

Housing for Sugar Workers - Jamaica

Improvement Through Incremental Housing



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Shelter Situation Analysis - Jamaica

Basic General Data

Geography and Administration

Jamaica is an island state, located in the Caribbean Sea, approximately ninety (90) miles south of Cuba¹. Its total area is 10,991 sq km (*land*: 10,831 sq km and *water*: 160 sq km). The terrain is mostly mountainous, with narrow, discontinuous coastal plains. The coastline is approximately 1,022 km. The primary natural resources are bauxite, gypsum, and limestone. The climate is tropical; hot humid; with temperate interior. The primary natural hazard is hurricanes, especially July to November. The current environmental issues are: deforestation; coastal waters polluted by industrial waste, sewage, and oil spills; damage to coral reefs. The population is approximately 2.76 Million (with another 2.5 Million purported to be living abroad), with an annual growth rate of .08%, and life expectancy of 73 years. Approximately 60% of the population is between the ages of 15 – 64 (refer to Appendix 1 for other key Demography and Health Data).

¹ <https://www.cia.gov/cia/publications/factbook/geos/jm.html>

Jamaica has a constitutional parliamentary democracy, with administrative divisions in 14 parishes. The legal system is based on English Common Law. There are three branches of government: Executive branch (chief of state: Queen ELIZABETH II; head of government: Prime Minister); Legislative branch (Parliament: Senate and the House of Representatives); Judicial branch (Supreme Court and the Court of Appeal). There are two main political parties (Jamaica Labour Party –JLP; Peoples National Party – PNP).

Economy

The Services Sector accounts for more than 60% of Jamaica's GDP. Most of the foreign exchange emanates from tourism, remittances (directly related to the high number of Jamaicans living abroad), and bauxite/alumina². The economy faces serious long-term problems: high (but declining) interest rates, increased foreign competition, exchange rate instability, a sizable merchandise trade deficit, high unemployment and underemployment, and a high debt burden. The government faces the difficult prospect of having to achieve fiscal discipline in order to maintain debt repayments, while simultaneously attacking a serious and growing crime problem that is hampering economic growth (Appendix 2 provides key economic indicators).

Shelter Related Fact and Figures

Housing

The Housing Stock comprises 630,308 units (1999, NHT) with annual completions of 28,000 to satisfy current requirements³. The housing quality index indicates that 66% of households live in suitable houses and land tenure is at 58% - predominantly formal tenure (refer to Appendix 3 for other key data on shelter).

Basic Services/Infrastructure

Approximately 74% of the population has access to basic services (refer to Appendix 4 for details)

² <https://www.cia.gov/cia/publications/factbook/geos/jm.html>

³ Source: PIOJ, *Jamaica Survey of Living Conditions (2004)*; NHT: *On Housing -2: "Estimating the National Housing Needs, 1997" (1999)*

Education

Expenditure on education has averaged 5.34% of the national budget (budget years: 1995, 2000, and 2004). This appears to be inadequate if the country is to grow its human capital to facilitate meaningful economic development within the medium term. The private sector enrolment is less than 10% for primary and secondary levels, but gross enrolments at all levels are very high (refer to Appendix 5 for more detail).

Monthly Household Expenditure

Mortgages (\$12.34) and water (\$.95) represent the parameters of the mean monthly expenditure by household. However, these may be understated by a substantial number of households who are either informal/illegal settlers on lands belonging to others, and/or steal the services (refer to Appendix 6 for more details).

Housing Policy

It is my understanding, from the research conducted, that there is no existing housing policy and that housing development has been largely guided by the National Shelter Sector Strategy 1986 (under the Housing Ministry). Noteworthy, is that the Minister of Housing, Transport, Water and Works, in an address at the opening of the Caribbean Association of Housing Finance Institutions conference in May 2006, outlined the government of Jamaica proposed National Housing Policy as⁴: “To facilitate better utilization of resources in the public and private sectors, so as to satisfy the demand for housing in a coordinated and economical manner.

Improvements to the legislative framework for housing; increased joint venture partnerships; squatter regularization; providing security of tenure through divestment and titling programmes; increased collaboration between housing and approval agencies; and the reactivation of the secondary mortgage market.”

Actors in Shelter Delivery and their Roles

The following is a tale of the major players and their roles in the shelter delivery process in Jamaica:

Table 1: Actors in the Shelter Delivery Process

ACTORS	ROLES
Government (central and local)	The government is responsible for establishing, maintaining, monitoring and providing support for the country's housing policy, procedures and guidelines. Eg. legislations & regulations, economic & financial support, facilitating easy access to security of tenure, labour, etc.
Developers (Private & Public)	Developers undertake the design and construction of housing solutions, primarily to residents on a "For Profit" basis. The government institutions (such as the NHT and the National Housing Development Corporation) primary focus is on the low-income earners, while the private sector focuses on the middle to upper-income earners.
Approval agencies and other service providers	The related government agencies and other service providers are responsible for the review of development plans, implementation monitoring and the takeover and maintenance of the infrastructure services. The objectives are to ensure conformance with the requirements/guidelines for sustainable development while improving the quality of life (Appendix 7 details the major players and their roles in shelter delivery process).
Financial Institutions (construction, mortgage and insurance)	<ul style="list-style-type: none"> • Loans for construction (housing estates and individual units). • Loans for the purchase of completed houses and serviced lots. • They are saving institutions, primarily for housing purchases (Private institution loans are market based, while public institutions (such as the NHT) provide loans marginally below market, but with criteria that are geared for the lower-income market. They provide lines of credit, insurances and security guarantees for construction contractors to undertake works).
Construction Contractors and Design Consultants	Provide technical and physical support to developers and government on a "For Profit" basis. They undertake services for the design (including agency approvals and construction monitoring) and the construction of subdivisions. They also perform roles as housing estate developers.
Non-Government Organizations (NGO) and Community Based Organizations	(CBO) - Focus on the low-income segments of the housing market and self-help projects. The principal NGO operating in Jamaica are Food For the Poor and Jamaica Social Development Fund (JSIF). They construct the superstructures for Timber Units on plots, except for the sanitary facilities. CBOs include Provident Societies which are formed around "Brown-Field" developments, for which the requirements are primarily the installation of civil infrastructures. JSIF obtains funds and grants from international donor agencies to undertake works on civil infrastructure and the general improvement of settlement conditions in rural areas.
Real Estate Agencies, Valuator, and Lawyers	The mostly provide technical support to most players in the housing sector on a 'For Profit' basis.

⁴ <http://www.jis.gov.jm>

Shelter Design

Based on my informal research, it is my understanding that since the late 1960, shelter design for low-income housing has been based on the pattern of increased urbanization (migration to the capital city of Kingston) with the practice of densification. Designs such as Sites and Services, multi-storey and prefabricated buildings, have since been in Kingston and adjoining St. Andrew, which have the largest Plains in the Island, the Liguanea Plains. This pattern is now a main feature in parish capitals and major towns. The following are the main characteristics which impacts shelter designs:

Land Use

The land use distribution is: Arable land: 15.83%; Permanent crops: 10%; other: 74.16%⁵.

Population Density

The population density is 245 people per sq. km.

Safety

There are building inspectors in each municipality with training in building and in construction. However, the capacities and capabilities of the human resources, will have to be augmented to ensure that building plans can be properly reviewed and construction monitored in accordance with the requirements.

Social Inclusion and Gender Issues

Women have been playing a greater role in the society. In the administration prior to the general elections of September 3, 2007, 11.7% of parliamentary seats were held by women, and the first woman Prime Minister. There has been a substantial reversal in the ratio of Male to Female in tertiary school enrolment (a mean of 19% and 26.3% of the population of males and females respectively). Pupil-teacher ratio at the primary level is 1 to 28, but 1 to 35 would be a better representation of the reality. The female/male adult (age 15 and above) literacy rates are 85.9%/74.1%.

⁵ <https://www.cia.gov/cia/publications/factbook/geos/jm.html>; PIOJ, *Jamaica Survey of Living Conditions* (2004); NHT: *On Housing -2: "Estimating the National Housing Needs, 1997"* (1999); Worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0

Primary school enrolments for female/male are indicated at 91.1%/90.2%, but a high proportion are entering secondary schools functionally illiterate.

Norms & Codes

Jamaica National Building code were drafted and distributed for comment in 1984 -- not adopted. A revised Code has been drafted and is being discussed. By-laws for guiding housing development and buildings are in each municipality.

The National Housing Trust (NHT)

The NHT was established in 1976 to address the housing shortage which resulted from a growing population and the inadequate annual output of houses. The need was for a financial institution that could mobilise additional funds for housing and ensure that those funds are available to more Jamaican families at rates below the traditional markets rates. The NHT was entrusted with the mission of increasing and enhancing the quality of the existing housing stock, as well as providing financial assistance to the neediest contributors wishing to purchase, build, maintain or upgrade their homes (loans). Other aspects of the mandate included the generation of funding for the housing construction sector, the promotion of improved building systems and greater efficiency within the industry. 2% of the gross wages of workers (refundable after the seventh year after deduction) and 3% of employers' wage bills are channelled into the NHT. In addition, self-employed individuals are required to contribute 3% of gross emoluments. In 2003, the NHT managed assets in excess of J\$54 billion. In the first ten years, the NHT allocated some 20,000-mortgage loans, thereby providing housing for an estimated 100,000 persons in all strata of the society. There are now more than 100,000 mortgages in its portfolio and just under half of these were approved in the last five years. The NHT now provides approximately 10,000 housing solutions annually through facilities such as mortgage loans, construction finance, and housing estate developments.

Studies undertaken in the 1970's indicated that 23,000 new housing units were required annually over a ten-year period to satisfy the existing need. However, the backlog remains substantial because of the insufficient capacity of the housing sector

and the inefficient beauracracy. Accordingly to the Planning Institute of Jamaica, housing completions for 2001-2005 amounted to 22,724⁶.

Housing for Sugar Workers

The Sugar Industry was the backbone of the Jamaican economy for more than 2 1/2 centuries. Unfortunately, the industry has suffered gross inefficiency because of the lack of reequipping and retooling over many decades. Consequently, the industry has not been able to compete in the global market (even with guaranteed preferential prices from the European Union). The situation has become more abysmal because of the removal of the preferential prices.

In January 2000, the Prime Minister of Jamaica (the NHT's Portfolio Minister), the three (3) Trade Unions (representing the workers), and the Sugar Producers Federation (representing the nine (9) Sugar Estate) signed a Memorandum of Understanding (MoU) to supplement salary increases due to the workers (because of the Federation's inability to pay). This committed the NHT to the development of approximately 5,000 housing solutions within five years (at least 90% to be completed units). It is anticipated that the total development cost of the Programme will be approximately J\$6 Billion (J\$ 65 to US\$1). As at March 15, 2007:

- 1 1,892 serviced lots completed at a total cost of US\$13.8 Million (see Appendix 8).
- 2 25 housing units completed at a total cost of US\$515,000.
- 3 Approximately 830 One-Bedroom units are to be constructed at an estimated cost of US\$19.3 Million (see Appendix 9).
- 4 1,062 units are to be constructed by the lot owners using the NHT's construction loan (and subsidy, where applicable) at an estimated cost of US\$25.7 Million.
- 5 The construction of 819 serviced lots at an estimated cost of US\$7.2 Million are to be completed in 2008 (see Appendix 10).

The main challenges hampering the programme include:

- 1 Unsecured project loans due to the unavailability of unencumbered registered Land Titles.

⁶ http://www.smartech.gatech.edu/bitstream/1853/13950/1/williams_grace_d_200612_mast.pdf

- 2 The late commitment and/or unavailability of suitable lands.
- 3 The physical characteristics of the lands offered by the Estates (most of which were previously cane lands).
- 4 The remunerations of workers were among the lowest in the country, and this affects effective demand for the desired housing units.
- 5 The vast majority of workers are formally employed for 6-8 months (planting and reaping periods).
- 6 The Trade Unions and workers expectations are for immensely subsidized (free) houses.
- 7 The exorbitant time associated with the housing estate approval process (including initial enquiries on agencies requirements, permits, licenses, subdivisions and designs approvals).
- 8 The inadequate capacity of construction industry (design consultants and construction contractors).
- 9 Delays in the approvals of change of land use from agricultural to residential.
- 10 The Manual for Developments, Parish Development Orders, and other planning guidelines are outdated.
- 11 The varying conditions of approvals and By-laws of the municipalities allow each authority to set arbitrary conditions for approvals.
- 12 The inadequate monitoring of the works by the agencies during construction to ensure compliance with designs specifications and acceptable construction methodologies.
- 13 The lack of supporting infrastructure (such as potable water supply and sewage collection & treatment systems, access roads, storm-water drainage) poses significant challenges to the viability of projects. This is particularly so where the project absorbs all the related cost, even though the benefits are not project specific, but serves national development.

Strengths Weaknesses Opportunities Threats (SWOT): Table 2 outlines the SWOT of the NHT that is done to determine the NHT's capability and capacity to address the aforementioned challenges:

Table 2: The NHT's SWOT

<p><u>STRENGTHS</u></p> <p>Organizational:</p> <ul style="list-style-type: none"> ▪ Effective Project Management ▪ The effectiveness of internal controls. ▪ Good knowledge management and expertise in the housing development processes. <p>Financial:</p> <ul style="list-style-type: none"> ▪ Availability of resources to sustain viable projects. <p>Human Resource:</p> <ul style="list-style-type: none"> ▪ The multi-disciplinary collection of knowledge (including: project management, research, financial and social expertise). ▪ High level of trust. ▪ Dedicated staff. <p>Reputational:</p> <ul style="list-style-type: none"> ▪ A track record of delivering on commitments. ▪ The respect gained from several government agencies, consulting firms and other institutions for the professional approach to business. ▪ Good community relations <p>Institutional-based view:</p> <ul style="list-style-type: none"> ▪ The culture of collectivism – the workers identify themselves with the organization, hence the NHT's targets takes priority over individual achievement. ▪ Good recruitment practices. 	<p><u>WEAKNESSES</u></p> <p>Technological:</p> <ul style="list-style-type: none"> ▪ The NHT's technologies are substantially confined to its core business. <p>Institutional-based view:</p> <ul style="list-style-type: none"> ▪ Inadequate monitoring of construction. ▪ Inadequate differentiation in the pricing of housing solutions. ▪ Inadequate coordination across operating divisions. ▪ Inadequate use of internal communication mechanisms. ▪ Inadequate policies and procedures. ▪ Slow processing times. ▪ Ineffective leadership in areas. ▪ There is a high level of uncertainty avoidance.
<p><u>OPPORTUNITIES</u></p> <p>Industry-based (Housing Development) perspective:</p> <ul style="list-style-type: none"> ▪ By far the dominated player in the industry. ▪ The other developers are relatively small and similar in size & offerings. ▪ The Housing development sector is a high growth industry. ▪ The large number of ready buyers of the housing solutions. ▪ Our housing solutions provide value (cost savings and quality of life enhancement). ▪ Construction contractors and consultants are unlikely to vertically integrate backwards because of high capital and financial costs. ▪ The ability to outsource to overseas contractors, consultants, and material suppliers. ▪ The undifferentiated products/services provided by contractors, suppliers of raw material and consultants. ▪ The NHT is important to these suppliers because other local developers are not as liquid. ▪ The capital costs and risks of vertically integrating forward are very high for contractors, consultants, and material suppliers. ▪ Relatively low cost of funds. ▪ Competitive staff compensation. <p>Institutional conditions and transitions:</p> <ul style="list-style-type: none"> ▪ The NHT reports to the Office of the Prime Minister and can therefore leverage the municipalities and other agencies in terms of timely approvals and responses. 	<p><u>THREATS</u></p> <ul style="list-style-type: none"> ▪ The high level of crime and violence. ▪ Spontaneous Political directives for social interventions. ▪ The ineffectiveness of the regulatory frameworks (municipalities and agencies). ▪ The culture of extortion. ▪ The high and increasing levels of squatter settlements. ▪ The relatively low level of GDP Per Capita. ▪ Unreliable data from both private and public entities. ▪ Increasing construction costs influenced by international conditions. ▪ Target groups might not be able to optimise the use of technological solutions. ▪ Low product differentiation. ▪ Inadequate physical and social infrastructures. ▪ The low capacities of the players in the industry to facilitate large-scale growth.

Options

The following options were considered to address general challenges encountered in the construction industry and particularly, the Sugar Housing Programme. The intention is to address all, or any combinations, of the challenges within 3 years:

1. Incremental housing.
2. Improving the efficiency and effectiveness of the municipalities.
3. Improving the capacity and capability of the construction industry.

The details of these options are:

- Incremental housing - The objective is for a three-pronged approach to address the issue of shelter access for the workers very low incomes:
 - Agreement of key stakeholders to the process of incremental housing.
 - Capacity building and empowerment of the workers through training and micro-financing for small businesses (to facilitate more effective participation/contribution to the construction of their units).
 - Providing additional subsidy from international sources through grants or other forms of aid.
- Improving the efficiency and effectiveness of the municipalities and other approval agencies. The objective is to transform their roles and functions in providing timely services by:
 - Obtaining the requisite funding from the government, the private sector, and international source(s) to facilitate the preparation of comprehensive development plans for the country, local development orders & other planning guidelines, and for human resource development.
 - Establishing mutually beneficial relationships between tertiary institutions and the municipalities (students could be trained and mentored through various forms of employment at Municipalities).
 - Guaranteeing a reliable source of funds through mechanisms such as a fixed percentage of taxes that are collected within the municipalities.
 - Enabling the municipalities to charge fees that are aligned to the services provided.
 - Restructuring the relationships and responsibilities between central and local governments to ensure clarity.

- Improving the capacity and capability of the construction industry (consultants and contractors). The objective is for the industry to be able to optimise on opportunities, not only in Jamaica, but the entire English-speaking Caribbean. This can be approached by:
 - The establishment of local joint-ventures and the formation of alliances with regional counterparts.
 - Re-engineering the process by which government works (designs and construction) are put to international tender.
 - A significant increase in the funding and scholarships in the technical (construction related) areas.
 - Tax incentives to the construction industry in relation to the importation of material and equipment.

The criteria for the selection of the option to be pursued are:

1. Benefits can be derived within 3 years.
2. Not costly for the NHT to implement.
3. Within the control of the NHT.

From the table below, the option selected is the process of Incremental Housing because it satisfied all of the selection criteria, as outlined in the table below.

Options	Challenges	Criteria satisfied
Incremental housing	4, 5, 6, & 10	1, 2, & 3
Improving the capabilities of the municipalities	4, 6, 7, 9, 10, 11, 12, & 13	1
Improving the capacities of contractors and consultants	1, 3, 4, 6, 7, 8, 9, 10, & 12	1

In addition, the option selected was influenced by the process of incremental housing that was successfully pursued in Costa Rica in the FUPROVI project⁷. This was influenced by the similarities of the roles and characteristics of the two (2) primary stakeholders in both projects, as outlined below:

1. The community:
 - 1.1 They constituted low-income workers.

⁷ Building Issues 1996, organized Small-scale Self-help Housing

- 1.2 The average nuclear family comprises five members.
 - 1.3 They were organized into groups.
 - 1.4 They were primarily from spontaneous settlements.
 - 1.5 Organized “self-help” is a major component of the projects.
2. The Government and Local Authorities play critical roles in the success of the projects:
 - 2.1 The main services were designed and build using substantial governmental subsidies.
 - 2.2 The designs were required to be in accordance with the requirements of the Local Authorities.
 - 2.3 The services were sold and maintained by government agencies.
 3. International funding through grants and aids is to form the basis for the incremental housing component.

Proposal for Incremental Housing

This proposal is supported by the NHT’s commitment to provide subsidies for serviced lots and housing construction towards the construction of a One-bedroom unit, which includes: bedroom, living dining & kitchen, bathroom, patio (see Appendix 11) at an estimated total cost of US\$88.23 Million (with a subsidy of US\$29.4 M.). It includes establishing a component for capacity building and empowerment of the workers through training and micro-financing for small businesses to facilitate more effective participation/contribution of the workers to the housing construction process. The process includes:

- A detailed review of organized self-help housing programmes (such as FUPROVI in Costa Rica) to determine the lessons learnt (best and worse practices).
- Identifying the key stakeholders, outlining the structure of the proposal and obtaining agreement on the process of incremental housing.
- The establishment of a threshold for the category of low-income workers.

- Undertaking surveys to determine the workers which falls within the category, their employment capabilities & needs, and the demographics of the families.
- Determine the cost estimates for providing housing solutions, training and micro-financing to support small business for these workers.
- Establishing the mechanisms through which the project should be funded (i.e. sweat equity, international funding through grants, micro-financing (revolving funds) or other forms of aid, micro-financing, workers equity).
- Preparing project plans for the implementation of the programme.

Objectives

- Short-Term – 6 months
 - To obtain agreement on the roles of the key stakeholders to the process of incremental (self-help) housing:
 - NHT – Facilitator (planning, advice, coordinating, training, etc.).
 - Workers – Enhancers (reducing construction costs through the effective participation of individuals, households and community).
 - SPF and Trade Unions – Leaders (soliciting financial assistance (grants and revolving loan funds) from international institutions such as SIDA to facilitate improvement in the socio-economic status of the workers).
 - NGOs – Fund Managers (managing the Micro-Financing Process).
 - To agree on the workers to be targeted for the project.
 - To establish a Steering Committee of the key stakeholders.
 - To solicit the assistance of at least one international institution for funding.
- Long-Term – 3 years
 - To satisfy the housing needs of low-income sugar workers through mutual help and personal effort.
 - To establish a frameworks for the organization of domestic and international resources to enhance community development and empowerment for low-income workers.

Action Plan

The following is a summary of the activities to implement the programme:

- The evaluation of lessons learnt from related activities:
 - Research materials on related experiences – May 10 to May 17.
 - Document lessons learnt to in relation to time, costs, and constraints – May 19 to May 21.
 - Evaluate lessons learnt May 23.
- Prepare the Project Plan (resource required, activity schedule, budget, and risk plan, etc.) and distribute to stakeholders – December 3 to December 8.
- Determine the resources required from each stakeholder – December 10.
- Meet with the stakeholders to get ‘buy-in’ – December 12 to December 17.
- Evaluate to determine resource gaps and option to fill gaps – January 19 to January 23.
- Get stakeholders’ commitments (in writing) including resources to fill gaps – January 5 – January 10.
- Implement project:

○ Stakeholders meeting to agree objectives, roles & responsibilities, and meeting schedule – October 7.

○ Prepare and distribute Implement Plan – October 20 to October 25.

○ Undertake quarterly project evaluation and report to stakeholders– Commencing February 10, 2008.

References

Websites:

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- Ref. 4 http://www.jis.gov.jmm/water_housing/html/2006
- Ref. 5 <http://www.nht.gov.jm>
- Ref. 6 http://www.smartech.gatech.edu/bitstream/1853/13950/1/williams_grace_d_200612_mast.pdf.pdf
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National Publications Reports

- Ref. 1 National Housing Trust (1999): On Housing -2: “Estimating the National Housing Needs, 1997”
- Ref. 2 Jamaica Survey of Living Conditions (2004, Planning Institute of Jamaica)

Report

- Ref. 1 Building Issues 1996, organized Small-scale Self-help Housing
Astrand J, Rodriquez M

Appendices

Appendix 1

Demography and Health Data Table 3

Factor	Particulars	Factor	Particulars	Factor	Particulars
Population	2,758,124	Median age	23 years (male: 22.4 years female: 23.5 years)	Population growth rate	0.8%
Fertility rate	2.41 children born/woman	Birth and death rates	20.82 births/1,000 population 6.52 deaths/1,000 population	Net migration	6.27 migrant(s)/1,000 population
Sex ratio	0.98 male(s)/female	Infant mortality	15.98 deaths/1,000 live births	Life expectancy at birth	73.24 years (male: 71.54 years and female: 75.03 years)
Age structure	0-14 years: 33.1% 15-64 years: 59.6% 65 years and over: 7.3%	Ethnic groups	Black 90.9%, East Indian 1.3%, white 0.2%, Chinese 0.2%, mixed 7.3%,	Religious denominations	Protestant 61.3%; Roman Catholic 4%; other including some spiritual cults 34.7%.

Source: <https://www.cia.gov/cia/publications/factbook/geos/jm.html>

Appendix 2

Economic Data Table 4

Factor	Particulars	Factor	Particulars	Factor	Particulars
GDP (PPP)	\$12.71 billion	GDP - per capita (PPP)	\$4,600	Debt – external	\$7.384 billion
GDP - real growth rate	2.7%	GDP - composition by sector	Agriculture: 5.2%; industry: 27.3%; services: 67.5%	Labor force by occupation Value	Agriculture: 18.1%; industry: 17.3%; services: 64.6%.
Labor force	1.1 million	Public debt	133.3% of GDP	Budget (billion)	Revenues - \$2.85 expenditures - \$3.174
Unemployment rate	11.3%.	Population below poverty line	14.8%	Exchange rates	Jamaican dollars per US dollar - 65.768
Inflation rate (consumer prices)	5.8%	Budget (billion)	Revenues - \$2.85 expenditures - \$3.174	Public debt	133.3% of GDP

Source: <https://www.cia.gov/cia/publications/factbook/geos/jm.html>

Appendix 3

Access to Shelter Data – Table 5

Factor	Particulars	Factor	Particulars	Factor	Particulars
Housing stock (1999, NHT)	630,308	Occupancy (i.e. 1-1.01 persons per living space)	48.7% of households	Housing Quality Index	66.0% of households
Housing deficit –quantitative (1997, NHT)	28,503	Yearly % increase in the # of dwelling units	Na	Housing (starts)	Na
Housing deficit (qualitative)	583,256	Floor area per person		Building materials (outer walls)	Concrete Blocks & Steel (64%)
Tenure of households (2004, JSLC)		Rental – formal (2004, JSLC)	22.5% of households	House price to income ratio	Na
Ownership (formal)	56.9%	Rental (informal)	Na	Land (formal)	Na
Ownership (informal)	1.2%	Housing affordability ratio	Na	Land (informal)	Na
House price to income ratio	Na				

Sources: 1999 NHT; 2004 JSLC;

Appendix 4

Access to and cost of Basic Services/Infrastructure Table 6

Amenities	Electricity	Piped Water	Water Closet
% Distribution	89.0	68.2	63.8

Appendix 5

Real mean Monthly Household Expenditure 2004 (J\$) – Table 7

Amenities	Water	Electricity	Telephone	Mortgage	Rent
Mean Monthly Cost	63.00	123.00	143.00	827.00	382.00

Appendix 6

Access to and cost of Education - Table 8

Factor	Particulars	Factor	Particulars
Gross enrolment ratio (2004)	<ul style="list-style-type: none"> ▪ Primary – 95.3% ▪ Secondary – 88.1% ▪ Tertiary – 19% 	Public expenditure on education as a percentage of GDP	<ul style="list-style-type: none"> ▪ 1995 – 5.1% ▪ 2000 – 6.1% ▪ 2004 – 4.9%
Ration of pupils to teacher	<ul style="list-style-type: none"> ▪ Primary – 27.5 ▪ Secondary – 19.1 	Private Sector enrolment share (2004)	<ul style="list-style-type: none"> ▪ Primary level – 8% ▪ Secondary level – 5.8%

Appendix 7

Agency/Service Provider	Roles
National Environmental & Planning Agency	Protection of specified species of fauna; protection of watersheds and areas adjoining watersheds and promote the conservation of water resources; proper management of Jamaica's coastal and marine resources; management, conservation and protection of the natural resources; Land Development and Utilization; Town and Country Planning
National Water Commission	A statutory organisation charged with the responsibility of providing potable water and wastewater services for the people of Jamaica
Organization Disaster Preparedness & Emergency Management	Initiate measures to support disaster risk reduction: water sector policy, flood forecasting and risk mapping, flood management control plan, inclusion of hazard assessment in environmental impact assessments (hazard maps do not exist for the entire country).
Mines & Geology	Exercise general supervision over all prospecting, mining and quarrying operations throughout the island.
Environmental Health Unit (Ministry of Health)	A division of the Ministry of Health. Reviews all development plans with specific emphasis on potable water supply and wastewater treatment and disposal.
Parish Councils (14)	
National Works Agency	To plan, build and maintain a reliable safe and an efficient main road network and flood control systems;
National Lands Agency	Land Titling; optimise the use of government owned lands; the maintenance of a basis infrastructure to build a modern spatial information system to support sustainable development.
Parish Councils	Review all development plans and establishes conditions of approvals for housing estate developments, and approves building plans.
Rural Physical Planning Unit	A division of the ministry of Agriculture. Reviews development plans for land usage.
Water Resource Authority	Reviews development plans for: the level of sewage treatment required; flooding vulnerability; potential source of water supply.
Jamaica Bauxite Institute	Review development applications in the 5 bauxite-producing parishes in relation to proximity to bauxite reserve.
Jamaica Public Service	Reviews application and designs for electricity distribution infrastructure, and undertake construction on payment of the requisite deposits.

Appendix 8

Project	No. Solutions	Completion	Delivery
Bellrock	19	March 2001	March 2001
New Yarmouth	79	March 2003	March 2003
Monymusk	587	March 2004	March 2004
Appleton	140	November 2004	April 2005
Frome	665	March 2005	April 2005
Bernard Lodge	402	February 2006	March 2006
Total	1892		

Appendix 9

Project	No. Solutions	Pre-Construction Schedules	Delivery Schedules
Frome	250	December 2006 – April 2007	December 2007 – August 2008
Appleton	70	February 2007 – June 2007	February 2008 – September 2008
Monymusk	320	January 2007 – May 2007	December 2007 – December 2008
New Yarmouth	30	October 2006 – March 2007	October 2007 – May 2008
Bernard Lodge	160	October 2006 – March 2007	October 2007 – August 2008
Total	830		

Appendix 10

Project	Title Committed	No. Solutions	Status	Projected Completion
Long Pond	Nov. 2001	399	Tender / Approval	December 2008
Hampden	Jan. 2003	271	Design in progress	October 2008
Stokes Hall	Nov. 2003	149	Design in progress	June 2008
Total		819		

APPENDIX 11

