JAMAICA COUNTRY ASSESSMENT

PRELIMINARY DRAFT

PLANNING INSTITUTE OF JAMAICA
APRIL 2012
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### Abbreviations and Acronyms

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<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
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<tr>
<td>BOJ</td>
<td>Bank of Jamaica</td>
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<tr>
<td>BSJ</td>
<td>Bureau of Standards Jamaica</td>
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<tr>
<td>CARICOM</td>
<td>Caribbean Community</td>
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<tr>
<td>CBO</td>
<td>Community Based Organization</td>
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<tr>
<td>CDA</td>
<td>Child Development Agency</td>
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<tr>
<td>CITO</td>
<td>Central Information Technology Office</td>
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<tr>
<td>CNCD</td>
<td>Chronic Non-Communicable Diseases</td>
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<td>CSEC</td>
<td>Caribbean Secondary Education Certificate</td>
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<td>CSME</td>
<td>Caribbean Single Market and Economy</td>
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<td>CSOs</td>
<td>Civil Society Organizations</td>
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<td>DBJ</td>
<td>Development Bank of Jamaica</td>
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<td>DCS</td>
<td>Department of Correctional Services</td>
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<td>ECC</td>
<td>Early Childhood Commission</td>
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<td>EPI</td>
<td>Environmental Performance Index</td>
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<td>ESSJ</td>
<td>Economic and Social Survey Jamaica</td>
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<td>EU</td>
<td>European Union</td>
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<td>FSC</td>
<td>Financial Services Commission</td>
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<td>GCI</td>
<td>Global Competitiveness Index</td>
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<td>GCT</td>
<td>General Consumption Tax</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GOJ</td>
<td>Government of Jamaica</td>
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<tr>
<td>HACCP</td>
<td>Hazard Analysis and Critical Control Points</td>
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<td>HDI</td>
<td>Human Development Index</td>
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<tr>
<td>HEART Trust/NTA</td>
<td>Human Employment and Resource Training Trust/National Training Agency</td>
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<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>ICT</td>
<td>Information and Communications Technology</td>
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<td>IDB</td>
<td>Inter-American Development Bank</td>
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<td>IDP</td>
<td>International Development Partners</td>
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<tr>
<td>INSPORT</td>
<td>Institute of Sport</td>
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<td>IP</td>
<td>Intellectual Property</td>
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<tr>
<td>JAMSTATS</td>
<td>Jamaica Statistics</td>
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<td>JBDC</td>
<td>Jamaica Business Development Corporation</td>
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<td>JCC</td>
<td>Jamaica Chamber of Commerce</td>
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<td>JCDC</td>
<td>Jamaica Cultural Development Commission</td>
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<tr>
<td>JCF</td>
<td>Jamaica Constabulary Force</td>
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<td>JEA</td>
<td>Jamaica Exporters’ Association</td>
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<td>JIPO</td>
<td>Jamaica Intellectual Property Office</td>
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<td>JIS</td>
<td>Jamaica Information Service</td>
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<td>JHTA</td>
<td>Jamaica Hotel and Tourist Association</td>
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<tr>
<td>JMA</td>
<td>Jamaica Manufacturers Association Limited</td>
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<tr>
<td>JPSCo</td>
<td>Jamaica Public Service Company Limited</td>
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<tr>
<td>JTB</td>
<td>Jamaica Tourist Board</td>
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<tr>
<td>MDAs</td>
<td>Ministries, Agencies and Departments</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<tr>
<td>MEM</td>
<td>Ministry of Energy and Mining</td>
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<tr>
<td>MLSS</td>
<td>Ministry of Labour and Social Security</td>
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<td>MFAFT</td>
<td>Ministry of Foreign Affairs and Foreign Trade</td>
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<tr>
<td>MHEW</td>
<td>Ministry of Housing, Environment and Water</td>
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<td>MNS</td>
<td>Ministry of National Security</td>
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<tr>
<td>Acronym</td>
<td>Full Name</td>
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<tr>
<td>MOAF</td>
<td>Ministry of Agriculture and Fisheries</td>
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<td>MOE</td>
<td>Ministry of Education</td>
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<tr>
<td>MOFP</td>
<td>Ministry of Finance and Planning</td>
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<tr>
<td>MOH</td>
<td>Ministry of Health</td>
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<tr>
<td>MIIC</td>
<td>Ministry of Industry, Investment and Commerce</td>
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<tr>
<td>MOJ</td>
<td>Ministry of Justice</td>
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<tr>
<td>MSM</td>
<td>Men Who have Sex with Men</td>
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<tr>
<td>MSME</td>
<td>Micro, Small and Medium Enterprises</td>
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<tr>
<td>MTEF</td>
<td>Medium Term Expenditure Framework</td>
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<td>MTF</td>
<td>Medium Term Socio-Economic Policy Framework</td>
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<td>MTW</td>
<td>Ministry of Transport and Works</td>
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<tr>
<td>NDP</td>
<td>National Development Plan</td>
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<td>NEPA</td>
<td>National Environment and Planning Agency</td>
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<tr>
<td>NGO</td>
<td>Non Governmental Organization</td>
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<td>NSWMA</td>
<td>National Solid Waste Management Authority</td>
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<td>NWA</td>
<td>National Works Agency</td>
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<tr>
<td>NWC</td>
<td>National Water Commission</td>
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<tr>
<td>ODPEM</td>
<td>Office of Disaster Preparedness and Emergency Management</td>
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<tr>
<td>OPM</td>
<td>Office of the Prime Minister</td>
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<tr>
<td>OUR</td>
<td>Office of Utilities Regulations</td>
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<tr>
<td>PATH</td>
<td>Programme of Advancement through Health and Education</td>
</tr>
<tr>
<td>PCJ</td>
<td>Petroleum Corporation of Jamaica</td>
</tr>
<tr>
<td>PIOJ</td>
<td>Planning Institute of Jamaica</td>
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<tr>
<td>PLHIV</td>
<td>Persons Living With HIV</td>
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<tr>
<td>PSOJ</td>
<td>Private Sector Organization of Jamaica</td>
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<tr>
<td>PWD</td>
<td>Persons with Disabilities</td>
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<tr>
<td>RADA</td>
<td>Rural Agricultural Development Authority</td>
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<tr>
<td>RBM</td>
<td>Results Based Management</td>
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<tr>
<td>SBAJ</td>
<td>Small Business Association of Jamaica</td>
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<td>SDC</td>
<td>Social Development Commission</td>
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<td>Scientific Research Council</td>
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<td>STATIN</td>
<td>Statistical Institute of Jamaica</td>
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<tr>
<td>STI</td>
<td>Science, Technology and Innovation</td>
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<td>T21</td>
<td>Threshold 21 Jamaica</td>
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<tr>
<td>TWGs</td>
<td>Thematic Working Groups</td>
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<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Education, Scientific and Cultural Organization</td>
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<tr>
<td>UNFCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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<td>UNGASS</td>
<td>United Nations General Assembly</td>
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<td>UNICEF</td>
<td>United Nations Children Fund</td>
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<tr>
<td>UTECH</td>
<td>University of Technology</td>
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<tr>
<td>UWI</td>
<td>University of the West Indies</td>
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<td>WEF</td>
<td>World Economic Forum</td>
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1 Introduction

1.1 Jamaica Context
Jamaica is the largest English-speaking island in the Caribbean spanning approximately 1 million hectares in size – 82 km wide by 234 km long—and is more than 2,256 metres at its highest point, Blue Mountain Peak. Its varied topography and climate allow for a diversity of habitats and growing conditions. The island is located in the Atlantic Ocean hurricane belt and has been subjected to significant damage and loss of lives from a succession of hurricanes and tropical storms. The population, approximately 2.7 million with an average annual growth rate of 0.3 per cent, is projected to not exceed 3.0 million by 2030.

According to most assessments, Jamaica has undergone significant social, political and economic changes over the past three years. Jamaica is a highly indebted middle income country which recently graduated to the status of upper middle income country after several years of straddling the lower-upper middle income threshold. Jamaica's HDI value for 2011 is 0.727—in the high human development category—positioning the country at 79 out of 187 countries and territories. Between 1980 and 2011, Jamaica’s HDI value increased from 0.607 to 0.727, an increase of 20.0 per cent or average annual increase of about 0.6 per cent1,2.

The 2009 National Millennium Development Goals (MDGs) Report highlighted that Jamaica has made good progress in eight out of the 14 targets for 2015. The country has achieved universal primary education and has reduced absolute poverty, malnutrition and hunger. The country is also on track in a number of areas including combating HIV/AIDS, halting and reversing the incidence of diseases such as malaria and tuberculosis, access to reproductive health, and provision of safe drinking water and basic sanitation. See Appendix 1—Jamaica MDG Progress.

1.2 Background and Purpose
The country’s first long-term strategic plan, Vision 2030 Jamaica – National Development Plan and the Medium Term Socio-Economic Policy Framework

1. http://hdrstats.undp.org/images/explanations/JAM.pdf. The rank of Jamaica’s HDI for 2010 based on data available in 2011 and methods used in 2011 is 78 out of 187 countries. In the 2010 HDR, Jamaica was ranked 80 out of 169 countries. However, it is misleading to compare values and rankings with those of previously published reports, because the underlying data and methods have changed, as well as the number of countries included in the HDI.

2. Vision 2030 Jamaica has set a target HDI of 0.75 to be achieved by 2012.
(MTF) 2009–2012 were tabled in Parliament on May 5, 2009 by former Prime Minister the Honourable Bruce Golding during his contribution to the 2009/2010 Budget Debate. The development of these strategic documents was preceded by two and a half years of planning, consultations and preparation led by the Planning Institute of Jamaica (PIOJ) and included broad based participation from all sectors of society—government, private sector, community-based organizations, academia, individual citizens of Jamaica and the international development community.

Vision 2030 Jamaica – National Development Plan provides a comprehensive planning framework in which the economic, social, environmental and governance aspects of national development are integrated. The Plan is expected to put Jamaica in a position to achieve developed country status by 2030 and is based on the vision: “Jamaica, the place of choice to live, work, raise families, and do business”. Vision 2030 Jamaica is built on four strategic goals which are mutually reinforcing and synergistic in design and further mapped into 15 National Outcomes.

The Medium Term Socio-Economic Policy Framework (MTF) is the main mechanism for translating Vision 2030 Jamaica’s long-term national goals and outcomes into action. Vision 2030 Jamaica will be implemented through a series of seven consecutive three-yearly MTFs from fiscal year 2009-2010 to fiscal year 2029/2030. The first in the series is MTF 2009–2012. The next in the series will be MTF 2012–2015. As a fundamental component of the national planning framework, MTF 2009-2012 outlines a prioritized package of policies, strategies and programmes aligned to the budget at the macro level that are implemented primarily by Ministries, Departments and Agencies (MDAs).

March 2012 marks the end of the three-year cycle for MTF 2009–2012 and a new MTF 2012–2015 is being prepared. The Jamaica Country Assessment is an important input into the development of the new MTF.

The Jamaica Country Assessment serves as an overview and analysis of the development situation in the country and using Vision 2030 Jamaica - National Development Plan as a frame, attempts to point out new development issues and challenges the country faces in the political, social, environmental and economic spheres. The Jamaica Country Assessment provides justification and relevance ensuring that the new medium term priorities for the next three year
period are aligned with the most urgent needs and the main development issues and challenges identified by key stakeholders.

1.3 Methodology
The process of preparing the country assessment involved the following:
1. Preparation of a comprehensive list of documents on Jamaica's economic, natural environment, social, politics and governance situation
2. Comprehensive review and synthesis of the documents
3. Preparation of draft document by the Planning Institute of Jamaica, which is the focal point for Vision 2030 Jamaica
4. Review of draft document by PIOJ internal review panel and incorporation of feedback
5. Circulation of draft document to external stakeholders for review and additional input
6. Finalisation of the document based on review and input from stakeholders
7. Presentation of the document, in particular, the key development issues and challenges, as part of the National Strategic Prioritisation Exercise

Limitations
Much effort was made to source recent data and information (2009, 2010 and 2011) to complete the situational analysis and to provide supporting evidence. However, at the time of writing, complete data sets and information were not available particularly for 2010 and 2011. It is expected that these data will be provided in time for the development of the new MTF.

1.4 Structure of the Document
The Country Assessment document comprises five sections. The first section which is the Introduction provides a brief overview of Jamaica, justification for the preparation of the Country Assessment and the methodology for its preparation.

The remaining four sections - two to five - outline the national development situation in the social, governance, economic and environmental spheres utilizing the four strategic goal structure of Vision 2030 Jamaica National Development Plan. Each of the section highlights key achievements in the various areas as well as progress made towards national imperatives such as Vision 2030 Jamaica targets, the Medium Term Economic Programme associated with the IMF Stand By Arrangement, internationally agreed development goals and treaty obligations such as the MDGs.

In addition, each section identifies the main national development issues and challenges associated with the respective focal areas and where possible provides brief comments on gaps in responses to address them.
Goal 1 - Jamaicans are empowered to achieve their fullest potential: The focal areas under this section are Population, Health, HIV-AIDS, Education, Poverty and Social Protection

Goal 2 - The Jamaican society is safe, cohesive and just: The areas of focus under this section are National Security and Governance with emphasis on Justice, Local Government, Constitutional Reform and Public Sector Reform

Goal 3 - Jamaica’s economy is prosperous: The focal areas under this section are the Macroeconomy, Energy and Science, Technology and Innovation

Goal 4 - Jamaica has a healthy natural environment: This section focuses on the natural environment with specific emphasis on the following sub-sectors: Ecosystems and Natural Resources, Biological Resources & Protected Areas, Marine and Coastal Resources, Fresh Water Resources, Forests and Watersheds, Waste Management, Air Pollution, Natural Hazards and Climate Change.
2 Goal 1: Jamaicans are empowered to achieve their fullest potential

Vision 2030 Jamaica will create a society in which all Jamaicans are empowered to participate fully in the development of their country and to develop their talents and abilities, thereby elevating their standard of living and quality of life. By 2030, it is expected that Jamaica will achieve an HDI score of 0.800 or higher that will rank us among the countries with high human development.

Positive progress has been made under Goal 1 particularly with respect to the national outcomes for demography, health, education, social protection and culture. As an overall measure of progress, Jamaica’s ranking under the Human Development Index (HDI) has increased to 0.727 in 2011, placing the country in the high human development category. The overall population growth rate has fallen from 0.5 per cent per annum in 2007 to 0.3 per cent per annum in 2010, moving Jamaica closer to a stable population. The adult literacy rate increased from 86.8 per cent estimated in 2009\(^3\) to 91.7 per cent\(^4\) in 2010, while the percentage of Jamaica’s labour force with vocational and/or professional training increased from 19.6 per cent to 21.2 per cent over the same period. The gross enrolment rate at the tertiary level also increased from 29.0 per cent in 2008 to 32.8 per cent in 2010. There were improvements in social protection measures. There were 363,496 persons registered on the PATH, signifying an achievement of the 360,000 target set by the GOJ in 2008. The majority of beneficiaries on PATH are from quintiles 1 and 2. The percentage of the labour force that is contributing to NIS also rose from 32% in 2007, to 35.7% in 2009. However, the prevalence of poverty rose from 12.3 per cent in 2008 to 16.5 per cent in 2009 and to 17.6 per cent in 2010.

The social development areas to be addressed under this goal area are Population, Health, HIV-AIDS, Education, Poverty and Social Protection.

2.1 Social Development

In terms of social indicators, it is expected that Jamaica will achieve most of its Millennium Development Goals (MDGs). According to national estimates, the country is expected to meet targets for poverty reduction, infant and child nutrition, primary education and access to safe drinking water. The country is on track to halt and reverse the incidence of malaria and tuberculosis and possibly HIV/AIDS. At 74.13\(^5\) years in 2010, life expectancy is comparable to high income countries, enrollment in primary and junior secondary school is near universal,

\(^3\) UNESCO projections based on data from the 1999 Jamaica Literacy Survey
\(^4\) JSLC
\(^5\) ESSJ 2010.
and access to safe water and sanitation facility has improved considerably with coverage at 81.3 per cent and 99.9 per cent, respectively. Jamaica will however, not meet targets for infant and maternal mortality. The country is also lagging in the area of gender equality particularly as it relates to male under-performance in education and the issue of a higher rate of unemployment for women, despite their educational gains.

2.1.1 Population

2.1.1.1 Overview and Context

The population census of 2001 established Jamaica’s population as 2.61 million persons. According to the Economic Social Survey Jamaica (ESSJ), population estimate at the end of 2010 was 2.7 million persons (49.3 per cent males and 50.7 per cent females) with a growth rate of 0.3 per cent. The rate of natural increase was 9.4 per 1,000 with estimated births and deaths at 41,600 and 16,100, respectively, and net external movements at 18,500. The proportions for both sexes have remained unchanged since 2004, giving a sex ratio of 97.1 males per 100 females.

The population growth rate is declining more rapidly than projected under Vision 2030 Jamaica. In 2009, it was reported to have fallen to 0.2 per cent, down from 0.5 per cent in 2007. Reductions in the Crude Birth Rate (CBR) and the relatively high levels of international migration were among the main factors contributing to this decline. With the annual population growth rate averaging consistently below 0.5 per cent over the past few years, it means that the targets for 2012 and 2015 under Vision 2030 Jamaica have already been surpassed.

The development of a National Policy and Plan of Action on International Migration and Development is a critical tool in the strategy for realizing key population goals and development priorities. The outcomes of the Plan are to ensure that international migration “is adequately measured, monitored and influenced to serve the development needs of Jamaica”. The policy will focus on the following themes:

- Labour mobility and development
- Remittance and development
- Diaspora engagement and development
- Human rights and social protection
- Governance and policy coherence
- Data, research and information systems
- Return and reintegration of migrants

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6 Data is a serious problem as no health indicator surveys are available since 1991.
7 Economic Social Survey Jamaica, 2010
8 Economic and Social Survey Jamaica, 2009, Population Chapter.
• Family, migration and development

The ESSJ 2010 reports that Jamaica is currently at an intermediate stage of the demographic transition, evidenced by the demographic ageing of the population (decreasing birth rates and relatively low death rates). The effects of the ageing population structure are apparent in the declining 0–14 age group; and the increasing working age, 15–64, and dependent elderly (65+) age groups.

Inter-censal estimates indicate that spatial distribution of the population remained unchanged for the period 2006–2010. Approximately 25 per cent of the population resides in Kingston and St. Andrew. St. Catherine has the second largest proportion of the population at 18.3 per cent. The parish of Hanover has the lowest proportion at 2.6 per cent.

2.1.1.2 Issues and Challenges

Population Ageing
Population ageing can be easily described as one of the main demographic phenomena of this era and has increasing importance both for now and the future. This process embodies the following characteristics:

- Increase in the proportion of older persons;
- Decrease in the proportion of younger persons; and
- Increase in the active (working age) population up to a point in time until it begins to decline.

The changes in the population present clear opportunities for economic growth, savings and investments. To benefit from this window of opportunity, Jamaica must act now in the early stages- as this window will close when the proportion of elderly persons increases further - returning the country to the point of high dependency ratios.

Impact of Migration on National Development
International migration has had major effects on the growth, structure and characteristics of the population. Over the past four decades, more than 25,000 persons have emigrated legally each year from Jamaica to the USA, Canada and the United Kingdom. Emigration has reduced population growth by over 40 per cent annually. More migrants are females and fall within the most economically productive age group 15-49 years (see ESSJ various issues). Another major feature is the relatively high levels of professional, executive, administrative and managerial workers in the migration streams. These comprised about 18 per cent of total workers to the USA and Canada since 1970. The loss of critical human resources (brain drain) has been of great
Recent studies have demonstrated overwhelmingly that migrants have contributed positively to the development of the economies and societies to which they have migrated. Remittances to Jamaica have tripled since the 1990s. In 2010, total remittance inflows were US$1,906.2 million, representing an increase of US$115.9 million relative to 2009. Remittances have been associated with reducing poverty and improving living conditions in many households island-wide. International migration, however, has been negatively connected to family fragmentation, under-achievement in school and poor socialization of children left behind, juvenile delinquency and involvement in crime and criminal networks.

Civil Registration and Vital Statistics System
The Government of Jamaica has embarked on a programme for the modernization of Jamaica’s Civil Registration and Vital Statistics Systems (CRVSS). This was deemed necessary based on the findings of an audit of its systems conducted in 2005, under the general guidance of the Vital Statistics Commission (VSC) which was established in 2003. The slow pace of the modernization process leaves a lot to be desired. The country has been dogged by data weaknesses and overall data quality particularly with respect to infant and maternal mortality. The modernization programme seeks to address the identified weaknesses within its CRVSS, thus ensuring that Jamaica has an effective and efficient system that produces reliable and timely vital data and vital statistics that meet international standards and local requirements.

Vital statistics produced by the system is expected to provide the basis for evidence-based policy decisions including:

- Government’s daily administration and policy analyses
- Policy-makers’ planning
- Business decisions
- The citizenry to hold their governments accountable
- Monitoring progress of MDGs, ICPD and other internationally agreed development goals

2.1.2 Health
2.1.2.1 Overview and Context
The health of Jamaicans has improved considerably over the past decades and Jamaica ranks high among developing countries with respect to the health status of the population. Life expectancy at birth stood at 74.13 years in 2010. The total fertility rate is approximately 2.4 children per woman and declining due
to improvements in contraceptive prevalence. Compared to regional and international benchmarks Jamaica already has relatively low infant and maternal mortality rates and continue to make improvements in these areas\textsuperscript{10}.

In 2010, immunization coverage for children 0–11 months was BCG 95.2 per cent, Polio 94.2 per cent, DPT/DT 94.6 per cent, Hib 94.5 per cent, HepB 94.4 per cent. Coverage for children 12–23 months for MMR was 87.1 per cent, representing some of the highest coverage seen in the past five years Immunization coverage has long been a cause for concern and these results reflect increased investments by the government.

In 2010, the Economic and Social Survey, Jamaica, reported the status of key health indicators for Jamaica as:

- Life expectancy (at birth) – 74.13 years
- Infant Mortality – 15.4/1 000 live births
- Crude birth rate – 17.0/1 000 mean population
- Total fertility rate – 2.4/1 000 women in 15-49 age group
- Maternal Mortality Rate – 94.8/100 000
- Immunization coverage:
  - DPT,OPV, BCG 0-11 months – 94.7 per cent
  - MMR 12-23 months – 87.1 per cent

The main causes of mortality and morbidity in Jamaica are now chronic non-communicable diseases (NCDs) such as hypertension, cardio-vascular (heart) conditions, diabetes, obesity, some cancers and lifestyle practices such as tobacco consumption, substance abuse, and violence, injuries and mental illness. Major contributory lifestyle factors have been identified as causative factors to NCDs including weight problems, sedentary life styles and inadequate diet practices. The management of these conditions represents a burden on the health services.

During 2010, the government continued its focus on access and the levels of utilization within the sector. There was a decline in visits to public health centres compared with 2009. Despite this, demand for services within the public health sector remained high, particularly with respect to pharmacy services, with an increase in the number of pharmacy items dispensed at both public health centres and public hospitals.

\textsuperscript{10} The measurement of maternal and infant mortality rates has been affected by data deficiencies. Despite the data limitations, estimates from the Statistical Institute of Jamaica (STATIN) indicate that there has been some improvement in these indicators. However, based on the current rate of improvement, it is unlikely that the MDG relating to infant and maternal mortality rates (the target is to halve these rates by 2015) can be met by 2015.
2.1.2.2 Issues and Challenges - Health

Notwithstanding Jamaica’s relatively good positioning with respect to most health indicators, there is public dissatisfaction with the delivery of health care particularly as relates to the public health care system. In addition, areas such as the infant and maternal mortality rates which have not moved significantly in the recent past, is cause for concern.

Other key issues and challenges include:

- Following the abolition of user fees in all public hospitals and health centres in April 2008, Jamaicans can now access all services including pharmaceutical services at these facilities at no cost. The introduction of the no user fee policy significantly increased the number of patients accessing pharmacy services. This has highlighted the chronic shortage of pharmacists in the public sector as well as the availability of pharmaceuticals in the public health system to meet the needs of citizens.
- Several of our health care institutions at all levels are under-equipped and under staffed with respect to some categories of staff.
- Vital statistics with respect to death and birth registration are questionable. There are concerns about the under-registration of deaths, the recording of maternal deaths, delays in the handing over of records of infant deaths to the Registrar General’s office and records of deaths occurring outside of the hospitals which do not reach the RGD offices.
- Limited available data to plan for Jamaica’s human resources in the health sector. A Needs-Based Human Resources for Health Planning study, funded by Health Canada and PAHO, revealed that there were shortages in Contact Investigators, Dentists, Midwives, Pharmacists and Psychiatrists in the South East Regional Health Authority (ESSJ, 2010).
- With the prevalence of hypertension at approximately 20.0 percent and diabetes at 9.0 percent, and increasing obesity; the management of chronic and life style illnesses are is a growing cause of concern in Jamaica.
- The accident and emergency rooms at most of our secondary health care institutions are constantly overcrowded dealing with primary health care concerns.
- Intentional injuries resulting from acts of crime and violence continues to cost the state as resources are allocated to facilitate the management of these conditions impact heavily on the budget of the Ministry of Health.
- Many of our primary health care institutions which should serve the needs of most of the outpatients are underutilised in some instances due to the absence of key health personnel and equipment in these institutions.
- The prevalence of HIV/AIDS, STIs and STDs persist at a higher than desirable rate.
- There are frequent complaints from the public on the poor quality of service delivered by personnel in the health sector.
- Tertiary level institutions are unevenly distributed around the island.
Migration of highly skilled health care personnel without adequate replacement

Key health issues affecting children included immunization, nutrition and unintentional injuries. Data from the MOH indicated that 47.1 per cent of six weeks old babies seen at public clinics between January and October 2010 were exclusively breast fed compared with 44.8 per cent in 2009. This is well below the Ministry’s target of 60.0 per cent exclusive breast feeding at six weeks. According to MOH, 12 per cent of children in Jamaica were born in 2009 with low weight as maternal infantile indicators failed to improve in recent years. Chronic malnutrition (low height for age) affects 4 per cent of children under five years of age.

2.1.3 HIV and AIDS
2.1.3.1 Overview and Context
The adult HIV prevalence in Jamaica was 1.7 per cent with an estimated 32 000 persons living with HIV (PLHIV) (UNAIDS 2010). Approximately one half of these persons are unaware that they were infected with HIV. Over the past decade UNAIDS assessed that there was a 25 per cent decline in new HIV infections in Jamaica. However, as many as 2 100 Jamaicans are estimated to become newly HIV infected each year and AIDS remains a leading cause of death among adults 15–49 years with over 500 reported deaths due to AIDS in 2010.

The HIV epidemic in Jamaica is characterised as being a mixed epidemic because it shows features of being both generalized in the population and concentrated among key populations. While HIV prevalence has been less than 2 per cent in the general population and relatively stable for many years the prevalence of HIV among key populations remains unacceptably high. Among men who have sex with men (MSM) HIV prevalence has been estimated as 32 per cent for over 15 years (Figueroa et al, 2011). HIV prevalence among female sex workers (SW) was 9 per cent in 2005 and 4.9 per cent in 2008; among prison inmates 3.3 per cent, the homeless 10 per cent and crack/cocaine users 5 per cent (Ministry of Health, Jamaica 2010; Figueroa et al 2008, UNAIDS 2010).

The Government of Jamaica and its key partners have placed significant emphasis on working to halt and reverse the spread. According to the 2010 UNGASS Jamaica Report, the National HIV response consists of more than 100 stakeholders from the government of Jamaica, non-governmental organisations, private sector groups and international development partners.

Their interventions are guided by the 2007-2012 National Strategic Plan in the following areas:
- Prevention
- Treatment care and support
Enabling environment
Empowerment and governance.

Jamaica has recorded significant successes in its response to the epidemic. Some of these include:

- A 25 per cent decline in the number of persons newly HIV infected over the past decade (UNAIDS, 2010)
- A drastic reduction in the number of infants born to HIV infected women. The HIV transmission rate from mother to child has been reduced from 25 per cent to less than 5 per cent since 2007. Nearly all (95 per cent) pregnant women in 2010 were tested for HIV and most (87 per cent) HIV infected women and 98 per cent of HIV exposed infants received ARV medication. Less than 20 children are reported with HIV annually
- A significant decline in deaths due to AIDS and an improvement in the survival and quality of life of persons living with HIV
- Since late 2004, there has been a public access treatment programme supported by the Global Fund that has placed more than 8000 persons with advanced HIV or AIDS on ARV treatment. Nearly 50 per cent of all PLHIV in need of treatment are now on ARV treatment and over 80 per cent of them are still on treatment after one year. Twenty three treatment sites with teams of trained providers have been established island wide as well as partnerships with selected private physicians. ARV medication is provided free of cost
- A National HIV/AIDS Policy was adopted unanimously in Parliament in 2005 and both houses of Parliament approved the National HIV/AIDS Workplace Policy in 2010. HIV regulations requiring private and public sector entities to adopt and implement HIV polices within the workplace were drafted.
- Former Prime Minister, Honourable Bruce Golding and the leader of the Opposition, Most Honourable Portia Simpson Miller, signed a Declaration of Commitment to eliminate HIV related stigma and discrimination and gender inequality in Jamaica on 29 April 2011
- Stigma and discrimination associated with HIV in Jamaica has declined considerably. Major anti-stigma campaigns involving 4 Jamaicans living with HIV have been mounted in recent years and been well received by the public
- Prevention and treatment programmes among vulnerable populations have expanded considerably. HIV prevalence among female sex workers has declined from 12 per cent in 1989 to 5 per cent in 2008. Most female sex workers report using condoms with their clients. Work with MSM has expanded in recent years although HIV prevalence among MSM has not declined
- The condom market has grown from 2.5 million condoms (20 per cent sold) in 1985 to 10 million (70 per cent sold) in 2000 and 15 million (50 per cent sold) in 2010. Approximately 75 per cent of men and 60 per cent of women
with multiple sex partners report condom use at last sex (national KABP 2008)

- The Health and Family Life Education (HFLE) curriculum including sex education has been rolled out in 87 per cent of schools throughout the island reaching nearly half a million students
- The HIV response includes active participation among line ministries, key social sectors such as labour, education, tourism, youth and security, over 25 non-governmental organisations, the private sector including a business council, faith based organisations, persons living with HIV and their organisations and other organisations, agencies and individuals
- HIV testing has become normalised and much more acceptable due to consistent efforts of the national program to promote its importance, and through the provision of outreach testing in a variety of settings including mobile units and the systematic training of thousands of health and other providers in HIV counselling and testing
- HIV rapid testing is available at primary health care sites throughout the island. Routine “opt out” HIV testing is available for all pregnant women and most public STI clinic attendees while outreach testing is conducted on a regular basis among key populations. Provider initiated HIV testing and counselling has been introduced at all hospitals
- HIV laboratory services including CD4, viral load and neonatal PCR testing have been established in the public private health sector with access for the private health sector
- The HIV response has been decentralised to the Health Regions, social sectors, parishes and civil society. Hundreds of training workshops have been held with scores of thousands of persons trained in all aspects of HIV prevention, treatment, care, stigma reduction and management

It is reported that grants from the Global Fund to Fight AIDS, Tuberculosis and Malaria Global Fund have largely supported the HIV and AIDS response in Jamaica. Since 2004, a total of US$45.6 million has been disbursed via Rounds 3 and 7 of the Global Fund to address areas related treatment—universal access ARVs, prevention, policy, and programming for vulnerable populations. This amount represents approximately 71 per cent of the approved funding amount.

2.1.3.2 Issues and Challenges - HIV and AIDS

Although Jamaica has recorded significant successes in the HIV response in recent years, many challenges remain.

These include:

- Nearly 50 per cent of PLHIV in Jamaica are not aware of their HIV status
- Despite a general scaling up of prevention and treatment programmes, the percentage of young people aged 15–24 years old who are HIV positive showed no significant change in the last five years. Data from the
National HIV/AIDS Programme (NHP) show that reported AIDS cases among girls in the 10-19 age group have increased since 1982, but there has been no noticeable trend in the number of cases reported for males in this age group. Girls in this age group are three times more likely to be infected with HIV than their male counterparts

- HIV prevalence among MSM remains unacceptably high at 32 per cent.
- Stigma associated with socially marginalised groups, especially MSM, remains very strong and acts of discrimination are common. Stigma associated with HIV remains. However, the perception of stigma and discrimination associated with HIV is far more serious in the minds of PLHIV and vulnerable persons than is found in practice.
- Persons living with HIV are reluctant to disclose their status to anyone including family members and friends. The failure to disclose helps to keep the HIV epidemic invisible to most persons who remain unaware that their own family member or friend or co-worker may be living with HIV.
- Many of those most vulnerable, especially MSM, are not accessing HIV prevention or treatment services or are doing so at a very late stage. HIV testing is not being accessed readily by many persons most at risk.
- Fifty per cent of those estimated to be in need of ARV treatment are not on therapy primarily because they have not been tested and are therefore unaware of their HIV status.
- Laboratory tests for the clinical monitoring of persons on ARV therapy are frequently not available or the results are slow in being returned to clinicians. Most patients cannot afford to access these tests in the private sector and the public sector is under severe stress.
- Many of those who are on treatment are not adhering adequately to ARV medication. This is likely to contribute to the emergence of HIV resistant strains. Clinical management by some health practitioners is not at the required standard.
- There have been major problems with the supply, distribution and dispensing of ARV drugs in the country. Public pharmacies are completely overwhelmed and patients have to wait long hours for prescriptions to be filled often having to return another day. There are far too few pharmacies stocking ARV drugs and stock outs are common. Basic drugs for related conditions such as STI are frequently not available in the public sector and too expensive for most patients in the private sector.
- The sustainability of the HIV program and the provision of free the anti-retroviral drugs are of concern. International funding under the Global Fund is expected to come to a close in 2013. Moreover in an economically challenged environment, the jobs of scores of prevention outreach staff, PLHIV and others are under threat.
- Slow pace of the legal and regulatory framework towards an enabling environment that would reduce the vulnerability of those most at risk and better facilitate the provision of services and practice of safer sex.
The limited technical and managerial capacity with respect to HIV among most civil society organisations has implications for the expansion of coverage of prevention interventions. (Draft National HIV Strategic Plan 2013–2018).

2.1.4 Education

2.1.4.1 Overview and Context

Jamaica has achieved universal access at the early childhood, primary, and lower secondary level of the education system. For the 2009/10 academic year, enrolment was estimated at 79.4 per cent (846 419 persons) of the school-age cohort (3–24 years old) with the primary level accounting for 34.8 per cent of the total. The gross enrolment rates at pre-primary, primary, secondary and tertiary levels were 99.6 per cent, 92.1 per cent, 94.5 per cent and 32.8 per cent, respectively.

The average daily attendance rate at the early childhood education level was 77.5 per cent (77.9 per cent female, 77.1 per cent male) in Infant Schools/Departments. Attendance data at the primary level showed improvement at 84.9 per cent almost achieving the 85 per cent target set by the Ministry of Education. The attendance level for girls (85.9 per cent) was higher than for boys (83.9 per cent). Estimated average attendance at the secondary level was 81.0 per cent with girls (83.4 per cent) outdoing the boys (78.6 per cent).

At the secondary level, the MOE estimated the average daily attendance at 81.0 per cent in 2009/10. The average daily attendance estimated for girls was 83.4 per cent and for boys 78.6 per cent.

At the ECE level, there were 6 736 teachers, with average teacher to pupil ratio being 1:20. At the Primary level, the teacher-to-pupil ratio has remained at 1:35. Teachers in primary institutions numbered 10 773 (compared with 10 734 in the 2008/09 school year). Over 92.3 per cent of teachers at this level were trained, which reflects a marginal improvement compared to the 91.0 per cent recorded in 2008/09. The level of qualifications of teachers in the public education system has been improving over the past five years with the percentage of trained graduates climbing to 36.0 per cent (3 888 teachers) in 2010 from 21.9 per cent (2 322 teachers) in 2006.

There were 13 787 teachers employed in the 409 public schools offering secondary level education, an increase of 1.4 per cent compared with 2008/09. Of these teachers, 81.0 per cent were trained: 40.3 per cent were college trained teachers/instructors, while 40.7 per cent were trained university graduates. The number of trained university graduates at this level has
improved, moving from 35.4 per cent in 2006 to 40.7 per cent in 2010. The goal of the MOE is to have all teachers certified at this level by 2016. The overall average teacher to pupil ratio was 1:18. The pupil-teacher ratio for the secondary level varies according to school type, with a ratio of 1:23 for All-Age Schools and 1:19 for Technical High Schools.

Adult literacy rate as reported by the Jamaica Survey of Living Conditions was 91.7 per cent in 2010 compared to 86.8 per cent estimated in 2009 (which is based on projections from UNESCO based on data from the 1999 Jamaica Literacy Survey). This means that both the 2012 and 2015 targets set under Vision 2030 Jamaica for adult literacy have been surpassed.

Student Performance
Performance at key examinations at the various levels has been improving. In June 2011, a total of 56 126 students from public, private and special schools sat the Grade 4 Literacy Test. Over 71 per cent of the 56 126 students who sat the examination attained mastery, up from 67 per cent last year in 2010. Within the public schools, 69 per cent attained mastery, an increase over the 64.5 per cent achieved in 2010 and the 67.3 per cent recorded in 2009. Private schools gained 93 per cent mastery, six per cent almost mastery and 1 per cent in the non-mastery category.

In 2010, a total of 48 311 students registered for the Grade Six Achievement examination with 96.6 per cent sitting. The mean percentage scores were Mathematics, 57.0 (53.0 in 2009); Language Arts, 58.0 (57.0 in 2009); Social Studies, 58.0 (53.0 in 2009); Science, 60.0 (53.0 in 2009); and Composition, 66.6 (58.3 in 2009). Consistent with previous years, girls outperformed boys in all subject areas. Students in Kindergarten/Preparatory schools had better results than their counterparts in all other school types.

Of the 248 809 subject entries in the CSEC examinations in 2010, 168 404 or 67.7 per cent attained Grades I-III. This showed an improvement over 2009 figures which represented 64.7 per cent. The data showed that females who sat the Examinations had a 70.1 per cent success rate compared to 63.6 per cent for their male counterparts.

Of the 33 888 public secondary school candidates who sat the CSEC in June 2010, approximately 12 421 or 36.6 per cent obtained five or more subjects. Based on these outcomes approximately 29.4 per cent of the Grade 11 cohort could qualify for entry into tertiary institutions depending on the requirements.

Many initiatives and policies have been implemented over the past years at all levels of the education system for improving the offerings and outcomes of educational programmes in Jamaica. Of note is the Education System
Transformation Programme (ESTP), which was launched in mid-2010 to give greater focus to the reform of the systems, business processes and quality of the sector.

Under the Education Transformation Programme, areas of focus include:
- Expansion of school facilities and infrastructure
- School leadership and management
- Literacy and numeracy at the end of primary school
- Poor attendance
- Low levels of teaching resources and aids
- Violence and anti-social behaviour
- Low levels of teacher training at early childhood level

Other recent policies and programmes include:
- Early Childhood Development and National Parenting Policy
- Career Advancement Programme (CAP)
- Jamaica Teaching Council

2.1.4.2 Issues and Challenges - Education

The educational system has some 846,419 persons or 79.4 per cent of the school-age cohort (3–24 years old) currently enrolled. The total number of students enrolled in the public and private education system at the pre-primary, primary and secondary levels was 700,301, with relatively high gross enrolment rates in the respective cohorts being 99.6 per cent, 99.5 per cent, and 100.5 per cent. Enrolment at the tertiary level was estimated at 68,471 students (41.6 per cent female), a gross enrolment rate of 32.8 per cent of the tertiary age cohort (20-24 years). The system however has some quality assurance issues, included are the quality of graduates from government funded or co-funded institutions; unsatisfactory daily attendance rate, the examination success rate of students at all levels of the system; and a significant proportion of individuals (15 per cent) who depart the system illiterate. These outcomes have been linked to a range of perceived ills in the system including:
- Lack of access to quality facilities particularly at the pre-primary, primary and secondary levels
- Inadequately trained teachers, particularly for the pre-primary level
- The inability of some parents to afford the cost of schooling despite free tuition policy at the Primary and Secondary Levels
- Inadequate number of facilities to accommodate students with special needs and in exceptional circumstances

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11 National Education Strategic Plan. 2011
- The under-performance of boys compared to girls at all levels of the school system
- Anti-social behaviour and increased violence in schools
- Ineffective institutional and instructional leadership and management in some schools.

The main challenges facing the education and training system will be discussed under the following headings: access, quality, accountability, safety and security.

**Access:**
- Limited provision of services to meet the needs of all children with exceptionalities: Special needs learners including gifted learners and children who are challenged physically and/or mentally are currently underserved in the education system. Data out of the MOE suggest that this group could be as large as 20 per cent and accounts for much of the failures in the National Assessment Examinations. Much more to be done to improve access to schools by the physically challenged. Newly-constructed schools are provided with access ramps, and where possible, schools make special efforts to accommodate physically challenged learners who are placed at these institutions. A few special schools for learners who are blind or deaf and are government-funded; however, their reach is not island-wide or universal.
- Demand for places is greater than supply especially in urban areas for all types of schools: Many schools are operating above their capacities or have implemented the shift system. The space audit report (2009) for the primary level of system indicated that some 65,000 places (75 schools) are needed to relieve overcrowding and remove schools off the shift system. At the secondary level, the demand is for approximately 98,000 places to accommodate that school age population, translating into 94 schools. Limited supply of places at the tertiary level is also an issue. The use of public funds to widen the current access to schooling in private schools is an approach that can be pursued by the authorities. Moreover, innovative solutions involving public private partnership (PPP) arrangements to build schools are grossly underutilized.
- Cost of post secondary and tertiary education: Improving the efficiency and financial viability of the student loan regime while broadening its coverage continues to be a major challenge. The Student Loan Bureau, as a response to financing tertiary level education, has been fraught with numerous challenges including inadequate targeting, overly stringent guarantee conditions, high cost of funds for onlending, high interest rates, and high delinquency rate. A revamping and improving of the efficiencies of the Student Loan Bureau would be needed to address some of these.
Quality:
- A large proportion of the pupils transitioning from the primary to the secondary level are not ready to access the secondary curriculum.
- A large proportion of students complete their secondary level education without any certification
- Inadequate supply of qualified teachers
- Inadequate supply of qualified teachers to treat with exceptionalities
- Low levels of performance particularly at the primary and secondary levels.

Despite consistent increase in expenditure on education and expansion in education coverage, the educational outcomes are low. Over 30 per cent of grade 6 leavers are functionally illiterate and are not qualified to progress to the secondary level. Only 30 percent of those who appear pass the Caribbean CXC mathematics examination in grade 11, lower than most Caribbean countries. Some 31 per cent of the grade 11 enrolment in 2009/10 completed their secondary level education without any certification, as measured by the CSEC examination. The underperformance of boys compared to girls at all levels of the school system is a critical concern.

With respect to input into the education system, the NESP reported that for the past 30 years, there has been an inadequate supply of trained classroom teachers. The policy to support the transfer of teachers from one area of the country to another is insufficient and there is no reliable data management system to assess teacher supply by level and subject area. Output of teachers in important areas of the Sciences, Mathematics and foreign languages continue to be very small.

Accountability:
- Systems of accountability not consistently enforced and culture of engagement to foster accountability not entrenched
- Inadequate legislative authority for enforcement

There is an absence of policies governing teaching standards, which makes it challenging to measure teacher performance at the primary and secondary levels. In addition, the existing institutional arrangements are unable to hold educational managers or educators accountable for the results of teaching and learning in classrooms. It is expected that the registration and licensing of teachers and the work of the Jamaica Teaching Council (JTC) in retraining teachers as well as the introduction of the Leadership College will help to alleviate some of these concerns.

Security and Safety:
- Unacceptable levels of anti-social and violent behaviours
- Improperly secured school plants
The high level of anti-social and violent behaviour evident in the society is reflected in education sector and is proving to be a challenge to the management of schools. There has been increasing incidents of gang violence and other negative behaviours. Schools are not adequately prepared for such incidents. Under the Safe School Programme, which operates in 143 schools, 130 students were arrested for varying infractions including possession of contraband. A total of 15 gangs were identified by this programme.

Several incidents have occurred where children have been attacked and robbed on school compounds.

Other challenges within the education system relate to:

- Inadequate alignment between the outputs of the system and the demands of the economy. As a result, individuals exiting the school system at various levels, often find difficulty in obtaining employment
- Unacceptable number of “at risk” youth
- The lack of equity in treating with the non formal learning system
- Weak links between general and vocational education and training
- Inconsistent parental support and meaningful involvement in the educational process
- Inadequate managerial training among school leaders
- Tertiary level:
  - access is still limited by entry requirements, available spaces and the cost to students
  - high level of gender imbalance; more women are enrolled and more graduate each year from tertiary institutions
  - substantial migration of graduates from tertiary level institutions also poses a high risk to the country by not being able to retain the intellectual capacity which is required to drive long term development

2.1.5 Poverty

2.1.5.1 Overview and Context

The prevalence of poverty at the national level was 17.6 per cent in 2010 compared with 16.5 per cent in 2009 (see Table 1). Prior to 2007, both nationally and regionally, poverty had generally shown a trend of decline. However, in 2008, with the increase in food and oil prices and the subsequent onset of the global economic crisis in 2009, poverty rates began to increase and have been trending upwards since. Regionally, Rural Areas continued to maintain the highest prevalence of poverty recording 23.2 per cent, double the prevalence in Other Towns (11.6 percent) and 1.6 times that of the KMA (14.4 per cent).
Under Vision 2030 Jamaica, a poverty prevalence rate of 12.1 per cent was projected for 2012. It is unlikely that this target will be achieved in light of the prevailing situation.

<table>
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</table>

Source: Jamaica Survey of Living Conditions

The overall rate represents an increase in the proportion of individuals who were consuming a value of goods and services below the poverty line. This was influenced by a combination of factors, including high food prices and the decline in employment in several industries (including Mining & Quarrying, Construction & Installation and Manufacturing). These partially reflect the lagged effect of the global recession.

Consumption inequality, as measured by the GINI Coefficient, dipped slightly. Measured at 0.3667 in 2009 compared with 0.371 in 2008, the decline in the index indicated an improvement.

Current poverty reduction initiatives in Jamaica span a wide range of interventions, from construction of community infrastructure such as roads and schools, water and sanitation projects, rural electrification, and skills building, to cash transfers, residential care and employment programmes. In addition, there are education, training and apprenticeship programmes, as well as nutrition support.

2.1.5.2 Issues and Challenges - Poverty

The increase in poverty since 2008 has effectively undermined the declines observed over the past eight years. Poverty has increased in all regions since 2008 with KMA and Rural Areas recording the largest increases.

Since 1989, analyses of the data derived from the Jamaica Survey of Living Conditions, which is the instrument used to measure household consumption and estimate poverty prevalence, and other studies have been taking place. These assessments reveal that the cyclical nature of poverty among households leads to similarity between causes and effects of poverty over time. In addition, many of the factors impacting poverty have an inter-generational dynamic that re-creates the manifestations of poverty where they are not curtailed. The major issues highlighted are:
i. low educational attainment levels
ii. low income earning capability
iii. inability to access basic social services
iv. lack of economic opportunities leading to underemployment, unemployment and low wage employment
v. poor rural development impacting the opportunities and livelihoods of rural households
vi. high levels of risk from exposure to natural hazards and poor environmental practices.

Key Features of Poverty
Several key features of poverty in Jamaica have been highlighted. These features include:

i. The dollar value of eliminating poverty has increased over the past three years due to a higher prevalence, coupled with worsening economic conditions and higher prices, which have pushed individuals further into poverty and hindered their ability to escape it

ii. A higher proportion of female-headed (14.0 per cent) than male-headed (11.0 percent) households are poor, a trend that has persisted over the past 10 years. This may be due to the fact that female-headed households tend to be larger and have more dependents per person of working age.

iii. Poor households tend to have more adult females and more children

iv. Looking at the three major demographic divisions: children, the working age population and the dependent elderly, children (0-14 years) registered the highest prevalence of poverty, recording 21.9 per cent. By comparison, the poverty rate was 16.8 per cent for the dependent elderly (65+) and 15.6 per cent for the working age population (15-64)

v. Poverty is consistently highest in the rural areas; however, there are pockets of urban poverty

vi. Fundamental difference between the rural and urban poor

The issue of poverty reduction is still lacking a portfolio ministry or agency that will undertake responsibility and accountability to coordinate and monitor an integrated, multi-sectoral programme. Current poverty reduction efforts of GOJ are not being adequately coordinated. The institutional arrangements originally approved by Cabinet in Ministry Paper #13/97 no longer exist in practice. Despite the perceived impact of various programmes and initiatives, there still remains a persistent level of poverty, particularly rural poverty, which requires the singular focus of a designated body to make further progress in sustained reduction of poverty. In addition, recent increases in poverty rates documented by PIOJ reinforce the need for maintaining a viable institutional focal point for programme coordination, monitoring and evaluation (A Growth-Inducement Strategy for Jamaica in the Short and Medium Term, 2010).
2.1.6 Social Protection

2.1.6.1 Overview and Context

Since 2000, the GOJ has embarked on the reform of the social protection system which is aimed at protecting the vulnerable, whilst ensuring that programmes are cost-effective and efficient. The reform effort has been relatively successful in consolidating existing programmes, improving benefits, and widening the scope and reach of social assistance.

Jamaica’s social safety net includes the Programme of Advancement Through Health and Education (PATH), the Poor Relief Programme, School Feeding Programme, School Fee Assistance Programme, Rehabilitation Grant Programme, Jamaica Drugs for the Elderly, the National Health Fund, among others. The main beneficiaries of these programmes are children 0–17 years, the elderly, persons with disabilities, pregnant and lactating women, and the destitute.

The GOJ/World Bank Social Protection Project (2008–2013) continues to be integral in strengthening the social protection system in Jamaica. Under the institutional strengthening components of the project, several pieces of research work were initiated, in order to bring greater understanding to welfare dynamics, as well as improve the selection and service delivery of pertinent programmes of social assistance. Work was also advanced on the proposed reform of public service pension systems, with further training and research into best practice internationally.

A non-conditional portion of the benefit to clients of the Programme of Advancement Through Health and Education (PATH) was introduced as a minimum social protection floor, particularly in light of the negative impact of the global recession on the most vulnerable persons. Benefit levels were increased from a base of $650.00 to $900.00, with differential levels being increased by an average 15.0 per cent.

At end of December 2010, there were 363 496 persons registered under PATH, signifying that the programme had achieved its target of 360 000 set by the government in 2008. Some 77.2 per cent of these were children. For the payment period ending December, over $539.5 million was paid to 323 582 beneficiaries.

The PATH is not intended to house families permanently. To that end, the existing re-certification process represents an exit strategy to ensure that persons receiving benefits are still eligible to be on the programme as well as to include more beneficiaries. The pilot of the Steps-to-Work Programme, which is also another initiative to create a viable exit strategy for welfare households, was
extended to remaining parishes on a phased basis\textsuperscript{12}. Up to February 2011, 3,308 persons had benefited from interventions under the Steps to Work Programme. Poor Relief and Public Assistance services in the form of Rehabilitation, Compassionate and Emergency Grants also continued to be offered to clients across the island.

\textit{Social Insurance}
There is a mixture of contributory and non-contributory programmes within social insurance sector in Jamaica. The National Insurance Scheme (NIS), which has been in existence since 1966, is a contributory programme providing benefits including retirement, invalidity, orphans, widow/widower, employment injury and maternity allowance (the latter benefit is provided only for domestic workers as other employed females are paid by their employers). It covers employed persons, self-employed and voluntary contributors. The contribution rate for the NIS from public and private sectors is 5 per cent, the lowest in the region, comprising 2.5 per cent from the employees and 2.5 per cent from employers applied to the gross earning, with an “insurable wage ceiling” which recently was increased from J$500,000 to J$1.0 million per annum. Of each of these contributions, 0.5 per cent is allocated for the National Health Fund (see below). Domestic workers, voluntary contributors, and self-employed persons contribute a flat amount of J$50 per week, recently increased from J$20. Members of Parliament and of the Jamaica Defence Force, who also contributed a flat rate of J$20 per week, are now included in the general contribution regime (Jamaica Social Protection Assessment, 2011).

The number of contributors to the NIS was 436,999 in 2008 (53 per cent female); of this total 28,582 were self-employed, domestic and voluntary contributors (65 per cent females). See Table 2. The participation of the employed labour force in the pension system was 37 per cent in 2008 compared to over 80 per cent in Antigua and Barbuda, Bahamas, Barbados, Belize, Grenada, St. Kitts and Nevis and St. Vincent and the Grenadines. Of the population age 65 and over, only 28.7 per cent is receiving benefits from the system compared to a LAC average of over 37 per cent. A similar number of male and female are covered.

\begin{footnotesize}
\begin{table}[h]
\centering
\caption{National Insurance Scheme – Coverage and Pension Benefits, 2006-2010}
\begin{tabular}{|l|c|c|c|c|c|}
\hline
\hline
No. Contributors & 424,315 & 446,209 & 436,999 & N/A    & N/A    \\
Employed       & 400,511 & 419,577 & 408,417 & N/A    & N/A    \\
Self-employed/domestic/voluntary & 23,804 & 26,632 & 28,582 & N/A    & N/A    \\
No. Pensioners & 87,845 & 91,469 & N/A    & 90,482 & 96,283 \\
No. Pensioners Old Age & 62,515 & 64,012 & N/A    & 65,610 & 70,360 \\
\hline
\end{tabular}
\end{table}
\end{footnotesize}

\textsuperscript{12} Six parishes were targeted in the initial phase.
Retirement pensions form the majority of the benefit payments made by the NIS, accounting for 71 per cent of all payment in 2010. See Table 3. In 2009/2010 there were 65,610 old age pensioners and the total pension payments amounted to J$ 7,737.4 million.

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. New Pensioners</td>
<td>10,416</td>
<td>12,658</td>
<td>7,433</td>
<td>9,634</td>
<td>11,507</td>
</tr>
<tr>
<td>No. New Old Age Pensioners</td>
<td>4,324</td>
<td>6,902</td>
<td>5,631</td>
<td>6,775</td>
<td>7,211</td>
</tr>
<tr>
<td>Maximum Monthly Old Age pension (J$)</td>
<td>12,079</td>
<td>12,479</td>
<td>14,783</td>
<td>16,183</td>
<td>19,046</td>
</tr>
<tr>
<td>Average Monthly Old Age pension (J$)</td>
<td>3,006</td>
<td>5,076</td>
<td></td>
<td>6,905</td>
<td>7,539</td>
</tr>
<tr>
<td>Minimum Monthly Old Age pension (J$)</td>
<td>1,950</td>
<td>3,350</td>
<td>3,250</td>
<td>4,333</td>
<td>4,333</td>
</tr>
<tr>
<td>N/A – Not Available</td>
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</tbody>
</table>

Most categories of NIS benefits were increased by 20.0 per cent in July 2010, and the Insurable Wage Ceiling was raised to $1.0 million from $500,000.00 in the following month (August 2010). The flat rate contribution payable by domestic workers, voluntary contributors and self-employed persons also increased in 2010 to $50.00 per week from $20.00. Plans were advanced towards raising the retirement age for females to 65 years from 60 years, over a five-year phased implementation. Other reforms were also introduced to increase the maximum pension payable and the benefit for employment injury or disablement.

**Health insurance**

Health insurance (NI Gold), and healthcare subsidies at the national level are offered through the National Health Fund, Jamaica Drugs for the Elderly Programme, the Government Pensioners Health Scheme. These target the elderly and persons with chronic illnesses. The NHF objective is to provide universal coverage, financial risk protection and equity in financing, and currently both institutional and individual benefits are accommodated under the Fund.

Accompanying the recent reforms to the NIS (increase wage ceiling, women retirement age, change in flat contributions), the NI Gold’s benefits covering prescription drugs, diagnostic procedures, and dental and optical services were increased by 25–50 per cent.
Public Pension Plans
There are two main types of public pension plans: (i) Non-contributory (Civil Servants, Teachers, Defence Force, Judges); and (ii) Contributory (Police, Parliament, Executive Agencies, new staff of Regional Health Authorities, Port Authority). All public employees, excluding the teachers, pay 4 per cent of salary for family benefits (survivors’ benefits). The number of periods of contributions required to access an old age pension varies depending on the plan. The benefit is computed as a replacement rate times the salary at the date of retirement. The replacement rate also varies considerably depending on the plan. For example, a health worker retiring with 30 years of contributions will get a pension equal to two-thirds of his final salary; while the replacement rate is 100 per cent for judges. Under the public pension plan, a retiree has the option of accepting a full pension or a reduced pension and a lump sum gratuity amount. According to the Ministry of Finance and Planning, most pensioners opt for the latter. The public pension plan currently has 26,192 pensioners (See Table 4); and it pays (after the gratuity) an average monthly pension of J$23,874 or more than three times the average pensions paid by NIS. The cost of the public pension plan increased from J$9,439 million in 2006/07 to J$14,689 million in 2009/2010, or from 1.2 per cent of GDP to 1.3 per cent GDP, to cover 25,370 pensioners. (See further discussion on pension reform under Economic Challenges).

Table 4: Public Pension Plan, 2006/07-2010/11

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<th></th>
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</thead>
<tbody>
<tr>
<td>No. of Public Employees</td>
<td>97,846</td>
<td>154,575</td>
<td>112,615</td>
<td>110,000</td>
<td>N/A</td>
</tr>
<tr>
<td>No. of pensioners</td>
<td>N/A</td>
<td>23,246</td>
<td>24,590</td>
<td>25,370</td>
<td>26,192</td>
</tr>
<tr>
<td>Maximum Monthly Pension (J$)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Average Monthly Pension (J$)</td>
<td>N/A</td>
<td>20,949</td>
<td>23,734</td>
<td>21,639</td>
<td>23,874</td>
</tr>
<tr>
<td>Minimum Monthly Pension (J$)</td>
<td>N/A</td>
<td>6,000</td>
<td>6,000</td>
<td>8,000</td>
<td>8,000</td>
</tr>
<tr>
<td>GOJ Annual Expenditures (J$M) a/</td>
<td>9,439</td>
<td>11,323</td>
<td>12,377</td>
<td>14,689</td>
<td>16,499</td>
</tr>
<tr>
<td>GDP(J$M)</td>
<td>815,300</td>
<td>922,700</td>
<td>1,027,600</td>
<td>1,100,223</td>
<td>1,217,330</td>
</tr>
<tr>
<td>% of GDP</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
<td>1.3</td>
<td>1.4</td>
</tr>
<tr>
<td>N/A – Not Available</td>
<td></td>
<td></td>
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</table>

2.1.6.2 Issues and Challenges - Social Protection
Social protection issues and challenges include:
- The reform process needs to embrace other vulnerable groups such as the homeless, poor persons living with HIV/AIDS and youth (particularly out of school children falling outside of eligibility for PATH)
- Transportation (cost and availability), particularly in rural areas, is impeding the access of poor households to available services
• School feeding needs to be rationalized so as to be more consistently available for poor children
• Although there have been strides in developing national policies towards upholding the rights of persons with disabilities, there are still many challenges faced by poor and non-poor. Among these are overt and covert acts of discrimination, stigma, inadequacies of public infrastructure, a dearth of available technology and aids, and a less than enlightened citizenry
• The role of the private sector and NGOs in the provision and promotion of social security requires further deliberation
• Limited financial resources for programme implementation
• Jamaican pension system faces significant challenges including financial sustainability, low coverage, increasing public expenditure on pensions for public employees, very modest NIS pensions and lack of portability of private pension benefits. Moreover, given population ageing; e.g., life expectancy is greater, chronic and lifestyle diseases are also on the increase, and pensions are being called upon for longer periods and to address these issues
• With an ageing population comes the need to determine where the society stands on a host of issues: housing, employment, retirement planning, recreational options, products and services for the aged, healthcare, physical infrastructure, community-based care etc.
• Dependency burden due to demographic transition
• Costs of administration of small schemes under the new pensions regulation
• Unsustainable imbalance between contribution base and expenditure liabilities for public pensions
• Appropriately attending to the needs of children in care of the State, street and working children, the poor living with HIV/AIDS, and the indoor poor in Parish infirmaries, outdoor poor and the homeless
• There is no adequate exit plan for children leaving state run foster homes, who therefore become vulnerable at age 18 years, when they must leave these facilities
• Considering that the PATH is not intended to accommodate poor families permanently, more emphasis must be placed on increasing exit strategies (e.g. Steps to Work) to facilitate graduation and empowerment
• There is no clear strategy for reabsorbing children 15 to 17 years old who are out of school. The Government’s remedial education and training programmes accept youth at 17 years old. It should be noted however, that the number of un-attached out-of-school children has been declining
• Increasing fragmentation of the social protection system, with duplication and, in some cases, addition of financially unsustainable programmes. This is due in part to the global financial crisis which has resulted in increased poverty and vulnerability; some slippage in health indicators and a decline in school attendance.
3 GOAL 2: The Jamaican society is safe, cohesive and just

Vision 2030 Jamaica recognizes that in an environment characterized by high levels of crime and violence and inequitable dispensation of justice, citizens are alienated and less productive than they might be, and are more likely to engage in destructive behaviour. This fuels a vicious cycle that militates against achievement of positive social, economic and cultural outcomes. Under this goal, it is expected that there will be significant improvement in the overall situation with regard to national security and governance.

Notable progress has been made under Goal 2, particularly with respect to the national outcomes for security and governance. Major crimes fell by 7.5 per cent in 2010 to 409 per 100,000 population, down from 437 per 100,000 population in 2009, while the annual murder rate fell even more, by 15 per cent in 2010 when compared with the rate for 2009, falling to 53 per 100,000 population in 2010 to 62 per 100,000 population in 2009. The rate of recidivism for correctional institutions fell to 23.8 per cent in 2009, down from 27.8 per cent in 2008. Meanwhile the case clearance rate in Resident Magistrates Courts increased to 94.0 per cent in 2010, up from 80.1 per cent in 2009. However, most other indicators for governance showed little or no improvement during the period.

The areas of focus under this section are National Security and Governance with emphasis on Justice, Local Government, Constitutional Reform and Public Sector Reform.

3.1 National Security
3.1.1 Overview and Context
Crime and violence has had a negative impact on all spheres of the society and has been credited as being a significant factor in the low levels of GDP growth that have been achieved by Jamaica over the years. It has been estimated to cost the economy between 5 and 7 per cent in gross output (UNODC, 2007). Findings from the 2009 Victimization Survey indicated that a high percentage of citizens feel unsafe or very unsafe outside of their own homes and outside their communities. A high percentage of respondents to the survey indicate feeling unsafe conducting various day to day activities such as using public transport, going to school or work, shopping, or attending entertainment events after dark.

With respect to Major Crimes (murder, shooting, rape, carnal abuse, robbery, break-ins and larceny), 409 per 100 000 population were committed over the period January – December 2010, a decline of 6.5 per cent from 438 per 100 000 population over the similar period in 2009. The murder rate from January–
December 2010 was 53 per 100,000 population, down 14.7 per cent from 62 per 100,000 population over the similar period in 2009.\(^{13}\)

The likely contributory factors for this fall in the crime rates include the strategic intervention of the security forces in key locations to disrupt the activities of the major gang networks, increased collaboration between citizens and security forces, and increased use of proactive and technology driven policing methods. The Government plans to consolidate these gains through steps such as the proposed Community Renewal Programme, strengthening the new Independent Commission of Investigations (INDECOM) and ensuring provision of infrastructure and social services in vulnerable communities.

In keeping with the general pattern over the years, most of the crimes committed have taken place in urban centres, particularly the Kingston Metropolitan Area (KMA) and Montego Bay.

St. James, followed by St. Catherine, Kingston and St. Andrew and Clarendon accounted for the parishes with the highest murder rates in 2010. Major crime rate and murder rate for St. James were 572 per 100,000 and 102 per 100,000, respectively. The parishes of Portland followed by St. Elizabeth recorded the lowest murder rate for 2010.

Recent data show a continuing decline. For the period, January–September 2011, the Major Crime Rate was 277 per 100,000 population, a reduction by 9.9 per cent over the similar period in 2010. The Murder Rate declined by 26.4 per cent to 30 per 100,000 population during the same period. If this trend continue, it is likely that the 2012 targets set under MTF 2009–2012 for those key indicators will be surpassed.

There was a slight reduction (1.8 per cent) in the number of persons reported missing in 2010.

**Response to Crime and Violence**

A systematic approach to crime reduction is being taken by Government, with noticeable gains now being realized. To further confront the problem of crime and violence, the government continued to pursue a number of social intervention initiatives targeting the most volatile and vulnerable communities, at-risk youth, ex-offenders and incarcerated persons. Of note are the GoJ’s National Crime Prevention and Community Safety Strategy (NCPCSS) and the Community Renewal Programme (CRP) which are expected to chart a new

\(^{13}\)Preliminary figures for 2011 indicate a decrease in overall crime rate to 403 per 100,000 population; and a reduction in the murder rate to approximately 42 per 100,000 population.
course of action for the next decade. The CRP is the main implementing arm of the NCPCSS and will be implemented across all parishes with particular focus on those exhibiting the highest rates of and vulnerability to crime and violence.

The strategic objectives of the NCPCSS are:
- Sustained reductions in fear of crime, crime and violence and related risk factors
- Increased crime and violence prevention, reduction and control capacity of the State and its institutions
- Enhanced collective efficacy of residents of priority communities, and increased participation in the co-production of community safety
- Re-orientation of residents away from anti-social behaviour and attitudes.

The Community Renewal Programme (CRP) was developed in 2010, fuelled by the civil unrest that occurred in May of that year. It was designed to be a means of implementing and coordinating initiatives that will contribute to reductions in crime and violence and support sustainable development in 100 volatile and vulnerable communities in five parishes across Jamaica. These initiatives are being implemented under six broad pillars, namely: Socio-Economic Development, Physical Development, Safety and Justice, Governance, and Social Transformation/Inclusion.

The implementation of the JCF Strategic Review to transform the national police service into a modern, efficient, professional organization continues to make progress with the development of Policing Plans, the implementation of community based policing; and the upgrading of physical infrastructure.

The capacity of the Jamaica Constabulary Force (JCF) was also enhanced through a number of developments including the use of video interview recording and visual identification; development of an electronic database for case management; and the acquisition of Crime Zone Forensic mapping technology.

Jamaica has reviewed and updated its National Plan of Action for Integrated Responses to Children and Violence. The National Plan of Action for an Integrated Response to Children and Violence (NPACV) 2011–2016 complements the strategies and targets laid out in Vision 2030 Jamaica. This Plan of Action is one of the tangible outputs arising from the commitment of the Government of Jamaica (GOJ) and key stakeholders aimed at creating and maintaining a protective environment, supportive of and responsive to the issues of children and violence.
3.1.1.1 Correctional Services

The adult custodial population in the island’s correctional institutions as at December 31 was 3,652, 17 less than in 2009. The Tower Street and St. Catherine Adult Correctional Centres continued to operate at 96.3 per cent and 44.3 per cent, respectively, above capacity.

A total of 1,967 persons (1,795 males) were incarcerated compared with 1,929 in 2009. Of the total number of persons incarcerated, 33.5 per cent are involved in training programmes, 27.8 per cent are involved in miscellaneous activities while the remaining 38.7 per cent were not engaged. Of all admissions, 1,441 persons (1,295 males) were new and 526 (500 males) were recidivists (repeat offenders).

As with previous years, the largest number of new admissions came from the 21–25 and 26–30 age groups. As it relates to repeat offenders, there were 66 more recidivists than in 2009. Approximately 72.4 per cent of recidivists were sent to SCACC.

The juvenile custodial population at the end of December was 353 (292 males). Of this number, 285 were on correctional orders and the remaining 68 on remand. Due to the continued inadequacy of facilities, especially for those who are high risk, female juveniles are still being housed at adult facilities. Twenty-two female juveniles were housed at the Fort Augusta Adult Correctional Centre and 175 youth (166 males) were admitted to the island’s juvenile institutions. The completion of infrastructural work on a facility at Metcalfe Street in 2011 has greatly improved the capacity of the Department of Correctional Services (DCS) to adequately house youth offenders.

The majority (80.6 per cent) of juveniles admitted was between 15 and 17 years. Most were admitted for uncontrollable behaviour (16.0 per cent), shop/house breaking and larceny (11.4 per cent), larceny (10.6 per cent), dangerous drugs (10.3 per cent), and wounding and breach of probation order (9.7 per cent).

The number of juveniles appearing before the courts in 2010 increased to 3,614 (67.9 per cent male) compared with 3,586 in 2009. Approximately 26.3 per cent was for care and protection/child abandonment and 13.8 per cent for uncontrollable behaviour, while others committed offences such as ‘wounding/assault/assault occasioning bodily harm’ 14.0 per cent, ‘offensive weapon’ 11.5 per cent and ‘dangerous drugs’ 9.5 per cent.

Implementation of the adult offender risk/need assessment and Risk of Harm assessment tools began and a corresponding tool for juvenile offenders was successfully piloted and introduced to juvenile institutions. In an effort to improve security at the island’s correctional centres, ‘walk through’ metal detectors were installed at two centres. Under the Jamaica Reducing Re-offending Action Plan...
(JRRAP), a number of infrastructure projects were completed including facilities for training and economic activity.

3.1.2 Issues and Challenges - National Security
Challenges in the National Security sector include:

High levels of crime and violence
The World Bank’s recent CEM on Jamaica highlighted the following: “Crime is the most evident and severe problem in Jamaica. Once crime is established, it is difficult to overcome. It severely limits future growth and leads to a vicious circle as low growth further increases crime and higher crime rates further reduce growth. Crime erodes social stability and makes rule of law a critical area of concern. It has a negative effect on human capital, creating incentives for migration among the most skilled, educated, and entrepreneurial citizens. It constrains business expansion and diverts resources from productive activities to crime protection.”

The security issue that has posed the greatest concern to the society for several decades has been a seemingly intractable murder rate that has increased in every decade since the 1970’s. Up to the end of 2009, Jamaica was one of the countries with the highest murder rates in the world. During 2010, however, for the first time in decades, Jamaica made significant inroads in reducing the murder rate. In this regard, the annual murder rate fell by 15 per cent in 2010 compared with the rate for 2009, falling to 53 per 100,000 population in 2010 to 62 per 100,000 population in 2009. It fell even further in the first quarter of 2011, having decreased by over 40 per cent compared to the similar period in 2010. Major crimes, including murder, shooting, rape, carnal abuse, robbery, break-ins and larceny, fell by 7.5 per cent in 2010 to 409 per 100,000 population, down from 437 per 100,000 population in 2009.

It is important to note that actual violent crime rates are thought to be higher than these reported rates since, according to recent estimates (Harriott 2009), only 20-30 per cent of crimes are reported to the police. Despite the declines, however, the level of crime and violence in Jamaica continues to be too high and to erode the development and growth potential of the country.
The easy availability of guns
Guns continue to be the weapon of choice in Jamaica’s homicide rate. In 2002, guns were used in 68.7 per cent of all murders; by 2006 the figure had risen to 75.2 per cent of all murders. In 2010, the gun was used to commit 75.8 per cent of all murders. The rate at which the guns gain entry into the country via unprotected coastline and airspace far exceeds the successes in the recovery of guns by police. During 2010, 85 firearms and 1,769 rounds of ammunition were reported stolen while the JCF recovered 685 firearms and 35,488 rounds of ammunition.

The large number of criminal networks and gangs operating in the country
The continuing existence of powerful and notorious gangs remains a real threat to the sustained success in the reduction of crime. Between 2009 and 2010, a total of 36 gangs were identified in schools, confirming that there is a rich reservoir of young people particularly males from which powerful gangs can recruit new adherents.

The drug trade
The association of the drugs trade with the criminal gangs, has made it an issue of great importance. The total number of persons arrested in 2006 for breaches of the Dangerous Drugs Act was 6,793 climbing to 10,249 arrests (10,118 locals and 131 foreigners) in 2010. This represents a 21.1 per cent increase compared with 2009. Males made up the majority of those arrested (95.1 per cent of locals and 67.2 per cent foreigners). Some 306 arrests were made in 2010 at the country’s main access points, namely: Norman Manley International Airport, 228; Donald Sangster International Airport, 78; and seaports, 8.
**The style of policing, corruption in the police force and frequent human rights abuses**

Findings from the strategic review of the Jamaica Constabulary Force in 2007 indicated that the culture within the JCF “is that of command and control; corruption is prevalent and “there is a general lack of regard for human rights”. Moreover, the JCF leadership and the GOJ have not been able to address problems with corruption and human rights abuse, which further undermines public confidence and effectiveness.

Despite significant efforts, challenges persist and there is considerable animosity between the police and the average citizen, especially in inner-city areas. The taking of bribes and human rights violations by members of the security forces, in particular, the police are not uncommon.

**High level of youth involvement in crime and violence**

The face of crime in Jamaica is predominantly young, unskilled, unemployed, and undereducated males ages 15–29. The number of young people implicated in violent crimes continues to increase each year. The statistics show that young people are equally victims and perpetrators of crime.

Some 28,078 persons were arrested and charged in 2010, 47.9 per cent more than in 2009. Of this number, 3,159 (98.4 per cent males) were for major crimes. Some 52.1 per cent of those arrested were in the 16–25 age group. There were 11,061 victims (59.0 per cent males) of major crimes. Approximately 52.4 per cent of victims were in the 15–39 age group while the number of victims in the 0–14 age group increased by 9.1 per cent to 614 from 563 in the previous year. Females were the main victims (74.0 per cent) of crime in the 0–19 age group. Rape and carnal abuse were the crimes mostly committed against females.

**Children and Violence**

Children continue to suffer cruelty, violence and abuse in Jamaica. During 2010, 6,330 reports were received the Office of the Children’s Registry. This represents a slight decrease of 1.4 per cent compared with the number of reports (6,417) received in 2009. Of that amount, 89.6 per cent (5,673) were of children about whom a report was being made to the OCR for the first time. More than one half (56.1 per cent) of the 5,673 children were females, while the sex of 152 children (2.7 per cent) was not specified.

The missing children phenomenon continues to be a frightening one as many children go missing weekly. The ESSJ (2010) reported that a total of 2,405 persons

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were reported missing, 44 less than in 2009. As it relates to the remaining 2,394 persons, 70.2 per cent (1,680) were children, with females accounting for 76.8 per cent. Of the 714 adults reported missing 63.2 per cent (451) were male. Some 1,660 persons (1,248 children) were returned or found, 62 confirmed dead (8 children), while 672 (424 children) were still unaccounted for.

Data from the police revealed that there were over 81 reported cases of children murdered. In 2010, there was a 25 per cent decline to 61.

3.2 Governance

3.2.1 Overview and Context

Effective governance represents a key priority under MTF 2009-2012. During the period, much resources and effort have been spent on reforming the national security system, creating a world class justice system and a more efficient and effective public sector. Whilst much work was undertaken on the reform of local government, the target for this reform has been pushed back again, delaying full implementation by another year. Of significance were the efforts made to include civil society in key policy developments as well as efforts to ensure respect for human rights and freedoms.

Whilst there has been much progress in the implementation of projects and programmes geared towards improving the face of governance in Jamaica, the World Bank’s Worldwide Governance Indicators revealed that indices relating to Government Effectiveness, Voice and Accountability, Rule of Law have not been responsive.

Moreover under the Transparency International’s Corruption Perceptions Index 2011, there was a worsening of the indicator relating to the Control of Corruption. Jamaica received a score of 3.3 (out of 10) and a ranking of 86 out of 182 countries. The Corruption Perceptions Index ranks countries according to their perceived levels of public-sector corruption. Four Caribbean countries (Barbados, St. Lucia, St. Vincent and the Grenadines and Dominica) received scores higher than Jamaica.

3.2.1.1 Justice

The comprehensive review of the Jamaican Justice System in 2007 characterized it as an inefficient system with inadequate access to and delays in the administration and delivery of justice. The high levels of crime and violence have also exacerbated the situation. Nevertheless, significant progress has been achieved under the Jamaican Justice System Reform Agenda as the Government attempts to put in place a “Jamaican justice system which is available, accessible, accountable and affordable on a timely, courteous, respectful, flexible, fair and competent basis for all”.

Jamaica Country Assessment Report
Several important initiatives were undertaken:

- Increase in the complement of Judges and RMs as part of the effort to reduce case backlog which creates delays in the delivery of justice
- Introduction of Criminal Case Management System which is being piloted in six courts, namely the Supreme Court Gun Court; Home Circuit Court; St. Mary Circuit Court; Corporate Area RM (Criminal) Court; St. James RM Court; and St. Mary RM Court
- Modernization of Physical Infrastructure: Construction of a modern family court in Lucea, Hanover. The facility houses two courtrooms, two judges’ chambers, two attorney interviewing rooms, offices for the Clerk of Court and other administrative officers. Construction also continued on a new courthouse in Balaclava, St. Elizabeth to replace the existing building that had fallen into disrepair. Additionally, the MOJ completed the refurbishing of an additional office for counsellors at the Montego Bay Family Court.
- Establishment of the office of the Special Coroner: The Sutton Street RM (Civil) Court was identified as the location for the Office of the Special Coroner and the necessary refurbishing work was completed. The Judicial Services Commission is in the process of recruiting a Special Coroner
- Strengthening Public Trust and Confidence: The capacity of the Office of the Parliamentary Counsel (OPC) in producing draft legislation was enhanced through the services of two Legislative Drafters to support the OPC for a two-year period, the assigning of a Legislative Drafter to the Justice Training Institute (JTI) to develop and provide Legislative Drafting Training
- The establishment of the Court Management Services entity to facilitate more efficient operations of the Court system
- The modernization of the Office of the Director of Public Prosecutions
- The development of a policy of Restorative Justice
- Strengthening human resource capacity in the Supreme Court Registry and in the Legal Reform Department
- The National Plan of Action for Child Justice underwent extensive consultations and is awaiting Cabinet approval

3.2.1.2 Public Sector Reform
The thrust towards strengthening public institutions to deliver efficient and effective goods and services to Jamaicans was fast tracked over the period with the approval by Cabinet of the Medium Term Action Plan (MTAP) of Ministry Paper 56/2002: Government at Your Service—Public Sector Modernization Vision and Strategy—the Government’s blue print for public sector reform by 2012. Under the MTAP, four strategic areas are being pursued, with programmes being developed and implemented around these. These four
areas are Service Delivery; Governance and Accountability; Managing for Results; and Change Management and Communication.

Under this national strategy is the work undertaken by the Public Sector Transformation Unit (PSTU) which was established in 2009 to focus on the development of proposals for the restructuring and rationalization of the public sector to improve its efficiency and effectiveness in facilitating growth. These proposals were presented to Parliament in 2010 in the form of a Green Paper, entitled, “Public Sector Master Rationalization Plan – Recommendations for the Restructuring of Ministries, Departments and Agencies”. Following consultation and review, the Public Sector Master Rationalization Plan was presented to Parliament by the Public Administration and Appropriations Committee in December 2010 and approved by Cabinet Decision in May 2011.

Another area of emphasis was the implementation of the priority training to support implementation of GOJ Medium Term Action Plan which commenced with support under PRODEV. Over 1,200 technical officers were trained in areas such as results based management, strategic negotiations for the public sector, and performance management and accountability.

3.2.1.3 Local Government Reform

Local governance reform was advanced by:

- The staging of 14 one-day parish visioning symposia between February and March 2010 led by the Department of Local Government to allow citizens/communities the opportunity to develop a vision for their parish. This vision is expected to guide the development of 20-year Sustainable Development Plans for each of the 14 parishes. Under the theme “My Community, Our Parish, One Jamaica – My Vision”, the islandwide event enabled the articulation of vision which outlined the strategic direction for achieving social, economic and physical development of each parish in a sustainable manner.

- Development of a new Local Government Act which is expected to develop the framework for Community Development Planning, and define mechanisms for integrating community development planning with national planning processes.

- Capacity development of key officers within local authorities in strategic planning towards enabling the development of local level corporate plans.

- Development of a Memorandum of Understanding (MOU) between the Department of Local Government and the Social Development Commission (SDC) towards managing governance issues in each parish.

- Completion of an organizational assessment of local authorities.
3.2.1.4 Constitutional Reform

The amendment to the Constitution to establish the Charter of Fundamental Rights was passed in Parliament in March 2011 after many years of deliberations. This is a clear statement of purpose of both the government and opposition that the most sacred duty of any state is to secure the rights of its citizens.

3.2.2 Issues and Challenges - Governance

Jamaica faces governance challenges that transcend and cut across all developmental spheres despite several efforts. Effective governance is an essential underpinning of the society and for the realization of a stable environment necessary for growth and development.

On the surface, Jamaica has strong formal institutions. It has a well-established parliamentary democracy and a vibrant civil society and media. It also possesses a strong and competent civil service. Nevertheless, the Jamaica society shows signs of social and political polarization, which makes it difficult to form consensus on policies that are in the broad public interest and entail a long time planning horizon.

Elements contributing to the weakening of governance in Jamaica include:
- Apathy towards, and alienation from, existing political institutions and processes (and) increasing disregard for the norms of civil society by a growing number of persons, especially the young
- Poor performance of the economy and the persistence of poverty
- Increased criminal activity, inclusive of drug trafficking and the proliferation of gangs
- The inability of the State to sustain levels of welfare that were put in place in the post-independence era
- An inadequate local governance framework
- The redefined position of the state from its previous function as a development agency to that of a facilitator of market driven policies.

There are several governance issues of relevance for discussion. Some are highlighted below.

Government effectiveness

Although the Jamaican public sector is being constantly strengthened and reformed, there are still concerns about the quality of public institutions and the efficiency of their operations. Excessive bureaucracy and red tape, over-regulation, corruption, improper management of government contracts, and lack of transparency and accountability continue to exist imposing excessive transaction costs to businesses, and negatively affecting the country competitiveness and growth.
The public sector continues to lack some critical capacities, as evidenced by weak systems and processes within its management and administrative structures.

**Rule of law**
A strong rule of law regime is essential for sustainable economic development; it can contribute positively to increases in foreign investments and improved social indicators.

The rule of law in Jamaica is threatened by the following:
- Slow pace of development of appropriate guidelines/laws/procedures for adherence to effective governance principles
- Outdated legislation
- Lack of resources to monitor and enforce the implementation of laws, policies etc.
- Escalating crime and violence
- Persistence of garrison communities

**Control of Corruption**
In Jamaica, “corruption” in perception and/or reality has grown to become a major popular concern and public policy issue. Jamaica’s corruption Perception Index score has been consistently low, placing it among the group of countries identified as highly corrupt. This perception of corruption is further compounded by what is considered the failure of authorities to adequately punish public officials and members of the security forces who are identified as being involved in acts of corruption.

**Infringement on and Lack of Respect for Human Rights and Freedoms**
This is evidenced by issues such as child prostitution, trafficking in persons, and police excesses. There has been increasing violence against women and children and there is a poor record by the authorities in dealing with sexual violence against women and children. The International Organization for Migration (IOM) and International Labour Organization (ILO) estimate that several hundred minors from Jamaica are involved in trafficking, child labour and the sex trade.

Citizens have also cited the abuse of power by members of the security forces and lack of police accountability as an infringement on their rights. In 2010, a total of 362 shooting incidents were reported to the Bureau of Special Investigations, 44 more than in the previous year. Of this number, 274 were for fatal shootings, 85 injury incidents and 3 discharge of firearm. During the year, 290 case files were completed which was 36.0 per cent less than in 2009. The completed cases were: 196 fatal shootings, 91 injury incidents, and 3 discharge of firearm. As a result of investigations, the Director of Public Prosecution made a
total of 280 rulings: 169 forwarded to the Coroner; 70 no criminal action; 35 departmental action; 16 forwarded for criminal action; and 7 forwarded for civil action.

Although there has been progress in bringing some cases to trial, there were no convictions, and no police officer accused of human rights violations has been convicted since 2006 (Jamaica Human Rights Report, 2011).

Stigma and discrimination and violence against PWDs, PLHIVs and persons of different sexual orientation are causes for concern.

Justice
The justice sector faces a number of challenges.

Case Backlog
Delays in disposing of cases resulting in backlogs: Backlog in the courts by virtue of the age of matters is closer to 145,000. Case disposal is currently running at a three-year average in Jamaica. The international standard is a one-year average for the disposal of cases. Cases, particularly those involving murder, rape, carnal abuse, and wounding with intent, on average, take more than two years to be settled

Backlog (by age of cases)
Court of Appeal: For the Court of Appeal during the year 2010/11 approximately 40% of the pending appeals were five years and older.

Figure 2: Backlog of Pending Appeals
**Supreme Court:** To determine the level of backlog in the Supreme Court Criminal Division, an analysis of the Calendars from the Office of the DPP was done. It indicated that approximately 25% of matters listed for trial in the Home Circuit Court was three years and older while approximately 39% of matters listed for trial in the parish circuits was aged between one and three years. Only a mere one percent (1%) of matters listed for the Parish Circuits was older than three years.

Figure 3: Backlog in the Home Circuit and Parish Circuits of the Supreme Court

The **Supreme Court Gun Court Division:** A review of the case data was carried out by a research team from the Ministry of Justice to verify the actual caseload of this court. The results indicated that the actual number of matters on the Gun Court list was one thousand, five hundred and sixty-three (1,563) broken out as follows:

**Table 5: Age of Cases on the Gun Court List of Matters to be Tried**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of cases</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aged up to Dec. 31, 2007</td>
<td>53</td>
<td>3.4</td>
</tr>
<tr>
<td>2008</td>
<td>105</td>
<td>6.7</td>
</tr>
<tr>
<td>2009</td>
<td>245</td>
<td>15.7</td>
</tr>
<tr>
<td>2010</td>
<td>603</td>
<td>38.6</td>
</tr>
<tr>
<td>2011</td>
<td>557</td>
<td>35.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,563</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Gun Court Files\(^{15}\) 2011.

\(^{15}\) During the month of August 2011, a review was conducted by the MOJ of the Court Sheets and files at the Gun Court to verify the actual number of cases still on the Gun Court schedule.
Poor and inadequate court infrastructure
The condition of the courthouses and other facilities is in many cases very poor. It is very difficult if not impossible to render high quality justice in the physical conditions that exist in most Jamaican courts. Court structures generally are in a dilapidated and antiquated condition and maintenance of facilities is inadequate. Many courthouses:
   o have insufficient space and suffer from chronic overcrowding in both the public and operational areas
   o have insufficient lighting ventilation and air conditioning
   o do not have minimally acceptable facilities for the public or court personnel (restrooms, parking, safekeeping areas for court files and records, facilities for handicapped accessibility, counsel rooms, libraries)
   o have inadequate security
   o do not have sufficient functional basic equipment such as computers, telephones, and facsimile machines
   o suffer from lack of specialised spaces for different court activities
Moreover, the location of court facilities does not necessarily reflect the demand for service.

Other challenges include:
   ▪ Inconsistent enforcement of laws and legal processes
   ▪ Inadequate emphasis on human rights and adherence to international treaties: Insufficient attention is paid to human rights and to some of Jamaica’s obligations under international human rights treaties, some of which have not yet been integrated into domestic law and practice. Overcrowding in correction facilities and housing of juveniles with adults are common occurrences
   ▪ Complex and inflexible court procedures
   ▪ Outdated and inefficient practices and procedures (specific issues include: the use of juries, the use of preliminary inquiries, scheduling practices; court management and administration practices; filing and recording keeping)

Local Government
Jamaica has been for several years in the process of reforming its local government system to create a more decentralised governance framework. Despite progress on some fronts, there are uncertainties and delays and local authorities are yet to take over several of the functions being performed on their behalf by central government.
4 GOAL 3: Jamaica’s economy is prosperous

Under this goal, Vision 2030 Jamaica will create a new paradigm for economic prosperity. To achieve this goal Vision 2030 Jamaica will undertake measures that strengthen the natural, man-made and financial capital stocks to provide stable macroeconomic conditions, strong economic infrastructure and a secure, affordable energy supply as basic requirements for a competitive economy.

Addressing the fundamental aspects of the business environment by building institutional capital and streamlining bureaucracy, and enhancing the efficiency of our markets for goods, services, labour and capital are important to achieving this goal.

Progress under Goal 3 was less than desirable in a number of areas and favourable in some. The global recession of 2008-2009 had a negative impact on the economy, with several economic indicators showing declining performance during the period. The real Gross Domestic Product (GDP) of the country saw negative growth of -3.1 percent in 2009 and -1.2 per cent in 2010, compared to growth targets of 3 per cent for each year. The debt to GDP ratio worsened to 130.7 and the fiscal balance also worsened to -6.2 per cent of GDP by the end of FY2010/2011. The unemployment rate rose to 12.4 per cent in 2010, up from 9.8 per cent in 2007. Other indicators for specific industries also showed declines. Export earnings for manufactures declined by 41.04 per cent in 2009 and 7.83 per cent in 2010, while export earnings from bauxite and alumina declined by 50 per cent in 2009 before recovering to record an increase of 9 per cent in 2010.

The annual inflation rate fell to 11.7 per cent in 2010 from 16.8 per cent in the baseline year 2007, while the nominal GDP per capita increased to US$4,979 in 2010 from US$4,802 in 2007. The Connectivity and Technology Infrastructure Index for Jamaica improved significantly to 4.85 in 2010, up from 3.70 in 2007, and the E-readiness Index also improved from 5.05 to 5.21 over the same period. The energy sector also showed improvement over the period, as the percentage of renewables in the energy mix increased from 4.8 per cent in 2007 to 9 per cent in 2010. The Agriculture Production Index increased in 2009 to 93.67 (base year 2003=100), up from 83.1 in 2008, and increased further to 93.92 in 2010.

The focal areas under this section are the Macroeconomy, Energy and Science, Technology and Innovation
4.1 Macroeconomic Developments

The following assessment takes place within the context of a 27-month Stand-By-Arrangement (SBA) which the International Monetary Fund (IMF) approved on February 4, 2010. Quantitative and qualitative fiscal consolidation and reform are at the core of this SBA programme. Specifically, the Programme seeks to:

- place the debt to GDP ratio on a downward trajectory
- entrench fiscal accountability and discipline
- reforms of the financial sector in an effort to reduce risk
- raise real GDP growth rates.

Jamaica has made some progress since entering the SBA with the IMF. Some of the achievements since February 4, 2010 include: the reform of the tax administration by establishment of Tax Administration Jamaica (TAJ) to unify the Inland Revenue Department, the Taxpayer Audit and Assessment Department (TAAD), and the Tax Administration Services Department (TASD). This is a major milestone along the path towards the attainment of a semi-autonomous revenue authority (SARA) consistent with recommendations from the IMF in successive Aide Memoires. In a similar vein, the Customs Department is en route to becoming an executive agency by the beginning of fiscal year 2012.

During the current fiscal year, there has been the introduction of an interim Central Treasury Management System (CTMS) to streamline the management of and consolidation of Government’s accounts. The interim CTMS is being piloted in three Ministries, namely the Ministries of Finance and Planning, Education and Transport and Works. The Medium Term Expenditure Framework (MTEF) is also being piloted this fiscal year 2011/2012.

Other structural reforms include pension reform, tax reform and public sector rationalization. Green Paper 1-2011 entitled Tax Reform for Jamaica was tabled by the Minister of Finance during budget presentation in April 2011. The First Fiscal Policy Paper (FPP), consistent with the promulgation of a Fiscal Responsibility Framework (FRF) including the passage of Fiscal Responsibility Legislation (FRL) in early 2010, was tabled along with the first Tax Expenditure Statement (TES). The Fiscal Policy Paper includes the Fiscal Responsibility Statement, the Macroeconomic Framework and the Fiscal Management Strategy. Amendments to the FRL were approved in mid-2011 as well as the passage of Regulations to enforce sanctions for violations. The FPP and the TES signal a new path for the country’s public financial management.

The restructuring of the Debt Management Unit (DMU) of the Ministry of Finance into front, middle and back offices is also a structural reform that is underway. The aim is to improve the country’s debt management capacity including the ability to perform risk analyses and debt sustainability analyses.
4.1.1 Gross Domestic Product

The Jamaican economy contracted by 1.4 per cent in calendar year 2010 with declines of 1.8 per cent and 2.0 per cent for the Goods Producing and Services industries, respectively. The current year 2011 has seen the economy return to a growth path. During October – December 2011, the Jamaican economy grew by an estimated 1.7 per cent relative to the similar period in 2010 recording growth in all four quarters. For the October – December 2011 review period, real value added for the Goods Producing Industry expanded by 5.8 per cent while the Services Industry experienced 0.2 per cent growth. The strongest growth was recorded for Agriculture Forestry & Fishing and Mining & Quarrying which expanded by 16.4 per cent and 8.2 per cent, respectively. Real value added for the Manufacture industry grew by an estimated 2.1%.

This performance brings the estimated calendar 2011 GDP growth to 1.5 per cent, and represents the first annual increase in real GDP recorded since calendar year 2007.

Increased domestic production during 2011 was influenced by:
- a rise in global demand for Jamaica’s key exports, particularly Minerals and Tourism. Bauxite/Alumina production was buoyed by the re-opening of the WINDALCO Ewarton alumina plant, which resumed operations in

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16 Commencing in July-September 2011, the Statistical Institute of Jamaica (STATIN) revised the constant price GDP base year to 2007 from 2003. As a consequence, analysis for the review period was calculated utilizing the new base year.

17 Real GDP figure for January-September 2011 is based on actual data from STATIN for the January-June 2011 period and estimates from the PIOJ for the July-September 2011 period.
June 2010. Tourism-related activity was positively influenced by higher levels of both stop-over and cruise passenger arrivals

- increased manufacturing activities particularly in the food processing component
- improved weather conditions relative to the drought conditions which prevailed in the corresponding period of 2010
- increased replanting efforts in the aftermath of tropical storm Nicole
- increased expenditure on road construction activities
- election campaigning
- a substantial increase in the net stock of loans and advances relative to the corresponding quarter of 2010

**Growth Inducement Strategy**

A growth-inducement strategy for Jamaica in the short and medium term, which establishes a strategic framework for robust economic growth, was developed by the PIOJ in March 2011. This strategy, which is aligned with Vision 2030 Jamaica – National Development Plan and the MTF, addresses the binding constraints that the economy now faces, and seeks to provide the necessary support framework to mobilize potentially productive assets and unleash entrepreneurial dynamism. Several initiatives focused on mitigation efforts and strengthening the resilience of the built and natural environment are being implemented as part of the growth-inducement strategy.

**4.1.2 Real Sector Development**

The following provides an update on the real sector for the period October to December 2011.

**Agriculture**

The agriculture, forestry & fishing industry grew by an estimated 16.4%, reflecting increased output for the subcategory Other Agricultural Crops, up 28.9%. However, output from traditional export crops, and post harvest activities declined.

The improved performance in agriculture was due to:

- a recovery in domestic crop production relative to the corresponding quarter of 2010 when performance was negatively impacted by tropical storm Nicole. The total hectares of domestic crops reaped during the review period increased by 26.3 per cent;
- the impact of major replanting by farmers with support from the Ministry of Agriculture, following the impact of tropical storm Nicole; and
- the Ministry of Agriculture’s Production & Productivity Programme which provided support to farmers in the areas of marketing, irrigation and extension services aimed at improving productivity.
**Mining & Quarrying**
Real Value Added for Mining & Quarrying grew by 8.2 per cent, largely reflecting the continued impact of the reopening of the Windalco Ewarton Alumina Plant and increased bauxite production by Noranda Bauxite Company in St. Ann.

Total bauxite production increased by 17.0 per cent reflecting:
- Increased alumina production by 6.4 per cent
- Increased crude bauxite production by 18.0 per cent

**Manufacture**
Real Value Added for the Manufacture industry grew by an estimated 2.1 per cent. This out-turn was due to increases in both components: Food, Beverages & Tobacco up 1.8 per cent and Other Manufacturing up 2.5 per cent.

With respect to Food, Beverages & Tobacco, the increase in output was driven mainly by growth in Sugar production, up 86.9 per cent; Animal Feeds (up 7.4 per cent); Molasses (up 166.7 per cent); Rum & Alcohol (up 57.2 per cent).

The increase in Other Manufacture was influenced mainly by increased petroleum and chemical production. The increased petroleum production should be viewed against lower production in the corresponding period of 2010, as the refinery was not fully operational for the entire October–December 2010 quarter.

**Construction**
Real value added for Construction grew by 1.0 per cent, reflecting increased activities in the category Other Construction, particularly, Civil Engineering which includes road works. Major projects during the quarter included the Jamaica Development Infrastructure Programme (JDIP); Palisadoes Roadway; and the Sandy Bay to May Pen phase of the Highway 2000 Project. Increased Capital Expenditure was recorded for the NWA up 25.6 per cent to $6.5 billion; and NROCC $1.7 billion (up 115 per cent).

Also contributing to the growth in the Construction industry is the estimated expansion in residential construction activity influenced primarily by a significant increase in Housing Starts.

**Developments in the Services Industry**
The estimated growth recorded in the Services Industry was attributed to the expansion in most industries with the exception of Transport, Storage & Communication, and Finance & Insurance industries.
Electricity & Water
Real value added for the Electricity & Water industry grew by 3.4 per cent due to increased electricity generation and increased water production.

Gross electricity generation grew by 3.7 per cent reflecting a 4.6 per cent increase in JPSCo’s net electricity generation and a 0.8 per cent increase in generation from non-JPSCo sources. The increased generation largely reflected a recovery from the low levels of economic activities in the corresponding quarter of 2010. Increased sales were recorded for all industrial customer categories (General Service, Power Service and Large Power) except “Other” which is comprised mainly of interchange customers such as bauxite companies. Sales to the residential category also declined, possibly reflecting increased efforts at conservation by these customers.

Water production increased by 2.2 per cent, due to a 1.2 per cent increase in the Eastern Division and a 3.8 per cent increase in the Western Division. This increase was attributed to more favourable weather conditions which prevailed relative to the corresponding quarter of 2010.

Transport, Storage & Communication
Real value added for Transport, Storage & Communication declined by 2.4 per cent, due largely to an estimated decline in the Transport & Storage component, which primarily reflected the impact of the final transfer of Air Jamaica assets in July 2011. This outweighed the effect of increased passenger movements which grew by 0.9 per cent, as a result of a 1.5 per cent increase in passenger movements at Sangster International Airport. Passenger movements at Norman Manley International Airport declined by 0.4 per cent.

Cargo volume handled at the islands seaports increased by 0.6 per cent to 4.0 million tonnes, reflecting:
- Port of Kingston, down 19.7 per cent
- Outports, up 12.8 per cent - driven largely by increased Bauxite & Alumina exports

Despite the increase in the total cargo handled at seaports, overall impact on real GDP was tempered by the reduction in cargo handled at the Port of Kingston, which accounts for the greater share of value added activities in that component of the industry.

Finance & Insurance
Real value added in the Finance & Insurance industry contracted by 0.5 per cent, due to the combined effect of reductions in net interest income on loan stocks at deposit taking institutions and an increase in Fees and Commission Income. The stock of Loans & Advances Outstanding at Commercial Banks
amounted to $266.0 billion, an increase of 5.8 per cent compared with the end of December 2010. However, the continued decline in interest rates negatively impacted interest income earned.

Wholesale & Retail Trade; Repair & Installation of Machinery (WRTRIM)
The Wholesale & Retail Trade; Repair & Installation of Machinery industry recorded an increase of 0.7 per cent. The performance of the industry was positively impacted by an estimated increase in sales in five of the nine goods categories which accounted for 78.2 per cent of gross sales during the quarter. This assessment of increased activities is supported by:
- improvements in Construction, Manufacture and Agriculture, which resulted in more goods being available for distribution;
- a 38.0 per cent increase in the value of Automated Banking Machines and Point of Sale transactions; and
- an increase of 4.2 per cent in remittance inflows for October and November 2011.

Hotels & Restaurants
Real value added of Hotels & Restaurants industry grew by 0.2 per cent. Growth in this industry emanated from an estimated increase in the Restaurant component as the Hotels component was estimated to have remained flat. Stopover arrival was estimated to have remained flat due in part to the warmer winter conditions in the main source markets relative to the corresponding period of 2010. In addition, the slowing in the pace of recovery in the global economy would have had a dampening effect on world travel and by extension reduce the demand for Jamaica’s tourism product.

Preliminary data indicate that total visitor arrivals increased by 17.2 per cent. Cruise passenger arrivals increased by 48.9 per cent reflecting the impact of larger cruise vessels being accommodated at the Falmouth pier.
### Table 6: Year over Year Change of Value Added by Industry at Constant (2007) Prices

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>GOODS PRODUCING SECTORS</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Agriculture, Forestry &amp; Fishing</td>
<td>0.8</td>
<td>5.6</td>
<td>5.8</td>
<td>2.4</td>
<td>4.7</td>
</tr>
<tr>
<td>Mining &amp; Quarrying</td>
<td>1.8</td>
<td>10.7</td>
<td>12.3</td>
<td>2.9</td>
<td>9.2</td>
</tr>
<tr>
<td>Manufacture</td>
<td>-3.0</td>
<td>-0.4</td>
<td>-0.5</td>
<td>1.8</td>
<td>0.3</td>
</tr>
<tr>
<td>of which: Food, Beverages &amp; Tobacco</td>
<td>0.7</td>
<td>5.7</td>
<td>3.6</td>
<td>2.1</td>
<td>3.1</td>
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<td><strong>SERVICES SECTORS</strong></td>
<td>-1.7</td>
<td>0.9</td>
<td>0.3</td>
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<td>0.1</td>
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<td>Electricity &amp; Water Supply</td>
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<td>0.9</td>
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<td>1.0</td>
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<td>Transport, Storage &amp; Communication</td>
<td>-2.8</td>
<td>3.3</td>
<td>1.1</td>
<td>-2.1</td>
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</tr>
<tr>
<td>Wholesale &amp; Retail Trade; Repair and Installation of Machinery</td>
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<td>0.0</td>
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<tr>
<td>Finance &amp; Insurance Services</td>
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<td>-0.1</td>
<td>-1.6</td>
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<tr>
<td>Real Estate, Renting &amp; Business Activities</td>
<td>-0.9</td>
<td>0.7</td>
<td>0.4</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Producers of Government Services</td>
<td>-0.1</td>
<td>0.3</td>
<td>0.0</td>
<td>0.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Hotels and Restaurants</td>
<td>2.7</td>
<td>2.4</td>
<td>3.4</td>
<td>-0.5</td>
<td>2.8</td>
</tr>
<tr>
<td>Other Services</td>
<td>-1.0</td>
<td>0.7</td>
<td>0.7</td>
<td>-1.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Less Financial Intermediation Services Indirectly Measured (FISIM)</td>
<td>-11.6</td>
<td>-4.1</td>
<td>-4.6</td>
<td>-5.4</td>
<td>-4.9</td>
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<tr>
<td><strong>TOTAL GDP AT BASIC PRICES</strong></td>
<td>-0.6</td>
<td>2.2</td>
<td>1.9</td>
<td>0.6</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Source: STATIN and PIOJ

### 4.1.3 Fiscal Accounts

Following seven consecutive years of Central Government Budget surpluses, the fiscal accounts deteriorated, into persistent budget deficits, beginning in FY 1996/97. These deficits were largely precipitated by the financial sector crisis of the mid to late 1990s and aggravated by several weather related shocks—hurricanes, floods and drought, and more recently, the global economic meltdown in 2009. The cost to the Central Government of the 1990s financial sector intervention, in terms of the shock to the debt stock, amounted to approximately 40 per cent of GDP, with significant attendant increases in debt servicing costs. Consequently, the fiscal accounts moved from a surplus of 3.3 per cent of GDP in FY 1995/96 to a deficit of 7.3 per cent of GDP in FY 1996/97, and have essentially remained in deficit since then.

Active fiscal measures, including increasing consumption taxes, mainly General Consumption Tax (GCT) and Special Consumption Tax (SCT) and profound expenditure containment initiatives, such as three Memoranda of Understandings (MOUs) with public sector unions and divestment of ‘debt
creating’ public bodies, facilitated a reduction in the fiscal deficit to 4.9 per cent by FY 2007/08. However, the onset of the global economic meltdown in 2008 alongside weather related shocks induced adverse fiscal effects, resulting in a spike in the fiscal deficit to 10.9 per cent by FY 2009/10. Interest costs, in particular, jumped from 11.1 per cent of GDP in FY 2007/08 to 17.0 per cent of GDP by FY 2009/10.

The GOJ fiscal operations were guided by the targets of the 27-month IMF SBA. Central governments operations for the period April–December 2010 generated a fiscal deficit of $56.0 billion which was $8.2 billion (12.8 per cent) lower than budgeted. This lower deficit was the net result of Revenue and Grants being below (1.8 per cent) lower than expected and Expenditure being $12.3 billion (4.2 per cent) below targeted level.

Loan receipts for the period April–December 2010 amounted to $140.1 billion which was $5.7 billion below budget. Of the total loan receipts, $90.6 billion was from domestic sources, with the remainder ($49.5 billion) from external sources. The lower than planned loan inflows was due to less than expected spending on interest cost occasioned by greater than projected decline in the interest profile of domestic denominated debt instruments during the post Jamaica Debt Exchange period.

Central government’s fiscal operations during FY 2010/11 were guided by the Fiscal Responsibility Framework which was approved in Parliament in March 2010.

4.1.4 Money & Inflation
The point-to-point inflation rate for calendar year 2009 was 10.2 per cent, a substantial reduction on the 16.8 per cent recorded in calendar year 2008. This slowdown in prices mainly resulted from increased domestic agricultural supplies, especially ground provisions, as well as the impact of weakened consumer demand and a relatively stable exchange rate. However, some increase in the rate of inflation occurred in the March 2010 quarter consequent on the direct and pass-through effects of revenue-enhancing measures as well as from the effects of severe drought conditions that affected agricultural output. Additionally, the overall improved global economic activities acted as a stimulus for higher prices for oil and imported food resulting in the point-to-point inflation rate for FY 2009/10 recording 13.3 per cent.

Inflation in FY 2010/11 was recorded at 7.8 per cent (Fiscal Policy Paper, 2011), within the target range of 7.5 per cent - 9.5 per cent. The decline in the rate of general price increases during the first half of FY 2010/11 was driven by relatively lower imported commodity prices, weak consumer demand as well as an
appreciation in the value of the Jamaica dollar. At end-March 2011, the exchange rate was US$1=J$85.75, compared to US$1=J$89.51 at end-March 2010. Weather-related disruptions to domestic agricultural crop output coupled with increased imported oil and grain prices facilitated an inflation upturn in the December quarter. However, increased supplies of agricultural produce were instrumental in the 1.1 per cent and 1.8 per cent declines in the heavily weighted “Food and Non-Alcoholic Beverages” group in January and February, respectively. The main contributors to inflation in FY 2010/11 were: ‘Food & Non-Alcoholic Beverages’ (7.4 per cent); ‘Alcoholic Beverages & Tobacco’ (6.0 per cent); ‘Housing, Water, Electricity, Gas and Other Fuels' (10.5 per cent); and ‘Transport’ (12.8 per cent).

Following negative inflation rates of 0.2 per cent and 0.4 per cent in January and February 2011, respectively, there was a 1.1 per cent surge in prices consequent on the increased cost of oil on the international market which led to increased utility rates by 4.1 per cent in March 2011. Inflation rate recorded by the Statistical Institute of Jamaica (STATIN) for March–October 2011 was 4.6 per cent.

During the preceding fiscal year, there was relative exchange rate stability as the dollar appreciated 4.1 per cent in FY 2010/11 to J$86.02 to US$1.00. The 30-day open market interest rate saw record reductions during FY 2010/11. At the beginning of the IMF SBA programme, it was about 10.0 per cent; at end-September 2011, the 30-day rate was 6.3 per cent. The average interest rate on the 6-month Treasury Bill (T-bill) rate fell from 10.5 per cent in March 2010 to 9.3 per cent in March 2011.

4.1.5 Debt
Jamaica’s total public debt stood at $1 570 368.3 million or 128.3 per cent of GDP at the end of FY 2010/11. This represented a 9.5 per cent increase over the $1 434 755.8 million or 129.3 per cent of GDP at the end of FY 2009/10.

The stock movement during the course of FY 2010/11 was mainly attributable to:
- financing of the fiscal deficit
- raising of the US$400.0mn on the International Capital Markets to pre-finance repayment obligations that fall due in FY 2011/12
- receiving disbursements from the IMF
- assuming debts of the Sugar Company of Jamaica (SCJ)
- issuing of securities to BOJ for capitalized interest on former FINSAC Bonds.

The domestic debt stood at $809 370.0 million or 66.1 per cent of GDP at the end of FY 2010/11, which was 6.7 per cent higher than the $758 700.4 million
recorded at the end of FY 2009/10. In addition, explicit domestic guarantees amounted to $26 403.4 million or 2.2 per cent of GDP at the end of FY 2010/11. With respect to the stock of public and publicly-guaranteed external debt, this rose to $760 998.3 million (US$8 874.8 million) or 62.2 per cent of GDP at the end of FY 2010/11, an increase of 12.5 per cent over the stock at the end of FY 2009/10.

4.1.6 External Current Account
In 2010, Jamaica recorded an improvement of the deficit on its current account. The smaller deficit in 2010 emanated mainly from an expansion of the surplus on the Current Transfers sub-account due to increased private transfers linked to higher remittance inflows. With respect to External Merchandise Trade, Jamaica’s trade deficit with the rest of the world widened as a result of increased expenditure on imports. This increase resulted from the combination of higher prices for both oil and non-oil commodities which rose in 2010, (IMF WEO, 2011) and a decline in the value of goods exported.

4.1.7 Labour Market Developments

The Labour Force
Jamaica’s Labour Force for July 2011 comprised 1.236 million persons compared with 1.255 million persons in July 2010. See Table 6. This decline in the labour force of 19 000 persons relative to July 2010 reflected the combined effect of an increase in the number of persons outside the labour force of 24 200, and an increase of 5 200 persons in the ‘population 14 year and older’. With respect to the increase in ‘persons outside the labour force’, the main contributor by age group was ‘65 and over’, which increased by 12 400 persons. The age group 55-64 also increased by 3 200. Together these two groups accounted for 64.5 per cent of the increase in the category ‘persons outside the labour force’.

Data from the Statistical Institute of Jamaica’s Labour Force Survey indicated that the employed labour force recorded a net decline of 1,300 persons compared with October 2010. The decline in the employed labour force reflected lower levels of employment in six of the sixteen industry groups. The largest declines were recorded in Agriculture, Hunting, Forestry & Fishing (down 29,100 persons); Education (down 5,000 persons); and Financial Intermediation (down 1,700 persons). The sharp downturn in employment in the Agriculture, Hunting, Forestry & Fishing industry was largely attributed to among other things, a fallout in the coffee industry.
Unemployment
In 2010, the number of unemployed persons increased by 7.2 per cent, resulting in an increase in the average unemployment rate to 12.4 per cent from 11.4 per cent (see Figure 3). The female unemployment rate, which consistently exceeds that of males, was 16.2 per cent compared with the male unemployment rate of 9.2 per cent. An analysis of average unemployment rates for the last 30 years showed that the current rate represents the highest rate recorded since 2004.
With regard to age, the unemployed labour force comprised 49,700 youth and 105,100 adults, representing an increase of 6.4 per cent and 7.7 per cent, respectively. The youth unemployment rate, which remained more than three times that of adults, increased to 30.8 per cent from 27.1 per cent, while the adult unemployment rate increased to 9.7 per cent from 8.9 per cent. In 2010, both the youth unemployment rate and the adult unemployment rate were the highest since 2002, when an identical figure was recorded for the youth unemployment rate, while the adult unemployment rate was 10.3 per cent. An examination of the unemployment data for the period 2001 to 2010 showed that the youth unemployment rate averaged 27.7 per cent, while the adult unemployment rate averaged 8.5 per cent.

The Statistical Institute of Jamaica’s Labour Force Survey indicated that the unemployment rate as at October 2011 was 12.8 per cent. This was 0.8 percentage point, higher than in October 2010.

Labour Migration
An important feature of the Jamaican labour market is labour migration. Every year since the 1960s, thousands of workers are recruited from Jamaica for temporary and circular employment. In addition, many Jamaicans of working age emigrate annually. In 2010 for instance, over 28,733 persons were granted visas for permanent residence in the United States of America (USA), Canada and United Kingdom (UK).

Wages and Salaries
In 2010, average weekly earnings ($15,727.00) declined by 2.3 per cent compared to 2009. The highest average weekly wage was earned by workers in the Electricity, Gas & Water sub-industry ($34,019.00), followed by the Transportation, Storage & Communications sub-industry ($24,783.00). By contrast, the lowest average earnings were reported in Manufacturing ($13,496.00). No adjustment was made to the national minimum wage in 2010. The rates remained at $4,070.00 per 40-hour week, or $101.75 per hour; and $6,050.00 per week, or $151.25 per hour for industrial security guards.

Labour Market Reform
The MLSS continued to lead the process of labour market reform, which included the review of several pieces of legislation. New amendments were also proposed to several other pieces of legislation.

4.1.8 Macroeconomic Issues and Challenges

Jamaica main economic problems have been forcefully summarized in terms of a supposed “paradox of low-growth-high investment”. The Jamaican economy has persistently recorded low growth over significant periods. The average real GDP per capita growth rate over the past 30 years amounted to 1 per cent per year. What has remained a puzzle to all is that Jamaica has one of the highest investment to GDP ratio among developing countries despite having this history of low economic growth rates.

A coherent, integrated framework for understanding these problems has been outlined in the PIOJ’s Growth Inducement Strategy, wherein, a low growth – high investment puzzle is explained by the following set of conditions:

(a) a chronic state of fiscal imbalance  
(b) an underutilization of productive capacity  
(c) the economic waste of capital  
(d) a mis-aligned sectoral structure of the economy, with high investment rates in capital intensive, enclave sectors.

These general conditions are manifested in number of well documented specific pathologies and structural imbalances, including:

- Low rates of economic growth
- High levels of debt
- Fiscal deficits
- Lack of competitiveness
- Inefficient tax system

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18 Based on the aggregation of the findings of the “Employment, Earnings and Hours Worked in Large establishments” quarterly survey conducted by STATIN in firms employing ten or more persons in all industries excluding Agriculture, the public sector, private educational institutions and the Free Zones.
Labour market inefficiencies

Low rates of economic growth
There was significant similarity in the analysis provided in the World Bank’s Jamaica Country Economic Memorandum. The analysis by the World Bank highlighted that Jamaica’s poor growth performance and low productivity have three core ‘binding constraints’ amid many contributing factors. The leading binding constraints are (i) crime, (ii) deficient human capital, and (iii) fiscal distortions (tax incentives and waivers as well as government’s budget management policies and practices). The many potential obstacles to growth include frequent natural disasters, low productivity of capital, loss of competitiveness, distortions from tax incentives, limited space for productive public spending due to high public debt, inadequate human capital, migration of skilled labour, the high cost of crime, and lapses in governance. The most significant growth impact will come from removing these key growth obstacles. See elaboration in Section 4.2 - Goods and Services Producing Industries.

Public Debt
Jamaica’s high levels of public debt and large swings in the debt-to-GDP ratio have been a burden for decades. Since the 1980s, the debt to GDP ratio has been very volatile and efforts to reduce to a sustainable level have been largely unsuccessful. At no time since the 1980s was Jamaica’s public debt less than 60 per cent of GDP. Jamaica’s debt to GDP ratio remains very high, amongst the highest in the world, averaging 121.5 per cent between 2001 and 2010.

Debt servicing continues to be the major cost to the country accounting for 54 per cent of the budget or 54 cents of every dollar spent. The history of high debt is associated with overall lack of adequate fiscal governance, chronic public deficits, weak budget coverage, and contingent liabilities arising from a large number of weakly regulated public bodies (World Bank CEM, 2011).

The persistently high debt to GDP ratio has the effect of:
- preventing the Government from running countercyclical policy to stimulate the economy particularly during the recessionary periods
- reducing the GOJ discretionary expenditure (non-debt expenditure), which limits the government’s ability to spend on growth enhancing areas such as education, infrastructure, and national security
- putting pressure on the supply of loanable funds, which crowds out private investment
Fiscal Deficit
There are several factors that pose risk to the GOJ’s fiscal management strategy and that will contribute to a widening of the countries fiscal deficit. These include:

- Arrears/Pending Obligations:
  - Wages & Salaries: Wages and Salaries have been ‘frozen’ since FY 2009/10 and the immediate honouring of these pose serious risks. See discussion below.
  - Judicial Awards

- Tax expenditures (discretionary) are a significant fiscal risk and in recognition of this, the GOJ has sought to ‘overhaul’ the system of waivers

- Arrears over 90 days will be closely monitored to ensure there is no accumulation, consistent with the IMF (SBA)

- Financial Assistance to Public Bodies: Assumption of the debts of other entities can and do present a “clear and present danger” to the goals of
the fiscal management strategy. Whereas the GOJ is clear that guarantees (contingent liabilities) and its other commitments must be honoured, these contingent liabilities that are of a material risk to the targets, will necessitate certain steps being taken to keep the fiscal profile on a credible path

- Natural disasters occur and often cause significant damage to infrastructure as well as unanticipated costs to the Budget. One of the main fiscal risks to the Budget (climatic risks) materialized in late September 2010. Tropical Storm Nicole caused loss of life and significant damage to road and other infrastructure across the country
- Adverse movements in key macro-economic variables, such as inflation, reduce the impact (purchasing power) of the expenditure budget, particularly the recurrent expenditure
- Revenue yields less than expected
- Lower real GDP outturns have adverse impacts on the revenues.

Lack of Competitiveness
Diagnostic studies of Jamaica’s competitiveness and business environment has consistently identified and ranked the key supply-side constraints to growth in the Jamaican economy as follows:

- Crime and violence
- Corruption
- Taxation
- Electricity
- Finance
- Macroeconomic instability

The Global Competitiveness Report (GCR) 2011–2012 reported that Jamaica’s competitiveness continued to decline, with an overall ranking of 107 out of 142 countries. This ranking moved Jamaica from being in the top 68 per cent to the top 75 per cent of the countries surveyed and placed it third, behind Barbados and Trinidad, amongst CARICOM countries surveyed.

The report attributed the lower ranking mainly to the deterioration of security conditions and macroeconomic environment.

Three broad categories comprising 12 indicators were weighted to obtain an overall index. The three categories were weighted and ranked as follows:

1. **Basic Requirements**, with a weighting of 40.7 per cent, was ranked at 116 reflecting a slippage of 7.6 percentage points;
2. **Efficiency Enhancers**, with a weighting of 49.5 per cent, was ranked at 85 reflecting a decline of 2.3 percentage points;
3. **Innovation and Sophistication** Factors with a weighting of 9.8 per cent was ranked at 84 improving by 2.7 percentage point.

The report indicated that the areas of greatest weaknesses lie within the Basic Requirements category. These were:
- the Macroeconomic Environment which was ranked last of the 142 countries surveyed and third to last in the 139 countries surveyed in the previous year;
- Health and Primary Education was ranked low at 106 with a decline of 1.2 percentage points.

The best rankings were obtained for:
- Financial Market Development ranked at 52, placing Jamaica in the top 37 per cent; and
- Technological Readiness ranked at 72, placing Jamaica in the top 37 per cent.

Jamaica’s ranking under the Doing Business Report also continued to decline. The country ranked 75 out of 183 countries in 2010, down from 67 out of 181 countries in 2009. See Table 7.

| Table 8: Jamaica: Doing Business, Indicators, 2006-2010 |
|-----------------------------------------------|-------------------|-------------------|-------------------|-------------------|
| Indicators                                 | Rank, Year        | Correlation with time* |
|-----------------------------------------------|-------------------|-------------------|-------------------|-------------------|
| Number of Economies                         | 183 181 178 175 155 |                   |
| Ease of Doing Business                      | 75 67 63 50 43     | 0.989             |
| Starting a Business                         | 19 12 11 10       | 0.885             |
| Dealing with Construction Permits           | 49 48 74 93       | -0.942            |
| Employing Workers                           | 39 37 33 26       | 0.968             |
| Registering Property                        | 122 129 108 107   | 0.790             |
| Getting Credit                              | 87 84 115 101     | -0.662            |
| Protecting Investors                        | 73 70 64 60       | 0.993             |
| Paying Taxes                                | 174 175 170 163   | 0.901             |
| Trading Across Borders                       | 104 102 92 74     | 0.942             |
| Enforcing Contracts                         | 128 126 103 46    | 0.909             |
| Closing a Business                          | 23 23 22 23       | 0.258             |

*Data adjusted for differences over time in a number of economies. Source: Doing Business Report, various years, World Bank.

The analysis in the PIOJ’s Growth-Inducement Strategy also showed that the uncompetitiveness of the productive sector is also a result of the failure to address supply-side factors “internal” to the firm, the most important of which are:
- Goods market efficiency
- Labour market efficiency
Inefficient Tax System

The tax system remains complicated and inefficient due to, for example, multiple nonstandard tax rates and the absence of a uniformed rate structure. The system is also in need of urgent reform due to generally low tax compliance levels, narrow tax bases (due mainly to various exemptions and the granting of various incentives and waivers) but relatively high tax rates, high dependence on direct taxes (especially, income and payroll taxes) and based on the fact that only a few taxpayers generally bear the burden of selected taxes.

Tax reform has been a critical part of Government policy for decades. Despite some success in implementing selected tax reform initiatives over the years, some of those policy measures were at times implemented in a piece-meal or ‘big-bang’ manner (rather than as part of a comprehensive reform package), thereby limiting the intended positive effects.

Moreover, some of the intended reforms of the tax system were delayed partly due to serious fiscal constraints and based on the fact that some of the proposed reforms would have potential winners and losers. Consequently, the Jamaican tax system is still in need of further reform.

Labour Market Inefficiencies

Some of the key issues and challenges confronting the labour market infrastructure in Jamaica include:

- Females lag behind generally in labour market indicators: The data show much higher unemployment and underemployment for females than males
- Males lag behind generally in tertiary level educational output
- High youth unemployment rate: Insufficient preparation for the world of work, inadequacies in education and skills training, lower levels of experience, insufficient job opportunities due to the adverse economic conditions among others continue to contribute to the vulnerability of youth to unemployment
- Rising underemployment rate
- High proportion of working age persons outside the labour force who do not want to work. This is a threat to nation building
- Relatively poor labour and total factor productivity
- Inadequately trained and certified labour force: High proportion of the labour force insufficiently educated/certified, which threatens their ability to take advantage of new employment opportunities being created by globalization/regionalization and improvements in technology and ultimately productivity
Labour force deficient in necessary attitudes to compete in the new global economy

Insufficient access to LMI for all stakeholders and inadequate application of available LMI by stakeholders

the implementation in the Public Sector Master Rationalization Plan, which is expected to result in a reduction in employment in the public sector, but should enhance efficiency

Volatility in global oil prices may also pose a risk to the global and local economic recovery and thus, employment

Minimum wages reviews continue to be ad hoc and infrequent despite indications by the MLSS to undertake annual review

The effect of brain-drain as a result of labour migration is most evident in the quality of service being delivered in key sectors that are critical to national development such as education and health. It is also evident in the unavailability of some of the most skilled professionals in other fields, as well as of entrepreneurs. It is estimated that the number of tertiary graduates living overseas is in the range of 34–59 per cent

The need for greater efficiency to be brought to the labour market via the implementation of labour reforms. These reforms relate to areas such as flexi-work time, redundancy laws etc. to boost the competitiveness of Jamaican businesses and increase Jamaica’s rankings in the Global Competitiveness Index

There is an urgent need to conclude negotiations between the government and the labour unions regarding the structure of public sector wages in the medium term. This is a critical issue that has implications for Jamaica’s socio-economic stability.

More urgent effort is needed to increase Jamaica’s productivity. The capacity of the Jamaica Productivity Centre needs to be bolstered, so that their work can be more effective.

The Medium Term Economic Programme and the IMF Stand By Arrangement

The GOJ’s medium term economic programme within the context of the IMF SBA is intended to address several of the issues and challenges outlined. While Early on in its implementation, the implementation of the was challenged by two notable domestic shocks, namely, the State of Emergency in May 2010 and the impact of Tropical Storm Nicole in October 2010. Despite these events, the programme remained on track.

However, while some progress has been made, there have been concerns about the sustainability of the GOJ’s medium term economic programme. Correspondingly, IMF staff assessment of the SBA is currently suspended. In particular, There have been no quarterly reviews since end-September

19 “An Assessment of the Emigration of Highly Skilled Workers from Jamaica”, 2006. PIOJ.
2010 (the Third Review). The reviews for end-December 2010 and end-March 2011 have not taken place. The interruption of the programme assessment occurred mainly because of areas of reform where sufficient progress had not occurred.

Key among these were the lack of a resolution to the 7 per cent wage dispute with public sector workers, the outstanding divestment of the government’s shares in Clarendon Alumina Partners (CAP), tax reform and pension reform. The 7 per cent wage issue was eventually resolved and the payment of new rates commenced in September 2011; the retroactive amounts are to be paid in five instalments up to fiscal year 2013/14. The associated problem is the Government’s ability to attain the wages to GDP target of 9 per cent by fiscal year 2015/16, consistent with the FRL. There was apparent concern from the Fund that without public sector rationalization occurring, the target would not be met. The issue of CAP has since been settled with an agreement on the sale of the government’s interest to UC Rusal.

Tax reform is still a pressing agenda item. The Tax Committee of Parliament has convened and heard presentations with respect to the Green Paper from about seven individuals representing different interest groups. A White Paper is scheduled to be completed before the end of December 2011 given that some of the recommendations for tax reform with respect to income tax in particular would need to be implemented in January since the tax year is the calendar year.

Green Paper 2-2011 entitled Options for Reform of the Public Sector Pension System was tabled in Parliament on September 7, 2011. A White Paper is expected by February 2012. Public hearings on the Green Paper will also be facilitated prior to the finalization of the White Paper. There are five options for Pension Reform but it is Option 2 (parametric reform 2) that is advocated. In this option, the employee contributes 5 per cent and the employer contributes 5 per cent and the accrual rate is reduced from 2.2 per cent to 1.8 per cent, over a ten year period, for employees who are currently below the age of 50. Pension reform is critical because it is one of the main expenditure components of the budget, along with wages and debt payments, that constitute debt rigidity. Pensions relative to GDP grew from 0.4 per cent of GDP in 1990 to 1.4 per cent of GDP in 2010. In FY 2011/12, for every dollar spent in the budget, 3 cents went to pension payments, 21 cents went to wages and 61 cents went to debt servicing (a total of 85 cents). This left only 15 cents for “discretional” expenditure in terms of apportionment among other Ministries and programs. This crowding out of other growth-stimulating activities by pensions, wages and debt servicing is unsustainable.
There is a very valid concern that the debt to GDP ratio will not reach 100 per cent of GDP by FY 2015/16, especially if the revenue underperforms and anticipated budget support grants and loans from the multilaterals are not forthcoming.

The SBA is a linchpin because of the GOJ’s interactions with the international donor, creditor and investor communities. Most of the other international development partners, namely the Inter-American Development Bank, the World Bank and the European Union use the SBA reviews as their main indicator to trigger disbursement; therefore, if the Review does not occur and all other targets have been met, there is no disbursement as has happened with at least one IDB policy based loan. Many of the programs of the other multilaterals include elements of the SBA. This impasse with the SBA, therefore, has implications later on towards the close of the fiscal year when the Government will need to meet its cash flow needs.

Currently, the revenue performance is not buoyant as the population—the portion that pays taxes—is overtaxed; hence, the need for comprehensive tax reform to bring greater equity by broadening the base to enhance revenue while simultaneously lowering some tax rates.

Recently, Standard & Poors (S&P’s) downgraded its outlook on Jamaica from stable to negative while maintaining its B-long-term rating. It cited the impending general election and the stalemate regarding the SBA as the main reasons given the impact that a change of political administration might have on national economic policies.

It can be said, therefore, that the medium term economic programme is not only of interest to the Government and the Fund but also to the other multilaterals, the domestic and international capital markets, rating agencies and investors. Stability and credibility of fiscal policies are being evaluated to determine opportunistic behaviour or actions. Within this context, the primary balance target is the main fiscal target as it is (along with real economic growth and real interest rates) a key determinant of how well revenue and expenditure policies are harmonized to achieve a sustainable burden of public debt.

The priority national development challenges from a fiscal standpoint are will be for the Government to consistently achieve a primary surplus and at the same time provide fiscal space for growth. On the expenditure side the main challenge is to craft expenditure containment and reduction measures (with respect to wages, pensions and debt, in particular) that avoid placing the burden of expenditure adjustment on public investments. On the revenue side, it is how to enhance revenue and reduce the deadweight loss associated with tax expenditure, namely waivers, concessions, exemptions, etc.
If expenditure to GDP is not declining and revenue to GDP is not increasing, the Government’s Central Government Operations (CGO) is unsustainable. It means borrowing will have to finance the fiscal deficit. If Jamaica’s ratings are adversely affected as with S&P’s, then interest rates on instruments will have to increase to attract investors, which will undermine efforts to reduce debt payment expenditure and may negatively impact the objective of reducing debt to a sustainable level. The Jamaica Debt Exchange which was executed as a prior option in January 2010 in order for Board approval, did alleviate some of the burden but it did not solve the problem; it was a short term measure to provide some breathing room for fiscal policy.

Public sector rationalization has not advanced much and has implications for both wages and pensions. While there are plans to divest and merge entities, not much has been done to reduce public sector wage costs. To reduce the wage to GDP ratio to 9 per cent by FY 2015/16 will require difficult choices as to which jobs to cut. The ages of the persons who are “retired” has implications for pension reform and it is important that in undertaking all these reforms with fiscal implications that the Government sequence these appropriately.

The groups that will be most affected by Government’s revenue and expenditure policies with regard to wages, pensions and public sector rationalization are public sector employees and pensioners. Pensioners are particularly vulnerable because much of their disposable income is spent on healthcare.

Tax reform will impact all taxpayers. There will be those who are worse off and those who will be better off. Overall, though, there should be greater equity with lower rates and more people being captured by the tax net.

The delay in resuming, renewing or renegotiating the SBA poses quite a risk to the medium term economic programme. The growth that has been attained thus far is in jeopardy if the medium term economic program is not adhered to; much will need to be done to regain traction and correct for any policy slippages along the way.

**4.2 Goods and Services Producing Industries**

*4.2.1 Overview and Context*

As outlined under Section 4.1 above, the Jamaican economy recorded growth in 2011, after three consecutive years of contraction, with estimated growth of 1.5 per cent from January–September 2011, compared with the similar period in 2010. The growth was broad-based, with all industries except Finance & Insurance Services recording growth during the period. Real value added for
the Goods Producing Industry grew by 4.7 per cent while the Services Industry grew by 0.1 per cent. The strongest growth was recorded for Mining & Quarrying and Agriculture Forestry & Fishing which expanded by 24.8 per cent and 9.2 per cent, respectively (see Table 5).

The overall performance of the economy depends on the competitiveness of the enterprises in each of the goods and services producing industries. The performance of these enterprises is based on their levels of productivity, the availability of inputs and support services, and effective linkages with other enterprises and industries. It is important therefore to consider the specific conditions facing each industry within the context of the overall economy.

4.2.2 Issues and Challenges
The macroeconomic conditions, business environment, quality of infrastructure and energy supply, and levels of application of technology as considered in preceding sections are important factors affecting the performance of all industries in the economy. However, each industry also faces specific issues and challenges that affect its performance and the prospects for its productive enterprises.

The main issues and challenges facing each of the goods and services producing industries of the Jamaican economy are outlined below.

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<tr>
<th>Industry</th>
<th>Issues and Challenges</th>
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<tr>
<td>Agriculture</td>
<td>• Declining competitiveness of agricultural production, due to the small size of landholdings, high cost of inputs and limited application of modern technology</td>
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<td></td>
<td>• Praedial larceny</td>
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<td>• Gaps in key infrastructure, including poor feeder roads, inadequate irrigation works, and limited sorting, grading, packaging and storage facilities</td>
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<td>• Weaknesses in marketing channels, information services and linkages to other sectors</td>
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<td>• Loss of agricultural lands to urban settlement and housing development</td>
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<td>• Threats to marine fisheries including over-harvesting, habitat destruction, pollution and incursions by fishing vessels from other countries</td>
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<td>• Environmental issues including soil erosion, use of chemical fertilizers, impact of natural hazards and deforestation</td>
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<td>Manufacture</td>
<td>• Limited economies of scale resulting from relatively small plants</td>
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<td>Industry</td>
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<td>• High costs associated with crime and security issues</td>
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<td>• High costs of some productive inputs including energy</td>
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<td>• Relatively low levels of investment in modern technology and business practices</td>
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<td>• Trade-related issues including implications of trade liberalization, rules of origin requirements and enforcement of anti-dumping provisions</td>
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<td>• Requirements of international product and process standards including HACCP and ISO 9000 and 14000</td>
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<td></td>
<td>• Pollution and waste generated by the manufacturing sector, including solid and hazardous waste, liquid and sludge waste, and air emissions</td>
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<tr>
<td>Mining and</td>
<td>• High energy costs that reduce global competitiveness of minerals industry</td>
</tr>
<tr>
<td>Quarrying</td>
<td>• Major environmental impacts, including dust and noise pollution, leaching of red mud lakes, loss of habitats and forest cover, scarification of landscapes, sediment loads to surface and coastal waters, and relocation of communities</td>
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<td></td>
<td>• Declining ratio of trihydrate bauxite to monohydrate bauxite reserves, leading to increased cost and lower yields in alumina processing</td>
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<td></td>
<td>• Limited technical and financial capacity of local companies in the non-metallic minerals industry</td>
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<td>• Limited transport infrastructure for the sector including inadequate bulk-handling port and loading facilities to accommodate non-metallic minerals exports</td>
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<td>• Weak supporting framework for research and development</td>
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<tr>
<td>Construction</td>
<td>• Shortages of skilled construction workers and technical personnel</td>
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<td></td>
<td>• Low labour productivity</td>
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<td></td>
<td>• Competition facing local private sector construction firms from overseas construction companies</td>
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<td>• Low levels of research and development</td>
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<td>• High cost and collateral requirements for mobilization and performance bonds</td>
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<td></td>
<td>• Security concerns which lead to increased costs and delays in completion of construction projects</td>
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<td></td>
<td>• High levels of informal activity in industry</td>
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<td></td>
<td>• Inadequate collaboration between local construction firms</td>
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<td>• The highest gender disparity of any economic activity in Jamaica</td>
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<td>Industry</td>
<td>Issues and Challenges</td>
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<tr>
<td>Cultural and Creative Industries</td>
<td>• Limited use of green architectural design for energy efficiency and waste reduction</td>
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<td></td>
<td>• Inadequate coordination among relevant government agencies and private sector</td>
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<td></td>
<td>• Inadequate numbers of properly equipped venues for creative industries</td>
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<td></td>
<td>• High levels of piracy</td>
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<td>• Limited control of marketing and distribution channels for creative industries</td>
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<td>• High level of informality among entities and individuals in creative industries</td>
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<td></td>
<td>• Limited capacity in business skills and technology application</td>
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<td>• Relatively limited access to capital for the creative industries</td>
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<td>• Lack of adequate statistics and information on creative industries</td>
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<td></td>
<td>• Inadequate education and training in creative skills</td>
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<td>Sport</td>
<td>• Relatively limited access to capital for sports-related enterprises</td>
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<td></td>
<td>• Lack of adequate statistics and information on sports to provide a basis for planning and development</td>
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<td></td>
<td>• Inadequate levels of business skills and technology application in sport enterprises</td>
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<td>• Inadequate capacity for training sport administrators, coaches, managers and other personnel</td>
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<tr>
<td>ICT</td>
<td>• Gaps in the levels of required skills and capabilities for ICT among the work force</td>
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<td>• Existing focus of local ICT companies on low value-added services for export</td>
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<td>• Limited access to capital for new ventures in the ICT industry</td>
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<td></td>
<td>• Constraints to the continued development of the outsourcing industry including inadequate office space</td>
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<td></td>
<td>• Limited existing capacity in the manufacturing of hardware components and the creation of software</td>
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<td>• Inadequate access to broadband for households</td>
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<td>• Relatively limited application of ecommerce and advanced data and knowledge management systems</td>
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<td>• Increasing levels of e-waste associated with use of ICT</td>
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<tr>
<td>Financial, Business and Distribution</td>
<td>• Inadequate level of financing allocated to MSMEs</td>
</tr>
<tr>
<td>Services</td>
<td>• Gaps in supervisory and regulatory framework for financial industry, including need for increasing reporting requirements and inter-agency cooperation, rationalizing roles of regulatory institutions and strengthening the supervisory independence of the Bank of Jamaica</td>
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</tbody>
</table>
### Industry

<table>
<thead>
<tr>
<th>Issues and Challenges</th>
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<tbody>
<tr>
<td>Challenges relating to the creation of an integrated regional capital market for CARICOM member states</td>
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<tr>
<td>Negative impact of the net outward migration of skilled labour</td>
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<tr>
<td>Costs of telecommunications services including the cost of internet outbound connectivity</td>
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<tr>
<td>Relatively low levels of awareness of export modes and opportunities among local service providers</td>
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<tr>
<td>Capacity constraints of MSMEs and informal enterprises in the business services sector</td>
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<tr>
<td>Transport constraints for distribution, including limited capacity of highways to accommodate container haulage vehicles and inadequate levels of storage facilities</td>
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<tr>
<td>Environmental issues including solid waste generated by the packaging of traded goods, handling of hazardous materials and air pollution from road transport vehicles</td>
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</table>

### Tourism

<table>
<thead>
<tr>
<th>Issues and Challenges</th>
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<tbody>
<tr>
<td>Need for ongoing improvement in key aspects of the tourism product, including development and diversification of accommodation and attractions, improving standards, upgrading of infrastructure in resort areas, and human resource development</td>
</tr>
<tr>
<td>Need to earn and retain higher value from each tourist arrival</td>
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<td>Inadequate linkages between tourism and the other sectors and industries of the economy</td>
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<tr>
<td>Negative perceptions of Jamaica as a travel destination due to crime and tourist harassment</td>
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<tr>
<td>A high level of dependence on the North American market</td>
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<tr>
<td>A wide range of environmental and socio-economic impacts, including loss of wetlands as a result of the construction of resorts and hotels, beach erosion, damage to coral reefs, habitat loss, intensive use of fresh water resources, and increased pollution</td>
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<tr>
<td>The need to widen the share of benefits derived from the industry by local residents and communities</td>
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### 4.3 Energy

#### 4.3.1 Overview and Context

There was sustained effort towards achieving energy security by diversifying the energy-mix of the country and reducing reliance on fossil fuels. This was reflected in the expansion of renewable energy (wind and hydro power). In addition, there was strengthening of the policy framework with the approval of Jamaica’s first long term National Energy Policy 2009–2030 by Parliament in
November 2010 and the completion of draft sub-policies for Renewable Energy; Biofuels; Conservation and Efficiency; Trading of Carbon Credit; and Energy-from-Waste. The National Energy Policy is designed to achieve by 2030 “a modern, efficient, diversified and environmentally sustainable energy sector providing affordable and accessible energy supplies with long-term energy security and supported by informed public behaviour on energy issues and an appropriate policy, regulatory and institutional framework”. These are important milestones given the current and predicted price volatility of oil.

Aligned with the national goal of improving energy efficiency and conservation, Jamaica embarked on a number of initiatives to reduce consumption of energy. Among these were the commencement of the GOJ/IDB Energy Efficiency and Conservation Technical Assistance Project and the Energy Security and Efficiency Enhancement Project being funded by the GOJ and the World Bank. In addition, the Ministry of Energy and Mining has provided training in energy efficiency and conservation for selected public sector entities.

The current work programme in the energy sector, up to 2013, is being carried out simultaneously with the Government’s economic recovery programme which is aimed at restoring macroeconomic stability and creating conditions for strong and sustained growth towards preparing the economy to benefit from the recovery in the global economy. The fifth pillar of this programme speaks to “Urgent implementation of the energy policy, including energy conservation and efficiency and investment in alternative energy”. Advancements in the country’s energy sector are expected to contribute to the achievement of the key structural fiscal reforms, to put the public debt levels on a clearly downward path.

Jamaica has seen an increase in the percentage of renewables in the energy mix moving from 5.6 per cent in 2008 to 9 per cent in the 2010 due primarily to the development and implementation of various programmes such as the full roll out of E10 for use in motor vehicles in the transport sector as well as investments in wind energy and hydro power.

With respect to increasing the percentage of renewables in the energy mix, Jamaica seems well on target to achieving the 11 per cent of renewables in the energy mix by 2012, having increased the contribution of renewables by a little over 4 percentage points from 2007 and by three percentage points from 2009. The various projects underway in the areas of solar, wind, hydro and biofuels are expected to facilitate the achievement of this target. Of note, the expansion of the Wigton Wind Farm from 20.7 MW to 38.7 MW will:
- provide 55 GWh of electrical energy, capable of powering approximately 24 000 homes
reduce consumption of imported fuel by approximately 32,400 barrels of oil and save the country US$3.2M of foreign exchange (based on prices which average US$70/barrel of oil)

- avoid the emission of approximately 45,954 tonnes of carbon dioxide
- contribute to the long term lowering of the overall fuel charge component on consumers’ electricity bill as fossil fuel energy is substituted by renewable energy

The expansion of the wind farm also resulted in an increase in the share of wind energy from 1.3 per cent in 2009 to 4 per cent at the start of 2011 on the country’s national grid.

The various initiatives in the energy sector should contribute to diversification of the energy mix, reduced dependence on fossil fuels and improve energy efficiency and conservation. This is critical to improving the country’s energy security, reducing the price of energy and making local business more competitive. The increasing share of renewables as part of the energy mix will help Jamaica to chart a low carbon energy roadmap, reduce air emissions and benefit from carbon credits.

4.3.2 Issues and Challenges - Energy

- Jamaica depends on imported oil for approximately 95 per cent of its energy needs and has one of the highest per capita consumption (10.2 barrels) in the Western hemisphere. Renewables such as wind and hydro and indigenous sources of energy are exploited to meet the rest of its energy needs. The country is over 90 per cent reliant on imported oil for electricity generation. This has caused a significant increase in the country’s oil bill over the past decade, totalling over US$1.6 billion in 2010, which accounts for a substantial proportion of the nation’s foreign exchange earnings. Although oil is imported at high financial and economic costs, it is used inefficiently and conservation is inadequate.

- Given the fiscal constraints facing Jamaica, the increasing demand for petroleum products continues to be a considerable development challenge. Among the other issues are the effects of high-energy costs on economic competitiveness and social well-being, the high transmission and distribution system losses (currently 20 per cent) and the current licensing structure. Apart from the cost, increased gasoline consumption, along with the use of other petroleum based products, poses a threat to air quality.

- The volatility of oil prices, geo-political tensions in and among oil producing countries, dwindling oil stocks and concerns about the environment and climate change impel Jamaica to diversify its energy mix and reduce its high dependence on fossil fuels.
4.4 Science, Technology and Innovation

4.4.1 Overview and Context

There is recognition that science, technology and innovation (STI) is critical to Jamaica’s economic and social development. The country has not adequately harnessed STI to increase wealth and significantly reduce poverty. Between fiscal years 2009/10 and 2010/11, Government expenditure on STI increased to 0.5 per cent of the national budget. This represents a 40 per cent increase from 2004 when the expenditure on STI represented only 0.3 per cent of the national budget. Gross Expenditure on Research and Development (GERD) for Jamaica is estimated at 0.3 per cent of GDP. This is less than the 1 per cent average in Latin American and the Caribbean in 2010. There is general consensus that countries that enjoy the benefits of STI invest more than 1 per cent of GDP in research and development (R&D) This level of investment in STI remains low when compared to the world leaders in R & D such as Sweden and Singapore, in which GERD is approximately 1.8 and 2.5 per cent of national budget respectively. The low investment in R&D and STI is reflected in the consistently low domestic patent filings. At an average of 5 patent filings per million/annum, Jamaica is on par with India but four times less than the number of filings in Brazil (ESSJ 2010).

Sectors such as agriculture, water, education, energy and justice have been engaged in technological innovations. Innovations are reflected in the country’s efforts to grow pest and drought resistant crops; develop renewable energy from solar, wind and water; and improve the ICT infrastructure. Jamaica has made significant strides in improving and expanding its ICT infrastructure, boasting a tele-density of 126.9/100 population. The growth in ICT has also facilitated e-learning in schools and the provision of diverse electronic services in the financial sector. For example, the number of Automated Banking Machines grew to 553 in 2010 which was a 24.8 per cent increase over the figure for 2006. The country’s internet penetration also increased to 58.5 per cent. The use of ICTs to boost efficiency is seen across sectors. For instance, NEPA has been using the AMANDA System to speed up the approval process with respect to the land and building approval process.

A number of public sector agencies are also providing online services thus improving the efficiency and reach of their services. These include the Inland Revenue Department, the Registrar General Department, Jamaica Customs and the National Housing Trust. The country is not only using ICTs for commercial activities but ICTs also are supporting activities of a non-commercial and regulatory nature.
Other STI related initiatives implemented include:

- Establishment of the Centre of Excellence for Advanced Technology in Agriculture to boost research and technology in the agriculture sector
- experimentation with native and exotic breeds of small ruminants for improved meat production as well as projects aimed at enhancing greenhouse technologies
- Research projects related to diversifying the energy mix – projects ranging from hydro power, biomass, energy from waste and energy efficiency products
- Research into the glycemic indices of local foods towards better management of diabetes mellitus
- Advances were made by the Government in providing greater inter-government connectivity and interface between government and citizens as many government entities maintained an online presence and continued to provide online services (GovNet)
- Continued implementation of the e-learning project. All high schools (162 in total), and six special schools with students with learning and physical challenges were equipped with computers and local area networks. There are now e-Learning implementations committees established in all schools and colleges, and since November 2005, over $2 billion has been spent under the project.

At all levels of the education system (primary, secondary and tertiary), there was an overall upward trend in the number of candidates exposed to science and mathematics subjects. At the tertiary level, the numbers of persons enrolled in the Faculty of Pure and Applied Sciences at both the Universities of the West Indies and Technology increased by some 13 per cent over the period.

4.4.2 Issues and Challenges

Despite efforts to improve Jamaica’s innovation infrastructure and build its STI capacity, the country is still lagging behind. STI has not been given adequate priority for it to contribute to the transformation of the economy and enhance social well-being. The country’s performance on a number of international STI related and ICT indices has not improved. For example, Jamaica’s ranking on the Economist Intelligence Unit (EIU) Digital Economy Ranking 2010 remained at 44 out of 70 countries. The ranking utilize a cadre of comprehensive and standardized quantitative and qualitative criteria to evaluate ICT development. Jamaica scored highest on the legal environment criterion reflecting the country’s continued improvement in its policy and regulatory framework for ICT and lowest for connectivity indicating a relatively low broadband penetration. Overall, Jamaica’s positioning on this index fell. In 2010, Jamaica slipped 13 places to 66 on the Global Information Technology Report Network Readiness Index. Notwithstanding the expansion of the ICT infrastructure, the country has significant work to do in improving its e-readiness.
Low productivity growth can be associated with deficiencies in the availability or adoption of new technologies and low innovation. Even though Jamaica’s first science and technology (S&T) policy was promulgated in 1960, a strong commitment to implement different mechanisms for improving innovation has been seen only in recent years. To date, the country does not have a formal national innovation system. Although efforts have been made to promote science, technology, research, innovation, and intellectual property rights (IPRs), the country is lagging behind international norms (World Bank Jamaica CEM, 2011). Several policies critical to the development of STI are still in drafts. These include policies relating to science and technology (S&T), Information and Communication Technology (ICT), Biosafety, Biotechnology.

At present, technology is not being adequately used in addressing critical sustainable development issues such as energy and waste management, adaptation to climate change, disaster management, wealth creation or the high incidence of crime. Nor is it being sufficiently used in addressing issues related to sustainable livelihoods and poverty reduction. The STI policy framework should give priority to expanding S&T education, facilitating a more widespread use and application of technology island-wide, boosting innovation and promoting public, private sector and academia partnerships for the development of S&T as outlined by the National Development Plan.

Jamaica’s capacity to effectively and efficiently exploit science, technology and innovation (STI) for sustainable development is hampered because less than 1% of GDP is being spent on scientific research and development. The international thrust towards trade standards such as Hazard Analysis and Critical Control Points (HACCP), the ISO14000 series and sanitary and phyto-sanitary standards, justifies the need for greater investment in STI. Non-compliance in these areas could undermine the country’s ability to trade and in the long run the welfare status of citizens. Developments in biotechnology also make it imperative for greater levels of research and links to be made between scientific research and agriculture and agro-processing.

Telecommunications
- Challenges in spectrum management includes being able to anticipate the needs of users, to manage the various demands for spectrum to avoid conflict among potential users and to provide the appropriate regulatory framework for the development of wireless communication systems in Jamaica
- Absence of a single regulator: The creation of a single telecommunication regulator will help to remove the fragmentation and overlapping jurisdictions in the telecommunications sector, caused by the existence of the multiple
regulators, and to implement a simplified and efficient institutional framework for the regulation of the trading of goods and services within the sectors.

- The global integration of the telecommunications industry has implications for small open economies such as Jamaica, including the following:
  - The potential impact that ongoing negotiations and adjustments to international accounting settlement rates may have on countries such as Jamaica that receive more international telephone calls than they originate.
  - Continued evolution of technology will increase difficulties in ensuring regulatory compliance and minimizing bypass and other evasive techniques.
  - Confronting the increasing threats of data interference, identity theft and other forms of cyber-crime.
  - Increased openness to the impact of foreign cultural values and practices.

- The main issues in the long-term development of the communications infrastructure will include:
  - Achievement of affordable universal access including services to marginalized communities, remote areas, the disabled and the elderly. This is particularly important as Jamaica’s ICT indicators also show that access to ICTs are more limited among rural and low-income households, which has implications for ensuring greater levels of e-inclusion.
  - Domestic and international connectivity including to the existing fixed line telecommunications operators.
  - Reductions in cost of internet outbound connectivity.
  - Equitable access to telecommunications infrastructure systems by other service providers that rely on these infrastructure systems as the basis to provide their services.
  - Equitable management and allocation of telephone numbers which represent a scarce resource similar to spectrum.
  - Access to computers and other devices for internet connectivity on affordable basis to help bridge Jamaica’s internal “digital divide”.

- The island’s telecommunications infrastructure needs to be adapted on an ongoing basis to address vulnerabilities and build increasing levels of resilience including establishment of an ICT disaster management programme.

**Information and Communication Technology**

- ICT deployment and usage is still curtailed by a combination of human resource factors including, high illiteracy rates, loss of ICT skills due to migration, low skill levels, high technology anxiety among the elderly, and
high unemployment rates among the general labour force, particularly affecting women and youth

- The development of Jamaica’s capacity for research and innovation in ICT is also limited by the relatively low levels of overall expenditure on research and development
- Inadequate Data on ICT sector: The ICT sector also suffers from the absence of quantitative measure both at the micro and macro levels. There is also inadequate information on the status of ICT4D and the application of ICT in other sectors
- Development of ICT sector: The country must overcome specific issues and challenges to ensure the long-term development of the sector. These include:
  - gaps in the levels of required skills and capabilities for ICT among the work force
  - existing focus of local ICT companies on low value-added services for export
  - limited access to capital for new ventures in the ICT sector
  - relatively low levels of computer usage and affordable internet access among households and schools with limited access to affordable hardware
- Inadequate public awareness toward the importance of technology
- Importance of information literacy for all Jamaicans
- Development of environmentally sustainable methods of disposing of increasing levels of waste generated by the ICT sector

**Intellectual Property**

- Protection of Intellectual Property: The framework for protection of intellectual property rights in Jamaica requires strengthening including increasing public awareness of the importance of intellectual property rights.

Overall, advancing STI in Jamaica is hampered by:

- Little priority for the development of STI and no general consensus on the role of STI in the country’s development process
- Low levels of investment in R&D
- Disconnect between R&D and productive sectors and the development of indigenous technology
- Inadequate enabling environment for innovation
- Inadequate science and technology education
- Inability to train retain high quality STI professionals
5 GOAL 4: Jamaica has a healthy natural environment

The quality of life depends on the quality of the natural environment. This goal recognizes the importance of the natural environment and will ensure harmony among development activities, environmental sustainability and conservation of the country’s natural resources. Jamaica’s location, geography and geology make the island prone to several natural hazards. This goal will focus on the development of a comprehensive integrated approach to hazard risk management and climate change. This goal further recognizes that healthy, productive and protective environments, social systems and economies are the bases of development, sustainability and human welfare.

There has been mixed progress under Goal 4. In 2010, Jamaica’s ranking in terms of environmental performance as measured by the Environmental Performance Index (EPI) dropped by over 20 points, placing the country at 89th out of 163 countries with a score of 58, down from a ranking of 54th out of 149 countries in 2008. There were no hazards which caused damage in 2009, while hazards in 2010 resulted in significant damage and losses representing 1.9% of GDP, mainly from floods associated with Tropical Depression # 16/ Tropical Cyclone Nicole. This compares with the baseline year of 2007, when disasters caused damage representing 3.4% of GDP. Some progress was also recorded in the indicators relating to housing. The Housing Quality Index rose to 71.40 in 2009, up from 68.10 in the baseline year 2007, before falling slightly to 70.90 in 2010, while the proportion of households with access to secure tenure rose from 80.50 per cent in 2007 to 81.8 per cent in 2009, but then fell back to 80.50 per cent in 2010.

This section focuses on the natural environment with specific emphasis on the following sub-sectors: Ecosystems and Natural Resources, Biological Resources & Protected Areas, Marine and Coastal Resources, Fresh Water Resources, Forests and Watersheds, Waste Management, Air Pollution, Natural Hazards and Climate Change.

5.1 Environment

5.1.1 Overview and Context

The 2009 MDG report highlighted that Jamaica is lagging behind in the area of environmental sustainability, particularly as it relates to energy production and oil dependency and the protection of biodiversity and habitat.

In 2010, Jamaica ranked 89th out of 163 countries in environmental performance as measured by the Environmental Performance Index (EPI) with a score of 58, down from a ranking of 54th out of 149 countries in 2008. The
country received a high score of 78.3 out of 100 in the area of environmental health and a low score o 45.8 out of 100 for ecosystem vitality.

**5.1.1.1 Jamaica’s Ecosystems and Natural Resources**

In the last three years, between 2008 and 2010, the overall status of Jamaica’s ecosystems and natural resources has remained fairly constant. During this time:

- Key elements of biodiversity—species and ecosystems (including watersheds, forests, coral reefs and other marine areas) — have remained at the same state in general. The amount of protected land and marine areas has remained the same (although there were new fish sanctuaries declared in 2009 and 2010). There have been changes in management activities, for example, the number of prosecutions under the Wild Life Protection Act increased. In fact, the number of enforcement actions increased in all areas.
- The quality of air, coastal and riverine water remained relatively constant except for an apparent increase in the percentage of river sites meeting nutrient standards.
- There were reductions in the amount of solid waste generated and hazardous waste exported. This could be attributed to increased focus on waste reduction efforts.
- The portion of the country’s energy mix that comes from renewable energy almost doubled, demonstrating a stronger focus on reducing the use of imported petroleum and on developing alternate energy sources.

**5.1.1.2 Biological Resources & Protected Areas**

Jamaica has a remarkable diversity of species and ecosystems, and is an important contributor to biodiversity of the Caribbean Basin, which is ranked fifth out of “the eight hottest hotspots” on the Conservation International list of Biodiversity Hotspots. Jamaica has the highest number of endemic birds and plants of any Caribbean island and is ranked number five in terms of its endemic flora and fauna amongst islands worldwide. Threats to Jamaica’s biodiversity include the following:

- Habitat loss
- Over-exploitation
- The impact of alien invasive species
- Weak law enforcement
- Inadequate awareness of the value of natural resources
- Urban population growth
- Pollution
- Poor spatial planning and land use
- Climate change

Limited baseline data prevents a comprehensive inventory of the status of the island’s biological resources.
Jamaica has 244 protected areas, of which terrestrial protected areas represent approximately 200,000 ha or approximately 18 per cent of Jamaica’s total land area and marine protected areas accounting for 180,000 ha or approximately 15 per cent of the country’s archipelagic waters (and 1.1 per cent of Jamaica’s total marine area). In 2009 and 2010, the Ministry of Agriculture and Fisheries declared 10 additional sanctuaries expanding the existing the country’s existing two fish sanctuaries at Bogue Island Lagoon, Montego Bay, and Bowden Inner Harbour, St Thomas.

5.1.1.3 Marine and Coastal Resources
Jamaica’s coastal and marine resources contribute to socio-economic well-being, particularly through the agriculture and tourism sectors. Monitoring of these resources is done primarily by the National Environment and Planning Agency (NEPA). Jamaica’s coastal and marine areas are at risk of degradation because of pressures including over-fishing, unplanned coastal development, pollution, tourism, species invasion, and climate change.

In the past three decades, there has been significant loss of the island’s coral reefs. Between the 1970s and 1990s, mean coral cover at a 10-metre depth fell from 52 per cent to 3 per cent, while fleshy algae cover increased from 4 per cent to 92 per cent. Deeper reefs are in a better condition (SOE 2010).

In 2010, mean percentage cover for hard corals ranged from a low of 1.4 per cent in the Oracabessa Bay Fish Sanctuary, to a high of 30.6 per cent within the Palisadoes/Port Royal Protected Area (NEPA – Reef Status and Trends 2010). In contrast, fleshy algae composition ranged from 0.6 per cent to 81.6 per cent with the Oracabessa Bay Fish Sanctuary site recording both the lowest coral coverage and the lowest algal coverage. Of 22 sites assessed, only Drapers and Drunkenman’s Cay recorded coral cover over 20 per cent, while eight sites had less than 10 per cent.

NEPA carries out a routine programme of beach profile measurements at a number of benchmarks at 7 sites across the island. These sites are: Burwood Beach in Trelwany, Negril in Westmoreland and Hanover, Bluefields and Font Hill in St. Elizabeth, Jackson Bay in Clarendon, Port Royal and Palisadoes in Kingston and Long Bay in Portland. Of the 36 benchmarks monitored, 5 show evidence of chronic erosion (> 25 per cent loss), 11 sites show evidence of mild erosion (1 – 25 per cent loss) and 15 sites show a gain in mean beach width. Among these locations, Negril was determined to have a significant erosion problem while Palisadoes, Bluefields, Jackson Bay and Burwood beach all show a pattern of accretion.
Wetlands, commonly called morass, represent less than 2 per cent of Jamaica's total surface area. The most extensive areas of mangrove are found in the Portland Bight area, which is now a protected area. Mangroves are found along 290 km – or 29 per cent of the coastline. Wetlands perform invaluable ecological functions in their natural state. These areas are among the most biologically productive ecosystems, and play a great part in ensuring coastal stability. Coastal wetlands protect the shoreline from erosion by acting as a buffer against wave action as in the case of coastal mangroves. They also reduce the effect of floods on coastal areas by acting as a sponge and slowing down floodwaters, as in the case of coastal marshlands. In the absence of wetlands, the full force of floodwaters would cause erosion of river banks, and affect coral reefs.

There has been no authoritative catalogue of Jamaica’s mangrove and coastal wetlands. However, in 1997, the aerial extent of Jamaica’s coastal wetlands was estimated to be 17 700 ha. Since 2007, 40.68 ha of mangroves have been removed or relocated for approved development. This accounts for 0.23 per cent of Jamaica’s total estimated coastal wetlands.

The Jamaican fisheries continued to provide a means of livelihood and a source of protein for some Jamaicans, especially in certain coastal areas. There were 19 685 registered fishers and 5 080 boats operating from 187 landing sites. Jamaica’s coastal waters are severely over-fished, with large species and most predators absent or very scarce. Monitoring has highlighted that the fish stock is comprised primarily of juveniles and low densities of commercially important species (SOE 2010).

Marine fish production (fish, conch, lobster, shrimp) declined by 13.7 per cent to 11 390 tonnes. The decline in fish catch is partly attributed to plummeting traditional fish stocks due to degradation of coastal ecosystems (mangroves, seagrass and coral reefs), pollution from land-based sources, presence of invasive species, and increasing fishing effort. In addition, the long periods of rain during the latter part of 2010 caused by low pressure systems may have reduced the number of fishing days resulting in lower fish catches. Average biomass for commercially important fish varied by site. The parrot fish was the only species having high (fish) density, that is, above 3.0 (ESSJ, 2010).

**Coastal Water Quality**

Over the past 10–20 years, marine pollution has become of great importance especially in the Caribbean. Deterioration in coastal water quality has not only made beaches unsuitable for swimming, but has also damaged ecological systems such as coral reefs, mangroves and seagrass communities.

Jamaica’s coastal waters receive pollution from a number of sources, including wastewater treatment facilities, industrial facilities, power plants, construction
works (urban expansion, harbour works), habitat modification (dredging, filling and clearing of mangroves), urban run-off, agricultural run-off, construction run-off, landfills and hazardous waste sites. Poorly or untreated sewage is by far the most serious source of pollution affecting many areas on the coast including Kingston Harbour. Note that much of the pollution that reaches the coast and marine environment is conveyed via rivers and streams which are oftentimes polluted by elements such as untreated sewage, fertilizers and sediment.

An assessment of marine water quality indicators across the island indicates that most of the coastal area is under threat and are not fully meeting all the established standards for various parameters (SOE 2010). Values are highest in areas near coastal townships and within the plume of water ways, gullies and rivers.

5.1.1.4 Fresh Water Resources
Jamaica’s land formations give rise to surface drainage through a large network of streams and rivers. Although the country would seem to be well endowed with freshwater resources, with 1,512 cubic metres of water per person per year, the island is experiencing moderate water stress according to the Water Resources Authority. The great majority (75 per cent) of Jamaica’s freshwater is consumed by the agricultural sector so there is a need for greater water efficiency in this part of the economy.

In 2010, the volume of water resources allocated to industrial and domestic use amounted to 1,203.0 MCM and the demand was 910.2 MCM, implying that there is an over-allocation of 292.8 MCM for 2010. The current and future demand for water is greatest in the southern basins of the island. With the exception of the Kingston and Rio Cobre Basin, there is enough exploitable water resource in each basin to meet its local demands up to 2025. Intra-basin transfer and rainwater harvesting are possible strategies to augment the resources to meet demands in these basins.

It is estimated that over 85 per cent of Jamaicans have access to safe drinking water. Approximately 70 per cent of potable water in Jamaica is provided by the National Water Commission (NWC). However, Parish Councils also provide potable water in some rural areas which also use springs, rainwater and wayside tanks. Private suppliers of water include the bauxite companies, some private estates and a few private water companies account for only a small portion of potable water produced.

The surface and groundwater resources are presently of excellent quality throughout the country. Less than 10 per cent of the island’s water resources have been contaminated. In the areas of contamination there are use
restrictions for drinking water and strategies are in place to improve water quality and prevent further contamination (SOE 2010).

5.1.1.5  **Forests and Watersheds**

Jamaica currently has an estimated forested area of 328,600 hectares, or 29.9 per cent of its total land area. This represents a 2.2 per cent decrease in forest cover since 1989 when forests covered 30.6 per cent of the land area. 13.1 per cent of Jamaica’s forests are protected, primarily as forest reserves. It should be noted that 3.5 per cent of this protected forest is still being disturbed by human actions.

Leading environmental concerns include deforestation, soil erosion, population pressures, mining for limestone and bauxite, large and small-scale cultivation on mountain slopes and lack of public awareness concerning conservation. Deforestation causes massive soil erosion, and water-courses becoming heavily laden with sediment, resulting in floods at lower levels. Until recently, interior forests were quite inaccessible; however, continued road construction into these areas will inevitably lead to selective cutting and increased deforestation.

In keeping with the thrust towards reforestation and reversing the loss of forest cover, there was an increase in the production and distribution of seedlings compared with 2009. Data for the 2006–2010 period showed that a total of 1,058 hectares was set as the target for reforestation and was achieved. Between 2005 and 2009, reforested areas included Blue Mountain Forest Reserve and the Cockpit Country.

Jamaica is divided into 26 watershed management units. Results obtained from routine monitoring of watershed management units by NEPA between 2008 and 2009, reveal that 10 watersheds are degraded or severely degraded. These watersheds include: Rio Minho, Hope River, Yallahs River, Wagwater River, Rio Cobre, Morant River, Rio Grande, Swift River, Pencar-Buff Bay River, and Wagwater River.

5.1.1.6  **Waste Management**

In Jamaica, the average per capita waste generation has risen from 0.74 kg/day in 2007 to 0.86 kg/day in 2009 (ESSJ 2010). Socioeconomic and demographic factors influence the type and quantity of waste being produced. These factors include: population size and structure; consumption patterns and lifestyles; changes in household size and composition; changing gender roles; urbanization; and, shifts and expansion of economic activities. The main waste
streams in the country include municipal and non-municipal solid waste\textsuperscript{20}, sewage and industrial wastewater and hazardous waste\textsuperscript{21}.

The last waste characterization study conducted at the Riverton Waste Disposal Site was in 2006. It showed that 69 per cent of the solid waste produced in Jamaica is organic and represents approximately 1.01 million tonnes by volume. It should be noted that this organic waste is either compostable or recyclable and therefore presents an opportunity for Jamaica to engage in economic activities related to composting and recycling, thereby reducing the amount of waste to be collected and transported to disposal sites.

The National Solid Waste Management Authority (NSWMA) estimates that 70 to 75 per cent of the country’s household waste is collected, while the remainder is uncollected due to inaccessibility, competing disposal practices and improper waste management practices. It is estimated that the Riverton Waste Disposal Site receives approximately 60 per cent of the total waste collected.

Collection by garbage trucks and burning are the predominant methods of garbage disposal and treatment. Garbage collection in the Kingston Metropolitan Area (KMA) and other towns has been more efficient than in other areas of the country. Collection is particularly low in rural areas where the main method of treatment and disposal is burning. Other disposal methods include burying and dumping on open lots and in gullies. Jamaica has no sanitary landfills but has eight authorized disposal sites which are managed by the NSWMA.

It is projected that by about 2014, the Riverton Waste Disposal Facility will reach its maximum capacity therefore it is critical that systems are put in place to facilitate recovery, reuse and recycling of waste at source.

Although there is limited data on the actual quantities generated, the general view is that the quantity of hazardous waste is increasing. In 2010 the proportion of the population that own computers and mobile phones increased by 9.3 per cent compared to the previous year. Notwithstanding, there has been a 45 per cent decline in motor vehicle imports from 2007–2010 and a corresponding decrease in the quantity of lead acid batteries imported.

There is no facility in Jamaica for the proper disposal of hazardous and electronic waste (e-waste) and so a large portion ends up at disposal sites and is sometimes mixed with the municipal waste. In spite of this, there are some

\textsuperscript{20} Solid waste is broadly defined as non-hazardous, industrial, commercial and domestic refuse including household organic trash, street sweepings, hospital and institutional garbage, and construction wastes.

\textsuperscript{21} Waste that is hazardous has properties that make it dangerous or potentially harmful to human health or the environment (United States Environmental Protection Agency, 2006)
categories of hazardous waste that are collected for reuse and recycling. Reuse and disposal of certain hazardous materials occurs as follows:

- Used petroleum oil – Used as a supplemental fuel and lubricant; also used inappropriately in pest control (in drains to control mosquitoes and on animals to eradicate ticks) and for dust control
- Asbestos – Asbestos waste is accepted by the NSWMA at the Riverton site once it is packaged according to NEPA’s requirements and it is disposed of in a designated area
- E-waste – NSWMA receives and stores discarded computers in a designated area at the Riverton Disposal site
- Medical waste – Much of the medical waste generated is separated and incinerated, however, some medical waste does end up in municipal disposal sites.

There are presently 306 sewage treatment plants in Jamaica. Sixty eight are owned by the NWC, the largest provider of sewerage services in Jamaica. Of the 165 plants monitored by the Environmental Health Unit between January and September 2010, only 66, or 40 per cent, were in compliance. Of the 65 NWC plants monitored, only 17, or 26 per cent, were compliant.

In addition to the NWC, sewage treatment plants are owned by hotels, strata corporations and public housing development agencies. Major urban centres such as Kingston and St. Andrew, St. James and St. Catherine account for approximately 90 per cent of the waste handled by the NWC.

Jamaica’s wastewater sector generally has a low level of performance, and sewage effluent quality from most treatment plants has generally not been able to meet the NRCA’s sewage effluent standards. This is mainly due to issues such as improper plant designs, old technology, overloading, lack of maintenance, and improper operations. This problem has been alleviated somewhat by the 2007 commissioning of the first phase of the Soapberry Treatment Ponds that provide tertiary treatment of sewage from Kingston and St. Andrew and South East St. Catherine (Portmore).

In Jamaica, almost all households (98.9 per cent) surveyed in 2007 had access to water closets and pit latrines, the latter being defined also as an acceptable forms of toilet facility. Water Closets (Flush Toilets) were the main type of facility, accounting for 64.3 per cent of households. Some 42.4 per cent of households with flush toilets were not linked to wastewater treatment facilities (sewers), indicating that soil absorption systems are the predominant means of sewage disposal for the country. Approximately 25 per cent of Jamaica’s population is served by sewerage systems operated by the NWC. The remaining 75 per cent of Jamaica’s sewage wastes are disposed of through soak away systems, septic tanks, tile fields, pit latrines etc. However, soakaway pits may lead to
contamination of groundwater, as seepage reaches aquifers through the porous limestone base.

Sanitation services exist in most major urban areas, and are being improved. In the Kingston Metropolitan Area (KMA), 92 per cent of households have flush toilets, while in other towns 60 per cent of households have this facility. The great majority of households without flush toilets use pit latrines. In order for a national system to be developed to process wastewater sludge for energy generation, centralized wastewater treatment plants are necessary. However, while coverage of sewerage services has increased significantly in recent years, only 20 per cent of the population island-wide is connected to sewage treatment facilities. In the KMA the percentage is considerably higher with 60 per cent of households linked to sewer systems, while in other towns only 11 per cent of households are connected, most of which are in housing developments. The NWC is currently implementing a programme to expand the sewer connections in the KMA, and has recently completed the construction of a new sewerage system in the Montego Bay area.

5.1.1.7 Air Pollution

In Jamaica, the main contributors to poor outdoor (ambient) air quality are emission of air pollutants from business and industry, motor vehicles, open burning of sugarcane fields and solid waste at dumpsites and in backyards. The quantities of these emissions are impacted by population growth, the level of energy use, the vehicle population, and poor domestic and industrial practices. The major air pollutants which have continued to cause the most damage to the environment and human health in Jamaica are sulphur dioxide, nitrogen oxides and particulate matter.

During 2009, sulphur dioxide ($\text{SO}_2$) was the major polluter of the atmosphere from the licenced facilities. $\text{SO}_2$ was calculated at 79,903 tonnes, and nitrogen dioxide ($\text{NO}_2$) at 41,527 tonnes. Particulate matter was calculated at 13,000 tonnes while other criteria pollutants such as Volatile organic compounds (VOCs) and carbon monoxide (CO) averaged below 10,000 tonnes. These annual emissions values were calculated based on stack emission results.

The major releasers of the pollutants sulphur dioxide and oxides of nitrogen are the electric power generation sector and the alumina industry sector. The electric power generation sector is responsible for the largest portion of both gases. They overshadowed the alumina Industry during 2009. This may be as a result of the closure of operations of three of the five alumina plants during 2009.

The alumina industry is responsible for 44 per cent of the carbon monoxide emissions during 2009. The alumina industry also is the leading contributor of the emissions of particulate matter. The industry still faces a number of challenges
despite the fact that more than half the sector was not in operation during the period 2008 – 2010. The industry has many open bauxite residue disposal areas (red mud lakes) which emit particulate matter on a daily basis based on wind speed and direction.

NEPA has been monitoring and assessing the ambient air quality in the parishes of Kingston and St. Andrew since 2006 on the following parameters: total suspended particulates (TSP), particulate matter less than 10 microns (PM\textsubscript{10}), sulphur dioxide (SO\textsubscript{2}) and nitrogen dioxide (NO\textsubscript{2}).

Looking at the island generally, ambient concentration levels of particulate matter in the Kingston and St. Andrew area appear to be trending upwards and at some of the sites they are well above the ambient limit for human exposure. Particulate matter levels outside of the Kingston and St. Andrew area is driven by the bauxite sector and the down turn experienced by the sector in this period has impacted the levels both negatively and positively. The positive, is that fugitive dust from mining, stack emissions and refinery operations have been reduced, leading to a reduction in ambient levels. However, on the negative side, the vast open red mud disposal (mud lakes) areas have dried up and become in most cases dust-bowls. These areas can only be managed by continued wetting and during dry seasons become increasingly difficult to manage leading to the high levels of particulate matter reported during 2010.

In general the ambient air in the Kingston and St. Andrew area with respect to particulate matter is medium to poor. This however improves further inland from the Kingston Harbour where most of the industries are located. There are also impacts from the major traffic road ways and these impacts compromise the ambient air for some of the areas further inland. The other parishes in the island have relatively good ambient air quality with respect to particulate matter. The conditions improve as the radius around the bauxite refineries and mining areas increases (SOE 2010). In 2009, the entire island recorded on average good ambient air quality for sulphur dioxide and nitrogen dioxide. There is however an increasing trend for both nitrogen dioxide and sulphur dioxide in the Kingston and St. Andrew area.

5.1.1.8 Natural Hazards
Jamaica, by virtue of its location, topography and geology, is prone to several natural hazards. These natural hazards can be placed into two categories: hydro-meteorological (tropical cyclones or hurricanes, floods, drought and fires) and geological (earthquakes, landslides and tsunamis) (UNEP, 2010). Over the years, natural hazards have had significant impact on economic activities, property, human welfare and natural resources in Jamaica. Disasters have potentially significant implications for public finance, increasing expenditure,
reducing domestic revenue and in turn resulting in increased domestic and external borrowing.

Jamaica has experienced an increase in the frequency of natural events related to inclement weather, tropical depressions, tropical storms, hurricanes—primarily floods, droughts and landslides—over the last 30 years, which have realized increasing economic and environmental cost. Most recently, the rains associated with Tropical Depression No. 16 and TS Nicole had the greatest impact on Jamaica in 2010. The event dumped 3,544.4 mm of rain on the island over a 6-day period (September 26 – October 1, 2010). The event impacted 507,831 persons or approximately 18.7 per cent of the island’s population and 16 persons lost their lives. While the entire island was impacted by rains, the most severe impacts were sustained by the southern parishes and the southern sections of northern parishes. There was considerable damage to the road network, drainage systems, farm roads, schools, beaches and NWC installations as well as loss of crops and livestock. Preliminary assessments estimated that the floods would cost the Government at least US$151 million.

Flooding and landslides also remain a major problem in Jamaica. Between 2007 and 2010 there were 242 flooding events and 44 landslides across the islands, with 70 per cent of these flooding events being experienced in 2010.

During 2010, a total of 327 earthquakes were recorded. Of these, approximately 88 or 27 per cent were local (on land) and 120 or 37 per cent were near (off the island). Of the local earthquakes which occurred, only four were felt and two registered greater than four on the Richter scale (ODPEM, 2010). These predominantly occur in the eastern section of the island which contributes to this area being exposed to multiple hazards.

There are few options to reduce the occurrence and intensity of most natural hazards. Jamaica therefore continues to place emphasis on the implementation of various activities, projects and programmes that would reduce or prevent the incidence of disasters. Most of these projects are geared towards supporting citizens’ ability to resist hazard impacts, by reducing human vulnerability, and by building their capacity to anticipate, cope with, resist and recover from hazard impacts. Some of these included:

- Revision of the ODPEM Act
- Implementation of the Building Resilient Communities Project
- Development of the Vulnerability Ranking Methodology by ODPEM which reveals high risk communities with the aid of hazard maps
- The development of a disaster emergency plan for each of the 41 child care institutions in Jamaica
- Pilot testing of the Risk and Vulnerability Methodology developed by UNEP. The Risk and Vulnerability Assessment Methodology Project (RIVAMP) is intended to produce a methodology to incorporate the role
of ecosystems in reducing risk and vulnerability associated with natural hazards and particularly with the impending threats of climate change.

Man-made hazards include oil spills, pollution, chemical contamination and fire. There is an increasing incidence of fires, a large percentage being bush fires, and this could be exacerbated by climate change. Bush fires are of significance because they result in loss of lives (in particular children), agricultural crop damage, biodiversity loss and flooding. Fires associated with refuse/dump sites are also on the increase and are symptomatic of the country’s inadequate waste management system. The associated air pollution from these fires is contributing to increasing incidence of upper respiratory diseases.

5.1.1.9 **Climate Change**

Jamaica is vulnerable to the direct and indirect impacts of climate change for example, sea level rise, extreme weather events and coastal erosion. An estimated 75 per cent of industries and service sectors are located along coastal zones. These industries and sectors are responsible for generating approximately 90 per cent of the island’s GDP. The island’s two major international airports (as well as most, if not all, smaller airports and air strips) are also located along the coast. In addition, more than 60 per cent of Jamaica’s population resides within 2 km of the coast, with the majority either reliant on, or affected by coastal activities. Jamaica’s tourism industry is very vulnerable to coastal impacts.

Over the last 25–30 years, Jamaica has experienced an increase in the frequency of natural events, primarily floods related to inclement weather, tropical depressions, tropical storms and hurricanes, droughts and landslides. The adverse impacts of hurricanes included a decline in the health of coral reefs; loss of seagrass beds; severe beach erosion and loss of forested areas. It is projected that the island has, and will continue to be affected by increased frequency and intensity of tropical weather systems, which can partly be attributed to climate change. Between 2004 and 2008, five major storm events caused damage and losses estimated at US$1.2 billion.

**Climate Projections**

A major portion of the impacts of climate change in Jamaica by 2050 will be manifested through an increase in climate variability and extreme weather events. Projections for climate variability include:

- a decrease in the length of the rainy season by 7-8 per cent
- an increase in the length of the dry season by 6-8 per cent
- a 20 per cent increase in the frequency of intense rains
- an increase in the frequency of more intense hurricanes.
Jamaica’s water resources are especially vulnerable to future changes and distribution of rainfall and the country is likely to experience increased water stress as a result of climate change. Agriculture is also likely to be impacted. Changes in water extremes (e.g., flooding and drought) are likely to have a negative effect on agricultural production. Also, sea water intrusion into groundwater (used for irrigation) and soil salinization will affect the agriculture industry.

Jamaica is party to the United Nations Framework Convention on Climate Change and the Kyoto Protocol. During 2010, climate change adaptation activities included the development of a number of programmes/projects to build climate resilience, namely:

- the Pilot Program for Climate Resilience (PPCR)
- the Climate Change Adaptation and Disaster Risk Reduction Project; and
- the Risk and Vulnerability Assessment Methodology Development Project (RiVAMP)

Of note is the Climate Change Adaptation and Disaster Risk Reduction Project which was finalized and approved in late 2010 and is being implemented at a cost of 4.8 million, over a 30-month period. The project aims to: rehabilitate watersheds and forested areas to reduce hillside degradation; rehabilitate coastal ecosystems to increase their resilience to natural hazards; and increase the capacity of Jamaicans at the local and national levels to address climate change through raising awareness.

In addition, the PIOJ was accredited a National Implementing Entity (NIE) under the Adaptation Fund by the Adaptation Fund Board (AFB). As an NIE, the PIOJ can access grants directly from the AFB to finance concrete climate adaptation projects instead of having to work through a multilateral agency (ESSJ, 2010).

5.1.2 Issues and Challenges - Environment

The country’s economy is heavily dependent on its natural resources and the quality of the natural environment. Although strides have been made in improving environmental management, challenges persist.

The main challenges include:

- Deforestation, water quality degradation and increased soil erosion due to poor management of watersheds and forestry reserves. Watershed management encompasses management of valuable environmental assets, including forestry reserves, parks and protected areas, centres of biodiversity, freshwater and groundwater resources, and coastal zones of great economic and ecological importance
- The pressures on the coastal zones include pollution, beach erosion, sand mining, and degradation of coral reefs
- Pressures on marine resources from unsustainable harvesting and inadequate fisheries management
- Jamaica’s biological resources are threatened by loss of habitat, over-harvesting and introduction of exotic species
- Freshwater resources are threatened by seawater intrusion of coastal aquifers, and contamination from agro-industry, sewage, and other sources
- Air quality is threatened by increased emission of pollutants from a range of sources
- Susceptibility to effects of disasters and climate change increased by human activities
- Urbanization: The need for urban management to address the rapid increase in the urban population in Jamaica and consequent problems such as squatting and loss of agricultural lands. The rapid urbanization of the population has far-reaching environmental implications. Urban centres are concentrated sources of pressures including pollution, habitat loss, and coastal degradation, and at the same time represent a concentration of human resources and economic opportunity
- Inadequate policy and institutional framework including the following:
  - Insufficient public sector capacity in monitoring, evaluation and enforcement
  - insufficient human and financial resources, cultural practices, and poor enforcement of existing legislation
  - Shortcomings in the policy-making process, including protracted time period and inadequate coordination of policy-making across ministries and agencies
  - Need to rationalize and complete local government reform
  - Need to implement modernization of the planning framework
  - a lack of time series data which hamper efforts to use quantitative indicators to spot emerging problems, assess policy options and gauge the effectiveness of environmental these programmes
- Lack of compliance with international commitments: Jamaica is presently signatory to many international environmental action plans and bi-lateral agreements/treaties including Agenda 21, the SIDS Programme of Action, Kyoto Protocol and the MDGs. These commitments place an increased burden on the management resources of the environment sector and require coordination of response, analysis of the full costs and benefits of these commitments, and greater public awareness of their consequences
- Poor management of solid, liquid and hazardous wastes
- Increasing incidence of fires
- Squatting
- Lack of support by citizenry and political directorate for sustainable development commitments.
## 6 Appendices

### 6.1 Appendix 1: MDG Progress Matrix for Jamaica

<table>
<thead>
<tr>
<th>Goal/Targets</th>
<th>Progress Dec 2007</th>
<th>Explanation</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Eradicate Poverty &amp; Hunger</td>
<td>Achieved</td>
<td>Reduced by two-thirds.</td>
<td>Causal factors include reduction in inflation, growth of informal sector, increase in real wages, and probably include remittances. Vulnerable to exogenous shocks. Likely to be unsustainable under global recession.</td>
</tr>
<tr>
<td>1a. Halve, between 1990 &amp; 2015, the proportion of people below the poverty line</td>
<td>Achieved</td>
<td>Proportion of underweight children &lt;5 yrs reduced by three-quarters. Proportion of food poor reduced by two-thirds.</td>
<td></td>
</tr>
<tr>
<td>1b. Halve, between 1990 &amp; 2015, the proportion of people who suffer from hunger</td>
<td>Achieved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Achieve Universal Primary Education</td>
<td>Achieved</td>
<td>Net enrolment over 90%. Gross enrolment almost 100%</td>
<td>Problem not access but quality of education, under-performance of boys, &amp; attendance problems connected with poverty. Quality of access for students with special needs or students in exceptional circumstances</td>
</tr>
<tr>
<td>2a. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling</td>
<td>Achieved</td>
<td>No gender disparity at primary level. Gender disparity begins at grade 6 in the primary completion rate and peaks at grade 9 of secondary levels as boys drop out. Males under-represented at tertiary level by 2:1. Low representation of women in Parliament (13%)</td>
<td>Problems include under-performance of boys, unemployment rate among women (over twice that of men), and cultural barriers affecting female participation in governance.</td>
</tr>
<tr>
<td>3. Promote Gender Equality and Empower Women</td>
<td>Lagging</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3a. Eliminate gender disparity in primary &amp; secondary education, preferably by 2005, &amp; to all levels of education no later than 2015</td>
<td>Lagging</td>
<td>Under-five mortality rate only reduced by 14% up to 2005. Infant mortality rate reduced by almost one-third.</td>
<td>Immunisation rates high. At Jamaica’s comparatively low mortality levels major resources needed to reach target. 70% of infant deaths occur in perinatal period. There are unresolved data management problems in this area.</td>
</tr>
<tr>
<td>4. Reduce Child Mortality</td>
<td>Far behind</td>
<td>Under-five mortality rate only reduced by 14% up to 2005. Infant mortality rate reduced by almost one-third.</td>
<td>Immunisation rates high. At Jamaica’s comparatively low mortality levels major resources needed to reach target. 70% of infant deaths occur in perinatal period. There are unresolved data management problems in this area.</td>
</tr>
<tr>
<td>4a. Reduce by two-thirds, between 1990 &amp; 2015, the under-five mortality rate</td>
<td>Far behind</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Improve maternal health</td>
<td>Far behind</td>
<td>Unresolved data management problems also exist in this area. Data available indicate a 20% reduction over 14 years. Close to universal access to antenatal care.</td>
<td>Deaths from direct causes halved over 10 yrs, but 83% increase in deaths from indirect causes e.g., HIV/AIDS, NCDs, unsafe abortions. 47% shortage in midwife cadre, lost to migration.</td>
</tr>
<tr>
<td>5a. Reduce by three-quarters, between 1990 &amp; 2015, the maternal mortality rate</td>
<td>Far behind</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5b. Achieve by 2015, universal access to reproductive health</td>
<td>On track</td>
<td>Only 10% unmet need for family planning.</td>
<td>Reproductive issue among young girls is forced sex.</td>
</tr>
<tr>
<td>6. Combat HIV/AIDS, Malaria and Other Diseases</td>
<td>On track</td>
<td>1st decline in AIDS deaths in 2005 and in AIDS cases in 2006.</td>
<td>Major reason for decline was access to antiretroviral treatment through Global Fund.</td>
</tr>
<tr>
<td>Goal/Targets</td>
<td>Progress Dec 2007</td>
<td>Explanation</td>
<td>Comment</td>
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<tr>
<td>6b. Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it</td>
<td>On track</td>
<td>Access to retroviral drugs jumped from &lt;5% in 2000 to 60% in 2008.</td>
<td></td>
</tr>
<tr>
<td>6c. Have halted by 2015 &amp; begun to reverse the incidence of malaria and other major diseases</td>
<td>On track</td>
<td>Local malaria outbreaks since 2006 swiftly contained, no deaths. TB incidence/deaths declining.</td>
<td>Malaria had been eliminated for many years but there were 186 imported cases in 2006, followed by local transmission in 2007. Poor sanitation in urban inner-city areas now cited for more recent local outbreaks in Kingston.</td>
</tr>
<tr>
<td>7. Ensure Environmental Sustainability</td>
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<tr>
<td>7a. Integrate principles of sustainable development into country policies &amp; programmes &amp; reverse the losses of environmental resources.</td>
<td>Lagging</td>
<td>Policy coherence &amp; long-term sustainable development planning has been lacking.</td>
<td>National Development Plan is an important step towards policy coherence/long-term integrated sustainable development.</td>
</tr>
<tr>
<td>7b. Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss</td>
<td>Lagging</td>
<td>Achieved elimination of ozone depleting substances; inadequate progress in protected areas; slippage in reduction of CO₂ emissions.</td>
<td>Reliance on, high use, and inefficient production of oil-based energy a major problem. Identified as a priority policy focus. Environmental data collection mechanisms a challenge.</td>
</tr>
<tr>
<td>7c. Halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation</td>
<td>On track</td>
<td>92% have access to safe drinking water, while 98.9% have access to basic sanitation.</td>
<td>Access to water has improved but challenge is sanitation issues e.g., management of solid waste and poor hygiene.</td>
</tr>
<tr>
<td>7d. By 2020 have achieved a significant improvement in the lives of at least 100 million slum dwellers</td>
<td>Slipping back</td>
<td>UN data suggests slippage. Insufficient data collected nationally.</td>
<td>Urban population has grown from 35% in 1991 to current 52%. Poor infrastructure a major problem. 1 000 units recently completed in public inner-city housing programme with social interventions. Social Investment Fund has new inner-city infrastructure projects.</td>
</tr>
</tbody>
</table>

Source: PIOJ in Collaboration with Ministry of Foreign Affairs & Foreign Trade
### 6.2 Appendix 2: Vision 2030 Jamaica Indicator Matrix

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Unit</th>
<th>Subgroup</th>
<th>2007 (Actual)</th>
<th>2008 (Actual)</th>
<th>2009 (Actual)</th>
<th>2010 (Actual)</th>
<th>2012 (Target)</th>
<th>2015 (Target)</th>
<th>2030 (Target)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal 1: Jamaicans are empowered to achieve their fullest potential</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>Outcome 1: A Healthy and Stable Population</strong></td>
<td></td>
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<td>Life expectancy at birth</td>
<td>Years</td>
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<td>Adult literacy rate (estimated)</td>
<td>Per cent</td>
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<td>Per cent</td>
<td>Male Target</td>
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<td>Adult literacy rate (estimated)</td>
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<td>Percentage of labour force that is certified</td>
<td>Per cent</td>
<td>Total 14+ yr</td>
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### Outcome 3: Effective social protection

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<td>Poverty headcount ratio</td>
<td>Per cent</td>
<td>Total</td>
<td>9.90</td>
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<td>% of children in quint. 1 receiving PATH benefits</td>
<td>Per cent</td>
<td>Total</td>
<td>65.80</td>
<td>69</td>
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<td>% of PATH beneficiaries in quintiles 1 and 2</td>
<td>Per cent</td>
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### Outcome 4: Authentic and transformational culture

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### Goal 2: The Jamaican society is secure, cohesive and just

#### Outcome 5: Security and Safety

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<th>2030 (Target)</th>
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<td>Crime rate</td>
<td>Per 100K pop.</td>
<td>Major Crimes</td>
<td>272.18</td>
<td>373.21</td>
<td>437.79</td>
<td>409.39</td>
<td>216</td>
<td>182</td>
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<td>Unit</td>
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<td>Murder rate</td>
<td>Per 100K pop.</td>
<td>Total</td>
<td>58.82</td>
<td>59.84</td>
<td>62.03</td>
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<td>Rate of breaking</td>
<td>Rate</td>
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<td>54.82</td>
<td>91.52</td>
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<td>Rate of rape and carnal abuse</td>
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<td>Total</td>
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<td>54.53</td>
<td>47.23</td>
<td>44.63</td>
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<td>13.32</td>
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<td>112.07</td>
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## Regulatory Quality

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<td>Case clearance rate</td>
<td>Percent</td>
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## Goal 3: Jamaica’s economy is prosperous

### Outcome 7: A Stable Macroeconomy

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<td>Nominal GDP per capita</td>
<td>US$</td>
<td>Total</td>
<td>4,802.28</td>
<td>5,152.69</td>
<td>4,542.12</td>
<td>4,978.81</td>
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<td>6,629</td>
<td>23,567</td>
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<td>Real GDP annual growth rate</td>
<td>Per cent</td>
<td>Total</td>
<td>1.43</td>
<td>-0.91</td>
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<td>-1.23</td>
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<td>Debt to GDP ratio (Fiscal Year)</td>
<td>Percent</td>
<td>Total</td>
<td>109.16</td>
<td>116.79</td>
<td>129.30</td>
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<td>Fiscal balance as a percentage of GDP (Fiscal Year)</td>
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<td>Total</td>
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<td>-10.87</td>
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<td>Annual inflation rate</td>
<td>Percent</td>
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<td>16.80</td>
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### Outcome 8: An Enabling Business Environment

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<td>% of total renewable fresh water resources produced</td>
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<td>Percentage of renewables in energy mix</td>
<td>Per cent</td>
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<td>Percentage share of global GDP based on PPP</td>
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<td>Growth rate of services (Financing and Real Estate)</td>
<td>Per cent</td>
<td>Total</td>
<td>3.26</td>
<td>1.23</td>
<td>0.37</td>
<td>-2.55</td>
<td>2.25</td>
<td>2.25</td>
<td>4.02</td>
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<tr>
<td>% change in foreign exchange earnings from tourism</td>
<td>Per cent</td>
<td>Total</td>
<td>2.11</td>
<td>3.42</td>
<td>-2.54</td>
<td>3.45</td>
<td>3.98</td>
<td>3.98</td>
<td>4.10</td>
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<tr>
<td>Travel and Tourism competitiveness index</td>
<td>Index</td>
<td>Country Rank</td>
<td>48</td>
<td>57</td>
<td>60</td>
<td>65</td>
<td>54</td>
<td>48</td>
<td>35</td>
</tr>
<tr>
<td>Travel and Tourism competitiveness index</td>
<td>Index</td>
<td>Country Score</td>
<td>4.41</td>
<td>4.18</td>
<td>4.13</td>
<td>4.12</td>
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</table>

**Goal 4: Jamaica has a healthy natural environment**

**Outcome 13: Sustainable Management and Use of Environmental and Natural Resources**

<p>| Environmental Performance Index | Index | Country Score | 79.10 | 58 | 80.10 | 82.20 | 85 |
| Environmental Performance Index | Index | Country Rank  | 54    | 89 |       |       |    |</p>
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Unit</th>
<th>2007 (Actual)</th>
<th>2008 (Actual)</th>
<th>2009 (Actual)</th>
<th>2010 (Actual)</th>
<th>2012 (Target)</th>
<th>2015 (Target)</th>
<th>2030 (Target)</th>
</tr>
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<tbody>
<tr>
<td><strong>Outcome 14: Hazard Risk Reduction and Adaptation to Climate</strong></td>
<td>Total</td>
<td>3.40</td>
<td>2</td>
<td>1.90</td>
<td>2.50</td>
<td>1.50</td>
<td>1.00</td>
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<td><strong>Hazard damage as a percentage of GDP</strong></td>
<td>Per cent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Outcome 15: Sustainable Urban and Rural Development</strong></td>
<td>Total</td>
<td>80.50</td>
<td>81.80</td>
<td>80.50</td>
<td>82.00</td>
<td>85.00</td>
<td>95.00</td>
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</tr>
<tr>
<td>Proportion of Households with access to secure tenure</td>
<td>Per cent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Housing Quality Index</td>
<td>Index</td>
<td>68.10</td>
<td>71.40</td>
<td>70.90</td>
<td>71.34</td>
<td>73.77</td>
<td>86.00</td>
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<tr>
<td>Poverty in rural areas</td>
<td>Per cent</td>
<td>15.30</td>
<td>17.00</td>
<td>22.50</td>
<td>16.80</td>
<td>14.50</td>
<td>12.00</td>
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</table>
7 References


Others (to be specified)

- State of the Environment Report
- Jamaica Second National Communication (SNC) to the UNFCCC
- Fiscal Responsibility Framework
- World Bank Development Prospects
- World Bank Doing Business Report
- Various Papers from SALISES
- IMF World Economic Outlook
- IDP Policy Loan Matrix