

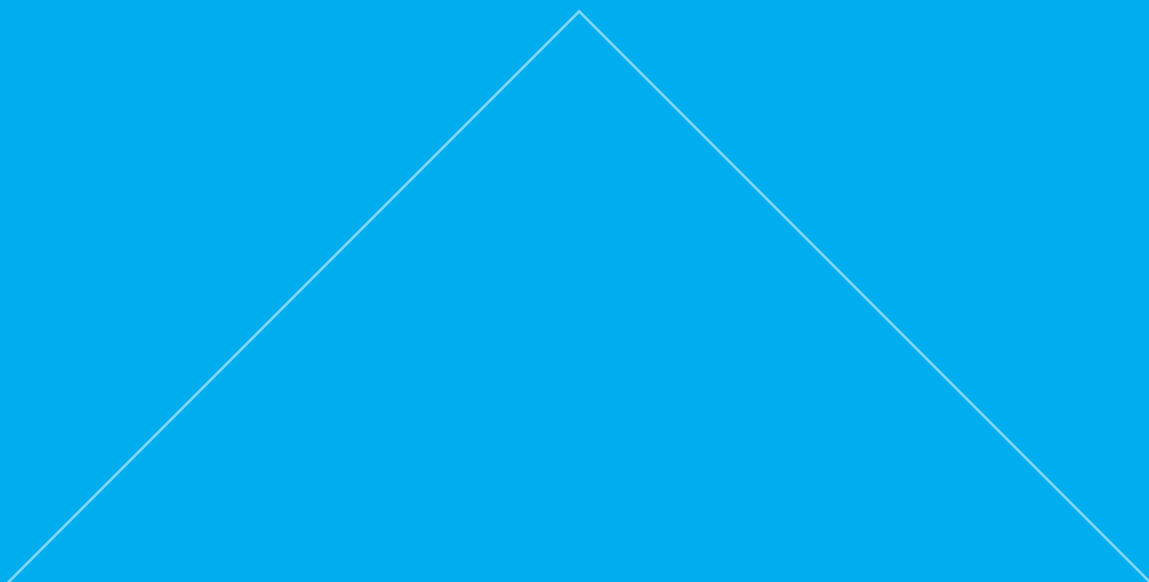


GOVERNMENT OF BERMUDA
Ministry of Home Affairs



PROGRESSING CLIMATE RESILIENCE AND SUSTAINABILITY

MINISTRY OF HOME AFFAIRS 2024 YEAR IN REVIEW



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INTRODUCTION

The Ministry of Home Affairs is committed to advancing Bermuda's environmental sustainability, energy resilience, and regulatory efficiency. Through a series of strategic initiatives, the Government has taken proactive steps to address pressing climate challenges, enhance energy security, and modernize critical services. This report highlights the Ministry's key accomplishments in 2023 and early 2024, underscoring Bermuda's leadership in sustainability, innovation, and responsible governance.

As climate change poses significant risks to small island states, Bermuda has strengthened its preparedness through groundbreaking research, regulatory advancements, and infrastructure improvements. The Government has prioritized climate adaptation, energy cost reduction, and marine conservation, ensuring that Bermuda remains at the forefront of environmental stewardship. Key legislative reforms, such as the Clean Air Amendment Act 2024 and the Water Resources Amendment Act 2024, demonstrate a steadfast commitment to safeguarding public health and natural resources.

In addition to environmental efforts, the Ministry has championed digital transformation, agricultural sustainability, and regulatory efficiency. Introducing AI-driven land title registration, enhanced food storage facilities, and streamlined birth and death registration processes are pivotal to improving public services and economic resilience. By embracing innovation and collaboration, Bermuda continues to set a global example in balancing economic growth with environmental responsibility.

ADDRESSING CLIMATE CHANGE

In 2023, the Government of Bermuda made significant progress in tackling climate change. Completing the comprehensive study, Bermuda and Climate Change: Impacts from Sea Level Rise and Changing Storm Activity, was an important milestone. Funded by the UK Government and conducted by Smith Warner International, the study assessed Bermuda's vulnerabilities to rising sea levels and intensified storm activity. It provided insights into the risks of climate change, identifying at-risk infrastructure, areas vulnerable to flooding and erosion, and potential ecological impacts. The findings were shared with the public, and an expanded Multi-sectoral Climate Change Task Force was established to develop a National Action Plan, promote public awareness, and recommend legislative adaptations. Through these efforts, Bermuda is taking decisive steps to protect its future and position itself as a leader in resilience for other small island states.

REDUCING ENERGY COSTS

In collaboration with Age Concern and the Salvation Army, the LED Giveaway Initiative has significantly advanced energy efficiency in Bermuda. Over 150,000 LED bulbs have been distributed, with 1150 given to residents at the 2024 Bermuda Agricultural Exhibition, generating an estimated \$375,000 in savings for residents. Each LED bulb offers lifetime savings of \$327 compared to incandescent bulbs, underscoring the program's long-term benefits. Further events and resources will continue supporting residents and businesses in reducing energy costs and carbon footprints.

ADVANCING RENEWABLE ENERGY

The Electricity Amendment Act 2024 introduced the *Bulk Generation Sole Use Installation* (BGSUI) licence, allowing large developments to generate electricity beyond the 500-kilowatt threshold for their use. It also aligns with the Government's 2019 Integrated Resource Plan, reducing fossil fuel dependency. Eligible entities, such as commercial buildings, hotels, and data centres, can now generate and utilize renewable energy on-site, with limited sales permitted to the utility. The legislation establishes criteria for granting this licence, regulatory oversight, and the procedures for suspending or revoking licences. It also ensures minimal impact on grid stability and ratepayer costs. This legislation supports Bermuda's clean energy transition while ensuring effective regulation and affordability.

The Ministry of Home Affairs has implemented the following key initiatives to enhance Bermuda's energy security, sustainability, and regulatory framework, demonstrating the Government's commitment to fostering a resilient and innovative energy sector while ensuring long-term benefits for residents and businesses:

- 1. Energy Regulatory Sandbox:** The Electricity (*Innovative Licence*) Regulations 2023 established Bermuda's Energy Regulatory Sandbox, enabling developers to test renewable energy technologies, supporting economic recovery through lower energy costs and diversification.
- 2. Electricity Amendment Act 2024 Implementation:** The Act introduced a large-scale renewable electricity generation framework, enabling businesses and hotels to generate power while ensuring grid stability. It supports Bermuda's goal of reducing fossil fuel dependency by 85% by 2035, as outlined in the 2019 Integrated Resource Plan (IRP).
- 3. Expansion of Digital Infrastructure:** Partnering with Google, the Ministry facilitated the landing of the Nuvem submarine cable, which aligns with the Government's strategy to establish Bermuda as a Digital Atlantic Hub. To be constructed as part of this project, the cable landing station will attract additional global technology investments, create employment opportunities, and provide Bermuda with direct connectivity to Europe. The collaboration with Google ensures long-term economic and technological benefits, positioning Bermuda as a critical node in global digital infrastructure.
- 4. Energy Efficiency and Cost-Saving Initiatives:** A part of the \$15 million stimulus package announced in July 2022 enabled the nationwide LED distribution, prioritizing vulnerable populations. The switch to LED lighting is estimated to save households \$37 per bulb annually, and over its four-to-six-year lifespan, at least \$148 per bulb—or \$592 for a four-pack. Beyond financial relief, this initiative will reduce Bermuda's carbon footprint by preventing 36 million kilograms of CO₂ emissions, the equivalent of removing over 4,000 cars from the road.

These initiatives have strengthened Bermuda's energy sector, enhanced digital connectivity, provided residents with tangible financial benefits, and underscored the Government's commitment to sustainability, innovation, and economic resilience.

ENSURING CLEAN AIR AND WATER

The **Clean Air Amendment Act 2024** strengthens air quality standards, aligning Bermuda with international jurisdictions, including the UK and the U.S. It enhances air pollution monitoring with new sensors, increases fines for non-compliance, and defines statutory nuisances, including large particulate soot. The Act also mandates Air Quality Action Plans, lowers smoke opacity limits, and expands the definition of polluting facilities to include manure pits and spray paint operations. New regulations will reinforce the Government's commitment to public health and environmental protection.

The **Water Resources Amendment Act 2024** strengthens Bermuda's groundwater protection by enhancing enforcement, expanding monitoring authority, and imposing stricter penalties for pollution. It introduces new regulations on pollution limits and reporting, safeguarding water quality for public health, the environment, and the economy.

REDUCING BUREAUCRACY

The Registration (Births and Deaths) Amendment Act 2024 addresses delays in issuing death certificates when the cause of death is not immediately known. Previously, the Registrar General needed confirmation of both the fact and cause of death, causing delays, especially in cases under Coroner or Court review or when autopsies and inquests were pending. The Act introduces a short-form death certificate by allowing a medical practitioner or Coroner to confirm the fact of death without needing the cause. It provides families a quicker way to handle legal, financial, and administrative matters while awaiting further details.

The new “Voluntary Registration of Vital Documents (Miscellaneous Amendments) Act 2024” now allows for the voluntary registration of vital events (births, deaths, marriages, domestic partnerships, and name changes) that occur outside Bermuda. It applies to individuals with Bermudian status, naturalized persons, and their families. The aim is to improve national data for public health, research, and surveillance. The changes enable the Registrar-General to record these events, preserving a complete historical record and generating revenue from certified copies. The system is voluntary, meaning individuals aren’t required to register events occurring overseas.

MODERNIZING LAND TITLE REGISTRATION

The Land Title and Registration Department (LTRO) is launching an AI-powered land title registration system on March 17th, 2025, to address a significant backlog of cases caused by the COVID-19 pandemic, a 2023 cyberattack, and increased property sales. The system, which integrates Artificial Intelligence (AI), Machine Learning (ML), and Geographic Information System (GIS) technology, has shown promising results in accurately processing documents. Once fully deployed, it is expected to reduce processing times from 3-5 days per application to just 10 minutes and improve efficiency by 99%. This innovation aims to clear a backlog of 2,000 cases and improve speed and security in land title registration, marking a significant step in LTRO’s modernization efforts.

DIGITAL TRANSFORMATION INITIATIVES

GovPilot: Throughout 2024, the Ministry of Home Affairs has been working to digitize government services with a Software-as-a-Service (SaaS) platform to create digital solutions for departments like the Registry General, Land Valuation, and the Department of Energy and Natural Resources to enhance operational efficiency. The Dog Licensing, the first system to use the platform, is set to launch in March 2025, marking a key step in this transformation.

STRENGTHENING MARINE PROTECTION

The Blue Belt Ocean Shield (BBOS) partnership enhances Bermuda’s marine protection through improved fisheries sustainability, advanced surveillance, monitoring, and safety technologies. This collaboration aims to ensure better license compliance and safer fishing, with continued funding supporting the rollout of these technologies through 2025 and 2026, reinforcing Bermuda’s commitment to responsible marine resource management.

In collaboration with the UK, the Department of Environment and Natural Resources is developing an action plan for the Blue Ocean Shield Program, with input from various agencies. A partnership with the U.S. Coast Guard has led to the deployment of patrol vessels in Bermuda’s Exclusive Economic Zone (EEZ) and nearby high seas, along with intelligence sharing on international fishing vessels.

A consultant hired through the Bermuda Ocean Prosperity Programme is finalizing the draft Bermuda Marine Resources Enforcement Strategy. They are providing recommendations to enhance the strategy, ensuring it aligns with emerging partnerships and initiatives while addressing concerns from the community and the Marine Spatial Plan Independent Review Panel, particularly on enforcement matters.

PROTECTING ECOSYSTEMS

The Government of Bermuda has made significant strides in environmental conservation through various initiatives. A strategy to protect sharks in local waters has been implemented, with new legislation safeguarding all shark species while allowing some cultural and commercial practices exemptions. This move aligns with international conservation efforts and strengthens Bermuda's commitment to marine protection.

The Department of Environment & Natural Resources is addressing invasive species, including a crayfish population in Devonshire Marsh likely introduced by the pet trade and is exploring eradication methods. Invasive lantern flies, originating from China, have been found on cruise ships arriving from the U.S., prompting new protocols for ship personnel before entering Bermuda.

On a positive note, Bermuda's endangered petrel (cahow) population is growing, and the Greater Bermuda Land Snail has been successfully reintroduced to Nonsuch Island. The island's coral reefs are in relatively good health, especially compared to those further south, which suffer from coral disease and bleaching due to climate change. Following a decline in green turtle numbers, the natural recovery of seagrass in inshore waters has also been observed.

Additionally, Bermuda's "Plastics Control Bill," which aims to regulate single-use plastics, has been approved and is now at the drafting stage. Following public consultations where 73% of residents supported the policy, the Bill will regulate the import, sale, and use of single-use plastics, introducing a phased ban on certain items, duty relief for sustainable alternatives, and enforcement mechanisms. The legislation will be updated regularly to address environmental and practical concerns, with input from various stakeholders.

In 2024, the Ministry announced the launch of the **Outerbridge Memorial Award** in honour of the late Ewart Outerbridge and his son, Linwood Outerbridge. Both men embodied the spirit of collaboration and commitment to sustainability that have been vital to Bermuda's success.

The award will be presented for the first time on **World Fisheries Day in 2025** to individuals in the fishing community who demonstrate leadership and innovation in advancing sustainable fishing practices. It aims to:

- **Celebrate** the contributions of those dedicated to sustainable fisheries in Bermuda.
- **Recognise** the vital role of the fishing industry in our community.
- **Inspire** the next generation of fishermen and conservation leaders.

Through this award, the Ministry seeks to honour the Outerbridges' legacy and reinforce the importance of sustainability in Bermuda's fisheries.

ENHANCING AGRICULTURE AND FOOD SECURITY

The Government of Bermuda is enhancing local food security by developing a 15,000-square-foot Agriculture Services Centre to replace the outdated facility. The state-of-the-art centre will feature advanced cold storage, humidity-controlled areas, a hydrocool room, expanded dry storage, and modern sorting, packing, and inspection capabilities. Designed with renewable energy solutions and improved water collection systems, the facility aims to sustainably boost food production and strengthen Bermuda's resilience to global supply disruptions.

In support of this, consultant agronomist Mr. Stewart Swanson has worked with Bermuda's agriculture industry since May 2023. He has provided pesticide and herbicide application training, conducted weed assessments, and surveyed crop varieties to optimize yields. Mr. Swanson also completed a comprehensive soil survey, helping farmers tailor soil amendments for improved yields and cost reduction. Additionally, a nematode survey conducted in March 2024 assessed the impact of these worms on crops. His findings and other relevant information are shared with farmers through his 6-weekly newsletters.

EMPOWERING BERMUDA'S YOUTH FOR ENVIRONMENTAL LEADERSHIP

Bermuda is nurturing the next generation of environmental leaders by actively engaging young people in sustainability initiatives. Recognizing that youth are among the most passionate advocates for environmental protection, efforts are underway to equip them with the knowledge, skills, and opportunities to drive meaningful change.

Muovement Environmental Education Platform: The Ministry of Home Affairs, in partnership with Muovement and the Department of Education, is developing an interactive online platform to enhance sustainability education in Bermuda's schools. Designed to raise environmental awareness, the platform is currently being evaluated by a focus group of Bermudian students to ensure its effectiveness. Set to launch in March 2025, it will play a key role in fostering environmental stewardship among young people and reinforcing Bermuda's commitment to a sustainable future.

Additional Youth-Led Environmental Initiatives: Beyond the Muovement platform, several initiatives are empowering young Bermudians to take action:

- **Bermuda Aquarium, Museum & Zoo (BAMZ):** Engaging youth in marine conservation, ecological education, and hands-on environmental projects, ensuring that opportunities for young people in these fields remain a priority.
- **Youth Climate Summit:** A platform for young leaders to collaborate, discuss, and drive climate action. The Ministry has supported this event from its inception, recognizing that youth engagement with policymakers is essential for Bermuda's long-term success in addressing climate change and conservation.

By amplifying youth voices, integrating their feedback, and providing avenues for leadership, Bermuda ensures that its young people are not just participants but pioneers in shaping a greener, more sustainable island.

CONCLUSION

The Government of Bermuda has made significant strides in advancing environmental sustainability, energy resilience, and food security. Through strategic initiatives such as developing the new Agriculture Services Centre and implementing energy-efficient programs like the LED Giveaway Initiative, Bermuda is enhancing local food production and reducing reliance on imported goods. Legislative reforms, such as the Clean Air Amendment Act and Water Resources Amendment Act, further reinforce the Government's commitment to preserving Bermuda's natural resources while addressing climate change challenges. Additionally, collaborations like the Blue Belt Ocean Shield partnership demonstrate Bermuda's dedication to marine protection and responsible resource management.

Bermuda's holistic approach, combining legislative advancements, infrastructural investments, and public-private partnerships, ensures a resilient future for the island's environment and economy. The emphasis on digital transformation and regulatory modernization, such as the AI-powered land title registration system and the introduction of the Plastics Control Bill, reflects the Government's commitment to fostering innovation while maintaining sustainability. As Bermuda continues to address pressing environmental challenges and build resilience, it sets a strong example for small island states, positioning itself as a leader in sustainable development and climate adaptation.