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UNDP-JCCCP IN-COUNTRY SPECIFIC CAMPAIGN FOR GRENADA

RESULTS OF CLIMATE CHANGE AWARENESS SURVEY

KNOWLEDGE, ATTITUDES AND PRACTICES (KAP) SURVEY REPORT

FINAL

Tecla Fontenard
COMMUNICATIONS CONSUTLANT | CASTRIES, SAINT LUCIA

Development of a country-specific communication campaign for Grenada

Submitted to:

Mr. Stephen O'Malley
UNDP Barbados and the OECS Subregional Office
United Nations Development Programme
UN House
Marine Gardens
Christ Church
BARBADOS

Prepared and submitted by:

Tecla Fontenard
Communications Specialist
Marigot
Box 829, GPO
LC 04101, Castries
Saint Lucia, W.I.
Email: teclaf@hotmail.com
Tel: 758-484-5155

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Every effort has been made to ensure that the information contained in this report is accurate, complete, and obtained from reliable sources, but I am unable to give absolute guarantee of the completeness and accuracy of information provided by the interviewees, interviewers and data analysts who were involved in data collection and analysis of the study.

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➢ LIST OF ACRONYMS

GBN	Grenada Broadcasting Network
GEF	Global Environment Facility
GIS	Government Information Service
JCCCP	Japan-Caribbean Climate Change Partnership
KAP	Knowledge, Attitudes, Practices
MTV	Maitland Television
NADMA	National Agency for Disaster Management
NAMA	Nationally Appropriate Mitigation Actions
NAP	National Adaptation Plan
PSA	Public Service Announcement
SIDS	Small Island Developing States
TOR	Terms of Reference
UNDP	United Nations Development Programme

1. ACKNOWLEDGMENTS

Several persons contributed to the compilation and realisation of this report and are hereby acknowledged.

Special thanks to the enumerators who did the field work across Grenada, and to all respondents who agreed to participate despite the length of time the conduct of the survey took.

To the Department of Statistics who assisted with guidance and advice, and to Nickson Barry who undertook the preliminary local mobilisation and critical legwork that led to the successful launch of the survey, thank you.

Heartfelt gratitude to Jasmin Gabriel and Kristal Celestin who played an integral role assisting with data entry, and tremendous appreciation to Kwame Francis for multiple roles in data collection, data entry and validation, analysis and generating graphs; and for all her other valuable inputs that contributed to the presentation of the findings.

2. EXECUTIVE SUMMARY

This Report provides an overview of the key results from a Knowledge, Attitudes and Practices (KAP) Survey on Climate Change, which was conducted in Grenada between last July and early August 2016. These results are intended to inform the development of a country-specific communication campaign on Climate Change that is to be executed under the United Nations Development Programme Japan-Caribbean Climate Change Partnership (UNDP-J-CCCP) Project.

The survey targeted households across the island of Grenada, in an effort to acquire data from residents, who are viewed as key stakeholders and main beneficiaries of Climate Change interventions. The survey focussed specifically on the following areas:

- General Environmental Awareness
- Awareness of Climate Change
- Knowledge of and Attitudes towards Climate Change
- Behaviours and Attitudes towards Adaptation and Mitigation
- Media Preferences

In addition, the survey also collected information from respondents on their media consumption patterns, their media preference, and their level of interest in receiving information on Climate Change, as well as.

The data collection tool was a structured questionnaire, which was administered via Interviews that were led by trained survey interviewers. Participants were 15 years and older and only one interview was conducted in each household. The distribution of the sample mirrored that of the national population with respect to administrative divisions (parishes), sex and age. Respondents also represented diverse socio-economic backgrounds.

- **General Environmental Awareness:**
    a) When asked to consider an environmental event or issue which they had seen/heard/read which had an impact them, most persons viewed Hurricanes, Tropical Storms, natural disasters as the most impactful environmental experiences they had, with 35% citing these types of natural events in response to the question;
    b) Most Grenadians believe that environment and natural resources are very important to national development with 88.1% of respondents stating that they believed it was ''very important";
    c) When asked whether their communities were endangered by natural disasters, Grenadians listed storms/hurricanes (89.6%) at the top of the list, followed by droughts and water shortages (69.3%). They also saw landslides and earthquakes among those causing high risk (each received approximately 60% of responses);
    d) Most respondents listed water as among the most important resource to national development with 96.3% listing it at as "very important", followed by "soil and land" (87%).

- **Awareness of Climate change:**
    a) Climate change and global warming, were not listed among the "most serious problem" in the Caribbean or Grenada. A mere 17.7% of respondents named the phenomenon amongst the most serious problems.
    b) The overwhelming majority of persons (86%) had heard and suggested a definition for "climate change", although 7% said they did not know the phrase and another 5% was unsure.
    c) When asked to define the term Climate Change 56.8% related it to changing weather patterns. Approximately one in ten respondents (11.8%) also gave responses pertaining to ''changes in the climate'' while 6.6% of respondents gave definitions related to global warming and changes in the atmosphere.
    d) Also notable - as many as 12.9% said that they were either unsure or did not know what the term climate change meant.
    e) Almost all respondents could say "yes", they had heard of the related changes in the Earth's weather, and they also claimed personal experience regarding such weather changes. The main indicators for them

appeared to be the *heat*, with 96.9% saying they had experienced hotter days and/or nights, and with an almost perfect match was unpredictable rain patterns (96.7%).

- **Knowledge of and Attitude towards climate change:**
  a) In general, most respondents regarded climate change as a serious issue, despite not viewing it as the "most serious issue" in the Caribbean.
  b) A large proportion (62.2%) of respondents felt that people generally needed more information about climate change.
  c) Respondents also indicated fairly strong sentiments (69.8%) that children should be taught about climate change in school;
  d) Approximately 70% of the respondents agreed that Caribbean countries are not responsible for causing global climate change, yet 51.6% also agreed that Caribbean countries should work together to deal with climate change issues.
  e) Just over half of respondents were clear that climate change was caused by the burning of electricity and fuels, with 58.9% respondents indicating this as the main cause. Yet 25%.8 claimed it was due to natural causes and some 12.4% stated that it was as a result of Acts of God.
  f) When asked how they felt about climate change", relative uncertainties were shown, with more than half (53.0%) saying that they needed more information.
  g) Few respondents felt that they were ""very well informed" of issues related to climate change with less than a quarter indicating not knowing enough regarding issues such as the cause and possible effects of climate change, or what could be done to reduce climate change and protect themselves from it.
  h) Stronger hurricanes and storms, drought, and rising sea levels were most frequently identified by respondents as possible effects of climate change, with more than 85% of respondents agreeing that each of these were possible effects.

- **Behaviour and attitudes towards adaptation and mitigation:**

  a) When people were asked: "*Do you do anything that contributes to climate change?"*, only 30.7% said "yes"; unfortunately, a high 38.4% said they "didn't know/(were) not sure";

  a) The evidence that people had started to take personal responsibility for actions related to climate change, was quite weak, with just about 40% - only 39.8% said "yes" they had taken an action to protect themselves from a hurricane or storm;

  b) The greatest actions respondents had taken to protect themselves against a hurricane or storm was reportedly purchasing torch lights, cleaning drains, and trimming trees and branches. Installing hurricane shutters was the least action indicated by respondents, with only 8.3 % reportedly undertaking this action in preparation for hurricanes;

  c) Respondents indicated that in relation to conservation of energy and of water at home, they spoke "often" about both - 60.5% respondents said they spoke "often" about saving energy and 70.5% said they spoke often about "saving water;

  d) 94.5% respondents noted that disaster preparedness was the most useful way to adapt to climate change, followed by rain water collection (88%);

  e) Almost one-half of respondents (45.2%) said they were aware of organizations active in dealing with climate change in Grenada. The main organisations mentioned by those saying "yes", was: NADMA, mentioned by 86.1% of them. Also occasionally mentioned were, Red Cross, SPECTO, NASAWA, GIZ, and UNDP;
  f) Few persons said they knew of the Government taking actions to reduce climate change effects - only 24.5% said yes;
  g) Most Respondents recommended that government should **"Increase information to make the public more aware"** of climate change as the foremost action to help citizens cope with climate related issue**s.**

- **Information Sources and Media preferences**

  a) Most respondents showed high interest in receiving more information on climate change with 57.8% of respondents saying "yes, definitely" and another 19.6% saying "yes, maybe". Importantly, one-fifth of respondents (18.8%) also said they had no interest at all.
  b) Scientists/environmental groups were identified as the most trusted source of information on the subject of climate change (73.1%), while government officials/agencies were the least trusted (45.3%);
  c) Most respondents indicated a preference for information on TV (84.2%), followed by radio (77.7%), followed by newspaper (63.3%) – a clear indication that traditional mass media is still a primary choice above all other forms of media choices in Grenada.
  d) Local television stations were more popular than foreign television stations.
  e) Television and radio news reports and advertisements were the preferred formats for presentation of information on climate change.
  f) Most people listened to radio on mornings between 6:00 a.m. to 10:00 a.m., with a substantial proportion (71%) also listening throughout the day from 10:00 a.m. to 7:00 P.M.
  g) Most persons watched TV on evenings from 7:00 p.m. - 10:00 p.m with heightened viewing during local news. In addition, a large percentage – over 60% also watched local television programming on mornings (from 6:00 a.m – 10:00 a.m.)

3. INTRODUCTION

a) WHY IS THE CARIBBEAN SO VULNERABLE TO CLIMATE CHANGE?

Climate change is predicted to inflict havoc on small islands the world over. In the Caribbean, from as far back as the 1990s, several effects have been seen, felt and experienced - manifested in more and intense hurricanes; loss of beaches because of higher seas, and strong wave action; erratic rainfall patterns, resulting in loss of crops, contamination of fresh water tables, soil erosion, land slippage, damaged watersheds and the list goes on.

Current Caribbean populations speak everyday about a spell of varying weather patterns, which is stirring up inexplicable frustrations. Such persons include farmers with smaller yields; fishermen with diminished stocks; engineers with salt intrusion challenges, and low water levels in catchments and reservoirs; foresters witnessing less tree cover and reduced biodiversity; meteorologists with higher prediction errors; conservationists with nothing to conserve and countless more.

The situation is compounded by a lack of awareness, and a dearth of evidenced based data which is made worse by limited research capabilities and low budgets that cannot support the formulation of much needed strategic interventions. These are among key reasons for the absence of more critical climate change adaptation investments in the Caribbean.

Given predicted impacts, the Caribbean region has no choice, but to continue to improve systems and put in place relevant structures to reduce its vulnerability to climate change. To achieve this, it depends heavily on donor partners and Developed countries for climate funding in order to address the challenges brought on by this phenomenon.

b) BACKGROUND TO STUDY

Although Caribbean countries emit relatively small amounts of greenhouse gases - known as the leading cause of the rapid change in climate – they are expected to unduly suffer from its impacts. Many impacts have manifested and endless more predicted, including impacts associated to land, water resources and biodiversity leading to inherent impacts on key industries such as tourism and agriculture.

The Government of Japan has been one of many leading donors in the fight against climate change. Japan has delivered development assistance totalling $17.6 billion to vulnerable countries from October 2009 to December 2012 for mitigation and adaptation. The Government of Japan intends to continue its assistance in this area to create enabling environments with a view to formulate a new framework applicable to all Parties. In particular, the Government of Japan is assisting Small Islands Developing States (SIDS), to establish a new regional assistance programme for CARICOM countries in the area of

climate change under the framework of the Partnership for Peace, Development and Prosperity between Japan and the Member States of the Caribbean Community (CARICOM)[1].

The Japan-Caribbean Climate Change Partnership (JCCCP) aims to support countries in advancing the process of low-emission risk-resilient development by improving energy security and integrating medium to long-term planning for adaptation to climate change. In pursuit of this mandate, the initiative intends to support policy formulations, adaptation plans and technological investments in the areas of low-emission and climate risk management, including demonstration projects in eight target countries, including Grenada. The programme will strengthen institutional and technical capacities in selected countries for iterative development of comprehensive NAMAs and NAPs that are country-driven, and based on existing national/sub-national development priorities, strategies and processes.

An important supportive component of the JCCCP is that of communication and awareness, especially given that many challenges to adaptation reside in the stubbornness of local populations. "Developing climate resilience requires all to change inappropriate behaviours and become more climate-conscious. Yet, people will only make climate-friendly decisions if they have convenient, low-cost, reliable and safe alternatives and if they are aware of these options. Other challenges [include the fact that]… the benefits of climate-conscious behaviours are not necessarily felt by those who take measures, but instead benefit others in the future. Therefore people do not see what is immediately "in it for them" when they change to become more climate wise in the short term. [i]

In developing the project, UNDP and its donor country – Japan - recognise that there is increasing demand and need for information, knowledge and participation if they are to successfully build climate resilience in Grenada. This recognition forms the cornerstone of the component on awareness, and gives impetus to the preparation for and implementation of communication campaigns in participating countries.

c) WHY A KAP SURVEY?

KAP Surveys have become a best practice in communication procedures, as they provide critical baseline material that help inform the preparation of communication strategies and shape activities in awareness campaigns.

The extent to which people's current environmental and other behavioural practices exacerbate impacts, is vital to the long-term viability of climate change adaptation in the Caribbean region. In this regard, seeking their levels of knowledge, has mutual benefits. It will help the JCCCP project team use evidenced based data to address gaps in awareness levels, while also arming the public with information and tools to cope with possible implications of climate change on their livelihoods, their resources and on their country.

The UNDP-JCCCP KAP survey on climate change awareness will form the bedrock of the country-specific communication campaign to be produced for Grenada.

d) OBJECTIVES OF THE KAP SURVEY

The objective was to conduct a KAP Survey on climate change awareness in Grenada under the J-CCCP Project, results of which are to inform the development of a country-specific communication campaign.

This Report provides an overview of the key results from a Knowledge, Attitudes and Practices (KAP) Survey on Climate Change, which was conducted in Grenada from late July to early August 2016.

The report responds to a portion of a larger assignment, which seeks to: "*provide technical assistance for the conduct a KAP Survey on climate change awareness in Grenada under the J-CCCP Project, results of which are to inform the development of a country-specific communication campaign*". More specifically, the report presents and analyzes survey findings.

1http://www.mofa.go.jp/region/latin/caricom/mc_1009/psp.html

4. METHODOLOGY

a) Survey administration

The interviews were conducted by trained enumerators, through face-face administration using a convenience sampling frame. A total of 9 enumerators assisted with data collection spread out in the various Parishes. The period of data collection spanned approximately 3 weeks

Enumerators used a structured questionnaire which included both open and closed ended questions - the closed questionnaires represented approximately 10% of the total questions in the instrument. Respondents fell into four age categories with the youngest being 15 years old.

In addition, target respondents were also selected by sex, education, occupation and socio-economic background in proportion to their representation in the country's population. The sample population was based on the 2011 population census, and representative samples were therefore drawn from all age groups.

10% of the questionnaires completed were verified through call backs to respondents, who were picked randomly if their numbers were indicated on the questionnaire and based on their availability at the time of the call.

b) Sample distribution

The survey was targeted as households across the island of Grenada and covered all of 7 Parishes in Grenada as well as representative samples in Carriacou and Petite Martinique.

The targeted respondents were nationals or residents of Grenada. Quotas were used to guide the selection of respondents in keeping with the areas outlined.[2] A profile of the respondents is presented in Section 5 of this report.

c) Data Analysis and Reporting

The data obtained from the survey interviews was entered into Microsoft Excel, and then exported to the Statistical Package for the Social Sciences (SPSS) for analysis. Open-ended responses were coded to arrive at clusters to tabulate percentage responses. The data was analysed primarily through frequency tables and cross-tabulations to filter the required information; key demographic variables included for some analyses were: sex, age, and education.

5. PROFILE OF RESPONDENTS

A total of 519 interviews were conducted in Grenada, identified, intercepted and interviewed island wide.

Further characteristics of the survey participants are below: The sample generally mirrored the percentage distribution of the population by parish as illustrated in Figure 1.

[2] Distribution by parish and gender based on 2011 census results. Distribution by age based on 2001 census results.

Figure 1: Map showing percentage by Parish

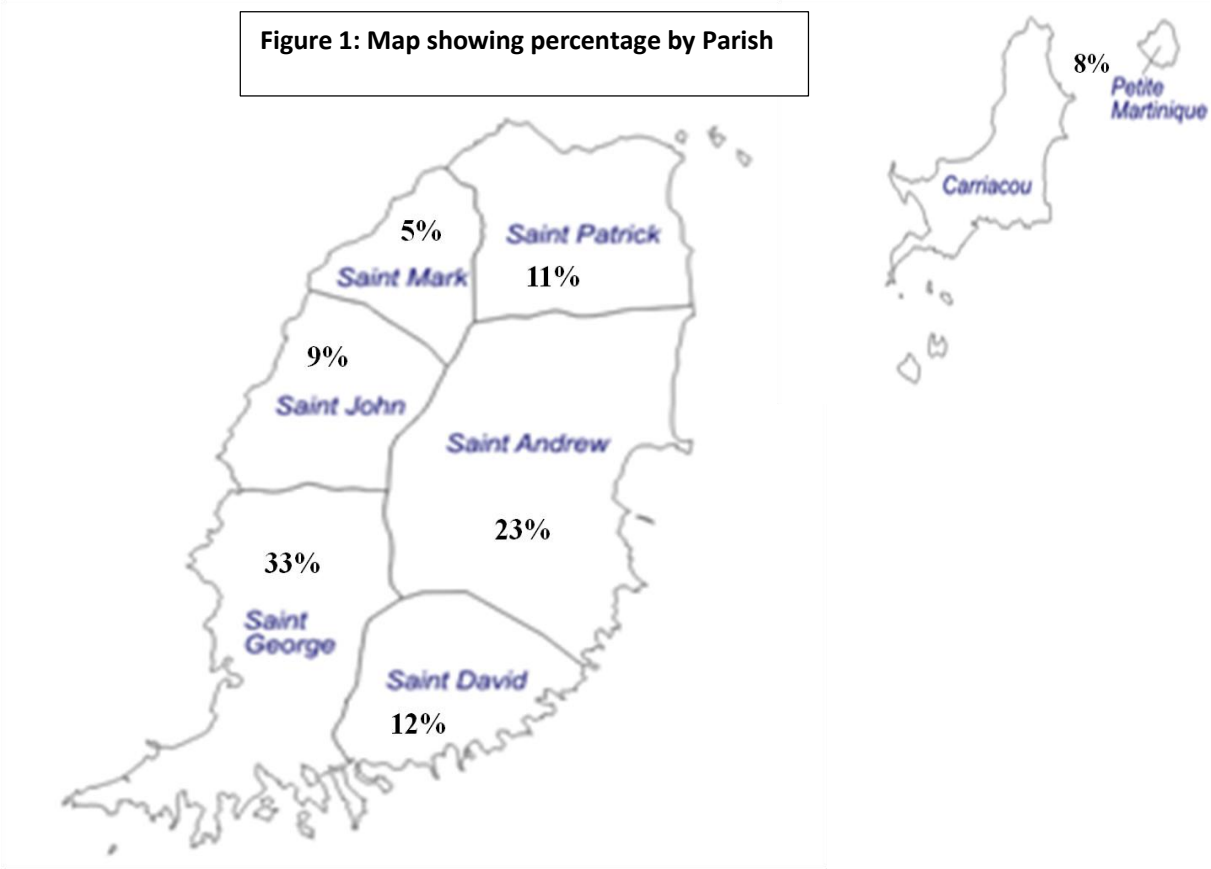
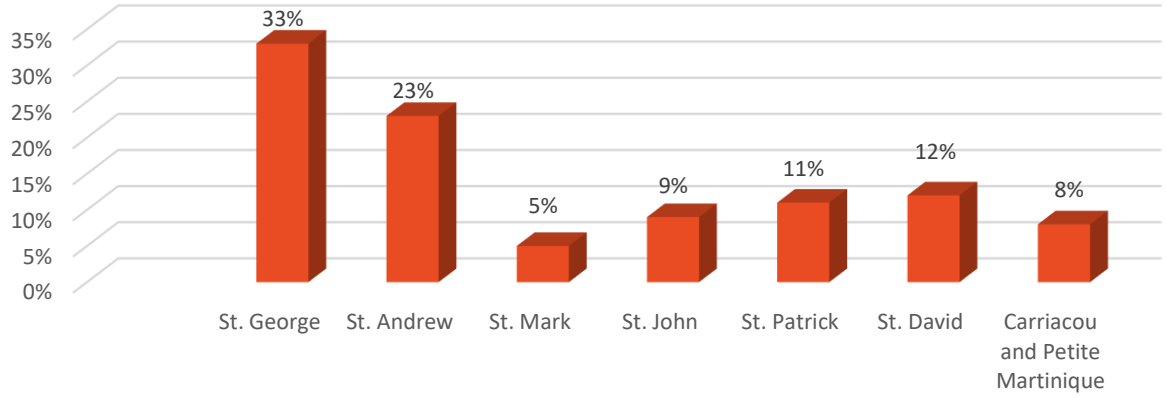


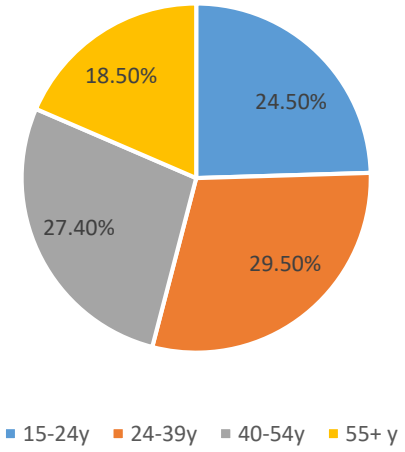
Figure 2: Respondents by Parish



a) Age of respondents

Respondents were 15 years and older. One-quarter of them (24.5%) were between the ages of 15 and 24 years , 29.5% aged 24-29 years, 27.4% was 40 to 54 years' old, and a smaller percentage (18.5%) aged 55 years or more (See Figure 3).

Figure 3. Age of sample (yrs)



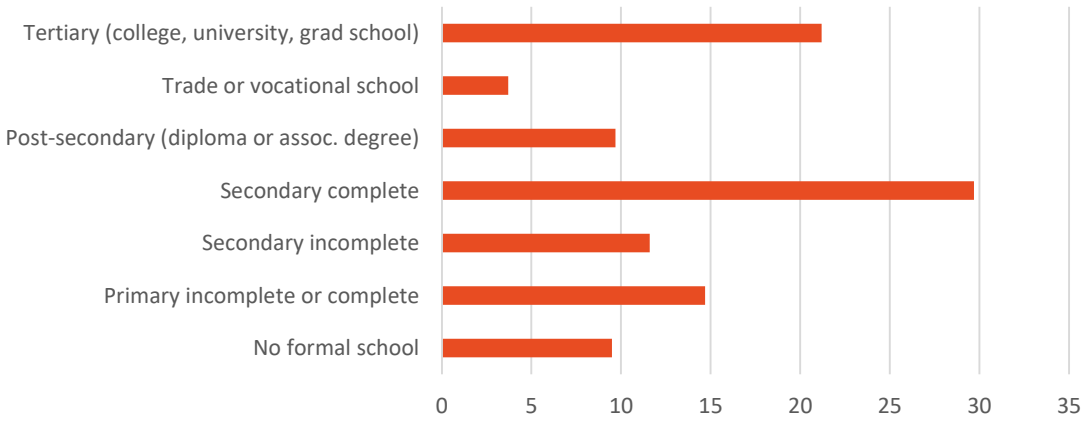
b) Sex of respondents

Just under half (47.6%) was male; females therefore accounted for 52.4%.

c) Level of education

In regard to education (Figure 4), only a minority (25.8%) had not completed secondary level schooling; however, further analysis indicated that almost one-third (31.7%) of those who had not completed secondary schooling were in the 15-24 year age range – which meant they might still be in school. At the same time, there was a fairly large proportion of those saying "no formal education", which were also in that same age range; it is unclear why this might be so unless there was relatively high tendency for e.g. home schooling. Given the study topics, this could be important, as it spoke about relative access (incl. literacies) to persons with respondents' profiles. Importantly, the large majority (61.3%) said they read very well. See Figure 4

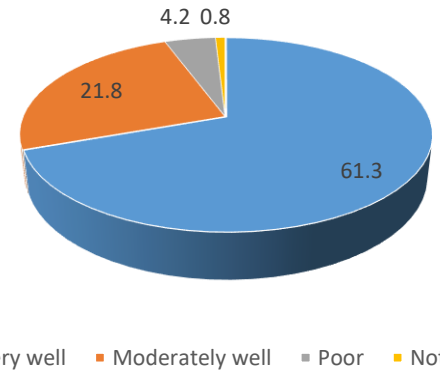
Figure 4. Education levels (% response)



d) Reading ability

More than 60% of the respondents indicated that they read "very well" (61.3%), while only a marginal percentage – a mere 0.8% declared that were did not read at all. Figure 5 illustrates.

Figure 5. How well do you read? (% response)

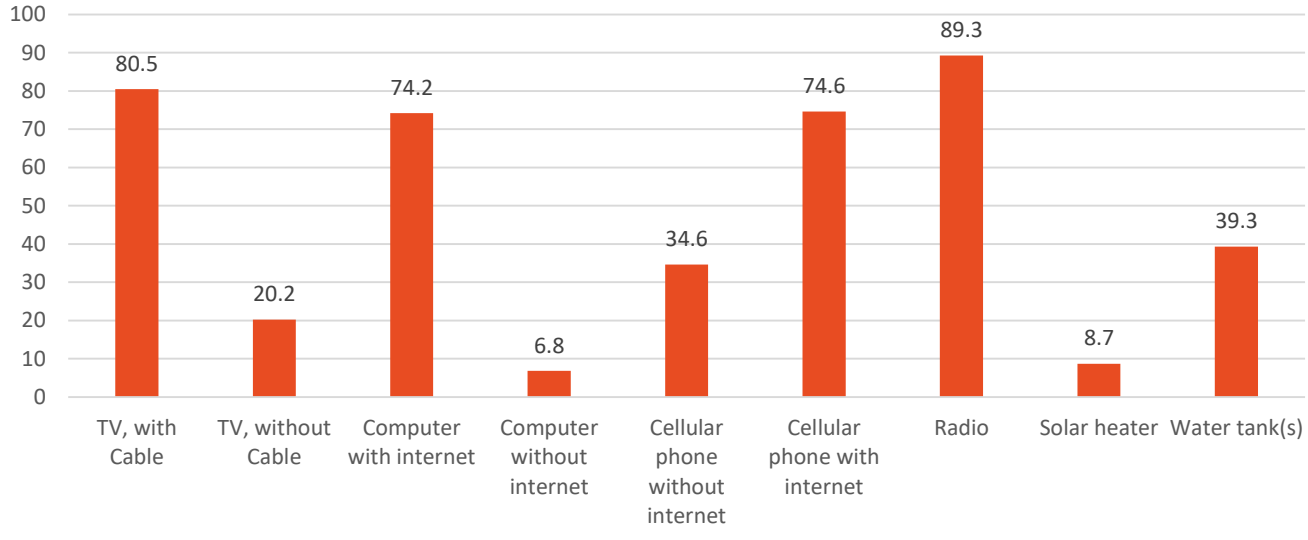


e) Select Household Appliances and Equipment

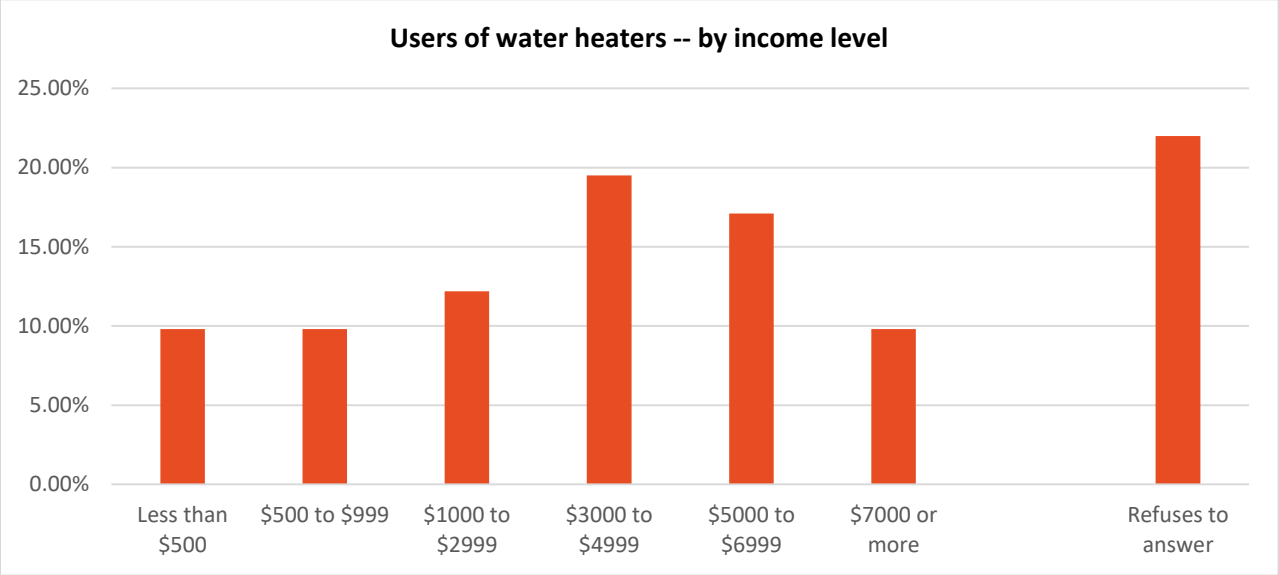
Respondents were also asked to indicate what appliances and communication equipment they had in use in their households. Radio was the media form that most people said they "had in use" (89.3% said "yes"); and essentially everyone had a television in use – however a proportion of these did not have cable service. In respect of their connectivity for data receipt and/or other exchange, most had computers with internet (74.2%) and/or cellular telephones with internet (74.6%).

With respect to select appliances, more than one-third (39.3%) of respondents used water tanks. There were significant differences in user profiles based on *education* - those most likely to have water tanks in use were secondary and tertiary graduates (37.0%, and 27.6% of respondents respectively). On *income*, 31.8% of users earned EC$1000 to $2999 monthly, and 13% earned EC$3000 to $4999 monthly). Interestingly, the highest proportion of users (34.4%) of water tanks was the subgroup refusing to declare income.

Figure 6. % with equipment and applicances in use



Solar water heaters were a rarity, and only 8.7% possessed these. (Figure 6 illustrates). Results also showed that education and cost could have been factors for the statistical difference found amongst users, i.e. the education level for persons most likely to use solar heaters was tertiary (51.2%), followed by those with secondary (22.0%). There was also a significant difference based on income (see table below), but the relationship was not linear. The highest level of users (19.5%) earned $3000 to 4999 monthly, while 17.7% of users earned $5000 to 6999, but stunningly, the lowest income earners, and the highest income earners were the two groups least likely to have water heaters in use – with approximately 10% of respondents in these two opposite groups reportedly stating that they did not have water heaters "in use".



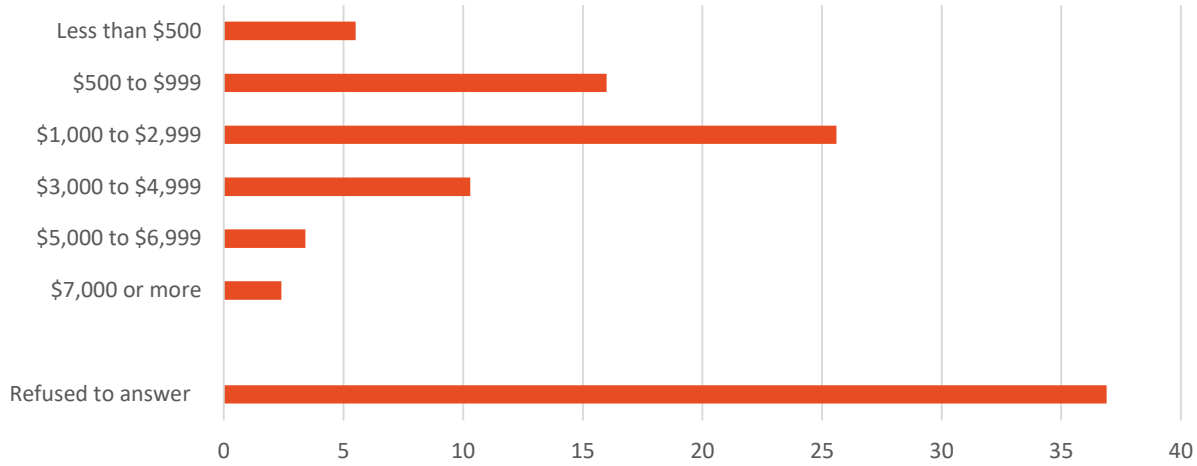
Only 6.6% of respondent households used both water tanks and solar heaters; further, 17.9% of those using water tanks, also used solar heaters (conversely, 79.5% of those using solar heaters, used water tanks).

f) Household Income

A little more than one-quarter of the respondents estimated their monthly household income to be between $1,000 and $2,999, while less than 25% of respondents indicated estimates of less than $1,000.

Like many other surveys, there was a fairly high proportion of non-response regarding income. When asked about household income, more than one-third (36.9%) "refused to answer".

Figure 7. Declared EC$ Income (% response)



g) Household Size

The mean household (HH) size considering all persons including babies and the elderly, was 4.34 persons (SD[3]: 2.29); from a minimum of one person (8.5%), to a maximum of 14 (0.4%).

Respondents' occupations varied significantly, suggesting many/most economic sectors were captured across the study.

[3] SD: standard deviation

6. DETAILED FINDINGS

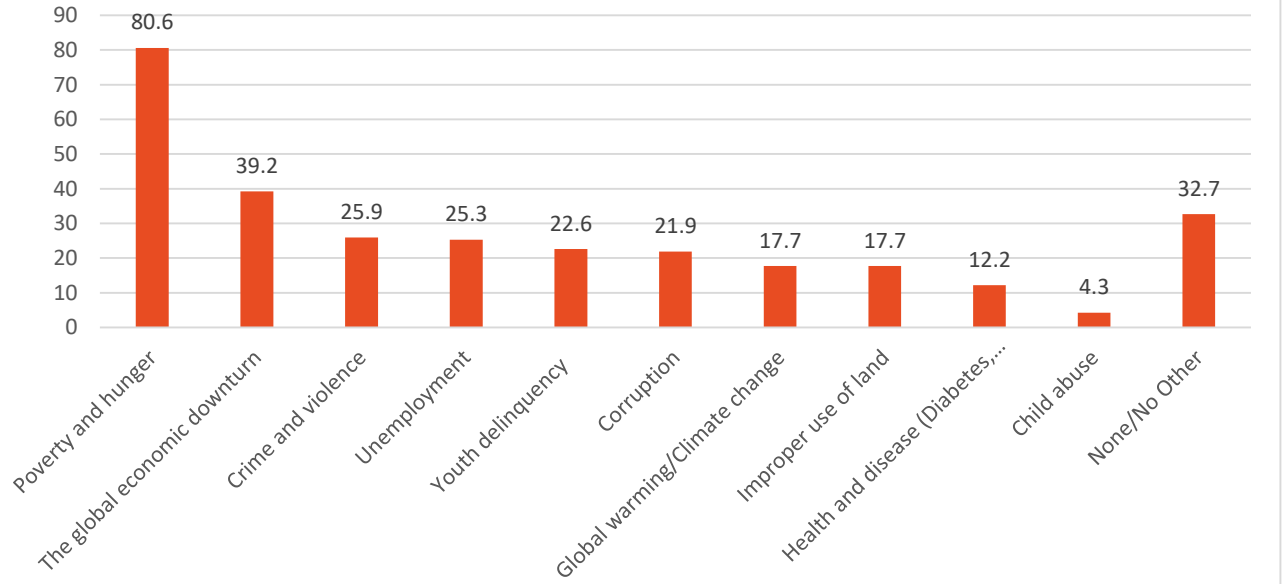
a) General Environmental Awareness:

Most serious problem in the Caribbean today

Respondents were asked to suggest the most "serious problem" in the region. They were given the opportunity to mention up to three problems, and most indicated "poverty and hunger"– 80.6% of all respondents mentioned this overall, in addition to 57.7% mentioning it as their *first* response. Importantly, the global economic downturn which might have been seen as impacting countries' and households' financial buoyancy, was mentioned with second highest frequency (39.2% of total). Crime and Violence; as well as unemployment were listed as the 3rd most serious problem in the Caribbean today (each receiving more than 25% of the total number of responses).

Climate change issues – which were combined with questions of "global warming", was felt by a much lower proportion (17.7%) to be amongst the most serious problems – reflecting the same level of seriousness to them as "improper use of land". Figure 8 illustrates.

Figure 8. "Most serious" problem in Caribbean (% response)

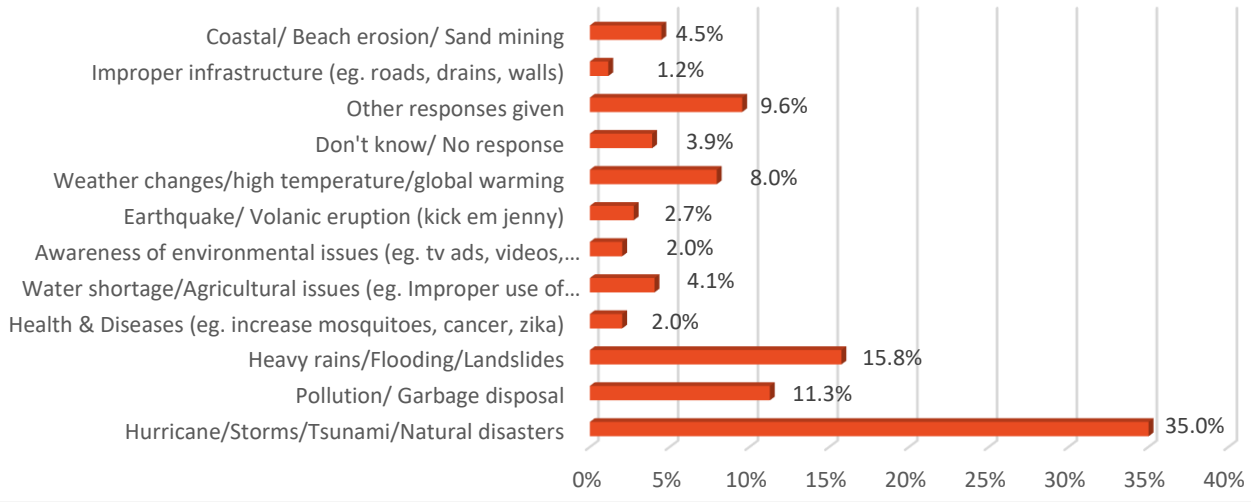


Impactful Environment Issues/Events

Respondents were asked to think about how aware they are or how they feel about the environment and then to give an example of an environmental issue that they had seen, read, heard or experienced which had impacted them or stirred their interest. Figure 9 illustrates the responses that were given by some respondents.

Hurricanes, Tropical Storms, natural disasters appeared to be most impactful, with 35% citing these types of natural events in response to the question. In particular, mention was made of Hurricane Ivan (2004), Emily (2005), and Janet (1955) which directly affected Grenada. Heavy rains, flooding and landslides were mentioned by 15.8% of respondents and issues related to poor garbage disposal and pollution were cited by more than 11% of respondents. Figure 9 provides some additional insights.

Figure 9: Most impactful environmental issues

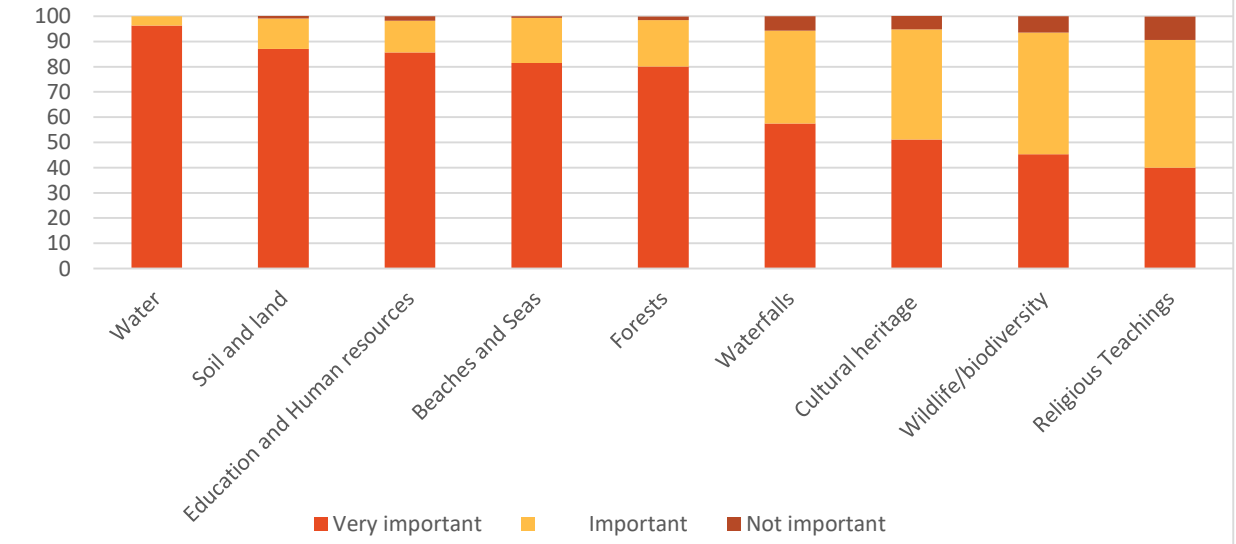


Importance of the Environment and Natural Resources to National Development

When asked about the importance of natural resources to national development, 88.1% of respondents stated that they believed it was ''very important", demonstrating that Grenadians clearly saw a strong link between the *environment and natural resources* and *national development*.

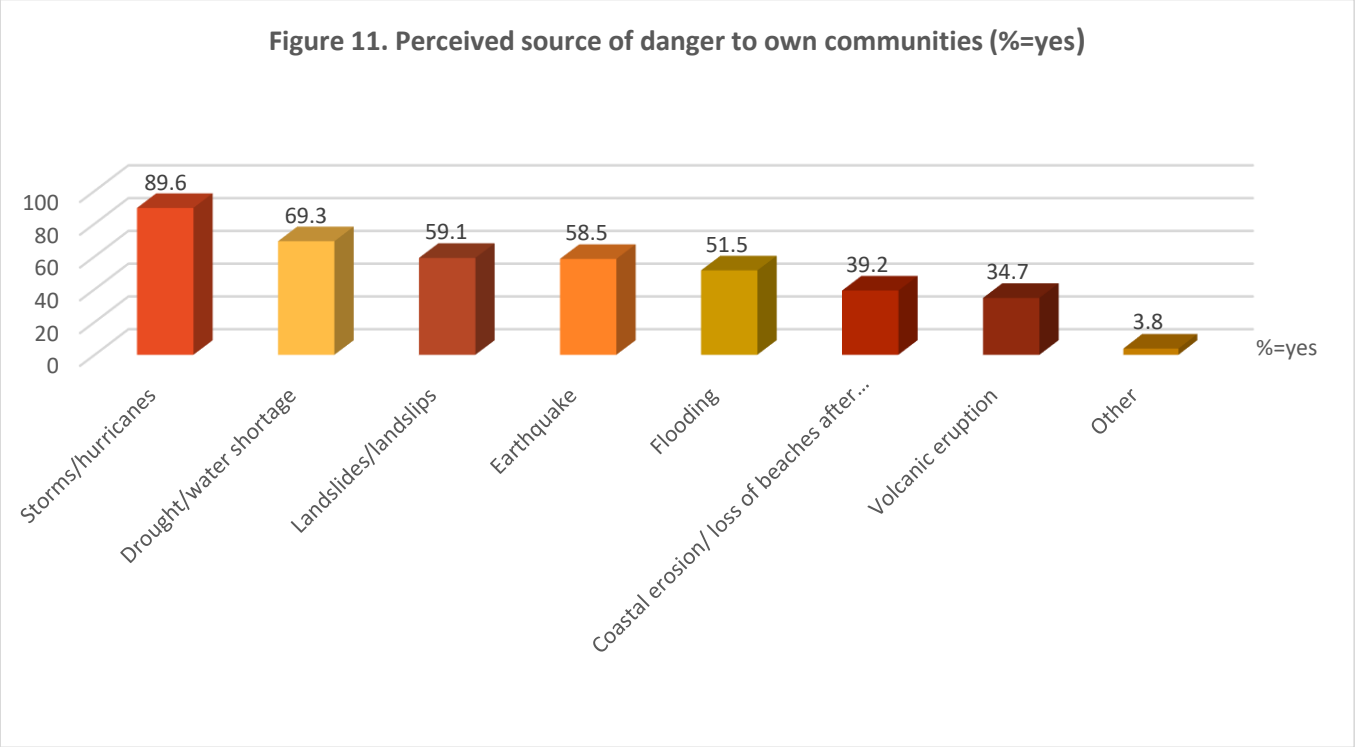
When probed further into reviewing specific national resources, people listed water as among the most important resource to national development with 96.3% listing it at as "very important", followed by "soil and land" (87%). The less tangible aspects such as religious teachings, biodiversity, cultural heritage, tended to be seen as less important. Figure 10 illustrates.

Figure 10. Grenada's most important natural assets



Natural Disasters that Pose a Danger

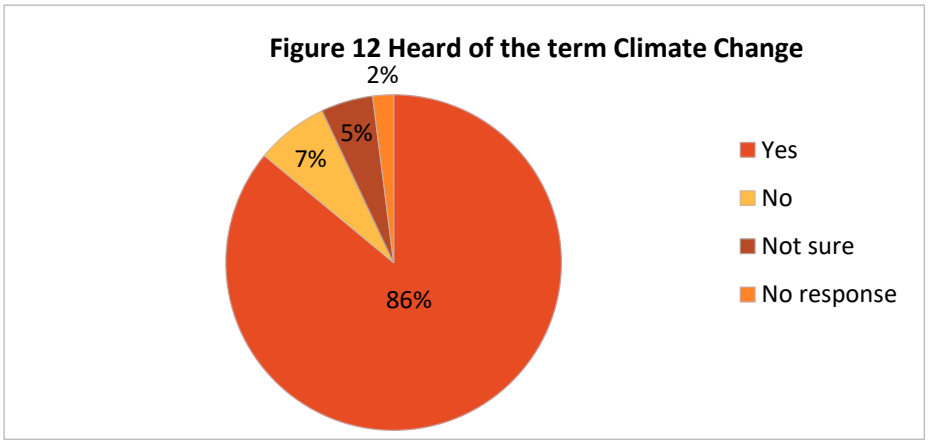
When asked whether their communities were endangered by natural disasters, Grenadians listed storms/hurricanes (89.6%) at the top of the list, followed by droughts and water shortages (69.3%). Landslides and earthquakes each received just under 60% - making them among the third most rated as posing a danger to their communities. Although known as a volcanic island with the famous underwater volcano, Kick ém Jenny located in its waters, far less persons saw a risk from its presence with a mere 34.7% listing it as posing a danger to their community. See figure 11.



b) Awareness of Climate Change:

Level of Climate Change awareness

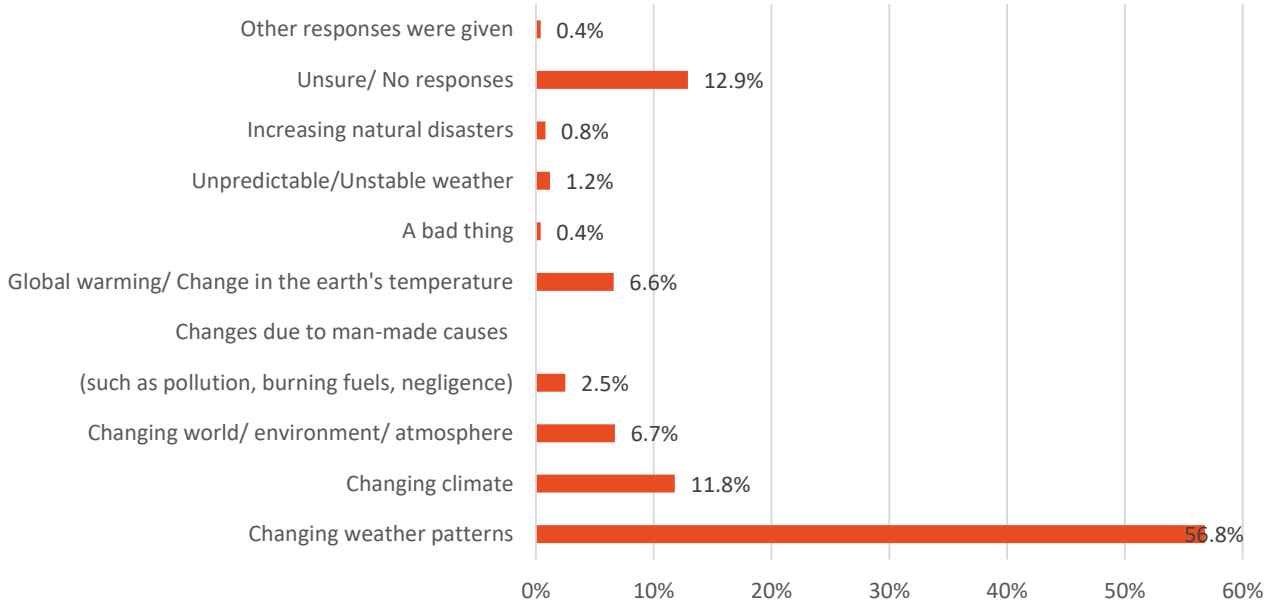
The overwhelming majority of persons (86%) had heard and suggested a definition for "climate change". 7% said they did not know the phrase and another 5% was unsure.



Understanding of the term Climate Change

When asked what they thought was meant by the term Climate Change, the most frequent response put forward by more than half of the respondents (56.8%) - related to changing weather patterns. Approximately one in ten respondents (11.8%) also gave responses pertaining to ''changes in the climate'' while 6.6% of respondents gave definitions related to global warming and changes in the atmosphere. Also notable - as many as 12.9% said that they were either unsure or did not know what the term climate change meant. Figure 13 summarises responses given by most respondents regarding their understanding of the term.

Figure 13:Understanding of the term Climate Change



Changes in the Earth's Climate/Weather Patterns

Regardless of the definitions, there was experiential reference: almost all respondents could say "yes", they had heard of the related changes in the Earth's weather, and they also claimed personal experience regarding such weather changes (Table 1). The main indicators for them appeared to be the *heat*, with 96.9% saying they had experienced hotter days and/or nights, and with an almost perfect match was unpredictable rain patterns (96.7%). Storms and hurricanes were seemingly less referenced, giving the impression that fewer had experienced them (relative to other aspects).

Table 1. Changes in weather – what they had heard or felt

	%=Yes
Have you ever heard that the Earth's climate, or its weather patterns are changing?	93.7
Have you personally noticed changes in the following weather patterns in recent times (*general*)?	97.9
– Hotter days/nights	96.9
– More rain/ less rain/ unpredictable rain patterns	96.7
– Stronger storms /hurricanes	73.7
– More storms/hurricanes	61.5

c) Sources of information about Climate Change

It was from local radio (Table 2) that most had heard about climate change (70.1% said "yes" without being prompted); local and overseas television viewing were the main other places they had heard of the weather phenomena. The workplace appeared to be the weakest source for getting information regarding climate change.

Table 2. Climate Change Information Sources

Where have you heard/read about it (climate change)?	Unaided	Aided	No mention at all
a) Radio: Local	70.1	7.3	22.5
b) TV: Local	68.5	5.2	26.3
c) TV: Foreign	44.7	7.7	47.6
d) Radio: Foreign	34.7	8.5	56.8
e) On the Internet	29.7	11.6	58.8
f) In school	27.7	3.5	68.8
g) In the Newspapers	25.9	13.9	60.2
h) Other	18.4	-	81.6
i) At work	12.7	3.7	83.6
j) In a Movie	4.2	4.2	91.5

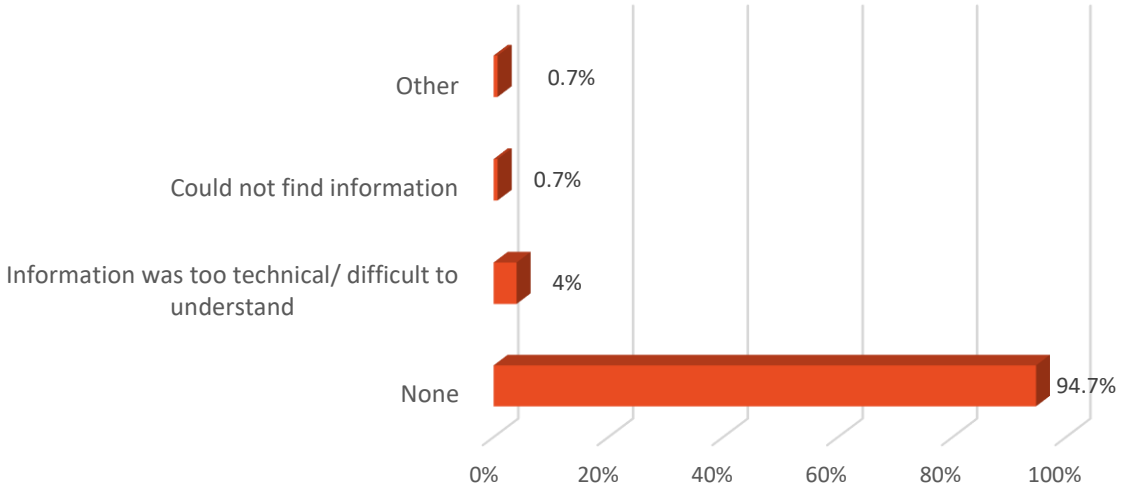
d) Use of Internet to Search for Information on Climate Change

Only 21.7% of respondents said they "ever used" the Internet to search for climate change related information. Importantly, there were differences within population in this regard, with younger respondents (15-24y) *most* likely to conduct such Internet searches (33.3% said "yes") and the oldest (55+y), the *least* likely to do so (only 6.2% said "yes").

Difficulties Experienced in Using Information on Climate Change that is Available on the Internet

Respondents who had used the internet to search for information on climate change were asked to indicate whether they had encountered any difficulties, and most - 94.7% claimed to have found no difficulty. Only a mere 4% of those who had searched indicated that they found the information too technical.

Figure 14: Difficulties in using information about climate change available on the internet



7. Knowledge of and Attitudes towards Climate Change:

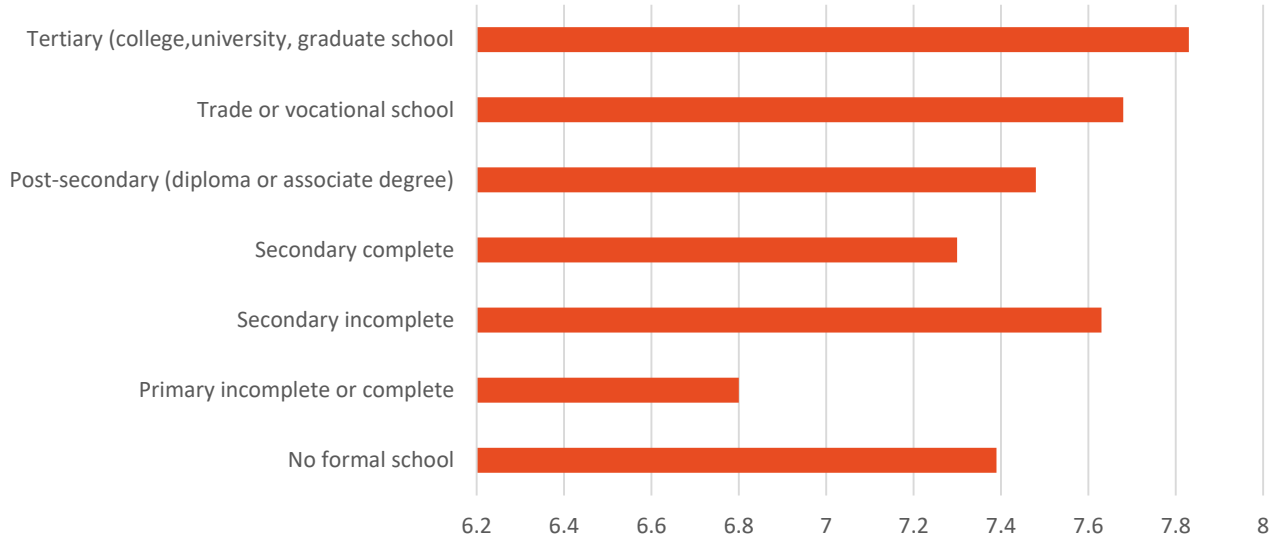
a) Perceptions of the seriousness of climate change

There were a number of questions posed which sought to capture respondents' knowledge and/or attitudes regarding climate change. The first provided a working definition, and asked respondents to judge the seriousness of climate change based on said definition (below).

Table 4	***Let us say "Climate Change" refers to "changes in weather patterns over time". Based on this meaning and your own observations, how serious a problem do you think climate change is at this moment?***									
	Not a serious problem at all							**An extremely serious problem**		
Scale	1	2	3	4	5	6	7	8	9	10
%	0.6	0.2	1.2	2.5	10.4	14.3	18.1	23.0	19.3	10.4

In general, most respondents regarded climate changes as a serious issue. However, ratings did not differ by age or sex; but they did do so by education level; importantly, there was no directional consistency to such difference. Figure 15 illustrates

Figure 15. How serious climate change is by education level? (mean/10)



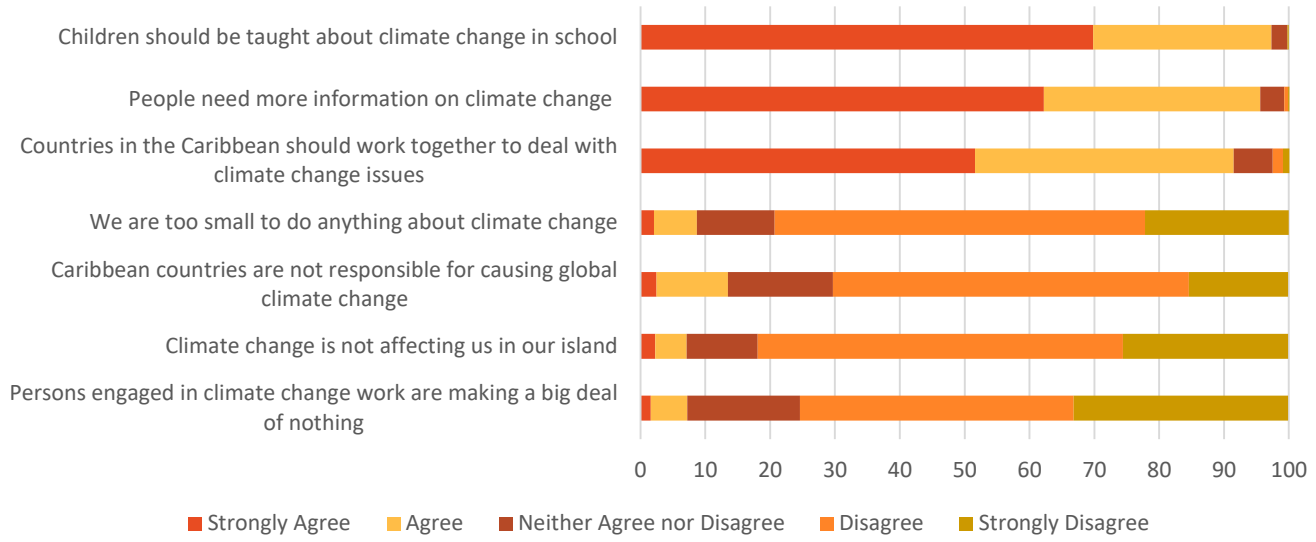
b) Attitude towards Climate Change

A large proportion (62.2%) of respondents felt that "people" generally needed more information about climate change. Respondents also indicated fairly strong sentiments (69.8%) that children should be taught about climate change in the school environment. (Figure 16)

Just about half of the respondents (51.6%) also agreed that countries in the Caribbean should work together to deal with climate change issues. Likewise, 56.3% felt that climate change was affecting their island, by disagreeing with the statement, "Climate change is not affecting our island." Similarly, most respondents did not agree that persons engaged in climate change work are making a big deal of nothing approximately 75% either disagreeing or strongly disagreeing with the statement.

With respect to whether Caribbean people were guilty of causing climate change, approximately 70% of the respondents agreed that Caribbean countries are not responsible for causing global climate change.

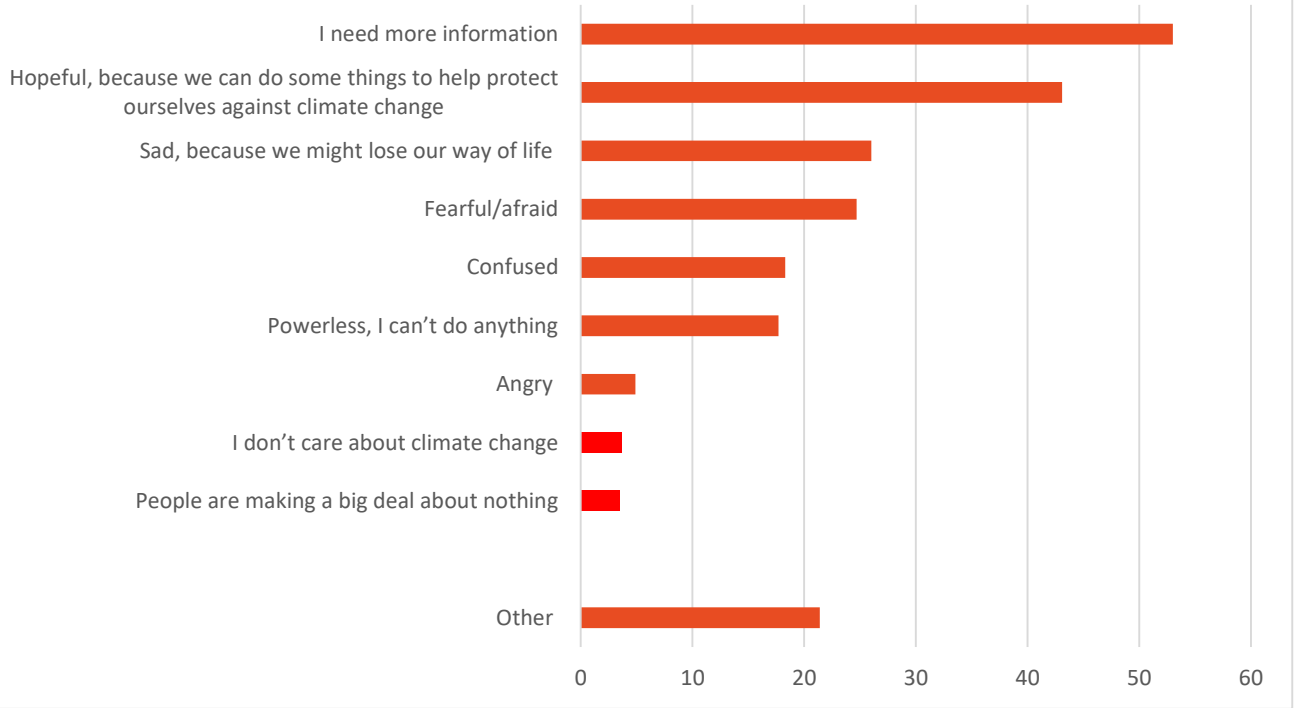
Figure 16.Attitudes re specific climate change trends, responsibilities



c) Feelings about Climate Change

When asked how they felt about climate change", relative uncertainties were shown, with more than half (53.0%) saying that they needed more information. A little less than one-half (43.1%) also reported that they felt hopeful as they could do some things to protect themselves against climate change. Approximately one-quarter of respondents expressed feeling fearful/afraid (26%) and sad (24.7 %). (See Figure 17).

Figure 17.Feelings about climate change (% mention)



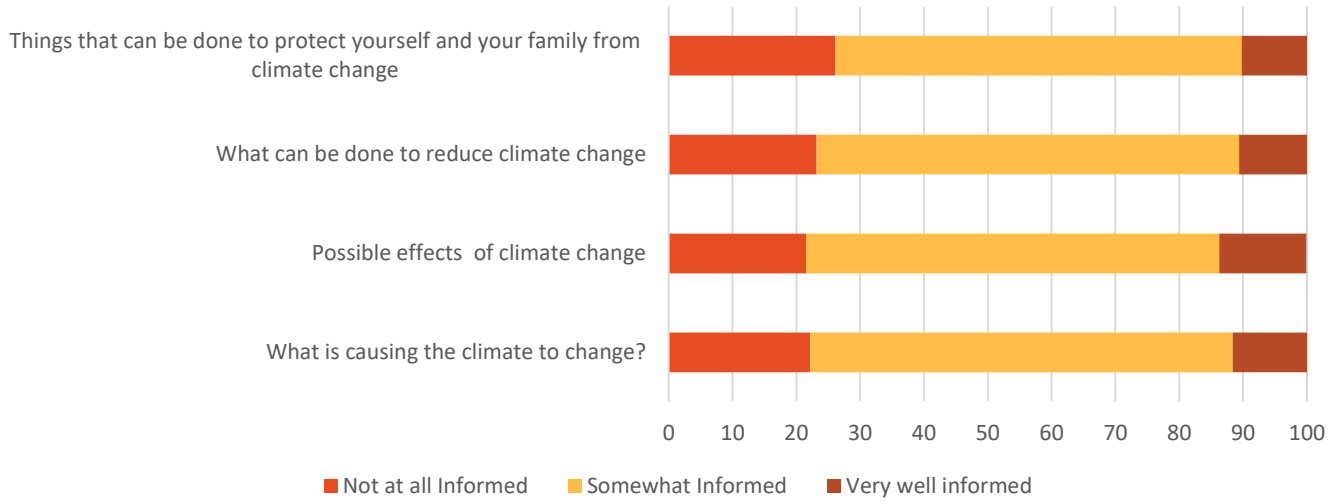
d) Information about Climate Change Issues

When it came to being informed about climate change, the lack of certainty was played out even further when respondents were specifically asked how well informed they thought they were, regarding various matters related to climate change. They expressed strength in no area about which they were asked. Instead, they responded in the most comfortable zone: "somewhat informed" as follows: (See Figure 18 for more).

Most respondents felt that they were **somewhat informed** about:

- Things that can be done to protect themselves and their families from climate change (63.7%);
- What can be done to reduce climate change (66.2%);
- Possible effects of climate change (68.8%), and
- What is causing climate change (66.2%)

Figure 18. "How well informed do you think you are about the following, which are related to climate change"?

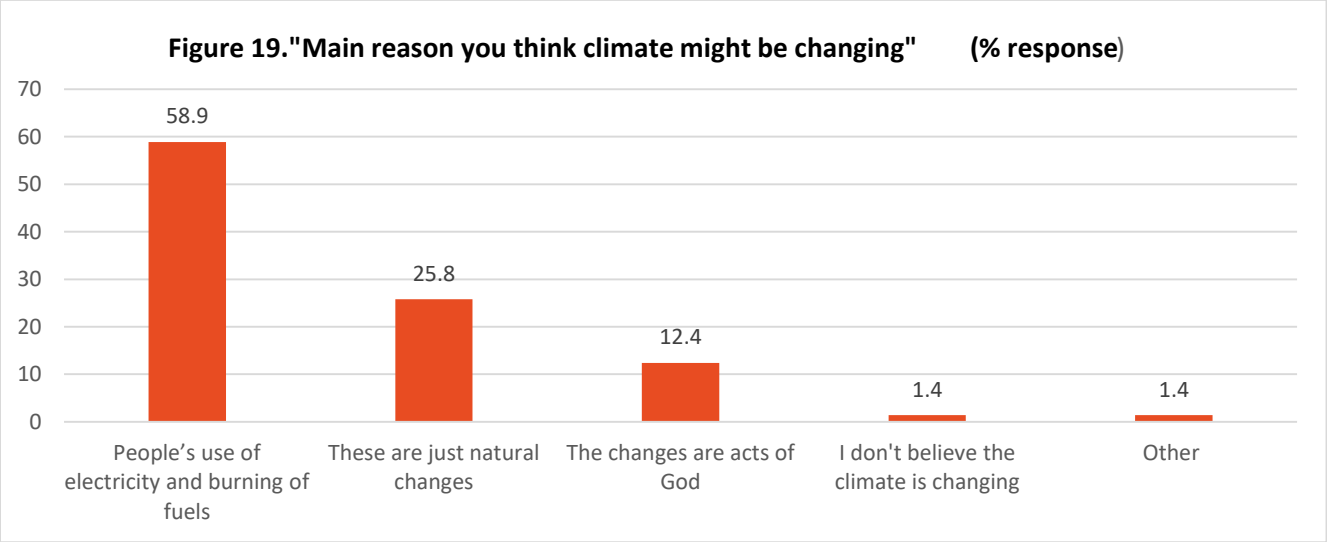


There were differences based on level of education on the issue of being informed on "things that can be done to protect yourself …", wherein more of those with tertiary levels (23.9%) said they were "very well informed"; the group next likely to feel so informed were those without formal education (17.0% said they were). A similar situation existed for being informed about "cause", as well as about "effects". In like manner, persons who had been educated at the tertiary level were more likely to be informed about "reducing" climate change than those of lesser education attainment.

With respect to age - the youngest ones (15-24y) were most likely to be informed about "cause" (19.0% said they were very informed") and about "effects" (22.6% of them said they were very informed). They were also the ones most likely to be informed about how to reduce and also how to protect against, climate change.

e) Perception of the Main Reason for Climate Change

More than half of respondents were clear that climate change was caused by the burning of electricity and fuels, with 58.9% respondents indicating this as the main cause (Such relative certainty could possibly have come about due to public information programmes - even though they stated that this was insufficient). This perspective was more popular compared to far fewer claiming it was due to natural causes (25%.8) and/or Acts of God (12.4%). Figure 19 illustrates.



f) Perceived main reason climate might be changing by age and education

When analysed by age, sex and education, there was little difference between men and women indicating the main reason why the climate might be changing, however findings showed that the younger population were the most to believe that it was the use of electricity and burning of fuel – with most persons (approximately 60%) aged between 15 and 54 years indicating this response, as compared to 40% of respondents over 55 years old.

In general, respondents who were more educated tended to also believe that the burning of fuels and use of electricity more than those less educated. Interestingly, persons educated below secondary level tended to believe climate change was as a result of natural changes and/or acts of God with approximately 38% of respondents in this level of education suggesting these reasons. See table 5

Table 5. Perceived main reason people think climate might be changing – relative to age and education

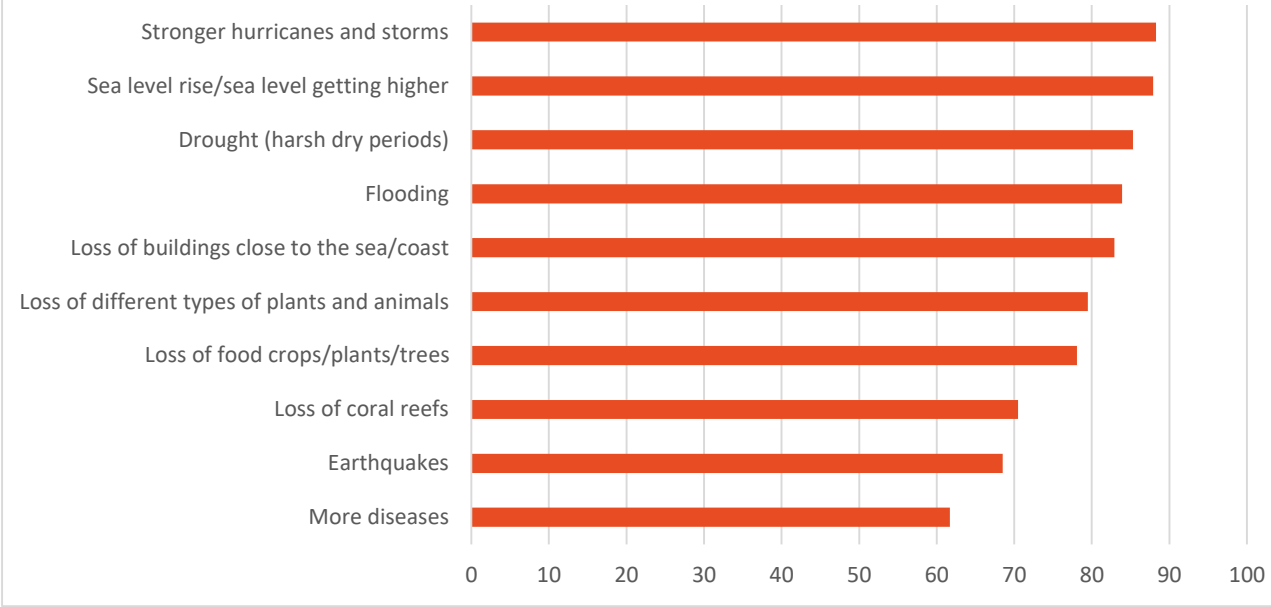
	These are just natural changes	The changes are acts of God	People's use of electricity and burning of fuels	I don't believe the climate is changing	Other
Age (yrs.):					
15-24	26.4	11.6	60.3	0.8	0.8
25-39	18.8	13.1	66.2	0.7	1.4
40-54	27.4	7.4	60.7	3.0	1.5
55+	35.4	20.7	40.2	1.2	2.4
Education:					
No formal school	38.6	6.8	52.3	--	2.3

Primary incomplete or complete	38.9	25.0	27.8	4.2	4.2
Secondary incomplete	22.0	5.1	69.5	3.4	--
Secondary complete	25.5	13.8	59.3	0.7	0.7
Post-secondary (diploma or associate degree)	18.4	12.2	67.3	--	2.0
Trade or vocational school	29.4	17.6	52.9	--	--
Tertiary (college, university, graduate school)	16.5	6.2	75.3	1.0	1.0

g) Possible Effects of Climate Change

Stronger hurricanes and storms, drought, and rising sea levels were most frequently identified by respondents as possible effects of climate change, with more than 85% of respondents agreeing that each of these were possible effects. While most respondents also generally agreed that floods and loss of buildings were high possible effects of climate change – with more than 80% indicating a ýes' response for these effects. Less persons (although not significantly less) believed earthquakes (68.5%) and diseases (61.7%) were a result of the phenomenon. (Figure 20 illustrates.)

Figure 20. Perceived possible effects of climate change (%=yes)



8. Behaviours and Attitudes towards Adaptation and Mitigation:

a) Individual Contribution to Climate Change

When people were asked: "*Do you do anything that contributes to climate change?"*, only 30.7% said "yes"; unfortunately, a high 38.4% said they "didn't know/(were) not sure" – which also meant they might not really be able to claim *considered* responsibility.

b) Recent Actions to Protect Self and/or Family from a Hurricane or Storm

The evidence that people had started to take personal responsibility for actions related to climate change was quite weak. They were asked: *During the past six months, have you done anything to protect you and/or your family from a hurricane or storm?* Only 39.8% said "yes". Most of the others said "no". For those who said "yes", they were asked what precise action they had taken and 68.9% said that they had cleaned drains, while 66% said that they had cut trees and branches. Nearly half of the respondents reported that they had purchased torch lights. Notably, installing hurricane shutters was the least action indicated by respondents, with only 8.3 % reportedly undertaken this action in preparation for hurricanes. Table 6 illustrates.

Table 6. Preventive/preparatory actions taken against hurricanes (*those who had taken action*)

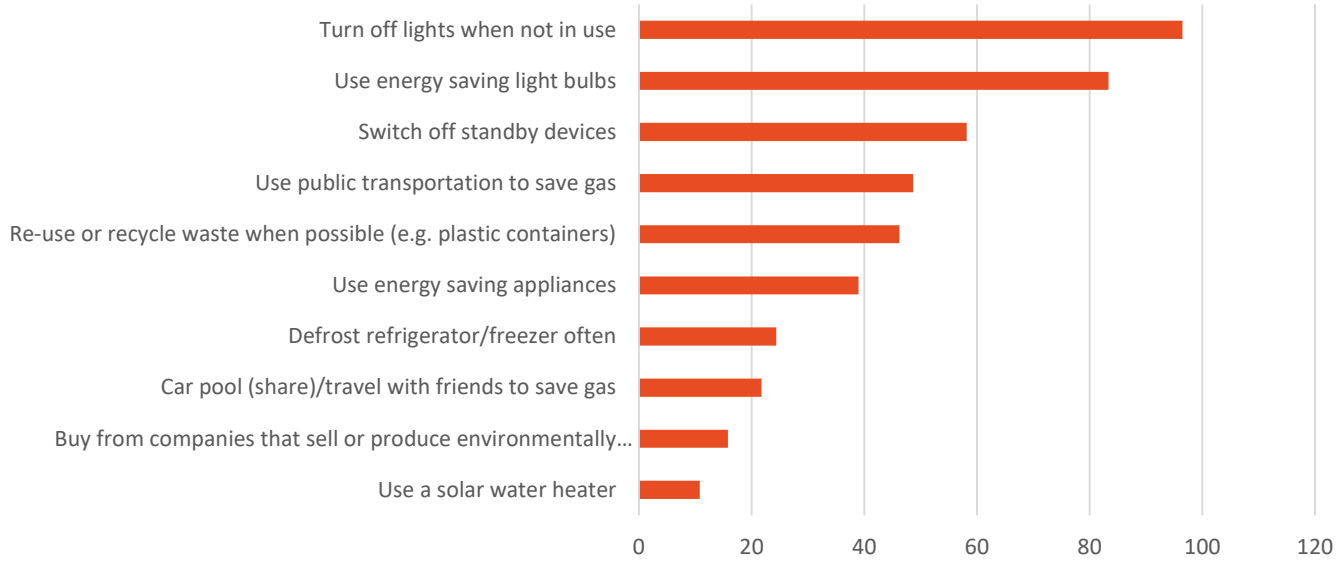
If *Yes*, what have you done?	Unaided	Aided	No mention at all	NA
a) Cleaned drains	68.9	14.1	14.6	2.4
b) Cut trees and branches	66.0	12.1	16.0	5.8
c) Purchased torch lights	49.5	15.5	30.1	4.9
d) Stocked canned foods	40.3	29.6	22.8	7.3
e) Strengthened roof	22.3	13.6	57.3	6.8
f) Bought House Insurance	12.6	11.7	68.4	7.3
g) Put on/Installed hurricane shutters	8.3	13.6	70.9	7.3

c) Conservation practices related to energy and water

Regarding conservation of energy and of water, findings show that 60.5% and 70.5% respondents respectively, said they spoke "often" about saving energy and water respectively at home. Another 23.5% and 16.5% respectively, said they spoke only "sometimes" about water and energy conservation.

To support this positive response, an overwhelming 96.5% said they "turned off the light(s) when not in use – this clearly being a very visible element over which householders likely felt some control. In general however, fewer respondents used energy saving devices – whether light bulbs (83.4%) or appliances (39.0%) as an energy saving practices. Further, solar water heaters were clearly not a wide method of energy conservation, as few respondents owned this device. (Figure 21 illustrates).

Figure 21. Current practices towards conservation (%=Yes)

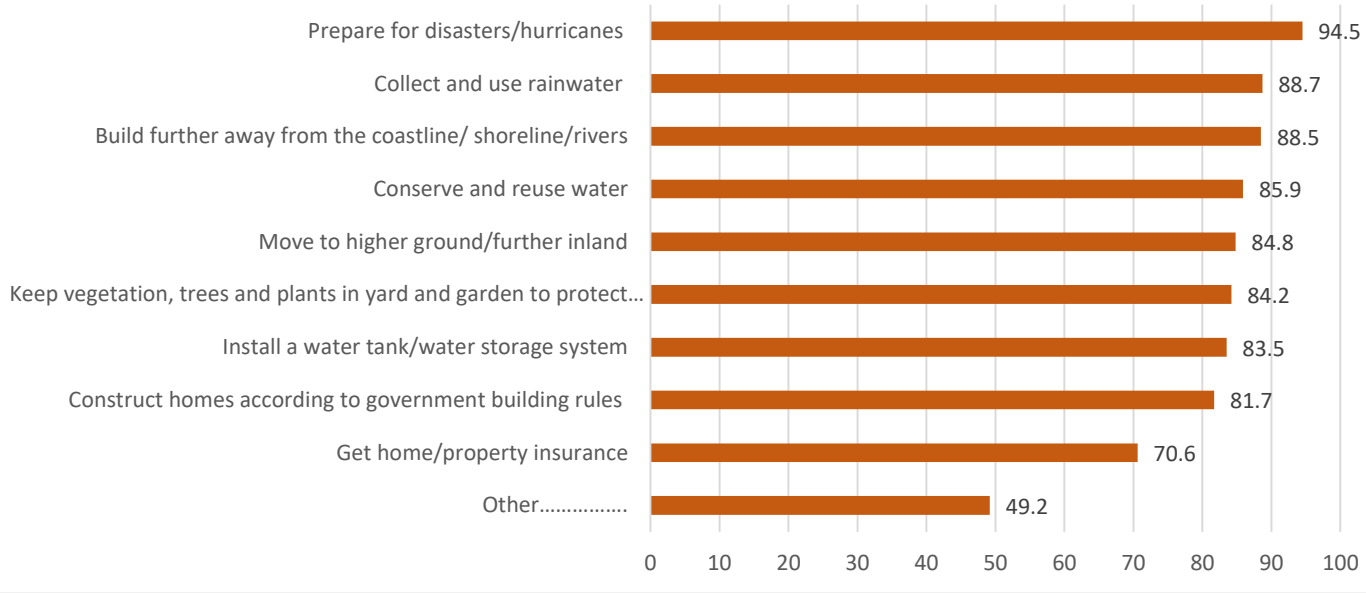


d) Attitudes related to readiness for climate change

Opinions re useful ways to adapt to climate change

Respondents were asked what they thought were useful ways to adapt to climate change and they responded strongly for several options that were put forward with 94.5% indicating "yes" for disasters preparedness, followed by approximately 88% indicating rain water collection, as well as building away from coastline as other top measures. Overall, respondents had very positive postures regarding conserving water, moving to higher ground, maintaining trees and gardens, with over 80% of respondents viewing these as other key adaptation measures. Figure 22 provides a summary.

Figure 22. General attitudes towards readiness for climate change (% saying "would be useful ways for households to adapt to/survive climate change)



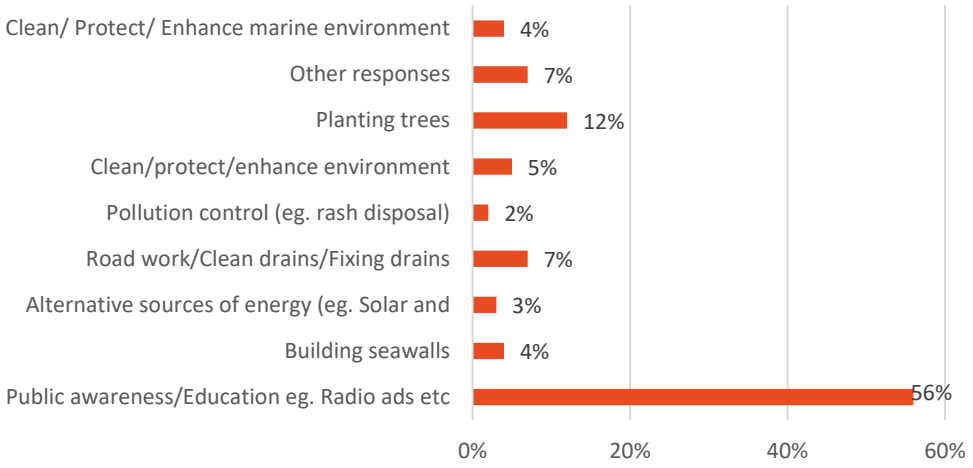
e) Awareness of Local Organisations that are Active in Dealing with Climate Change Issues

Almost one-half of respondents (45.2%) said they were aware of organizations active in dealing with climate change in Grenada. The main organisation mentioned by those saying "yes", was: NADMA, mentioned by 86.1% of them. Also occasionally mentioned were e.g. Red Cross, SPECTO, NASAWA, GIZ, and UNDP.

f) Efforts by the Government to Reduce the Effects of Climate Change

Few persons said they knew of the Government taking actions to reduce climate change effects (24.5% said yes). A wide range of activities was mentioned by those who said yes, they knew. Some of the key activities mentioned included planting trees (12%) and undertaking road works including drain maintenance (7%). A number of other responses were given as can be seen in Figure 23 below.

Figure 23. Efforts by the Government to reduce the effects of Climate Change



g) Recommendations for the Government towards Reducing the Effects of Climate Change

Respondents were asked to suggest actions the government may take to deal with climate change issues, the most important action put forward by respondents was **"Increasing information to make the public more aware".** Other suggestions included conducting of more research, and regular maintenance of applicable infrastructure. Although many other actions were mentioned, it was with far less frequency. As many as 12.5% also felt that the Government was already doing what could be done. See table 7 below.

Table 7: Recommendations for Government towards national preparations for climate change

What else do you think the government should do?	Unaided	Aided	No mention at all
a) Give people more information/ increase public awareness	60.5	12.5	27.0
b) Conduct more research	28.7	19.1	52.2
c) Regular maintenance of drains/roads/bridges	27.9	36.0	36.0
d) Ensure waste/garbage is collected or disposed of/thrown away from properly	23.7	37.8	38.5
e) Replant trees/ introduce reforestation programme	22.7	32.8	44.5
f) Enforce existing laws/create new environmental laws	18.5	30.4	51.1
g) Promote rainwater collection and water conservation practices	13.3	39.6	47.1

h)	*Nothing/Government is already doing all it can*	12.5	3.1	84.4
i)	*Give **benefits** for buying items that are environmentally friendly*	7.7	10.4	81.9
j)	*DO NOT import goods that damage the environment, e.g. leaded gasoline*	6.6	14.6	78.8
k)	*Charge higher **taxes** on goods that are not environmentally friendly*	4.6	7.5	87.9
l)	*Other*	8.9	-	91.1

h) Receiving Information about Climate Change

Interest in receiving Information

Given such interest in the receipt of information on climate change, respondents were also asked of their interest in getting information in the future: 57.8% said "yes, definitely" and another 19.6% said "yes, maybe". Importantly, one-fifth of respondents (18.8%) said they had no interest at all.

Preferred method for receiving information

Those with interest in receiving information, were asked for specifics about media and packaging preferences. Most respondents indicated a preference for information on TV (84.2%), followed by radio (77.7%), followed by newspaper (63.3%) – a clear indication that traditional mass media is still a primary choice above all other forms of media choices in Grenada.

Age made a significant difference for preferences indicated. The 25-39y age range was amongst the most interested in getting the information via Internet/websites, Facebook and similar social media, text messages and/or email. Notably, the youngest ones (15-24y) were also as interested in receipts via social media.

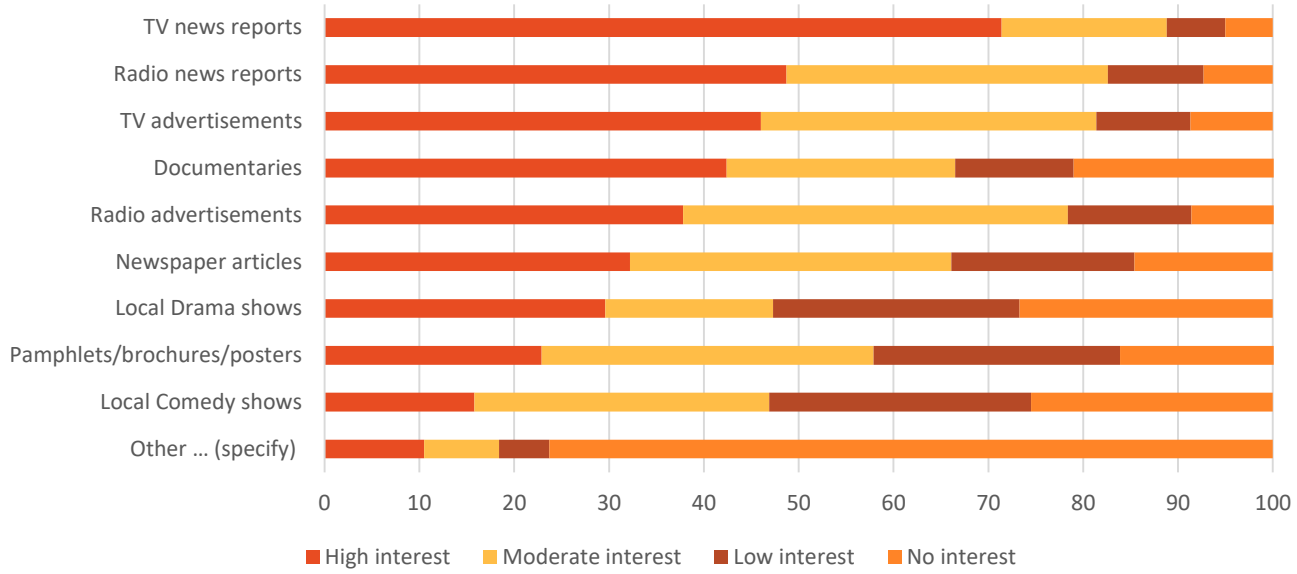
Table 8: Preferred method of receiving information		**Age Range (*yrs.*)**			
How would you like to receive information about climate change?	% Mention	15-24	25-39	40-54	55+
a) **In the Media**					
i. TV	84.2	22.1	31.0	29.2	17.7
ii. Radio	77.7	19.4	32.1	28.1	20.4
iii. Newspapers	63.3	18.9	31.3	32.5	17.3
iv. Internet/websites	47.4	31.2	35.8	27.8	5.1
v. Facebook & other social network sites	46.3	35.9	35.9	25.3	2.9
vi. Text messages (SMS/BBM/ISM/MMS+)	37.9	25.2	43.2	27.3	4.3
vii. Email	31.1	31.6	38.6	24.6	5.3
b) **Workshops/seminars/Exhibitions**	36.7	20.0	40.7	32.6	6.7
c) **Notices in public places/Billboard advt.**	26.0	22.1	41.1	27.4	9.5
d) **Notices in the mail**	15.7	21.1	36.8	29.8	12.3

Packaging of Information about Climate Change

Overall, there was preference for news reports – firstly via "television" then "radio". Documentaries was noted as the 4th highest choice for receiving information, but the preferences were clearer for shorter material either in the form of news reports or Commercials. Overall, newspapers were less favoured than electronic media. Pamphlets/brochures/posters received a higher percentage for "moderate interest" (35%) than high interest 22.9%.

There were no statistically significant differences when specific packaging options were examined for neither age nor sex. In addition, there were no related distinguishing features identifying who would/not be interested. See Figure 24.

Figure 24. Preferred options for packaging Climate Change Info (*those with interest*)



Trusted Sources of Information

Respondents indicated the following in response to questions related to trusted agents of climate change information:

- ***Most*** trusted were: Scientists & Environmental groups (73.1% selected this category)
- ***Least*** trusted were: Government agencies/officials (45.3% selected this category)

These core results did not differ by age or sex.

9. General Media Practices:

a) Consumption Patterns for radio and TV

Respondents were asked about their media habits in order to contextualize and enable future interventions.

1.1. TV listening: The survey therefore asked about regular TV viewing and radio-listening habits. The times of day/night were indicated as the highest overall viewing periods – with early morning and primetime (from 7:00 p.m. – 10:00 p.m.) chosen as the highest viewing times for TV. This selected TV viewing period may be as a result of nightly newscasts aired at those indicated times - around which persons focussed their viewing. This pattern was seen for both weekdays and weekends.

1.2. Radio listening was at its highest during early-morning hours between 6:00 a.m. – 10:00 a.m. However, unlike TV, radio listenership was also evenly spread across the hours of each day as well as between weekdays-and weekends; clearly showing more personalized resonance and without any specific singular pull/programmes that would have listeners tuned in.

Table 9 – Television viewing habits

Table 9: Television Viewing Habits			% of respondents
WEEKDAYS	Morning	6am – 10am	61.8%
	Daytime	10am – 7pm	38.2%
	Primetime	7pm – 10pm	79.5%
	Late night/Overnight	10pm+	45.1%
WEEK-ENDS	Daytime	10am – 7pm	61.7%
	Evenings	7pm –10pm+	73.8%
DO NOT WATCH TV			16.4%

Table 10 – Radio listenership habits

Table 10: Radio Listenership Habits			% of respondents
WEEKDAYS	Morning	6am – 10am	83.5%
	Daytime	10am – 3pm	56.8%
	Afternoon/Evening	3pm – 7pm	37.2%
	Primetime	7pm – 10pm	41.5%
	Late night/Overnight	10pm+	23.5%
WEEK-ENDS	Daytime	10am – 7pm	71.1%
	Evenings	7pm –10pm+	49.6%
DO NOT LISTEN TO THE RADIO			21.4%

c) Radio and TV consumption patterns by age

As many as 21.4 % respondents did not listen to radio and 16.4% never watch TV. Neither age nor sex seemed to significantly differentiate in media viewing and listening patterns; instead, the same consumption pattern was seen for the wider population. See Tables 11 and 12 below

Table 11 – TV Viewing habits by age

	Table 11: TV viewing habits by age					
		TIMES	Age Range (yrs) %			
			15-24 yrs	25-39 yrs	40-54yrs	55=yrs
WEEKDAYS	On the way to work/Drive time	6am-10am	48.6 %	60.2 %	71.6%	67.3%
	Day time	10am-3pm	32.8%	34.4%	39.2	52.8%
WEEKENDS	Prime time	3pm-7pm	71.4%	82.7%	83.5%	80.5%
	Late night/Overnight	7pm-10pm	55.6%	43.1%	40.4%	36.0
	Daytime	10pm+	60.6%	64.6%	60.2%	60.3%
	Evenings	10am-7pm	72.6%	74.1%	73.0%	75.4%
	I do not listen to radio		10.7%	12.5%	30.4%	15.8%

Table 12 – Radio listenership habits

	Table 12: Radio listenership habits by age					
		TIMES	Age Range (yrs) %			
			15-24 yrs	25-39 yrs	40-54yrs	55=yrs
WEEKDAYS	On the way to work/Drive time	6am-10am	76.2	88.1	87.6	77.0
	On bus in the morning/Drive time	6am-10am	11.8	44.8	29.4	43.8
	Daytime	10am-3pm	48.4	57.3	60.3	61.7
WEEKENDS	On the way home from work/on the bus/drive time	3pm-7pm	27.1	55.0	36.0	21.2
	Evening	7pm-10pm	38.6	47.7	36.5	42.1
	Late night/Overnight	10pm+	25.0	26.5	21.3	19.2
	Daytime	10am-7pm	65.0	74.5	71.7	72.5
	Evenings7pm-10pm+		45.5	62.5	45.8	36.4
	Never/I do not listen to radio		28.1	17.9	20.0	19.0

c) Favourite Local media personalities (Radio and TV)

Respondents were asked to identify favourite personalities, being allowed up to three (3) choices. Box 1 below presents the names which were most frequently mentioned in order of popularity, although with more than three reflected for favourite personalities.

Respondents also indicated their favourite stations for "news", "entertainment", and "overall". The government owned television network, known as the GBN emerged as favourite, followed by MTV, followed by CC6.

For radio, Wee FM emerged most popular overall followed by GBN, followed by Boss FM.

Box 1. FAVOURITES **in local electronic media**			
Personalities	**Favourite Local channel for News**	**Favourite local channel for Entertainment**	**Favourite local channel Overall**
TELEVISION			
Lew Smith	GBN	GBN	GBN
Linda Braveboy	MTV	CC6	MTV
Chearvon Benjamin	CC6	MTV	
Brenda Baptiste			
Wendy Chateau			
RADIO			
Shaggy Duncan	Wee FM	Boss FM	Wee FM
Asia Munroe	GBN	Wee FM	GBN
Andre Donald		Hot FM	Boss FM
Joseph Cadore			
Lew Smith			
Aruna Neptune			
Micky Hutchinson			
George Grant			
Graffics			

d) Consumption patterns for Newspapers

Print/Newspapers: Findings for newspaper readership showed low preferences as compared with interest in TV and radio. The New Today had the highest number of readers per week with a total of 24.5% followed by The Grenada Informer with 18.9%. Despite the high percentage of weekly readers of the New Today, 44.3% had never read this Newspaper in the past month, likewise 57.2% had not read The Grenada Voice in the same period, 45.7% had not read the Grenada Informer and 64.2% had not read the Grenada Advocate also in the past month. Table 13 presents further.

Table 13: Newspaper readership

In the past month how often did you read each of the following newspapers?	New Today	Grenadian Voice	Grenada Informer	Grenada Advocate
every week	24.5	5.6	18.9	1.2
every other week	6.6	3.7	7.7	0.4
every so often	7.5	5.4	8.9	1.7
once or twice in the past month	10.8	5.6	8.1	2.3
never in the past month	44.3	57.2	45.7	64.2
not applicable/ never heard of it	6.4	22.5	10.8	30.3

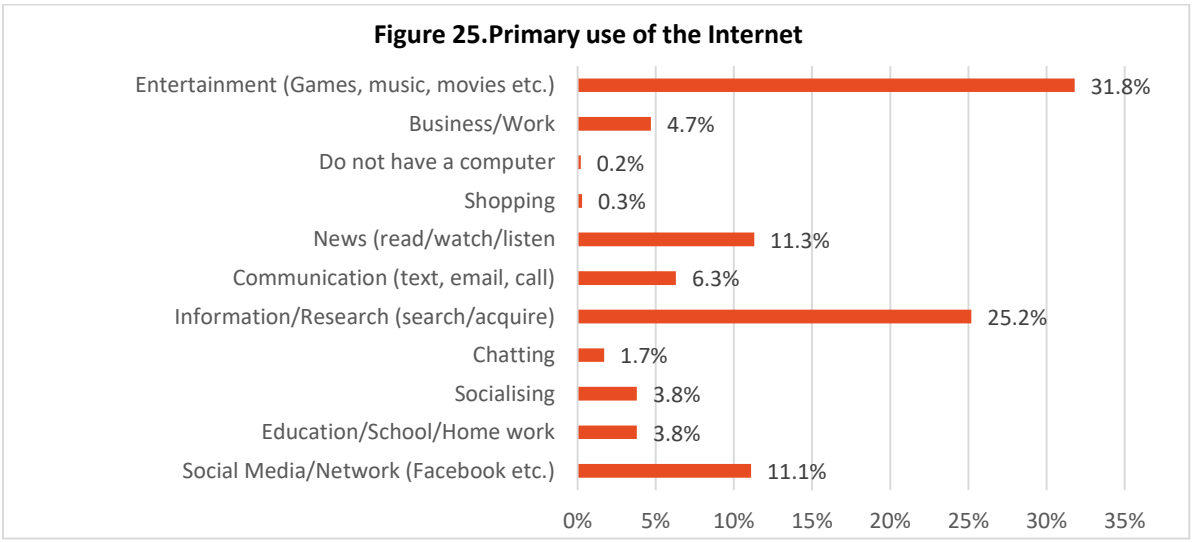
There were no statistically significant age differences trending within the wider population for newspaper readership, except those aged 40-54 years were most likely to read the ***New Today*** on a weekly basis (35.9% of them) compared with e.g. 25.0% of those 55+ years, 22.2% of those aged 25-39 years, and 14.2% of the 15-24 year-old respondents.

The pattern for the ***Grenada Informer*** was almost exactly the same. Although slightly similar at much lower levels, the readership profiles for the ***Grenadian Voice*** were also statistically significant; however, slightly more of 15-24 (4.7%) than 25-39 year old (1.3%) respondents were weekly readers. Weekly reading levels for 40-54 and 55+ year age groups were 9.9%, 7.3% respectively.

e) Internet Use

Internet usage: 61.9% of respondents reported **daily** use of the internet. There were huge age differences for daily use of the internet: 92.8% (15-24y), 74.7% (25-39y), 46.8% (40-54y), and 22.6% (55+y). Entertainment, News, Research, Social Media interactions, and their various combinations were the main overall purposes for internet engagements. Those specifically using the Internet to search of news represented 45.3% of total. Figure 25 illustrates.

Figure 25.Primary use of the Internet



10. Conclusions and recommendations

This Knowledge, Attitudes and Practices (KAP) Survey on Climate Change was conducted in Grenada as a key strategy to obtaining a baseline that will inform the development of a country-specific communication campaign on Climate Change to be executed under the United Nations Development Programme Japan-Caribbean Climate Change Partnership (UNDP-JCCCP) Project.

The results of the survey show an overall high level of awareness of climate change among respondents. In addition, most respondents acknowledged its seriousness and recognised that there were things which they could personally do to reduce impacts. Environmental issues and conservation efforts were also on the minds of the local population and small actions were seen from some persons. However, only a few respondents were proactive in protecting themselves and their families from what they identified as possible effects such as storms or hurricanes.

Most respondents felt that they were not very informed about matters concerning climate change and made a strong call for more information:

- When asked how they feel about climate change, 53% of respondents said that they need more information;
- 62.2% of respondents agreed that people need more information on climate change;
- Approximately 70% of respondents agreed that children should be taught about climate change in schools;
- Over 70% of respondents said the Government should provide more information/increase public awareness towards reducing the effects of Climate Change.

Despite this, respondents generally did not go out of their way to search for information on climate change, with less than one quarter stating that they had used the Internet to search for information on the subject - although most used the internet daily – reportedly mostly for entertainment, followed by research for personal interest. However, most respondents showed high interest in receiving more information on climate change with 57.8% of respondents saying “yes, definitely” and another 19.6% saying “yes, maybe”.

Disaggregation of the results demonstrate that respondents who were more educated, particularly those who were educated at the tertiary level, indicated the highest levels of awareness and also expressed the greatest interest in receiving more information about climate change. Conversely, those who were educated below the secondary level were generally least aware and also least interested in receiving more information.

a) Key findings

With respect to respondents’ awareness, the following key points were noted:

a) Climate change and global warming were viewed by a mere 17.7% of the Grenadian population to be amongst the most serious problems in the Caribbean;
b) The overwhelming majority of persons in Grenada (87.4%) had heard of and suggested a definition for “climate change”;
c) 5.3% said they do not recall hearing the term climate change and another 7.3% was unsure.
d) Most persons in Grenada were able to provide a meaning for climate change that was related to “’changes in weather patterns/the environment”, or link it to aspects such as temperatures, greenhouse gases, or “climate” itself
e) Local radio was the main place where people had heard about climate change (70.1%) followed by local and overseas television viewing being the main other places

f) Only 21.7% of respondents said they "ever used" the Internet to search for climate change related information, with younger respondents (15-24y) most likely to conduct such Internet searches (33.3% said "yes") and the oldest (55+y), the least likely to do so (only 6.2% said "yes").
g) Respondents showed high interest in getting information on climate change in the future: 57.8% said "yes, definitely" and another 19.6% said "yes, maybe".
h) One-fifth of respondents (18.8%) said they had no interest at all in receiving additional information on climate change
i) Findings show that 60.5% and 70.5% respondents, said they spoke "often" about saving energy and water respectively at home. Another 23.5% and 16.5% respectively, said they spoke only "sometimes" about water and energy conservation.
j) Most (69.8%) felt that children should be taught about climate change in the school environment
k) The highest overall viewing periods for TV were early morning and primetime (from 7:00 p.m. – 10:00 p.m.);
l) Radio listenership was at its highest during early-morning hours between 6:00 a.m. – 10:00 a.m. However, unlike TV, radio listenership was more evenly spread across the hours of each day as well as between weekdays-and weekends;
m) The government owned television network, known as the GBN emerged as favourite television station followed by MTV, followed by CC6.
n) For radio, Wee FM emerged most popular overall followed by GBN, followed by Boss FM.
o) As many as 21.4 % respondents did not listen to radio and 16.4% never watch TV
p) Newspaper readership showed low preferences compared with interest in TV and radio. The New Today had the highest number of readers per week with a total of 24.5% followed by The Grenada Informer with 18.9%, followed by the Grenada Voice with 5.6%.
q) 61.9% of respondents reported daily use of the internet. In somewhat similar levels as for TV and Radio, 17.1% said they did not use it at all

b) Recommendations specific for public awareness and communication approaches:

1. With social ills preoccupying the minds of the Grenadian population, UNDP-JCCCP must seek to link climate change issues with these social ills such as unemployment, and poverty as part of its awareness strategies so that the population can believe its severity and its potential impact on all sectors of society;
2. Given the continued predictions for climate change impacts on Caribbean islands, it would be important to create special programmes for school's outreach and where possible lobby for climate change topics to be introduced to school forums;
3. With the younger population the most to believe that the main cause of climate change was the use of electricity and burning of fuel, some specially targeted messages for older persons may need to be considered;
4. In general, respondents who were more educated tended to also believe that the burning of fuels and use of electricity more than those less educated. Interestingly, persons educated below secondary level tended to believe climate change was as a result of natural changes and/or acts of God with approximately 38% of respondents in this level of education suggesting these reasons;
5. Public Education campaigns must seek to improve conservation habits in water and energy sectors;
6. With 45.3% of respondents stating that they did not trust government agencies/officials with climate change information, some effort must be placed on strategizing to change this mind-set given that government officials are key agents driving local climate change initiatives;
7. Radio and TV are still the major information sources, and preferred medium for the people of Grenada and must be utilised heavily in order to reach the majority of audiences;
8. Internet based platforms must be used to reach young persons;
9. Despite the popularity with TV and radio as the main sources of information and also preferred media choices for continued information on climate change, yet 21.4% do not listen to radio and 16.4% do not watch TV at all, UNDP-JCCCP to use findings to ensure such persons are still reached through their alternative preferred information sources;

10. In developing awareness approaches, UNDP must pay close attention to findings related to whom people trust, and don't trust as messengers of climate change, and must also consider very carefully, the placement of messages – so that it takes advantage of times of highest TV viewing and radio listening patterns;
11. In general, UNDP must employ a multi-media approach to its education and awareness initiatives that also embraces a multitude of local stakeholders and promotes community participation.

11. APPENDIX A –RESEARCH INSTRUMENT

Empowered lives. Resilient nations.

Japan-Caribbean Climate Change Partnership

From the People of Japan

UNDP-JCCCP Knowledge Attitudes Practices (KAP) Survey on Climate Change

Household Questionnaire

SECTION 1 – OFFICIAL INFORMATION

This section contains background information, which should be filled in, prior to the interview without asking the respondent.

Enumerator Name	
Date of interview (month/day/year)	
Country in which interview conducted:	☐ 1. Dominica ☐ 2. Grenada
District/Parish in which interview conducted:	Write in the name of the District/Parish here

Introduction: Hello, my name is ....., and I am conducting a survey about the environment and media usage. We would very much appreciate your participation in this survey by agreeing to be interviewed. Whatever information you provide will be kept strictly confidential. Your name and answers will not be shown to or shared with any other person except persons working on the survey. Your answers will help us to plan and implement awareness programmes on related issues.

In order to participate in this survey, you must be 15 years or older and be a resident of this country. Participation in the survey is voluntary and you can choose not to answer any individual question or all of the questions. Your views are important to us and I hope you will participate.

Respondent agrees to be interviewed (If no, keep tally on separate sheet of paper)

SECTION 2 – DEMOGRAPHICS [A]

2.1 How old were you on your last birthday?

1. 15-24 y.
2. 25-39 y.
3. 40-54 y
4. 55+y

1.2 Sex (do not ask)

1. Male
2. Female

SECTION 3 – GENERAL ENVIRONMENTAL AWARENESS

3. 1 What do you consider to be the most serious problem in the CARIBBEAN today?(*Use Flashcard*)

	Most Serious Problems		
	1st mention	2nd mention	3rd mention
a) None/No Other	0	0	0
b) Poverty and hunger	1	1	1
c) Unemployment	2	2	2
d) Corruption	3	3	3
e) Global warming/Climate change	4	4	4
f) The global economic downturn	5	5	5
g) Crime and violence	6	6	6
h) Health and disease (Diabetes, HIV/AIDS etc.)	7	7	7
i) Improper use of land	8	8	8
j) Youth delinquency	9	9	9
k) Child abuse	10	10	10
l) Other_____	11	11	11

3.2 I am going to ask you some questions about the environment. Think about how aware you are, or feel about the environment. Thinking back, what two things e.g an event, something you saw, read, heard or even experienced would you say have had the most impact on you/or that stirred your interest?

a) ……

b)……

3.3 How important is the environment and natural resources to national development?

1. Very important
2. Important
3. Little importance
4. Not important

3.4. What natural assets/natural resources do you think is most important to the country?

	How important?		
	Very important	Important	Not important
a) Water	3	2	1
b) Soil and land	3	2	1
c) Beaches and Seas	3	2	1
d) Forests	3	2	1
e) Wildlife/biodiversity	3	2	1
f) Waterfalls	3	2	1
g) Cultural heritage	3	2	1

h) Education and Human resources	3	2	1
i) Religious Teachings	3	2	1
j) Other_____	3	2	1

3.5 Would you say your community is in danger from any of the following natural disasters?

	Yes	No	DK/NS
a) Flooding	1	2	3
b) Landslides/landslips	1	2	3
c) Volcanic eruption	1	2	3
d) Earthquake	1	2	3
e) Coastal erosion/ loss of beaches after heavy rains	1	2	3
f) Drought/water shortage	1	2	3
g) Storms/hurricanes	1	2	3
h) Other…….	1	2	3

SECTION 4 – AWARENESS OF CLIMATE CHANGE: In this section, I am going to ask you about climate change

	Yes	No	Not sure
4.1. Have you ever heard mention of the term Climate Change?	1	2	3
4.2. What do you think is meant by the term climate change?			
4.3. Have you ever heard that the Earth's climate, or its weather patterns are changing?			
4.4. Have you personally noticed changes in the following weather patterns in recent times?	Yes	No	
a) More rain/ less rain/ unpredictable rain patterns	1	2	
b) More storms/hurricanes	1	2	
c) Stronger storms /hurricanes	1	2	
d) Hotter days/nights	1	2	
e) Other_____	1	2	

4.5 Where have you heard/read about it? [Circle 1 (i.e. "Unaided") for the first responses received without any probing; then ask about those listed that respondent did not mention – circle 2 (i.e. "Aided") if they respond in the affirmative and 3 ("no mention at all") if they respond in the negative]

	Unaided	Aided	No mention at all
a) Radio: Local	1	2	3
b) Radio: Foreign	1	2	3
c) TV: Local	1	2	3
d) TV: Foreign	1	2	3
e) In a Movie (List) ……	1	2	3
f) On the Internet	1	2	3

g)	In the Newspapers	1	2	3
h)	In school	1	2	3
i)	At work	1	2	3
j)	Other	1	2	3

4.6 Have you ever used the internet to search for information on climate change?

1. Yes 2. No ……. IF NO, skip to 5.1

4.7 What difficulties do you experience in using information on climate change that is available from the Internet? (check all that apply)

		Mention	No mention
a)	None	1	2
b)	The information is too technical/difficult to understand	1	2
c)	Could not find information	1	2
d)	Other (Specify)	1	2

SECTION 5 - KNOWLEDGE OFAND ATTITUDES TOWARDS CLIMATE CHANGE

5.1 Let us say "Climate Change" refers to "changes in weather patterns over time". Based on this meaning and your own observations, how serious a problem do you think climate change is at this moment? Please use a scale of 1 to 10 where 1 is "not serious at all" and 10 is "extremely serious"; you may use any number in-between. *Use Flashcard.*

Not a serious problem at all									An extremely serious problem
1	2	3	4	5	6	7	8	9	10

5.2 I am going to read you a number of statements. Please tell me whether you "agree" (A) or "disagree" (D) with each of them, and how strongly e.g. "strongly agree" (SA) or "strongly disagree" (SD).

		SA	A	Neither A nor D	D	SD
a)	Persons engaged in climate change work are making a big deal of nothing	1	2	3	4	5
b)	Climate change is not affecting us in our island	1	2	3	4	5
c)	Caribbean countries are not responsible for causing global climate change	1	2	3	4	5
d)	We are too small to do anything about climate change	1	2	3	4	5
e)	Countries in the Caribbean should work together to deal with climate change issues	1	2	3	4	5
f)	People need more information on climate change	1	2	3	4	5
g)	Children should be taught about climate change in school	1	2	3	4	5

5.3 How do you FEEL about climate change?

		Mention	No mention
a)	Fearful/afraid	1	2
b)	Confused	1	2
c)	Angry	1	2
d)	Powerless, I can't do anything	1	2

e)	Hopeful, because we can do some things to help protect ourselves against climate change	1	2
f)	Sad, because we might lose our way of life	1	2
g)	I need more information	1	2
h)	People are making a big deal about nothing	1	2
i)	I don't care about climate change	1	2
j)	Other _____	1	2

5.4 How well informed do you think you are about the following?

	CLIMATE CHANGE	Not at all Informed	Somewhat Informed	Very well informed
a)	What is **causing** the climate to change?	1	2	3
b)	Possible **effects** of climate change	1	2	3
c)	What can be done to **reduce** climate change	1	2	3
d)	Things that can be done to **protect** yourself and your family from climate change	1	2	3

5.5 Tell me one (1) main reason or cause why you think the climate might be changing? (*Use Flashcard)*

a) These are just natural changes 1
b) The changes are acts of God 2
c) People's use of electricity and burning of fuels 3
d) I don't believe the climate is changing 4
e) Other _____ 5

5.6 Do you personally do anything that contributes to climate change?

1. Yes 2. No 3. Don't know/not sure

5.7 Do you think the following are possible effects of climate change? (Yes/No/don't know)

		Yes	No	Don't Know
a)	Stronger hurricanes and storms	1	2	3
b)	Loss of different types of plants and animals	1	2	3
c)	Sea level rise/sea level getting higher	1	2	3
d)	Drought (harsh dry periods)	1	2	3
e)	Loss of coral reefs	1	2	3
f)	Earthquakes	1	2	3
g)	More diseases	1	2	3
h)	Loss of buildings close to the sea/coast	1	2	3
i)	Loss of food crops/plants/trees	1	2	3
j)	Flooding	1	2	3

SECTION 6 – BEHAVIOURS AND ATTITUDES TOWARDS ADAPTATION AND MITIGATION

6.1 During the past six months, have you done anything to protect you and/or your family from a hurricane or storm?

1. Yes 2. No 3. Don't know/not sure

IF NO, skip to 6.3

6.2 If ***Yes***, what have you done? [Circle 1 for the first responses given without any probing; then ask about those listed that respondent did not mention – circle 2 if they respond in the affirmative and 3 if they respond in the negative]

	Unaided	Aided	No mention at all
Purchased torch lights	1	2	3
Cleaned drains	1	2	3
Cut tress and branches	1	2	3
Strengthened roof	1	2	3
Stocked canned foods	1	2	3
Bought House Insurance	1	2	3
Put on/Installed hurricane shutters	1	2	3
Other _____	1	2	3

	Yes	No	Don't Know	(b) If "Yes", please list them [accept up to three (3)]
6.3. (a) Are you aware of any organizations that are active in dealing with climate change issues in your country?	1	2	3	(i)
				(ii)
				(iii)
	Yes	No	Don't Know	(b) If yes, what is the government doing (accept up to three (3)
6.4. (a) Is the government doing anything to reduce the effects of climate change?	1	2	3	(i)
				(ii)
				(iii)

6.5 What else do you think the government should do? [Circle 1 for the first responses given without any probing; then ask about those listed that respondent did not mention – circle 2 if they respond in the affirmative and 3 if they respond in the negative] ***DO NOT READ OUT ANSWERS***

		Unaided	Aided	No mention at all
a)	Nothing/Government is already doing all it can	1	2	3
b)	Charge higher **taxes** on goods that are not environmentally friendly	1	2	3
c)	Give **benefits** for buying items that are environmentally friendly	1	2	3
d)	Give people more information/ increase public awareness	1	2	3
e)	Regular maintenance of drains/roads/bridges	1	2	3
f)	DO NOT import goods that damage the environment, e.g. leaded gasoline	1	2	3
g)	Replant trees/ introduce reforestation programme	1	2	3
h)	Promote rainwater collection and water conservation practices	1	2	3
i)	Ensure waste/garbage is collected or disposed of/thrown away from properly	1	2	3
j)	Enforce existing laws/create new environmental laws	1	2	3
k)	Conduct more research	1	2	3
l)	Other_____	1	2	3

6.6 Do you currently do any of the following things?

		Yes	No	Don't Know
a)	Turn off lights when not in use	1	2	3
b)	Use energy saving light bulbs	1	2	3
c)	Use energy saving appliances	1	2	3
d)	Use public transportation to save gas	1	2	3
e)	Car pool (share)/travel with friends to save gas	1	2	3
f)	Use a solar water heater	1	2	3
g)	Switch off standby devices	1	2	3
h)	Defrost refrigerator/freezer often	1	2	3
i)	Re-use or recycle waste when possible (e.g. plastic containers)	1	2	3
j)	Buy from companies that sell or produce environmentally friendly/climate friendly goods and services	1	2	3
k)	Other(list) _____	1	2	3

6.7 How often do you talk about **saving energy**(electricity, gas, fuel) in your home?

- ☐ 1. Often
- ☐ 2. Sometimes
- ☐ 3. Rarely
- ☐ 4. Not at all

6.8 How often do you talk about **saving water** in your home?

- ☐ 1. Often
- ☐ 2. Sometimes
- ☐ 3. Rarely
- ☐ 4. Not at all

6.9 Do you think the following would be useful ways for households to adapt to/survive climate change?

		Yes	No	Don't know
a)	Build further away from the coastline/ shoreline/rivers	1	2	3
b)	Move to higher ground/further inland	1	2	3
c)	Construct homes according to government building rules	1	2	3
d)	Get home/property insurance	1	2	3
e)	Prepare for disasters/hurricanes	1	2	3
f)	Conserve and reuse water	1	2	3
g)	Collect and use rainwater	1	2	3
h)	Install a water tank/water storage system	1	2	3
i)	Keep vegetation, trees and plants in yard and garden to protect soil	1	2	3
j)	Other…….	1	2	3

6.10 Would you like to personally receive information about climate change?

- ☐ 1. Yes, definitely
- ☐ 2. Yes, maybe
- ☐ 3. No, hardly
- ☐ 4. No, not at all, **Skip to Q6.13**
- ☐ 5. Don't know

6.11 How would you like to receive information about climate change? *Check all that apply. DO NOT READ ANSWERS*

		Mention	No mention
a)	In the Media (check all that apply)		
i.	TV	1	2
ii.	Radio	1	2
iii.	Newspapers	1	2
iv.	Text messages (SMS/BBM/ISM/MMS, etc.)	1	2
v.	Internet/websites	1	2
vi.	Email	1	2
vii.	Facebook and other social networking sites	1	2
b)	Notices in public places/Billboard advertisements	1	2
c)	Notices in the mail	1	2
d)	Workshops/seminars/Exhibitions	1	2
e)	Other_____	1	2

6.12 How would you like the information packaged? Tell me how much interest you have in each of the following, i.e. High, Moderate, Low, or None at all. *Use Flashcard*

		High interest	Moderate interest	Low interest	No interest
a)	TV news reports	4	3	2	1
b)	TV advertisements	4	3	2	1
c)	Radio news reports	4	3	2	1
d)	Radio advertisements	4	3	2	1
e)	Newspaper articles	4	3	2	1
f)	Pamphlets/brochures/posters	4	3	2	1
g)	Local Comedy shows	4	3	2	1
h)	Local Drama shows	4	3	2	1
i)	Documentaries	4	3	2	1
j)	Other … (specify)	4	3	2	1

6.13 Of the following possible sources of information, which do you trust the **most**, and which do you trust the **least** – to give correct information about climate change? Only identify one (1) each

	(i) Trust **MOST**	(ii) Trust **LEAST**
Scientists/ environmental groups	1	1
Print media: newspaper and magazines	2	2
Mass media: radio and television	3	3
The Internet	4	4
Government agencies/officials	5	5

SECTION 7 –GENERAL MEDIA PRACTICES

I will now ask you a few general questions that are ***not*** related to climate change. These questions are about your media use and patterns/ to see how you generally get information. These are necessary, to assist us with building awareness on climate

change, and so these questions about radio, TV and internet use will help us know how, where and when to place our climate change messages.

7.1 What times are you generally watching **Television/Cable TV**?

Times		(i)		(ii) Channels most watched 1. Local	2. Cable
WEEKDAYS		*Yes*	*No*		
(a) Morning	6am - 10am	1	2		
(b) Daytime	10am -7pm	1	2		
(c) Primetime	7pm-10pm	1	2		
(d) Late night/overnight	10pm+	1	2		
WEEKENDS					
(e) Daytime	10am -7pm	1	2		
(f) Evenings	7pm-10pm+	1	2		
(g) Never/I do not watch TV		1	2		

If Never/I do not watch TV, - DO NOT ASK Q7.2 and Q7.3 -Skip to 7.4

7.2 Who are your favourite local TV personalities? Name TOP 3

a) _____
b) _____
c) _____

7.3 Which is your favourite local TV station for each of these:

a. Local News_____
b. Entertainment_____
c. Overall_____

7.4 During what times are you generally listening to the **radio**?

				Radio stations most listened to	
Times				Name of **First**	Name of **Second**
WEEKDAYS		yes	no		
On the way to work/on the Bus in the morning/Drive time	6am - 10am	1	2		
Daytime	10am -3pm	1	2		
On the way home from work/on the bus/drive time	3pm-7pm	1	2		
Evening	7pm-10pm	1	2		
Late night/overnight	10pm+	1	2		
WEEKENDS					
Daytime	10am -7pm	1	2		

Evenings	7pm-10pm+	1	2		
Never/I do not watch TV		1	2		

If Never/I do not listen to the radio, Skip to 7.7 (DO NOT ASK Q7.5 and Q7.6)

7.5 Who are your favourite **radio personalities**? Name Top 3

a. _____

b. _____

c. _____

7.6 Which is your favourite **radio station** for each of these:

a. Local News _____

b. Music and entertainment_____

c. Overall_____

7.7 In the past month how often did you read each of the following newspapers?

	(a) New Today	(b) Grenadian Voice	(c) Grenada Informer	(d) Grenada Advocate
every week	1	1	1	1
every other week	2	2	2	2
every so often	3	3	3	3
once or twice in the past month	4	4	4	4
never in the past month	5	5	5	5
not applicable/ never heard of it	0	0	0	0

7.8 If any of your responses above (Qu. 7.7) is 1 to 4,, which newspapers do you read most?

a. _____ b. _____ c. _____

7.9 How often do you use the internet?

1. Every day 2. Every other day 3. Once a week 4. Once in a while 5. Not at all

7.10 What is your primary purpose for using the internet?

……

7.11 Do you use the internet as a tool to search for news? Yes…… 1 No……..

SECTION 8 – DEMOGRAPHICS [B]

I am going to ask you some questions now that you may find sensitive – but they are very important questions as the answers will assist in helping us come up with strategies to address climate change for different groups of people

8.1. What is the highest level of schooling that you completed? If you never went to school, please say "no formal school."	8.4. Which of the following appliances/ household	yes	no

No formal school	0
Primary incomplete or complete	1
Secondary incomplete	2
Secondary complete	3
Post-secondary (diploma or associate degree)	4
Trade or vocational school	5
Tertiary (college, university, graduate school)	6

8.2. What is your occupation?

_____

8.3. 8.6. How well do you read?

Very well	1
Moderately well	2
Poor	3
Not at all	4

How many persons <u>incl. yourself</u> currently live in this household? (*include babies and elderly people*)

persons: _____

equipment does your household have in use?

a)	TV, with Cable	1	2
b)	TV, without Cable	1	2
c)	Computer with internet	1	2
d)	Computer *<u>without</u>* internet	1	2
e)	Cellular phone without internet	1	2
f)	Cellular phone with internet	1	2
g)	Radio	1	2
h)	Solar heater	1	2
i)	Water tank(s)	1	2

8.5 What is the average monthly income for your household in EC dollars?

Less than $500	1
$500 to $999	2
$1,000 to $2,999	3
$3,000 to $4,999	4
$5,000 to $6,999	5
$7,000 or more	6
Refuses to answer	7

We need your name and number purely for the purposes of verifying your answers, just in case during data entry and analysis, there is something that is not clear

8.7 NAME……. 8.8 TELEPHONE NUMBER……