%) had the lowest turnout (Table 7.3). This is not a surprising finding (in terms of support for participation in the survey), given the general perception shared by representatives from these latter sectors who generally shared the view that their work was unrelated to climate change.

**Table 7.3: Respondents by Sector**

Sector	Count	Percent
Environment/Natural Resources Management/Physical Planning/ Disaster Management	106	35.7
Agriculture/Fisheries/Marine Resources	41	13.8
Meteorology	32	10.8
Infrastructure	20	6.7
Energy	20	6.7
Tourism	20	6.7
Finance/Banking/Insurance	12	4.0
Statistics/Economic Planning	7	2.4
Health	6	2.0
Water	4	1.3
Education	3	1.0
Other	20	6.7
Not stated	6	2.0
Total	297	100.0

Table 7.4 shows that technocrats accounted for 69.4 percent of all respondents, with middle managers/supervisors accounting for the highest proportion (29.4%). Technician positions accounted for 17.7 percent, while clerk/other-white collar workers accounted for the second largest individual category (28.6%). The position of manual worker had the lowest representation (2.0%).

**Table 7.4: Respondents by Position within Organization**

Which Title Best Describes Your Position within the Organization?	Percent	Cumulative Percent
CEO/Permanent Secretary/Director	6.9	6.9
Manager/Professional	15.3	22.2
Technician	17.7	39.9
Middle management/supervisor	29.4	69.4
Clerk/Other white collar worker	28.6	98.0
Manual Worker	2.0	100.0
Total (%)	100.0	
Total (N)	297	

As expected in a survey of institutions, the 25-39 and 40-54 age groups had the largest representation among respondents, accounting for 55.4 percent and 28.0 percent of respondents respectively. The 55 years and over age group had the lowest representation among respondents in this component of the survey. These findings were consistent across all PMS (Table 7.5).

**Table 7.5: Respondents by Age Group**

Which Category Below Includes Your Age?	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
15-24	15.4	9.5	12.5	11.3	9.9	10.5	11.1
25-39	53.8	64.3	62.5	59.2	54.9	45.6	55.4
40-54	30.8	26.2	18.8	22.5	31.0	33.3	28.0
55+	0.0	0.0	6.3	7.0	4.2	10.5	5.5
% Within Country	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Respondents were not balanced in terms of sex – 38.7 percent of all respondents were men and 61.3 percent were women.

**Table 7.6: Respondents by Sex**

Sex	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Female	76.9	64.3	56.3	64.8	59.2	57.9	61.3
Male	23.1	35.7	43.8	35.2	40.8	42.1	38.7
% Within Country	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Close to 64 percent of all respondents reported that they had high education (meaning they had college or university degrees). In all Member States, more than three quarters of all respondents to this survey had attained post secondary or tertiary level education (Table 7.7). Among the PMS, Antigua and Barbuda had the highest proportion of respondents with tertiary level education (100.0%).

**Table 7.7: Highest Level of Education of Respondent by Country**

Level of Education	Countries						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	%
Primary incomplete or complete	0.0	4.8	0.0%	0.0	0.0	1.8	1.1
Secondary incomplete or complete	0.0	11.9	12.5%	27.1	19.7	7.1	16.7
Post secondary diploma or associate degree/Trade school	0.0	23.8	18.8%	15.7	22.5	17.9	18.6
Tertiary (college, university, graduate school)	100.0	59.5	68.8%	57.1	57.7	73.2	63.6
% within Select the name of your country.	100.0	100.0	100.0%	100.0	100.0	100.0	100.0

In general, the socio-demographic profile of respondents to any survey will have some bearing on the type of responses that are generated in the survey. It is noteworthy that in contrast to the household survey, respondents to this component of the KAP survey were highly educated, and generally did not include persons in the 55 years and over category.

## CHAPTER 8

### PERCEPTION OF CLIMATE CHANGE

#### CLIMATE CHANGE IN RELATION TO OTHER ISSUES

Crime and violence was perceived as the most serious issue facing the Caribbean region at this time, according to respondents from institutions doing work related to climate change in the OECS. Some 18.7 percent of all respondents cited crime and violence as being among the three most important issues, while unemployment was cited by 15.1 percent of respondents. Global warming/climate change was cited among the three most important issues (14.5 percent) (Table 8.1). This results differed from the household survey where respondents cited unemployment as the most pressing issue, followed by crime and violence and then by poverty and hunger.

**Table 8.1: The Three Most Serious Problems Facing the Caribbean in 2012**

Issue	Responses	
	Count (N)	Percent (%)
<b>Crime and violence</b>	<b>134</b>	<b>18.7</b>
<b>Unemployment</b>	<b>108</b>	<b>15.1</b>
<b>Global warming/Climate change</b>	<b>104</b>	<b>14.5</b>
The global economic downturn	94	13.1
Health and disease	78	10.9
Corruption	68	9.5
Poverty and hunger	55	7.7
Child abuse	42	5.9
Youth delinquency	32	4.5
Total	715	100.0

The three most serious concerns are generally consistent across Member States;<sup>12</sup> with crime and violence, unemployment, and climate change ranked highest regardless of the country under consideration, except in Saint Kitts and Nevis and Saint Vincent and the Grenadines (Table 8.2). In the case of Saint Kitts and Nevis the global economic downtime was listed among the first three concerns along with crime and violence and global warming/climate change. Respondents in Saint Vincent and the Grenadines identified health and disease and the global economic downtime among their most serious concerns, along with crime and violence and global warming/climate change.

<sup>12</sup> The low response rate for Grenada and Antigua and Barbuda prevents the analysis on many variables at the country level.

**Table 8.2: The Three Most Important Issues Facing the Caribbean by Country**

Issue	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	(N)	(N)	(N)	(N)	(N)	(N)	
<b>Crime and violence</b>	<b>2</b>	<b>17</b>	<b>6</b>	<b>48</b>	<b>34</b>	<b>27</b>	<b>134</b>
<b>Unemployment</b>	<b>7</b>	<b>16</b>	<b>8</b>	<b>15</b>	<b>46</b>	<b>16</b>	<b>108</b>
<b>Global warming/Climate change</b>	<b>7</b>	<b>19</b>	<b>6</b>	<b>24</b>	<b>22</b>	<b>26</b>	<b>104</b>
Poverty and hunger	2	14	5	7	17	10	55
Corruption	2	10	4	19	19	14	68
The global economic downturn	5	13	4	30	21	21	94
Health and disease	4	13	3	19	17	22	78
Child abuse	4	7	3	12	10	6	42
Youth delinquency	4	5	4	9	4	6	32

N=Count

## AWARENESS OF CLIMATE CHANGE

Awareness of climate change was higher among institutional respondents compared to householders. There was almost universal acknowledgement that the earth's weather patterns are changing among respondents of the institutional survey - 96.2 percent of all respondents confirmed having heard that the earth's weather patterns are changing (Table 8.3).

**Table 8.3: Responses to the Question:  
Heard about Earth's Changing Weather Pattern?**

Response	Frequency	Valid Percent
Yes	276	96.2%
No	11	3.8%
Total	287	100.0%
No response	10	
Total	297	

Like the household respondents, institutional respondents most experienced climatic changes as changes in rainfall patterns and atmospheric temperature. However, a much lower proportion of household respondents noticed changes in storm frequency or intensity compared to their institutional counterparts. Some 80 percent of the institutional respondents said they had observed or experienced changes in rain patterns (79.8%) or day/night atmospheric temperatures (82.5%). Respondents were less likely to report having observed changes in storm frequency (31.3%) or intensity (37.4%) (Table 8.4).

**Table 8.4: Percent of Respondents who Observed Changes in Weather Pattern**

Observed Changes	Yes		No		Total	
	Count	%	Count	%	Count	%
Hotter days/nights	245	82.5	52	17.5	297	100.0
Changes in rainfall patterns	237	79.8	60	20.2	297	100.0
Stronger storms/hurricanes	111	37.4	186	62.6	297	100.0
More storms/hurricanes	93	31.3	204	68.7	297	100.0

When these data were analyzed by country, the pattern of responses was consistent. Respondents were more likely to report changes in rain patterns and temperature than any other weather pattern changes (Table 8.5). Other changes listed included decreased stream flow and volume, sea level rise, coastal erosion, coral bleaching, and increased sea temperatures. Additional research will be required to explain the differences observed.

**Table 8.5: Responses to Changes in Weather Pattern Observed by Country**

Observed Changes in Weather Pattern	Countries						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Hotter days/nights	30.0	39.4	34.3	41.7	36.9	27.5	35.7
Changes in rainfall patterns	30.0	36.5	42.9	32.1	37.4	31.9	34.5
Stronger storms/hurricanes	20.0	11.5	11.4	12.5	17.9	21.3	16.2
More storms/hurricanes	20.0	12.5	11.4	13.7	7.8	19.4	13.6
Total Number of Responses (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Number of Responses (Count)	40	104	35	168	179	160	686

When asked specifically about having heard the term “Climate change,” 98.6 percent of respondents said they had at least “heard the term” (Table 8.6).

**Table 8.6: Responses to Question on Having Heard the Term, “Climate Change”**

Response	Frequency	Percent	Valid Percent
Yes	285	96.0	98.6
No	4	1.3	1.4
Total	289	97.3	100.0
No response	8	2.7	
Total	297	100.0	

However, while awareness levels were high (99.3% of respondents knew the meaning of climate change), as many as 18 percent felt that they only “sort of” understood what was meant by it (Table 8.7).

**Table 8.7: Responses to the Meaning of the Term, “Climate Change”**

Response	Frequency	Percent	Valid Percent
Yes	227	76.4	81.1
Yes, sort of	51	17.2	18.2
No	2	0.7	0.7
Total	280	94.3	100.0
No response	17	5.7	
Total	297	100.0	

More than 65 percent of respondents felt that climate change was considered important to their organizations and only 8.0 percent thought it trivial. Importantly, 25.9 percent were unsure of the relevance of climate change to the work carried out by their organization (Table 8.8).

**Table 8.8: Responses to Climate Change as a Factor that Organizations Consider Important**

Climate Change as a Factor that the Respondent’s Organization Considers Important	Total	Percent	Valid Percent
Yes	174	58.6	66.2
No	21	7.1	8.0
Don't know	68	22.9	25.9
Total	263	88.6	100.0
No response	34	11.4	
Total	297	100.0	

Some 46.8 percent of respondents felt that their organizations’ work was directly related to climate change, while another 33.8 percent were unable to say if their organization was directly involved in climate change work.

**Table 8.9: Responses to Organizations’ Involvement in Work Directly Related to Climate Change**

Respondent’s organization involvement in work directly related to climate change	Total	Percent	Valid Percent
Yes	123	41.4	46.8
No	61	20.5	23.2
Don't know	89	30.0	33.8
Total	273	91.9	103.8
No response	24	8.1	
Total	297	100.0	

## ATTITUDES TOWARDS CLIMATE CHANGE

When asked to scale the extent to which they considered climate change to be a serious problem, most respondents defined climate change as being either a very serious problem (62.4%) or a fairly serious problem (28.9%).

**Table 8.10: Perception of Seriousness of Climate Change**

Details	Frequency	Valid Percent
Not a serious problem	25	8.7
A fairly serious problem	83	28.9
A very serious problem	179	62.4
Total	287	100.0

Most respondents disagreed with the statement “persons engaged in climate work are making a big deal about nothing”; 85.6 percent of respondents disagreed either strongly or somewhat with the statement.

**Table 8.11: Response to Statement that Persons Engaged in Climate Change Work are Making a Big Deal of Nothing**

Persons Engaged in Climate Change Work Are Making a Big Deal of Nothing	Frequency	Percent	Valid Percent
Strongly agree	7	2.4	2.6
Somewhat agree	7	2.4	2.6
Neither agree nor disagree	24	8.1	9.1
Somewhat disagree	61	20.5	23.0
Strongly disagree	166	55.9	62.6
Total	265	89.2	100.0
Not Stated	32	10.8	
Total	297	100.0	

Some 88 percent of all respondents disagreed with the statement “Climate change is not affecting us in this country”; however, 7.9 percent of respondents agreed with the statement (Table 8.12).

**Table 8.12: Response to Statement that Climate Change Not Affecting the Country**

Climate Change Is Not Affecting Us in this Country	Frequency	Percent	Valid Percent
Strongly agree	8	2.7	3.0
Somewhat agree	13	4.4	4.9
Neither agree nor disagree	11	3.7	4.1
Somewhat disagree	54	18.2	20.3
Strongly disagree	180	60.6	67.7
Total	266	89.6	100.0
No response	31	10.4	
Total	297	100.0	

The response rate for this statement implies that it was challenging, as 49.4 percent of all respondents disagreed that “Caribbean countries are not responsible for causing global climate change” (Table 8.13).

**Table 8.13: Response to Statement that Caribbean Countries Are Not Responsible for Causing Global Climate Change**

Caribbean Countries Are Not Responsible for Causing Global Climate Change	Frequency	Percent	Valid Percent
Strongly agree	26	8.8	9.8
Somewhat agree	62	20.9	23.4
Neither agree nor disagree	46	15.5	17.4
Somewhat disagree	61	20.5	23.0
Strongly disagree	70	23.6	26.4
Total	265	89.2	100.0
No response	32	10.8	
Total	297	100.0	

About 15.9 percent of respondents felt that we (in the Caribbean) were too small to do anything to stop climate change; but 76.5 percent of respondents disagreed with the statement (Table 8.14).

**Table 8.14: Response to Statement that the Country Was Too Small to Stop Climate Change**

We Are too Small to Do Anything to Stop Climate Change	Frequency	Percent	Valid Percent
Strongly agree	13	4.4	4.9
Somewhat agree	29	9.8	11.0
Neither agree nor disagree	20	6.7	7.6
Somewhat disagree	61	20.5	23.1
Strongly disagree	141	47.5	53.4
Total	264	88.9	100.0
No response	33	11.1	
Total	297	100.0	

Some 68.0 percent of all respondents disagreed with the statement that technology could fix any damage to the environment.

**Table 8.15: We Can Fix Any Damage to the Environment with Technology**

We Can Fix Any Damage to the Environment with Technology	Frequency	Percent	Valid Percent
Strongly agree	12	4.0	4.5
Somewhat agree	25	8.4	9.4
Neither agree nor disagree	48	16.2	18.1
Somewhat disagree	59	19.9	22.3
Strongly disagree	121	40.7	45.7
Total	265	89.2	100.0
No response	32	10.8	
Total	297	100.0	

## CHAPTER 9

### KNOWLEDGE OF CAUSES AND EFFECTS OF CLIMATE CHANGE

Overall, more than half of the respondents (60.3%) identified people’s use of electricity and burning of fuel as the main cause of the changing climate (Table 9.1). This response was consistent when analyzed by country. But it was interesting that even among this group at least 38 percent of respondents felt that these were either “natural changes” or “acts of God”.

**Table 9.1: Main Causes of the Changing Climate by Country**

What Do You Think Is the Main Cause of the Changing Climate?	Total	Percent	Valid Percent
People’s use of electricity and burning of fuels	149	50.2	60.3
These are just natural changes	66	22.2	26.7
The changes are acts of God	30	10.1	12.1
I don't believe the climate is changing	2	0.7	0.8
Total	247	83.2	100.0
No response	50	16.8	
Total	297	100.0	

Most respondents listed drought (94.0%), sea level rise (94.0%), and stronger hurricanes and storms (90.3%) as possible effects of climate change. Except for health epidemics (51.9%) and earthquakes (42.9%), respondents largely agreed that all of the options presented were possible effects of climate change (Table 9.2).

**Table 9.2: Possible Effects of Climate Change**

Effects	Total “Yes” Responses (Count)	As a Percentage of Respondents Saying “Yes” Valid Percent (%)
<b>Drought (harsh dry spells)</b>	<b>251</b>	<b>94.0</b>
<b>Sea level rise</b>	<b>251</b>	<b>94.0</b>
<b>Stronger hurricanes and storms</b>	<b>241</b>	<b>90.3</b>
Flooding	232	87.5
Loss of food crops/plants/trees	223	83.8
Loss of coral reefs	221	82.2
Loss of plant and animal species	217	81.0
Soil erosion/landslides	212	78.8
Loss of buildings close to the sea/coast	196	74.8
Health epidemics/more diseases	135	51.9
Earthquakes	115	42.9
Total Number of Responses	2,294	

Respondents rated water shortages/drought (21.8%), more severe storms/hurricanes (19.6%) and food shortages (19.1%) as their top three greatest concerns related to climate change (Table 9.3). This pattern was consistent across all Member States.

**Table 9.3: Greatest Concerns Related to Climate Change**

Effect of Greatest Concern	Country (Frequency)							Percentage of Total Responses (100% = 776)
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	OECS	
	(N)	(N)	(N)	(N)	(N)	(N)	(N)	%
<b>Water shortages/drought</b>	<b>6</b>	<b>29</b>	<b>7</b>	<b>40</b>	<b>47</b>	<b>40</b>	<b>169</b>	<b>21.8</b>
<b>More severe storms/ hurricanes</b>	<b>9</b>	<b>16</b>	<b>10</b>	<b>37</b>	<b>46</b>	<b>34</b>	<b>152</b>	<b>19.6</b>
<b>Food shortages</b>	<b>6</b>	<b>25</b>	<b>9</b>	<b>37</b>	<b>42</b>	<b>29</b>	<b>148</b>	<b>19.1</b>
Changes in weather patterns	7	20	8	30	31	26	122	15.7
Hotter days/nights	4	15	6	26	14	16	81	10.4
Species loss (plants and animals)	3	14	1	13	18	13	62	8.0
Loss of coral reefs	4	4	3	11	10	10	42	5.4

## CHAPTER 10

### PLANNING AND MANAGEMENT

Over half of all institutional respondents (54.0%) indicated having some knowledge of how climate change will affect their organizations (Table 10.1). Saint Lucia and Dominica were the only Member States, from the sample, to have had more workers claiming to be knowledgeable about the issue than not. Some of the responses included increased disaster preparedness and awareness events, increased insurance and increases in Government expenditure to protect the environment.

**Table 10.1: Knowledge about How Climate Change Will Affect Respondents' Organization**

Do You Know How Climate Change Will Affect Your Organization?	Total Count (N)	Percent	Valid Percent
Yes	143	48.1	54.0
No	122	41.1	46.0
Total	265	89.2	100.0
No response	32	10.8	
Total	297	100.0	

Of all workers, 39.1 percent said that their organizations started incorporating climate change impacts into planning for future activities (Table 10.2). Alarming, 33.2 percent of all workers did not know whether or not their organizations had begun implementing changes. Excluding workers who are not knowledgeable, only Saint Kitts and Nevis had more workers not knowing as opposed to knowing of organization plans.

**Table 10.2: Organization Started Incorporating Climate Change Impacts into Planning**

Has Your Organization Started Incorporating Climate Change Impacts into Planning for Future Management/Activities?	Total Count (N)	Percent	Valid Percent
Yes	106	35.7	39.1
No	75	25.3	27.7
Don't know	90	30.3	33.2
Total	271	91.2	100.0
No response	26	8.8	
Total	297	100.0	

Some 55 percent of all workers think that climate change will have negative financial consequences for their organizations and 34.8 percent were unsure (Table 10.3). It is important to recall that the majority of respondents belonged to agencies in the frontline of climate change fight, such as the Environment/Natural Resources Management/Physical Planning/ Disaster Management agencies, Departments of

Agriculture/Fisheries/Marine Resources and Meteorology, and also the Tourism sector.

**Table 10.3: Climate Change Has Negative Financial Consequences to Organizations**

Climate Change Will Have Negative Financial Consequences for My Organization	Total Count (N)	Percent	Valid Percent
Yes	139	46.8	54.9
No	26	8.8	10.3
Don't Know	88	29.6	34.8
Total	253	85.2	100.0
No response	44	14.8	
Total	297	100.0	

The three most popular answers (YES) of respondents were that their organizations maintained grounds (62.7%); reduced waste where possible (53.6%), and the use of environmental/ climate friendly products and services (37.9%) (Table 10.4).

**Table 10.4: Sustainable Initiatives Used by Organizations to Impact on Climate Change**

Actions	Total Responses "Yes"		Total Responses "No"		Total Responses "Don't Know"		Total Responses
	Count (N)	Percent	Count (N)	Percent	Count (N)	Percent	
Maintain the grounds/ property in a manner that does not cause soil erosion or loss of soil	163	62.7	52	100.0	45	17.3	260
Reduce waste, where possible	141	53.6	109	101.2	13	4.9	263
Use of environmental/ climate friendly products and services	99	37.9	94	100.4	68	26.1	261
Host environment days	92	35.1	151	100.8	19	7.3	262
Recycle/ conserve water	81	31.6	157	98.5	18	7.0	256
Use suppliers that care about the environment	76	29.3	87	99.6	96	37.1	259
Provide staff shuttle service	55	21.5	191	98.5	10	3.9	256
Encourage car pooling	45	17.6	182	98.5	29	11.3	256
Recycle plastic bottles	39	15.2	208	98.8	10	3.9	257

## ACTORS

A mere 4 percent of workers readily acknowledged that their country was prepared for the impacts of climate change, including Antigua and Barbuda where no-one thought (100% No response rate) that their country was prepared (Table 10.5). The majority of all workers indicated that their country was not prepared to handle the impacts of climate change (70.7%). Notably, 16.2 percent of respondents did not know if their country was prepared.

**Table 10.5: Country Is Prepared to Handle Impact of Climate Change**

Is the Country Prepared to Handle the Impacts of Climate Change?	Country						OECS	Percentage of Respondents
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines		
	(N)	(N)	(N)	(N)	(N)	(N)	(N)	
Yes	0	2	2	3	1	4	12	4.0
No	14	31	11	49	60	45	210	70.7
Don't know	0	9	3	17	11	8	48	16.2
Total	14	42	16	69	72	57	270	90.9
No Response	4	3	3	10	4	3	27	9.1
Total (N)	18	45	19	79	76	60	297	100.0

N=Count

In terms of awareness of organizations that were active in dealing with climate change issues in their countries, 59.9 percent responded 'yes' (Table 10.6).

**Table 10.6: Respondents Aware of Organizations that Are Active in Dealing with Climate Change**

Is the Country Prepared to Handle the Impacts of Climate Change?	Country						OECS	Percentage of Respondents
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines		
	(N)	(N)	(N)	(N)	(N)	(N)	(N)	
Yes	11	33	11	39	51	33	178	59.9
No	4	9	5	32	21	24	95	32.0
Total	14	42	16	71	72	57	273	91.9
No Response	4	3	3	8	4	3	24	8.1%
Total	18	45	19	79	76	60	297	100.0%

N=Count

What could be done to protect against climate change? The most popular responses included increasing public education and awareness (85.5%), enforcing environmental laws (84.5%), protection of coastal areas (83.5%), and encouragement to conserve and recycle water (81.0%) (Table 10.7). An appreciable percentage of household respondents also saw the need for increased public awareness, and more information on climate change (about 76%).

**Table 10.7: Recommendations on how to Protect against Climate Change**

Actions	Country						OECS	Percentage of Respondents
	Grenada and Grenada	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines		
	(N)	(N)	(N)	(N)	(N)	(N)		
<b>Increase public education and awareness</b>	11	39	15	67	69	53	254	85.5
<b>Enforce environmental laws</b>	13	39	14	66	67	52	251	84.5
<b>Protect coastal areas (including mangroves and coral reefs)</b>	13	36	14	67	66	52	248	83.5
Encourage water conservation and reuse water	11	34	12	60	71	51	239	80.5
Enforce/insist that buildings are constructed to withstand	8	36	10	62	62	46	224	75.4
Decrease deforestation/increase reforestation	8	36	14	45	66	49	218	73.4
Build structures to protect the coasts	8	31	10	46	43	34	172	57.9
Relocate/move communities further inland	3	23	10	22	34	25	117	39.4
Nothing can be done	2	1	2	5	0	0	0	0.0
Other		1	0	1	1	2	5	1.7
<b>Total</b>	<b>77</b>	<b>276</b>	<b>101</b>	<b>441</b>	<b>479</b>	<b>364</b>	<b>1,728</b>	

N=Count

## SECTION 3

# MEDIA PRACTICES AND THE WAY FORWARD

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## CHAPTER 11

### MEDIA PRACTICES

#### FINDINGS FROM THE HOUSEHOLD SURVEY

Respondents were asked to answer questions regarding their current media consumption patterns. This section reviews the responses in respect of times when residents of the six PMS watch local and cable television and the channels most watched; radio stations most frequently listened to for news and entertainment; newspapers most read and frequency with which these are read; and favourite TV and radio personalities.

The information gathered from this section of the questionnaire when used together with the findings from the household and institutional surveys will inform the design and implementation of a Public Awareness and Education Programme, the ultimate purpose for which this survey was intended.

#### Television Viewing Practices

##### The Most Frequently Watched Local TV Channel by Country

In Grenada, the most watched local television station is by far the Grenada Broadcasting Network (GBN); more than 70 percent of all respondents in Grenada (73.7%) rated GBN as their preferred local channel. Similarly, more than half of the respondents from Saint Lucia (55.4%) cited Daher Broadcasting Service (DBS) as their preferred channel. In Saint Vincent and the Grenadines (SVG), the preferred choice was SVG TV (64.4%).

The other countries had less clear-cut favourites. In Antigua and Barbuda, the most watched was Antigua and Barbuda Broadcasting Service (ABS) (43.95), in Saint Kitts and Nevis it was ZIZ (37.4%). In Dominica, Marpin took the lead (14.5%); GBN and DBS represented 14.7 and 11.8 percent shares of all respondents, respectively (Table 11.1).

**Table 11.1: Most Watched Local TV Channels**

Country	Channel Responses Ranked Number 1		
	Channel	Percentage of Respondents (Within the Country)	Percentage of Respondents (among All OECS)
Antigua and Barbuda	ABS	43.9	7.8
Dominica	Marpin	14.5	2.2
Grenada	GBN	73.7	12.3
Saint Kitts and Nevis	ZIZ	37.4	6.1
Saint Lucia	DBS	55.4	9.8
Saint Vincent and the Grenadines	SVG TV	64.4	10.5

### The Most Frequently Watched Cable Channel

The response rate on this question was low, indicating in part lower access to cable TV than to local TV on the part of residents. With the exception of Saint Kitts and Nevis, all other PMS suffered non-response rates of over 50 percent. Nonetheless, of those who did respond, information channels usually ranked among the top three. These tended to include Discovery, CNN and the BBC (Table 11.2).

**Table 11.2: Cable TV Channel Watched by Country**

Country	Rank*	
	Channel	Percentage of Respondents
Antigua and Barbuda	1 = 3ABN	25.5
	2 = A.B.S.	23.6
	3 = Discovery	9.1
Dominica	1 = Sport Max	11.8
	2 = ANE	11.3
	3 = BBC	6.2
Grenada	1 = CNN	4.9
	2 = BBC	4.1
	3 = Lifetime	3.6
Saint Kitts Nevis	1 = Lifetime	12.3
	2 = CaribVision	11.6
	3 = U.S.A	9.6
Saint Lucia	1 = Lifetime	12.8
	2 = ESPN	8.0
	3 = BBC	7.5
Saint Vincent and the Grenadines	1 = No Favourite	12.6
	2 = Lifetime	11.4
	3 = Sports Max & CNN	3.5

\*1= Most watched; 2 = Second most watched; 3 = Third most watched

### Most Frequently Watched TV Channel (Local or Cable)

Table 11.3 presents the top ranked Television Channels overall for the six PMS. In general, the leading channels in Member States were locally owned and all were State-owned except for DBS in Saint Lucia which is privately owned.

**Table 11.3: TV (both Local and Cable) Watched by Country**

Country	Rank*	
	Channel	Percentage of Respondents
Antigua and Barbuda	1 = ABS	43.9
	2 = ABN	13.0
	3 = Other	6.1
Dominica	1 = Marpin13	14.5
	2 = GIS	11.0
	3 = ANE	6.3
Grenada	1 = GBN	73.7
	2 = MTV	12.9
	3 = CC6	9.0
Saint Kitts Nevis	1 = ZIZ	37.4
	2 = Nevis News Cast	12.1
	3 = NTV	5.4
Saint Lucia	1 = DBS	55.4
	2 = HTS	33.3
	3 = Choice	17.5
Saint Vincent and the Grenadines	1 = SVG TV	64.4
	2 = No favourite	9.7
	3 = IKRV	3.7

\*1= Most Watched; 2 = Second Most Watched; 3 = Third Most Watched

Also listed in the Appendices are the most watched local and cable channels, by time of day and country. The following data are available:

- Cable channel watched, Morning (6 a.m. - 10 a.m.);
- Cable channel watched, Daytime (10 a.m. - 7 p.m.);
- Cable channel watched, Primetime (7 p.m. - 10 p.m.);
- Cable channel watched, Late night/overnight (10 p.m.+);
- Cable channel watched, Weekends Daytime; *and*
- Cable channel watched, Weekends Evenings

Such information would be useful in the design of a detailed media awareness and education campaign which will not be elaborated further here.

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13 Marpin is a Cable TV service provider which also provides local programming.

## Radio Consumption Practices

### When Are Respondents Listening to the Radio?

Half of all respondents (across all PMS) listen to the radio between the hours of 6 a.m. and 10 a.m., during their morning commute. A significant number of respondents also cited daytime (28.0%) and evening (20.9%) listening. On weekends, daytime listening (22.0) was more popular than evenings (15.1%). However, as much as twenty four percent of respondents asserted that they never listen to the radio (Table 11.4).

**Table 11.4: When Do You Listen to the Radio? All OECS**

Time Listen to Radio	Frequency	
	Count	Percent
Listens to the radio On the way to work/on the Bus in the morning/Drive time (6am to 10am)	1,468	50.2
Listens to the radio On the way home from work/on the bus/drive time (3pm to 7pm)	460	15.7
Listens to the radio Daytime (10am to 3pm)	819	28.0
Listens to the radio Evening (7pm to 10pm)	617	21.1
Listens to the radio Late night/overnight (10pm+)	194	6.6
Listens to the radio On weekends – Daytime	645	22.0
Listens to the radio On weekends – Evenings	441	15.1
Listens to the radio Never/I do not listen to the radio	691	23.6
Total	2,926	100.0

### Favourite Radio Station Overall

In terms of country-focused analysis to determine which radio station respondents were most likely to tune in to, in Saint Lucia, 37.3 percent of all listeners preferred Hot FM (Caribbean Hot FM), which outperformed the rest. In Grenada Wee FM (30%) was the leading station, and in Dominica Broadcasting Services (Dominica DBS) (33.4%) came out on top (Table 11.5). Leading by slightly narrower margins were Caribbean Super Station (CSS) in Antigua and Barbuda (19.4%) and Freedom FM in Saint Kitts and Nevis (21.8%).

In terms of listening to the radio as a source of news, the same radio stations largely came out on top, except in Saint Kitts and Nevis, where Big Wave de-seated Freedom TV, and Saint Vincent and the Grenadines where NBC 705, outperformed Hot 97, as leader in news listenership Table 11.6).

**Table 11.5: Favourite Radio Station Overall by Country**

Country	Rank*	
	Radio Station	Percentage of Respondents
Antigua and Barbuda	1 = CSS	19.4
	2 = ZDK	15.2
	3 = Observer	12.0
Dominica	1 = DBS	33.4
	2 = Q95	20.4
	3 = Kairi FM	11.3
Grenada	1 = Wee FM	30.0
	2 = Boss FM	26.7
	3 = GBN	5.3
Saint Kitts and Nevis	1 = Freedom FM	21.8
	2 = WINN FM	10.5
	3 = Big Wave	6.2
Saint Lucia	1 = Hot FM	37.3
	2 = Helen FM	9.9
	3 = RCI	7.6
Saint Vincent and the Grenadines	1 = Hot 97	19.9
	2 = NBC 705	17.4
	3 = Nice radio	7.5

\*1= Most Listened; 2 = Second Most Listened; 3 = Third Most Listened

**Table 11.6: Preferred Radio Station for News by Country**

Country	Rank*	
	Channel	Percentage of Respondents
Antigua and Barbuda	1 = CSS	28.9
	2 = Observer	26.2
	3 = Radio ZDK	20.1
Dominica	1 = DBS	61.3
	2 = Q95	17.1
	3 = Kairi FM	7.5
Grenada	1 = Wee FM	36.1
	2 = GBN	9.4
	3 = Boss FM	9.4
Saint Kitts Nevis	1 = Big Wave	23.2
	2 = WINN FM	19.4
	3 = VON	17.0
Saint Lucia	1 = Hot FM	31.3
	2 = Helen FM	20.6
	3 = RCI	11.2
Saint Vincent and the Grenadines	1 = NBC 705	52.8
	2 = Hot 97	12.7
	3 = Nice FM	8.0

\*1= Most Preferred; 2 = Second Most Preferred; 3 = Third Most Preferred

## Newspaper Consumption Patterns

Newspaper readership is quite low among PMS; 35 percent of respondents read weekend newspapers every week in the reference month, and more than one quarter (22.7%) had not read a weekend newspaper at any time in the last month (Table 11.7).

**Table 11.7: Frequency of Reading Weekend Newspaper**

How often do you read the weekend newspapers?	All OECS	
	Count	Percent
Every week	662	35.0
Every other week	138	7.3
Every so often	232	12.2
Once or twice in the past month	340	18.0
Never in the past month	430	22.7
Not stated	92	4.9
Total	1,894	100.0

In terms of the weekday newspapers, about three in ten respondents (29%) never read weekday newspapers in the reference month. Dominica had the highest proportion of respondents who read the newspapers every week (26.5%). Over 50 percent of the respondents in Saint Lucia (54.6%), and about one third of respondents in Antigua and Barbuda, Saint Kitts and Nevis, and Saint Vincent and the Grenadines said that they had not read any weekday newspapers in the reference month. In Grenada, this question largely went unanswered since they only have weekend newspapers (Table 11.8).

**Table 11.8: How Often Weekday Newspaper Read by Country**

How often read weekday newspaper	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	%
Every week	10.1	26.5	0.9	10.7	8.4	15.6	14.2
Every other week	2.9	8.2	0.0	3.6	5.0	4.4	4.7
Every so often	17.4	13.6	0.0	5.3	9.9	12.0	10.7
Four once or twice in the past month	8.7	15.3	0.0	9.5	11.1	11.7	10.8
Never in the past month	34.8	13.6	0.0	29.6	54.6	29.8	29.0
Not Stated	26.1	22.8	99.1	41.4	11.1	26.4	30.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

But for those recipients who did read newspapers, there were very distinct patterns in terms of preferred newspapers: the Observer was ranked number one in Antigua and Barbuda by 59.6 percent of respondents and in Saint Kitts and Nevis by 44.8 percent of respondents. In Dominica the top newspaper was the Chronicle (55.2%), in Grenada it was The New Today (54.7%) and in Saint Vincent and the Grenadines it was the News (57.0%). In Saint Lucia an overwhelming majority of respondents (79.7%) prefer The Voice (Table 11.9).

**Table 11.9: Top Three Most Read Newspapers by Country**

Country	Rank*	
	Newspapers	Percentage of Respondents
Antigua and Barbuda	1 = Observer	59.6
	2 = New pages	30.7
	3 = Other	2.8
Dominica	1 = The Chronicle	55.2
	2 = The Sun	13.1
	3 = Other	1.3
Grenada	1 = The New Today	54.7
	2 = The informer	32.2
	3 = Grenadian Voice	1.9
Saint Kitts Nevis	1 = Observer	44.8
	2 = Democrat	14.2
	3 = Labour Spokesman	13.4
Saint Lucia	1 = The Voice	79.7
	2 = The Star	16.1
	3 = Other	0.5
Saint Vincent and the Grenadines	1 = The News	57.0
	2 = Searchlight	31.9
	3 = Vincentian	10.6

\*1= Most Read; 2 = Second Most Read; 3 = Third Most Read

## Other Media Preferences

### Favourite TV Personality

Andre Paul and Timothy Poleon together ranked as the preferred television personalities in Saint Lucia, while Kenroy Baptiste is the favourite for a large majority of respondents in Grenada, with a distinct margin ahead of the next contender (Table 11.10).

**Table 11.10: Top Three Favourite Local TV Personality by Country**

Country	Rank*	
	TV Personality	Percentage of Respondents
Antigua and Barbuda	1 = Alex Nicolas	25.4
	2 = Brucille Marsh	18.5
	3 = Dave Lester Payne	12.8
Dominica	1 = Nazanne Gordon	22.2
	2 = Antherton Martew	21.4
	3 = Magarene Gordon	16.8
Grenada	1 = Kenroy Baptiste	41.0
	2 = Nikisha St. Louis	12.4
	3 = Lou Smith	6.8
Saint Kitts and Nevis	1 = Bronty Swanston Hendrickson	13.4
	2 = Jadee Caines	12.9
	3 = Vere Galloway	8.0
Saint Lucia	1 = Andre Paul	35.9
	2 = Timothy Poleon	35.9
	3 = Onel Sandford-Belle	13.0
Saint Vincent and the Grenadines	1 = Jimmy Prince	18.9
	2 = Jennifer Richardson	17.7
	3 = Paulette Williams	14.5

\*1= Most Liked; 2 = Second Most Liked; 3 = Third Most Liked

In terms of preferred radio personalities, Sam Flood in Saint Lucia, Patrick (Shaggy) Duncan in Grenada, and Cool Chris in Saint Vincent and the Grenadines lead the pack (Table 11.11).

**Table 11.11 Radio Personality by Country**

Country	Rank*	
	Radio Personality	Percentage of Respondents
Antigua and Barbuda	1 = Agnes Francis	14.0
	2 = Serpent	11.8
	3 = Sly J	10.8
Dominica	1 = Angelo Alleyne	16.0
	2 = Matt Pettier	12.7
	3 = Kamala Aaron	9.1
Grenada	1 = Patrick Shaggy Duncan	22.5
	2 = Lou Smith	8.9
	3 = Aruna Neptune	6.1
Saint Kitts and Nevis	1 = Leslie Morton	15.1
	2 = Ali Guilbert	13.2
	3 = Everette Herbert	4.5
Saint Lucia	1 = Sam Flood	23.8
	2 = Andre Paul	11.5
	3 = Lady Lee	4.9
Saint Vincent and the Grenadines	1 = 2 Cool Chris	18.2
	2 = Desmond Arindell	12.2
	3 = Chris Jones	6.1

\*1= Most Liked; 2 = Second Most Liked; 3 = Third Most Liked

## FINDINGS FROM THE INSTITUTIONAL SURVEY

### Information Sources

Institutional respondents received the most information about the environment from the Internet (26.6%) and mass media (24.8%). The third most popular source of information cited was print media (15.7%). Schools/Universities (5.6%), conversations with friends and family (5.3%) and community meetings (1.3%) were less important sources of information on climate change for this group (Table 11.12).

**Table 11.12: Sources of Information**

Sources of Information	Total (Frequency)	Percent
<b>Internet/The world wide web</b>	<b>210</b>	<b>26.6</b>
<b>Mass media: radio or television</b>	<b>196</b>	<b>24.8</b>
<b>Print media: newspaper or magazines</b>	<b>124</b>	<b>15.7</b>
Technical or scientific publications	85	10.8
Environmental groups	78	9.9
School/University	44	5.6
Conversations with friends and family	42	5.3
Community meetings	10	1.3
Total	789	100.0

When considering the sources of information in more depth, it was found that institutional respondents tended to obtain information mainly from the Internet (79.8%), television – foreign news (72.1%), local radio (51.9%), television – local news (47.5%) and workshops/conferences (45.8%) (Table 11.13). Respondents indicated that they were also informed about climate change from movies like *An Inconvenient Truth*, *2012* and *Day After Tomorrow*. Information on climate change was obtained from UNFCCC publications.

**Table 11.13: Information Sources in Detail**

Source of Information	Total	Percentage of Respondents
<b>The internet</b>	<b>237</b>	<b>79.8</b>
<b>TV news: foreign</b>	<b>214</b>	<b>72.1</b>
<b>Radio: local</b>	<b>154</b>	<b>51.9</b>
TV news: local	141	47.5
Workshops/conferences/seminars	136	45.8
TV shows: foreign	108	36.4
Newspapers: local	107	36.0
Pamphlets/flyers/poster	94	31.6
Magazines	86	29.0
Radio: foreign	84	28.3
Newspapers: foreign	60	20.2
A movie	51	17.2
TV shows: local	44	14.8
A book	29	9.8

Of all respondents, some 72.2 percent (192) said that they had actively used the Internet to search for information on climate change (Table 11.14). Grenada had a almost 100 percent response of (Yes) with only one individual not actively using the Internet for information on climate change.

**Table 11.14: Response to the Question on the Use of the Internet to Actively Search for Information on Climate Change**

Have You Ever Used the Internet to Actively Search for Information on Climate Change?	Total	Percent	Valid Percent
Yes	192	64.6	72.2
No	74	24.9	27.8
Total	266	89.6	100.0
Missing	31	10.4	
Total	297	100.0	

## CHAPTER 12

### WHAT IS NEEDED?

#### FINDINGS FROM THE HOUSEHOLD SURVEY

Feedback from survey respondents suggests at least three possible strategies in moving forward:

1. Caribbean countries should work together on climate change issues;
2. People need more information on climate change; and
3. Children should be taught about climate change in school

An overwhelming majority of respondents (95.4) felt that Caribbean countries should work together on climate change issues and of these, more than 75 percent felt strongly that it was the way to go (Table 12.1).

**Table 12.1: Household View - Countries in the Caribbean Should Work Together on Climate Change Issues**

Countries In the Caribbean Should Work Together to Deal with Climate Change Issues	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Strongly agree	78.0	82.5	81.1	76.8	71.3	71.9	76.9
Somewhat agree	13.6	8.4	11.5	11.9	18.8	18.5	13.8
Neither agree nor disagree	4.1	3.2	3.2	5.5	4.3	5.3	4.3
Somewhat disagree	1.2	1.4	.6	1.4	2.7	2.2	1.6
Strongly disagree	2.5	4.0	3.2	3.8	2.1	1.8	2.9
Not stated	.6	.6	.4	.6	.8	.2	.5
OECS	100.0	100.0	100.0	100.0	100.0	100.0	100.0

More than 90 percent of respondents supported the view that people need more information on climate change and of those, 83.4 percent felt strongly about this (Table 12.2).

**Table 12.2: Household Response to the Statement: People Need More Information on Climate Change**

People Need More Information on Climate Change	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Strongly agree	83.2	85.1	88.1	85.9	77.7	80.4	83.4
Somewhat agree	11.9	9.6	5.8	8.1	17.6	15.9	11.5
Neither agree nor disagree	2.3	2.6	3.2	3.2	1.8	2.0	2.5
Somewhat disagree	.8	.6	.6	.6	1.2	.8	.8
Strongly disagree	1.0	2.0	2.0	2.0	1.4	.6	1.5
Not stated	.8	.2	.2	.2	.4	.2	.3
OECS	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Similarly, there was overwhelming support for the suggestion that children should be taught about climate change in school, with more than 95 percent of respondents lending their support to the proposal and a very small minority (less than 2% of respondents) not in favour (Table 12.3).

**Table 12.3: Children Should Be Taught about Climate Change in School**

Children Should be Taught about Climate Change in School	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Strongly agree	85.6	88.6	88.7	85.1	80.5	85.1	85.6
Somewhat agree	9.2	6.6	6.6	8.9	16.0	11.0	9.8
Neither agree nor disagree	3.5	1.4	3.0	3.6	1.8	2.6	2.6
Somewhat disagree	.0	.4	.2	.6	.8	.2	.4
Strongly disagree	1.0	2.0	1.2	1.4	.8	.8	1.2
Not stated	.6	1.0	.2	.4	.2	.2	.4
OECS	100.0	100.0	100.0	100.0	100.0	100.0	100.0

About 1 in 10 residents in the OECS would not wish to receive any information on climate change; however, an overwhelming proportion of respondents (86.5%) confirmed their interest in personally receiving information on climate change (Table 12.4).

**Table 12.4: Would Like to Receive Information about Climate Change by Country**

Would You Like to Personally Receive Information about Climate Change?	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
Yes, definitely	75.4	66.7	70.0	69.1	65.2	62.9	68.2
Yes, maybe	12.1	18.5	19.9	19.2	18.4	21.6	18.3
No, hardly	2.1	2.6	1.8	1.4	3.3	2.2	2.2
No, not at all	9.7	10.4	7.0	9.1	11.7	11.8	10.0
Don't know	.8	1.8	1.2	1.2	1.4	1.4	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

In examining the influence of socio-demographic factors on respondents' interest in receiving information, it was found that:

- ✓ Women and men are equally eager to receive information on climate change (Table 12.5).
- ✓ In respect of the age groupings, older respondents (age 55+) and younger respondents (15-24) are more likely to decline information on climate change.
- ✓ Interest in receiving information on climate change rises with respondents' levels of education.

**Table 12.5: Responses to Receiving Information on Climate Change by Socio-demographic Category**

Would Like to Receive Information on Climate Change?	Percentage of Group	
	Yes	No
Socio-demographic Characteristic		
<b>All Groups</b>	86.5	13.5
<b>Sex</b>		
Male	85.8	14.2
Female	86.9	13.1
<b>Age</b>		
15-24	82.8	17.2
25-39	89.2	10.8
40-54	89.8	10.2
55+	81.3	18.7
<b>Level of Education</b>		
Lowest	83.9	16.1
Middle	87.8	12.2
Highest	87.7	12.3

Respondents who indicated an interest in receiving information on climate change were asked what was their preferred medium of receiving information. Most respondents (73.3%) preferred to receive information via the television (TV), radio (64.7%) or newspapers (46.7%), as can be seen in Table 12.6.

**Table 12.6: Preferred Medium of Receiving Information by Country**

Preferred Way of Receiving Information	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
<b>TV</b>	<b>75.4</b>	<b>68.5</b>	<b>68.2</b>	<b>72.3</b>	<b>74.8</b>	<b>81.8</b>	<b>73.3</b>
<b>Radio</b>	<b>66.9</b>	<b>62.7</b>	<b>55.3</b>	<b>68.5</b>	<b>68.0</b>	<b>67.2</b>	<b>64.7</b>
<b>Newspapers</b>	<b>56.1</b>	<b>44.8</b>	<b>28.0</b>	<b>51.9</b>	<b>40.2</b>	<b>61.4</b>	<b>46.7</b>
Notices in public places/Billboard advertisements	27.1	19.3	18.5	27.7	33.4	25.4	25.3
Workshops/Seminars/Exhibitions	39.8	31.3	14.9	47.7	28.7	30.3	32.1
Internet/Websites	26.7	16.9	12.9	31.7	26.4	22.6	22.9
Facebook and other social networking sites	33.7	22.3	16.3	36.4	26.2	27.5	27.0
Text messages (SMS/BBM/ISM/MMS, etc.)	46.6	22.7	18.9	53.5	30.1	43.2	35.6
Email	22.4	8.0	14.5	24.6	18.8	15.9	17.4
Notices in the mail	40.2	26.3	18.5	47.1	31.3	38.8	33.5
Other	2.5	3.4	1.6	3.0	2.7	2.5	2.6
Not stated	8.6	9.6	7.2	8.7	11.5	.5	7.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

About three out of ten respondents indicated an interest in receiving information through notices in public places (33.5%), workshops and seminars (33.5%) or via the Internet (32.1%). There was little difference between men and women (Table 12.7).

**Table 12.7: Preferred Way of Receiving Information by Sex**

Preferred Way of Receiving Information	Sex	
	Male	Female
	%	%
<b>TV</b>	<b>71.5</b>	<b>74.5</b>
<b>Radio</b>	<b>63.3</b>	<b>65.7</b>
<b>Newspapers</b>	<b>43.0</b>	<b>49.1</b>
Text messages (SMS/BBM/ISM/MMS, etc.)	34.3	36.4
Notices in the mail	31.8	34.6
Workshops/Seminars/Exhibitions	33.0	31.5
Facebook and other social networking sites	26.9	27.1
Notices in public places/Billboard advertisements	24.6	25.7
Internet/websites	23.2	22.6
Email	17.3	17.4
Other	2.5	2.7
Not stated	8.3	7.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

There were differences in respect of age and educational attainment of respondents regarding media preferred for receiving information (Tables 11.8 and 11.9). In respect of the age groupings, it was found that younger respondents have a greater preference to receive climate change information via text messaging, emails, Facebook and internet/websites, compared to respondents 55 years and older.

**Table 12.8: Preferred Way of Receiving Information by Age**

Preferred Way of Receiving Information	Age			
	15-24 %	25-39 %	40-54 %	55+ %
TV	69.1	73.9	76.6	72.4
Radio	54.0	64.5	71.4	68.0
Newspapers	41.1	49.7	51.6	41.1
Notices in public places/Billboard advertisements	30.2	33.4	23.4	8.7
Workshops/seminars/Exhibitions	42.1	38.6	29.0	14.2
Internet/websites	28.5	29.1	21.6	8.0
Facebook and other social networking sites	45.3	34.1	18.4	6.5
Text messages (SMS/BBM/ISM/MMS, etc.)	33.1	39.5	38.0	28.5
Email	14.7	18.6	18.1	17.2
Notices in the mail	28.0	37.7	38.9	25.3
Other	2.1	3.5	2.4	2.1
Not stated	10.4	6.1	5.8	10.8
Total	100.0	100.0	100.0	100.0

While there seemed to be little difference among respondents of different educational level regarding receiving information on climate change via the television, interest in receiving such information through newspapers and more modern media (text messaging, the internet, email, social networking sites, etc.) rises with respondents' levels of education. Notably, younger respondents have the greater preference for receiving information via the radio compared to their older counterparts.

**Table 12.9: Preferred Way of Receiving Information by Level of Education of Respondent**

Preferred Way of Receiving Information	Level of Education		
	Low %	Medium %	High %
<b>TV</b>	<b>74.8</b>	<b>72.2</b>	<b>73.3</b>
<b>Radio</b>	<b>68.3</b>	<b>63.3</b>	<b>62.2</b>
<b>Newspapers</b>	<b>40.6</b>	<b>46.5</b>	<b>56.3</b>
Internet/Websites	15.4	35.5	50.4
Notices in public places/Billboard advertisements	25.2	37.1	48.2
Workshops/Seminars/Exhibitions	23.7	34.0	47.3
Email	9.3	24.0	41.1
Facebook and other social networking sites	11.8	32.9	37.9
Text messages (SMS/BBM/ISM/MMS, etc.)	15.0	29.5	32.0
Notices in the mail	12.4	18.7	22.1
Other	3.2	2.3	2.5
Not stated	6.7	9.0	7.3
Total	100.0	100.0	100.0

When asked how the information on climate change should be packaged, respondents generally showed an interest in receiving this information as television and radio news reports (59.3% and 49.1%, respectively); television and radio infomercials (52.4% and 44.9% respectively); as newspaper articles (40.2%); and as pamphlets, brochures and posters (39.6%);. Three out of ten respondents prefer to receive information on climate change through documentaries (Table 12.10).

**Table 12.10: Preferred Way of Receiving Information Packaged by Country**

Preferred Way of Receiving Information	Country						OECS
	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	
	%	%	%	%	%	%	
<b>TV news reports</b>	<b>65.8</b>	<b>57.6</b>	<b>52.0</b>	<b>58.4</b>	<b>61.3</b>	<b>61.1</b>	<b>59.3</b>
<b>TV advertisements</b>	<b>55.7</b>	<b>45.6</b>	<b>39.7</b>	<b>57.9</b>	<b>59.4</b>	<b>57.2</b>	<b>52.4</b>
<b>Radio news reports</b>	<b>54.7</b>	<b>45.3</b>	<b>38.2</b>	<b>56.3</b>	<b>50.5</b>	<b>50.1</b>	<b>49.1</b>
Radio advertisements	46.6	35.8	32.9	56.6	50.2	48.5	44.9
Newspaper articles	50.0	33.7	20.3	49.7	34.9	54.9	40.2
Pamphlets/brochures/posters	44.1	28.1	32.4	54.9	35.1	44.1	39.6
Documentaries	48.9	18.8	20.7	36.8	27.4	28.0	30.0
Local Drama shows	24.9	11.4	10.4	19.1	19.1	20.8	17.5
Local Comedy shows	21.6	10.6	10.6	18.6	25.3	14.8	16.9
Like to receive information packaged other ways	3.9	2.9	6.6	2.1	3.6	5.3	4.0
Not stated	9.0	11.2	10.5	9.9	13.3	2.6	9.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Younger respondents were less interested in receiving information on climate change from radio news reports and advertisements compared to their older counterparts (Table 12.11). In addition older respondents (55+ year olds) indicated less interest in documentaries, while they, along with respondents in the 15-24 year old grouping, showed less preference for reading climate change newspaper articles.

**Table 12.11: Table: Preferred Way of Receiving Information Packaged by Age**

Preferred Way of Receiving Information Packaged	Age				
	15-24	25-39	40-54	55+	All Ages
	%	%	%	%	%
<b>TV news reports</b>	<b>51.2</b>	<b>60.4</b>	<b>64.0</b>	<b>60.2</b>	<b>59.3</b>
<b>TV advertisements</b>	<b>51.1</b>	<b>55.3</b>	<b>53.2</b>	<b>48.1</b>	<b>52.4</b>
<b>Radio news reports</b>	<b>36.0</b>	<b>47.6</b>	<b>57.3</b>	<b>55.0</b>	<b>49.1</b>
Radio advertisements	36.3	46.2	50.1	45.5	44.9
Newspaper articles	33.7	43.6	44.8	35.5	40.2
Pamphlets/brochures/posters	36.1	42.1	43.4	34.3	39.6
Documentaries	27.3	34.5	33.2	21.4	30.0
Local Drama shows	18.7	19.2	19.2	11.0	17.5
Local Comedy shows	19.2	18.7	17.3	10.9	16.9
Like to receive information packaged other ways	3.5	6.0	3.0	2.9	4.0
Not stated	12.0	7.3	7.9	12.8	9.6
Total	100.0	100.0	100.0	100.0	100.0

## FINDINGS FROM THE INSTITUTIONAL SURVEY

In respect of the institutional survey, 93.7 percent of respondents agreed with the suggestion that countries in the Caribbean should work together to deal with climate change issues (Table 12.12). Less than 5 percent disagreed. At least at the regional level (at the level of CARICOM and the OECS), there already exists considerable functional cooperation that is well known to Caribbean people. This might have predisposed respondents to recognizing the need for cooperation among the Caribbean countries to address the issue of climate change which is among the most critical challenges confronting their societies.

**Table 12.12: Countries in the Caribbean Should Work Together to Deal with Climate Change**

Countries in the Caribbean Should Work Together to Deal with Climate Change Issues	Frequency	Percent	Valid Percent
Strongly agree	222	74.7	83.5
Somewhat agree	27	9.1	10.2
Neither agree nor disagree	6	2.0	2.3
Somewhat disagree	5	1.7	1.9
Strongly disagree	6	2.0	2.3
Total	266	89.6	100.0
No response	31	10.4	
Total	297	100.0	

Household and institutional respondents overwhelmingly shared similar views with regard to the need for people to have more information on climate change. Over 90 percent of all respondents (95.2%) agree that people need more information on climate change (Table 12.13). Again, less than five percent disagreed. It can be inferred that there is a deep concern about the lack of information available to the population.

**Table 12.13: Institutional Response to the Statement, “People Need More Information on Climate Change”**

People Need More Information on Climate Change	Frequency	Percent	Valid Percent
Strongly agree	223	75.1	82.0
Somewhat agree	36	12.1	13.2
Neither agree nor disagree	3	1.0	1.1
Somewhat disagree	1	.3	0.4
Strongly disagree	9	3.0	3.3
Total	272	91.6	100.0
No response	25	8.4	
Total	297	100.0	

Like their household counterparts, over 95 percent of all institutional respondents agreed that children should be taught about climate change in school (Table 12.14.).

**Table 12.14: Response to Statement, Children Should Be Taught about Climate Change in School**

Children should be taught about climate change in school	Frequency	Percent	Valid Percent
Strongly agree	217	73.1	81.3
Somewhat agree	39	13.1	14.6
Neither agree nor disagree	3	1.0	1.1
Somewhat disagree	3	1.0	1.1
Strongly disagree	5	1.7	1.9
Total	267	89.9	100.0
No response	30	10.1	
Total	297	100.0	

## CHAPTER 14

# CONCLUSION AND RECOMMENDATIONS

The KAP on Climate Change was conducted to assess the knowledge of, attitudes to, and practices of the population of the OECS, in relation to **climate change**. As part of the project, *Reducing the Risks to Human and Natural Assets Resulting from Climate Change (RRACC)*, the results of the survey will inform the development of a regional awareness strategy and action plan for improving public awareness and education on the predicted impacts of climate change and on the importance of implementing measures for adaptation and resilience in the OECS.

The survey dealt with a number of critical factors of relevance to the OECS sub-region, with regard to climate change, including the people's perception of the seriousness of the problem, their level of awareness and knowledge of the causes and consequences of climate change, and their response to it, both at the household and institutional levels. Additionally the survey looked at people's media preferences.

In the global arena, climate change is considered to be the one of the world's greatest threats today because of its potential to affect every aspect of life. For SIDS, which have a number of environmental and socioeconomic characteristics which make them vulnerable and present particular challenges in arriving at sustainable development, the threat of climate change has the possibility of exacerbating existing socioeconomic and environmental problems and creating new ones. The survey results suggest the need for the people of the OECS to have a greater understanding of climate change and its ramifications for Caribbean societies and more specifically for their daily lives.

The population of the OECS listed unemployment, crime and violence and poverty as the three areas of greatest concern to them; climate change features much lower as a priority issue. In fact one in five persons shared the view that climate change was not affecting their country. On the other hand, personnel involved in key organizations in these countries, while in accord with the opinion that social problems like unemployment, poverty and crime and violence are important, agreed on the gravity of climate change for their societies.

Despite this difference in opinion on the importance of climate change to the Caribbean, there were some key areas where the population and institutional personnel agreed. They shared the view that:

- Climate change was a fairly serious to very serious issue.

- Caribbean countries were responsible for causing climate change and they can be part of the solution to the problem.
- The use of electricity and the burning of fuels are the main causes of climate change (though an appreciable percentage of respondents believed such differences were just natural changes or Acts of God).
- Climate change is affecting us in the Caribbean region; the main changes respondents had observed thus far were changes in rainfall and atmospheric temperature.
- The five main impacts of climate change were the increased incidence of drought; sea level rise; stronger hurricanes and tropical storms; loss of food crops/plants/trees; and increased flooding.
- Caribbean countries should work together to address climate change issues.
- Children should be taught about climate change in school.

Both the general population and institutional personnel saw the need for more information about climate change. This was evident since more than one quarter of the household respondents (25.0%) indicated that they were not at all informed about the causes, impacts and ways of addressing climate change; when they were well informed, an overwhelming percentage of them (70%) felt it was a very serious issue. Moreover, less than five percent of institutional respondents felt that their countries were prepared for the impacts of climate change.

Recognizing the need for climate change information and the regional approach advocated, there is support for the development of public awareness and education programmes regarding regional climate change. Any such programme for the OECS sub-region should take the following into account:

1. The reality is that social issues preoccupy the minds of the population – unemployment, crime and violence and poverty. Climate change is relatively low on their scale of critical issues generally. It would be important to show the link between current social and environmental issues and climate change.
2. There should be a component of the public education programme which targets persons working in sectors that would be hard hit by climate change. At present, there seemed to be the perception that climate change is an environmental issue. However, it is critical for the population to understand the far reaching potential of climate change to impact Caribbean societies.
3. Age, level of education and socio-economic status are intervening variables in the level of concern about climate change. While the whole population should be targeted, special efforts should be used to pitch the messages of climate

change to women, persons with low educational levels and the elderly in the public education programme.

4. Information on the use of the electronic media in reaching the population provides useful leads in most of the countries. Popular local television channels and radio stations, particularly during the morning commute, as well as the involvement of popular radio and TV personalities are a conduit to be explored in bringing information to the population.
5. In improving awareness of issues relating to the environment, it will be necessary to develop a strategy for lower socio-economic groups in the OECS. The radio may be the most efficacious medium in that regard, but the message has to be configured for a clientele largely engaged in commuting to and from work.
6. Internet use is increasing, and through information centres can be accessible to the general public. It should be remembered however that 1 in 5 persons considers that the climate change information found online is too technical and therefore the education materials (both online and offline materials) should be simple and relate to the everyday lives of individual learners.
7. Cellular phones have penetrated the OECS market and are now in widespread use. Smart phones are gaining in popularity. It may be possible among OECS countries for cellular phones to be used in getting targeted messages to the population. Mobile app technologies can also be used to tailor specific messages to the younger population. The Governments can make the availability of free messaging about climate change and other important environmental concerns, a condition for the granting of telecommunications licences.
8. A similar public interest principle can be made to apply to radio stations, and the providers of local television and cable services.
9. Morning radio shows can be used in the first instance as a conduit to inform the population on the commute, without compromising the need to be engaging.
10. Almost 25 percent of the population never listens to the radio, and a significant share does not read newspapers. These populations will have to be closely studied in order for development of a media campaign that will also reach them.

11. Given that television is the second most popular mass medium, it will be important to involve favourite television personalities and channels in bringing the message of climate change across. The survey results do provide some insight into viewer's preferences that can be incorporated into the campaign.
  
12. Participatory methodologies have proven to be very effective in bringing messages across to targeted segments of the Caribbean population. It is vital to explore and research the use of such methodologies in the OECS PMS.

