NATIONAL STATISTICAL OFFICE
Government of Grenada

Grenada
Core Welfare Indicators
Questionnaire (CWIQ) Survey
2005

BASIC REPORT

Key Indicators of Development Performance
Including an assessment of the impact of
Hurricane Ivan

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FOREWORD

This report of the first Core Welfare Indicator Questionnaire (CWIQ) Survey carried out in Grenada responds to an urgent long-standing need for documentation of social and economic conditions in that country.

The devastation following the passage of hurricane Ivan in September 2004 lifted the social and economic challenges to a new and uniquely urgent level while simultaneously reducing the capacity of the Government of Grenada to respond to the needs of its citizens.

The ability to implement the CWIQ Survey reflects the coming together of a number of critical factors. It demonstrates the commitment of the Government of Grenada to face the massive rebuilding task in a determined and informed manner. It demonstrates the flexibility of a survey instrument that could be adapted to capture post-Ivan developments and be mounted under extremely difficult field conditions with a minimum of re-training for staff.

It demonstrates further the practical value of well-planned assistance from the donor community. At a time when the Government of Grenada would have been preoccupied with the immediate demands of restoring physical facilities and the services that its citizens rightfully demand, the United Nations Development Programme (UNDP) and the Caribbean Development Bank (CDB) were able to source, fund and put in place the technical capacity needed to carry out the survey.

The result is not merely another document. The CWIQ Survey Report is a guide to where the most urgent need exists and can reassure planners that their efforts are correctly targeted. Equally as important is that the country now has a trained cohort of individuals with the capacity to repeat the exercise to continually secure up-to-date information and, over time, paint a picture of continuing needs and successful achievements.

We believe that all parties who have contributed to the implementation of the Core Welfare Indicator Questionnaire Survey and to the production of this report can be justly gratified at their achievement.

Rosina Wiltshire   Compton Bourne

Resident Representative   President (?)

UNDP   Caribbean Development Bank

PREFACE

The Core Welfare Indicator Questionnaire survey is a household survey instrument developed by the World Bank in close collaboration with UNDP, UNICEF and ILO. It measures changes in key social indicators of population groups, specifically indicators of access to, utilization of and satisfaction with core social and economic services. The CWIQ is very effective for improving project and sector programme design, and for targeting essential services towards the poor and most disadvantaged communities. Over time, the CWIQ becomes a monitoring tool for assessing implementation effectiveness and the impact of programs/projects on living conditions (CWIQ handbook p. 109). This survey has been conducted mainly in African countries, including Ghana, Kenya, Nigeria and Tanzania, but has since crossed the Atlantic first to St. Lucia, where a successful pilot was run in October 2004, and then Grenada.

The CWIQ was conducted in Grenada to assess the change in social conditions following the devastating impact of Hurricane Ivan, and provide the necessary data to inform national reconstruction efforts. The survey was modified and a "Hurricane Ivan Module" included in the main questionnaire frame to capture the effects of the hurricane on the lives and livelihoods of population groups and in particular, the impact on women. The Grenada survey would be the first to provide up-to-date information on post-Ivan conditions, and to aggregate the data into a viable set from which policy-makers can work.

To achieve high quality results, the survey drew upon international and local expertise to manage the process. The following individuals were key to the successful implementation of the CWIQ in Grenada:

- ***Timothy Marchant***, *who was instrumental in developing the CWIQ methodology, and Mr. James Otto, served as independent international consultants and conducted training sessions for enumerators and data processing staff. Special emphasis was placed on proper administration of the CWIQ questionnaires by enumerators and training in the use of the CWIQ software by data processing staff to validate data provided by completed questionnaires.*
- ***Edwin St. Catherine***, *Director of Statistics of St. Lucia, was instrumental in ensuring that the functions of the TELEFORM package were understood to facilitate expedient and effective scanning of questionnaires. Previous use of TELEFORM in the 2001 Census was an asset to the CWIQ survey, as the programme was readily available and some transferable skills proved to be an advantage.*
- ***Dr. Dessima Williams***, *Gender Consultant, assisted in the development of the questionnaire and the training of field staff so that gender would be highlighted in the findings of the survey. She also assisted in making the issues relating to gender very clear in the report.*
- *The Coordinator, UNDP Liaison Office, Grenada **Michelle Gyles-McDonnough**, Programme Manager Poverty Reduction/HIV-AIDS, UNDP Barbados **Leisa Perch**, and the Poverty Programme Adviser of UNDP Barbados, **Elbert Ellis**, were influential in ensuring that the CWIQ was implemented in a timely manner and that the objectives of the survey were met.*

For making this project a reality, I express immense gratitude to all the funding and support agencies involved:

- *UNDP, for conceiving the CWIQ and providing both financial and technical support, and working very closely with the Government in making it successful.*
- *CDB, for providing financial support.*
- *UNIFEM, for providing the expertise to conduct the gender analysis of the findings and assessing particularly the impact on women.*
- *UNECLAC, for providing expertise to undertake the analysis of social vulnerability and the implications of the disaster.*

Also I extend heartfelt thanks to the staff of the Central Statistical Office, Grenada and UNDP who worked tirelessly to secure the credibility of the data produced and ensure that the objectives of the CWIQ were realized.

Benefiting from combined national and international assistance, the CWIQ has:

1. *Produced key social indicators for different population subgroups in the country.*
2. *Developed a simple and quick survey instrument for monitoring changes in living conditions over time, and for reporting annually on welfare and social trends, to the community level.*

3. *Encouraged, by virtue of its process, wider dialogue and participation of stakeholders in the development planning process.*

The report which follows, serves as a multi-purpose device, providing vital information to the Ministries of Health, Finance and Social Development in Grenada, to non-governmental organisations and international bodies, including UNICEF, UNDP, ILO, UNIFEM and the World Bank

Curlan Gilchrist
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INTRODUCTION

The reduction of poverty has become one of the prime objectives of national development programs worldwide. The Caribbean islands are no exception and have set as their development goals, the improvement in living standards across all population groups, particularly amongst the poorest and most vulnerable.

The poverty rate for Grenada, a Small Island Developing State (SIDS), has been estimated at 32 percent in 2002 while approximately five per cent of the population was estimated to be living in extreme poverty. Unemployment was estimated at 12.2% in 2002. In addition, 64% of the population did not have formal education certification and more than 25% of students leaving primary school had no access to secondary school education. While the government increased spending on education from 5.3% of GDP in 2000 to 6.3% in 2002, low teacher qualification remains endemic. Urban migration and urban squatting have increased demand for safety nets for the poor and made a streamlined poverty reduction programme crucial for Grenada. Grenada has a 1% prevalence rate of HIV. Providing cost-effective primary healthcare continues to be one of the main challenges for government. The MDG report points to an increase in the number of HIV/AIDS orphans in Grenada.

The last full poverty assessment for Grenada was conducted in 1996. Since then, there has been no detailed assessment of social conditions in the country. The 2004 Human Development Report placed the of Grenada in the medium human development range. However, the impact of Hurricane Ivan would have significantly reduced the island's ranking overnight. The livelihood of every Grenadian was disrupted and serious damage done to the country's economy. Hurricane Ivan was classified as a category 4 hurricane on the Saffir-Simpson scale when it struck Grenada on September 7th, 2004. When it was over, 28 people were reported dead, 353 hospitalized, and 90% of the housing stock was damaged, leaving 30,000 people homeless.

Prior to this, the majority of the 102,000 inhabitants of Grenada made their living from tourism and agriculture. Both of these sectors were severely hit by Hurricane Ivan. It is feared that the proportion of the population living in extreme poverty might increase significantly in the aftermath of this disaster, including the number of vulnerable community groups, in particular women, children and the elderly. Farmers, constituting a substantial part of the labour force and making significant contribution to Grenada's economy have been severely impacted. In this new position, it seems almost impossible for Grenada to achieve the target of the Millennium Development Goals (MDG) without immediate, strategic, external interventions.

The post-impact Macroeconomic and Social Assessment of Grenada conducted by the Organization of East Caribbean States (OECS) in conjunction with the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) indicates that 31,000 jobs were lost in the Tourism sector; the Agriculture sector lost $53m in direct revenue and $46m in indirect revenue; and the GDP growth, originally projected at 4.7% for 2004, has consequently been revised to reflect a projected growth of -1.4% for 2004 and --- for 2005. In the area of housing, 89% of the stocks were damaged with 38% of that number seriously affected. Virtually 100% of the houses in the southern region of the island have suffered some degree of damage.

Poverty alleviation is at the heart of the government's development strategy. It will be important to the success of the strategy that appropriate systems are established for monitoring its implementation and for measuring impact of the various components on the lives and livelihoods of the population — particularly the poorest. Without such a mechanism it will be impossible to measure progress and to learn from mistakes and improve the effectiveness of government planning. Such a monitoring system will involve the collection of information from a variety of different sources, as well as the establishment of appropriate mechanisms for reviewing the data, and analysing them with a view to taking corrective measures to improve programme delivery.

Urban migration and urban squatting have increased demand for safety nets for the poor and made a streamlined poverty reduction programme crucial for Grenada.

In principle the basic statistical tools for a national poverty monitoring system include:
   (i)   a combination of census and survey data to generate poverty maps;
   (ii) a Living Conditions Survey for poverty assessments; and
   (iii) the compilation of annual time-series for monitoring key performance indicators.

While OECS countries have individual components, none has as yet a complete poverty monitoring system. Grenada is no exception. Although the country has the capacity to compile and disseminate basic social and economic statistics at an aggregate level, it lacks the capacity to undertake household surveys on a regular basis and to analyse (or make available for others to analyse) the data and use them for improving the design and delivery of public services. The strengthening of capacity to carry out a national household survey is therefore a critical prerequisite for implementing any forthcoming poverty reduction strategy. With this in mind the government approached the donor community for assistance to establish such a capacity and to carry out the first national monitoring survey since hurricane Ivan wreaked havoc on the island's social and economic infrastructure. Government was particularly interested in receiving assistance to undertake a Core Welfare Indicator Questionnaire (CWIQ) Survey.

In addition to meeting the usual CWIQ goals, the Grenada CWIQ had the additional task of measuring the impact of Hurricane Ivan on the livelihoods of different elements of the population.

T he CWIQ is a household survey that measures changes in key social indicators for different population groups – specifically indicators of *access*, *utilization* and *satisfaction* with core social and economic services. It is a very effective tool for improving project and sector programme design and the targeting of services towards the poor and most disadvantaged communities. When repeated annually, the CWIQ becomes a monitoring tool for assessing implementation effectiveness and the impact of programs/projects on living conditions. The CWIQ is being used increasingly as one of the key tools for monitoring PRSPs. It was piloted for the first time in the Caribbean in Saint Lucia in 2004. The pilot was a success and demonstrated that the CWIQ can serve not just as a tool that provides quality data quickly, but also as a capacity building tool that can be used to train the staff of national statistics offices in good survey practices, including preparing them for undertaking more complex surveys such as a living standards surveys, country poverty assessments and household income expenditure surveys.

The Grenada CWIQ survey is the second to be undertaken in the region. In addition to meeting the usual CWIQ goals, the Grenada CWIQ had the additional task of measuring the impact of Hurricane Ivan on the livelihoods of different elements of the population. The CWIQ was required to produce information leading to:
   • Clearer details and statistics on the impacts on women by the specific analysis of the data for gender;
   • Details on children and their living conditions; and
   • Detailed analysis of the social vulnerability implications of the disaster.

The survey was implemented over a four-week period in May and June 2005. Within a fortnight of the completion of fieldwork, a technical working group was established and met to review the initial outputs and to establish the outline for this, the first report. The intention of this report is to disseminate as rapidly as possible the basic data and results emanating from the survey. It is by no means exhaustive but is intended to "whet the appetite". The first set of summary tables to be generated out of the survey data is presented in its entirety, and is accompanied by some preliminary descriptive analysis to show the potential for using these data for monitoring the delivery of government programs and assessing the impact. The use of leading indicators of access, use and satisfaction to evaluate different sectoral programmes is stressed. It is intended that this report should be the first of a series of analytical reports to be produced using the CWIQ survey data. In parallel with the preparation of this report, a CD-ROM is also being prepared containing all the data and meta data relevant to the survey. This will be invaluable for carrying out more in-depth analysis of the data.

EXECUTIVE SUMMARY

Sustainable human development has emerged as the leading goal for governments in improving the quality of life of citizens. But given the ephemeral nature of the concept of quality of life, a major task for any government working toward sustainable development lies in the challenge of definition and measurement.

The Millennium Summit of 2000 made a major contribution to facing that challenge by formulating a series of measurable goals, consisting of already identified needs in the majority of developing countries, which were designated the Millennium Development Goals (MDGs). A significant advance in the formulation of the goals came through establishing targets that each country could apply to its own situation and could adapt as necessary.

An early result of accepting this new approach was the revelation of the gaps in information, found both in the kind of information collected and in the collection process.

The Grenada Core Welfare Indicators Questionnaire (CWIQ) Survey Report reflects this challenge of measurement in Grenada, made more urgent by the passage of Hurricane Ivan, which created additional need for services while reducing both the services available and access to the information needed to provide the services. The CWIQ Survey also helped to define key social indicators; develop a simple and quick survey instrument for monitoring ongoing change in living conditions; and encouraged wider dialogue and participation among a wider range of interests.

The CWIQ Survey required a fresh look at sampling, with the survey team starting from the enumeration districts of the 2001 census and adjusting to accommodate changes over the four to five years following, and allowing for changes caused by the passage of Ivan.

Another significant adaptation was made in the choice to divide the population into welfare quintiles rather than establish a fixed poverty line. An immediate advantage was the creation of a sliding scale reflecting varying levels of need in the society as opposed to a single division between poor and rich.

The Government of Grenada has set as its medium term goal the return of the economy to sustained growth through macroeconomic stability and poverty reduction.

Monitoring National Development Goals

The Government of Grenada has set as its medium term goal the return of the economy to sustained growth through macroeconomic stability and poverty reduction. Specifically, the objective is to create a diversified and flexible economy capable of adapting and responding positively to the changes in the international economic environment through strengthening the operations of central government and increased emphasis on poverty reduction.

Once goals are set, the levels of achievement must be monitored to track economic progress and changes in poverty levels. Poverty monitoring requires collection of accurate data, normally at a cost that limits the frequency of the exercise and thus the timeliness of the data.

The CWIQ Survey is a lighter instrument that can be employed on an annual basis to monitor leading indicators and to track the more immediate effects of the sectoral programmes. The particular strengths of the survey are that it allows comparisons across geographical regions and, when repeated over time, can be used to build up time series that highlight obstacles to progress. The small sample sizes used, however, require caution in comparisons.

Assessing the Impact of Hurricane Ivan

Key qualities of the CWIQ Survey are its flexibility and responsiveness to local situations. The generic questionnaire can be modified to reflect changes and to capture topical information. In the Grenadian context, the questionnaire was adapted to capture the effects of Hurricane Ivan, providing the first real systematic study of the devastation caused by the hurricane.

According to the survey, overall nearly ninety percent of dwellings in the country were damaged, with half sustaining serious damages and approximately 5 percent of dwellings

being completely destroyed. The highest levels of damage to dwellings occurred in St. George's, St. David's, St. Patrick's and St. Andrew's. The poorest households were the most adversely affected, with 95 percent suffering damages as compared to 65 percent in the least poor group. Damage was also more severe among the poor.

Almost half of households across Grenada were displaced, just over half for several days only, 24 percent for several weeks, and 13 percent for several months. Some 7 percent were still displaced seven months after the hurricane. Most displaced households moved to family and friends for shelter.

Only 10 percent of damaged households had home insurance, with none among the poorest quintile. Home insurance was most evident in St. George's. Over a third of damaged households are being rebuilt. Half of the householders who are rebuilding are aware of the building codes and, among those who are aware, nearly all are complying with the codes.

About 75 percent of households have received support post-Ivan, with the family being the most important source of help. The most common forms of support received were food and water, and building materials.

Physical injuries and mental sickness respectively occurred in less than 10 percent of the households. Most physical patients have recovered but less than one quarter of the mentally affected have recovered.

Damage to key assets was highly variable. Ten percent of vehicles were damaged, half of them severely. Damage to tree and cash/short crops was significant and severe but damage to livestock was minimal. Recovery has been variable.

Earnings have fallen, especially from wage employment, through loss of jobs and the reduction of salaries. Income from businesses fell by 15%. The disaster also had an impact on nutrition, and affected the capacity of individuals to bounce back. Food security has also been compromised through increased food imports and the loss of the nutmeg and cocoa industries, which would also affected the national economy.

Male heads of households account for the vast majority employed in the private formal sector, and of persons who are self-employed.

Household Composition

Household Head: Just under half of households in Grenada are female-headed, with more than one fifth in the rural areas falling into the lowest welfare quintile. Well over half the female heads are unemployed, as compared with one quarter of male heads. Similarly half the female heads are not in marital union as compared with one quarter of male heads of households. Male heads of households account for the vast majority employed in the private formal sector, and of persons who are self-employed. Female heads of household predominate in the private informal sector.

Households in Poverty: A significantly large proportion of households within the bottom quintile of the rural households are female-headed, compared with households in the highest quintile where most heads are men. For the urban households, 44 percent of female heads live in the bottom 3 quintiles as opposed to a mere 18 percent for the males.

Dependency Ratio: The dependency ratio is 50 percent or higher in all parishes and the highest ratios are found among the unemployed and in the private informal sector. The dependency ratio is higher for female-headed households that for male.

Education

Literacy: Grenada has a 96 percent adult literacy rate. The CWIQ methodology for measuring literacy asked the question "Can you read and write?"

Access to schools: Access to schooling is defined in terms of time taken to reach the nearest facility, both primary and secondary and households within 15 minutes of a school are considered to have access. Less than half of households with primary school age children have access; this number falls to 24 percent for secondary schools. Urban households all have easy access while less than 30 percent of poor students from the rural areas do. However, despite limited access, enrolment figures are high with rates of over 90%.

Satisfaction*:* The Survey measured satisfaction with educational services by asking "Did you have any problems with the school?" Satisfaction with primary school is above 75 percent and secondary approximately 80%. There is however considerable variation between parishes, and particularly between urban and rural households.

While urban households clearly have an advantage with access, this does not appear to have much impact on enrolment rates and the rates among the poor are comparable with those of the non-poor.

Health and Child Care

Health Access: As with the education services, access is based on the time needed to reach the nearest health facility. In urban areas, 68 percent of the population have a health facility within 15 minutes, compared with only 30 percent for the rural population. Just under 9 percent of the population reported that they had had need of health services in the previous four weeks.

Use*:* 'Users' are persons who had been sick or injured in the past 4 weeks and made use of a health facility. The survey reveals a comparatively lower level of use by the rural poor compared with other rural households. The relatively high levels of access in the urban areas are not reflected in their use, suggesting that other factors could be affecting use.

Satisfaction: Overall, the level of satisfaction with health services is high. The most common reason given for dissatisfaction is 'long waiting time', followed by 'cost 'in the rural areas, and unsuccessful treatment in urban. Persons in Carriacou expressed the highest level of dissatisfaction with medical services, with high cost being the most prevalent reason. The perception that private doctors provide higher quality service than public facilities may be influencing preference for private doctors.

Child Health: Live births in the preceding twelve months largely received pre-natal care. In St. Patrick's, however, only 60 percent of pregnant women received pre-natal care, a factor the survey data could not explain.

Across the nation, nearly two thirds of children had had all three development assessments but with considerable regional variation. The rural rate substantially exceeded the urban rate, possibly explained by a lack of vaccines and loss or unavailability of records following Ivan. The figures may be under representing the situation since children require all necessary vaccines before entering school.

Employment

Some two thirds of the population were in the active population (labour force), with 81 percent employed. Unemployment is highest among the poor, and among the 15-29-year-olds of both sexes.

Employed Population by Status*:* Paid employees and the self-employed respectively make up the great majority of the employed population, with males making up the larger percentage in each case. Self-employment is highest in parishes best known for fishing.

Private enterprise employs the highest percentage of workers and more males than females. More females than males are employed in the public sector. The highest levels of employment are found in Construction and Services. Employment still falls along traditional gender lines, best illustrated in the construction, wholesale and retail, and hotel and restaurant sectors.

Unemployment*:* The total unemployment rate is 18.8%, higher among women than men. In the urban area, female unemployment is more than double the male rate. Nearly one third of youth are unemployed, again with higher rates among females.

Household Assets

Apart from the traditional poverty analysis based on household income, an equally valid approach is to look at 'asset ownership', where asset accumulation becomes an indicator of households moving out of poverty.

Across the nation, nearly two thirds of children had had all three development assessments but with considerable regional variation. The rural rate substantially exceeded the urban rate

Home Ownership*:* Approximately four fifths of households own their homes and one tenth rents. Home ownership is significantly higher in the rural areas.

Land Ownership: Land is a valuable asset both as a productive resource and as collateral for investment and business development. Seventy-nine percent of households own land, with high levels in all parishes and minimal variation across socio-economic groups. The number of male-headed households owning land is similar to that of female-headed households but the amount of land owned by male-headed households appears to be significantly more.

Vehicles and other assets: Just under one fifth of the population own a vehicle, with low levels of ownership among the poor, and the urban non-poor owning twice as many vehicles as the rural non-poor. This gives the perception that a vehicle is a luxury product and an urban phenomenon. Male-headed households are three times more likely to have a vehicle than female-headed households.

Stoves are the most common appliances followed by electric irons, refrigerators, television and radio/stereo sets. Analysis by gender of household head showed no significant differences in the levels of owning assets.

Housing and Amenities

... the urban non-poor own[...] twice as many vehicles as the rural non-poor. This gives the perception that a vehicle is a luxury product and an urban phenomenon.

Most Grenadians live in undivided private houses with three or more rooms but a significant portion of the poor live in houses with two or fewer rooms. Overcrowding is prevalent in approximately 14 percent of the households, probably aggravated by Hurricane Ivan.

Sheet metal is the main roofing material at the national level. There is a marginal difference between the percentage of households living in houses with wooden external walls and households having outer walls of stone, concrete or blocks. The majority of the poor households live in wooden houses.

Water, Sanitation and Disposal: There is almost universal access to water within 15 minutes, with 86 percent of households having access to safe water supply. The overall good access to a safe water source does not apply to Carriacou, with only 11 percent of the households having a safe source of water supply.

Over one third of households still use pit latrines and 61 percent use safe sanitation (flush toilets and ventilated pit latrines). Sanitation is a serious problem in poorer areas, despite an improvement in the number of households using flush toilets. Garbage collection is managed fully by the government and dumping and burning has been reduced and improved waste disposal increased.

Lighting and Cooking*:* The majority of households use electricity for lighting but there has been a decrease since 2004, possibly as a result of Hurricane Ivan. The use of kerosene for lighting is prevalent in poor areas. Gas is the main cooking fuel and firewood and charcoal use is negligible at national and parish levels.

Services

Among all the services, electricity is most frequently used, but usage was significantly affected by the hurricane. Telephone use, both fixed line and mobile, is high. Internet access is directly related to fixed lines and is high across all parishes, as is access to cable TV.

Police, bank and insurance services are not widely used. Despite overall low access to the nearest police station, police services appear more popular than private security. Commercial banks are the most popular of financial services.

The main reason given for not using telephone, public transport, and electricity services was the cost. Lack of adequate facilities was also a common reason for non-use.

1 – SURVEY METHODOLOGY, TECHNICAL NOTES AND DEFINITIONS

1.1   INTRODUCTION

The CWIQ provides a massive source of information that can be accessed by a wide range of users for research and policy and programme design and for monitoring and evaluation purposes. In this, the initial report, it is possible only to provide a flavour of what the survey has to offer and the basis for further detailed analysis to inform government policy and action. The report itself contains some analysis of the survey data, but is primarily a source of reference on current social and economic statistics pertaining to Grenada. In parallel with the report, a CD-ROM has been prepared which contains all the survey data and tables in electronic form. The CD-ROM is obtainable from the Central Statistical Office (CSO).

 The report is structured as follows:

> Chapter 1 introduces the survey by describing the **survey methodology,** including the **sample design.** It also provides **Technical Notes**, and **Definitions** to help with a correct interpretation and use of the survey findings and results. It is important that it be read in conjunction the tables presented later in the report.

> Chapter 2 shows how to use the survey for policy-relevant analysis and for monitoring socioeconomic outcomes of national development policies and programs. It is divided into two sections. The first focuses on how to use the CWIQ for monitoring progress in meeting national development goals - including the Millennium Development Goals (MDGs). The section ends with the presentation of the summary **Table of Core Welfare Indicators**. The second section focuses on assessing the impact of Hurricane Ivan and measuring the extent to which it has affected the lives and livelihoods of different population groups.

> Chapter 3 is entitled **Survey Highlights** and includes a descriptive analysis of the main messages to come out of the survey. The analysis is by no means exhaustive, but is intended to serve as a guide to the reader to demonstrate the ways in which the survey data can be used and interpreted.

> Chapter 4 contains the set of **Basic Reference Tables** that were generated immediately after the survey. Again, the reader should refer to the technical notes and definitions in Chapter 1 to help with the understanding and interpretation of the tables.

The CWIQ provides a massive source of information that can be accessed by a wide range of users for research and policy and programme design and for monitoring and evaluation purposes.

1.2   TECHNICAL NOTES

A. SAMPLE SIZE AND SAMPLING ERRORS

The table of core indicators presented later in this chapter shows the margin of error for the country as a whole for each of the indicators. This can be used to gauge the precision of the estimates. Thus for example where the table shows that 22.3 percent of all households are single person households and that the margin of error is 3.1, this means that the real figure lies between 22.3 percent plus or minus 3.1 (i.e. 19.2 percent and 25.4 percent)[1].

The CWIQ survey was undertaken using a stratified two-stage probability sample. At the first stage, 88 Enumeration Districts (EDs) were selected with probability proportional to size. The list of EDs came directly from the 2001 population census. The EDs were stratified by parish in order to provide an even spread of households in all parishes. All households in the selected EDs were relisted because census data were several years out of date and because of the significant population movements resulting from Hurricane Ivan. A

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[1] Error margins are calculated at the 95% confidence level.

comparison of household numbers, ED by ED, shows that the differences between the census figures and those from the CWIQ are often quite large but are fairly normally distributed. There was however a small number of EDs where there was a clear undercount – either due to population exodus resulting from Ivan, or due to poor fieldwork. Once the relisting was complete, the final sample of 12 households per ED was selected yielding a total sample of 1042 households. Given the size and variability of the island, this is a relatively small (but representative) sample whose estimates may be expected to be relatively robust at the national level. However when the results are disaggregated to lower levels, e.g. to parish level, the size of the margin of error will increase.

Figure 1
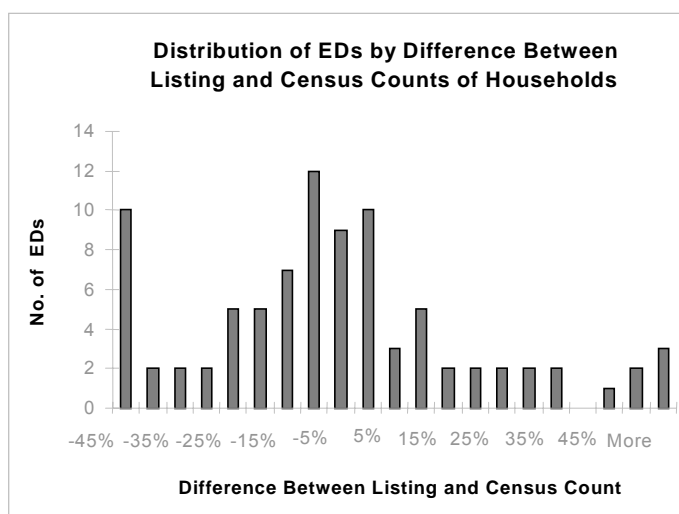
a relatively small (but representative) sample whose estimates may be expected to be relatively robust at the national level.

A comparison with census results is quite informative. The initial results of the CWIQ survey indicate that the number of households in the country is currently 31,069 and the population size is 109,322. Comparing this with the 2001 census figures, which estimated the number of households to be 31,122 and the total population to be 90,941, would indicate that the population has grown at a rate of 4.7 percent p.a. - principally through an increase in household size rather than through an increase in the absolute number of households.

B. DERIVATION OF POVERTY QUINTILES

Poverty analysis involves identifying the percentage of the population lying at and below the national poverty line. This implies that a national poverty line is established (usually based on valuation of a minimum basket of food and non-food needs) and then that a detailed survey is carried out to collect information on household consumption and/or income. These are complex variables and it usually requires multiple visits to the household to connect the variables with any degree of accuracy. Usually surveys of living conditions or household budgets are used for this purpose. Though CWIQ surveys are generally too light and not considered suitable for tracking changes in poverty levels, it is nevertheless still possible to use CWIQ data to identify and separate 'poor' from 'non-poor' households and to compare them.

In the absence of household consumption, there are several alternatives. The first is to use 'consumption correlates' instead of actual consumption data. The establishment of the correlates is usually done using regression analysis on a recently conducted survey of living conditions. In the absence of a recent survey of living conditions (as is the case with Grenada), an 'asset based' concept of poverty is used. The term 'asset' is interpreted quite loosely and can include human as well as physical assets. Assets are assigned a value then

| Item	Response	Score
Wall type	Brick/Block/Concrete	3
	Wood and Concrete	2
	Wood	1
	Wattle/Tapia/makeshift	0
Toilet type	WC to sewer/cess pit	1
	Pit latrine/None	0
Light Source	Electricity or gas	1
	Kerosene/none	0
Possessions	TV/Telephone/Video/ Stove/Fridge/	0.5 each
	Washing machine Car/pick-up	1
No persons per bedroom	<1	3
	1-1.99	2
	2-3	1
	3.01 or more	0
Education of head (summary)	Tertiary/university	5
	Secondary complete	4
	Secondary incomplete	3
	Primary complete	2
	Primary incomplete	1
	None	0
No. employed to total number of persons	1	3
	x<1, x>0.49	2
	x<0.5, x>0.25	1
	x<.25	0
Maximum Score		20

CWIQ does away entirely with the use of an absolute definition of poverty and a fixed poverty line

these values are summed at the household level to establish an 'asset score'. This may be done using Principle Component Analysis or through a process of subjective selection. This latter approach was used for the Grenada survey. The asset scores are then used as the 'poverty' variable to rank households from richest to poorest and to break them down into quintiles.

Finally, the CWIQ does away entirely with the use of an absolute definition of poverty and a fixed poverty line and instead uses a relative concept by taking the poor to be those in the lowest quintile. The Grenada CWIQ uses a range of indicators to allocate each household interviewed into quintiles. These indicators were the same as those used in the St. Lucia CWIQ.

Those households falling into the lowest or 1st quintile are those having the lowest level of welfare indicators. Such households have few assets, wooden walls, no flush toilet, and 2-3 persons sleeping in one bedroom. The household head has only primary level education, and there is only one employed person for every 2 – 4 dependents. The distribution of poor households is shown in Figure 2.

Figure 2

Percent Distribution of Population by Poverty Quintile and by Parish
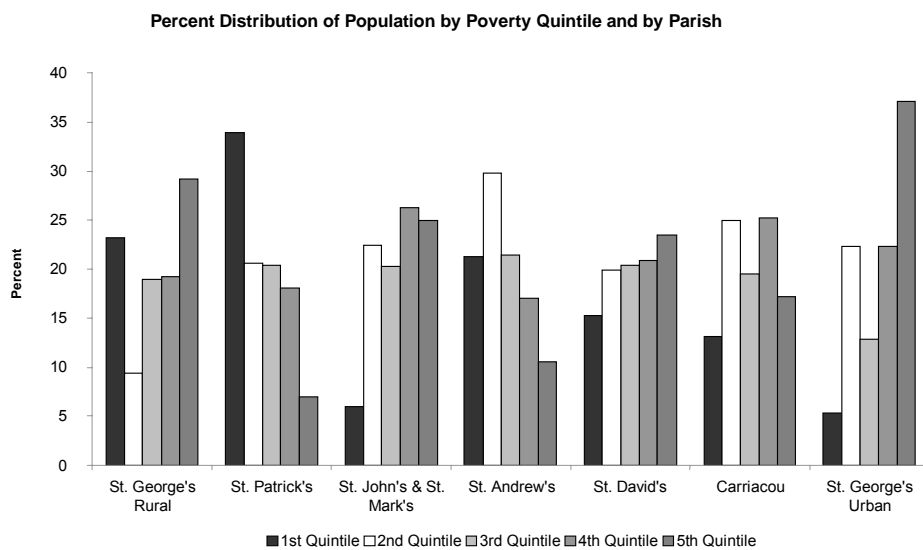
C) DEFINITIONS

<u>Margin of error</u> expresses the error attributed to sampling. It is expressed as an absolute percentage and indicates the range of a 95 percent confidence interval for the estimate.

<u>Poor households</u>: are households classified in the lowest quintile as measured using a set of indicators designed to estimate the household's well-being.

<u>Urban households</u>: The urban stratum includes only households in St. Georges urban areas. Though there are smaller townships elsewhere on the island, they have, for the purpose of this survey, been treated as rural areas.

<u>Household economic situation compared to one year ago:</u> worse is defined for households that replied much worse now or a little worse now; better is defined for households that replied a little better now or much better now.

<u>Difficulty meeting food needs:</u> is defined for households that reported difficulty meeting food needs often or always.

<u>Access to water</u> is defined for households with a water source less than 15 minutes away.

<u>Safe water source</u> is defined for households having a public piped water source (into dwelling, into yard or public standpipe).

<u>Safe sanitation</u> is defined for households using a flush toilet or ventilated improved pit latrine.

<u>Has electricity</u> is defined for households using electricity for cooking or lighting or generator/shared electricity for lighting.

<u>Non-wood fuel used for cooking</u>: is defined for households using a fuel other than firewood or charcoal for cooking.

<u>Collected waste disposal:</u> is defined for households using government collected or a government skip for waste disposal.

<u>Household victim of a crime</u>: is defined for households where any member was a victim of a crime in the 12 month period preceding the survey.

<u>Children living in non-nuclear households</u>: is defined for children under age 18 who are not living with both parents.

<u>Dependency ratio</u>: is the ratio of the number of household members ages 0-14 and 65 and above to the number of household members age 15-64.

<u>Unemployed</u> is defined for age 15 and above. It includes persons who did not work in the seven-day period preceding the survey and who looked for work in the four-week period preceding the survey. The base for the unemployment rate is the active population.

<u>Underemployed</u> is defined for age 15 and above. It includes persons who sought to increase earnings in the seven-day period preceding the survey . The base for the underemployment rate is the active population.

<u>Youth unemployment</u> is defined for ages 15-24. It includes persons who did not work in the seven-day period preceding the survey and who looked for work in the four-week period preceding the survey. The base for the unemployment rate is the active population.

<u>Adult literacy rates</u> are defined for persons age 15 and above and are based on the judgement of the respondent.

<u>Youth literacy rates</u> are defined for persons aged 15 to 24.

<u>Primary school</u> estimates are defined for children aged 6-11.

Access is defined for children living in households with a primary school less than 15 minutes away.

Enrolment (net) is defined for children currently in primary school (grades 1-6). Satisfaction is defined for all children currently in primary school who cited no problems.

<u>Secondary school</u> estimates are defined for children aged 12-16.

Access is defined for children living in households with a secondary school less than 30 minutes away.

Enrolment (net) is defined for children currently in secondary school (grades 7-11).

Satisfaction is defined for all children currently in secondary school who cited no problems.

<u>Wealth access</u> is defined for persons living in households with a health facility less than 15 minutes away.

<u>Health need</u> is defined for persons who were sick or injured in the four-week period preceding the survey.

<u>Health use</u> is defined for persons who consulted a health practitioner in the four-week period preceding the survey. Note that need is not taken into account.

<u>Health satisfaction</u> is defined for persons who consulted a health practitioner in the four-week period preceding the survey and who cited no problems.

<u>Prenatal care is defined</u> for women age 15-49 who had a live birth in the 12 months preceding the survey and who received pre-natal care during the pregnancy.

<u>Delivery by health professionals</u> is defined for children born in the last 5 years who were delivered by a doctor, nurse or midwife.

<u>Development assessment rate</u>: is defined for children age 3 and above who have had all 3 development assessments (6 weeks, 8 months and 3 years).

<u>Measles/MMR vaccination rate</u>: is defined for children age 1 and above who have had a measles and/or MMR vaccination.

2 - MONITORING NATIONAL DEVELOPMENT GOALS AND ASSESSING THE IMPACT OF HURRICANE IVAN

2.1 MONITORING NATIONAL DEVELOPMENT GOALS

The Tri-island State of Grenada, Carriacou and Petit Martinique has a land area of 344 square km (or 133 square miles) and it is situated 12.5 degrees North Latitude and 61 degrees West Longitude. It is a small open economy and like most developing countries is characterized by low GDP per capita, high external debt and relatively high levels of poverty. Grenada is also vulnerable to external shocks and natural disasters as seen by the effects of 9/11, Hurricane Ivan and most recently Hurricane Emily. As the country becomes more integrated in the international economy, the achievement of macroeconomic targets will depend on a number of factors. These include:

- The ability of the country to mobilize domestic and international resources to finance its development programme.
- The readiness of Grenada to take advantage of the opportunities and minimize the negative challenges presented by globalization.

Over the medium term, the broad goal of the government is to return the economy to a path of sustained economic growth accompanied by macroeconomic stability and poverty reduction. Specifically, the objective is to create a diversified and flexible economy capable of adapting and responding positively to the changes in the international economic environment through strengthening the capacity of central government to achieve poverty reduction. The manner in which this is to be achieved is described more fully in the Poverty Reduction Strategy Paper (PRSP), which has been drafted and is currently being reviewed by cabinet. The PRSP not only describes what needs to be done and how it is to be done, it also sets national development goals and targets (similar to the global Millennium Goals (MDGs)) for the short, medium, and long term.

Whilst it is important to set goals , setting goals on its own is of little value unless accompanied by a monitoring system that can measure the extent to which the goals are, or are not, being achieved. Such a monitoring system is likely to call on information from a variety of different sources. This should include information coming from the central statistical office, as well as sectoral information coming directly from appropriate line ministries. The population census and various types of household survey are particularly important sources of information for getting feedback from the intended beneficiaries themselves on how their livelihoods and living standards are affected by the programs. A typical PRSP monitoring programme includes the collection of information on household consumption, which is then used to track changes in poverty levels. The measurement of poverty requires that accurate data be collected on household consumption. This can be a very costly undertaking. It is therefore usually conducted only once every four or five years - most often through a household income and expenditure survey, or Survey of Living Conditions (SLC), which usually involves multiple visits to each sampled household over the period of one year. The last Grenadian SLC was done in 1998.

In the intervening years a lighter survey may be implemented on an annual basis, which can be used to monitor leading indicators and to track the more immediate effects of the different sectoral programmes. The CWIQ is well suited to this purpose. A particular strength of the survey is that it allows comparisons to be made across different geographical regions, for example, parishes. A second even greater advantage is that, when repeated over time, the survey can be used to build up time series that make it possible to monitor progress from one year to the next and to highlight obstacles that may prevent goals from being achieved. In 2006 Grenada, with the assistance of the Caribbean Development Bank and the support of UNDP, will implement an update of its Country Poverty Assessment (CPA), first completed in 1998. Because this is only the first such survey to be implemented in Grenada such temporal comparisons are not yet possible, but the survey can be used to establish a baseline situation and to suggest appropriate indicators that could be tracked by the CWIQ over time.

A particular strength of the survey is that it allows comparisons to be made across different geographical regions, for example, parishes.

The Government's Medium Term Economic Strategic Paper (MTESP) establishes goals for education, employment creation, poverty reduction, human services and housing, physical and environmental management, and culture and gender issues. In the following paragraphs a number of easy-to-measure leading indicators extracted from the CWIQ are suggested for monitoring the main elements of the Strategy.

Poverty: The CWIQ is a light survey and consequently does not attempt to measure absolute levels of poverty. Instead it collects information on asset ownership and this is then used to classify the households into poverty quintiles. The status of the lowest quintile (the 'poor') can then be compared with that of the other (non-poor) quintiles. Thus the survey reveals that, for the country as a whole, the unemployment rate is 19 percent, but for the lowest poverty quintile, it is 38 percent. This statistic can be further disaggregated to show differences between male and female unemployment rates[2]. The CWIQ also asks households directly about their standards of living and whether they have changed in the last 12 months. Forty-eight percent of the households claimed that their economic situation had declined significantly since hurricane Ivan, but for the households in the lowest quintile, this figure increased dramatically to 66 percent Though these are only subjective assessments, they have been shown to work very well as leading indicators of changes.

CWIQ leading indicators for monitoring poverty

<div style="float:left; font-style:italic; font-weight:bold; color:green;">
Another key objective is to provide learners with the relevant knowledge, skills and attitude so that after 12 years of schooling they can be productive.
</div>

Householder's assessment of current economic situation compared with before Ivan		*Worse*	*Better*
	Poorest quintile[3]:	66%	3%
	All households	48%	6%
		Male	*Female*
% unemployed	Poorest quintile:	27%	52%
	All households	12%	27%

Education: The Ministry of Education has just completed its Strategic Plan for Educational Enhancement and Development (SPEED). The main objectives of the education sector over the medium term are:
- increasing access to education at the pre-primary level,
- maintaining the universal access at the primary level,
- achieving universal secondary education, and
- increasing out-of-school opportunities and coverage at the tertiary level.

Another key objective is to provide learners with the relevant knowledge, skills and attitude so that after 12 years of schooling they can be productive. The CWIQ survey measures traditional indicators such as net and gross enrolment rates and drop-out rates, but additionally it also captures information on 'access' in terms of time and students' satisfaction with the education service. Whilst the traditional indicators are also collected through the annual surveys of educational establishments conducted by the Ministry of Education, the CWIQ survey offers the added benefit of providing information about the socioeconomic background of students attending school, as well as those who are not attending.

[2] The CWIQ survey is designed so that most information collected can be disaggregated by gender. This includes information on educational attainment, health, employment, demography and poverty. This equips the Gender and Family Affairs Ministry with adequate tools to do an effective gender analysis and provide policy makers with the information to make informed decisions that will put gender at the forefront of development. The CWIQ has highlighted some general gender disparities in employment. The number of female-headed households is high across the board – nearly 50% in many cases. Dependency rates are also high, above 0.5 in all parishes.

[3] Due to limitations of sample size, the poorest quintile does not include the 'urban poor'.

CWIQ leading indicators for monitoring education services

	Primary	Secondary
% of households having easy access (within 15 minutes)	44%	24%
Net enrolment rates	93%	76%
Male	94%	74%
Female	93%	78%
% satisfied with quality of service	78%	80%

Health: In continuing to provide the nation with quality health care services and facilities and a healthy environment, the Ministry of Health is in the process of formulating a five - year strategic plan geared towards the reform of the health sector. Also in providing better health care, the focus is on completion of construction of the new General Hospital and improvement and expansion of the network of community health clinics. As with the education sector, the CWIQ provides supplementary information to complement the information that is collected by the Ministry of Health and tools must be put in place to show whether or not and to what extent these objectives are being achieved. The CWIQ survey is designed to produce indicators of access to, need for, use of and satisfaction with health services, including child health services. Again, the focus is on assessing the extent to which the needs of the targeted beneficiaries are being met. It also gives an idea of the major diseases/injuries suffered by the population, reasons why persons who need health care services are not using them, and other key health indicators.

CWIQ leading indicators for monitoring health services

Easy access (within 15 minutes)	28%
% who needed health services	8%
% who consulted health practitioner	9%
% satisfied with quality of service	81%

Continued efforts are also required in the area of access to Information Communication Technologies (ICTs). Computer coverage is relatively low although in the face of other concerns this is to be expected.

A fuller list of indicators is provided in the following table of Core Welfare Indicators. The table presents a select number of key indicators for the country as a whole, then broken down into three categories: rural households, rural poor households, and urban households.[4] The last columns of the table show the same indicators broken down by parish. Comparisons can be made between parishes, but with caution because of the small sample sizes. Indeed, because of the risk of misinterpreting the results, the two parishes of St Mark's and St John's have been merged together.

2.2   ASSESSING THE IMPACT OF HURRICANE IVAN

A key quality of the CWIQ survey is its flexibility and responsiveness to the local situation. The questionnaire used in the survey comes in a generic form that can be modified to reflect changes and to capture information that becomes pertinent at the time. In the Grenadian context, the questionnaire was adapted to capture the effects of Hurricane Ivan by inserting a hurricane module into the core questionnaire and adding to or changing the questions in the different sections of the questionnaire.

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[4] A fourth category – urban poor – was to be included, but was ultimately excluded because the number of sampled households in this group was too small.

In continuing to provide the nation with quality health care services and facilities and a healthy environment, the Ministry of Health is in the process of formulating a five - year strategic plan geared towards the reform of the health sector.

Table of Core Welfare Indicators

	Total	Margin of error	Rural	Rural poor	Urban	St. George's Urban	St. George's Rural	St. Patrick's	St. John's & St. Mark's	St. Andrew's	St. David's	Carriacou
Household economic situation compared to before Ivan												
Worse now	47.7	6.3	48.0	65.9	41.9	41.9	50.8	30.8	46.9	39.6	70.4	52.8
Better now	6.1	2.1	6.3	3.3	3.3	3.3	8.7	4.2	8.4	5.0	1.9	5.6
Household characteristics												
Difficulty with food needs	8.6	2.8	8.5	14.8	9.2	9.2	10.5	19.7	6.6	5.8	2.8	4.2
Access to water	98.8	0.7	98.7	96.1	100.0	100.0	98.4	95.8	99.4	99.6	99.1	100.0
Safe water source	87.0	4.2	86.9	85.6	88.7	88.7	90.9	90.0	93.7	87.9	95.4	11.1
Safe sanitation	61.5	5.2	60.3	6.2	88.3	88.3	65.9	47.5	70.9	52.9	58.3	62.5
Collected waste disposal	97.5	1.2	97.4	95.3	100.0	100.0	98.8	98.3	91.2	98.8	96.3	98.6
Non-wood fuel used for cooking	96.7	1.1	96.6	86.2	97.4	97.4	96.0	95.0	97.3	96.7	98.1	98.6
Has electricity	80.9	3.3	80.9	39.5	81.4	81.4	76.2	86.7	91.5	80.8	79.6	76.4
Has computer	13.9	3.6	13.5	0.0	22.4	22.4	23.4	6.7	12.0	5.4	7.4	18.1
Household victim of crime	5.8	1.8	5.4	6.2	14.4	14.4	8.3	3.3	2.8	6.3	0.9	4.2
Household composition												
Single person households	23.8	3.8	23.8	22.4	23.6	23.6	28.6	18.3	37.8	19.6	16.7	5.6
Households with female heads	47.0	3.4	47.0	57.6	48.2	48.2	43.7	50.8	48.3	49.2	46.3	48.6
Children in non-nuclear families	53.0	4.8	53.1	60.3	50.2	50.2	54.8	55.7	66.7	45.1	57.7	47.2
Dependency ratio	0.6	0.1	0.6	0.9	0.6	0.6	0.5	0.7	0.6	0.7	0.8	0.8
Employment												
Unemployed	18.8	3.4	19.0	38.1	14.3	14.3	18.7	22.8	13.6	22.9	13.8	16.7
Male	12.4	3.1	12.4	27.3	10.6	10.6	13.8	14.8	5.4	13.6	8.3	15.1
Female	26.3	5.0	26.6	52.5	19.3	19.3	25.1	33.3	23.9	32.7	18.4	18.6
Underemployed	7.7	2.5	7.8	8.1	5.6	5.6	7.6	5.4	7.7	11.8	3.1	5.3
Male	9.8	3.2	10.0	8.0	5.2	5.2	9.2	5.2	11.0	16.0	4.2	8.2
Female	5.2	2.2	5.2	8.2	6.0	6.0	5.5	5.7	3.5	7.4	2.3	1.7
Youth Unemployed	32.9	7.0	32.9	53.1	32.9	32.9	31.3	37.7	24.1	39.8	26.3	22.2
Male	25.7	7.9	25.5	46.2	29.4	29.4	26.7	29.0	13.4	31.6	12.5	22.2
Female	41.1	9.1	41.2	66.6	37.9	37.9	38.5	50.0	38.4	47.0	36.4	22.2
Adult literacy rate	97.0	0.9	97.1	94.8	95.7	95.7	96.9	97.3	96.8	97.7	96.5	97.1
Male	97.1	1.1	97.1	96.6	97.3	97.3	96.7	98.2	96.2	98.0	95.7	98.0
Female	96.9	1.2	97.0	93.1	94.2	94.2	97.0	96.3	97.4	97.3	97.2	96.3
Youth literacy rate	98.9	0.8	98.9	97.9	97.4	97.4	98.3	99.1	100.0	99.5	97.4	100.0
Male	98.6	1.3	98.7	98.6	95.0	95.0	97.8	100.0	100.0	100.0	94.3	100.0
Female	99.2	0.9	99.1	97.0	100.0	100.0	98.8	98.0	100.0	99.1	100.0	100.0
Primary school												
Access to School	43.6	9.2	41.5	28.2	100.0	100.0	50.0	14.3	35.5	52.3	34.8	52.9
Primary Enrollment	93.4	2.1	93.4	74.1	93.7	93.7	93.2	95.6	90.3	92.1	93.9	98.0
Male	93.8	2.9	93.8	83.6	92.0	92.0	95.1	93.0	88.1	93.0	95.8	100.0
Female	93.1	3.7	93.1	62.5	95.6	95.6	91.5	97.9	92.4	90.8	92.9	96.3
Satisfaction	77.6	5.9	77.6	62.7	77.3	77.3	82.1	71.0	85.5	77.1	80.8	62.1
Secondary school												
Access to School	23.7	9.4	20.8	25.7	95.2	95.2	34.2	15.1	13.6	22.5	5.6	21.4
Secondary Enrollment	76.1	5.2	76.0	60.1	78.2	78.2	71.2	69.8	83.8	78.4	77.8	78.6
Male	74.3	7.2	74.2	61.3	78.4	78.4	61.8	74.1	88.8	76.1	78.6	77.8
Female	78.0	7.0	78.0	58.6	78.0	78.0	79.5	65.4	80.2	82.5	76.9	79.2
Satisfaction	79.6	6.6	79.3	74.9	87.2	87.2	83.1	70.4	85.0	78.9	86.0	57.1
Medical services												
Health access	28.3	6.7	26.6	21.9	68.1	68.1	31.9	12.8	33.4	30.1	11.7	32.6
Need	8.4	1.3	8.3	8.2	10.6	10.6	5.7	10.3	9.4	9.1	9.9	9.3
Use	9.5	1.3	9.4	8.0	9.8	9.8	8.4	9.7	9.0	10.0	10.7	9.6
Satisfaction	81.7	6.0	81.8	75.8	79.3	79.3	86.8	91.5	74.1	75.8	90.5	60.0
Pre-natal care	92.8	8.2	92.6	96.1	100.0	100.0	100.0	60.0	100.0	96.2	75.0	100.0
Delivery by health professionals	97.5	1.9	97.5	97.0	95.7	95.7	98.4	92.5	100.0	97.9	100.0	93.1
Children's health												
Development assesment rates	64.7	10.8	64.7	71.4	62.9	62.9	77.8	30.8	100.0	44.4	54.5	84.6
Measles/MMR vaccination rates	48.8	9.2	49.4	49.5	28.5	28.5	40.4	16.7	62.6	64.7	50.0	66.7

CWIQ was the first real systematic study of the devastation of the hurricane and endeavours to give reliable information to assist in the rebuilding efforts. This section seeks to give a more accurate picture of the effects of Hurricane Ivan on households and the parishes in which they reside. It also captures the situation post-Ivan with regards to support and sources of support.

A) DAMAGE TO DWELLINGS

According to the survey, overall 80 percent of dwellings in the country were damaged, 51 percent sustained serious damages, while approximately 5 percent of dwellings were completely destroyed.

Although damage was sustained throughout the island, certain areas were particularly severely affected. The highest levels of damage to dwellings were sustained in the parishes of St. George's, St. David's, St. Patrick's and St. Andrew's. The urban portion of St. George's had damages of 89 percent and the rural parts sustained damages of 87 percent. St. Patrick's sustained damages of a surprising 83 percent. Similarly, St. David's and St. Andrew's both recorded high levels of 84 percent and 81 percent respectively.

In contrast, the parishes of St. John's, St. Mark's and Carriacou and Petit Martinique suffered the least damages to dwellings. While St. Mark's and St. John's still suffered considerable damages, Carriacou and Petit Martinique were more fortunate. (See Figure 3).

In the poorest group 95 percent suffered damages, while in the least poor group only 65 percent reported damage.

Figure 3
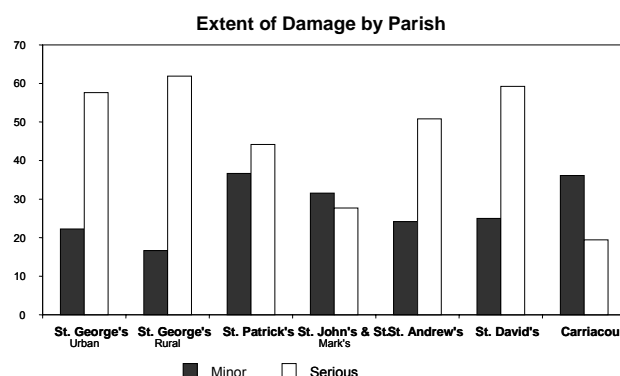
However, on further examination of extent of these damages a different picture is painted, with more serious damage occurring in the parishes of St. George's rural and urban and St. David's (62%, 58 percent and 59 percent respectively). St. Andrew's was next with half of its affected households claiming the damage to be serious. In the case of dwellings completely destroyed the figures were minimal. St. George's urban and rural and St. Andrew's recorded the highest percentage (5 percent, 7 percent, and 6 percent respectively). Although, St. Patrick's came third after St. George's and St. David's, minor damages accounted for a substantial part of this figure, suggesting that the extent of the damage was not as serious as St. George's, St. David's and even St. Andrew's. Most of the damage suffered by St. Mark's and St. John's combined, and Carriacou and Petit Martinique was minor.

The poorest households were the most adversely affected (see Figure 4). In the poorest group 95 percent suffered damages, while in the least poor group only 65 percent reported damage. Not only was the damage more prevalent amongst the poor, but it was also more severe - 70 percent suffering serious damages to houses and 12 percent suffering complete destruction, while only one third of the least poor suffered serious damage and less than 1 percent of houses were completely destroyed. This is evident from the type of housing used by the poor as compared with that of the non-poor.

Figure 4

Extent of Damage to Housing by Poverty Quintile
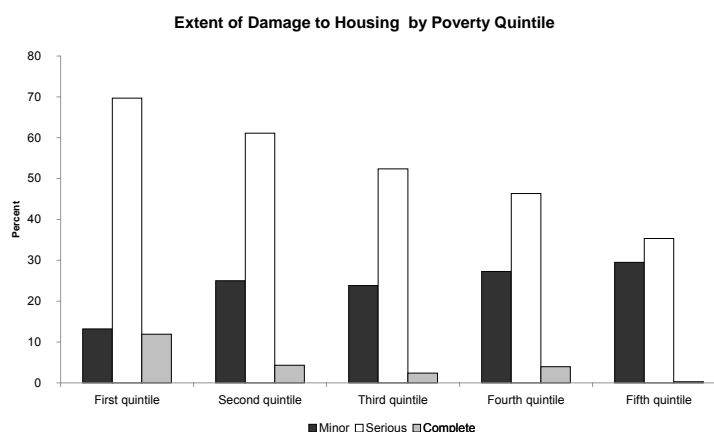
B) DISPLACED HOUSEHOLDS

As a result of the hurricane, almost half the households across Grenada were displaced. Of these, 56 percent were only displaced for several days, 24 percent for several weeks, 13 percent for several months and 7 percent were still displaced seven months after the hurricane. The parish recording the highest level of displacement was St. David's, followed closely by St. George's and St. Andrew's. The period of displacement also reflected the seriousness of the damage with people in St. George's and St. David's being displaced for longer periods. Hence, the data suggest that the poorer the households the greater the likelihood of displacement. Figure 5 shows the period of displacement by parish.

Most displaced households moved to family and friends for shelter while only 5 percent went to official shelters. This was the general picture across all parishes. The separation of households as a result of displacement was not a major issue, with only 8 percent reporting a split of household.

The parish recording the highest level of displacement was St. David's, followed closely by St. George's and St. Andrew's.

C) DAMAGED HOUSEHOLDS WITH INSURANCE

Home insurance was not very common among the damaged households with only 10 percent of damaged homes having home insurance. Home insurance was most evident in St. George's. The poorest quintile, as expected, had no home insurance while in the least poor quintile 35 percent of the damaged homes had insurance coverage.

D) REBUILDING

Well over one third of the damaged households are being rebuilt. The parish of St. John's and St. Mark's combined is well ahead with 51 percent being rebuilt, followed by St. George's rural. 50.7 percent of all households being rebuilt are aware of building codes, with 90 percent of these (i.e., 46 percent of the houses being rebuilt) following building codes. Across parishes, the households not aware of building codes vary significantly with St. John's and St. Mark's appearing the least knowledgeable. Generally, the main reasons for not following these codes are lack of knowledge, cost and time. Not following the codes has implications for the future vulnerability of households and communities and their ability to survive other storms or natural events. Significant attention is needed to ensure that rebuilding meets the necessary standards for hazard resistance.

Figure 5

Period of Displacement by Parish
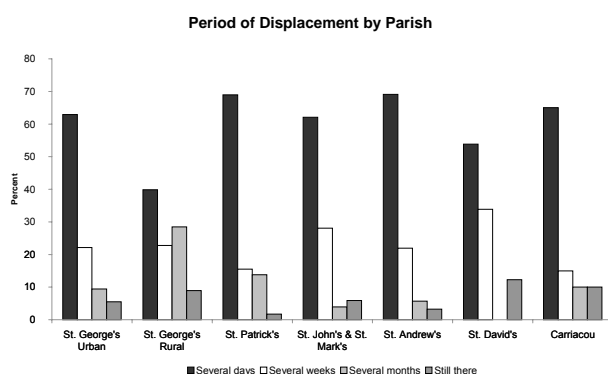
E)   SUPPORT RECEIVED BY HOUSEHOLDS

About 75 percent of the households have been receiving support post-Ivan. The survey highlights the fact that the family is the most important source of help, followed by NGOs and then by the church. When it comes to the allocation and sharing of assistance between the poor and the non-poor, the survey reveals that there is little difference between the welfare quintiles. The poorest and the most needy should be receiving the greater share of available relief resources, but the evidence suggests that this is not the case.

Figure 6
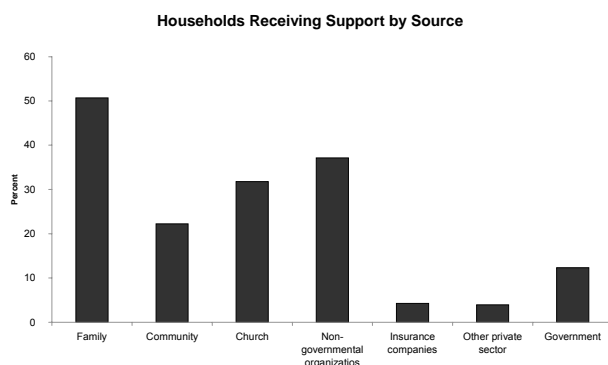
Households Receiving Support by Source

Comparing the level of support to the damage encountered, the proportion of households receiving support in most parishes was smaller than the proportion damaged, with the exception of St. John's and St. Mark's which received support for 17 percent more households than were damaged. (The excess can be accounted for through help received from families, churches and communities). This relationship is shown in Figure 7.

At the national level, the most common form of support received was food and water. This form of support represented a substantial proportion from each of the sources with the exception of insurance companies. The assistance delivered by insurance companies was, as one would expect, mostly in the form of financial payments and loans. Building materials accounted for a significant portion of the Government's contribution.

Every source of support was considered as either important or very important. Most households that received family support considered this to be very important (almost two thirds). The same is true for government support (60%). For all sources the number of households perceiving the support as not important is negligible. This showed that the assistance provided was in fact necessary and contributed substantively to the maintenance of people's standard of living after the hurricane.
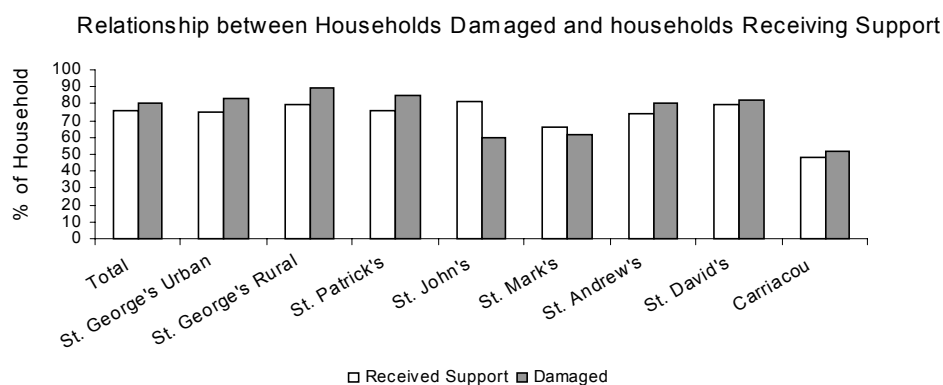
The poorest and the most needy should be receiving the greater share of available relief resources, but the evidence suggests that this is not the case.

Figure 7

Relationship between Households Damaged and households Receiving Support

Most cash/ short crops are either well underway or are only just starting to be restored. As would be expected, very few tree crops are fully restored.

At present, the majority of households are not receiving support. Despite this, 17 percent of the households that received assistance from families are still receiving some help, while 5 percent are still receiving considerable help. Likewise, 4 percent are still receiving considerable help from insurance companies, 5 percent are receiving some help from the Government and 5 percent are also receiving some help from churches.

F) DAMAGE TO PERSONAL HEALTH AND KEY ASSETS AND SERVICES

Instances of physical injuries/sickness and mental sickness/depression as a result of the hurricane occurred in 6 percent and 9 percent of the households respectively. Most persons who suffered physical injuries or sicknesses have recovered, while a few are still recovering. Only 24 percent of the persons experiencing mental sicknesses/depression have recovered, but most are on the way to or now beginning recovery.

A few key assets - vehicles, tree crops, cash/short crops and livestock - showed great variability in the amount and extent of **damages endured. Ten percent of** all vehicles were damaged – half of them severely. Tree crops, were significantly and severely damaged. Damage to cash/short crops was less extensive but equally severe. Only 5 percent of livestock were damaged or lost. The extent to which these assets were restored also varies considerably with a large proportion of vehicles being fully restored (almost half) and a significant but lesser proportion having no change (just under 30 percent). Most cash/short crops are either well underway or are only just starting to be restored. As would be expected, very few tree crops are fully restored. There is no change to the situation with livestock.

There was a general reduction in earnings. Earnings from wage employment were affected to a large extent and were also most affected in this category. Loss of jobs and reduction of salaries accounted for this. Nevertheless, a large portion has been restored. Income from business was affected by 15 percent with a significant amount fully restored or or well on the way to restoration. Earnings from agriculture seem less promising with only 5 percent being restored and a considerable 33 percent reamining unchanged.

It is also the case, to some extent implicit, that the disaster had an impact on nutrition and that trauma would impact on the capacity of households to bounce back and from the impact and help themselves. There are also implications for food security from increased food imports in the face of the damage to the sector, and from the loss of earnings at the country and sectoral level, as well as to farmers and their families. The impacts were particularly felt in the rural economies where there was a closer link to agriculture. At the national level, the loss of the nutmeg and cocoa industries would have an effect also in the national economy.

The damages to services were major in most cases. The vast majority (90 percent) of households, for instance, lost electricity. This is to be expected since it is known that most house-

holds had no electricity for months. A similar situation occurred with access to telephone and educational facilities. Thirty-five percent of households reported that health facilities and services suffered serious damage. The water supply was also significantly disrupted with half of the affected households being seriously impacted. Waste disposal and police services, on the other hand, were among the least affected services (see Figure 8).

Figure 8
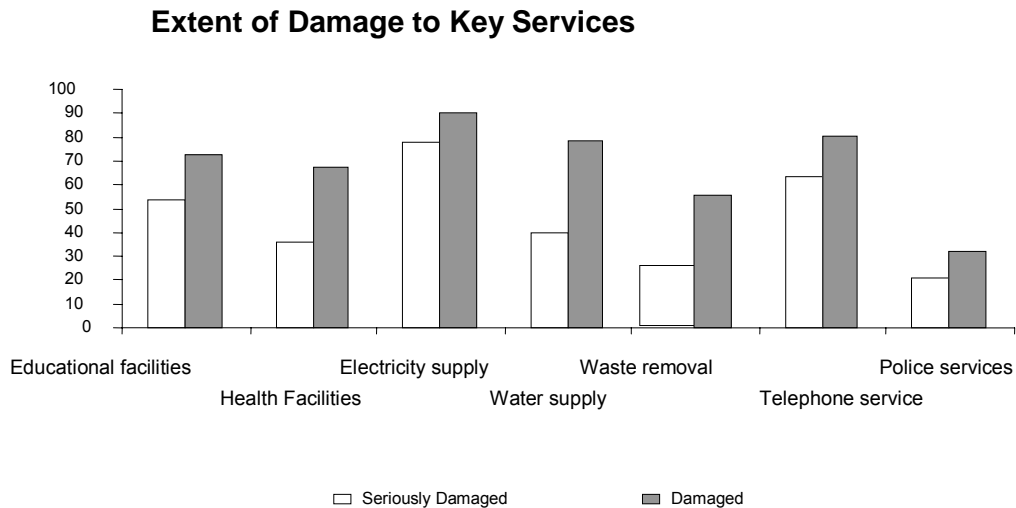
Extent of Damage to Key Services

☐ Seriously Damaged   ▨ Damaged

Despite the immense damages, electricity, water supply and telephone services are almost fully restored.

Despite the immense damages, electricity, water supply and telephone services are almost fully restored. Waste removal and police services are the other services showing favourable signs of restoration. The results for services in education and health are less encouraging with only 30 percent and 45 percent of households reporting that they were now fully restored.

Given the extent of the damage, a high proportion of these facilities had to be reconstructed and these services will therefore take longer to be restored than the other facilities. Currently, a high proportion of these services are well on the way to complete restoration.

Figure 9

Damage and Repair to Services

☐ Damaged   ▨ Fully restored
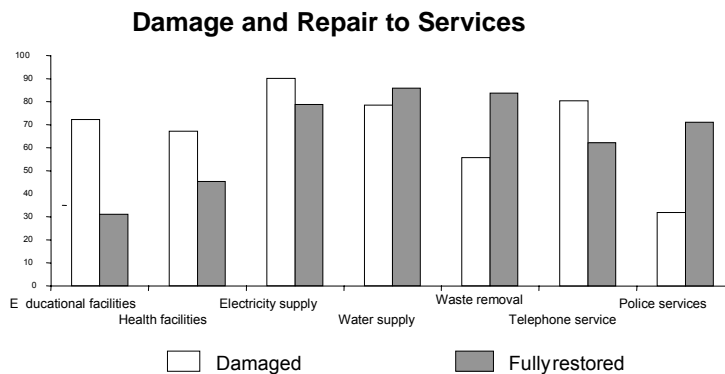
3 - SURVEY HIGHLIGHTS

In this chapter some of the more interesting results of the survey are summarised. It is by no means complete and is simply intended to provide a flavour of the ways in which the data can be used to describe socio-economic situations and to monitor changes in living standards. A complete set of summary tables is available in Chapter 4. In addition the raw data sets may be made available to users in electronic form or on CD-ROM.

3.1 HOUSEHOLD COMPOSITION

within the bottom quintile of the rural households a significantly larger proportion is female-headed compared with the highest quintile where male-headed households predominate

Household Head: Almost half the households in Grenada (47 percent) are female-headed. Of these, more than 20 percent in the rural areas are poor according to the CWIQ definition (i.e., they fall into the lowest poverty quintile), as compared to only 13 percent male-headed households. Well over half the female heads (56 percent) are unemployed compared with the male heads where only a quarter have no work. Almost half the female heads are not in marital union as compared with male-headed households where a little over a quarter are not in a marital union. There are more unmarried female heads than there are unmarried male heads. Slightly more female heads (4 percent) than males (2.9 percent) are not literate. However overall, literacy levels are high with 97 percent males and 96 percent females being able to read and write.
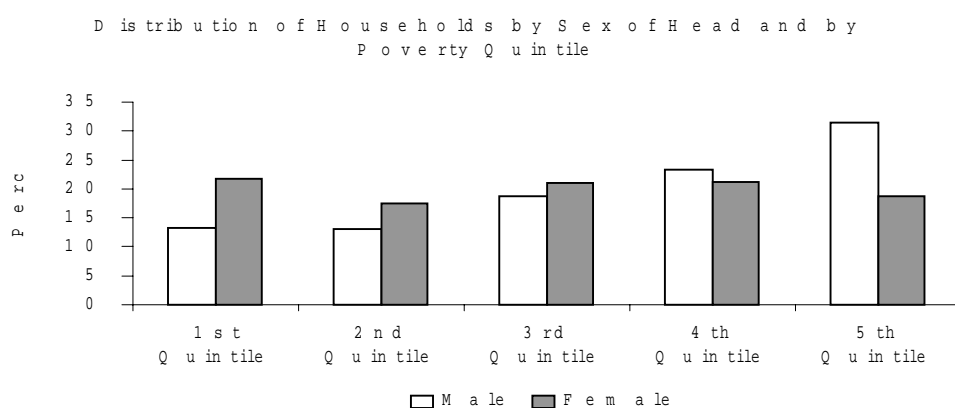
Occupation of the Head: Figure 10 compares the occupations of male household heads with those of female heads. Of the two, male heads account for the vast majority employed in the private formal sector, and of persons who are self-employed. In the private informal sector the opposite is true for females. Examining the genders independently the largest group of female heads are unemployed, as opposed to male heads whose largest group is in the private formal sector.

Figure 10

Distribution of Households by Sex and by Occupation of Head

Households in Poverty: Figure 11 shows the distribution of male and female headed households by welfare quintile. By definition, each quintile contains 20 percent of all households in the country. What is interesting to note however is that within the bottom quintile of the rural households a significantly larger proportion is female-headed compared with the highest quintile where male-headed households predominate. For the urban households, 44 percent of female heads live in the bottom three quintiles as opposed to a mere 18.6 percent for the males. Indeed, as one moves up from the poorest to the wealthiest household groups there is a consistent increase in the number of male-headed households.

Figure 11

Distribution of Households by Sex of Head and by Poverty Quintile

Persons employed in the public sector recorded the highest literacy rate of 98 percent, but there is not a significant difference between any of the socioeconomic groups, nor is there much difference between parishes, gender, or poverty quintile.

Dependency Ratio: The dependency ratio is the ratio of the number of household members ages 0-14 and 65 and above, to the number of household members age 15-64. As revealed by the data, all parishes display a 50 percent or above dependency ratio. This breakdown follows logically. The greater the household size, the greater the dependency ratio. The highest dependency ratios are observed for the socio-economic groupings of the unemployed and private informal. There is an overall higher dependency ratio for female headed households (70 percent compared to male headed, 60 percent). One can assume as well that there will be a higher vulnerability in such households due to income loss or unemployment. The vast majority of children living in non-nuclear homes live with their mothers only (40 percent) as opposed to their fathers only (3 percent). In St. David's especially, whereas the proportion of children living with their mother only is 51.3 percent, the proportion living with their father only is 0.6 percent. The parishes that show the highest proportion of children living in non-nuclear families are St. Mark's and St. John's combined (66.7 percent).

3.2 EDUCATION

Key educational indicators include literacy rate, access to school, enrolments rates, and satisfaction with the quality of education services. The results are disaggregated by location, socio-economic group, and gender.

Literacy: Grenada has a 96 percent adult literacy rate. The CWIQ methodology for measuring literacy is a simple one in which respondents 15 years and over are asked the question "Can you read and write". It might be useful if at some point, a more comprehensive study could be initiated to cross check the validity of the CWIQ estimates. Persons employed in the public sector recorded the highest literacy rate of 98 percent, but there is not a significant difference between any of the socioeconomic groups, nor is there much difference between parishes, gender, or poverty quintile.

Access to schools: In order to achieve the goal of universal primary education for all members of the population, the first priority has to be to ensure that all households have a school within easy reach. Access to schooling is defined in terms of time taken to reach the nearest facility, both primary and secondary. If a household has a school within 15 minutes (using the normal means of transportation), then it is considered to have access. According to this definition, less than half (44 percent) the households with children of primary school age (5-11 years) have a primary school within 15 minutes (using their normal means of transportation). For secondary schooling, the percentage drops to 24 percent. While the urban households, including the urban poor, all have easy access, less than 30 percent of poor students from the rural areas have easy access to either primary or secondary schools. Access is clearly a problem in rural areas, particularly in St Mark's and St Patrick's.

Enrolment Rates: Despite the fact that many households have limited access to schools, enrolment figures are high. The Ministry of Education for 2004 records primary enrolment rates of over 90 percent. The CWIQ records higher levels of 109 percent. The overall net primary school enrolment rate, according to the CWIQ is 93 percent, and for secondary school the rate decreases to 76 percent. Across the parishes net enrolment was above 90 percent and highest in Carriacou and Petit Martinique (98 percent). For secondary schooling, St Mark's has the highest enrolment levels followed by St George's urban.

Satisfaction*:* Households may be sending their children to school, but how satisfied are they with the quality of schooling? The Grenada CWIQ survey measured satisfaction with educational services by asking the question "Did you have any problems with the school?" Reasons for dissatisfaction could include

(i)   lack of books and supplies,
(ii)   absenteeism,
(iii)   poor teaching by teachers,
(iv)   lack of space, and
(v)   bad condition of facilities.

At the national level, primary school satisfaction is above 75 percent and secondary is approximately 80 percent. There is, however, considerable variation between parishes, and particularly between urban and rural households. Of the 21 percent of the school population that cited dissatisfaction with schools, 38 percent had problems with poor facilities and 31 percent had problems with lack of books. In Carriacou, 58 percent of the dissatisfaction results from a lack of books and supplies.

House- holds may be sending their chil- dren to school, but how satis- fied are they with the quality of schooling?

Figure 12

Access, Use and Satisfaction indicators for Primary schooling – by Urban and Rural Areas

Figure 13

Access, Use and Satisfaction Indicators for Secondary Schooling - by Urban and rural areas
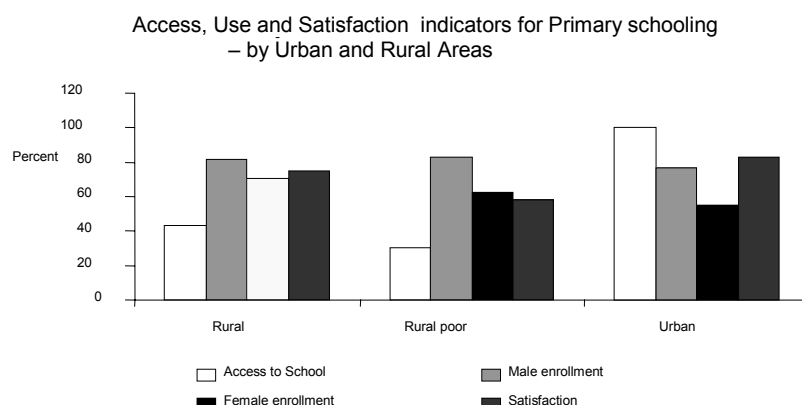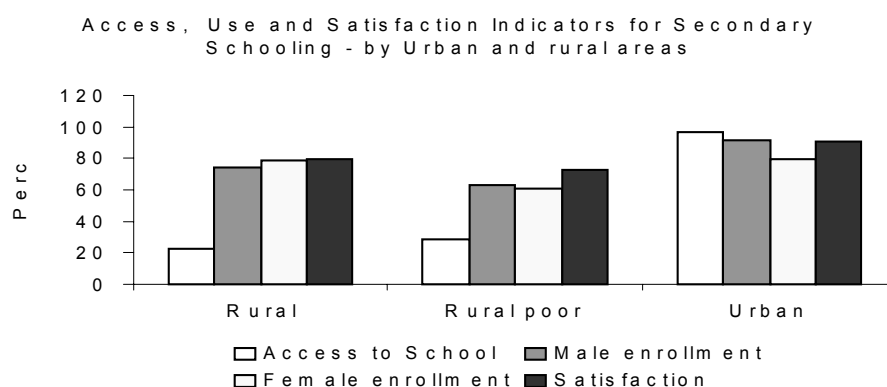
Figures 12 and 13 bring together the three key 'service delivery' indicators of access, use and satisfaction, for both primary and secondary schooling, and compare them for the three household groups: rural, rural poor, and urban. With respect to the access indicator, the urban households are clearly at an advantage but this does not appear to have had much impact on enrolment rates (the 'use' indicator), which do not appear to be all that different from those of the rural households. Even amongst the poor, the enrolment rates are comparable with those of the non-poor. Across all groups, however, there are differences between male and female enrolment rates – though interestingly, with respect to secondary schooling, female enrolment rates in rural households are actually higher than male rates. Finally, with respect to 'satisfaction', it appears that the quality of service is higher in the urban areas, and lowest with the poor households.

3.3 HEALTH AND CHILD CARE

In assessing the quality of health services in Grenada, the CWIQ monitors the indicators of "Access", "Need", "Use", "Satisfaction", "Prenatal Care" and "Delivery by Health Professionals". Figure 14 compares the access, use and satisfaction indicators for urban, rural and poor households.

Figure 14
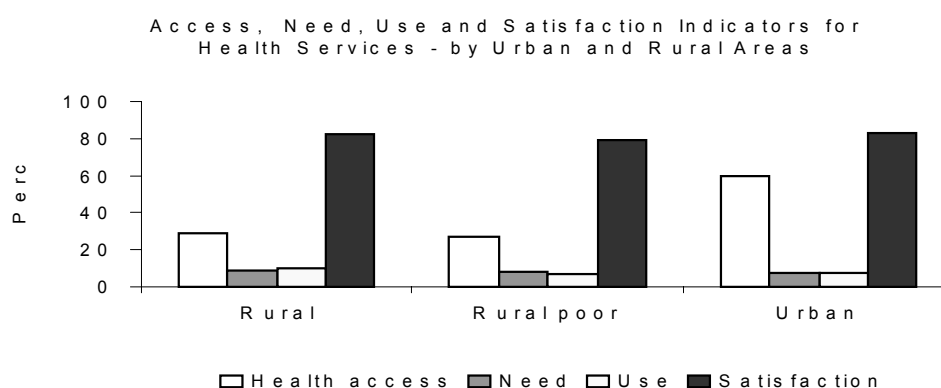
Access, Need, Use and Satisfaction Indicators for Health Services - by Urban and Rural Areas

Health Access: As with the education services, access is based on the time needed to reach the nearest health facility. In urban areas, 68 percent of the population have a health facility within 15 minutes – compared with only 30 percent for the rural population.

Need: Just under 9 percent of the population reported that they had had need of health services in the previous four weeks. This was fairly consistent across all groups and regions, apart from St. George's rural where respondents reported the lowest need of health services (just under 6 percent).

Use*:* 'Users' are persons who have been sick or injured in the past 4 weeks and have made use of a health facility. The survey reveals a comparatively lower level of use by the rural poor (8 percent) compared with other rural households (9.4 percent). The differences in 'use' among the sub-groups of rural, rural poor and urban appear to be minimal with the rural poor recording the lowest (8 percent) and urban the highest (10 percent). The relatively high levels of access in the urban areas are not reflected in their use, suggesting that other factors could be affecting use. However, in the rural areas one can explain the low levels of use by the low access. When comparing use to need it is interesting to note that for the urban households the latter is greater.

Satisfaction: Overall, the level of satisfaction with health services is high. The most common reason given for dissatisfaction is 'long waiting time', followed by 'cost'(see Figure 15). These reasons were more common to the rural areas. On the other hand, in the urban areas

the urban households are clearly at an advantage but this does not appear to have had much impact on enrolment rates, which do not appear to be all that different from those of the rural households.

Figure 15
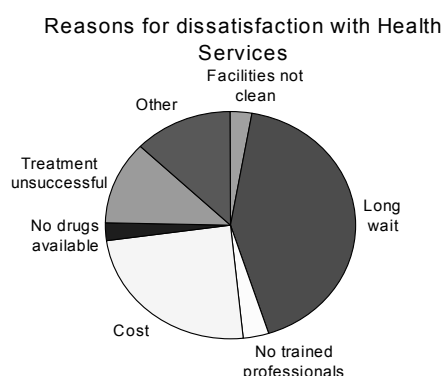
Reasons for dissatisfaction with Health Services

Almost all women who had a live birth in the twelve months preceding the survey received prenatal care during the pregnancy.

three quarters of the dissatisfaction was because of unsuccessful treatment. This certainly explains the low levels of use in light of good access and the higher need than use level.

Persons in Carriacou expressed the highest percentage of dissatisfaction with medical services (40 percent). The most prevalent reason for dissatisfaction in Carriacou was high cost (50 percent). This was echoed in St. Andrew's. An issue of quality comes into play since it is possible that the perception that private doctors would provide a higher quality service than a public hospital would lead more people to opt for the private doctors.

Prenatal Care: Almost all women who had a live birth in the twelve months preceding the survey received prenatal care during the pregnancy. Some special attention must be given to the parish of St. Patrick's, however, where only 60 percent of pregnant women received prenatal care. This occurrence can only be attributed to exogenous factors, which cannot be adequately explained by the survey data.

Figure 16

Distribution of Pre-Natal Care by Parish
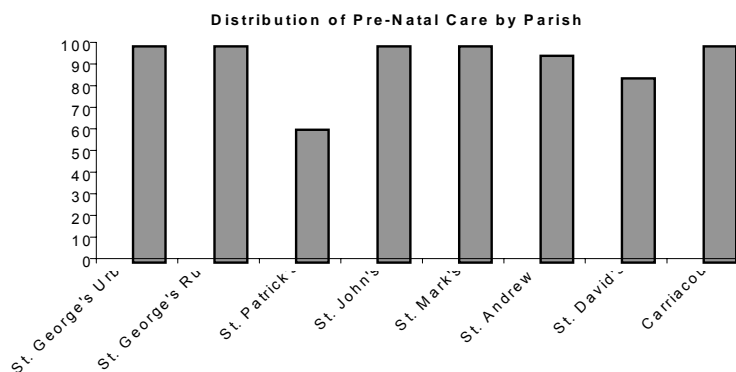
Child Health: The "development assessment rate" is the percentage of children age 3 and above who have had all three development assessments (6 weeks, 8 months and 3 years). Overall, the rate for the country as a whole was just under 65 percent, but this hides considerable regional variation. In St. Patrick's, St Andrew's and St David's the rates are all below 55 percent whereas in St. John's and St Mark's the rate is 100 percent. Interestingly too, the rural rate (64 percent) is higher than the urban rate (54 percent). However, with the large margin of error (±10 percent) these figures must be analyzed with caution. Nonetheless, two reasons can be presented to bridge the foregoing disparities:
a) Post hurricane Ivan (approximately 3 months afterwards) there were no vaccines available to children resulting in a lapse in the administration of vaccines.

b) There were instances where the development cards were not available for the enumerators to inspect and they enumerators could not fill in the information.

The figures can be conservatively revised upwards since a child would not be able to enter school without having received all the necessary vaccines. The low vaccination rates throughout - rural (49 percent), rural poor (49 percent), urban poor (29 percent) - may also be partially attributed to the fact that persons in these areas were unable to locate the development cards either because they were misplaced or destroyed by hurricane Ivan. The parishes that seemed to be most affected by the above are St. Patrick's, St. George's and St. David's.

3.4   EMPLOYMENT

Figure 17 shows the percentage of the men and women of working age that are employed, underemployed, and unemployed, for the island as a whole and broken down by urban, rural and rural poor. Overall, around 65 percent of the population comprise the active population (labour force), from the active population, 81 percent are working and just under 19 percent are unemployed. Unemployment is highest amongst the poor, and in the 15-29 age group for both females and males.

Figure 17

Employment Status of Urban, Rural, Poor and Non-poor Households
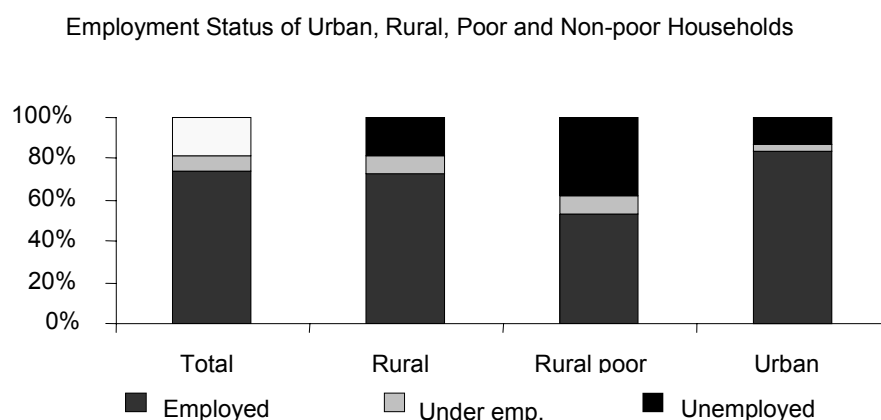
Employed Population by Status: The self-employed and paid employees are of greatest significance in the distribution of the employed population. About 70 percent are in paid employment.   Just under 18 percent are self-employed. The gender breakdown shows that more of the employed males (20 percent) are self-employed as compared to the employed females (15 percent), and more males (72 percent) than females (68 percent) are paid employees. The highest occurrences of self-employed persons are in the parishes of Carriacou and Petit Martinique, and St. John's and St. Mark's combined, parishes best known for fishing.

Employed Population by Employer: Private businesses employ the highest percentage of workers (47 percent), employing more males than females. There is a higher proportion of females (23 percent) employed in the government than males (12 percent).

Population by Activity: Construction (23 percent) and Services (21 percent) employ most persons. Employment is still along the traditional gender lines across sectors. The best illustration of the gender divide can be found in the construction, wholesale and retail and hotel and restaurant sectors. Thirty-seven percent of working males work in the construction sector, whereas only 2 percent of women work in this sector. Six percent of the male work force are employed in the Wholesale and Retail sector compared with 13 percent of women. Only 2 percent of the male working population work in the hotel and restaurants sector,, as opposed to 9 percent of working females.

The figures can be conservatively revised upwards since a child would not be able to enter school without having received all the necessary vaccines.

Unemployment*:* The total unemployment rate is 18.8 percent. More women are unemployed (25.5 percent), than men (12.5 percent). In the urban area, the female unemployment rate is 19 percent, compared with the male rate of 8.4 percent. Of great concern is the high level of youth unemployment (32.9 percent) where females appear worse off. Most persons are unemployed because of a lack of jobs (90 percent), regardless of gender.
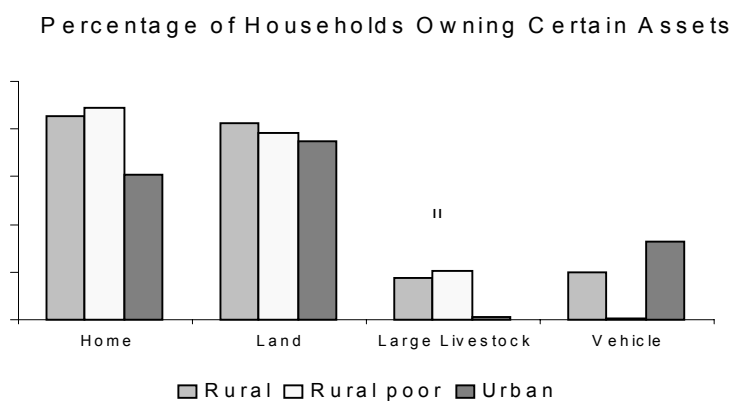
Underemployment*:* The underemployed are defined as those persons aged 15 and above who sought to increase their earnings in the seven days preceding the survey. In light of this, underemployment is most marked for paid employees (47 percent) and the self-employed (37 percent). In both cases, a greater proportion of males than females fall into the bracket of being underemployed.

3.5 HOUSEHOLD ASSETS

The traditional approach to poverty analysis is based on an analysis of household income (or consumption) levels and patterns. An alternative, and equally valid approach is to look at 'asset ownership'. At the simplest level, this means defining the 'poor' as those households with the fewest and least valuable assets. Asset accumulation therefore becomes an indicator of households moving out of poverty, and asset depletion becomes an indicator of increased vulnerability and of households becoming poorer.

Across socio-economic groups there is minimal variation in the ownership of land. The numbers for each group fall in a 10% range
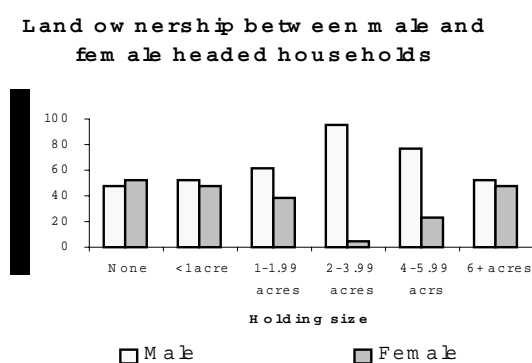
Figure 18

Percentage of Households Owning Certain Assets

Home   Land   Large Livestock   Vehicle

☐ Rural ☐ Rural poor ☐ Urban

Home Ownership*:* Approximately four fifths of households own their homes and one tenth rents. Home ownership is significantly higher in the rural areas (see Figure 8). On the other hand, the data also indicate that temporary dwelling stands out in the urban poor areas, with 32 percent of the households living in a temporary dwelling. There is no significant difference when comparing the ownership of homes for male headed and female-headed households.

Land Ownership: Land is a valuable asset both as a productive resource in its own right and for its importance as collateral for investment and business development. Seventy-nine percent of households own land, which comes very close to the amount owning homes. All parishes show high land ownership with St. George's urban recording the lowest and St. Patrick's the highest. However, the ownership of land beneath the dwelling (76 percent) appears to be slightly less than the ownership of land generally.[1] Across socio-economic groups there is minimal variation in the ownership of land. The numbers for each group fall in a 10 percent range (77 percent- 87 percent), which suggests that ownership is homogenous across economic groups. Like home ownership, the number of male-headed households owning land is similar to that of female-headed households. However, the amount of

[1] There is an issue, however, with respect to the actual interpretation of what constitutes ownership, since in the 'Post-Ivan' module of the questionnaire a large number of persons did not have title to land (only 45.7% had title ownership) and this prevented them from accessing USAID funds for home repair.

land owned by male-headed households appears to be significantly more. This is evident in the amount of male-headed households owning land in the range 1-5.99 acres.

Figure 19

Land ownership between male and female headed households

Holding size

☐ Male ☐ Female

Livestock*:* At the national level, there is generally a low level of livestock ownership. This is especially so for small livestock such as chickens and pigs where less than 4 percent of households own such animals.

Only one household in six owns large livestock (cattle, goats and sheep). Great variability exists across sub-regions and geographic areas, with Carriacou and Petit Martinique and St. David's outshining the other parishes. The rearing of cattle, goats and sheep still plays an important role in the livelihood of the residents of these parishes.

Vehicle*:* Eighteen percent of the Grenadian population owns at least one vehicle compared to 21.5 percent from the 2001 census. Vehicle ownership is not common among the poor. This makes the perception that a vehicle is a luxury more valid. Despite this, there is still a great difference between the non-poor areas, with households in urban areas owning twice as many vehicles as those in the non-poor rural areas. Not only is a vehicle a luxury product, it can also be considered an urban phenomenon.

There is a striking difference between female and male headed household ownership of vehicles. Male-headed households are three times more likely to have a vehicle than female-headed households. A possible contributor to this situation is the high level of female un-employment and the fact that more female than male-headed households fall in the lower poverty quintiles.

Appliances and other Household Assets*:* Stoves are the most common of all the appli-ances with 93 percent of all households having one. The other commonly owned appli-ances, which are evident in over 70 percent of the households, are electric irons, refrigera-tors, television and radio/stereo sets. Further analysis into the sub-regions shows that it is more likely for non-poor houses to have these appliances. When comparing the non-poor areas the ownership of these assets is slightly more common in the urban areas.

Further analysis by gender showed no significant differences in the level of male and female headed households owning these assets and appliances. This was more or less the scenario with regards to ownership of all assets (with the exception of motor vehicles and the area of land owned).

3.6 HOUSING AND AMENITIES

Most Grenadians (85 percent) live in an undivided private house. Only 8 percent of the households claim to share their houses. Most people live in houses with three or more rooms, with a significant portion of the poor households living in houses with two or fewer rooms. On average, there is one person per room.
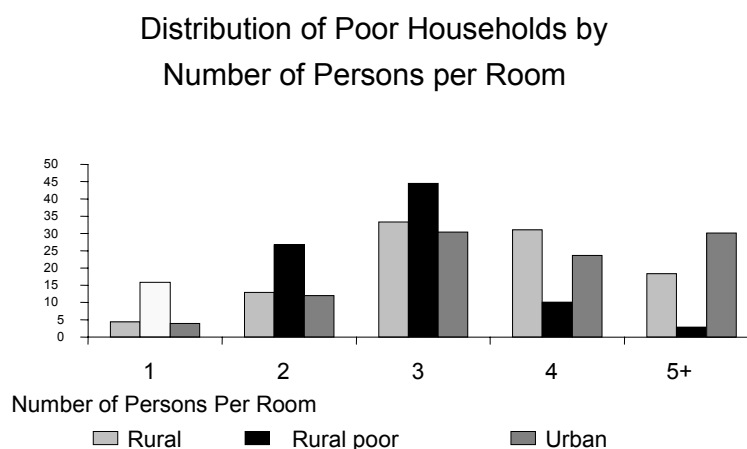
Overcrowding, which can be defined as having a ratio of 2 or more persons per room, is prevalent in approximately 14 percent of the households. Hurricane Ivan is a possible cause for overcrowding, since it undoubtedly reduced the rooms and increased the number of occupants in homes. Overcrowding becomes more of an issue for the poor households. This is illustrated in Figure 20.

Another key welfare determinant is the materials used in the construction of the dwelling unit. The use of sheet metal as the main roofing material is widespread at the national level (94 percent). This comes close to the Census 2001 figure of 96.4 percent. In any parish over 88 percent of the houses use sheet metal. There is a marginal difference between the percentage of households living in houses with wooden external walls and households having outer walls of stone, concrete or blocks (41 percent and 32 percent respectively).

It is also apparent that the majority of the poor households live in wooden houses while the opposite is true for the non-poor.

The overall good access to a safe water source is not representative of the situation in Carriacou, with only 11% of the households having a safe source of water supply.

Figure 20

Distribution of Poor Households by
Number of Persons per Room

Number of Persons Per Room

☐ Rural   ■ Rural poor   ☐ Urban

These percentages are the same for wooden houses and slightly lower for stone and concrete houses in Census 2001. It is also apparent that the majority of the poor households live in wooden houses while the opposite is true for the non-poor. A similar pattern exists in the case of the flooring materials used, with both wooden and concrete flooring accounting for approximately the same proportion   (45 percent).

Water, Sanitation and Disposal: An important welfare indicator is access to safe water supply which has implications for health and sanitation. While 99 percent of the households can access water within 15 minutes, 86 percent have access to safe water supply.

Figure 21 shows the distribution of drinking water sources in rural and urban areas, showing that water is more accessible to the non-poor than the poor households since for most of the former water is piped into the dwelling. The overall good access to a safe water source is not representative of the situation in Carriacou, with only 11 percent of the households having a safe source of water supply. Rainwater seems to be the main source of drinking water for a considerable number of households in Carriacou. This low access to safe drinking water is also revealed in Census 2001.

Sanitation measured in terms of toilet facilities appears to be pooerer than access to water, with 36 percent of the households still using pit latrines and with 51 percent using safe sanitation (flush toilets and ventilated pit latrines).

The survey data also show that sanitation is a serious problem in poorer areas. Despite this, there has been an improvement in sanitation from 51 percent (2001 Census) to 59 percent of the households using flush toilets.
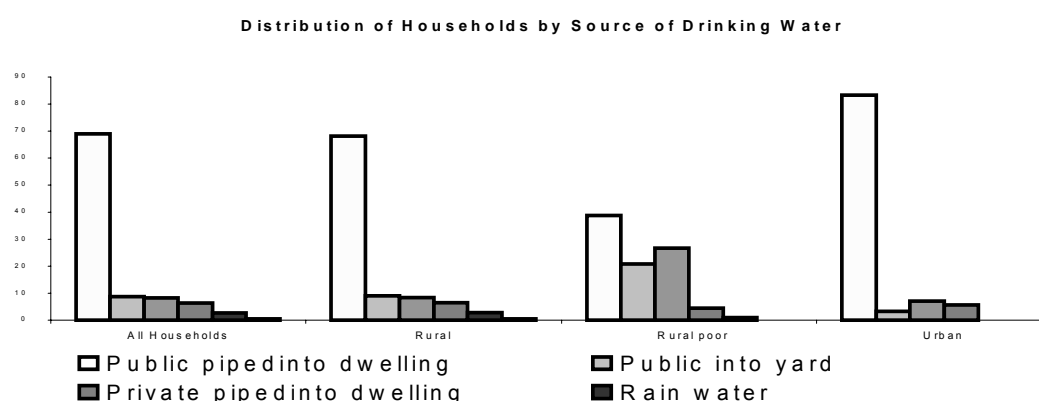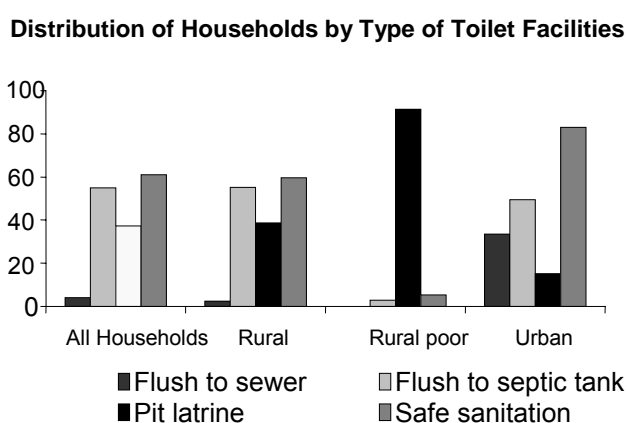
Figure 21

Distribution of Households by Source of Drinking Water

☐ Public piped into dwelling   ☐ Public into yard
■ Private piped into dwelling   ■ Rain water

Figure 22

Distribution of Households by Type of Toilet Facilities

■ Flush to sewer   ☐ Flush to septic tank
■ Pit latrine   ■ Safe sanitation

Garbage collection is managed fully by the government. Dumping and burning of waste are minimal. This is an improvement from 2001 with dumping and burning reduced and improved waste disposal increasing by 6 percent.

Lighting and Cooking*:* The majority of household (80 percent) use electricity for lighting. This has fallen from 85.3 percent compared to 2001. The use of electricity would have been affected by the hurricane since some damaged roofs are not yet repaired. The use of kerosene for lighting is highly prevalent in the poor areas (54.3 percent).

The main fuel used for cooking is gas (95 percent). This denotes a slight improvement from 2001 of 4 percent. The use of firewood and charcoal is negligible at the national and parish levels, and continues to a small extent in the poorer regions. The use of these materials for cooking has also fallen slightly.

3.7 SERVICES

The CWIQ is also an important source of information on service delivery. It can be used for tracking consumer behaviour and attitudes for a wide range of public services. Figure 23 shows the extent to which these services are used by the public, and compares usage patterns before and after Hurricane Ivan.

Among all the services, electricity appears to be most frequently used, but usage was significantly affected by the hurricane and dropped from 85 percent to 77 percent. Telephone service also appears to have been disrupted. The use of telephones is also reflected in the

The use of telephones is also reflected in the level of ownership of fixed and mobile phones. The high level of fixed telephone lines in Carriacou and the low levels in other parishes suggest that telephone access is not fully restored.

Figure 23

Frequency of use of public services before and after Hurricane Ivan

Of all the financial services, commercial banks emerge to be the most popular with a greater pro-portion claiming to use it occa-sionally than frequently. This is true for before and after the hurricane.
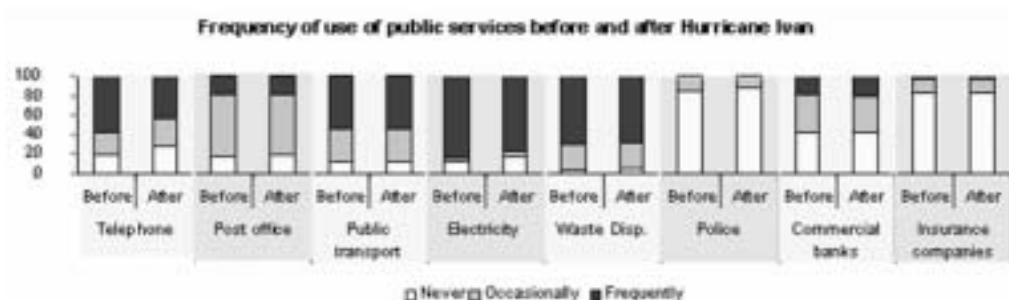
level of ownership of fixed and mobile phones. The high level of fixed telephone lines in Carriacou and the low levels in other parishes suggest that telephone access is not fully restored. The damage to telecommunication is shown more clearly by 67 percent of house-holds accessing fixed phones lines in 2001 as compared to 53 percent at present. Mobile phones however have shown substantial increase in access from 2001.

Internet access is directly related to fixed lines and shows a similar trend across parishes. The survey data also reveal a pattern for cable TV similar to that for telephone service, with access and use being more prevalent in the least affected areas. This service has been re-stored to a far lesser extent than for telephone, as shown by a reduction in use from 30.3 percent (2001 Census) to 23 percent.

Waste disposal services are also widely used and usage levels do not appear to have been seriously affected by the hurricane.

The figure also highlights the services that are <u>not</u> extensively used. These include: police, banks and insurance services. Although the use of police services is low, police services appear to be more popular than private security, with 18 percent and 15 percent of the households (before and after Hurricane Ivan respectively) claiming to use the services occa-sionally. There is overall low access to the nearest police station and, geographically, low access in all parishes except St. Mark's and St. George's Urban. The use of private security, the other forms of security, is negligible with approximately 98 percent of households both before and after the hurricane declaring non-use. Of all the financial services, commercial banks emerge to be the most popular with a greater proportion claiming to use it occasion-ally than frequently. This is true for before and after the hurricane. The other financial services showed high levels of non-use both before and after the hurricane, with govern-

Figure 24

Main reason for occasional or non-use of facilities and services
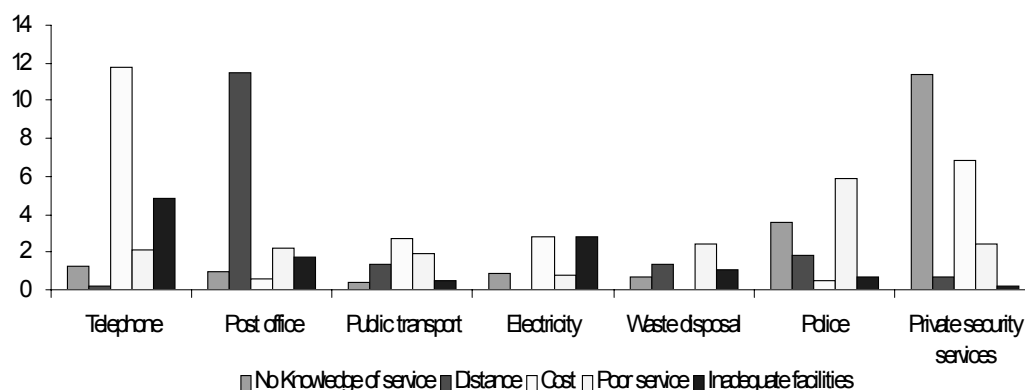
ment grants showing the highest.

Respondents who did not make use of specific services were also asked why not. The answers are shown in Figure 24. With respect to telephone, public transport, and electricity, the main reason given was 'cost'. With respect to the post office, the main reason was distance. Inadequate facilites was also another common reason for non-use. Further breakdowns of the data can be made to develop socioeconomic profiles for users and non-users of the services.

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