



Mia Mottley

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Introduction

Snapshot of Mia Mottley

Mia Mottley has been Prime Minister of Barbados since 2018, the first female to do so in the country. Before becoming leader of the Barbados Labor Party in 2008, she occupied other positions within the government, being Attorney General from 1994 to 2003. She was later appointed Deputy Prime Minister up to 2008. Furthermore, in 2018 her party had a historical result, holding 72.8% of the seats in parliament¹.

Under her leadership, Barbados went from a monarchy to a republican system. In 2021 she gave a speech in the UN, where she was later declared "Global leader of climate change". She has also been recognized and looked at as a global climate leader for Small Island Developing States (SIDS). Since her election, she has stressed the importance of Barbados transitioning to sustainable energy sources and adapting to the current and possible future effects of climate change. Lastly, in 2022, she got reelected as prime minister.

Biographical Information

Mia Mottley's father was involved in politics for a short time. He was a member of the English bar and spent most of his time in Barbados and the Caribbean where he was a lawyer. He was affiliated to the Christian Social Democrat Party, where his uncle also served, but did not undertake any main role. As a lawyer, he focused on social issues in general. However, he was president of the court of appeal, where he worked for 20 years. Mottley is an attorney-at-law with a degree from the London School of Economics, specialising in advocacy. She is also a Barrister of the Bar of England and Wales.

Political career

Prior to being prime minister, Mottley was also Attorney General and Minister of Home Affairs in 2001. During that time she focused on public safety and controlling crime and immigration rates. Regarding environmental laws, she did not pass any major law. Mottley led the Barbados Labour Party to an emphatic victory in 2018, winning all 30 seats in the House of Assembly by the largest margin ever seen in the electoral history of the country. The Barbados Labor Party is a centre-left party that came as a result of the independence of several Caribbean islands, during the 60s and late 70s.

¹PRIME MINISTER OF BARBADOS (no date) GOV.BB. Available at: <https://www.gov.bb/Government/prime-minister> (Accessed: 20 June 2024).

Some policies the BLP runs on have been debt reduction and free college education in local universities. As a result, the BLP has a social policy orientation, reflecting their leftist approach. Among the BLP, some main concerns have been effective land use, conservation and environmental protection.

Achievements and milestones in her political career including her leadership within the Barbados Labour Party (BLP) and her active role as a key actor among the SIDS. Moreover, she became the first woman to act as Barbadian prime minister. Mia Mottley was also responsible for implementing a republic system in the country, moving further away from the English crown². Aside from historical and cultural reasons, the island achieved full sovereignty. Having the Queen as head of state meant that the country still needed approval from her to establish a new government, for example. Moving away from the British crown gave Mottley decision making power, as she does not need to follow specific steps established by the British monarchy. Nevertheless, Barbados remains part of the commonwealth, maintaining a positive relationship with the UK.

She has been greatly focused on implementing policies such as the Bridgetown Initiative and the Roofs to Reefs Programme, both of which tackle climate change mitigation. In order to address both climatic and developmental issues in Barbados, Mottley has promoted sustainable tourism. A major aspect has been infrastructure development to incentivise the use of public over private transport through policies like the Blue Economy Strategy. Given that tourism contributes 17% of the Barbadian GDP, finding a balance between sustainability and economic growth is a key challenge.

However, a new concept has arisen that is slowly being adopted by Barbados through programmes like the Blue Economy Strategy. Some common policies are biodiversity conservation, investment in small businesses, protecting local culture and balanced growth. Balanced growth entails ensuring that the economic growth coming from tourism benefits everyone in the country equally.

In Barbados, some main policies have been community involvement in tourism, effective resource management, and integrated coastal zone management. From an environmental perspective, Barbados significantly depends on tourism (**Appendix 2**). However, Mia Mottley has implemented several goals, targeting environmental concerns.

² Traffic, B.T. (2022) *BLP has returned to its roots . . .*, *Barbados Today*. Available at: <https://barbadostoday.bb/2022/01/26/blp-has-returned-to-its-roots/> (Accessed: 20 June 2024).

Mia Mottley's Stake

The following section will bring our attention to the main environmental challenges faced by Barbados and therefore by Mia Mottley, including a section with the impact these challenges have, as well as provide a discussion of the leader's stake.

Rising sea levels are the main challenge of Barbados. Small islands like Barbados, which do not expel much CO₂, still face the risk of disappearing due to the consequences of climate change. This significant risk is one of the main reasons to push policy preferences towards climate change mitigation and adaptation. Furthermore, another incentive is human security, which Mia Mottley tries to tackle as the damages of severe weather events and the people affected is considerably high. And last but not least, an explanation of biodiversity loss of the country will be included to understand the impact this will have on Barbadians and their economy.

The majority of modern climate change is caused by global warming. Global warming is caused by excessive greenhouse gas (GHG) emissions, primarily expelled into the environment by humans. By exacerbating the global greenhouse effect and raising average temperatures, global climate systems suffer from effects of volatility, we are seeing rising sea levels, rising sea temperatures, and increased ice melt³.

Rising sea levels

This phenomenon is mainly caused by different human activities like burning fossil fuels or transportation of humans and goods, which releases carbon dioxide. The ocean absorbs the majority of the heat which ends up in melting water from glaciers and ice sheets and as a consequence, ocean levels increase. In 2022 the average sea level was 101.2 millimetres (4 inches) above 1993 levels⁴, so indeed a relatively worrying statistic which Barbados will suffer from.

Sea Level Rise presents lots of consequences to coastal life, including increased intensity of storms surges, flooding, damage to coastal areas, displacing people and contaminating soil and groundwater with salt.⁵

³ 'World Bank Climate Change Knowledge Portal' (*Worldbank.org*2022) <<https://climateknowledgeportal.worldbank.org/overview>> accessed 27 June 2024.

⁴ 'Climate Change: Global Sea Level' (*NOAA Climate.gov*19 April 2022) <[https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level#:~:text=The%20rising%20water%20level%20is,record%20\(1993%2Dpresent\)](https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level#:~:text=The%20rising%20water%20level%20is,record%20(1993%2Dpresent))> accessed 24 July 2024.

⁵ 'Sea Level Rise' (*Nationalgeographic.org*2023) <<https://education.nationalgeographic.org/resource/sea-level-rise/>> accessed 28 June 2024.

Barbados is an island located in the Eastern Caribbean with 166 square miles and 287,375 residents.⁶ The rising sea levels are relevant to Barbados because it is a flat island, as the highest point is 334 m above sea level, which makes its coastal zone vulnerable to sea level rise, hurricanes and flooding. The main issue is that 47,000 persons and 24% of human settlement is located in the Low Elevation Coastal Zone (LECZ), this is the contiguous zone up to a 10 m elevation.⁷

In addition to this, 70% of the hotels located in Barbados for tourists are situated within 250m of the coastal line. According to the UNEP, these areas are within the predicted inundation zones⁸.

Extreme Weather Events

Since 2010, Barbados has been significantly affected by hurricanes such as Tomas (2010), Ernesto (2012), Harvey (2017), and Elsa (2021), as well as tropical storms like Matthew, Maria, Kirk, and Gonzalo (2020). These events have caused extensive damage and disruption to daily life. According to the World Bank, the Annual Average Loss (AAL) from hurricanes in Barbados is US\$ 48M (0.9% of GDP). In a scope of 250 years the World Bank predicts that the Probable Maximum Loss for hurricanes is US\$ 2.5B (47.8% of GDP).⁹

Therefore, it is clear that countries like Barbados, which face significant threats from natural disasters due to their geographic location, incur considerable expenses that other countries may not have to bear. Natural disasters are currently pushing 100.7 million people into poverty worldwide, and by 2030, this number is projected to increase by an additional 36.7 million people¹⁰.

Biodiversity Loss

The Caribbean region in which Barbados is located is characterised by a high number of biological diversity and fragile terrestrial, marine and coastal ecosystems. Due to the region's insularity, there is a high level of endemism which has fostered isolated evolutionary patterns. The study from the UNEP suggests that up to 80% of living coral in the Caribbean reefs has disappeared in

⁶ 'Barbados' (UNDP2022) <<https://www.undp.org/barbados/barbados>> accessed 27 June 2024.

⁷ Michelle Mycoo and others, 'Human Adaptation to Coastal Hazards in Greater Bridgetown, Barbados' (2021) 9 *Frontiers in environmental science* <<https://www.frontiersin.org/journals/environmental-science/articles/10.3389/fenvs.2021.647788/full>> accessed 27 June 2024.

⁸ United Nations Environment Programme, 'Climate Change in the Caribbean and the Challenge of Adaptation in Collaboration With' (2008) <http://www.pnuma.org/deat1/pdf/Climate_Change_in_the_Caribbean_Final_LOW20oct.pdf>

⁹ Gross Stock, 'BARBADOS Hurricanes and Earthquakes RISK PROFILE What Is a Country Disaster Risk Profile? Country Disaster Risk Profile Snapshot Country At-A-Glance Two Representations of Hurricane Risk' <<https://documents1.worldbank.org/curated/en/099052623131634619/pdf/P1726070b87bd604108bc10618db824a8f1.pdf>>

¹⁰ 'Tackling Disasters Means Safer and Fairer Future for Caribbean: A UN Resident Coordinator Blog' (*UN News* 13 October 2023) <<https://news.un.org/en/story/2023/10/1142302>> accessed 28 June 2024.

the past 20 years, primarily due to rising sea temperatures and sea surface temperatures. Loss of coral reefs and mangroves have as a consequence the reduction of biodiversity and affect both marine and terrestrial species¹¹.

Biodiversity is mainly affected by habitat loss which is caused by tourism developments, unsustainable land use practices, land clearance and golf course developments. Additional issues like the introduction of invasive species and sewage production affect biodiversity directly. Specific threats to flagship include overexploitation of sea turtle stocks¹².

In the biodiversity sector the sargassum plays a crucial role. Since the year 2011, vast, sporadic influxes of floating sargassum seaweed have inundated the Caribbean coasts. The 2021 UNEP Sargassum White Paper reports that Caribbean regions can have up to 100 metric tonnes of sargassum per kilometre of shoreline each day during an inundation period. The direct consequences of these influxes is shorelines full of sargassum, resulting in economic losses and social and health negative impact¹³.

The limited land area and interdependence of the economy and environment in Barbados make conservation efforts challenging. Agriculture, fisheries, building, housing, transportation and tourism are the main sectors of Barbados' economy, and they rely heavily on the natural environment to develop their activities.

Environmental degradation and water contamination affects the influx of tourists by affecting the country's reputation. In the case of agriculture, change of precipitation due to climate change or the degradation of the fertile land negatively affects this sector, as well as fisheries, transportation and housing¹⁴.

Furthermore, natural disasters like hurricanes and tropical storms cause significant damage and disruption. Hurricane Elsa, for example, resulted in at least 145 collapsed homes and an additional 2,227 reported incidents of damages or otherwise¹⁵. These severe weather events, combined with others such as droughts, altered rainfall patterns, disease, and storms affect food production, water security and the health of the population.

The challenges mentioned before have direct negative effects over coastal resources, people living in Barbados and the infrastructure of the island,

¹¹ United Nations Environment Programme, 'Climate Change in the Caribbean and the Challenge of Adaptation in Collaboration With' (2008) <http://www.pnuma.org/deat1/pdf/Climate_Change_in_the_Caribbean_Final_LOW20oct.pdf>.

¹² 'Main Details' (Convention of Biological Diversity 2020) <<https://www.cbd.int/countries/profile?country-bb>> accessed 30 June 2024.

¹³ 'The Project for Improving National Sargassum Management Capacities in the Caribbean' (UNDP2022) <<https://www.undp.org/barbados/sargassum>> accessed 30 June 2024.

¹⁴ UN Environment, 'Barbados' Green Economy Scoping Study' (UNEP - UN Environment Programme2014) <<https://www.unep.org/resources/report/barbados-green-economy-scoping-study>> accessed 20 June 2024.

¹⁵ 'DEM Reports on Damage from Hurricane Elsa - Barbados' (ReliefWeb7 July 2021) <<https://reliefweb.int/report/barbados/dem-reports-damage-hurricane-elsa>> accessed 21 June 2024.

particularly affecting larger sectors like tourism. The Economic Commission for Latin America and the Caribbean states that tourism contributed 10-12,5% of the GDP of the country in 2011.

However with the combination of the impacts due to a reduction of tourist arrivals because of the coral reef loss, the increasing sea level rise, and severe climate events such as hurricanes, the estimated total economic impact under both scenarios would ascend to a total amount of \$7,648 million in the high emissions scenario and \$5,127 million in the low emissions scenario as we can see in the table below.¹⁶ **(Appendix 1)**

Vulnerable groups, such as youth, women, and lower-income communities, are the ones most affected because of the lack of resources. The social and economic effects of climate change are significant, affecting health through increased heat stress and a higher prevalence of water and vector-borne diseases. For instance, Barbados has the highest incidence of dengue cases. Barbadians use rainwater storage because there is not enough freshwater available and this cause breeding sites for the disease vector of dengue, the *Aedes aegypti* mosquito¹⁷.

Water resources are strained, with reduced availability due to drought or contamination from flooding, soil or pollutant infiltration, or saline intrusion. The fishery and agricultural industries are two examples of facing climate challenges, including loss of competitiveness due to drought, flooding, storm damage, saline intrusion, pest outbreaks, invasive species, and ecosystem destruction. Financial risk and insurance are also affected, with climate change projections directly influencing insurance costs, availability, and real estate market values.¹⁸ To sum up, climate change affects less prepared sectors.

Mia Mottley has compelling incentives and interests driving her to push climate policies. Key among these needs are tackling national and economic security in the face of climate threats, and ensuring human security to provide well-being and health for the population. The sum of these factors underscore her commitment to implementing robust climate action.

The main issue is Barbados's level of debt, in 2021, the debt-to-GDP ratio was 148.11%. As Prime Minister, Motley managed to reduce this debt and achieve the

¹⁶ 'AN ASSESSMENT of the ECONOMIC IMPACT of CLIMATE CHANGE on the COASTAL and HUMAN SETTLEMENTS, TOURISM and TRANSPORT SECTORS in BARBADOS' (2011)
<<https://repositorio.cepal.org/server/api/core/bitstreams/d7b89f7e-5690-4271-9889-884a7f6d5ba6/content>>.

¹⁷ World Health Organization, 'Barbados: Assessment of the Health Impacts of Climate Change 2010' (WHO, 2010)
https://cdn.who.int/media/docs/default-source/climate-change/adaptation-report-barbados-2010.pdf?sfvrsn=f5f18bff_2
accessed 21 June 2024.

¹⁸ Government of Barbados, *Nationally Determined Contribution (NDC) Update 2021*, 21 July 2021, p. 10. Available at:
<https://unfccc.int/sites/default/files/NDC/2022-06/2021%20Barbados%20NDC%20update%20-%2021%20July%202021.pdf>
(Accessed: 10 June 2024).

still high number of 107.46% in 2024. However it is difficult to reduce this debt when there are damages caused by hurricanes and other weather events that must be repaired frequently¹⁹. Without any urgent changes, the Caribbean as a whole faces projected annual costs of US\$22 billion by 2050 and US\$46 billion by 2100²⁰.

Regarding economic security, Mottley's strategy included pushing for economic diversification and protecting vital sectors like tourism and agriculture from climate impacts. By renegotiating debt and securing funds from the International Monetary Fund (IMF) with different conditions through innovative financial instruments like hurricane clauses, Mottley aimed to stabilise and diversify the economy, ensuring long-term economic security despite climate challenges. The government of Barbados, with the help of UN Trade and Development (UNCTAD), has been working on post-pandemic recovery, focusing on economic diversification to achieve a more sustainable growth path. The recommendation is to transform to a new infrastructure and capability, promoting payment systems, while also adopting sustainable data laws and regulations²¹.

In addition to this, regional integration with other Caribbean economies will be fundamental to achieve this diversification of the economy as regional partners could better achieve the national objectives. Lastly, promoting south-south cooperation at the global level to promote trade, investment, financial and industrial cooperation could generate more diversified development sources.²²

It is additionally relevant to mention the lobbying made by her for the polluting countries of the world as the big issue of COP 27, in which she gave an important speech. She claims that developing nations have to face a US\$1 trillion loss and damage bill but the developed nations, which are main producers of carbon emissions, would not pay this. After heavy lobbying from the island of Barbados, the United Kingdom government announced a loan scheme with the name of "Climate Resilient Debt Clauses", which offers low income class countries and small islands the possibility to defer debt payments for two years in the case that a natural disaster occurs²³.

¹⁹ 'Barbados - National Debt in Relation to Gross Domestic Product (GDP) 2019-2029 | Statista' (*Statista*2019) <<https://www.statista.com/statistics/533733/national-debt-of-barbados-in-relation-to-gross-domestic-product-gdp/>> accessed 21 June 2024.

²⁰ United Nations Environment Programme, 'Climate Change in the Caribbean and the Challenge of Adaptation in Collaboration With' (2008) <http://www.pnuma.org/deat1/pdf/Climate_Change_in_the_Caribbean_Final_LOW20oct.pdf>.

²¹ 'UNCTAD Supports Barbados to Bolster Economic Diversification' (*UNCTAD*2 March 2023) <<https://unctad.org/news/unctad-supports-barbados-bolster-economic-diversification>> accessed 21 June 2024.

²² 'UNCTAD Supports Barbados to Bolster Economic Diversification' (*UNCTAD*2 March 2023) <<https://unctad.org/news/unctad-supports-barbados-bolster-economic-diversification>> accessed 21 June 2024.

²³ Jacqueline Peel, 'It's the Big Issue of COP27 Climate Summit: Poor Nations Face a \$1 Trillion "Loss and Damage" Bill, but Rich Nations Won't Pay Up' (*The Conversation*10 November 2022) <<https://theconversation.com/its-the-big-issue-of-cop27-climate-summit-poor-nations-face-a-1trillion-loss-and-damage-bill-but-rich-nations-wont-pay-up-194043>> accessed 26 July 2024.

Finally, when we refer to human security, we reference Mottley's efforts to enhance climate resilience through projects that protect housing, infrastructure, and essential services. Initiatives like the "Roofs to Reefs" plan focus on restoring and fortifying physical and ecological infrastructure, ensuring that Barbadians have secure housing and reliable access to water and food supplies, which are increasingly threatened by climate change. As the International Disaster Database established, from the year 2002, including droughts, tropical cyclones and earthquakes, a total of 8,860 persons have been affected by these natural disasters²⁴. To have a better perspective of this data we should reiterate that Barbados is an island of 430 km² with a population of 287,375 people²⁵. The affected population accounts for 3.7% of total inhabitants.

Mia Mottley's Defining Moment

In the pursuit of analysing Mia Mottley, it is useful to reflect on the turning point that made her reconsider her courses of action. The following section explains the event that shaped the way she tackles the climate needs of her country.

The defining moment used in the analysis of this report is the COVID-19 pandemic²⁶, which had notable consequences on Barbados's economy. The fiscal surplus of 3.7% of GDP in the 2019/2020 fiscal year turned into a fiscal deficit of 0.2% of GDP in the middle of 2020/2021 fiscal year²⁷.

Moreover, the effects of the pandemic on global policy made her realise that the way her country dealt with its economic policies needed to change. The pandemic, as in other countries, forced the Barbadian economy to largely shut down. Fishing, agriculture and tourism were halted, giving Mottley a preview of the effects that the disappearance of these sectors could have on the economy. These same sectors are directly vulnerable to climate change, given that they rely on the natural resources of the country. For instance, globally, climate change has led to declining fish stocks and reduced agricultural yields. The Food and Agriculture Organization (FAO) reports that fish stocks are overfished, with 34.2% of global fish stocks below sustainable levels. Similarly, agricultural productivity has been threatened by changing precipitation patterns and extreme weather events.²⁸

²⁴ 'Public EM-DAT Platform' (Emdat.be2024) <<https://public.emdat.be/>> accessed 21 June 2024.

²⁵ Datosmacro, 'Barbados 2024' (Datosmacro.com2024) <<https://datosmacro.expansion.com/paises/barbados#:~:text=Barbados%2C%20situada%20en%20el%20Caribe.654%20habitantes%20por%20Km2>> accessed 21 June 2024.

²⁶ '2019 Novel Coronavirus' (Who.int2019) <<https://www.who.int/es/emergencies/diseases/novel-coronavirus-2019>> accessed 26 June 2024.

²⁷ 'Balance Preliminar de Las Economías de América Latina Y El Caribe' (2021) <<https://repositorio.cepal.org/server/api/core/bitstreams/53ac0d12-1d91-4492-a00f-d08e2829f772/content>> accessed 26 June 2024.

²⁸ 'Fisheries Management Works, so It's Time to Apply It More Broadly' (FAO) <<https://www.fao.org/newsroom/detail/Fisheries-management-works-so-it-s-time-to-apply-it-more-broadly/en>> accessed 10 July 2024

Barbados' First National Communication to the United Nations Framework Convention on Climate Change (2001) highlights changes in rainfall patterns, especially with regard to dry spells. These prolonged dry spells have serious implications for Barbados' limestone aquifer recharge by rainwater, which in turn has a negative impact on the sugar cane crop in terms of both quantity and quality. Moreover, as the atmospheric temperature rises it leads to alteration of soil temperatures that restrain growth and development of local crops. This, combined with severe droughts and floods, pose great challenges to Barbados's agricultural sector.

For example, there has been a decrease in germination of some vegetables due to higher soil temperatures over recent years. In 2009, an extended drought set in during the dry season which worried farmers. This was followed by tropical Storm Tomas that hit Barbados in October 2010, causing flooding and financial losses for more than 230 farmers whose fields were waterlogged, making their crops unharvestable. Thousands of dollars worth of crops and seedlings were destroyed. The aftermath showed not only damage to crops and livestock, but infrastructure too. Carrot growers reported increased occurrence of soil fungus, resulting from excessively hot weather conditions during that year, which had as a consequence a reduction in yields ²⁹.

Mottley realised that the next event to stop her economy would not be a pandemic but climate change. If changes were not made soon, Barbados would face the same issues it did during the pandemic, but for much longer periods, not just a year. This realisation drove her to implement policies to pivot her country toward a more sustainable economy. This was something she highlighted in her speeches.

This defining moment is supported by the argument that as the pandemic progressed, the economy suffered much more from the consequences of relying on sectors such as tourism. A 2019 report from the Ministry of Finance, Economic Affairs & Investment of Barbados states that Accommodation and Food Services accounted for 15.1% of the country's real GDP, reaching a value of \$1,379.8 million. Understanding this dependency underscored the urgency to diversify and implement sustainable economic policies to safeguard against future disruptions, particularly those driven by climate change.³⁰

²⁹ Chelston W and Braithwaite, "A Vision for the Future of Agriculture in Barbados" Chairman of the National Agricultural Commission the Agricultural Planning Unit of the Ministry of Agriculture, Food, Fisheries and Water Resource Management and the Inter-American Institute for Cooperation on Agriculture' <<https://faolex.fao.org/docs/pdf/bar181568.pdf>>

³⁰ 'Ministry of Finance, Economic Affairs & Investment' <<https://www.barbadosparliament.com/uploads/sittings/attachments/1dfdf1321f2c6b468bf8093b9501f660.pdf>> accessed 21 June 2024.

Additionally, the drop in tourism contributed to an unemployment rate of up to 40%, with 33,000 applications for unemployment subsidies, 31% of which came from people who worked in hotels and restaurants³¹.

This is why, since that moment of deep recession, the goal was to repair the damages of the economy as a consequence of Covid-19, while including the transformations needed to achieve inclusive growth and sustainable development which is the way to achieve reduction of poverty, and accelerate investments in renewable energy, digitalization and electricity development to achieve economic and employment recovery³².

Having understood the stake of Mia Mottley and her defining moment, the next section will provide an explanation of the most important policies undertaken by the Prime Minister. Starting with the Bridgetown initiative, which proposes a reform of existing institutions to finance climate resilience, followed by the Blue Economy implemented in Barbados, which, according to the World Bank, is a sustainable way of using natural resources for economic growth while improving livelihoods and jobs, and ocean ecosystem health. Lastly, the Roofs to Reefs program, which is the national resilience plan for climate change.³³

Mia Mottley's Solutions

The Bridgetown Initiative (2022)

Led by Mia Mottley, the Bridgetown Initiative seeks to reform the global financial system to better support climate-vulnerable developing nations. Some key components of this initiative include suspending interest payments during crises, increasing funding by \$1 trillion dollars from development banks for climate resilience and finally, establishing a global climate mitigation trust to attract private investments.

Currently, developed nations have interest rates between 1% and 4% on loans, while developing nations have rates of around 14%³⁴.

This second key component can be split into two steps. The first one is resetting how funding is loaned and repaid to tackle the issue of developing countries

³¹ 'Balance Preliminar de Las Economías de América Latina Y El Caribe' (2021) <<https://repositorio.cepal.org/server/api/core/bitstreams/53ac0d12-1d91-4492-a00f-d08e2829f772/content>> accessed 26 June 2024.

³² 'BARBADOS 2021 UPDATE of the FIRST NATIONALLY DETERMINED CONTRIBUTION SUBMITTED in FULFILLMENT of OBLIGATIONS under the PARIS AGREEMENT on CLIMATE CHANGE Government of Barbados BARBADOS 2021 UPDATE of the FIRST NATIONALLY DETERMINED CONTRIBUTION I' <<https://unfccc.int/sites/default/files/NDC/2022-06/2021%20Barbados%20NDC%20update%20-%202021%20July%202021.pdf>>.

³³ "'Roofs to Reefs' National Resilience Plan - Climate Change Laws of the World' (*Climate-laws.org*2021) <https://climate-laws.org/document/roofs-to-reefs-national-resilience-plan_fb59> accessed 27 June 2024.

³⁴ Victoria Masterson, 'Barbados calls for finance reform to fight climate change', *World Economic Forum*, January 2023.

having to endure a debt crisis. For example, while suffering a drought, interest payments should be suspended. The second and final step is to request \$1 trillion dollars from private investors to increase climate resilience in climate-vulnerable countries like Barbados³⁵.

The Bridgetown initiative helps Mia Mottley achieve her goals. Her goals revolve around economic stability, climate resilience and debt reductions. By suspending debt payments, the country can focus on recovery. Secondly, mobilising additional funds ensures resources for climate projects. Finally, through structural changes, she can ensure long-term financial reforms supporting sustainable development.

Mottley's stake in this project is both personal and for the country's national interest. Barbados is highly vulnerable to climate change effects, and ensuring economic and climate resilience is key to its survival.

Blue Economy Strategy of Barbados (2018)

The Blue Economy strategy of Barbados is aimed at harnessing the potential of the marine and coastal environment to drive sustainable economic growth. Recognizing the critical importance of the marine ecosystem, the government is focusing on maximising access to and sustainable use of marine resources. The goal is to ensure that these resources significantly contribute to the national economy while protecting the health of marine ecosystems.

Given Barbados's reliance on the tourism sector, there is a need to understand the value of the fisheries sector. According to the UNDP report on Barbados and the Caribbean, the government should implement a robust data recording and reporting system to ensure that catch and landing data are treated in a consistent manner, thereby ensuring that the Government always works with a single consistent data set for fisheries landings³⁶. Given the current uncertainty, a strategy to improve selective targeting of high value tunas should be pursued as a way to increase harvests of these species.

This policy reinforced her position as "leader of the SIDS". She is able to turn her words into action, by promoting sustainable growth by encouraging economic activities that are both profitable and environmentally sustainable.

Aside from her personal commitment to climate change, she also has a national interest. Ensuring the sustainable use of marine resources to secure short-term

³⁵ Victoria Masterson, 'Barbados calls for finance reform to fight climate change', *World Economic Forum*, January 2023.

³⁶ UWI-UNDP (ed.) (2020) *Barbados Blue Economy Scoping Study*, UNDP. Available at: <https://www.undp.org/sites/g/files/zskgke326/files/migration/bb/undp-bb-Barbados-Blue-Economy-Scoping-Study-Synthesis-Report.pdf> (Accessed: 25 June 2024).

economic growth and environmental health for Barbados, improving economic security. Considering Barbados's high chances of being underwater by 2050, Mottley has to focus on short term actions.

Roofs to Reefs

Mottley stated, "We must acknowledge that if we do not address the financing framework now, we will face significant challenges,". To assist Barbados in adapting to the climate crisis, she has led a national resilience initiative which is part of the Blue Economy strategy, called Roofs to Reefs. This program will leverage innovative financial tools to enhance public investment in areas such as fortifying homes and restoring coral reefs, which provide coastal protection from storms. Roofs to Reefs is recognized as a potential model for other nations grappling with climate change.

In terms of climate change adaptation, Barbados has several key legal frameworks. Adaptation efforts are primarily guided by the Planning and Development Act and the 2021 Physical Development Plan (PDP), which for the first time incorporates climate change as a key component. To achieve climate-resilient development, the Government of Barbados (GoB) ensures that its implementation policies are aligned with the Sendai Framework for Disaster Risk Reduction, the 2030 Sustainable Development Goals (SDGs), and climate action under the Paris Agreement.

The Sendai Framework for Disaster Risk Reduction focuses on three key components: exposure to hazards, vulnerability and exposure, and the hazards' characteristics. It aims to reduce death rates and the dimension of destruction of natural hazards³⁷. The priority adaptation strategies identified in the Second National Communication have been put into operation. The 2021 PDP and the Roofs to Reefs Programme (R2RP) now provide the necessary framework for Barbados to achieve its resilience goals by 2030³⁸.

Looking at how the country directly applies this programme, we can split this into six points. Firstly, strengthen low- and middle-income homes to withstand extreme weather, ensuring continued access to electricity and water, further enhancing home resilience. Second, boost freshwater storage capacity and promote efficient water use to better manage resources during periods of scarcity. Thirdly, deploy distributed renewable energy systems to reduce

³⁷ Sendai Framework for Disaster Risk Reduction 2015-2030. (2015). *UNDRR*. Retrieved June 25, 2024, from <<https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030>>

³⁸ Government of Barbados, *Nationally Determined Contribution (NDC) Update 2021*, 21 July 2021, p. 6. Available at: <https://unfccc.int/sites/default/files/NDC/2022-06/2021%20Barbados%20NDC%20update%20-%2021%20July%202021.pdf> (Accessed: 10 June 2024)

emissions and increase energy resilience. Fourthly, implement sustainable land use practices to decrease pollution from land-based sources affecting marine environments. Fifth, make key utilities, water, sanitation, and road systems more resilient to climate impacts as a way to fortify key infrastructure. Lastly, restore coral reef ecosystems by focusing on restoring vulnerable coral reefs, especially on the west and south coasts, which are crucial for biodiversity and coastal protection. R2RP helps Mia Mottley achieve her goals through various ways³⁹.

Primarily, R2RP can improve the quality of living of the citizens who most suffer from inequalities by reducing the damage after a severe weather event. It will improve housing stock as they will invest in fortification to withstand Category 4 hurricanes. Furthermore, the installation of disaster-resilient storage capacity for water will be incremented.

Additionally, the goal of reducing pollution will be achieved by more efficient stormwater and wastewater capture will reduce pollution, benefiting the health of ecosystems and coastal areas. The final target is economic stability through the establishment of an Special-Purpose-Vehicle (SPV) for capitalising on R2RP projects in order to create financial space without jeopardising fiscal targets, hence, ensuring sustainable economic growth.

Mia Mottley has been a prominent advocate for developing nations, particularly small island states at risk of being submerged by rising sea levels due to climate change. During a visit by UN Secretary-General António Guterres to Barbados in October, she highlighted the crucial need for financial resources to help developing nations adapt to climate impacts. The cost for these countries to address climate-related threats like droughts, floods, and sea-level rise is currently \$70 billion annually and could soar to \$300 billion per year by 2030⁴⁰.

Mia Mottley's Impact

The Bridgetown Initiative (2022)

The Bridgetown initiative has been updated over the years, in this paper we analyse Bridgetown 3.0. Bridgtown 1.0 was released in 2022 during COP 27, while Bridgetown initiative 2.0 was released in 2023. Finally, Bridgetown 3.0 is about to be released in 2024, and takes into account the needed reform of the global financial system. This version is also closely tied with the UN and the SDG

³⁹ Government of Barbados, *Nationally Determined Contribution (NDC) Update 2021*, 21 July 2021, p. 7. Available at: <https://unfccc.int/sites/default/files/NDC/2022-06/2021%20Barbados%20NDC%20update%20-%202021%20July%202021.pdf> (Accessed: 10 June 2024).

⁴⁰ UNEP, *Champions of the Earth - Mia Mottley*, 2021. Available at: <https://www.unep.org/championsofearth/laureates/2021/mia-mottley> (Accessed: 10 June 2024).

principles. There are several main differences between version 3.0 and the previous versions.

Firstly, 3.0 includes UDS\$ 300 billion coming from private investors to mitigate the effects of climate change. Also, establishing an extra fee fossil fuel companies have to pay, depending on their emissions and financial transactions. Governments must come to a consensus and establish the above-mentioned carbon tax. Additionally, it states that governments have the responsibility to pressure other international organisations to implementing carbon tax⁴¹.

Moreover, it proposes involving the Inter-American Development Bank and credit rating agencies in the process, working together with the UN and the IMF. Previously, these agencies have been known to be biased against small and medium countries⁴². Bridgetown 3.0 version calls for the end of this bias, giving an opportunity for small countries to develop. The main difference has been the tax aspect. A new organisation founded by the UN and co-chaired by France, Barbados and Kenya has been responsible for increasing the importance of taxes⁴³.

Regarding the effects of the policy on the country, they are limited, as it has not been implemented yet. However there are some possible effects, such as increasing resilience and potential debt relief. This initiative tackles the financial aspect of climate change mitigation. One main aspect of this initiative is that it suspends interest payments in times of crisis such as a pandemic or a natural disaster⁴⁴. Focus on SDG 6, Water and Sanitation. As it has been already discussed, the Bridgetown Initiative focuses a lot on water access by guaranteeing that Barbados has access to clean water and sanitation⁴⁵.

Through this policy, Mia Mottley shows her willingness to cooperate with other countries and institutions to reach a common goal. Through her engagement and commitment, Mia Mottley has become a main actor in the sustainable development stage representing vulnerable nations.

⁴¹ Ellmers, B. (2024). Bridgetown Initiative 3.0 released: What's the news? *Global Policy Forum*. Retrieved June 25, 2024, from <<https://www.globalpolicy.org/en/news/2024-06-05/bridgetown-initiative-30-released-whats-news>>

⁴² Ellmers, B. (2024). Bridgetown Initiative 3.0 released: What's the news? *Global Policy Forum*. Retrieved June 25, 2024, from <<https://www.globalpolicy.org/en/news/2024-06-05/bridgetown-initiative-30-released-whats-news>>

⁴³ *Bridgetown Initiative 3.0 released: What's the news?* (2024) *Global Policy Forum*. Available at: <https://www.globalpolicy.org/en/news/2024-06-05/bridgetown-initiative-30-released-whats-news> (Accessed: 20 June 2024).

⁴⁴ Masterson, V. (2023) *Barbados calls for finance reform to fight climate change*, *World Economic Forum*. Available at: <https://www.weforum.org/agenda/2023/01/barbados-bridgetown-initiative-climate-change/> (Accessed: 20 June 2024).

⁴⁵ Admin (2023) *Bridgetown initiative a useful tool in achieving SDG 6*, *Caribbean Broadcasting Corporation*. Available at: <https://www.cbc.bb/news/local-news/bridgetown-initiative-a-useful-tool-in-achieving-sdg-6/> (Accessed: 20 June 2024).

This policy looks at climate change in a holistic approach and focuses mainly on development finance. The restructuring of loans in developing countries to prevent them from entering a debt trap. These financial assistance include infrastructure development, mitigation strategies, technological development and reconstruction.

However, some criticisms have been made surrounding the fact that the bridgtown initiative focuses on mitigating climate change effects, and not on preventing them from happening. It is important to keep in mind, nonetheless, that Barbados contributed virtually 0% to global GHG emissions, meaning that managing their own contribution to climate change is evidently not where the country can best address immediate needs⁴⁶.

Blue Economy Strategy of Barbados (2018)

The Blue Economy Strategy encompasses various initiatives, including the Roofs to Reefs initiative. The implementation of this policy consists highly of technological investment in different tools to combat climate change and issues associated with climate change.

There have been four main implementations throughout the development of this policy. Firstly, the Ministry of Maritime Affairs and the Blue Economy. This ministry focuses on making Barbados a climate leader among the SIDS and guarantee that Barbados is taking advantage of its Exclusive Economic Zone (EEZ) in a sustainable manner, ensuring long term success. Secondly, the establishment of the Roofs to Reef program. This program will be further looked at in the third policy.

Thirdly, the establishment of the Nationally Determined Contribution (NDC). The NDCs are contributions countries make to mitigate climate change effects. Barbados has updated their NDC to fit into the Paris Climate Agreement. Finally, the SDG Fund Joint Program. The Blue Economy Strategy, together with the UNDP are focusing on increasing resilience in the region, leveraging bio marine technologies among others.

Furthermore some examples of policies created include increasing marine protected areas, as a way to protect biodiversity and increase resilience. However, some challenges have risen, as regulations are sometimes challenging and not completely ensured. Moreover, this policy has increased investment in the area, allowing for sustainable development. With diversification and new industries

⁴⁶ Ritchie, H. and Roser, M. (2024) *Who has contributed most to Global CO2 emissions?*, *Our World in Data*. Available at: <https://ourworldindata.org/contributed-most-global-co2> (Accessed: 20 June 2024).

create new jobs and possible career paths for the locals., Barbados may also benefit from economic diversification⁴⁷.

More economic sectors, especially sustainable economic sectors, increases job creation and thus, economic activity in the country. Additionally, sustainable economic sectors and diversification increases economic security and resilience, safeguarding Barbados's economic position globally.

Finally, as a small country, Barbados struggles to stand out and be taken "seriously" in the international arena. Being seen as a climate concerned country, focused on furthering their investments and development, may allow for further partnerships with other countries and international organisations⁴⁸. The Blue Economy Strategy enhanced Mia Mottley's position as both forward thinking and a climate leader. She has had several important roles and titles at the UN, coming from her commitment to climate change.

This initiative addresses climate change in several ways. Firstly, through implementing new waste management strategies, the Blue Economy Strategy focuses on protecting marine ecosystems and coral reefs⁴⁹. Additionally as part of the Blue Economy Strategy, Barbados wishes to restore and protect coastal areas such as sea beds. Sea beds have been shown to be key in carbon capture.

Moreover, Barbados aims to become a fossil fuel free country by 2030. The Blue Economy Strategy promotes investments on other clean energy sources, such as solar and ocean energy⁵⁰. This also plays a part in mitigating climate change. Lastly, as a way to ensure food and water security, Barbados plans to invest and promote sustainable fisheries as well as promoting sustainable fishing practices as a way to ensure fisherman livelihoods and protect marine life and biodiversity⁵¹.

Roofs to Reefs

This policy is expected to be fully implemented by November 2027. However, some initiatives have arisen from it, such as foreign investment and internal

⁴⁷ Home (2020) *Barbados Blue Economy*. Available at: <https://blueconomy.com/about/> (Accessed: 20 June 2024).

⁴⁸ *Blue economy has potential* (2020) *Barbados Advocate*. Available at:

<https://www.barbadosadvocate.com/news/blue-economy-has-potential> (Accessed: 20 June 2024).

⁴⁹ Hon. Kirk D. M. Humphrey, M.P. (2021) *A blue roadmap for Barbados, Sostenibilidad*. Available at:

<https://blogs.iadb.org/sostenibilidad/en/a-blue-roadmap-for-barbados/> (Accessed: 20 June 2024).

⁵⁰ *Blue Economy Scoping Studies* (2020) *UNDP*. Available at:

<https://www.undp.org/barbados/blue-economy-scoping-studies> (Accessed: 20 June 2024).

⁵¹ *The Barbados Blue Economy* (2019) *Business Barbados*. Available at:

<https://www.businessbarbados.com/articles/the-barbados-blue-economy> (Accessed: 20 June 2024).

initiatives coming from the government itself. Some of these initiatives have been reflected in housing resilience and an increase in nature based solutions.

The Roofs to Reefs initiative has brought development to various economic sectors. For starters, it has increased economic resilience. The development of new sectors lead to new job creation. Furthermore, new job opportunities enhance economic growth and activity.

Secondly, energy independence. Shifting to renewable energy sources reduces reliance on traditional energy sources, hence, making Barbados a more self-sufficient country. Furthermore, from an economic point of view, renewable energy sources tend to be more cost effective and reliable in the long term, reducing maintenance costs. Additionally the social and community benefits have also been visible when talking about energy independence⁵².

As part of this initiative, high quality housing has increased, making houses more resistant to extreme weather events such as hurricanes. Additionally, there has also been an increase in renewable energy. This ensures energy security in the region, benefiting the community.

Overall, nature based solutions tend to be more beneficial for a country long term. Even though this policy is quite recent, benefits are soon to be seen. When looking at the community impacts, Barbados has recently gotten a lot of attention from the international community, for being a country that places environmental benefits, ahead of economic ones. Although this may be caused by their vulnerability to climate change, it places Barbados in a good position globally, enhancing possible political alliances and support⁵³.

Mia Mottley, as the leader of a country trying to survive climate change, benefits greatly from implementing all these policies and projects. Firstly, she is globally recognized for not only being a climate leader, but also a leader with ambition, good leadership skills and motivation, among others. Although her personal motives do not seem to be the main reason she is doing this, they can still be important for her career. Being recognized as a global leader can increase her influence in the global stage, and increase career opportunities.

Within her country, she can benefit from public opinion. All these initiatives tackle climate change at a community level, thus, people will most likely have positive

⁵² *Pillar two implementation " oecdpillars.com (2024) oecdpillars.com " Independent Insights and Analysis on the OECD Two Pillars Solution*. Available at: <https://oecdpillars.com/pillar-tab/pillar-two-implementation/> (Accessed: 20 June 2024).

⁵³ *Green Climate Fund (2020) R2RP readiness, Green Climate Fund*. Available at: <https://www.greenclimate.fund/document/r2rp-readiness> (Accessed: 20 June 2024).

feelings towards her. This is crucial for when she tries to implement or fund other types of initiatives and programmes. From a political standpoint, she is living up to her promises. She promised to make Barbados prosper, which she is. This makes her stand out from other politicians, paving the way for a stronger political career.

The Roofs to Reefs initiative tackles various issues regarding climate change mitigation. From an environmental perspective, rainwater harvesting reduces runoff contamination. Furthermore, this initiative also enhances water security and reduces dependence on other water sources. Moreover, promoting and implementing nature based bonds increases financial resilience and sustainability. Moreover, this also furthers innovation within the country, promoting economic growth and activity in a sustainable manner. Finally, through rain harvesting and other types of initiatives comes greater adoption of renewable energies.

Conclusion

After analysing different aspects of the life and political career of Mia Mottley, it is possible to conclude that she has established herself as a survival and developmental leader, particularly in the sector of climate change policy. Her commitment to addressing the existential challenges which threaten the island of Barbados has been remarkable. Mottley's leadership has not only brought global attention to the threats of small island developing states (SIDS) such as Barbados, but also positioned her island as a relevant resilient and innovative.

Many have seen Mottley's focus on climate change mitigation and conformation as a reason why she gets to be recognized globally. She gave a speech in the UN in 2021 that underscored the international commitment of climate justice, emphasising small islands on climate change and considering them as the most affected countries. This made her receive an accolade of "Global Leader for Climate Change" from the UN where she has been using it to address the rights of vulnerable countries.

The effort of Mia Mottley in overseeing Barbados' high level of debt and promoting economic growth and diversification has been one of her most valuable strategies. In 2021, the debt-to-GDP ratio of the country was 148.11%. By 2024, this had reduced to 107.46% under her leadership despite the prevailing frequent hurricanes and other climate change related disasters. Her strategy involved renegotiating debts as well as borrowing money from the International Monetary Fund (IMF) in which they included financial instruments like special clauses due to extraordinary events like hurricanes. These measures have

provided a much more attractive fiscal space to invest in climate resilience and economic diversification, moving away from a heavy reliance on tourism.

Mottley's government has come up with a number of key policies that will see Barbados more resilient to climate change. The Bridgetown Initiative, which was unveiled in 2022, aims at bringing changes in the international financial architecture in order to tighten screws on climatically fragile states. By including the financial aspects of climate change, they are ensuring long-term stability and resilience for Barbados.

Mottley and her team have implemented different policies with the goal of enhancing Barbados' resilience to climate change. Starting with the Bridgetown Initiative, which looks forward to reform the global financial system to better support climate-vulnerable nations, this new initiative includes clauses like suspending interest payments during crises, raising the amount of funding for climate resilience and incentivising private investment.

The Blue Economy Strategy, which was first introduced in 2018, stands out for the responsible use of sea and ocean resources in order to achieve economic progress. This encompasses such issues like maintaining the health of the waters; fostering tourism that does not harm the natural environment; and working on biotechnological matters related to oceans. By taking advantage of Barbados' vast EEZ, Mottley has spearheaded economically viable ventures that are also eco-friendly, thereby furthering her goal of balancing economic growth with environmental conservation.

Another stake in the climate policy platform of Mottley is the Roofs to Reefs program. This national plan focuses on building more resilient homes, improving fresh water retention capacity, promoting alternative energy sources as well as rehabilitating fish habitats. It aligns with Mottley's comprehensive engagement with various effects caused by global warming through interventions targeting local communities based upon nature itself.

Mottley's leadership is characterised by strengthening Barbados' position on the global landscape. By advocating for climate justice and economic reform, she has built up valuable alliances with other vulnerable nations and gathered support from international organisations. Her role in the Bridgetown Initiative, for example, has brought together different countries and financial institutions to tackle the challenges hindering climate resilience in developing nations. This collaborative approach has introduced Barbados in the global landscape and also opened new income sources for support and investment.

During Mottley's tenure as Prime Minister of Barbados, she did not have an approach that allowed her to respond to changes in the weather effectively. In order to support her innovative ideas within the country while receiving recognition from outside countries as well, Barbados has become an exemplary state among others concerning global warming. At the same time, the state managed to lessen some of its debts while shifting towards more business activities with the help of her brave stance on global warming.

In conclusion, Mottley's current and previous efforts on climate establish Barbados as a significant actor in the global framework for conservation and enables its people to benefit from renewable natural resources. The development of an inclusive green economy shows how dedicated she is to achieving a future that is sustainable in terms of both social inclusion as well as environmental justice. Her legacy will clearly inspire other SIDS to pursue sustainable development goals.

Appendices

Appendix 1: Total impacts of climate change on tourism in Barbados (US\$ million)

Losses\ Scenario	A2 Scenario	%GDP	B2 Scenario	%GDP	BAU scenario
Tourism Loss due to climate	3,814	96.2%	2,754	69.5%	0
Tourism mobility loss	964	24.3%	1,117	28.2%	0
Coral reef	1,333	33.6%	667	16.8%	0
Sea level rise	1,537	38.8%	589	14.9%	0
Total	7,648	193%	5,127	129%	0

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Appendix 2: Graph illustrating tourism rates in term of numbers

Month	YEAR							
	2015	2016	2017	2018	2019	2020	2021	2022
January	53,856	62,338	62,218	65,970	69,496	59,572	3,547	48,848
February	57,789	60,969	63,085	66,916	68,609	63,124	1,880	54,607
March	57,385	60,601	65,725	70,445	70,669	31,152	1,769	60,728
April	51,716	49,248	60,172	57,054	63,364	136	1,865	47,059
May	40,933	44,935	48,642	50,255	50,717	346	3,362	33,949
June	39,687	42,565	44,957	46,334	50,160	494	6,448	32,763
July	53,964	56,670	54,860	55,623	60,248	2,056	11,524	39,377
August	42,927	44,807	51,937	51,995	50,757	6,102	15,620	34,329
September	32,153	35,537	34,347	35,759	36,861	4,867	17,209	28,847
October	41,688	43,398	45,187	46,519		2,389	18,504	34,797
November	52,987	62,802	57,691	59,483		6,669	23,749	53,955
December	64,458	67,643	72,339	72,184		18,195	39,356	70,487
TOTAL	589,543	631,513	661,160	678,537	520,881	195,102	144,833	539,746

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