

# **Barbados Population Policy**

**Barbados Population Commission**

**Revised 1 February 2024**

## Table of Contents

Acknowledgements.....	4
Executive Summary.....	5
Introduction .....	11
Barbados Development Context .....	14
Overview of the Population Dynamics.....	16
The Population Dilemma.....	27
The Role and Vision of the Barbados Population Policy.....	27
Overarching Population Policy Objective.....	30
Policy Goal 1: Ensure a Population Size Sufficient to Sustain Adequate Levels of Social Care, Productivity, Labour Force Participation and Revenue for Inclusive and Sustainable Development.....	31
Sub-goal 1.1 Increase the Population of Persons of Working Age.....	34
Sub-Goal 1. 2: Enhance Family Wellbeing to Support Reproductive Decision Making.....	38
Policy Goal 2: Provide Barbadians and Non-Nationals Now and in the Future with Opportunities for Personal Development.....	41
<i>Sub-goal 2.1: Promote and Strengthen the Care Economy</i> .....	41
Sub-goal 2.2: Expand Access to Quality Health Care and Wellness Service Interventions .....	43
Sub-goal 2.3: Improve the Capacity and Proficiency of the Labour Force with Access to Expanded Economic Opportunities.....	44
Policy Goal 3: Promote Integrated Settlement Development and Safeguard the Ecological Balance .....	48
Sub-goal 3.1: Reconcile Population Redistribution, Land Use and Settlement Patterns .....	48
Sub-goal 3.2: Ensure the Efficient Management of Natural Resources and the Environment .....	49
Sub-goal 3.3: Strengthen Collective Resilience to the Impacts of a Changing Climate.....	51
Implementation Framework .....	54
Conclusion .....	55
Population Policy Goals and Action Plan.....	57
Appendix 1: Derivation of Population Size 2021 Census.....	74
Appendix 2: Population projections 2020-2050 based on the maintenance of a replacement rate since 1980.....	75

Appendix 3: An Examination of the Population Density and Gross Domestic Product per capita .....	76
Appendix 4: Technical Note on the potential relationship impact of population growth on economic growth .....	79
Appendix 5: Potential Impact OECD Policy (Global minimum tax rate) on ability to make Tax/ fiscal Policy .....	88
Appendix 6: Consultations .....	89

Figures

Figure 1 Barbados Population Growth Rate- Census Year .....	16
Figure 2: Total Fertility Rates 1960-2017, Barbados .....	18
Figure 3: Live Births and Deaths- 1950 to 2020 .....	19
Figure 4: Age Dependency Ratio in Barbados 1960 to 2021 .....	20
Figure 5: Barbados Population Pyramid, 2010 .....	21
Figure 6: Barbados Population Pyramid, 2021 .....	22
Figure 7: Projected Barbados Population Pyramid, 2040.....	22
Figure 8: Projected Dependency Ratios in Barbados, 2020 to 2050 .....	27

## **Acknowledgements**

The preparation of the draft Population Policy was led by the Barbados Population Commission established in January 2019. Members of the Commission are:

Dr. Yolanda Alleyne  
Ms. Wainelle Alleyne-Jones (Deputy Chair)  
Ms. Paula Byer  
Ms. Roberta Clarke (Chair)  
Dr. Jonathan Lashley  
Dr. Madhuvanti M. Murphy  
Mr. Pierce Rudder  
Mr. Delano A Scantlebury  
Mrs. Janelle Scantlebury-Mounsey  
Mr. Jehroum Wood

In its work, the Commission has been supported by the Economic Affairs and Investment Division of the Ministry of Finance, Economic Affairs and Investment and by Ms. Wynelle Savory, Mr. Patrick McCaskie and Ms. Carolyn Waithe. The Commission had the guidance of Dr. Godfrey St. Bernard, Demographer of Sir Arthur Lewis Institute for Social and Economic Studies (SALISES), University of the West Indies.

The Commission thanks UNFPA for its support and input into the Population Situation Analysis and the draft Population Policy.

The Commission also appreciates the guidance received from representatives of the public sector and social partners and the public at a series of consultations convened between August 2020 and April 2023.

## **Executive Summary**

Barbados has amongst the lowest population growth rates in CARICOM. The total population has grown by just 16.5% in the last 60 years. Since 1960, birth and fertility rates have consistently fallen, and fertility rates have remained below replacement since 1980. Offsetting this decline has been only a modest rise in immigration levels alongside a decline in outward migration of Barbadians. This combination of factors has resulted an aging population structure. Based on birth, death and migration rates, actual population decline was expected to be evident in the 2030s.

However, inconsistent with these projections, the 2021 Population Census estimates show for the first time since 1960, an actual population decline. There are approximately 10,000 fewer persons residing in Barbados in 2021 than there was in 2010.

An aging population, without any intervention will result in consequential decreases in the workforce, increases in the care responsibility by a minority for the majority of the population; declines in government revenues as the employment related tax-base contracts and a likely decline in economic, social and cultural dynamism.

Over the next 30 years, the dependency ratio will grow to nearly two dependents per person of working-age, placing strains on families and social care and security systems. Care of the elderly is expected to nearly double in its demand of financing from just under 20 percent of total health expenditure to nearly 40 percent. The social and economic costs of an ageing society with a preponderance of retired persons are broad, complex and conditional on responses.

The current population structure is the unintended result of improvements in socio-economic conditions and the realization of human rights. With greater access to quality education, labour force opportunities and health care, including sexual and reproductive services, Barbados has seen a steady decline in birth and death rates in the post-independence period.

This population decline presents a challenge to Barbados maintaining and advancing its social and economic and achievements. On the other hand, controlling the size of the population has the benefits of reducing the human footprint on the environment including through reduction in waste, demand for scarce water and maintaining a level of green spaces needed for sustaining ecological management.

To achieve its vision of a Barbados that is modern, socially just, innovative and productive, the Government of Barbados, looking forward, seeks to respond to the negative consequences of population decline while maintaining the positive aspects related to availability of green spaces and ecological balance.

This Population Policy, an instrument of planning for the future, affirms the aspirations for social

justice, sustainable and inclusive development. Its overarching purpose is:

**“To promote sustainable and inclusive development and good quality of life for Barbadians and residents *without compromising environmental sustainability and the ability of future generations to meet their needs.*”**

It outlines three inter-related policy goals. The first, which is a demographic, proposes short- and long-term approaches to ensuring and maintaining a population structure to ensure adequate levels of care and economic and social vibrancy; the second speaks to human security for all present and future generations; and the third goal addresses the management of interactions between people and the environment to secure the ecological balance now and for future generations.

This objective can be realized through the pursuit of demographic and non-demographic goals as follows:

<p>Policy Goal 1: Ensure a Population Size Sufficient to Grow and Sustain Adequate Levels of Social Care, Productivity, Labour Force Participation and Revenue for Inclusive Development</p>	<p>Policy Goal 2: Provide Barbadians and Non-Nationals Now and in the Future with Opportunities for Personal Development</p>	<p>Policy Goal 3: Promote Integrated, Settlement Development and Safeguard the Ecological Balance.</p>
<ul style="list-style-type: none"><li>• Sub-Goal 1.1: Increase the population of persons of working age.</li><li>• Sub-Goal 1.2: Enhance Family Wellbeing to Support Reproductive Decision Making</li></ul>	<ul style="list-style-type: none"><li>• Sub-Goal 2.1: Promote and Strengthen the Care Economy across the Lifecycle and for the Vulnerable Populations</li><li>• Sub-Goal 2.2: Expand Access to Quality Health Care and Wellness Service Interventions</li><li>• Sub-Goal 2.3: Improve Capacity and Proficiency of the Labour Force with Access to Expanded Opportunities</li></ul>	<ul style="list-style-type: none"><li>• Sub-Goal 3.1: Reconcile Population Redistribution, Land Use and Settlement Patterns</li><li>• Sub-Goal 3.2: Ensure the Efficient Management of Natural Resources and the Environment.</li><li>• Sub-Goal 3.3: Strengthen Collective Resilience to the Impacts of Changing Climate</li></ul>

The Policy addresses domains beyond those that are directly related to the size and structure of the population. It does so because how the state responds to the needs of the population, how the people take care for each other and how the ecology and environment is managed and regulated all have a direct interactive effect on population dynamics. There is a reciprocal relationship between the capacity of the state to care for its people (through education, health, environmental management, social protection, human rights etc.) and the size and capacities of the population to make contributions to the state through, for example, labour force participation and taxation measures and to communities and families through social care.

This Policy does not stand on its own but rather should be considered as a component of the integrated and sectoral policy approaches that reflect the aspirations of Barbadians for a society

characterized by economic development, environmental sustainability, ecological balance, social justice and security, food security, universal access to sexual and reproductive health, social inclusion, gender equality and human rights.

While promoting population growth, the Population Policy is not prescriptive about increase targets. Rather, it speaks to three main ways to achieve growth in population size. The first is through managed migration, an approach that is likely to increase the population of working age persons in the short- and medium term. The second is through policies that promote repatriation of Barbadians or their continuous engagement with social and economic life though resident elsewhere. The third is by supporting reproductive decision-making through the strengthening of an enabling and supportive environment for families.

There are ways of devising targets for the population growth though with varying degrees of credibility.

One way would be based on the projection of what the size of the population would have been if fertility rates were maintained at 2.1 since 1980s and assuming the continuation of death and migration trends. In such a scenario, by 2020 the population would have been 360,000 and by 2050, it would be an estimated 400,000.

Another way of arriving at a numerical target would be to calculate actual and projected labour force needs which respond to existing labour force gaps and to projections of the skills and numbers of persons needed to meet industrial development plans. Setting such a numerical target for an increase in the working age population has some urgency but must be informed by industrial and labour force policies.

Another approach is to link population size to desired economic growth targets. The potential impact, whether beneficial, detrimental or non-existent, between population growth and economic growth is, however, a complex matter. Economic growth is influenced by the structure, size or composition of a country's population but also by other factors including the social and economic history of the country and the surrounding region, the structure of the economy, its location in the global political economy, and existing social and finance infrastructure and policies, particularly in the areas of health, sanitation, education and governance.<sup>1</sup>

It is also possible to be guided by the population size of countries which have higher population densities and higher GDP per capita than Barbados. This would include countries like Bermuda and Singapore. But this would be simplistic, and could not withstand scrutiny. It should be noted that there are countries with a lower population density than Barbados but with a higher GDP per capita (Aruba, San Marino, Republic of Korea and the Netherlands).<sup>2</sup> And there are many countries with larger populations and very poor social and economic development indicators.

Given these complexities, the Population Policy does not recommend a specific numerical goal

---

<sup>1</sup> See Appendix 3: Technical Note on the Potential Relationship/Impact of Population Growth on Economic Growth.

<sup>2</sup> Appendix 3: Technical Note: An Examination of the Population Density and Gross Domestic Product per capita

for population growth, though it does recommend an incremental increase in population size can be achieved through, the adoption a managed migration policy.

As a justifiable starting point, the formulation of population targets can be informed by considering the size that the population that the country would have realized if the replacement fertility rate had been maintained since 1980. In this regard, by 2050, the population would have been approximately 400,000.

While there is a lack of consensus on the nexus of population growth and economic growth, investment in social capital is recognised has as a catalyst to the development of countries, which is also why the Population Policy includes a goal on providing Barbadians and Non-Nationals Now and in the Future are with Opportunities for Personal and Social Capital Development.

The demographic and supporting non-demographic goals are:

**Goal 1: Ensure a Population Size Sufficient to Grow and Sustain Adequate Levels of Social Care, Productivity, Labour Force Participation and Revenue for Inclusive Development**

**Sub-goal 1.1: Increase the Population of Persons of Working Age**

- Extend the categories of persons entitled to citizenship and permanent residence;
- Retain and encourage repatriation of Barbadians and stem the brain drain; and
- Promote managed migration of persons who can bring capabilities and resources to invest in the future of Barbados and to contribute to areas of the economy where there are unmet labour and skills requirements.

**Sub-Goal 1. 2: Enhance Family Wellbeing to Support Reproductive Decision Making**

- Reduce the structural barriers to childbearing and support fertility decision-making
- Ensure non-discriminatory and age-appropriate access to sexual and reproductive information, and services across the life cycle.

**Policy Goal 2: Provide Barbadians and Non-Nationals Now and in the Future are with Opportunities for Personal Development**

**Sub-goal 2.1: Promote and Strengthen the Care Economy across the Lifecycle and for the Vulnerable Population**

- Promote workplace practices that support caregiving responsibilities.
- Promote, recognise and support equitable sharing of care responsibilities within families and between families and the state across the life cycle.

**Sub-goal 2.2: Expand Access to Quality Health Care and Wellness Service Interventions**

- Improve the capacity of health professionals in prevention, primary care, early rehabilitative care, specialist and allied health areas,
- Generate incentives to influence and promote healthy lifestyles and nutrition,
- Improve physical infrastructure that is conducive to greater levels of participation in physical



activities across the life cycle.

**Sub-goal 2.3: Improve the Capacity and Proficiency of the Labour Force with Access to Expanded Opportunities**

- Improve primary, secondary, and tertiary education to strengthen the delivery of science, technology, engineering, and mathematics (STEM) subjects and inculcate innovation, entrepreneurial behaviour and issues related to the acquisition of soft skills.
- Promotion of technical and vocational education and training (TVET) and the implementation of a dual-track TVET system where institutional instruction is complemented by practical work and experience.
- Establish partnerships with families, community-based organizations, faith-based organizations, and labour unions, specifically targeting youth not in employment, education, or training (NEET) to assist them with capitalizing on such opportunities for training and prospects for becoming employable and/or employed.
- Continued development of labour market data systems and development of institutional linkages for the realisation of a comprehensive labour market information system which is accessible and current.

**Policy Goal 3: Promote Integrated Settlement Development and Safeguard the Ecological Balance**

**Sub-goal 3.1: Reconcile Population Redistribution, Land Use and Settlement Patterns**

- Promotion of the designation of Predominantly Residential Areas to be areas located within the Urban Corridor, Stable Suburban Areas and National Park Villages, and intended to be developed as compact and complete communities.
- Designate an extensive area outside of the Urban Corridor and National Park as a Working Landscape for the harmonious co-existence and management of agricultural production, renewable energy initiatives, resource extraction, solid waste management and a mixture of essential infrastructural services.

**Sub-goal 3.2: Ensure the Efficient Management of Natural Resources and the Environment**

- Strengthen an integrated decision-making framework for development initiatives to safeguard our essential ecosystem services and reduce vulnerability to natural hazards.
- Ensure that environmental, legal, economic and social tenets of Barbados' Sustainable Development Policy are considered in the management of population structure and size as well as any population development strategies.

**Sub-goal 3.3: Strengthen Collective Resilience to the Impacts of a Changing Climate**

- Promote forward planning through the utilisation of the national, regional and community physical development plans to integrate climate change as a cross-cutting consideration across all components of land use planning, natural resources management and development management.
- Introduce ecosystem-based interventions combined with existing strategies to improve

ecosystem health, address climate change and known coastal hazards.

- Strengthen governance and partnerships between the public sector, private organisations and non- governmental organisations to harness scarce resources and build capacity to combat the effects of climate change and the wider spectrum of disaster risk management activities.

### **Implementation Framework**

The Population Policy is cross-sectoral and multidimensional, and its implementation will depend on the engagement of the Government, social partners, civil society actors, trade unions, private sector and communities. It should be accompanied by a plan of action developed by an Inter-sectoral Implementation Group (ISIG) which will be the framework for the design, financing, monitoring and evaluation, collaboration, and coordination of the Plan. The Plan of Action should identify responsible and lead agencies for the implementation of the goals and sub-goals. The plan of action should contain time-bound commitments and be adequately resourced to ensure accountability for implementation.

### **Cross-cutting themes:**

Recurring themes from the consultations which informed this Policy are i) gender equality in the sharing of care responsibilities and ii) the urgency of education reform away from testing and towards an affirmative experience that draws out and values the diversities of individual skills and competencies and grows cultural confidence; and iii) the strengthening of environmental management.

Family and community caregiving is still a gendered experience, given the traditional division of labour which ascribes to women the predominant responsibility for care of children, the elderly and vulnerable populations. This work continues to go under-valued and under-recognised. While there are cultural shifts, these must be accelerated through regulation, resources and education so that women and men can contribute to family and public life in ways that broaden their choices based on mutual obligations to care and protect families.

The education sector should strengthen diverse civic engagement, labour market productivity, security and more comprehensive experiences of fairness and inclusion. An education sector re-imagined away from the colonial and post-colonial focus on testing and realigned to the rounded development needs of individuals and communities is also desirable to respond to the causes and consequences of the projected population trends.

Barbados has championed environmental management, and this must be sustained and amplified. The Policy seeks to outline strategies for managing the interactions between the population and the natural environment to secure the ecological balance needed for a good quality of life now and for future generations.

## **Introduction**

The Government of Barbados, sensitive to the demographic transition into an aging population, constituted a National Population Commission (NPC) to analyse the implications and to prepare an evidence-based population policy for the period 2024-2040. This population policy outlines strategies that will increase the likelihood that Barbados continues to have a population size and balanced age structure to achieve its economic, social and cultural development goals. The Barbados Population Policy is part of planning for the future.

The Barbados Population Policy responds to projections in population structure and size based on trends over the last 40 years:

- Consistent fertility rates below the replacement rate of 2.1 children per woman;
- Growth in the proportion of the elderly population;
- Declining percentage of persons of working age; and
- Higher dependency ratios due to a reducing number of persons of working age and greater proportion of elderly persons.

These trends can negatively affect economic growth, impede the capacity of the state to raise revenue to meet the social care and security needs of its population, including the financing of universal health care, social security and education. Additionally, the aging nature of the population means that there will be increased numbers of people requiring care and being dependent on a decreasing number of persons of working age. Declining proportions of working age people will also affect the labour force and may undermine the prospects of sustaining a dynamic and diversified economy.

Apart from addressing the demographic trends, the Population Policy recognizes that a socially cohesive population is the precondition for the attainment of a modern, caring, innovative, and productive society and economy. Barbadians and residents must have expanded and equitable opportunities to meet personal development goals, and to make contributions to the culture and economy grounded in feelings of belonging and obligations of mutual care, and care for the environment.

Barbados should be characterized by inclusive development, environmental sustainability, ecological balance, social security, food security, universal access to sexual and reproductive health, social inclusion, gender equality and human rights.

A population policy is part of a suite of policy measures to address the current and anticipated developmental challenges and opportunities. Barbados is heavily dependent for its revenue on the services sector and in particular tourism. With limited manufacturing, most goods used by the population are imported. This has led to balance of trade deficits over many years and increasing indebtedness to meet Barbados' fuel and food needs.

Responding to an economic structure that is dependent on tourism and with insufficient diversification, one of the goals of the government is to regenerate and sustain an economy that is driven by and benefits Barbadians who are equipped with the capabilities to innovate and produce for self-reliance and to compete in the dynamic global market. As such, the population should be knowledge-based and skilled for a diversity of occupations, thereby increasing the prospects for attracting value-added industries and providing decent working conditions.

The post-independence social contract recognizes the state's obligation to provide universal access to quality free education and training, quality universal healthcare, access to affordable land and housing, the protection of public spaces and the environment, respect for diversity, fundamental freedoms, rights and responsibilities and equality under the law. The ability of the country to achieve these goals is critically dependent upon population structure and size, its growth, its spatial distribution and its socio-demographic profile.

This Population Policy affirms the aspirations for social justice, sustainable and inclusive development. The overarching purpose of the Barbados National Population Policy is:

**“To promote sustainable and inclusive development and good quality of life for Barbadians and residents without compromising environmental sustainability and the ability of future generations to meet their needs.”**

It outlines three inter-related policy goals. The first, which is a demographic, proposes short- and long-term approaches to maintaining a population structure to ensure adequate levels of care and economic and social vibrancy; the second speaks to human security for all present and future generations; and the third goal addresses the management of interactions between people and the environment to secure the ecological balance now and for future generations.

The Policy addresses domains beyond those that are directly related to the size and structure of the population (beyond demography). The Population Policy necessarily touches on and should complement other policy spaces, such as economic affairs, social protection and development, gender equality, urban planning, education, labour, the environment and health.

It does so because how the state and people take care of each other, and how the ecology and environment is managed, and regulated has a direct interactive effect on population dynamics. For this reason, across the goals, the Population Policy emphasizes the need for contribution and care. There is a reciprocal relationship between the capacity of the state to take care of its people (through education, health, environmental management, social protection, human rights etc.) and the capacities of the population to make contributions to the state through taxation measures and to communities and families through social care. Increasing the population size and strengthening a diversity of capacities of the current population creates more opportunities for more people to contribute to the economy, government revenue, the labour market, social development and cultural expression.

## **Process of Policy Formulation**

Under the auspices of the Ministry of Finance, Economic Affairs and Investment, a National Population Commission (NPC) was commissioned in 2019. A Population Situational Analysis (PSA) was developed based on broad stakeholder consultations and a review of the relevant literature. This exercise was completed during the first quarter of 2020 and outlines the issues arising from an aging population to which this Population Policy responds.

This Policy was informed by the Barbados PSA and by a series of consultations with a wide cross-section of stakeholder groups between July 2022 and April 2023 (See Appendix 1). Through these consultations, the Population Commission was guided in the development of the priority realms of policy that would respond to and ameliorate the challenging consequences of a declining and aging population.

## **Barbados Development Context**

Barbados, like many other countries, is grappling with the lingering impacts of the Coronavirus (COVID-19), on the social and economic development of the country. As of June 7, 2023, there were over 767.6 million confirmed cases and approximately 6.9 million deaths worldwide, associated with the Coronavirus pandemic. In addition to the human toll, the pandemic had a severe impact on the economy, because of the preventive measures instituted globally to contain the spread of the virus, inclusive of partial and full economic shutdowns as well as travel and trade restrictions. Consequently, the local economy contracted by 12.7 per cent in 2020, with the Accommodation and Food services industry being the most impacted with a decline of 58.3 per cent recorded.

Furthermore, the COVID-19 along with several recent natural disasters<sup>3</sup>, have dampened the country's substantial progress towards achieving macro-economic and fiscal stability through the implementation of the Barbados Economic Recovery and Transformation Plan, 2018 (BERT 2018). The BERT was introduced in October 2018 as part of a four-year International Monetary Fund (IMF) agreement under the Extended Fund Facility (EFF) and sought to rectify the country's economic challenges through measures to "restore macroeconomic and debt sustainability, address falling reserves, and increase growth"<sup>4</sup>. Within the decade prior to 2018, the local economy was characterised by low growth; averaging -0.4 per cent between 2008 to 2017; unsustainable high levels of debt, which stood at approximately 176.3 per cent of GDP at end of 2017/18; and low foreign exchange reserves, which stood at 6.1 weeks of import cover in 2017, well below the accepted international standard of twelve weeks of import cover. The country's reputation as a credible borrower was also in dispute, due to multiple downgrades by credit rating agencies, which undermined its capacity to access the capital markets at favourable conditions.

Through the implementation of the BERT 2018, critical structural reforms were implemented in the areas of growth, tax administration, State Owned- Enterprises (SOE); and fiscal, public sector and monetary policy. By March 2020, the gross foreign reserves increased to 18.6 weeks of import cover; while public debt was reduced to 117.4 percent of GDP in FY2019/20. However, the onset of the pandemic and recent natural disasters required extensive policy responses to alleviate the current challenges and ameliorate the impact on household and livelihoods. As a result of the increase required in public expenditure along with the contraction of the overall economy, public debt to GDP rose to 151.2 per cent by the end of FY 2020/21.

Despite the extensive changes in the global and local landscapes, Barbados' economy remains insufficiently diversified, with service-related industries representing the main drivers of growth. Over the period, 2008 to 2022, Accommodation and Food services (12.0 per cent), Real Estate (9.6 per cent) and Wholesale & Retail Trade (8.9 per cent), accounted for the highest share of GDP on average. While on average, Wholesale & Retail Trade (19.9 per cent), Accommodation

---

<sup>3</sup> Hurricane Elsa and the ash fall from the eruption of the La Soufriere Volcano from St. Vincent,

<sup>4</sup> Barbados Request for An Extended Arrangement Under the Extended Fund Facility, September 17, 2018, page 1.

and Food services (14.5 per cent) and Construction, Mining & Quarrying (12.4 per cent) industries provided the largest source of employment.

Private employment has and continues to be the predominant form of employment in Barbados. Government employment has increased modestly, while the most significant change in employment status has been among the self-employed. Self-employment increased from 12 per cent of the employed in 1995 to 18 per cent in 2022.

The rate of labour force participation has been declining since 1995. This is especially stark for youth whose numbers have declined by almost 50 per cent between 1995 and 2017, and youth unemployment stands at 35.1% as at 2022. The rate of inactivity among youth is high in part due to youth being in education or job training. However, there is an estimated 18 per cent of youth in 2010, who were not in employment, education or training (NEET). There has also been an increase in the number of people who are unemployed for an extended period.

The effects of the pandemic on the economy increased levels of unemployment, from a rate of 10.1 per cent in 2019 to 14.1 per cent in 2021. However, as the country enters a post-COVID-19 period, there are favourable signs recovery, particular in the tourism sector, with stay-over arrivals rebounding to 63.9 per cent of pre-COVID-19 levels in 2022. Unemployment fell to 8.4 per cent in 2022 and an improvement was also observed in the country fiscal position as debt to GDP ratio fell to 125 per cent GDP in July 2022.

To support of the country's recovery process, the Government of Barbados introduced the Barbados Economic Recovery and Transformation Plan 2.0 in 2022, which seeks to maintain the gains achieved under BERT 2018 and complete the intended "structural reforms to better position the country for macroeconomic stability and medium-term growth." This will include the pursuit of:

- a growth policy that advances developments in the areas of energy, tourism, transport and agriculture; enhances the local business environment; and incentivise the green transition and building climate resilient infrastructure.
- the requisite fiscal strategy and public sector reforms to support entry into international capital markets;
- a debt management strategy, to position the country towards a path of debt sustainability; and
- initiatives which promote social cohesion and eradicate poverty, inclusive of investments in skill training and education, and low-income housing.

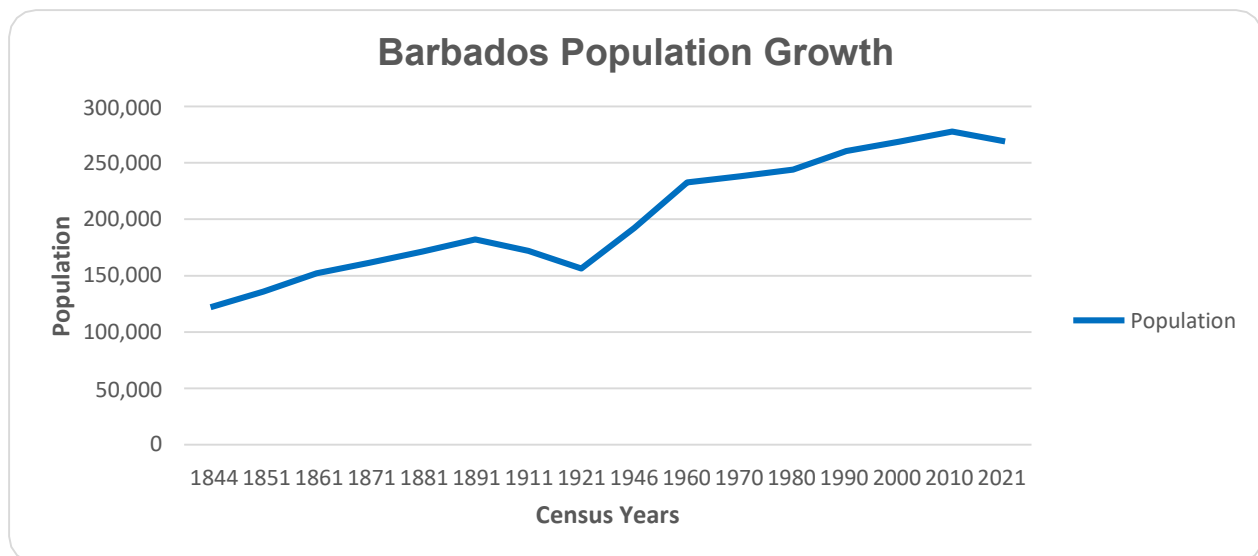
## **Overview of the Population Dynamics**

The Barbados Population Situation Analysis (PSA) outlines current Barbadian population dynamics and the impact on economic development, labour market conditions, spatial planning and the use of health services and environmental management. Key trends which shape the Population Policy include:

### **Population Size and Growth**

In 1960, the size of the population of Barbados was approximately 230,980. At the time of the 2010 Population and Housing Census, the population of Barbados was approximately 277,821 of which 52 percent were female and 48 percent male. By the 2021 Population and Housing Census, the population was estimated at 269,090 persons, a decrease of 8,731 persons since 2010.<sup>5</sup> In essence, between 1960 and 2021 the population of Barbados only increased by 16.5%.

**Figure 1 Barbados Population Growth Rate- Census Year**



### **Current age and sex structure**

The 2021 Census also shows that 21% of the population is under 18, 59% of the population is between 20-64, (and 21% are between 50-64) and 19% are over 64.

<sup>5</sup> See Appendix 1: Technical Note on Population Size at 2021



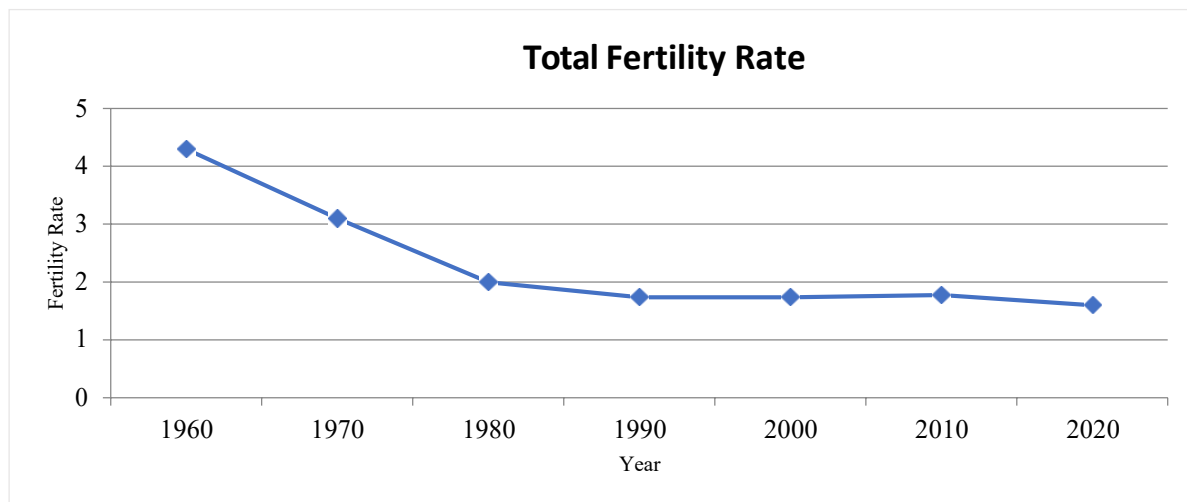
5 Year Age-Group	Sex			Percentage		
	Both Sexes	Male	Female	Both Sexes	Male	Female
<b>All Ages</b>	<b>269,090</b>	<b>130,037</b>	<b>139,053</b>			
0 - 4.	11,916	6,238	5,678	4%	2%	2%
5 - 9.	16,393	8,523	7,870	6%	3%	3%
10 - 14.	14,535	7,557	6,978	5%	3%	3%
15 - 19.	17,211	8,798	8,413	6%	3%	3%
20 - 24.	16,117	8,304	7,813	6%	3%	3%
25 - 29.	15,955	7,930	8,025	6%	3%	3%
30 - 34.	16,215	7,990	8,225	6%	3%	3%
35 - 39.	17,495	8,398	9,097	7%	3%	3%
40 - 44.	17,341	8,238	9,103	6%	3%	3%
45 - 49.	18,609	8,906	9,703	7%	3%	4%
50 - 54.	18,507	9,081	9,426	7%	3%	4%
55 - 59.	19,655	9,204	10,451	7%	3%	4%
60 - 64.	19,123	8,993	10,130	7%	3%	4%
65 - 69.	17,590	8,051	9,539	7%	3%	4%
70 - 74.	12,958	6,034	6,924	5%	2%	3%
75 - 79.	8,324	3,594	4,730	3%	1%	2%
80 - 84.	5,609	2,344	3,265	2%	1%	1%
85 & Over	5,537	1,854	3,683	2%	1%	1%
				100%	48%	52%

### Live Births and Fertility

The number of live births in Barbados has declined from a maximum of more than 7,000 annually during the 1950s and early 1960s to a low in the vicinity of 2,500 in 2018. The total fertility rate (the average number of live births per woman in the reproductive age groups) declined from 4.3 in 1960 to 1.8 in 2017. Barbados is therefore currently below the replacement fertility level of 2.1 children per woman. Adolescent fertility, while significant, declined from 50.5 per 1,000 girls aged 15-19 in 2000 to 33.6 per 1,000 girls aged 15-19 in 2015.<sup>6</sup>

<sup>6</sup>Source: United Nations Population Division. World Population Prospects 2019. File FERT/7: Age specific fertility rates estimates by region, subregion, and country. Available at <https://population.un.org/wpp/Download/Standard/Fertility/>

**Figure 2: Total Fertility Rates 1960-2020, Barbados<sup>7</sup>**



### **Deaths and Mortality**

Between 1950 and the mid-1980s, the annual number of deaths declined notably. The life expectancy at birth for 2021 was estimated to be 77.4 years, which is amongst the most favourable for CARICOM countries. This is attributable to improvements in public health care, water and sanitation, as well as the positive impacts of public health on infant and child mortality.

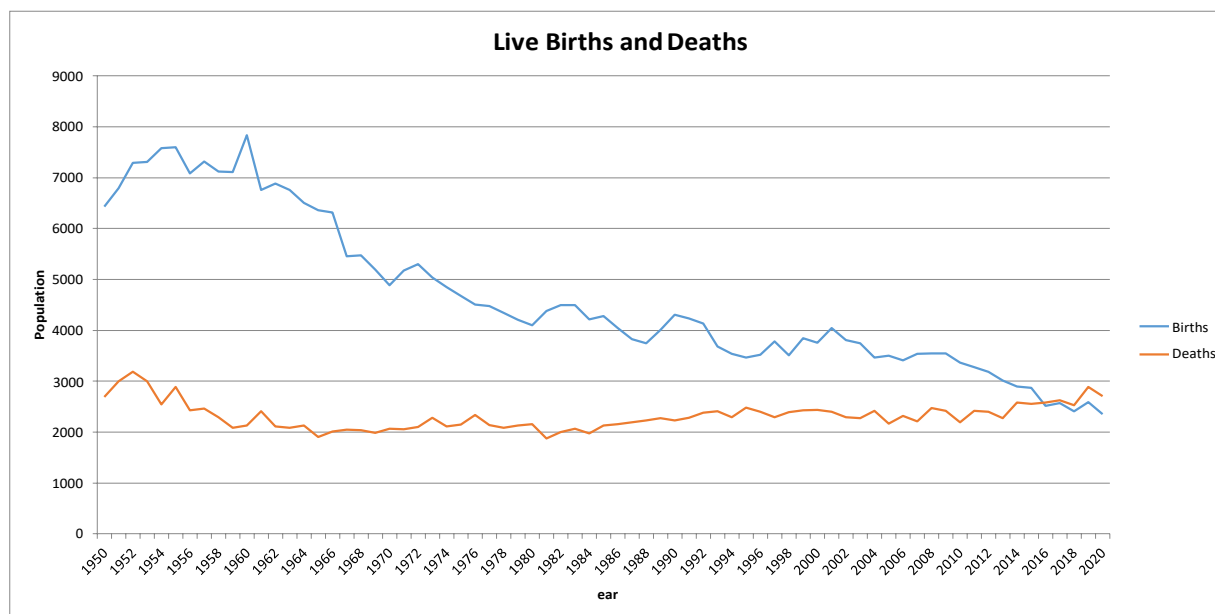
The health profile of Barbados has significantly changed over the past 50 years. There has been a transition from diseases related to malnutrition, poor sanitation and infections to a disease profile that is impacted by chronic non-communicable diseases (NCDs), new and emerging communicable diseases, a rapidly aging population and climate change. The primary burden for the health system is related to NCDs. Among the Barbadian population, almost 40% have one or more of the risk factors for NCDs. Not unexpectedly, there has been an uptick in death rates associated with an aging population and prevalence of NCDs.

### **Population Growth Due to Natural Increase**

This steady decline in the number of live births, and the rising number of deaths (associated with the aging Barbadian population) means that the population growth rate will continue to fall. At the point where the number of live births and the number of deaths is equal, the population of Barbados will stop increasing, unless offset by high levels of net migration.

<sup>7</sup> <https://databank.worldbank.org/source/population-estimates-and-projections>

**Figure 3: Live Births and Deaths- 1950 to 2020**



## International Migration

Barbadians, like other Caribbean people, have emigrated primarily for educational, income and quality of life considerations. Such emigration was most marked in the post-independence period between 1965-1980. With the tightening up of immigration laws in the traditional receiving countries (UK, US, and Canada), emigration has decreased significantly though there continues to be movement between Caribbean states, especially since the institution of free movement in the Caribbean Single Market and Economy regime.

Immigration has also been significant and the UN projects that as much as 12 percent of the resident population of Barbados are immigrants, mainly from other Caribbean countries such as Guyana, St. Vincent and the Grenadines, St. Lucia and Trinidad and Tobago. Over half (55 percent) are women and three quarters are aged 15-64 years.<sup>8</sup>

Still, it is estimated that Barbados has a net loss of population of approximately 400 persons per annum due to migration; that is, the number of emigrants from Barbados exceeds the number of immigrants entering Barbados by on average 400 persons.

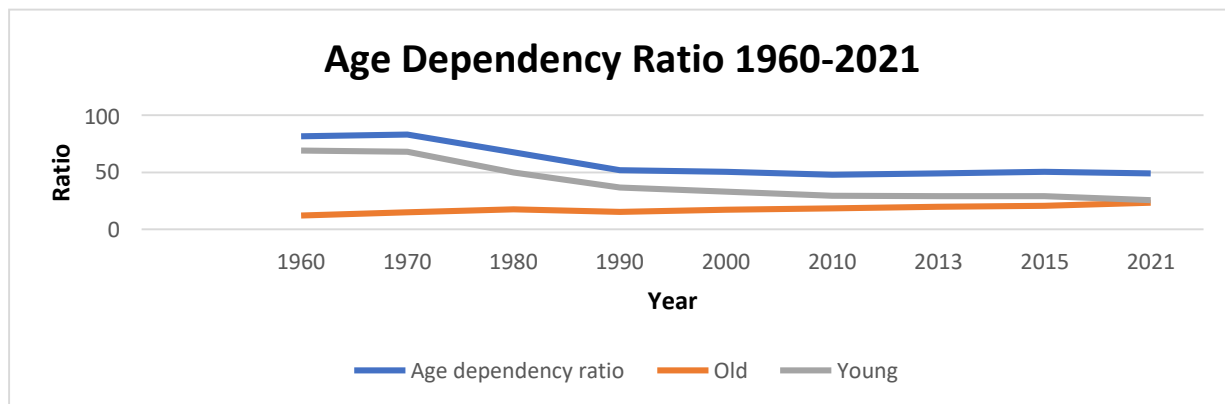
<sup>8</sup> UN DESA : International Migrant Stock. Country Profile Barbados 2019

## Changing Age Dependency Burden

Declining fertility rates have resulted in smaller families with a smaller burden of childcare obligations (fewer children in the home). As a result, the **youth dependency ratio** (the population younger than 15 years relative to the working-age population, 15-64 years) has been steadily decreasing and was 29 per 100 as of 2016. This decreasing burden of care for the young however continues to be offset by increases in the elderly **dependency ratio** (population of older dependents over 64 years relative to the working-age population aged 15-64 years) which in 2016 was estimated at 22 per 100 and expected to reach 33.3 per 100 by 2025.

The **overall age dependency ratio** in Barbados is calculated to be 49 per 100 in 2021. This is a significant decrease from 75.7 in 1960.<sup>9</sup> Given the stabilization of fertility rates and the increases in the population 65 years or older, there will be fewer people of working age in contrast to populations under 15 and over 64.

**Figure 4: Age Dependency Ratio in Barbados 1960 to 2021**



Source: World Bank Data: <https://data.worldbank.org/>

## Population Redistribution

Two-thirds of the population resides along the “Urban Corridor” situated less than two kilometres from the coastline. Economic activity related to tourism and infrastructure concentration in and near coastal zones increases Barbados’ vulnerability to the impacts of climate change such as sea level rise and storm surge. Coastal zone development has also degraded marine habitats, especially coral reefs which have declined in mass by 70% since the 1970s.

There has been outward migration from St. Michael and the City of Bridgetown and from the eastern parishes of St. John, St. Joseph and St. Andrew between 1970 and 2010. Concomitantly,

<sup>9</sup><https://databank.worldbank.org/source/population-estimates-and-projections>

there has been population growth in suburban and peri-urban areas in the parishes of St. James, St. Thomas, St. George and Christ Church, and in many rural areas of the parish of St. Philip. In these parishes, there has been significant land conversion from traditionally agricultural use to residential and commercial development.

### Population Density

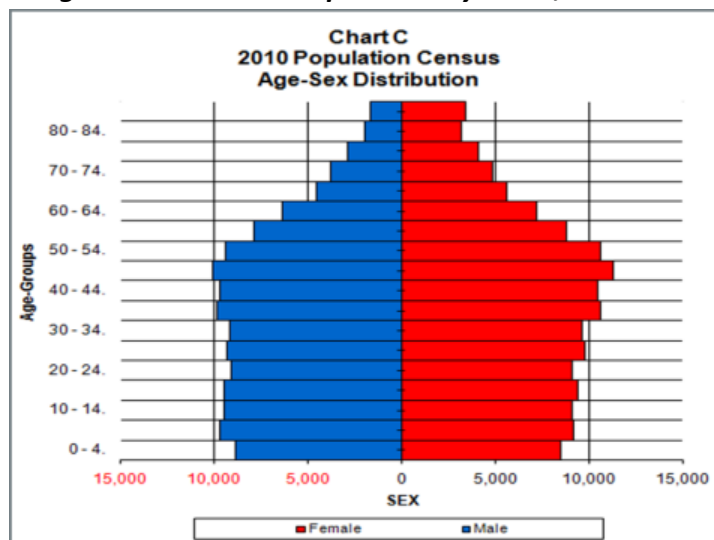
Using the latest census data, Barbados had an overall population density of 622 people per square kilometre. Even though this is a decrease from 2010 (666), Barbados still has the highest density among member states of the Caribbean Community (CARICOM), though not as high as non-CARICOM countries of St. Maarten and Bermuda, which have population densities of 1,261 and 1,185 persons per square kilometre, respectively.

### Projected Population Size in Barbados 2020-2040

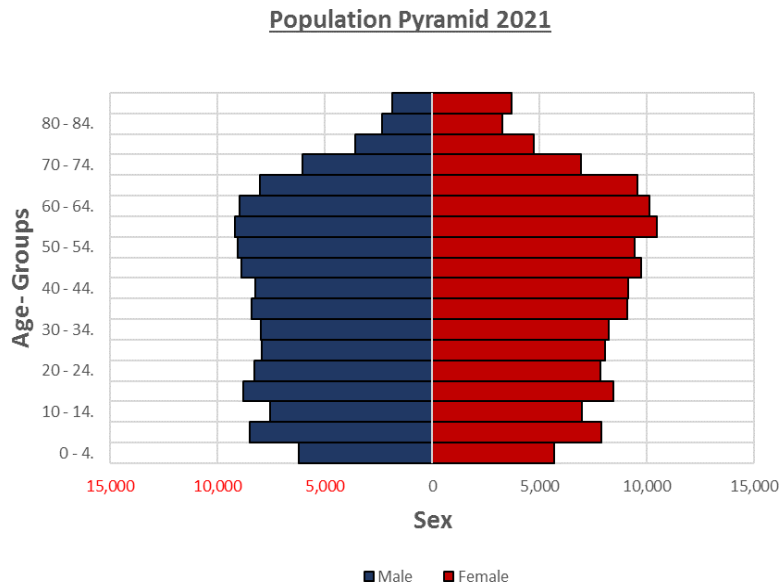
Prior to the data from the 2021 census, projections based on fertility and mortality trends, and with no catastrophic events resulting in migration to or from Barbados, suggested that the population of Barbados was expected to peak at 290,000 sometime around 2029 and then projected to begin a gradual decline in its size in the 2030s.

Within that scenario, the size of the working-age population, 15-64 years, was projected to peak around the year 2021/2022 at 189,730. While the proportion of those under 15 was expected to continue to decline, with consistent increases in the number of elderly people aged 65 years or older between 2020-2050. However, the population size data for 2021 already suggests population decline- 269,090 from 277,821 in 2010.

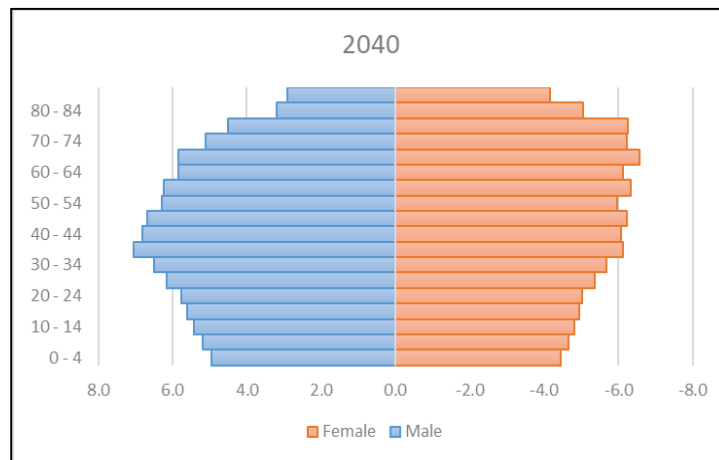
**Figure 5: Barbados Population Pyramid, 2010**



**Figure 6: Barbados Population Pyramid, 2021**



**Figure 7: Projected Barbados Population Pyramid, 2040**



**Projected Non-demographic impacts**

**Possible decreases in state revenue**

One of the main sources of government revenue is taxation on income as well as on consumption of goods and services. Reduced population, particularly in the cohort of the working age, can decrease revenue derived from employment-related taxation measures. Similarly, decreases in population size can also affect the levels of consumption and therefore revenue generated

through value-added tax. Given the structure of the current economy and labour market, it is unlikely that the levels of taxation derived from employment and consumption, can be increased to offset the reduced numbers of persons of working age.

Decreases in taxation revenues will directly impact the state's capacity to maintain and strengthen social development approaches such as universal education and health care, as well as infrastructure, and economic development measures.

State revenue needs can be addressed through macroeconomic approaches that focus on such activities as attracting foreign direct investment and expanding domestic production and exports. However, revenue flows from taxation on investments are subject to international taxation rules and are not within the control of the Barbadian state.<sup>10</sup>

### **Social Security and Social Protection**

Similarly, declining numbers of people of working age and increases in retired persons has a direct impact on the sustainability of the social security scheme. In all but one year since 2014, expenditure exceeded contribution income under this programme. Between 2018-2020, the number of NIS contributors decreased each year, while the number of pensioners and total pension payouts increased each year. With continued population trends, the total expenditure of the National Insurance Fund is expected to exceed total income each year and therefore, the Fund is expected to be depleted between 2034 and 2041.<sup>11</sup>

While there are demands on the state to provide national assistance and care facilities for the elderly, other sub-populations are beneficiaries of social protection through a variety of state-sponsored programmes. There are also cash and in-kind benefits including National Assistance Grants, food vouchers, disability grants, foster grants and assistance with rental, burial and house repair. For the benefit of children attending school, there are student support schemes including school feeding programmes, uniforms provision, textbooks loan programmes, examination fee subsidies and free transport. Day care services are made available by the state and target poor infants and young children, while a range of social care services targeting different constituents

---

<sup>10</sup>In October 2021, 137 countries under the Organisation for Economic Co-Operation and Development (OECD)/G20 Inclusive Framework for Base Erosion and Profit Shifting Project, agreed to a two-pillar strategy to reform the global tax regime, to tackle tax avoidance, improve the coherence of international tax rules, ensure a more transparent tax environment and address the tax challenges arising from digitalization. Part of the reform is said to be to dissuade unproductive/ ineffective tax competition among countries, by instituting a floor corporate tax rate. The long-term implications of these global rules domestically is unknown but it is recognized that the adoption of these measures, effectively removes the ability of developing countries such as Barbados to utilize low tax based incentives as part of their toolkit to attract investment and compete on the global stage.

See Technical Note 3: the Potential Impact OECD Policy (Global minimum tax rate) on ability to make Tax/ fiscal Policy

<sup>11</sup> Barbados National Insurance Scheme 17th Actuarial Review of the National Insurance Fund, Unemployment Fund and Severance Fund as of December 31, 2020. July 22, 2022

include counselling for troubled families and children, counselling services for abused women, homes for children and the elderly, and home-based care for the elderly.

The anticipated reductions in income and consumption taxation revenue due to declining populations of working age, unless offset by other taxation measures, will also jeopardize the state's capacity to maintain and expand social protection. State incapacity to deliver social protection services is also likely to have a disproportionately negative effect on women given the traditional division of labour within which women bear the responsibility of care for children, the sick and the elderly.

### **Labour Supply**

Current trends, if they persist, will yield declines in the prospective numbers of young people entering the labour market during periods when increasingly larger numbers of older people will be exiting the labour market. Such changes will place increasing levels of stress on the labour force which would witness a decline in its size commencing in 2035.

The impact on the economy because of these changes in the supply of labour include declines in the savings rate as older persons draw down on their assets to support themselves, likely declines in productivity, creativity and innovation, and taxation revenue reductions. Additionally, as the population ages, the state will have to increase provisions for social security and social protection programmes targeting a large and growing elderly population, especially those who would be living on the margins and classified among the vulnerable because they are poor and/or without family support.

### **Health Care**

Projected increases in the number of persons over 65 are accompanied by the prevalence of chronic non-communicable diseases, especially diabetes and hypertension. Barbados has been characterized as having an adult population that is overweight (2 in every 3 people) and obese (1 in every 3 people) with females being more overweight/obese than males. For the period 2020-2050, forecasts indicate that the care of the elderly may account for just under 20 percent of total health expenditure. This is further compounded by the fact that the growing population of elderly persons may create a need for increasingly greater allocations of space in elder care facilities due principally to concomitant changes in the family dynamics, work arrangements and the structure of households.

### **Family Arrangements and Care**

A larger proportion of men live alone than women whose households tend to be larger and may not include employed male adults. Poor female-headed households have higher dependency levels amounting to 74.8% non-earners per household compared to 68.6% in the case of poor male-headed households.



In Barbados, elderly persons mostly live within private households with just 4% being resident in institutions of care.

A higher proportion of older adults receive rather than provide support, regardless of whether they live with or away from their children. Women, and in particular daughters, are principally the primary caretakers of the elderly providing them with physical, emotional and financial support. Moreover, elderly mothers have higher odds of receiving all forms of support from their children when compared to fathers. Among those in institutions of care, 63% are men and in general, older men are more likely than older women to be isolated from familial networks of care.

It is likely that more older men are in institutional care because of being isolated from their families due to life choices made during their working ages. Certainly, nearly one third of men live alone according to the 2010 census. Adult women are less likely to live alone, having regard to the female realm of responsibility for the care of children and the elderly.

Planning for care of the elderly will have to include a focus on socialization to ensure that, on an equal basis with women, men understand the obligation and value of sharing of care responsibilities across their life cycle, and for the emotional, physical and material care of their children. That will ensure their integration, on a basis of reciprocity, within familial care bonds.

### **Spatial Infrastructure and the Environment**

Traditionally, there has been a concentration of residential and commercial properties along narrow coastal strips of land primarily along the west and south-western coastal areas of Barbados. There are the usual concerns surrounding that balance between changes in population size attributes and the supply of housing and land use choices.

Population redistribution away from coastal areas has resulted in new housing units mushrooming in spaces previously the preserve of agricultural production. This population spread has been accompanied by a reliance on the private ownership of automobiles, the number of which has increased notably in Barbados during the last two decades. The average annual growth rate in the motor vehicular population in Barbados has been 3.85%, notably greater than the acceptable standard of 2.5% which prevails internationally. The continued car-centric planning evidenced by the rise of several sub-urban shopping complexes and new suburban dormitory settlements without basic neighbourhood services may be linked to increased inactivity among individuals and chronic non-communicable diseases as well as the slow death of traditionally vibrant historic coastal centres like the capital, Bridgetown, as many businesses and residents have moved away.

Policies promoting increased population must be accompanied by a land use policy to prevent and/or mitigate habitat loss, pressure on biodiversity and reduced cultivable land, the latter placing threats on the island's capacity to build resilience regarding its food security.

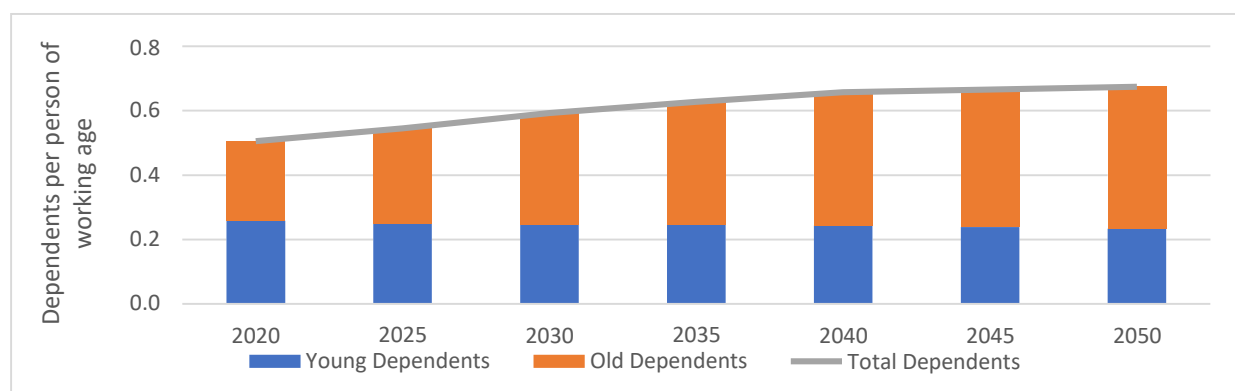
Population increases will require infrastructural investments in integrated solid waste management systems, public utility networks, transportation systems and health and educational services. This has implications for the delivery of quality housing stock, social and community services and commuting patterns. The State's capacity to increase the nation's water supply in accordance with prospective increases in population size at the national level and more particularly within emergent urban enclaves are major concerns to be considered.

## The Population Dilemma

Barbados is likely to have progressed past that window of opportunity known as the demographic dividend characterized by a relatively large working-age population due to declining fertility and increasingly smaller populations in the childhood stages of the life cycle, and relatively smaller but gradually growing elderly populations. Such an age structure is highly advantageous because it results in increased proportions of people of working age being active in the economy and as care providers for young and elderly dependents.

Already by 2021, Barbados has seen an actual decline in population, a decline that was projected to take place a decade later. Without any interventions, the size and structure of Barbados is certain to continue in a manner consistent with a rapidly aging society with a high dependency ratio.

**Figure 8: Projected Dependency Ratios in Barbados, 2020 to 2050**



**Source:** Barbados Statistical Service

Population aging has social and economic implications. These include an eventual decline in the population of working age, declining rates of labour force participation and workforce shortages as retirees outnumber new entrants to the workforce. There are also likely to be greater prospects of a decline in savings rate as older persons draw down on their assets to support themselves; a decline in productivity and innovation; and increased burden of care not only for family members but also for the state through social security and social protection programmes.

With an aging population, the fiscal balancing act of ensuring revenue generation sufficient to meet core public sector expenditure is threatened. Economic productivity and dynamism cannot be assured without a working-population that is well-educated, versatile, innovative, creative and sufficient in size to make the contributions needed to care for children, the elderly and others who are dependent on the state.

Given the current population projections, unless interventions are developed, Barbados will become a steadily greying society and the state's capacity to maintain the expected social

investments will be compromised and the benefits of a more youthful population will be diminished.

It must be pointed out that a shrinking population can also have positive effects, particularly for the environment. The benefits can include reduced strain on resources (e.g., less traffic congestion, pollution, waste, water use etc.), decreased dependencies at individual and household levels, reduced state expenditure on some kinds of infrastructure associated with population usage and greater levels of disposable income for some. A low or no growth population trend can also enhance the expansion and access to green spaces important for community life and wellbeing.

Additionally, there are technologies available to undertake many tasks previously associated with people across a range of sectors in both the public and private sectors. Automation, digitalization, use of robotics and artificial intelligence are replacing traditional jobs, and particularly relatively unskilled and low paying sectors. Automation is also associated with increased efficiency, productivity and economic growth and therefore population size and structure needs must be aligned with the effects of the acceleration of use of technologies and artificial intelligence.

Still, the negative consequences of an aging population must be addressed to ensure that the Barbadian state can fulfil its social contract and has the capacity to facilitate a decent quality of life across the life cycle. The challenge in increasing the population size is to ensure that all residents can enjoy productive lives and attain personal development goals while centring ecological and environmental conservation.

## **The Role and Vision of the Barbados Population Policy**

The socio-economic objectives of the government can be gleaned from the two Barbados Economic Recovery and Transformation Plans (BERT) 2018 and 2022. This plan is projected to transform the public finances and the economy of Barbados toward promoting a new, high-skilled, knowledge-based and more diversified economy. The objectives outlined are seen also as a precondition for reducing poverty and inequality through increasing resources available for social expenditure, generating employment and maintaining social protection schemes. It aims to restore debt and fiscal sustainability, and key to this is investments in skills.

The ability of the country to embark on activities to achieve these social, economic, institutional and environmental goals is partly dependent on the size, growth, distribution and structure of its population as well as its investment in its human capital. Additionally, the nature and scope of these activities ought to be formulated, designed and implemented to optimally serve the future needs of the Barbadian population of all generations.

A population policy complements and should be aligned to national and sectoral development policies in so far as it outlines how the population size and structure can contribute to the meeting of economic, social and environmental development objectives.

This Population Policy responds primarily to the challenges associated with an aging population and complements measures for achieving the short and long-term developmental objectives. It is predicated on the understanding that Barbados is a social democratic state where the state has obligations:

- The state has the primary responsibility for human resource development (education, health) and the social protection of vulnerable populations.
- The state has a regulatory obligation regarding the 'market' - labour laws, financial regulations, industrial policy etc.
- The state has an obligation to regulate the use of natural resources to preserve benefits for current and future generations.
- The state has an obligation to establish regulatory frameworks for the orderly and progressive development of land.
- The state has redistributive obligations using tax and non-tax measures to address poverty and inequalities.
- The state has an obligation to establish protective measures to secure its population and economy from extreme climatic events.
- The state has a role to facilitate social interaction at household and community levels to promote social care, social solidarity and cultural vibrancy and resilience.

## Population Policy Principles and Goals

The Population Policy is guided by national development aspirations and policies, and national, regional, and international human rights commitments to fairness, equality, non-discrimination and social justice. In accordance with the International Conference on Population Development and the Sustainable Development Goals, the Policy places individual dignity and human rights at the heart of development.

It is predicated on Caribbean regionalism and is informed by the Revised Treaty of Chaguaramas and the CARICOM Single Market and Economy. The Policy must be implemented in a manner that is consistent with ecological balance and environmental sustainability.

### ***Overarching Population Policy Objective***

The overarching policy objective of the Barbados Population Policy is:

**“To promote sustainable and inclusive development and good quality of life for Barbadians and residents without compromising environmental sustainability and the ability of future generations to meet their needs.”**

This objective can be realized through the pursuit of demographic and non-demographic goals as follows:

<p>Policy Goal 1: Ensure a Population size Sufficient to Grow and Sustain Adequate Levels of Social Care, Productivity, Labour Force Participation and Revenue for Inclusive Development</p>	<p>Policy Goal 2: Provide Barbadians and Non-Nationals Now and in the Future with Opportunities for Personal Development</p>	<p>Policy Goal 3: Promote Integrated, Settlement Development and Safeguard the Ecological Balance.</p>
<p>Sub-Goal 1.1: Increase the Population of Persons of working age.</p> <p>Sub-Goal 1.2: Enhance Family Wellbeing to Support Reproductive Decision Making</p>	<p>Sub-Goal 2.1: Promote and Strengthen the Care Economy across the Lifecycle and for the Vulnerable Populations</p> <p>Sub-Goal 2.2: Expand Access to Quality Health Care and Wellness Service Interventions</p> <p>Sub-Goal 2.3: Improve Capacity and Proficiency of the Labour Force with Access to Expanded Opportunities</p>	<p>Sub-Goal 3.1: Reconcile Population Redistribution, Land Use and Settlement Patterns.</p> <p>Sub-Goal 3.2: Ensure the Efficient Management of Natural Resources and the Environment.</p> <p>Sub-Goal 3.3: Strengthen Collective Resilience to the Impacts of a Changing Climate.</p>

***Policy Goal 1: Ensure a Population Size Sufficient to Grow and Sustain Adequate Levels of Social Care, Productivity, Labour Force Participation and Revenue for Inclusive Development***

Barbados needs both short-term and long-term approaches to ensure that it has the capacities that provide a foundation for the State and for the people to take care of each other now and in the future. Capabilities for caregiving are regenerated within the family and household through intergenerational care, access to education, health, social services, and employment. The State is capacitated through the generation of income and taxation revenue to maintain, modernise and expand social security and infrastructure and reduce poverty through education, health and social protection mechanisms.

An increase in population size, and especially those of working age, is just one component of such approaches.

Labour force gaps and their effects can also be addressed through realignment of educational processes to address structural barriers to achievement, and to meet current and projected skill and expertise needs. The use of automation, information, digitization and artificial intelligence technologies can also offset the negative effects of a reduced working age population. All these measures should also enhance productivity.

Still, there is a certain irreducibility to the need for human care across the life cycle. And with an economy that is oriented towards the service industries, maintaining a working age population size that reduces dependency rates, and allows for sustained and reliable contributions to the labour market, government revenue through taxation and social insurance schemes is vital.

In defining the size and structure of the population needed in the future, sustainability is a key consideration. Account must be taken of natural resources, preservation of biodiversity, environmental and infrastructural carrying capacity, support for cultural and technological creativity and the state's capacity to provide basic services. Population size increases must be informed by the limits beyond which human use will deplete the country's non-renewable natural resources.

But carrying capacity is not static and can be expanded by the application of technology which adapts and expands infrastructural and other resources and services. The application of agricultural technologies can increase food yields, desalination plants can increase water supply, and efficient public transportation can lead to less congestion and a reduction of private car usage. Regulations can be put in place that improve the collection of water, the use of vehicles and mandatory recycling to reduce the demand for waste disposal services. All these approaches to expanding carrying capacity require careful planning and significant capital outlay.

Consideration of resources and infrastructural and environmental carrying capacity must also take account of the fact that Barbados has a transient tourist population of approximately 500,000 annually. There are also cultural dimensions to carrying capacity given concerns for

population density, the association of large families with poverty and the strong sense of Barbadian identity.

With these caveats and considerations, an incremental approach to population growth over the period 2021-2050 which would contribute directly to meeting unmet labour force needs and bring in added human resources, is recommended. This would include an increase the population in the short-term in response to economic and labour force needs (migration), and an expansion of the options of the population to make reproductive decisions towards child bearing with possible impacts on increased fertility rates in the medium term.

While this Policy does not prescribe a number by which the population should be increased, it is evident that the phenomenon of an ageing and eventually declining population must be addressed as part of planning for the future.

The policy outlines three main approaches to increasing the population to meet the current and future development goals. The first is through managed migration, an approach targeted at increasing the population of working age persons in the short- and medium term. This approach is recommended to meet immediate or projected labour force gaps to drive economic growth. The second is through policies that promote repatriation of Barbadians, either permanent, temporarily or transitory. The third is through supporting pro-fertility, reproductive decision-making through the strengthening of an enabling and supportive environment for families. This is a longer-term strategy, the quantitative outcomes of which are unpredictable and uncertain given the non-negotiability of women's rights to decide the number and spacing of their children.

There are ways in which population growth targets, (immediately through the promotion of immigration and longer-term through a combination of migration and increases in birth rates), can be devised but with varying degrees of credibility.

One way would be based on the projection of what the size of the population would have been if fertility rates were maintained at 2.1 and without any dramatic variation in the trends of death or migration rates. Under these circumstances Barbados would have a population of approximately **400,000 by 2050, that is, a natural increase of approximately 185,000 people.**<sup>12</sup>

Another way of arriving at a numerical target would be to calculate actual and projected labour force needs which correspond to existing labour force gaps and to projections of the skills and numbers of persons that could support the implementation of an industrial development plan. These policy parameters are not currently available.

However setting and meeting such a numerical target based on labour force needs, and especially for short- and medium-term growth in the population of working age, has some urgency. Attention should be given to the development of a migration policy informed by labour force and social/human capital needs analyses and produced through inter-ministerial collaboration.

---

<sup>12</sup> See Appendix 2 for population projections based the maintenance of fertility replacement rate since 1980..



One approach which is not recommended is to link population size in a linear manner to economic growth and development. The potential impact whether beneficial, detrimental or non-existent, between population growth and economic growth/development is a complex matter, which is influenced not only by the structure, size or composition of a country's population but other factors including the social and economic history of the country and the surrounding region, the structure and size of the economy, the stage of country's development, its location in the global political economy, and existing social and finance infrastructure and policies, particularly in the areas of health, sanitation, education and governance.<sup>13</sup>

It is also possible to be guided by the population size of countries which have higher population densities and higher GDP per capita than Barbados. This would include countries like Bermuda and Singapore. But again, this would be simplistic, and any such number for targeted population growth through managed migration could not withstand scrutiny. It should be noted that there are countries with a lower population density than Barbados but with a higher GDP per capita (Aruba, San Marino, Republic of Korea and the Netherlands).<sup>14</sup> And there are many countries with larger populations and very poor social and economic development indicators.

**The Population Policy recommends an incremental approach that uses the projected population size based on replacement rate as a starting point for annual targets over the next 10-15 years.** The Policy also recommends the immediate development of a Managed Migration Policy that would specify the skills and competencies which are needed in the labour force as well as to drive desired and planned industrial development.

Elements informing the incremental approach include:

- annual targets for migration informed by needed skill sets and the absorptive capacity of the labour market;
- availability of housing and needed social services;
- maintenance of a data management system which collects data on migrants, including location of settlement, sectors of employment, numbers of accompanying family members; and
- periodic review and revision upwards or downwards of the migration targets based on the above variables and on the economic climate and human and social capital needs.

Population growth through migration should not be at the expense or displacement of employment (existing or prospective) for those already in Barbados and must be mindful of the state fiscal limits to invest in infrastructural and social services adaptations to meet the needs of rapid population increases in the short-term.

For long-term population stabilization, two main approaches are recommended for increasing the population size: the implementation of a managed migration policy to attract working age persons into Barbados and a policy that enhances family wellbeing to support reproductive

---

<sup>13</sup> See Appendix 4: Technical Note: The Potential Relationship and Impact of Population on Economic Growth.

<sup>14</sup> Appendix 3: Technical Note: An Examination of the Population Density and Gross Domestic Product per capita

decision making for those who wish to have children.

### **Sub-goal 1.1 Increase the Population of Persons of Working Age**

Given Barbados' advanced stage of aging and below-replacement fertility, natural increases are likely to be negligible or non-existent. Pro-population growth approaches which increase the proportion of persons of working age should:

- Extend the categories of persons entitled to citizenship and permanent residence;
- Retain and encourage repatriation of Barbadians and stem the brain drain; and
- Promote managed migration of persons who can bring capabilities and resources to invest in the future of Barbados and to contribute to areas of the economy where there are unmet labour and skills requirements.

Such approaches increase the likelihood of meeting the immediate and medium-term unmet labour force needs; increasing the amount of persons contributing to government revenue through direct and indirect taxation, contributing to the economic vibrancy and engaging in care work in families and the community.

#### **i. Extending the categories of persons entitled to citizenship and permanent residence**

There are already approaches aimed at encouraging persons to live and work in Barbados. These include the CARICOM Single Market and Economy (CSME) that enables CARICOM nationals in specified categories to move and work freely within the region, contingent on certification. Under the CSME, not only do CARICOM nationals and their families come to live and work, but also Barbadians are similarly unrestricted in moving to other CARICOM countries. Barbados is the number one destination country under CSME, having received the most CARICOM nationals.<sup>15</sup>

This policy should be extended to allow free movement of all persons from CARICOM, as is planned by CARICOM.

Draft legislation under consideration seeks to expand the categories of those entitled to citizenship as follows:

- persons born outside Barbados, if either one of their grandparents or great-grandparents is or was a Citizen of Barbados, whether by birth, descent, naturalization or otherwise;
- persons who are permanent residents and have resided in Barbados for a total of 1,095 days during the last 6 years immediately preceding the date of application;
- a person who is an immigrant and has been an immigrant for a period exceeding 3 years;
- a national (and their dependents and spouse) of a CARICOM member state who has resided

---

<sup>15</sup>IOM: Free Movement of Persons in the Caribbean: Economic and Security Dimensions. 2019

- in Barbados for at least 5 years; and
- a person (and spouse and dependents) who not being nationals of CARICOM has been resident in Barbados for 6 years.

Likewise, the Immigration Bill provides administrative pathways to permanent residence to expanded categories of persons:

- a child of a person who is a permanent resident of Barbados and residing in Barbados;
- a person who by reason of his age, education, experience, financial resources and skills is not a citizen or permanent resident of Barbados and can establish himself economically in Barbados.

These proposed legislative reforms which expand the categories of persons eligible for citizenship and permanent residence, also make provisions for administrative processes that should reduce processing time for the granting of the applied status.

The Commission recommends that these Bills be reviewed and enacted, but subject to further consideration of terms of eligibility to cost-free access to education and health care based on certain requirements such as period of residence, tax contributions or investments. This is to mitigate uptake of citizenship for purposes of access to services without contributions through taxation.

Temporary Residence: During the COVID-19 pandemic, the government introduced the Barbados Welcome Stamp Programme which facilitated the temporary relocation for persons who wished to work remotely from Barbados. This should be continued.

## **ii. Retaining and repatriating Barbadians**

It is estimated that the number of Barbadians living abroad totals almost 30 percent of the domestic resident population. Traditional migration pathways to North Atlantic countries have been associated with higher incomes, expanded occupational opportunities, social security and a better quality of life. Emigration represents brain and skills drain even while it also represents a source of remittances and opportunities for Barbadians within and outside Barbados. Still, Barbados ought to be the home that its people want to return to after studying or having living experiences outside of its borders.

While recognising that mobility across borders is a feature of Barbadian culture and of globalisation, the underlying factors that drive out-migration efforts must be addressed. Policy approaches to expand economic and labour opportunities, and strengthen social cohesion and security include:

- increased access to affordable land for productive uses;
- education reform that responds to and values the diversity of capacities needed in the society and economy;

- improved delivery of public services to support private sector development and job creation;
- increased productivity in high-skilled occupations, many of which are in the public sector; and
- tax concessions for the initial years of employment.

### Repatriation

Barbadians who live elsewhere should be encouraged to return, either for periods of time or permanently. Returning provides opportunities to give back through engagement in the labour force and through community engagement.

While there are complex push and pull factors that inform decisions to leave, remain or return, there are some measures that can facilitate the decision making to repatriate. These include:

- ready availability of information on social security and health care entitlements; accommodation/housing;
- job opportunities and education for children;
- continued untaxed import of vehicles and other belongings, and the granting of a residence permit and citizenship to family members;
- access to affordable land and housing;
- reduced bureaucracy to the establishment of new businesses; and
- creation and subsidisation of innovation laboratories for youth entrepreneurs.

### Partial Repatriation

In the world of increased connectivity and mobility, drawing on the lessons from the Barbados Welcome Stamp Programme (remote work programme), Barbadians abroad can also be encouraged to contribute actively and/or to see Barbados as a co- location for work and life. This would not require a complete repatriation but allow them to maintain the benefits of their migratory country as well as benefits of a closer association, physical or virtual, to Barbados.

Approaches that may facilitate periodic relocation and contribution include:

- development of a structured give back/pay forward scheme through which Barbadians in the diaspora can maintain connectivity and contribution to Barbados' social development;
- easy accessibility of school places for children;
- affordable housing;
- establishment and marketing of linkages between the diaspora community and professional institutions for volunteering and participation; and
- tax incentives, e.g., duty free concessions or VAT exemptions for specified periods.

### iii. **Managed Migration**

Ordinarily, managed migration policies support economic and labour market objectives. They are driven by labour market needs, derived from an understanding of over and under supply of labour as well as an identification of projected growth within and between industrial sectors.

Managed migration policies address temporary and permanent labour migration. They seek to attract skilled individuals that drive economic growth and innovation and can be informed by considerations such as vocational preparation, occupational demand and arranged employment. Otherwise, the migrant policy can be informed by a human capital focus that places emphasis on factors such as age, language proficiency, skills and education and is largely supply driven.

There are both opportunities and costs associated with labour migration programmes. Immigration can exacerbate socio-economic inequalities. As a component of a population policy, the efficiency and productivity gains of managed migration must be closely considered along with the distributional impact and dislocation that migration flows might generate.

Given the declining population of working age, a multi-sectoral managed migration policy should be developed with the objective of increasing the size and expertise of the working age population as a short and medium-term approach to the consequences of an aging and declining population. The scale of managed migration is obviously context specific and the target for Barbados has to be set through considerations of labour force and human capital needs.

Such a policy should promote Barbados as a desirable location to live and work for people who can bring capabilities and resources to invest in the future of Barbados and to contribute to areas of the economy where there are unmet labour and skills requirements.

It should speak to sectors that are or could be drivers of growth and for which new or added skills are needed. Sectors identified as the key drivers of growth include heritage tourism, renewable ICT, electricity, energy, graphic design and animation, software development, specialty rum, pharmaceuticals and biotech products.<sup>16</sup> A managed migration policy should be based on assessment of whether the needed skills to grow these sectors are available in Barbados, can be developed in the short to medium term and/or should be augmented by migration.

The implementation of such a migration policy should be closely monitored to ensure that migrants are integrated in a fair manner and that Barbadians are not displaced from the labour market or otherwise disadvantaged.

Such a policy should allow for migrants arriving with family members and ensure access to health and education for minors as well as to work permits for partners. At the same time, care and

---

<sup>16</sup> The Ministry of Labour, Social Security and Third Sector (MLSP) in collaboration with the Inter-American Development Bank (IDB): The 'Roadmap for Identifying Strategic Growth Sectors in Barbados Project, 2023

attention ought to be placed on making allowances for the implications associated with the increased demand for a variety of age-determined services and use of infrastructure.

The managed migration policy should specify short and medium-term targets for increasing the working age population which can be adjusted, having regard to the changing economic, social and cultural profile of the country, and its developmental objectives and opportunities, and based on continuous assessment of the impact of migration.

In summary, a managed migration policy should:

- Be informed by an industrial policy and based on a robust migration and labour market information systems. Such systems would provide a systemic basis for evaluating the demand for and supply of labour by sector.
- Remove obstacles associated with immigration protocols/initiatives that are likely to inhibit prospective investment and labour services.
- Review bureaucratic requirements for the timely granting of CSME skilled national certification.
- Secure migrant integration through policies that support:
  - Labour force mobility
  - Pathways to citizenship or permanent residence
  - Family reunion
  - Access to affordable health care and education by accompanying family members
  - Access to financial services
- Promote dialogue and interaction with Barbadians to facilitate integration and multi-culturalism while securing and advancing Barbadian cultural identity and values.
- Devise data collection systems to monitor changes in population distribution due to managed migration and analyse the implications of such changes, on, for example, demands for social services, education and health services, infrastructure, and security.

Such a policy is multi-sectoral, responding to considerations of the labour force, infrastructure, transportation, access to services, industrial policy. The development, implementation and monitoring of such a policy should be undertaken by an inter-ministerial team.

### **Sub-Goal 1. 2: Enhance Family Wellbeing to Support Reproductive Decision Making**

One long term approach to increasing population size is through supporting reproductive decision making of people who wish to have children. For those who wish to have children, policies should address the impediments or barriers to childbearing.

In addition to deliberate decision making on the timing, number and spacing of children, reduced fertility is also associated with limitations in the supporting environment for those who may want children. Poverty, inadequate childcare resources, inadequate workplace policies, time constraints and the absence of social support are factors informing the decision against

childbearing. The gender division of labour may also act as a barrier to childbearing given that women continue to carry an unequal care burden for children and the elderly.

The Population Policy recommends a framework to support reproductive decision making consistent with human rights, and in particular women's unfettered rights to reproductive self-determination to decide on the number and spacing of children. This framework should also respond to the barriers to childbearing for those who would like children and/or are considering their options.

The objectives within this goal are:

- To reduce the structural barriers to childbearing and support fertility decision-making
- To ensure non-discriminatory and age-appropriate access to sexual and reproductive information, and services across the life cycle.

### **Reducing Barriers to Fertility**

Policy prescriptions must respect women's rights to make decisions regarding the number, timing and spacing of children. The state is obligated to ensure that people, and in particular women, have access to reproductive information, services: including affordable contraception, and safe and non-stigmatized termination of pregnancy.

In addition, the state should also address the barriers to childbearing. These barriers include the disproportionate care responsibility for children on women, income insufficiency, inadequate/insufficient childcare facilities, inadequate workplace accommodation for parents and fertility constraints.

The responsibility for the care of children, while primarily the role of families, also must be borne by the state through the provision of day care facilities and cash transfers for low-income and middle-income households. Within families and between parents a more equitable contribution to the financial, physical and emotional care must be nurtured. Recognizing the diversity of family forms, family wellbeing must be promoted and is linked to positive child and youth development, gender equal culture, community solidarity, a caring and empathetic citizenry and a productive and engaged labour force.

Actions to reduce the structural barriers to childbearing and support fertility decision-making include the following components:

### **Social Protection and Social Services**

- Child benefit subsidies especially for low- and middle-income single parents
- Provision of free or highly subsidized quality childcare, especially for children below the age of 3
- Subsidized housing for low-income single parent households

- Tax concessions for families with dependent children
- Subsidies for childcare materials
- Building on existing initiatives such as PAREDOS, develop a case management approach to support parents and families for social care support.
- Ensure the implementation of a gender-responsive child support legal framework.
- Provide community counselling centres to support parents.

### **Social Norms Changes**

- Promoting equal sharing of unpaid care work between women and men.
- Use school-based approaches to address restrictive gender roles, relations and stereotypes.

### **Labour Force Measures**

- Strengthened parental protection legislative scheme.
- Provisions for longer periods of maternity leave, depending on the number of children under school going age in the household.
- Establish paternity leave and shared parental leave measures.
- Promote flexible working arrangements. This includes part-time work, compressed work weeks, tele-commuting and working from home, alternative office spaces and job-sharing.

### **Access to Health Care**

- Ensure access to affordable fertility assessments and treatments for women and men.
- Increase education and training for health care providers regarding fertility preservation, infertility diagnosis, safety and effectiveness of infertility treatment options and referral to providers of infertility care.

Complementary to removing structural barriers to fertility, children and young adults should have access to science-based, non-discriminatory sexual and reproductive education and services. To address adolescent fertility and teenage parenting, age-appropriate comprehensive life skills education should be a part of the school curriculum. This curriculum should emphasize the principles of full bodily autonomy, that is, the right to make choices, respect for self and others and provide accurate information about human development, anatomy and reproductive health. Such an approach should equip youth with the knowledge required to make sexual and reproductive decisions responsibly, keeping them protected from coercion, sexually transmitted infections and unintended pregnancy.

Non-discriminatory and age-appropriate access to sexual and reproductive information and services should be ensured through:

- age-appropriate and non-discriminatory comprehensive life skills education in schools consistent with the developing capacities of young people; and
- access to sexual and reproductive services, including for adolescents and youth.



## ***Policy Goal 2: Provide Barbadians and Non-Nationals Now and in the Future with Opportunities for Personal Development***

While there is a need to respond to the projected impacts of population decline, including through the encouragement of in-migration, a primary concern of the policy is that in its implementation, those who call Barbados home now and in the future are assured of a decent quality of life and have opportunities for self and community development.

### **Sub-goal 2.1: Promote and Strengthen the Care Economy across the Lifecycle and for the Vulnerable Population**

People who are vulnerable because of age, infirmity and/or disability must be assured of dignified lives through the provision of material, physical, social and psychological care. This multi-dimensional care should be shared within families and between families and state institutions.

The provision of quality care is essential for the reproduction of a well-adjusted and socially engaged society. It is the part of human activity that contributes to the wellbeing of the present and future labour force and the population. Care has material, social, physical and emotional dimensions. It is done by the state through health, education and social service institutions. However, daily and nurturing care is largely the responsibility of families. Within families, people, and especially persons dependent or vulnerable because of age or infirmity, are assured food security, shelter, clothing and emotional health.

Social care is also a very gendered experience. While both women and men have been historically engaged in labour outside the home, the division of labour ascribes to women the role of primary family caretakers, though increasingly more men are engaging actively in the care of children. This care work is generally undervalued and rendered invisible. Because of this traditional division of labour, many women of working age have a triple responsibility; not only do they have to be economic providers, but they must also provide care (in all its components) for their children and their parents. Women also are the main providers of care for persons with short- term or with chronic sicknesses and/or disabilities. They do so even while many are in the lowest paid sectors of the economy.

Yet social protection schemes do not recognize this care economy and there are no provisions made within pension schemes, especially for those whose main work has been in the domestic sphere. The care economy must be made visible; it must be recognised, reduced and redistributed through the sharing of responsibilities. The value of reciprocity and inter-generational dependence must be recognized as a core national value.

### **Elderly Care and Participation**

Many of the elderly suffer from chronic illnesses and families may be hard pressed over the long haul to provide quality care. They may also live alone and are outside of circles of care. This is

especially the case for elderly men who are more likely than women to be isolated from their families, having not been involved in the care of the children. Given the shrinking size of families and low fertility rates, the care responsibilities are increasingly concentrated on few persons within nuclear-type families.

Family caregiving over a prolonged period can be stressful, especially for those family members who are not trained. Care givers can be challenged to provide the level of quality care required by those who are dependent on them because of income insufficiency, anxiety and competing claims on time especially if employed or with caring responsibilities for young children. Supporting family care is therefore essential given the growth of the aging population with NCDs. That support is not only advantageous to the care givers, but to the care recipients and for public systems. State systems to support the primary caretakers of the elderly, persons living with chronic diseases and the young must be addressed.

Equally, it is important to acknowledge the diversity of capacities of vulnerable populations and not assume the need for only care. People live longer lives and wish to continue to make contributions to society but may be sidelined and excluded because of stereotypes about aging and disability status. In addition to the provision of high quality and accessible care, the Policy affirms active aging and recommends the integration and participation of older persons in public life.

This integration should be enabled through encouragement of economic, political, social and cultural participation in public life, through accessible and affordable infrastructure (housing, transportation) and integration in community life and the promotion of intergenerational relationships.

The following approaches are recommended with the objective of promoting the valuing and non-discriminatory sharing of care work in families, households and communities:

- Recognise the full-time and/or part-time domestic care contributions in pension schemes within the National Insurance Scheme.
- Promote workplace practices that support caregiving responsibilities.
- Support in-home caretaking through the provision of trained and remunerated caretakers.
- Provide tax breaks or provide cash grants for low-income caregivers who, within the confines of their private household, provide care for elderly persons or other dependents.
- Establish support groups and counselling programmes for caregivers.
- Promote family-friendly policies in the workplace for those caring for elderly family members (including flexible work schedules and telecommuting).

Elderly Care Recommendations:

- Review and adopt the draft National Policy on Aging which addresses caregiving and its integration and participation.
- Review the functioning of residential institutions and strengthen protocols for care facilities.

- Work with civil society community-based organisations to promote social circles for exercise, recreation and interaction.
- Encourage ‘on the job’ intergenerational mentorships.
- Ensure transportation affordability and accessibility to encourage mobility across the life cycle and different abilities.
- Reduce taxes on commodities for the elderly.

### **Sub-goal 2.2: Expand Access to Quality Health Care and Wellness Service Interventions**

The health and wellness sectors are oriented to meeting the needs of people across the life cycle. Of particular focus considering the population trends, is the need for targeted approaches to address the long- term care needs of a growing elderly population though not overlooking the needs of specific populations such as those with disabilities, children and young persons.

Respect for autonomy and the patient’s personal values must be considered in health-related decision-making, with people having access to the relevant information to make informed choices related to health care interventions, including the nature of care (e.g., palliative) and the timeline for interventions.

Health education and services must continue to promote wellness through healthier nutritional practices as well as greater levels of physical activity, across the life cycle for NCD prevention. To support this, facilities for exercise must be appropriate for all ages and abilities. Actions to strengthen disease prevention and control across the life cycle should include the following:

- Increased training and capacity of health professionals in prevention, primary care, early rehabilitative care, gerontology, dentistry and other needed specialist and allied health areas.
- Reinforcement of health and wellness clinics with specific focus on:
  - women’s health and wellness;
  - support and self-management of treatment regimens; and
  - men’s health and wellness.
- Use policy measures such as taxation as incentives to influence and promote healthy nutrition, including consumption of locally produced food (e.g., increase taxes on food items high in sugar, salt and trans-fats, as well as ultra-processed foods while subsidizing nutritious food options)
- Increase availability of land and support agricultural practices that increase the supply of local fruits and vegetables.
- Improve physical infrastructure that is conducive to greater levels of participation in physical activities across the life cycle.

In addition to the potential impact of such measures in strengthening the health and social well-being of resident populations in Barbados, they also contribute overwhelmingly to promoting lifestyle practices consistent with a model of disease prevention, especially those classified as chronic, non-communicable diseases (NCDs).

At community levels, infrastructural development should consider the spatial requirements that support participation in public spaces, mobility and recreational needs of aging populations and people living with disabilities. To this end, the following strategies are proffered:

- Develop and encourage safe social spaces at the community level that are also responsive to the mobility and recreational needs of specific populations including the elderly and persons living with disabilities, and which provide opportunities for intergenerational interactions at community levels.
- Ensure that all private and public buildings and facilities make provision to incorporate measures that permit ease of access and mobility for persons with disabilities.

### **Sub-goal 2.3: Improve the Capacity and Proficiency of the Labour Force with Access to Expanded Opportunities**

To attain sustainable socioeconomic development, measures must be pursued that will bolster employment opportunities in a diversified economy, especially for the youth, while removing limitations on those who wish to continue in the labour market beyond what is now the retirement age.

The economic impacts of COVID -19 and the associated disruption of the tourism industry reinforce the need for a more diversified economy with attention to growing other productive sectors that generate national income and employment.

In promoting diversification, attention must be given to alignment between education and training opportunities at the tertiary level and prospective and emerging productive sectors, whether in services, the industrial and energy sectors, agriculture or information technology. Specific growth sectors identified for the county over the next 10 to 15 years include: heritage tourism, renewable energy, graphic design and animation, software development, specialty rum, pharmaceuticals, and biotech products<sup>17</sup>. In addition, a Labour Market Information System can support that alignment between education and training and labour market needs.

In Barbados, high proportions of youth populations continue to be not in employment, education, or training (NEET). Early and long periods out of school and the productive sectors of the society and the economy for youth, and in particular young men, is associated with disaffection and participation in subcultures marked by substance abuse and criminal activity. This is especially so for youth who come from fragmented families and disadvantaged communities.

Ensuring that young people leave the education system with self-esteem, accomplishments,

---

<sup>17</sup> Comment from Ministry of Labour, Social Security and Third Sector in relation to recent studies: *Roadmap for Identifying Strategic Growth Sectors in Barbados Project, Skills for the Future Project* and the 2022 BERT/BEST Programme of the Government of Barbados.

capabilities and a sense of purpose within their communities is critical to their engagement in the economy in ways that contribute to the society and further their personal development goals.

Increasing labour force participation therefore is best attainable if the foundations for self-esteem and personal drive are secured in primary and secondary schools and in post-secondary institutions, and young people are prepared to participate in the labour market and empowered and supported to innovate and create. Education reform is needed to expand from the post-colonial preoccupation with certification at all stages of schooling, and re-oriented to foster confidence, critical thinking, empathy and life skills needed for flexibility and resilience. Young people should be better prepared for the world of work and community participation through the development of a diversity of capabilities and interests.

Entrepreneurial ventures have increasingly been encouraged in Barbados. Pre-COVID-19 data on the labour force characteristics in Barbados has shown that more men than women were self-employed, and that self-employment was gaining prominence as a means of engaging male workers in the labour market.

Labour market policy is needed to address the challenges associated with labour force precariousness especially for youth, women, people living with disabilities and those categorized as elderly who desire to remain active in the economy beyond the age of retirement. There also needs to be provision for reducing stereotyping and discrimination predicated upon age, gender, disability status and citizenship. In this vein, any strategies to emanate from a labour market policy, and indeed the population policy, should be cognizant of other existing initiatives, or those under development, such as the National Policy for Persons with Disabilities.

In addition to ensuring that youth are actively and constructively engaged in the labour force and their communities, the Policy promotes the active and voluntary engagement of elderly persons in the economy. Persons over the age of 67 (the current retirement age) should have the option of continued employment though this would have to be balanced against the employment needs of youth and would also depend on the sector of employment and the implications for the National Insurance Scheme.

The following policy strategies are recommended:

### **Education sector**

- Review and improve curricula and teaching methods in primary, secondary and tertiary education as they relate to science, technology, engineering and mathematics (STEM) subjects.
- Review and improve curricula and teaching methods in secondary, post-secondary and tertiary education to inculcate innovation, entrepreneurial behaviour and issues related to the acquisition of soft skills (conflict resolution, leadership, communication, inter- personal skills etc.) financial literacy and job-seeking skills.
- Any review should be accompanied by relevant accreditation (e.g., Barbados Accreditation

Council) to ensure international acceptance to the benefit of current student retention and attraction of external students.

### **Technical and vocational training**

- Enhance skill sets of the current workforce to meet the demands of new jobs in emergent industries (heritage tourism, renewable energy, graphic design and animation, software development, specialty rum, pharmaceuticals, and biotech products).
- Provide opportunities for structured arrangements that would permit qualification and certification for persons providing care services in the home, whether serving the needs of children, the elderly or the disabled.
- Promote technical and vocational education and training (TVET) and the implementation of a dual-track TVET system where institutional instruction is complemented by practical work and experience. This can be facilitated through the implementation of the Barbados Qualifications and Credit Framework (BQCF) to be operationalised by the Barbados Accreditation Council.<sup>18</sup>

### **Partnerships**

- Dissemination of information on employment and education/training opportunities for NEET youth by relevant government agencies including through families, community-based organizations, faith-based organizations and labour unions as gateways to NEET youth.
- Encourage investment in training in both the private and public sectors especially with respect to improving the quality of vocational training with a heavy emphasis on the acquisition of digital skills.
- Implement incentives for industry-academia linkages to enhance collaborative capacities across industry and academia. This allows for greater matching of the supply and demand for skills.
- Encourage investment and partnership agreements that will foster participation in research and development initiatives involving the public sector, the business community and academia.
- Commission dedicated ministries and research support centres and science councils to provide for a one-stop-shop for innovators.

### **Regulatory and Administrative Processes**

- Review the mandatory age of retirement to provide choice to persons who wish to and can continue employment.
- Promote an agenda consistent with the attainment of decent work in keeping with ILO's Decent Work protocols.
- Continue development of labour market data systems and development of institutional

---

<sup>18</sup>The BQCF is intended to “restructure the country’s system of qualifications in a vertical and horizontal way that will expand the pathways to attaining qualifications and facilitate the validation of skills obtained through non-formal and informal means”- Comment from Barbados Accreditation Council on the Draft Population Policy.

linkages for the realisation of a comprehensive labour market information system which is accessible and current.

### ***Policy Goal 3: Promote Integrated Settlement Development and Safeguard the Ecological Balance***

#### **Sub-goal 3.1: Reconcile Population Redistribution, Land Use and Settlement Patterns**

Notwithstanding the stabilization in population growth, there has been a significant increase in the conversion of agricultural land to fulfil residential and commercial purposes. That along with the diversion from traditional food production practices has increased the country's dependence on food imports, which has negative implications for food security and national health outcomes.

Bridgetown and communities in the greater Bridgetown area are threatened by urban decay due to sub-urbanization. Reinvestment in Bridgetown and surrounding older urban areas is needed to repurpose vacant and derelict properties to productive use.

Traffic congestion in and around the Greater Bridgetown area is an ongoing problem. Such congestion is primarily due to decentralization of residential areas. Despite having expanded the island's development footprint by 60 percent and almost doubling the number of cars over the last two decades, there has been little expansion in transport infrastructure capacity. The transportation network of highways and roads is fundamentally the same as it was dating back to the 1990s.

To date, Barbados is the only CARICOM member state with a government approved national Physical Development Plan (PDP) as an integrated framework to guide the physical development of the country and support the continued health and prosperity of its citizens. The current Barbados Physical Development Plan offers detailed policy guidelines that are endorsed in this Population Policy. It seeks *inter alia* to promote the efficient use of land and services through compact, contiguous and mixed-use development through:

- Protection of community cores, namely, the commercial, residential and cultural heart and central places of Barbados, providing the densest concentration of people, buildings, and activities. The community cores of Bridgetown, Speightstown, Oistins, Holetown, Six Cross Roads, Warrens, Wildey, Belleplaine and Bathsheba are identified in the Community Plans of the NDP. Each core is defined in a place-specific manner, and policies to encourage vibrant, walkable and prosperous cores are tailored to the distinct possibilities of that community.
- Encouragement of higher density residential development within the Urban Corridor.
- Promotion of the designation of Predominantly Residential Areas to be areas located within the Urban Corridor, Stable Suburban Areas and National Park Villages, and intended to be developed as compact and complete communities.

The PDP also encourages the design and development of compact, well-connected and complete communities through:

- Encouragement of major development facilities and essential services infrastructure (health-related, police stations, post offices, libraries, community centres) in Regional and Local



Centres or near other central community facilities and considering the distribution of such facilities based on population service areas rather than on the parish system;

- Review of school locations to ensure proximity to urban settlement areas and well serviced by transportation options and to respond to rising or falling populations of school age children.
- Incorporate adaptive reuse of public and heritage buildings;
- Designation of an extensive area outside of the Urban Corridor and National Park as a Working Landscape for the harmonious co-existence and management of agricultural production, renewable energy initiatives, resource extraction, solid waste management and a mixture of essential infrastructural services.
- Review transport routes based on population changes and commuting patterns and ensure access for all to safe, age and gender responsive, affordable, accessible and sustainable urban mobility and sea transport systems;
- Promotion and incentivization of transit use and active transport while dis-incentivizing private automobile usage, including through transport terminals, park and ride transfer points, rendezvous for car-pooling and bus transfer points.
- Institution of the requirement for EIAs and SIAs for any significant expansion of existing or development of new sporting complexes or similar facilities dedicated to serving communities or the national public.

### **Sub-goal 3.2: Ensure the Efficient Management of Natural Resources and the Environment**

The demand for water is influenced by urban sprawl, needed and/or anticipated increases in agricultural production and transient tourist populations. Yet Barbados suffers from water scarcity that is related to climate change due principally to higher temperatures and the increased intensity of droughts and variability of rainfall events. Barbados' aged water distribution infrastructure is strained by increased water consumption. Changes in population distribution and housing stock must consider supply and demand for water resources and so, significant attention must be given to water conservation, capture, distribution and efficient water use.

In Barbados, agricultural production (produce and livestock) has declined significantly, and the fishing industry has suffered a two percent decline from overfishing and climate change since 2000 despite various policy reforms and interventions. Food importation accounts for approximately one quarter of all imports and 80 percent of all food consumed is imported. In 2020, Barbados had a food import bill of more than BBD\$ 664.7 million. Actions to safeguard ecological balance must be informed by an understanding of the interactions and linkages between agriculture, trade, health and nutrition, rural livelihoods and environmental sustainability.

Most of the population of Barbados (66 percent in 2010) resides along the "urban corridor" within two kilometres of the coastline. As a result, the island's population is vulnerable to sea level rise and adverse weather systems such as hurricanes. The concentration of population and infrastructure in and near coastal zones has also degraded marine habitats with land-based

activities being a major contributor to the deterioration of marine ecosystems. The coral reefs provide protection to the fishing ecosystem and against beach erosion. The destruction of this natural habitat therefore is not only environmentally catastrophic but also can negatively affect economic activity in the tourism sector. This reality underpins the importance of strong coastal zone management, including the establishment of marine protected areas, sustainable tourism practices, and initiatives to promote coral reef conservation and restoration.

Urban and residential infrastructure development and higher levels of consumption increase the generation of waste and demand for improved waste management. Between 1949 and 2015, the amount of waste recorded entering the Mangrove Pond landfill has increased from 45 tonnes per day to approximately 1000 tonnes per day. Since 2005, national waste diversion and management strategies have effectively reduced the quantity of waste entering the landfill. However, increased population coupled with expanding residential and urban areas will result in an increased burden on municipal waste collection. This may inadvertently cause illegal dumping and waste stockpiling, negatively impacting human and environmental health.

To strengthen an integrated decision-making framework for development initiatives to safeguard our essential ecosystem services and reduce vulnerability to natural hazards, the following recommendations are made:

- Encourage Integrated Water Resource Management approaches and water efficient systems in community development plans as well as public, private and household building design.
- Strengthen the protection of water resources alongside economic development and population expansion through integrated water use and supply plans for proposed developments.
- Institute legislative arrangements requesting agricultural impact statements as pre-requirements for new major developments proposed on or adjacent to lands designated for agricultural use.
- Reinforce the protection and continued existence of food and agricultural areas within the urban corridors of Barbados.
- Institute legislation for applications for infrastructural development within 30 metres of the coast to be subject to EIAs, SIAs and other supporting technical studies.
- Encourage new development, as well as institutional, community facilities and national infrastructure projects outside of Natural Hazard Areas. Strengthen regulations, monitoring and enforcement for pollution control as it relates to water pollution, illegal dumping and habitat disruption.
- Encourage the inclusion of design measures for climate change resiliency that must be incorporated into site plans for new facilities.
- Ensure that environmental, legal, economic and social tenets of Barbados' Sustainable Development Policy are considered in the management of population structure and size as well as any population development strategies.
- Ensure that economic and social valuation tools and methodologies are incorporated into the decision-making process of natural resource use and population development strategies.

### **Sub-goal 3.3: Strengthen Collective Resilience to the Impacts of a Changing Climate**

Barbados and other small island developing states remain the most vulnerable countries in the world to climate change. This is the case even though collectively small island states contribute less than 1% to global greenhouse gas emissions that ultimately cause climate change.

Barbados is highly vulnerable to hurricanes and other natural hazards and is particularly susceptible to the potential impacts of climate change, including coastal inundation and sea level rise, an increase in tidal and storm surge levels, coastal erosion, rising temperatures, changes in rainfall patterns, drought and more frequent and intense tropical cyclones.

Analyses of regional climate models and projections suggest that ongoing global climatic changes have largely contributed to an average of nearly 5 to 20 per cent decline in seasonal rainfall in the Caribbean. Alongside the devastation that disasters continue to inflict on people in the region, countries are also grappling with coastal inundation and saltwater intrusion due to sea level rise estimated at 1.4 to 3.4 mm per annum.<sup>19</sup>

Efforts to limit the temperature increase to 1.5 degrees Celsius are imperative. Studies show that the difference between 1.5 degrees and 2 degrees Celsius, the threshold called for in the Paris Agreement, would mean 10-centimeter higher global sea-level rise by the start of the next century, longer heat waves, and would put virtually all tropical coral reefs at risk of dying off.

Coral reefs and other coastal ecosystems play a vital role in shoreline protection, beach creation, fish nurseries, recreational activities and education and training among other things.<sup>20</sup> This temperature increase has had considerable heat stress impacts on marine and terrestrial species populations. Humans can also be affected by these increased temperatures, and vulnerable communities such as those within an aging demographic may be especially susceptible to health impacts because of heat stress.

Further to the biophysical and social impacts, high-energy climatic events have had disastrous effects on island economies in the Caribbean. Countries have experienced over 200% losses in GDP from just one hurricane<sup>21</sup>. These GDP losses are then compounded by further losses in employment, public health expenditure, food production capacity, education system efficiency and natural ecosystem productivity. This vulnerability and combination of multi-dimensional impacts can be considered a threat to national security.

---

<sup>19</sup> <https://publications.iom.int/books/migration-environment-disaster-and-climate-change-data-eastern-caribbean-regional-overview>

<sup>20</sup> <https://www.caribbeanclimate.bz/blog/tag/1-5-degree-celsius/>

<sup>21</sup> <https://thedocs.worldbank.org/en/doc/7276af45227db85e778cd1586c68e040-0350082021/original/mpo-dma.pdf>

Barbados has begun to implement adaptation measures to address climate impacts and build a resilient society while demonstrating a commitment to reduce greenhouse gas emissions by transitioning to a low-carbon economy by 2030. Key policy instruments in use with integrated approaches to reduce the impacts of climate changes include the *Barbados Physical Development Plan*, the *Draft Integrated Coastal Zone Management Plan (2020-2030)* and the Government's model integrated development framework represented in the *Roofs to Reefs Programme*.

To secure climate resilient development across all sectors and levels of governance, the following should be undertaken:

- Promote forward planning through the utilisation of the national, regional and community physical development plans to integrate climate change as a cross-cutting consideration across all components of land use planning, natural resources management and development management.
- Introduce ecosystem-based interventions combined with existing strategies to improve ecosystem health, address climate change and known coastal hazards.
- Strengthen governance and partnerships between the public sector, private organisations and non- governmental organisations to harness scarce resources and build capacity to combat the effects of climate change and the wider spectrum of disaster risk management activities.
- Encourage the inclusion of design measures for climate change adaptation and resiliency that must be incorporated into site plans for new facilities.
- Improve technical capacity and sustainable livelihoods in climate resilience.
- Promote regeneration and conservation practices wherever possible to ensure the preservation and improvement of natural habitats.
- Implement risk resilient integrated coastal zone management to safeguard livelihoods, investments and natural ecosystems in the face of a range of coastal hazards including climate change.
- Encourage investment into climate resilience and habitat regeneration projects by new infrastructural and economic development initiatives.
- Increase the overall health and resiliency of natural habitats and avoid the degradation of ecosystems which support livelihoods and infrastructure.
- Encourage energy efficient technologies and the use of renewable energy generation elements for all new infrastructure developments.



## **Implementation Framework**

The Population Policy is cross-sectoral and its implementation will depend on the engagement of the Government, social partners, civil society actors, trade unions, private sector and communities. It should be accompanied by a plan of action developed by an Inter-sectoral Implementation Group (ISIG) that is accountable and reporting to the National Strategic Council.

The Plan of Action should be the framework for the design, financing, monitoring and evaluation, collaboration and coordination of the Plan. It should identify responsible and lead agencies for the implementation of the goals and sub-goals. The plan of action should contain time-bound commitments and be adequately resourced to ensure accountability for implementation. The ISIG should constitute a sub-committee to develop the managed migration policy.

This ISIG should be chaired by the Ministry of Economic Affairs, with thematic sub-committees co-chaired by relevant line ministries and civil society Implementation Group partners. The ISIG would have the following responsibilities:

- Development of a time-bound and resourced action plan.
- Providing leadership and coordinating and mobilizing support for population programmes.
- Tracking and assessing the impact of population programmes and making policy recommendations based on the assessment results.
- Assisting stakeholders and partners in the integration of priority population interventions.
- Oversight on implementation of the Action Plan work towards achieving its main objectives, which include: -
  - To improve knowledge and information base on population issues.
  - To improve policy framework and environment for population issues.
  - To enhance capacity for programme planning, coordination, monitoring and evaluation.
  - Coordinate the development and implementation of an M&E framework for the Plan of Action.

The ISIG should report to the Cabinet through National Strategic Council Team on its work and the progress of implementation at least twice a year to ensure political will and connectivity.

A Monitoring and Evaluation framework is essential for the accountability of responsible agencies for the effective implementation of the Population Policy and the Plan of Action. Periodic monitoring will promote sectoral engagement and oversight as well as communications across governmental departments and with social partners. An M&E framework will also be important for continuous engagement with the public to get their feedback and recommendations on the implementation of the Policy.

The M&E framework should also include sectoral frameworks to monitor activities in support of the Policy goals. All assessments should be made available to the public.

## **Conclusion**

The Policy promotes measures for a vibrant society and economy characterized by Barbadians and other resident populations who are engaged, empowered and resilient to contribute to sustainable and inclusive development and take care of each other with the support of a strong and engaged state.

The Policy is concerned with addressing the issues that flow from an aging population through recommendations for targets for population increases through managed migration as well as through interventions that may spur an increase in fertility rates. The Policy also prioritises measures that will address the quality-of-life concerns of present Barbadians and residents, including under- and unemployment of youth. The Policy measures are consistent with Barbados as a caring society especially those who belong to vulnerable sub-populations such as disabled persons, the elderly, and children. The family as a basic unit of a caring society is affirmed with attention paid to the sharing of the care burden between women and men, consistent with the core value of gender equality.

Civil society, the public sector, the private sector, regulatory mechanisms, faith-based organizations, community groups and the family have critical roles to play in setting the stage to achieve the objectives that lend credence to the perception that Barbados is a caring society.

Recurring themes from the consultations which informed this Policy are i) gender equality in the sharing of care responsibilities and ii) the urgency of education reform away from testing and towards an affirmative experience that draws out and values the diversities of individual skills and competencies and grows cultural confidence; and iii) the strengthening of environmental management.

Family and community caregiving is still a gendered experience given the traditional division of labour which ascribes to women the predominant responsibility for care of children, the elderly and vulnerable populations. This work continues to go under-valued and under-recognised. While there are cultural shifts, these must be accelerated through regulation, resources and education so that women and men can contribute to family and public life in ways that broaden their choices based on mutual obligations to care and protect families.

The education sector should strengthen diverse civic engagement, labour market productivity, security and more comprehensive experiences of fairness and inclusion. An education sector re-envisaged away from the colonial and post-colonial focus on testing and realigned to the rounded development needs of individuals and communities is also desirable to respond to the causes and consequences of the projected population trends.

Barbados has championed environmental management, and this must be sustained and amplified. The Policy seeks to outline strategies for managing the interactions between the population and the natural environment to secure the ecological balance needed for a good

quality of life now and for future generations.



## Population Policy Goals and Action Plan

The Barbados Population Policy is based upon one demographic goal, that is, a goal that seeks to increase the population size and structure and two (2) non-demographic goals. The demographic goal facilitates changes in migration and fertility outcomes that would result in an incremental increase in population size. The non- demographic goals outline approaches to secure a quality of life for all without discrimination and to ensure environmental sustainability. Within each family of goals, specific objectives and actions are set out as are the principal domains of population policy-related activities. These principal domains indicate institutional responsibilities for implementation of the Population Policy.

**The Barbados Population Policy promotes sustainable and inclusive development and good quality of life for Barbadians and residents without compromising environmental sustainability and the ability of future generations to meet their needs.**

<b>Policy Goal 1: Ensure a Population Size Sufficient to Grow and Sustain Adequate Levels of Social Care, Productivity, Labour Force Participation and Revenue for Inclusive Development</b>		
<b>Sub-goal 1.1: Increase the Population of Persons of Working Age</b>		
<b>Domains</b>	<b>Objectives</b>	<b>Actions</b>
Population Dynamics	To increase access to public and private institutions for skilled workers to address unmet labour force requirements in a timely manner.	<ul style="list-style-type: none"> <li>● Extend the categories of persons entitled to citizenship and permanent residence;</li> <li>● Retain and encourage repatriation of Barbadians and stem the brain drain; and</li> <li>● Promote managed migration of persons who can bring capabilities and resources to invest in the future of Barbados and to contribute to areas of the economy where there are unmet labour and skills requirements.</li> </ul>

	<p>To develop and implement a managed migration policy</p>	<ul style="list-style-type: none"> <li>● Develop and implement a managed migration policy that should be informed by an industrial policy and based on a robust labour market information system. Such a system would provide a systemic basis for evaluating the demand for and supply of labour by sector.</li> <li>● Remove obstacles associated with immigration protocols/initiatives that are likely to inhibit prospective investment and labour services</li> <li>● Review bureaucratic requirements for the timely granting of CSME skilled national certification.</li> <li>● Secure migrant integration through policies that support: <ul style="list-style-type: none"> <li>○ Labour force mobility</li> <li>○ Pathways to citizenship or permanent residence</li> <li>○ Family reunion</li> <li>○ Access to affordable health care and education by accompanying family members</li> <li>○ Access to financial services</li> </ul> </li> <li>● Promote dialogue and interaction with Barbadians to facilitate integration and multi-culturalism while securing and advancing Barbadian cultural identity and values.</li> <li>● Devise data collection systems to monitor changes in population distribution due to managed migration and analyse the implications of such changes, on, for</li> </ul>
--	--	--

		example, demands for social services, education and health services, infrastructure, and security.
	To prevent and reverse the brain drain phenomenon.	<p><b>Retention:</b></p> <ul style="list-style-type: none"> <li>● Education reform that responds to and values the diversity of capacities needed in the society and economy.</li> <li>● Access to affordable land for productive uses.</li> <li>● Increasing productivity in high-skilled occupations, many of which are in the public sector.</li> <li>● Improve the delivery of public services to support private sector development and job creation.</li> <li>● Provision of tax concessions for the initial years of employment</li> </ul>
		<p><b>Repatriation</b></p> <ul style="list-style-type: none"> <li>● Extension of accessible basic services, including the supply of information on social security and health care entitlements, accommodation/housing, job opportunities and education for children, continued untaxed import of vehicles and other belongings and the granting of a residence permit and citizenship to family members.</li> <li>● Integration support: facilitate access to employment information and educational institutions and investment opportunities.</li> </ul>

		<ul style="list-style-type: none"> <li>● Facilitate access to affordable land and housing.</li> <li>● Reduce bureaucracy related to the establishment of new businesses.</li> <li>● Create and subsidise innovation laboratories for youth entrepreneurs.</li> </ul> <p><b>Periodic and Partial Return</b></p> <ul style="list-style-type: none"> <li>● Facilitate easy accessibility of school places for children</li> <li>● Affordable housing</li> <li>● Establishment and marketing of linkages between the diaspora community and professional institutions for volunteering and participation</li> <li>● Tax incentives e.g., duty free concessions, VAT exemptions</li> </ul>
<b>Sub-goal 1.2: Enhance Family Wellbeing to Support Reproductive Decision Making</b>		
<b>Domains</b>	<b>Objectives</b>	<b>Actions</b>
<p>Population dynamics</p> <p>Gender Equality, Equity and Empowerment of Women</p> <p>The Family, its Roles, Rights, Composition and Structure</p> <p>Reproductive Information, Rights and Health Services</p>	<p>To reduce the structural barriers to childbearing and support fertility decision-making</p>	<p><b>Addressing structural barriers to childbearing:</b></p> <p><b>Social protection and social services</b></p> <ul style="list-style-type: none"> <li>● Provision of child benefit subsidies especially for low-income single parents</li> <li>● Provision of free or highly subsidized quality childcare, especially for children below the age of 3</li> <li>● Subsidize housing for low-income single parent households</li> <li>● Provision of tax concessions for families with dependent children</li> </ul>

		<ul style="list-style-type: none"> <li>● Provision of Subsidies for childcare materials</li> <li>● Building on existing initiatives such as PAREDOS, develop a case management approach to support parents and families for social care support.</li> <li>● Ensure the implementation of a gender-responsive child support legal framework.</li> <li>● Provide community counselling centres to support parents.</li> </ul> <p><b>Social norms changes</b></p> <ul style="list-style-type: none"> <li>● Promoting equal sharing of unpaid care work between women and men.</li> <li>● Use school-based approaches to address restrictive gender roles, relations and stereotypes.</li> </ul> <p><b>Labour force measures</b></p> <ul style="list-style-type: none"> <li>● Strengthened parental protection legislative scheme</li> <li>● Provisions for longer periods of maternity leave, depending on the number of children under school going age in the household; and</li> <li>● Establish paternity leave and shared parental leave measures.</li> <li>● Promote flexible working arrangements. This includes part-time work, compressed work weeks, tele-commuting and working from home, alternative office spaces and job-sharing</li> </ul> <p><b>Access to Health Care</b></p>
--	--	--

		<ul style="list-style-type: none"> <li>● Ensure access to affordable fertility assessments and treatments for women and men</li> <li>● Increase education and training for health care providers regarding fertility preservation, infertility diagnosis, safety and effectiveness of infertility treatment options and referral to providers of infertility care.</li> </ul>
Reproductive Rights and Reproductive Health Youth Development	To ensure non-discriminatory and age-appropriate access to sexual and reproductive information, and services across the life cycle.	<ul style="list-style-type: none"> <li>● Adopt Age-appropriate and non-discriminatory comprehensive life skills education in schools consistent with the developing capacities of young people.</li> <li>● Ensure access to quality sexual and reproductive services, including for adolescents and youth</li> </ul>
<b>Policy Goal 2: Provide Barbadians and Non-Nationals in Barbados Now and in the Future with Opportunities for Personal Development</b>		
<b>Sub-goal 2.1: Promote and Strengthen the Care Economy across the Lifecycle and for the Vulnerable Populations</b>		
<b>Domains</b>	<b>Objectives</b>	<b>● Actions</b>
Gender equality, equity, and empowerment of women  Male responsibilities and participation	To promote the valuing and inclusive sharing of care work in families, households and communities.	<ul style="list-style-type: none"> <li>● Promote the equal sharing of care work within families.</li> <li>● Promote the value of sharing care responsibilities and ending restrictive gender stereotypes in the school system.</li> <li>● Recognise the full-time and/or part-time domestic care contributions in pension schemes within the National Insurance Scheme.</li> <li>● Promote workplace practices that</li> </ul>

		<p>reflect provision and allowances for caregiving arrangements in family settings.</p> <ul style="list-style-type: none"> <li>● Ensure the inclusion of full-time and/or part-time domestic care givers in pension schemes within the National Insurance Scheme.</li> </ul>
	To support home caregiving for the elderly and other dependents.	<ul style="list-style-type: none"> <li>● Reduce taxes on commodities for the elderly.</li> <li>● Provide tax breaks or cash allowances for caregivers who, within the confines of their private household, provide care for elderly people or other dependents.</li> <li>● Train a cadre of people who can provide remunerated and temporary care to give primary care givers periodic respite.</li> <li>● Promote family-friendly policies in the workplace for those caring for elderly family members (including flexible work schedules and telecommuting).</li> <li>● Develop a national caregiver support programme that includes individual counselling, support groups and training.</li> </ul>
<p>Population dynamics</p> <p>Integrated population and development strategies</p> <p>National Policy on the Elderly</p>	To ensure that people who are vulnerable because of age, illness and/or disability lead dignified lives, receiving adequate physical, social and psychological care.	<ul style="list-style-type: none"> <li>● Review and adoption of the draft National Policy on Aging which addresses caregiving and integration and participation.</li> <li>● Review the functioning of residential institutions for vulnerable populations as an input into strengthening protocols for care facilities.</li> </ul>

		<ul style="list-style-type: none"> <li>● Promote, recognise and support in-home caretaking through the provision of trained and remunerated caretakers.</li> <li>● Work with civil society community-based organisations to promote social circles for exercise and interaction.</li> <li>● Encourage ‘on the job’ intergenerational mentorships.</li> <li>● Ensure transportation affordability and accessibility to encourage mobility across the life cycle and different abilities.</li> </ul>
<b>Sub-goal 2.2: Expand Access to Quality Health Care and Wellness Service Interventions</b>		
<b>Domains</b>	<b>Objectives</b>	<b>● Actions</b>
Health and wellness sector	To increase training and capacity of healthcare providers.	<ul style="list-style-type: none"> <li>● Increase training and capacity of healthcare providers in prevention, primary care, early rehabilitative care, gerontology, non-communicable diseases, dentistry and other needed specialist areas including allied health.</li> <li>● Assess and provide human resources for health and wellness, for example, increasing the number of available posts in specialist areas.</li> </ul>
Primary health care	<p>To strengthen prevention and control approaches across the life cycle.</p> <p>To support participation in public spaces by persons of all generations and abilities.</p>	<ul style="list-style-type: none"> <li>● Reinforcement of health and wellness clinics that include support services that take a holistic approach to health and wellness with specific focus on: <ul style="list-style-type: none"> <li>i. women’s health and wellness;</li> <li>ii. support and self-management of treatment regimens; and</li> <li>iii. men’s health and wellness.</li> </ul> </li> </ul>



		<ul style="list-style-type: none"> <li>● Use policy measures such as taxation of unhealthy foods and subsidies on healthy foods as incentives to influence and promote healthy nutrition, including production and consumption of locally produced food.</li> <li>● Increase availability of land and support agricultural practices that increase the supply of local fruits and vegetables.</li> <li>● Develop and encourage safe social spaces that are also responsive to the mobility and recreational needs of specific populations, and which provide opportunities for intergenerational interactions at community levels.</li> <li>● Ensure that all private and public buildings and facilities make provision to incorporate measures that permit ease of access and mobility for persons with disabilities.</li> </ul>
<p><b>Sub-goal 2.3: Improve the Capacity and Proficiency of the Labour Force with Access to Expanded Opportunities</b></p>		
<p><b>Domains</b></p>	<p><b>Objectives</b></p>	<p><b>Actions</b></p>
<p>Human resources, Education, population and sustainable development Partnership with the private sector Education National policies and plans of action for children and youth, elderly persons</p>	<p>To prepare potential workforce for entering and productively participating in the labour force (hard and soft skills).</p> <p>To enhance the skill sets of potential entrants and those currently in the labour force to match the skills required in all sectors, including new emerging sectors.</p>	<p><b>Education sector</b></p> <ul style="list-style-type: none"> <li>● Review and improve curricula and teaching methods in primary, secondary and tertiary education as they relate to science, technology, engineering and mathematics (STEM) subjects.</li> <li>● Review and improve curricula and teaching methods in secondary, post-</li> </ul>

	<p>To promote entry and retention in the labour force through the provision of decent working conditions, training opportunities and opportunities for advancement.</p> <p>To encourage NEET youth to participate in the formal labour market.</p> <p>To prevent and reverse the skills drain.</p>	<p>secondary and tertiary education to inculcate innovation, entrepreneurial behaviour and issues related to the acquisition of soft skills (conflict resolution, leadership, communication, inter- personal skills etc.), financial literacy and job-seeking skills.</p> <ul style="list-style-type: none"> <li>● Facilitate the relevant accreditation (e.g., Barbados Accreditation Council) of any reviewed or amended curricula to ensure international acceptance to the benefit of current student retention and attraction of external students.</li> </ul> <p><b>Technical and vocational training</b></p> <ul style="list-style-type: none"> <li>● Enhancement of skill sets of the current workforce to meet the demands of new jobs in emergent industries (heritage tourism, renewable energy, graphic design and animation, software development, specialty rum, pharmaceuticals, and biotech products).</li> <li>● Provision of opportunities for structured arrangements that would permit qualification and certification for persons providing care services in the home, whether serving the needs of children, the elderly or the disabled. Promotion of technical and vocational education and training (TVET) and the implementation of a</li> </ul>
--	--	--

		<p>comprehensive dual-track TVET system where institutional instruction is complemented by practical work and experience.</p> <ul style="list-style-type: none"> <li>● Facilitate Research and Development to enhance productivity and competitiveness.</li> <li>● Targeted dissemination of information on employment and education/training opportunities for NEET youth by relevant government agencies.</li> </ul> <p><b>Partnerships</b></p> <ul style="list-style-type: none"> <li>● Encourage investment in training in both the private and public sectors especially with respect to improving the quality of vocational training with a heavy emphasis on the acquisition of digital skills.</li> <li>● Establish partnerships with families, community-based organizations, faith-based organizations and labour unions, specifically targeting youth not in employment, education, or training (NEET) to directly inform them of opportunities and assist them with capitalizing on such opportunities for training and prospects for becoming employable and/or employed.</li> <li>● Implementation of incentives for industry-academia linkages to <i>enhance collaborative capacities</i> across industry and academia. This</li> </ul>
--	--	--

		<p>allows for greater matching of the supply and demand for skills.</p> <ul style="list-style-type: none"> <li>● Encourage investment and partnership agreements that will <i>foster participation in research and development</i> initiatives involving the public sector, the business community and academia.</li> <li>● Commission dedicated ministries, research support centres and science councils to provide for a one-stop-shop for innovators.</li> </ul> <p><b>Regulatory and administrative processes</b></p> <ul style="list-style-type: none"> <li>● Review of the mandatory age of retirement</li> <li>● Promote agenda consistent with the attainment of decent work in keeping with ILO’s Decent Work protocols.</li> <li>● Continued development of labour market data systems and development of institutional linkages for the realisation of a comprehensive labour market information system which is accessible and current</li> </ul>
<b>Policy Goal 3: Promote Integrated Settlement Development and Safeguard the Ecological Balance</b>		
<b>Sub-goal 3.1: Reconcile Population Redistribution, Land Use and Settlement Patterns</b>		
<b>Domains</b>	<b>Objectives</b>	<b>● Actions</b>
Population growth, urbanization, and internal migration/commuting	To promote the efficient use and management of land and services for integrated, sustainable, resilient development.	<ul style="list-style-type: none"> <li>● Adopt the current Barbados Physical Development Plan with detailed policy guidelines that <i>inter alia</i> seek to:</li> </ul>

		<ul style="list-style-type: none"> <li>● Promote the efficient use of land and services through compact, contiguous and mixed-use development.</li> </ul>
Population redistribution and health care	To encourage the design and development of compact, well-connected and complete communities with a distinct sustainable working landscape.	<ul style="list-style-type: none"> <li>● Encourage vibrant, walkable, and prosperous cores are tailored to the distinct possibilities of each community (commercial, residential, and cultural spaces).</li> </ul>
Policy and environment		<ul style="list-style-type: none"> <li>● Promote the designation of Predominantly Residential Areas to be areas located within the Urban Corridor, Stable Suburban Areas and National Park Villages and intended to be developed as compact and complete communities.</li> <li>● Protection of community cores, namely, the commercial, residential and cultural heart and central places of Barbados, providing the densest concentration of people, buildings, and activities.</li> <li>● Encouragement of higher density residential development within the Urban Corridor.</li> <li>● Encouragement of major development facilities and essential services infrastructure (health-related, police stations, post offices, libraries, community centres) in Regional and Local Centres</li> <li>● Review of school locations to ensure proximity to urban settlement areas and well serviced by transportation options and to respond to rising or falling populations of school age children.</li> <li>● Incorporate adaptive reuse of public and</li> </ul>

		<p>heritage buildings;</p> <ul style="list-style-type: none"> <li>● Designation of an extensive area outside of the Urban Corridor and National Park as a Working Landscape for the harmonious co-existence and management of agricultural production, renewable energy initiatives, resource extraction, solid waste management and a mixture of essential infrastructural services.</li> <li>● Review transport routes based on population changes and commuting patterns and ensure access for all to safe, age and gender responsive, affordable, accessible and sustainable urban mobility and sea transport systems;</li> <li>● Promotion and incentivization of transit use and active transport</li> <li>● Institution of the requirement for EIAs and SIAs for any significant expansion of existing or development of new sporting complexes or facilities dedicated to serving communities or the national public.</li> </ul>
<b>Sub-goal 3.2: Ensure Efficient Management of Natural Resources and the Environment</b>		
<b>Domains</b>	<b>Objectives</b>	<b>● Actions</b>
<p>National policies and plans of action</p> <p>Health promotion</p> <p>Land use</p> <p>Management of natural resources</p>	<p>To strengthen an integrated decision-making framework for development initiatives to safeguard our essential ecosystem services and reduce vulnerability to natural hazards.</p>	<ul style="list-style-type: none"> <li>● Encourage Integrated Water Resource Management approaches and water efficient systems in community development plans as well as public, private and household building design.</li> </ul>

<p>Population and environment</p>		<ul style="list-style-type: none"> <li>● Strengthen the protection of water resources alongside economic development and population expansion through integrated water use and supply plans for proposed developments.</li> <li>● Institute legislative arrangements requesting agricultural impact statements as pre-requirements for new major developments proposed on or adjacent to lands designated for agricultural use.</li> <li>● Reinforce the protection and continued existence of food and agricultural areas within the urban corridors of Barbados.</li> <li>● Institute legislation for applications for infrastructural development within 30 metres of the coast to be subject to EIAs, SIAs and other supporting technical studies.</li> <li>● Encourage new development, as well as institutional, community facilities and national infrastructure projects outside of Natural Hazard Areas.</li> <li>● Strengthen regulations, monitoring and enforcement for pollution control as it relates to water pollution, illegal dumping and habitat disruption.</li> <li>● Encourage the inclusion of design measures for climate change resiliency that must be incorporated into site plans for new facilities.</li> </ul>
-----------------------------------	--	--

		<ul style="list-style-type: none"> <li>● Ensure that economic and social valuation tools and methodologies are incorporated into the decision-making process of natural resource use and population development strategies.</li> </ul>
<b>Sub-Goal 3.3 Strengthen Collective Resilience to Impacts of a Changing Climate</b>		
<b>Domains</b>	<b>Objectives</b>	<b>Actions</b>
National policies and plans of action  Management of natural resources  Management of development and land use	To promote climate resilient development across all sectors and levels of governance.	<ul style="list-style-type: none"> <li>● National, regional and community physical development plans to integrate climate change as a cross-cutting consideration.</li> <li>● Introduce ecosystem-based interventions combined with existing strategies to improve ecosystem health, address climate change and known coastal hazards.</li> <li>● Strengthen governance and partnerships between the public sector, private organisations and non- governmental organisations to build capacity to combat the effects of climate change and the wider spectrum of disaster risk management activities.</li> <li>● Encourage the inclusion of design measures for climate change adaptation and resiliency that must be incorporated into site plans for new facilities.</li> <li>● Improve technical capacity and sustainable livelihoods in climate resilience.</li> </ul>



		<ul style="list-style-type: none"><li>● Promote regeneration and conservation practices wherever possible to ensure the preservation and improvement of natural habitats.</li><li>● Implement risk resilient integrated coastal zone management to safeguard livelihoods, investments and natural ecosystems in the face of a range of coastal hazards including climate change.</li><li>● Encourage investment into climate resilience and habitat regeneration projects by new infrastructural and economic development initiatives.</li><li>● Increase the overall health and resiliency of natural habitats and avoid the degradation of ecosystems which support livelihoods and infrastructure.</li><li>● Encourage energy efficient technologies and the use of renewable energy generation elements for all new infrastructure developments</li></ul>
--	--	---

## **Appendix 1: Derivation of Population Size 2021 Census**

The total resident population estimates were derived from the corresponding 2010 Census estimates, adjusted by subsequent births and deaths which occurred each year to 1st August 2021, with an adjustment for net migration over the intervening period. This method was utilised to counteract the large undercount.

Collected data were also compiled on the institutionalized population and the homeless population, along with the tabulated Census population, as at 1st August 2021, to derive an estimate of the undercount in this Census.

The total resident population estimates were disaggregated by age-groups, based on ratios derived from the tabulated Census results. The disaggregation by parish was based on ratios derived from an analysis of administrative data utilised by the department.

## **Appendix 2: Population projections 2020-2050 based on the maintenance of a replacement rate since 1980**

While specifying the number of working-age people needed in Barbados to ensure social and economic vibrancy could seem arbitrary, and especially when not sufficiently informed by labour force data and an industrial policy framework, it is possible to establish credible and justifiable targets for population growth based on the maintenance of the fertility replacement rate.

Should the fertility rate stayed at the replacement rate (2.1) since 1980, the population of Barbados would have exceeded 360,000 by 2020 and would just fall short of eclipsing 400,000 by 2050.

### **Population Projections for Missing People Model – Barbados Five ear Intervals 2020-2050**

Year	Projected Population at fertility rate of 2.1
2020	360450
2025	372685
2030	382473
2035	389418
2040	393754
2045	396198
2050	397622

### **Appendix 3: An Examination of the Population Density and Gross Domestic Product per capita<sup>22</sup>**

While there may be a link between population size and economic growth, this link would be complex and uncertain given history, global economic conditions, variations in productivity and external stresses and shocks. In seeking to explore potentially feasible population sizes for Barbados, the following data highlights data on population density and GDP per capita.

Drawing on population and GDP data from the World Bank’s World Development Indicators database<sup>23</sup>, the following tables and charts outline the relevant population densities for countries with a GDP per capita higher than Barbados, and population densities over 500 persons per square kilometre; Barbados’ population density is 653 persons per square kilometre.

*Table 1: GDP per capita, Population Density, Population and Land Area for selected countries for 2020*

<b>Selected Countries</b>	<b>GDP per capita (constant 2015 US\$)</b>	<b>Population density (people per sq. km)</b>	<b>Population, total</b>	<b>Land Area (square km)</b>
Monaco	166911	18215	36922	2.027
Bermuda	99745	1183	63893	54
Singapore	59176	7919	5685807	718
Netherlands	46303	518	17441500	33670
Hong Kong SAR, China	41451	7125	7481000	1050
San Marino	41416	567	34007	60
Macao SAR, China	34562	20556	676283	32.9
Korea, Rep.	31372	531	51836239	97600
Aruba	25824	592	106585	180
Malta	25619	1610	515332	320
Sint Maarten (Dutch part)	23791	1244	42310	34
Bahrain	22579	1882	1477469	785
<b>Barbados</b>	<b>14856</b>	<b>653</b>	<b>280693</b>	<b>430</b>

Source: World Development Indicators (2023)

As shown in Table 1, there are 12 countries with a GDP per capita higher than Barbados and with population densities in excess of 500 persons per square kilometre. GDP per capita ranges from US\$22,579 (Bahrain) to US\$166,911 (Monaco). Population density ranges from 518 persons per square kilometre (Netherlands) to 20,566 (Macao SAR, China). It should be noted that there are four countries with a lower population density than Barbados but with a higher GDP per capita (Aruba, San Marino, Republic of Korea and the Netherlands).

<sup>22</sup> Prepared by Dr. Jonathan Lashley, member of the Barbados Population Commission

<sup>23</sup> <https://databank.worldbank.org/source/world-development-indicators#>

Figure 9: Population density by GDP per capita for Selected Countries (2020)

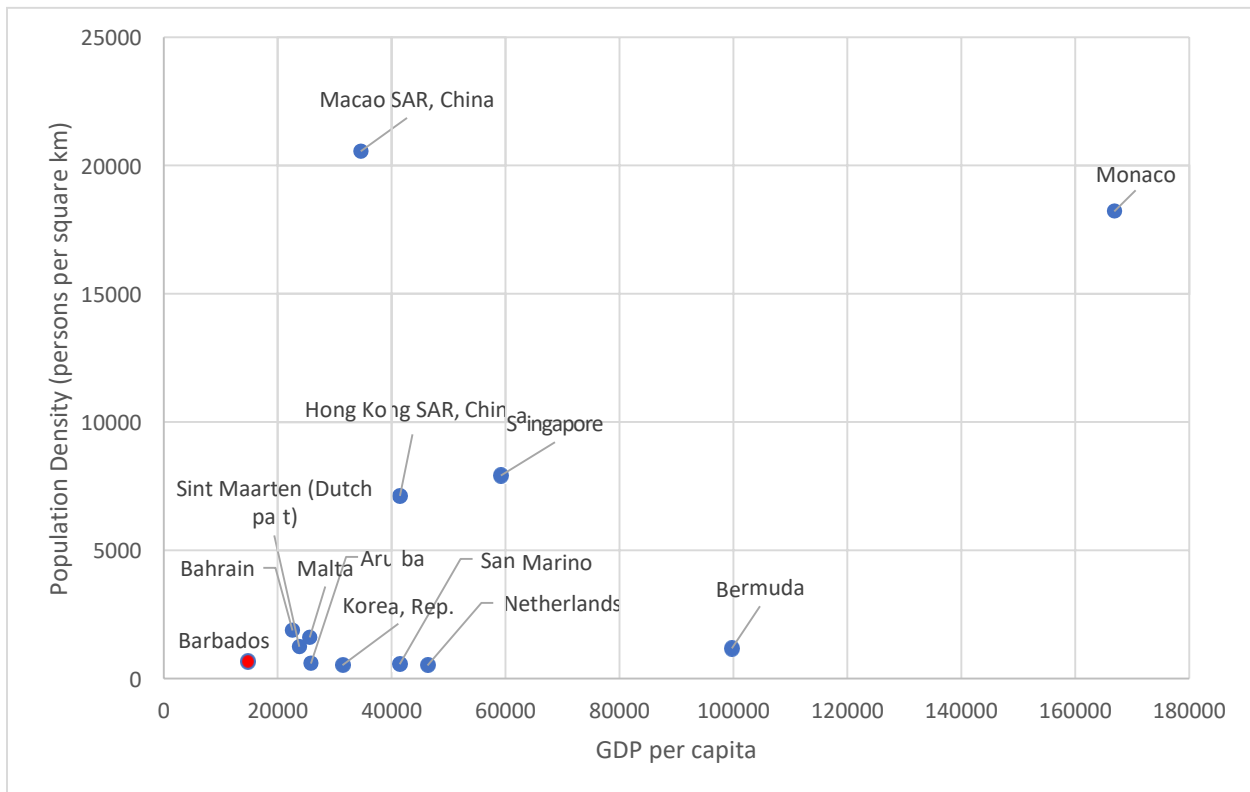


Figure 1 presents population density by GDP per capita. The data highlights some outliers, namely Monaco, Macao and Hong Kong (SAR, China), and Singapore in relation to both population density and GDP per capita. Bermuda, Netherlands, and San Marino can also be considered as outliers in relation to GDP per capita.

Table 2: Selected Countries by GDP per capita with Barbados' Population at Equivalent Population Density

Country	GDP per capita	Barbados Population at Equivalent Density
Macao SAR, China	34,562	8,838,957
Monaco	166,911	7,832,491
Singapore	59,176	3,405,149
Hong Kong SAR, China	41,451	3,063,648
Bahrain	22,579	809,314
Malta	25,619	692,477
Sint Maarten (Dutch part)	23,791	535,097
Bermuda	99,745	508,778
<b>Barbados</b>	<b>14,856</b>	<b>280,693</b>
Aruba	25,824	254,620
San Marino	41,416	243,717
Korea, Rep.	31,372	228,377
Netherlands	46,303	222,746

Table 2 presents Barbados' population at levels equivalent to the comparator countries. As the

table shows, countries with lower population densities than Barbados have achieved higher levels of GDP per capita (Aruba, San Marino, Korea Republic and the Netherlands); however, as noted previously, historical and structural issues would account for these differences. The same can apply for countries with higher population densities.

## **Appendix 4: Technical Note on the potential relationship impact of population growth on economic growth.**

### **Executive Summary<sup>24</sup>**

In surveying the literature on the impact of population growth on economic growth, from the somewhat bleak predictions of Malthus in 1789 to the contemporary works of (Bloom, Canning and Seville, 2001), (Pegou Sibe et al, 2016) and the (Chowdhury et al, 2018), there is overwhelming evidence that there remains a lack of academic consensus on the potential relationship between population growth and economic growth. The findings of the existing research indicate mixed results, where various studies show that population growth either encourages, dissuades or is independent of economic growth. This result suggests that assessing the relationship between these two variables is a more complex matter, which is influenced not only by the composition of a country's population but other factors including the structure of the economy and the prevailing social and finance policies and infrastructure.

### **Theoretical Basis**

In general, the literature on the possible linkage between population growth and economic growth remains largely unsettled. The question as to the potential consequences of population growth on growth, remains an ongoing discussion that has continued across the generations. In his 1798 writings, "An Essay on the Principle of Population," Mr. Thomas Malthus, was one of the first researchers to theorize on the direction and potential impacts of population growth. Mr. Thomas Malthus purported that without intervention, the population would increase in an unchecked manner, beyond the capacity for the natural resources and food production systems to sustain.

Malthus' theory was rooted in the notion that the population grew in geometrical manner and proposed that the population would likely double itself every twenty-five (25) years. In contrast he proposed that subsistence food production increased only in an arithmetical ratio, as such, even with the removal of barriers or restrictions to food production, population growth will eventually exceed the capacity for food production systems to meet demand. Malthus asserts that the only necessity for sustenance may act as a constraint to population growth.

He suggested that this emerging reality would lead to severe economic and social consequences, inclusive of depressed personal development, increased poverty, and famine, where the brunt of these damaging effects will be borne by those in the lower classes of society. As it relates to the labour market, Malthus proposed that a rapid unhindered increase in the population would also lead to reduced wages and deteriorating working conditions, as labour supply exceeds the demands of the market. On the other hand, the limitation in the supply of commodities would

---

<sup>24</sup> Prepared by the Economic Affairs and Investment Division, Ministry of Finance, Economic Affairs and Investment

lead to inflation, reduced standards of living, and an increase in the cost of care, particularly for child rearing.

However, today's conditions are generally not in line with the harshest of Malthus' predictions. As noted in the IMF World Economic Outlook, "The Global Demographic Transition," September 2004, "Today the theories of Malthus appear to be happening in reverse. As economic prosperity has risen around the world, fertility rates have fallen (and large gains in life expectancy have been made), resulting in slower population growth and aging." Additionally, Jinill Kim in the September 28, 2016 publication of the IFDP Notes entitled "The Effects of Demographic Change on GDP Growth in OECD Economies", stated that contradictory to the pessimist outlook of Malthus "that GDP growth per capita would fall due to a continued rapid increase in world population ...fertility rates instead plunged beginning in the 1960s. The global fertility rate (defined as births per woman), which was between 5 and 6 before 1950, declined below 3 in 2000 and is projected to be only around 2 by 2050. Correspondingly, the growth rate of the total world population, about  $1\frac{3}{4}$  percent in 1950, decreased to below  $1\frac{1}{4}$  percent in 2000, and is projected to stay barely

positive due to a longer life expectancy by 2050."

The neoclassical Solow-Swan growth model introduced by Robert Solow and T. W. Swan in 1956, asserts that output or growth in the economy (Y) at any time (t) is a function of the interaction three main factors of production, inclusive of capital (K), labour (L) and technology/(effectiveness of labour)(A), at that time, where labor is treated as equivalent to the size of the population and AL is a concept referred to as effective of labour.

$$Y(t) = F(K(t), A(t)L(t)) \quad (\text{equation 1})$$

The Solow-Swan model which builds on the Harrod–Domar model, allows for the examination of changes in the economy, based on the interaction and changes in factors of production. However, the model treats technology (effectiveness of labour) and labour as exogenous (external) variables, which grow at constant rates. As such, the changes in the economy are mainly viewed in terms of the changes reflected in capital. In particular, under the model output per unit effective labour ( $y=Y/AL$ ) can be seen as a function of capital per unit of effective labour ( $k=K/AL$ ),

$$y=f(k) \quad (\text{equation 2})$$

While changes in capital per unit of effective labour is viewed as the difference between actual investment per unit of effective labour [ $sf(k(t))$ ], [where (s) is the rate of saving] and the amount of investment required to keep capital per unit effective labour at the existing level (break-even). In this instance break-even investment [ $(n+g+\delta)k(t)$ ] is based on the influence of the rates of growth in the population (n) and technology (g) as well as the level of depreciation ( $\delta$ ) on the existing capital stock.

$$\Delta k(t) = sf(k(t)) - (n+g+\delta)k(t) \quad (\text{equation 3})$$



In general, the Solow-Swan model theorizes that a country's economy converges to a balance path growth/steady state, where  $k$  is  $k^*$ , that is where actual investment per unit of effective labour is equal to break-even investment  $[sf(k(t)) = (n+g+\delta)k(t)]$ . In this instance, each variable in the model ( $Y$ ,  $K$  and  $AL$ ) is growing at constant rate  $(n+g)$ . On a balance path of growth, capital per worker and output per worker is determined solely by the rate of technical progress.

As such, based on the model (refer to equation 3) an increase (decline) in the growth of the population ( $n$ ) would lead to a decline (increase) in the  $k^*$ . This would lead to a temporary reduction (increase) in output per worker, while the overall output of the economy will increase (decline) based on rate of population growth. However, the impact on the capital per worker, output per worker and the overall output will dissipate eventually (returning to the balance path of growth), given that in the long-term growth is driven solely by changes in technology.

In 1992, (Mankiw et al., 1992) introduced an augmented Solow model, which sought to account for accumulation of human capital (education etc.) and physical capital with regard to the effect of changes in the economy growth. Under this model "the negative impact of population growth is larger as population growth now forces economies to use their scarce savings to equip young people with physical and human capital. As a result, a 1% increase in population growth would decrease per capita income by 2%"<sup>25</sup> The potential contribution in education and other social services to development has been recognized by others such as (Ross-Brewster, 1996) who argued that the difference in development performance between countries (namely Barbados and Jamaica) can be somewhat defined in terms of the investment in social sector. He purported that the findings of empirical studies show that investment in education and health, together with their impact in reducing income equality, is the key to sustained growth.

At present some researchers have proposed that the demographic changes and economic conditions observed globally are more consistent, with the perspective highlighted within the Demographic Transition Theory. The Demographic Transition Theory was first introduced by Warren Thompson in 1929 and later formalized by Mr. Frank Notestein and indicates that all countries as part of their developmental process, will transition through various demographic changes in terms of patterns in mortality, fertility and growth rates over time. The demographic dynamics experienced by various societies can be characterized within five stages, inclusive of:

- Stage 1: preindustrial society- in which high mortality and high birth rates are recorded, leading to slow population growth. This stage has been referred to as Malthusian stagnation.
- Stage 2: developing society/early industrialization - fall in the mortality rate due to improvements in health care and sanitation, while the birth rate remains high, leading to rapid population growth.
- Stage 3: the birth rate gradually begins to fall, while the mortality rate continues to decline, which leads to a fall in the rate of population growth. The adjustments

---

<sup>25</sup>[The impact of population growth on economic growth and poverty reduction in Uganda \(econstor.eu\)](http://econstor.eu)

- observed at this stage are usually related to the introduction/enhancement of access to family planning services and improved economic opportunities for women.
- Stage 4: birth and death rates are both low, stabilizing the population. These societies are usually characterized by access to better health care and education and more favorable opportunities for employment. In this stage, improvement in life expectancy is expected, while the population remains stable.
  - **Stage 5:** At this stage the population begins to decline.

Bloom, Canning and Seville, 2001 notes that varying positions on the impact of population growth on the economy, “restricts, promote or is independent of economic growth”, focus mainly on the concepts of population size and growth. Bloom, Canning and Seville, 2001 stated that the age structure of population, resulting from the demographic dynamics occurring in society, has a significant impact on the performance of an economy and determine the distribution of resources in a country. A country with a high proportion of dependents (whether children or elderly) will devote a significant proportion of its resources to their care, which they argue can depress growth. In contrast, where a majority of a country’s population is of working age “the added productivity of this group can produce a “demographic dividend” of economic growth.”

In this context demographic dividend is defined as “the economic growth potential that can result from shifts in a population’s age structure, mainly when the share of the working age population(15 to 64) is larger than the non-working age share of the population (14 and younger, and 65 and older).<sup>26</sup> As highlighted in the United Nations Economist Analysis entitled “Harnessing the Economic Dividends from Demographic Change” “A larger working-age population can contribute to increased labour force participation, driving economic growth and productivity. Individuals in this group tend to also accumulate savings at a higher rate, facilitating further investment-led growth and development. A youthful and dynamic population brings fresh ideas and energy to the economy, fostering innovation and entrepreneurship”<sup>27</sup>

Bloom, Canning and Seville, 2001 suggested that a number of developing countries are experiencing demographic transition, from high to low rates of fertility and mortality and as a result will experience a period, where the population will increase significantly and provide an opportunity for these territories to capitalize on the “demographic dividend”. However, the opportunity to maximize on the economic benefits related to “demographic dividend”, will be dependent on the country facilitating the requisite enabling environment, inclusive of conducive policies and infrastructure in the areas of health, education, family planning, and labor. Bloom, Canning and Seville, 2001 also purported that exploiting the advantage posed by “demographic dividend” can lead to a sustained level of economic prosperity for a country for a long period. On the other hand, failure to institute such polices, can also have severe consequences. “At worst, where an increase in the working-age population is not matched by increased job opportunities,

---

<sup>26</sup> [Demographic dividend \(unfpa.org\)](http://unfpa.org)

<sup>27</sup> [Frontier Technology Issues: Harnessing the economic dividends from demographic change | Department of Economic and Social Affairs \(un.org\)](#)

they will face costly penalties, such as rising unemployment and perhaps also higher crime rates and political instability.”

### **Empirical Evidence**

A large body of research has been undertaken to investigate the potential relationship between population growth and economic growth over the years, the findings of which indicate varying results with regards to the correlation of these variables, whether it be positive, or negative or no relationship. The following are findings of select studies conducted in different countries on this matter:

Callen et. A, 2004, the IMF World Outlook, “The Global Demographic Transition,” September 2004 investigated the relationship between demographic variables (inclusive of 1: Share of working-age population; and 2: Share of elderly population) and per capita GDP growth, saving, investment, the current and fiscal balance, for 115 country panel data set covering the period 1960-2000. The results indicated that per capita GDP growth is positively correlated with changes in the relative size of the working-age population and negatively correlated with changes in the share of the elderly population. The study also indicated that based on the UN’s population projections extending to 2050 “the projected increase in elderly dependency ratios and the projected decline in the share of the working-age population could result in slower per capita GDP growth, and lower saving and investment” in advanced economies. The impact on growth in developing countries varied by region, with favorable improvement expected in Africa and the Middle East; changes on the demographics “are likely to weigh on growth in central and eastern Europe and, to a lesser extent, in Asia and Latin America by 2050”.

Hock Tsen and Furuoka, 2005 observed mixed results during the investigation of the relationship between population and economic growth in Asian economies, where the Granger causality method was applied. They concluded that the impact of population growth, whether beneficial or detrimental, to economic growth in a country could not be predetermined with certainty. The results confirmed a bidirectional Granger causality between population and economic growth for Japan, Korea and Thailand; while for China, Singapore and the Philippines population is found to Granger cause economic growth and not vice versa. For Hong Kong and Malaysia, economic growth is found to Granger cause population growth and not vice versa. For Taiwan and Indonesia, there is no evidence of Granger causality between population and economic growth.

Klasen et al, 2007, in the working paper “The Impact of Population Growth on Economic Growth and Poverty Reduction in Uganda” investigated the likely effect of population growth on per capita economic growth and poverty in Uganda, using cross section analysis of data over the period 1960 to 2020. The results indicated that population growth had a positive impact on overall economic growth (GDP), under both the Harrod-Domar Model and Solow Model; however, an additional person/increase in population has less than proportionate influence on economic growth.

Savas, 2008, investigated the causal relationship between population and per capita economic

growth in the Central Asian Economies (CAEs) namely, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. Using the ARDL approach to cointegration, a relationship between population and economic growth was determined as strong and positive in the CAEs over the period of the analysis. The researcher suggested that the results imply that the CAEs seem to be in the second stage of the demographic transition, called post-Malthusian regime, in which the relationship between income and population growth remains highly strong and positive. The findings support the existence of a long-run relationship between population and real per capita income and provide strong support for the hypothesis that population is driving growth. The results of causality tests suggest that there appears to be bi-directional causality when causality is assumed to run from population to real per capita or vice versa in the long run for all of the countries, while there are no feedback effects from real income to population in the short run, only for Turkmenistan and Uzbekistan.

Chang et. Al, 2014 investigated the link between population growth and economic growth in 21 countries over the period 1870-2013, with the application of the bootstrap panel causality test. The results established a connection between population growth and economic growth for a number of the countries; however, the nature of the relationship varied across each country, while no relationship between population and economic growth was established for other territories. A one-way Granger causality running from population growth to economic growth was observed for Finland, France, Portugal, and Sweden; and a one-way Granger causality running from economic growth to population growth for Canada, Germany, Japan, Norway, and Switzerland. Additionally, no causal relationship between population growth and economic growth is found in Belgium, Brazil, Denmark, Netherlands, New Zealand, Spain, Sri Lanka, the UK, the USA and Uruguay; while a two-way relationship for population growth and economic growth was observed for Austria and Italy. These results varied further when the data is split between time period.

Kim, 2016 assessed how a changing age structure of the population (between four groups-ages 0-14, 15-39, 40-64, and 65+) affected GDP growth using cross-country data for 18 advanced OECD countries. In general, the findings indicated that an increase in the population share of the young and elderly population tended to lower the growth rate of GDP, while an increase in the population in the two groups between 15 and 65 years old would tend to boost the GDP growth rate. Demographic changes accounted for a significant portion of the downward trend in economic growth of these countries during the past decade.

Pegou Sibe et al, 2016 employed the Error Correction Model method to estimate the long run relationship between population growth on economic growth and the granger causality test to identify a bi-directional causality between economic growth and population growth (per capita income) on panel data for 30 of the most populated countries of the world over the period 1960 to 2013. The results indicated that population growth acts as catalyst to economic growth and that there is a bi-directional causality, when causality is assumed to run from population to real per capita or vice versa in the long run for the selected countries reviewed.

Ahmad, R. N. and Ahmad, K., 2016, examined the relationship between economic growth (the

dependent variable) and population, fertility rate, employment, education and investment (independent variables) in Pakistan over a 35-year period (1981 to 2015). At that time Pakistan was one of highest populated countries in the world and from 2011 to 2012 recorded a total fertility rate of 3.4. Using the Unit root test of ADF, co-integration and auto-regressive distributed lags test to analyze the results, it was concluded that population and fertility rate negatively impacts economic growth in Pakistan. In contrast investment and employment are shown to have a positive impact on economic growth. Ahmad, and Ahmad, asserted that the “overall study concludes that the population has a great hindrance in way of economic growth of Pakistan. If not controlled than it can be very harmful for our economy.”

Chowdhury et al, 2018, in the paper entitled “Population and Economic Growth in Bangladesh: Malthus Revisited”, the relationship between population growth and economic development in terms of per capita GDP was examined in Bangladesh. In 2016, Bangladesh represented the second fastest growing country in the world with 7.1% GDP growth. Bangladesh is one of the most densely populated countries in the world with 3,310 people per square mile. The study undertook a simple linear regression analysis of yearly times series data from the period of 1960 and 2017, and the results indicated a clear negative and statistically significant relationship between per capita GDP and population growth rate, where a 1% increase in population growth leads to a decrease per capita GDP by 1.95%. The author concludes that population growth adversely effects the economic development of Bangladesh, which supports the Malthus prediction and suggests that such growth places pressure on investment growth and diminishes the savings rate.

## **Conclusion**

In conclusion, there are numerous viewpoints regarding the potential relationship between population growth and economic growth within territories. However, there does not exist a “one size fit all” theory, as it relates to impact of the population growth on the economy. Rather the mixed results from the aforementioned studies suggests that the potential impact whether beneficial, detrimental or non-existent, between population growth and economic growth/development is a complex matter, which is influenced not only by the structure, size or composition of a country’s population but other factors including the structure and size of the economy, the stage of country’s development and existing social and finance infrastructure and policies; particularly in the areas of health, sanitation, education and governance. Notwithstanding the lack of consensus between the nexus of population growth and economic growth as shown through the work of Ross-Brewster, investment in social capital is key to the development of countries, particularly as it relates to the Human Development Index and sustained growth.

## **References**

Ahmed R. N., Ahmad K. (2016). Impact of population on economic growth: A case study of Pakistan. *Bulletin of Business Economics*, 5(3), 162–176.

Bloom, David E. and Canning, Dave and Sevilla, Jaypee, (2001). Economic Growth and the Demographic Transition NBER Working Paper No. w8685, December

Chang, Tsangyao; Chia, Feng; Chu, Hsiao-Ping; Deale, Frederick W.; Gupta, Rangan(2014).:The Relationship between Population Growth and Economic Growth Over 1870- 2013: Evidence from a Bootstrapped Panel-Granger Causality Test, University of Pretoria Department of Economics Working Paper Series 2014-31.

Chowdhury, M. N. M., & Hossain, M. M. (2018). Population Growth and Economic Development in Bangladesh: Revisited Malthus. <https://arxiv.org/ftp/arxiv/papers/1812/1812.09393.pdf>

Gregory Mankiw & David Romer & David N. Weil, (1992). A Contribution to the Empirics of Economic Growth, The Quarterly Journal of Economics, Oxford University Press, vol. 107(2), pages 407-437.

International Monetary Fund. (2004). World Economic Outlook: The Global Demographic Transition Washington. D.C. September.

Jacob Pegou Sibe, Cesaire Chiatchoua and Marie Noel Megne (2016) The Long Run Relationship between Population Growth and Economic Growth: a Panel Data Analysis of 30 of the most Populated Countries of the World. Análisis Económico Núm. 77, vol. XXXI

Kim, Jinill (2016). The Effects of Demographic Change on GDP Growth in OECD Economies, IFDP Notes. Washington: Board of Governors of the Federal Reserve System, September 28, 2016. <https://doi.org/10.17016/2573-2129.22>

Klasen, Stephan; Lawson, David (2007). The impact of population growth on economic growth and poverty reduction in Uganda, Diskussionsbeiträge, No. 133, Georg-August-Universität Göttingen, Volkswirtschaftliches Seminar, Göttingen

Malthus, T.R. (1798). An Essay on the Principle of Population, J. Johnson, London

Romer, D. (2019). Advanced Macroeconomics (5th ed.). New York: McGraw-Hill Education.

Ross-Brewster, Havelock. (1996) Social Capital and Development: Reflections on Barbados and Jamaica, Barbados Economic Report 1995, Produced for the Ministry of Finance and Economic Affairs. May 1996

Savas, B. (2008). The Relationship between Population and Economic Growth: Empirical Evidence from the Central Asian Economies, Orta Asya ve Kafkasya Arastirmalari, 3(6), 161-183.

Tsen, W.H. and Furuoka, F., 2005. The relationship between population and economic growth in

Asian economies. ASEAN Economic Bulletin, 22(3), pp. 314-330.

[Demographic dividend \(unfpa.org\)](http://unfpa.org)

## **Appendix 5: Potential Impact OECD Policy (Global minimum tax rate) on ability to make Tax/ fiscal Policy:**

In October 2021, 137 countries under the Organisation for Economic Co-Operation and Development (OECD)/G20 Inclusive Framework for Base Erosion and Profit Shifting Project, agreed to a two-pillar strategy to reform the global tax regime, to tackle tax avoidance, improve the coherence of international tax rules, ensure a more transparent tax environment and address the tax challenges arising from digitalization.

Under Pillar two of the reform, a global minimum tax rate of 15 percent for multinational enterprises (MNEs) will be introduced within countries, which is expected to generate \$USD150 billion in additional global tax revenue annually. This reform intends to dissuade unproductive/ineffective tax competition among countries, by instituting a floor corporate tax rate. Although the long-term implications of this measure domestically is unknown; it is recognized that the adoption of this measure, effectively removes the ability of developing countries such as Barbados to utilize low tax based incentives as part of their toolkit to attract investment and compete on the global stage. Such measures have traditionally been employed by developing countries, as a means to elevate their international competitiveness in comparison to other advanced economies to attract investment and build desired skillsets domestically, through shared knowledge and experiences as well as infrastructure investment. Moreover, such reforms may potentially act as a disincentive for established multinational enterprises to continue domestic operations, in favour of other territories, with the fiscal space or technological advancement to offer non-tax related incentives for investment. Consequently, the adoption of the global minimum tax rate, will likely diminish future foreign investment through MNEs to the country as well as hinder the expansion of social capital associated with such investment.

Foreign investment from MNEs sources remain a key driver of economic activity within the country. At present, the majority of such investment is captured through the Finance & Insurance and the Business Services sectors, with both industries accounting for 8.8 percent of the share of GDP over the period 2008-2017, falling within the top five industries of the economy.

Although Barbados remains an attractive destination for investment with a highly educated workforce, sound infrastructure (road network, telecommunications, water, electricity etc.) a well-established and regulated financial and banking system, as well as a respected political and legal system, there is a need to adopt a strategic approach to counteract the potential negative consequences related to the introduction of a global minimum tax rate. This will likely include a collection of measures to enhance the business environment, improve the productivity and suitability of the workforce and reinvestment in other sectors of economy.



## **Appendix 6: Consultations**

The Economic Affairs and Investment Division of the Ministry of Finance, Economic Affairs and Investment hosted a series of consultation meetings on behalf of the National Population Commission between August 2020 and April 2023 to i) present and discuss the main findings of the Population Situational Analysis (PSA) and its implications; and ii) to present the draft Population Policy for feedback and input.<sup>28</sup>

To present PSA, five sessions were held between August 31 to September 3, 2020 at the Lloyd Erskine Sandiford Centre around the following themed areas:

- Day 1 - Thematic Area -Health Care
- Day 2 - Thematic Area- Environment, Spatial and Infrastructure
- Day 3 - Thematic Area – Socio-economic Development Dynamics (a.m.)
- Day 3 - Thematic Area – Social Care & Solidarity (p.m.)
- Day 4 - Thematic Area – Culture of Belonging

A total of 187 persons attended the sessions via the Zoom platform and the attendance for the individual sessions was as follows:

Session 1	August 31	14 persons
Session 2	September 1	48 persons
Session 3	September 2	45 persons
Session 4	September 2	46 persons
Session 5	September 3	34 persons

The draft Population Policy was presented at a series of public consultations between November 2022- April 2023, both in person and virtually as follows:

### 1. Three technical stakeholder consultations:

- Policy Goal 1 – Maintain Population Size to Sustain Adequate Levels of Social Care, Productivity and Labour Force Participation for Inclusive and Sustainable Development- October 26, 2023
- Policy Goal 2: Provide Barbadians and Non-Nationals in Barbados Now and in the Future with Opportunities for Personal Development - October 26, 2023

---

<sup>28</sup> The Population Situational Analysis was also informed by a series of workshops from April 15-17, 2019, which addressed five (5) thematic areas: Socio-economic and Labour Force Dimensions of Population Dynamics; Spatial Dimensions and Environment Considerations; Health Factors and Demographic Changes; Implications of Population Dynamics on Social Protection and Social Arrangements of Care; Migration

- Policy Goal 3: Promote Integrated Settlement Development and Safeguard the Ecological Balance- October 27, 2023

2. Online Consultation with Social Partners held on November 18, 2022.

3. Public Consultations:

- Town Hall Meeting at the Alexandra School held on March 20, 2023
- Town Hall Meeting at the Princess Margaret Secondary School held on March 22, 2023
- Town Hall Meeting at the St. Michael School held on March 23, 2023.
- Online Polispace initiative held on the Kevzpolitics twitter space on April 12, 2023.

In addition, the Population Commission also received written comments on the draft Population Policy via social media from the following agencies:

- United Nation Population Fund
- Ministry of Labour, Social Security and the Third Sector
- Barbados Chamber of Commerce and Industry
- Mr. David Yawson, Director of CERMES, UWI
- Barbados Accreditation Council
- National Disabilities Unit
- Barbados Family Planning Association
- Ministry of Energy and Business (Business Division)