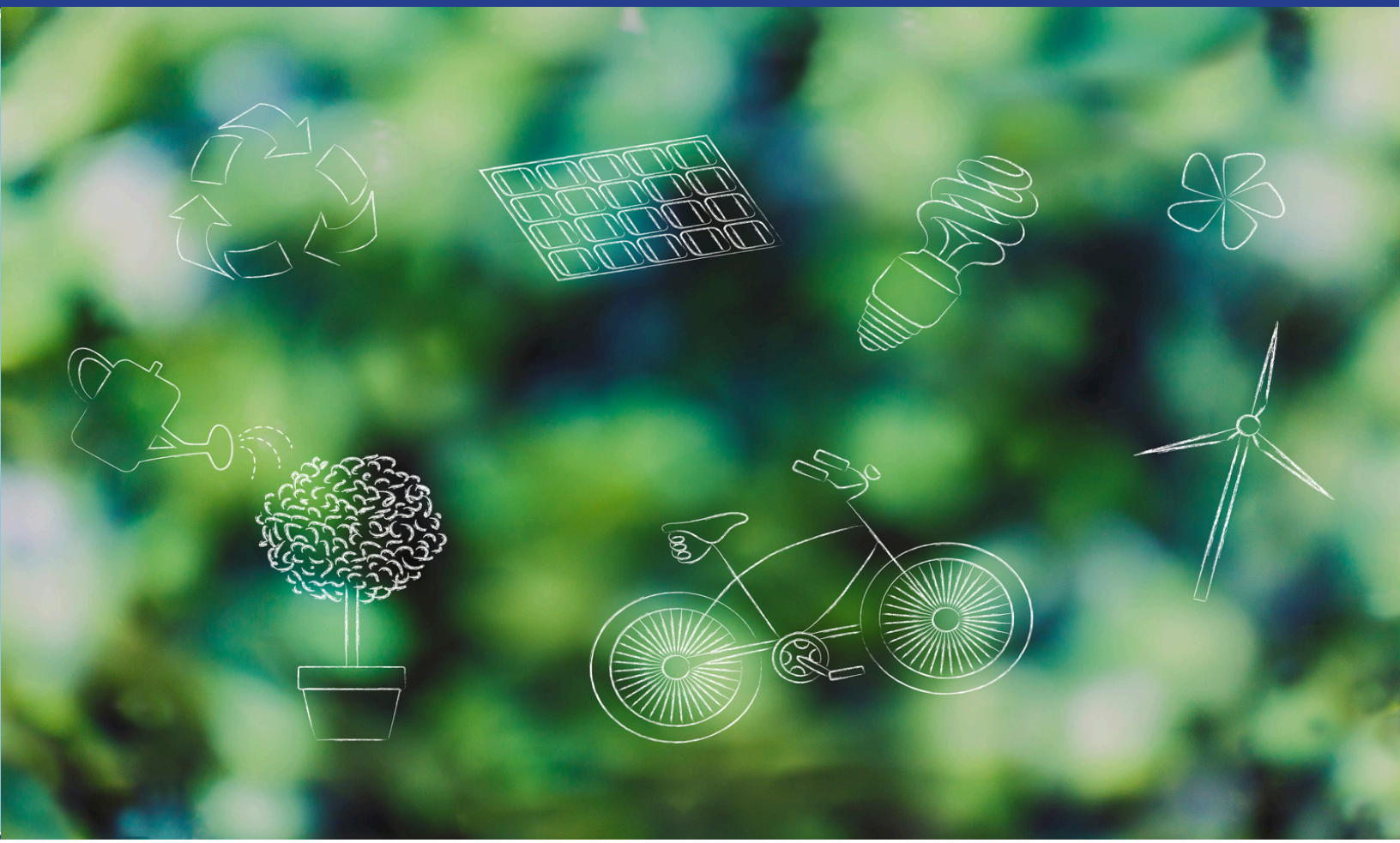
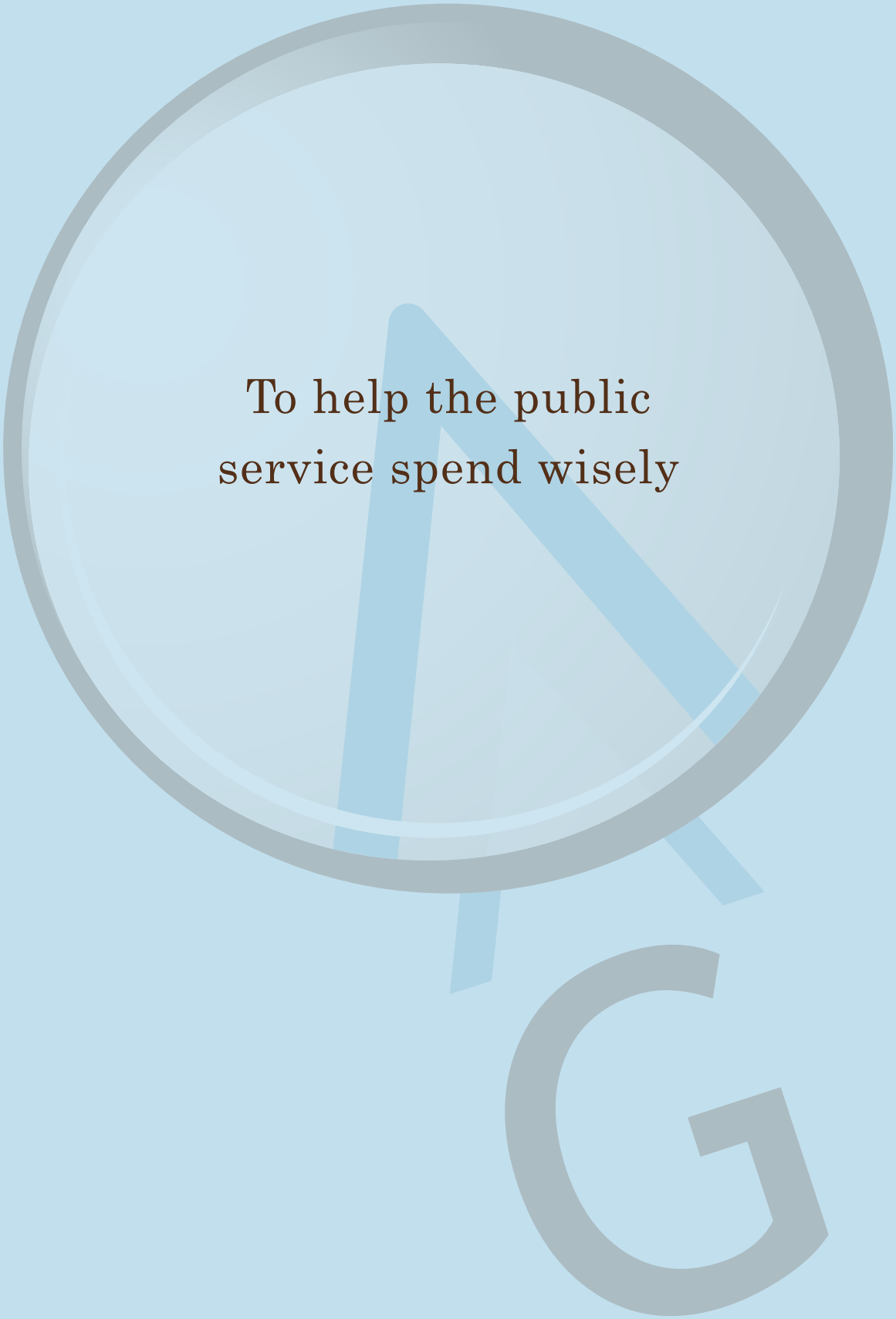
Office of the Auditor General
CAYMAN ISLANDS

Overview of the Cayman Islands' performance against the Sustainable Development Goals focused on the environment



March 2023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KEY FACTS

18%	Percentage of wetlands in the Cayman Islands that were protected as of 2013. More recent data are not available. Since 2008, Grand Cayman has lost at least 192 acres of wetlands.
11.1 lbs (5 kg)	The volume of waste generated per person per day in 2020. This is more than five times the global average.
2%	The Cayman Islands recycles less than 2 per cent of its waste.
3%	As of February 2023, renewable energy contributed 3 per cent of Grand Cayman's total energy production. *The Government target is for 70 per cent of total energy produced to be renewable energy by 2037.*
400	Number of people or families on the waiting list for affordable housing in Grand Cayman. Between 2010 and 2022, the National Housing Development Trust provided 137 houses under the Affordable Housing Initiative. The Sister Islands Affordable Housing Development Corporation did not construct or sell any houses in 2020 and 2021.
55%	Average household income spent on rent. 54 per cent of the population live in rented accommodation.
15.1	Metric tonnes of carbon dioxide emissions per person in 2019. This is three times the global average carbon dioxide emissions.
55%	T**he** Cayman Islands has about 55 per cent of near-shore waters under some form of area-based management.
10%	Dry forest area protected.

INTRODUCTION

BACKGROUND

1. The United Nations adopted the Sustainable Development Goals (SDGs) in 2015. The SDGs were an urgent call for action by all countries to end poverty, protect the planet and ensure that by 2030 all people enjoy peace and prosperity. They require governments to establish a framework that encourages the adoption of sustainable practices and to integrate sustainability information into their reporting cycles. The 17 SDGs are supported by 169 targets, 1,329 publications and 6,652 actions. Exhibit 1 provides a summary of the SDGs.

Exhibit 1 – The United Nations Sustainable Development Goals (SDGs)

Source: United Nations

2. The SDGs were unanimously adopted by the 193 Member States of the United Nations, including the United Kingdom. Therefore, they may also be relevant to the Cayman Islands by virtue of its status as a United Kingdom Overseas Territory.

3. The Government created the Ministry of Sustainability and Climate Resiliency (MSCR) in April 2021. Its aim is to deliver the Government's commitment to achieve environmental, social and economic balance, with a view to maximising benefits across all three areas. In his remarks accompanying the 2022–2024 Strategic Policy Statement (SPS), the Premier highlighted the importance of taking care of the environment and supporting climate change resilience and sustainable development. Successive governments have implemented various environment-related strategies, policies and plans. We discuss some of them in the next section.

4. In February 2023, MSCR issued a request for proposal (RFP) for consultancy services for an SDGs-related project. The RFP states that the successful consultant will facilitate discussions around sustainability both in individual Ministries and across the entire Cayman Islands Government. The consultant will also identify, for the Cabinet, possible targets under the SDGs that the Government should prioritise over the remainder of its term.

5. In an August 2021 report, the Intergovernmental Panel on Climate Change stated that human activities have unequivocally led to climate change and that recent climate changes are rapid, intensifying and unprecedented.[1] The report also stated that these changes will become larger and have long-lasting, irreversible implications, in particular rising sea levels. It concludes that, unless significant reductions in greenhouse gas emissions occur in the coming decades, global warming of 1.5°C and 2°C above pre-industrial levels will be exceeded this century. The report predicts, with high confidence, the following key consequences for small islands:

    - Rising sea levels, leading to loss of shorelines and beaches.
    - Fewer, but more intense, tropical storms.
    - Increased ocean acidification and more frequent and intense marine heatwaves, which will negatively impact coral reefs.
    - Rising sea levels coupled with storm surges and waves, which will exacerbate coastal flooding and the increase the potential for saltwater to find its way into aquifers.[2]
    - Declining trend in rainfall from June to August.

6. This public interest report focuses on the Cayman Islands' performance against those SDGs and targets that we have identified as directly relating to the environment. Out of the 17 SDGs, we have identified eight that are directly focused on the environment. The report provides a factual

[1] Climate Change 2021: The Physical Science Basis, International Panel on Climate Change, August 2021.
[2] Aquifers are rocks that can contain or transmit groundwater.

summary and aims to provide an overview of these environment-related SDG targets in the Cayman Islands.

7. This public interest report is the Office of the Auditor General's first report on the environment and the SDGs. We plan to do performance audits focusing on specific environmental issues in the future. We will use the data in this report as a baseline for those performance audits.

THE GOVERNMENT'S STRATEGIES, PLANS AND POLICIES

8. Several Acts of Parliament deal with environmental issues or affect the environment. For example:

    - The *National Conservation Act, 2013* aims to promote and secure biological diversity and the sustainable use of natural resources in the Cayman Islands.
    - The *Disaster Preparedness and Hazard Management Act (2019)* details the national approach to hazards such as hurricanes.
    - The *National Trust Act (2010 Revision)* established the National Trust for the Cayman Islands as a body corporate. The trust's role is to preserve natural environments and places of historical significance for present and future generations of the Cayman Islands. The trust is not a public body.
    - The *Development and Planning Act (2021 Revision)* is one of several pieces of legislation that affect land use in the Cayman Islands.
    - The *Water Authority Act (2022 Revision)* established the Water Authority of the Cayman Islands. The authority manages the country's water supply and sanitation affairs. It provides public water supplies and sewerage systems and manages, develops and protects water resources.

9. The Government published a National Energy Policy (NEP) in 2013. The policy was revised in 2016 and a new NEP covering the period 2017–2037 was published in 2017. The NEP sets targets to increase the use of renewable energy and to reduce greenhouse gas emissions. The Government drafted a Climate Change Policy in 2011, but this was never finalised.

10. The 2022–2024 SPS sets out the following strategic objectives relating to the environment:

    - Supporting climate change resilience and sustainable development.
    - Reviewing and revising the National Development Plan, as required by the *Development and Planning Act (2021 Revision).*
    - Reducing the number of second-hand cars that are imported from Japan and promoting the use of electric vehicles in the public transport system.
    - Stiffer fines for environmental violations.
    - Ensuring that mangrove buffer zones that have been damaged are replanted.

- Educating children and the general public about the environment and the negative effects of climate change on every aspect of their lives.

11. The Government has set and continues to set ambitious goals in key areas of the environment. The Government has also established several departments and bodies that have a role in environmental issues, including:

    - Central Planning Authority
    - Department of Agriculture
    - Department of Environment
    - Department of Environmental Health
    - Department of Planning
    - Hazard Management Cayman Islands (HMCI)
    - National Conservation Council
    - National Energy Policy Unit
    - National Trust for the Cayman Islands
    - National Weather Service
    - Water Authority of the Cayman Islands.

12. The National Conservation Council, established by the *National Conservation Act, 2013*, has a critical role to play. The Council promotes and secures the biological diversity of the islands and ensures the sustainable use of natural resources. It aims to protect and conserve endangered, threatened and endemic wildlife and their habitats. The Council is the steward for both terrestrial and marine protected areas under the *National Conservation Act*.

13. The Government has an Environmental Protection Fund financed by departure fees levied on travellers leaving the Cayman Islands via the airports or cruise ship terminal. The Government uses the money in the fund to acquire and manage protected areas and for measures to protect and conserve protected species and their critical habitats. The fund balance was $48 million as of December 2021.

ABOUT THE REPORT

14. We prepared this public interest report to provide independent information on the Cayman Islands' performance against the environment-related SDGs. The report provides an overview of progress in implementing these, using the latest available data and estimates. The report covers the period from 2015, when the SDGs were first adopted, to 2022. In most cases, the Cayman Islands'

performance was compared against the performance of global leaders or other countries in the Caribbean region.

15. Appendix 1 sets out each of the SDG targets that are relevant to the environment and our assessment of performance against these. It is worth noting that the SDGs are not independent of each other, and some are interlinked. For example, SDG 7 on increasing the share of renewable energy and SDG target 11.6 on improving air quality are related.

16. We relied on information obtained from various Government departments and units, such as the Department of Environment, Department of Environmental Health, HMCI, National Housing Development Trust (NHDT), National Energy Policy Unit and the Sister Islands Affordable Housing Development Corporation (SIAHDC). However, we were unable to obtain the data required to conclude on the Cayman Islands' performance against some of the SDGs. We note throughout the report, and in Appendix 1, where data were not available.

CAYMAN ISLANDS' PROGRESS AGAINST THE SUSTAINABLE DEVELOPMENT GOALS

17. As stated previously, the United Nations General Assembly approved the SDGs in 2015. We have assessed the Cayman Islands' progress against the 47 targets, covering eight SDGs that relate directly to the environment. This chapter sets our assessment of the Cayman Islands' progress against these targets.

18. Some of the targets of the SDGs were intended to be achieved by 2020, while others were longer term and were to be achieved by 2030. We identified 13 targets set for 2020 and have assessed these targets as met or not met (if the available data relate to 2020). One target was set for 2025 and a further 19 targets were set for 2030. We have assessed these later targets based on progress made so far, and they are assessed as follows: on track, some progress, limited progress or no progress. For the 14 targets where no deadline was set, we have assessed the targets as follows: met, some progress, limited progress and no progress.

19. We assessed progress based on the latest available data. We identify SDG targets for which we have not been able to assess performance due to lack of data. Of the 47 environment-related SDG targets, we assessed that two were not applicable to the Cayman Islands. We were unable to assess the performance of 16 targets because no data were available. Of the remaining 29 targets, four have been met and nine have not been met. A further two are on track, some progress has been made with five and there has been limited or no progress with nine. Exhibit 2 provides a high-level summary of our assessment of progress against the targets. Appendix 1 contains our assessment of each environment-related target.

Exhibit 2 – Summary of the Cayman Islands' progress against the environment-related SDGs

Status	Deadline				
	2020	2025	2030	No deadline	Total
Met	2	-	-	2	4
On track	-	-	2	-	2
Some progress	-	-	1	4	5
Not met	9	-	-	-	9
Limited progress	-	-	4	1	5
No progress	-	-	1	3	4
Not applicable	1	-	1	-	2
No data	1	1	10	4	16
Total number of targets	**13**	**1**	**19**	**14**	**47**

Source: Office of the Auditor General (OAG) assessment

SDG 3: GOOD HEALTH AND WELL-BEING

20. SDG 3 aims to ensure healthy lives and promote well-being for all at all ages. SDG 3 has 13 targets. We determined that two of these targets directly relate to the environment. Of the two targets, we have been unable to assess performance against target 3.9 because there are no publicly available data to measure progress against it. Target 3.9 is, by 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

THE CAYMAN ISLANDS FAILED TO MEET THE TARGET TO HALVE THE NUMBER OF ROAD TRAFFIC ACCIDENT DEATHS BY 2020

Target 3.6	**By 2020, halve the number of global deaths and injuries from road traffic accidents.**
Progress against the target is measured by:	Death rate due to road traffic injuries.

21. By 2020, the number of deaths due to road traffic accidents in the Cayman Islands had reduced by 30 per cent compared with 2015 levels, which is 20 percentage points below the SDG target. By 2021, the number of deaths had reduced further – by 35 per cent compared with 2015 levels – but this was still short of the SDG target. The Royal Cayman Islands Police Service attributed the fatalities in 2021 to speeding, dangerous driving, alcohol and drug consumption. In other words, none of the fatalities was directly related to environmental issues like flooded roads. Exhibit 3 shows the number of deaths from traffic accidents in the Cayman Islands from 2015 to 2021.

Exhibit 3 – Number of deaths from road traffic accidents in the Cayman Islands, 2015–2021

Year	Deaths from road traffic accidents	Population	Deaths per 100,000 population	Percentage reduction from 2015
2015	12	60,413	20	
2016	7	61,361	11	45%
2017	6	63,415	9	55%
2018	8	65,813	12	40%
2019	9	69,914	13	35%
2020	9	65,786	14	30%
2021	9	71,105	13	35%

Source: OAG analysis of traffic accidents data from the Royal Cayman Islands Police Service and population data published by the Economics and Statistics Office.

22. Although the Cayman Islands did not achieve the SDG target by 2020, it performed well globally. Exhibit 4 shows the estimated road traffic death rate per 100,000 population by region in 2018, the latest year for which full data are available from the World Health Organization. The exhibit shows that the number of deaths due to road traffic accidents in the Cayman Islands reduced by a higher percentage from 2015 to 2018 than in any other region in the world. In addition, in 2018, the death rate from road traffic accidents in the Cayman Islands was lower than that in all regions except Europe.

Exhibit 4 – Estimated road traffic death rate per 100,000 population by region, 2015 and 2018

Region	2015	2018	Percentage change
Global	17	17	0%
Africa	27	27	0%
Eastern Mediterranean	18	18	0%
Western Pacific	17	17	0%
South-East Asia	16	16	0%
Americas	16	15	6%
Europe	9	8	11%
Cayman Islands	**20**	**12**	**40%**

Source: OAG analysis of data from the World Health Organization Global Health Observatory, estimated road traffic death rate per 100,000 population

SDG 6: CLEAN WATER AND SANITATION

23. SDG 6 aims to ensure the availability and sustainable management of water and sanitation for all. SDG 6 has a total of eight targets. For the purposes of this report, we determined that five of the targets under SDG 6 directly relate to the environment. Of the five targets, we were unable to assess performance against three (i.e. targets 6.2, 6.3 and 6.4) because there are no publicly available data.

24. Target 6.2 is, by 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations. According to the World Bank, 84 per cent of the Cayman Islands' population used at least basic sanitation services in 2016.[3] These are the most recent data available.

[3] A safely managed sanitation service is defined as access to a toilet or latrine that is not shared with other households and that leads to treatment or safe disposal of excreta. If the sanitation service is shared, it is referred to as a basic sanitation service.

25. Target 6.3 is, by 2030, improve water quality by reducing pollution, eliminating dumping and minimising the release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally. There are no data to measure progress against this target. However, we obtained some relevant information about the target as detailed below.

26. The Department of Environment told us that:

    - There are few land-based sources of pollution to the surrounding marine waters because of the Cayman Islands' geography. Without rivers, upland agriculture and heavy industry, and with a relatively small population, marine pollution remains a limited threat. Therefore, surrounding ocean and coastal waters have been relatively pollution-free.
    - The Cayman Islands has been proactive in limiting the impact of coastal water pollution with laws that prevent the discharge of pollutants to the surrounding waters. The Department of Environment and the Water Authority of the Cayman Islands are jointly responsible for enforcement.[4]
    - Direct sewage disposal to the surrounding sea is illegal. However, sewage treatment and septic tank deep well disposal to groundwater remains the most significant cause of water quality concerns. The Cayman Islands' karst limestone geology means that groundwater that is high in nutrients (phosphate and nitrates) can leach into surrounding marine waters through underground caverns and fissures. This causes prolific algal growth on coral reefs and can introduce disease pathogens.

27. In October 2021, the Cabinet approved the Cayman Islands National Marine Oil Spill Contingency Plan. HMCI developed this plan. HMCI told us that:

    - It is leading the development of a Hazardous Materials Response Plan. This plan includes establishing a multi-sectorial Hazard Materials Technical Working Group. The technical working group's primary purpose will be to develop a system-wide approach to ensure the safe importation, transportation, storage, use and disposal of hazardous materials. The development and delivery of an up-to-date, safe, system-wide approach to hazardous materials has the support of the Chief Medical Officer and other key stakeholders in the Cayman Islands. HMCI plans to finalise the plan in 2023.

[4] The Water Authority Act and the National Conservation Act provide the Water Authority of the Cayman Islands and the Department of Environment with enforcement powers.

- There are currently very limited controls over the use of chemicals that contain nitrates and phosphates (such as fertilisers) and insecticides which may damage marine environment through freshwater runoff.

28. As of 2009, about 20 per cent of wastewater generated in the Cayman Islands was collected and treated at the central wastewater treatment plant operated by the Water Authority of the Cayman Islands. The remaining 80 per cent was treated in about 13,500 septic tanks and 520 aerobic treatment units.[5,6] More recent data are not available. However, considering anticipated sea level rises, it is unclear how effective septic tanks and aerobic units as wastewater treatment facilities will be in the long term.

29. Target 6.4 is, by 2030, substantially increase water use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity. There are no data to measure progress against this target.

MOST PEOPLE HAVE ACCESS TO BASIC DRINKING WATER SERVICES

Target 6.1	**By 2030, achieve universal and equitable access to safe and affordable drinking water for all.**
Progress against the target is measured by:	Proportion of population using safely managed drinking water services i.e., drinking water from an improved source that is: • accessible on premises, • available when needed, and • free from faecal and priority chemical contamination. Improved water sources include piped water, boreholes or tubewells, protected dug wells, protected springs, and packaged or delivered water. If the improved source does not meet any one of the three criteria, but a round trip to collect water takes 30 minutes or less, then it is classified as a basic drinking water service.

[5] *Performance Assessment of Onsite Wastewater Treatment Systems in the Cayman Islands*, Catherine Crabb, 2009.
[6] Aerobic Treatment Units (ATUs) are similar to standard septic systems in that they use natural processes to treat wastewater. But unlike conventional systems, ATUs also use oxygen to break down organic matter. ATUs are like scaled-down versions of municipal wastewater treatment systems.

30. According to the World Health Organization:

- In 2020, 74 per cent of the global population (5.8 billion people) used a safely managed drinking water service.
- 16 countries are on track to reach universal access to safely managed services, and 34 countries are on track to reach universal access to at least basic drinking water between 2020 and 2030.[7]

31. There are no publicly available data about the proportion of the Cayman Islands' population using safely managed drinking water services. However, based on other data available, we have assessed progress as 'on track' to meet the target by 2030.

32. In 2021, 97 per cent of households reported that they had access to at least basic drinking water services.[8] The remaining 3 per cent stated that they did not know or were unsure. Of the 97 per cent of households, 90.5 per cent obtained their water from the mains supply (piped city water or desalinated water). This is below global standards. For example, by 2020, 84 countries had achieved universal (i.e. greater than 99 per cent) access to at least basic drinking water services. This includes 30 countries that had achieved universal access to safely managed drinking water services.[9]

AROUND 18 PER CENT OF WETLAND IS PROTECTED AND SIGNIFICANT WETLAND IN GRAND CAYMAN HAS BEEN LOST

Target 6.6	**By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.**
Progress against the target is measured by:	Change in the extent of water-related ecosystems over time.

33. The Ramsar Convention defines wetlands as "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters." [10]

[7] *Progress on Household Drinking Water, Sanitation and Hygiene 2000–2020: Five Years into the SDGs*, The World Health Organization and United Nations Children's Fund (WHO/UNICEF) Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP), 2022.
[8] *Cayman Islands' 2021 Census Report*, Table 1.8J, Economics and Statistics Office.
[9] *Progress on Household Drinking Water, Sanitation and Hygiene 2000–2020: Five Years into the SDGs*, The World Health Organization and United Nations Children's Fund (WHO/UNICEF) Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP), 2022.
[10] The Ramsar Convention on Wetlands of International Importance is an international treaty for the conservation and sustainable use of wetlands. It is also known as the Convention on Wetlands.

Examples of wetlands are mangroves, marshes also known as “morass”, coral reefs and seagrass beds.

34. When joining the convention, each contracting party is required to designate at least one wetland site – a Ramsar Site – within their territory for inclusion in the List of Wetlands of International Importance – the Ramsar List. The convention provides guidance to its contracting parties on the management of Ramsar Sites, in addition to its guidance on the wise use of all wetlands. The convention includes various measures to respond to threats to the ecological character of Ramsar Sites. The Cayman Islands is not a party to the Ramsar Convention. However, the United Kingdom is a signatory to the convention, and therefore the Cayman Islands, as a United Kingdom Overseas Territory, may be party to it by extension. In 1994, the Cayman Islands designated, the Booby Pond and Rookery, in Little Cayman, as a Ramsar site.

35. There are no publicly available data for 2020. However, based on the information provided, we have assessed that the target was not met. Some wetlands are protected, but significant wetlands have been lost over the last five decades.

36. Two Acts of Parliament, the *National Trust Act (2020 Revision)* and the *National Conservation Act, 2013,* prescribe the legal regime for marine and terrestrial protected areas. The most recent data are from 2013, which pre-dates the setting of the SDGs. Exhibit 5 shows the Cayman Islands’ land cover, wetlands and protected wetlands, by acre and percentage, across each of the three Islands, in 2013. The exhibit includes wetlands protected under the *National Trust Act (2010 Revision)* and the *National Conservation Act, 2013*.

Exhibit 5 – Cayman Islands land cover by category of cover, 2013

Region	Total land cover (acres)	Total wetland (acres)	Percentage wetland	Wetland protected area (acres)	Percentage wetland protected area
Grand Cayman	49,311	18,917	38.4%	3,569	18.9%
Cayman Brac	9,507	141	1.5%	7	5%
Little Cayman	7,130	1,917	26.9%	163	8.5%
Total	**65,948**	**20,975**	**31.8%**	**3,739**	**17.8%**

Source: OAG analysis of data from the Department of Environment

37. In 2013, wetlands accounted for around 21,000 acres, or about 32 per cent of the Cayman Islands’ total land area. However, this varies significantly across each of the three islands. Grand Cayman has the largest wetland area at almost 19,000 acres, accounting for about 38 per cent of the land cover.

This is similar to Florida, where over 31 per cent of the area is wetlands.[11] Exhibit 5 also shows that less than 18 per cent of the wetland acreage is protected.

38. Significantly more wetlands are protected in Grand Cayman than in the Sister Islands. There aren't any wetlands protected under the *National Conservation Act, 2013* in Cayman Brac. That is, all protected wetlands in Cayman Brac are protected under the *National Trust Act (2010 Revision).*

39. According to the Department of Environment:

    - Grand Cayman has lost at least 192 acres of wetland area since 2008.
    - In 1976, the western end of Grand Cayman was largely composed of wetlands, with about 5,300 acres of mangroves and sedge marshes from Prospect to West Bay. By 2013, that number had dropped to around 1,600 acres because of residential and commercial development, a 70 per cent decrease.
    - The wetland loss for the Sister Islands has not yet been calculated.

40. The Cabinet ultimately decides which areas are protected under the *National Conservation Act, 2013*. Under this Act, which came into force in 2015, animal sanctuaries which had previously been designated under the *Animals Act* became "protected areas". The Cabinet also issued two Protected Area Orders in September 2017 and January 2018. However, between January 2018 and February 2022, no wetlands were protected under the *National Conservation Act, 2013*.

41. In March 2022, the Cabinet approved the National Conservation Council's recommendations to place an additional five locations, home to mangroves and other threatened habitats, under formal risk protection. The locations are Sand Cay, the Western Mangrove Cays extension, a piece of the southwest Central Mangrove Wetland on Grand Cayman, as well as Tarpon Lake and the East Interior of Little Cayman. This means that an additional 865 acres will be protected. According to the Department of Environment, adding these five sites to protected areas, the many species of plants and wildlife that grow and live in them will be protected. Exhibit 6 shows the additional acreage to be protected from 2022.

[11] *Land Cover Change Fast Facts*, Office for Coastal Management.

Exhibit 6 – Additional areas approved for protection by Cabinet in 2022

Place	Total area (acres) approved for protection by the Cabinet	Origin	Island
Duck Pond Cay	0.44	Crown	Grand Cayman
Salina Reserve parcel	33.68	Private	Grand Cayman
Sand Cay Parcel	0.48	Crown	Grand Cayman
Western Mangrove Cays	18.38	Crown	Grand Cayman
East Interior parcels	48.92	Crown	Little Cayman
East Interior parcels	71.56	Private	Little Cayman
Tarpon Lake parcels	691.07	Crown	Little Cayman
Total protected area	**864.53**		
Total protected area (Crown)	**759.29**		
Total wetland area (private)	**105.24**		

Source: OAG analysis of data from the Department of Environment

42. According to the Department of Environment, although all mangroves are now protected, the protections may still be removed with planning permission. As a result, acres of wetlands are being lost every month.

SDG 7: AFFORDABLE AND CLEAN ENERGY

43. SDG 7 aims to ensure access to affordable, reliable, sustainable and modern energy for all. SDG 7 has five targets. For the purposes of this report, we determined three of these targets to be directly related to the environment.

ACCESS TO ELECTRICITY IS ALMOST UNIVERSAL, BUT ELECTRICITY COSTS ARE HIGH

Target 7.1	**By 2030, ensure universal access to affordable, reliable and modern energy services.**
Progress against the target is measured by:	Proportion of the population with access to electricity; and Proportion of the population with primary reliance on clean fuels and technology.

44. Based on the information available, we have determined that some progress has been made towards the 2030 target. According to the Cayman Islands' 2021 Census Report, Cayman has

achieved almost universal access to electricity, i.e. 97 per cent of Caymanian households have access to electricity.[12] The remainder do not know or did not state their energy source.

45. However, electricity prices are high, primarily because a significant proportion of electricity is generated from imported diesel. The electricity cost per kilowatt hour (kWh) was about $0.24 in October 2022.[13] According to the World Bank, this is more than double the average price of electricity in the United States.[14,15] The high electricity prices have been exacerbated by the global energy shortages. For example, the cost of electricity in the Cayman Islands in October 2022 was double that in October 2021 and had increased by 53 per cent since February 2022.

46. To mitigate the impact of rising fuel costs on residents' electricity bills, the Government launched its Electricity Assistance Programme in July 2022.[16] The programme offered a fuel cost subsidy of up to $0.05 per kWh for residential customers whose monthly consumption is between 101 and 2,000 kWh. The programme was initially scheduled to run in July, August and September 2022, but the Government later extended it until December 2022.

47. The Government also provides social assistance, in the form of payment of electricity bills, for vulnerable people through the Needs Assessment Unit. Over the five years from 2016/17 to 2021 the Needs Assessment Unit has assisted between 111 and 365 families with electricity bills.

ONLY 3 PER CENT OF GRAND CAYMAN'S ENERGY IS GENERATED FROM RENEWABLE SOURCES

Target 7.2	**By 2030, increase substantially the share of renewable energy in the global energy mix.**
Progress against the target is measured by:	The share of renewable energy in the total final energy consumption.[17] The World Bank defines renewable energy as power generated from water, wind or the sun, or any other source that is replenished through a natural process.

[12] Cayman Islands' 2021 Census Report, Table 10.13B.
[13] Caribbean Utilities Company, Ltd, website – fuel cost.
[14] *Clean Energy in the Caribbean: A Triple Win*, Lilia Burunciuc, 21 June 2022.
[15] We were not able to compare the costs of electricity across the Caribbean region because of inconsistencies in the data published.
[16] Cayman Islands Government press release, 1 July 2022.
[17] Final energy consumption is the total energy consumed by end users, such as households, industry and agriculture. It is the energy which reaches the final consumer's door and excludes that which is used by the energy sector itself.

48. Limited progress has been made in achieving this target. In February 2017, the Cabinet approved the Cayman Islands' NEP 2017–2037. The NEP, first drafted in 2013, and reviewed in 2016, set a target of generating 70 per cent of electricity from renewable sources by 2037. When the target was set in 2015, more than 99 per cent of energy in the Cayman Islands was generated from oil products. At that time, renewable energy accounted for 0.2 per cent of electricity generation. In the seven years since the target was set, little progress has been made. By February 2023, renewable energy contributed 3 per cent of Grand Cayman's total energy production.[18] Significant effort will be needed to increase the use of renewable energy over the next 15 years and to achieve the target of 70 per cent.

49. According to the World Bank, Caribbean small states generated about 7 per cent of their energy from renewable sources in 2015.[19,20] More recent data for the Caribbean region are not available. In 2019, the Democratic Republic of the Congo had 96 per cent of its total energy consumption from renewable sources, the highest percentage globally.

PROGRESS IN IMPROVING ENERGY EFFICIENCY HAS BEEN LIMITED

Target 7.3	**By 2030, double the global rate of improvement in energy efficiency.**
Progress against the target is measured by:	Energy intensity measured in terms of primary energy and Gross Domestic Product (GDP). Energy efficiency can be measured by investments in energy efficiency as a percentage of GDP and the amount of investment in financial transfer for infrastructure and technology to sustainable development services.

50. Limited progress has been made in improving energy efficiency. Exhibit 7 shows that in 2016, on average, each Caribbean country had one energy efficiency programme or policy in the planning stage and one in place. Exhibit 7 shows whether a country has adopted a policy and whether that policy is in place, in planning phase or not considered (N/A). The Cayman Islands did not have any energy efficiency programmes or policies in place at the time.

[18] Caribbean Utilities Company, Ltd, electricity bills, February 2023. Note that data from the electricity provider in the Sister Islands are not available.
[19] *World Development Indicators*, World Bank.
[20] According to the World Bank, the Caribbean small states is a grouping comprised of Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Monserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago.

Exhibit 7 – Energy efficiency programmes and policies in Caribbean countries, 2016

	Energy Efficient Standards	Tax credits	Tax reduction/ Exemption	Public demonstration	Restrictions on incandescent bulbs	Appliance labelling standards	NA	Planning	In place
Antigua and Barbuda	Planning	N/A	N/A	Planning	Planning	Planning	2	4	0
Aruba	N/A	N/A	In place	In place	N/A	N/A	4	0	2
Bahamas	N/A	N/A	N/A	N/A	In place	N/A	5	0	1
Barbados	Planning	Planning	N/A	Planning	N/A	N/A	3	3	0
Belize	N/A	N/A	N/A	N/A	N/A	N/A	6	0	0
Cayman Islands	N/A	N/A	N/A	N/A	N/A	N/A	6	0	0
Dominica	Planning	N/A	In place	In place	Planning	Planning	1	3	2
Grenada	N/A	N/A	N/A	N/A	N/A	N/A	6	0	0
Guyana	N/A	N/A	In place	In place	N/A	N/A	4	0	2
Jamaica	N/A	In place	In place	N/A	N/A	In place	3	0	3
Dominican Republic	N/A	N/A	In place	In place	In place	N/A	3	0	3
St. Kitts and Nevis	N/A	N/A	N/A	N/A	N/A	N/A	6	0	0
St. Vincent and the Grenadines	Planning	Planning	In place	In place	In place	Planning	0	3	3
St. Lucia	N/A	N/A	Planning	N/A	N/A	N/A	5	1	0
Trinidad and Tobago	Planning	In place	In place	N/A	Planning	Planning	1	3	2
Turks and Caicos Islands	N/A	N/A	N/A	N/A	In place	N/A	5	0	1
Virgin Islands	N/A	N/A	N/A	N/A	In place	N/A	5	0	1
							Average Caribbean Country		
							4	1	1
NA	12	13	9	10	9	12			
Planning	5	2	1	2	3	4			
In place	0	2	7	5	5	1			

Source: Energy Efficiency Policies in the Caribbean: A Manual to Guide the Discussion, Sergio Guerra, 2016.

51. However, since 2016, the Government has taken some action to improve energy efficiency. For example, the NEP 2017–2037 outlines some strategic aims to increase energy efficiency. Exhibit 8 shows some of these aims, and the progress made against them by 2021 according to MSCR. We have included additional information that we are aware of in the exhibit.

Exhibit 8 – The NEP's strategic aims for energy efficiency and progress against them as of November 2021

Strategic aim no.	Description	Status as at November 2021
3.3.7.1	Create and/or maintain incentives to facilitate the use of electric and hybrid vehicles. The Government will lead with a policy to convert 7–10 per cent of its fleet to electric vehicles and hybrids, where appropriate in the first five years of the NEP.	This was supposed to have been implemented in 2022 but remains outstanding.
3.3.7.2	Support progressive conversion of the public transportation fleet to more efficient alternative fuel vehicles.	This was supposed to have been implemented by October 2017 but remains outstanding. In September 2022, the Ministry of Tourism and Transport commissioned Deloitte to provide consultancy services to help it reform the public transport system. The scope of the consultancy services includes providing a plan for a sustainable public transport system – inclusive of a zero-emission public bus fleet. The plan is expected by March 2023.
3.3.7.4	Reduce the duty on electric vehicles and hybrids to 0% and 10%, respectively, for five years.	Implemented in September 2019.
3.3.8.1	Amend the building code to mandate energy efficiency in lighting, insulation and equipment.	This was supposed to have been implemented by 31 May 2018 but remains outstanding.
3.3.8.5	Determine incentives for energy-efficient appliances and devices, and sustainable building materials.	This was supposed to have been implemented by December 2017 but remains outstanding. However, discussions are ongoing with the Ministry of Finance & Economic Development and with Customs and Border Control regarding a reduction in the tariff rate for energy star-rated equipment. See paragraph 53 for updated information since November 2021.
3.3.9.1	Implement a programme to retrofit government buildings and facilities.	Planning permission was granted for a 100 kW carport structure with solar panels in the car park at the Government Administration Building. The panels were installed and the system became operational between December 2022 and January 2023.
3.3.9.2	Develop programmes to reduce energy demand in government-owned facilities.	This was supposed to have been implemented by the December 2017, but is still in progress. In July 2022, the Resilience, Sustainable Energy and Marine Biodiversity Programme (RESEMBID) awarded MSCR more than $1 million to improve energy efficiency in public sector buildings and Government-built affordable homes.
3.3.9.5	Retrofit public street lighting fixtures to energy-efficient alternatives and renewable energy sources, where cost-effective.	This was supposed to be implemented by December 2019, but is still ongoing. The Caribbean Utilities Company, Ltd (CUC) is still in the process of retrofitting street lights with LED bulbs. Based on the CUC's 2021 annual report, 70 per cent of all street lighting had been retrofitted with LED bulbs as at December 2021.
3.3.11.2	Identify incentives to encourage integration of renewable energy solutions in public spaces, such as designated parking spaces for electric vehicles.	The Development and Planning Regulations were amended in November 2020 to include designated parking areas for electric vehicles in commercial car parks for buildings of 5,000 sq. ft. or greater.
3.3.11.3	Facilitate interconnection of waste-to-energy generation to the grid.	As part of the ReGen project, the Government is in negotiations for a waste-to-energy facility. The estimated completion date for this project is late 2026.

Source: National Energy Policy 2017–2037; 2021 Progress Report, MSCR, 2021.

52. In 2020, the Ministry of Planning, Agriculture, Housing and Infrastructure (MPAHI), then known as the Ministry of Commerce, Planning and Infrastructure (MCPI), in partnership with the Caribbean Utilities Company, Ltd, organised the "Cayman's home energy efficiency competition". The competition aimed to promote energy efficiency in households.[21] Eight winners each had their homes audited by the Caymanian-owned company Greentech Solar to determine where and how energy was being lost. Each energy audit was worth up to $1,900.

53. In November 2022, the Government approved duty waivers on several energy-efficient devices and building materials. The Government plans to amend Schedule 1 of the Customs and Tariff Act to set the duty for spray polyurethane foam insulation, polyurethane foam sheets, low e-film for windows, smart thermostats and smart home energy monitors to 0 per cent.

54. The Government commissioned consultants to support the five-year review of the NEP. We understand that the project includes reviewing and making recommendations to update the policy and related implementation plan. This will include aligning the policy with other national and international plans, policies, legislation and good practice, and determining if new targets are needed. The public was asked for input through a survey running between 19 December 2022 and 20 January 2023. We were told that the revised policy and its implementation and monitoring plan are due to be completed in March 2023, and will be subject to further public consultation before being approved.

SDG 11: SUSTAINABLE CITIES AND COMMUNITIES

55. SDG 11 aims to make cities and human settlements inclusive, safe, resilient and sustainable. SDG 11 has ten targets. For the purposes of this report, we determined that there are nine targets directly related to the environment. Of these, we were unable to assess progress against SDG targets 11.3, 11.6 and 11.7 because there are no publicly available data.

56. Target 11.3 is, by 2030, enhance inclusive and sustainable urbanisation and capacity for participatory, integrated and sustainable human settlement planning and management in all countries. Progress against the target is measured by the ratio of land consumption rate to population growth rate, and the proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically.

57. Target 11.6 is, by 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste. It is measured by the proportion of municipal solid waste collected and managed in controlled facilities out of total

[21] Based on information from the Cayman Islands National Energy Policy Unit.

municipal waste generated by cities, and annual mean levels of fine particulate matter (PM2.5 and PM10) in cities (population weighted). The Department of Environmental Health manages all municipal waste within facilities in Grand Cayman and the Sister Islands. Waste management is covered more broadly in paragraphs 96 to 107. The Government does not collect or report data on air quality in the Cayman Islands.

58. Target 11.7 is, by 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities. There are no publicly available data about the amount of space open for public use in the Cayman Islands. In addition, there are no specific data in relation to crimes in green and public spaces in the Cayman Islands. However, crime statistics for 2021 show the following:[22]

    - 1,735 domestic violence referrals – a decrease of 24 per cent compared with the previous year (2,295 in 2020).
    - 1,399 child safeguarding referrals – an increase of 22 per cent on the previous year (1,146 in 2020).
    - 90 sexual offences – an increase of 10 per cent on the previous year (82 in 2020).

THERE HAS BEEN LIMITED PROGRESS IN PROVIDING AFFORDABLE HOUSING

Target 11.1	**By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.**
Progress against the target is measured by:	Proportion of urban population living in slums, informal settlements or inadequate housing.

59. There are no data to specifically measure progress against this target. However, based on available data on affordable housing, we have determined that there is limited progress against the 2030 target. There is a shortage of affordable housing.

60. There are two Government-owned companies whose mandate is to provide affordable housing to Caymanians. NHDT performs the role in Grand Cayman, and SIAHDC does the same in the Sister Islands.

[22] *RCIPS Annual Crime and Traffic Statistical Report, Full Report 2021*, Royal Cayman Islands Police Service, 2021.

61. According to the NHDT's 2021 annual report, owning a house in the Cayman Islands is becoming increasingly difficult. The average cost of a starter home is at least $300,000, and the average price of a house is about $1 million.

62. NHDT's scope of activities is as follows:

- Constructing homes to be sold to Caymanians on low incomes at an affordable price under the Affordable Housing Initiative (AHI) programme.
- Providing financing to low-income Caymanians who qualify under the criteria set by NHDT's Board of Directors for the purchase of affordable homes constructed under the NHDT's supervision.
- Performing the duties as an administrator and loan processing agent on behalf of the Government for the Government Guaranteed Home Assistance Mortgage (GGHAM) programme.
- Providing bridge financing to Caymanians constructing a home on their property, whereby the mortgage loan is then refinanced by banks participating in the GGHAM programme.

63. The Government launched the GGHAM programme in 2007. The amount approved was $65 million, but the agreement expired in 2012. A total of 325 households have accessed the programme to get mortgages. At the end of December 2021, the GGHAM programme's balance was $14.8 million.

64. NHDT constructed 126 homes under the AHI programme between 2010 and 2019. Of these, NHDT sold 85 houses outright, 17 houses have been sold under lease-to-own arrangements and 12 houses are currently rented out. A further 10 houses are vacant, pending sale. Exhibit 9 shows the status of the AHI programme in December 2021.

Exhibit 9 – Affordable Housing Initiative programme house allocation, December 2021

Category	Bodden Town	East End	West Bay	George Town	Grand Total	Comments
Sold	35	18	22	10	85	Sold outright
Lease - To-Own	-	-	7	10	17	Homeowners Transferred from the Old Housing Sites to the New Sites
Lease/Rent	-	-	6	6	12	Rental Tenants
Special Case	1	-	1	-	2	Houses Assigned Under Testament
Vacant	3	7	-	-	10	House Assigned for Sale
Total	**39**	**25**	**36**	**26**	**126**	**AHI Houses Allocated**

Source: NHDT 2021 annual report

65. NHDT has not been able to cope with the demand for affordable homes. For example, based on media reports, it has a waiting list of about 400 applicants for affordable homes, some of whom have been waiting for two to three years.
66. However, we understand that NHDT has started building more homes. Media reports state that NHDT has started work on two affordable housing projects since December 2021. These include a project in North Side, started in December 2021, which will provide 45 homes, and a project in West Bay, started in November 2022, which will provide 19 homes. NHDT told us that they constructed 11 houses between 2020 and 2022.

67. The SIAHDC's activities are as follows:

- Constructing affordable homes in the Sister Islands to be sold to Caymanians.
- Assisting Caymanians in the Sister Islands who qualify under criteria set by the Corporation with financing for purchasing of affordable homes constructed under its supervision.

68. By December 2022, SIAHDC had facilitated the construction of at least 23 homes in the Sister Islands. There is a waiting list of at least seven people in the Sister Islands. We are aware, from our financial audits, that SIAHDC did not build or sell any homes between 2019 and 2022. We also understand that SIAHDC aims to start building affordable homes in the Sister Islands in 2023.

69. The Government has some other initiatives to assist Caymanians with home ownership. For example, the Government, through the Cayman Islands Development Bank, has allocated $15 million to lend to Caymanian mortgage seekers at interest rates as low as 3.75 per cent.[23]

70. In 2021, about 54 per cent of households in the Cayman Islands lived in rented houses.[24] Rental costs are high. For example, according to Cayman Resident, an online guide to living, working and doing business in the Cayman Islands, the average monthly rent for a one-bedroom apartment is $1,650.[25] Based on the Cayman Islands' 2021 Census Report, the median wage is about $36,000 annually or $3,000 monthly. Therefore, on average, residents can expect to spend about 55 per cent of their monthly income on rent.

71. In March 2009, Parliament passed the *Residential Tenancies Act, 2009*. The law aimed to reform existing laws relating to residential tenancies and to define the rights and obligations of landlords and tenants of residential premises. However, the law is not yet in force, 13 years later.

[23] Cayman Islands Government press release, 18 July 2022.
[24] Cayman Islands' 2021 Census Report, Table 10.2A.
[25] Cayman Resident, Cost of Living, average monthly rental rates (accessed 22 December 2022).

72. The Needs Assessment Unit assists vulnerable people with their rental costs. Based on the 2021 Compendium of Statistics, the unit assisted between 502 and 602 families with rent between 2016/17 and 2021.[26]

THE PUBLIC TRANSPORT SYSTEM IS INADEQUATE

Target 11.2	**By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.**
Progress against the target is measured by:	Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities.

73. The Cayman Islands has a very limited public transport system, made up of mini-buses connecting some districts of Grand Cayman. As at January 2023, nine routes in Grand Cayman were serviced by the mini-buses. In September 2022, the Ministry of Tourism and Transport (MTT) commissioned Deloitte to provide consultancy services to help it reform the public transport system. The scope of the consultancy services includes providing a plan for a sustainable public transport system that meets residents' and visitors' needs. The plan is expected by March 2023.

EXPENDITURE PER CAPITA ON CULTURE AND HERITAGE HAS REMAINED RELATIVELY CONSTANT SINCE 2015

Target 11.4	**Strengthen efforts to protect and safeguard the world's cultural and natural heritage.**
Progress against the target is measured by:	• Total per capita expenditure on the preservation, protection and conservation of all cultural and natural heritage, by source of funding (public, private), type of heritage (cultural, natural) and level of government (national, regional, and local/municipal).

74. The SDG does not set a date for this target. There are no specific public data to measure performance against this target. However, based on the data that are available, we have determined that there has been some progress against the target.

[26] *The Cayman Islands' Compendium of Statistics 2021*, Economics and Statistics Office, 2022.

75. Between 2015 and 2021, the Government spent about $24 million on culture and heritage. This is based on expenditure incurred by the Cayman National Cultural Foundation (CNCF), Cayman Islands National Museum (MUS) and the National Gallery of the Cayman Islands (NGCI). However, it is unclear how the three entities used the expenditure to protect and safeguard the country's cultural and natural heritage.

76. The spend per capita on culture and heritage has remained relatively consistent since 2015. Exhibit 10 shows that the spend per capita was $50 in both 2015 and 2021. The average per capita spend for the seven-year period 2015 to 2021 was also $50.

Exhibit 10 – Total expenditure on culture and heritage by the CNCF, MUS and NGCI, 2015–2021

Year	CNCF ($000)	MUS ($000)	NGCI ($000)	Total ($000)	Spend ($) per capita
2015	1,037	1,005	1,006	3,048	50
2016	1,006	1,004	1,077	3,087	50
2017	1,021	921	1,156	3,098	49
2018	965	938	1,127	3,030	46
2019	1,155	1,059	1,335	3,549	51
2020	1,242	937	1,206	3,385	51
2021	1,515	924	1,113	3,552	50
Total	**7,941**	**6,788**	**8,020**	**22,749**	

Note that 2016–17 was an 18-month period. We have pro-rated the expenditure to allow comparison with other financial years.

Source: Audited financial statements of the Cayman National Cultural Foundation (CNCF), Cayman Islands National Museum (MUS) and National Gallery of the Cayman Islands (NGCI).

77. In June 2021, the Government established the Ministry of Youth, Sports, Culture and Heritage. Culture and heritage were previously managed by the Ministry of Health & Wellness (previously known as the Ministry of Health, Environment, Culture and Heritage). The 2022–2024 budget did not allocate appropriations specifically for culture and heritage at the ministry level. Instead, the Ministry was allocated funds to administer the appropriations to three Government companies, i.e. the CNCF, MUS and NGCI. The 2022 and 2023 budgets for these three government companies increased slightly compared with the 2021 budgeted amounts. The budgets increased by between 2 and 4 per cent for the three companies. The Government's efforts will need to continue because the target does not have an end date.

78. The Government supports other cultural events and organisations but includes this expenditure in "general" transfer payments.[27] Therefore, we could not ascertain how much of this expenditure is directly related to culture and heritage and have not included it in our analysis.

THE CAYMAN ISLANDS HAS BEEN RESILIENT IN THE FACE OF NATURAL DISASTERS

Target 11.5	**By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.**
Progress against the target is measured by:	• The number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population. • Direct economic loss attributed to disasters in relation to global domestic product (GDP). • Damage to critical infrastructure and the number of disruptions to basic services, attributed to disasters.

79. HMCI is the lead agency responsible for the national comprehensive disaster management programme. HMCI has overall responsibility for the National Hazard Management Plan. The plan sets out the Government's response mechanism and strategies for a range of disasters and significant hazard threats (hurricanes, tsunamis, oil spills, pandemics, aviation accidents, etc.). A number of plans are in development for other threats, such as earthquakes and hazardous materials. HMCI also oversees emergency exercises in the Cayman Islands. HMCI's activities include the following:

    - Approaching risk reduction through both preparedness and mitigation strategies. Preparedness includes a broad-ranging public awareness and education programme aimed at building awareness of hazard threats and encouraging strategies for reducing and minimising risk. Mitigation measures include improving risk analysis to provide scientific and evidence-based approaches to manage the major disaster threats.
    - Offering training, developing response plans and conducting emergency exercises.
    - Leading the provision of emergency shelters across all three Islands.

[27] Transfer payments are a classification of government expenditure that is usually a benefit given by the government to individuals or entities without the expectation of goods or service in return.

80. Before the SDGs were set, the Cayman Islands experienced two significant natural disasters through Hurricane Ivan in 2004 and Hurricane Paloma in 2008:

    - According to the United Nations Economic Commission for Latin America and the Caribbean (ECLAC), 83 per cent of Grand Cayman's population was directly affected by Hurricane Ivan. The remainder was indirectly affected. The total impact of the disaster on the Cayman Islands was about $2.8 billion, or $76,000 per capita. The total amount of damage and losses was equivalent to almost double the Cayman Islands' GDP.[28] Two people died in Hurricane Ivan and about 400 were injured.
    - In November 2008, Hurricane Paloma struck Cayman Brac and Little Cayman, causing about $154 million in property damage, or approximately 7 per cent of GDP. The per capita impact was $57,000. About 2,500 people, or 5 per cent of the Cayman Island's population at the time, were affected by Hurricane Paloma. Of those affected, approximately 8 per cent were severely affected, nearly all of whom were in Cayman Brac. No lives were lost as a direct result of Hurricane Paloma.[29]

81. We understand that HMCI works closely with the Cayman Islands National Weather Service to improve its capacity to model storm-driven waves. HMCI aims to provide better storm risk and vulnerability analysis by improving its capacity to forecast the likely rise in sea level over time due to climate change. With this improved capacity, HMCI aims to inform the development and planning process, using informed estimates of the likely impacts on properties, primarily those in coastal and low-lying areas.

82. Since 2015, the Cayman Islands has been spared any significant damage from natural disasters but has experienced significant tropical storms, hurricanes and an earthquake. We have summarised the data available on each of these below:

    - In January 2020, the Cayman Islands and the northern Caribbean experienced a 7.7 magnitude earthquake. As a result, there were 31 aftershocks, including a 6.1 magnitude event later in the day, and a tsunami warning. The earthquake caused some structural damage, including 53 sink holes, but there was no major damage and no injuries.
    - In November 2020, Tropical Storm Eta caused some damage and brought down power lines.

[28] *The Impact of Hurricane Ivan in the Cayman Islands*, United Nations Economic Commission for Latin America and the Caribbean, 2004.
[29] *Cayman Islands: Macro Socio-Economic Assessment of the Damage and Losses Caused by Hurricane Paloma*, United Nations Economic Commission for Latin America and the Caribbean, 2009.

- In 2021, the Cayman Islands was hit by Tropical Storms Grace and Ida. However, no data about the estimated property damage caused by the storms are available yet.
- In September 2022, Hurricane Ian passed over the Cayman Islands. The hurricane caused some damage, flooding and power outages, but there were no injuries or major damage.

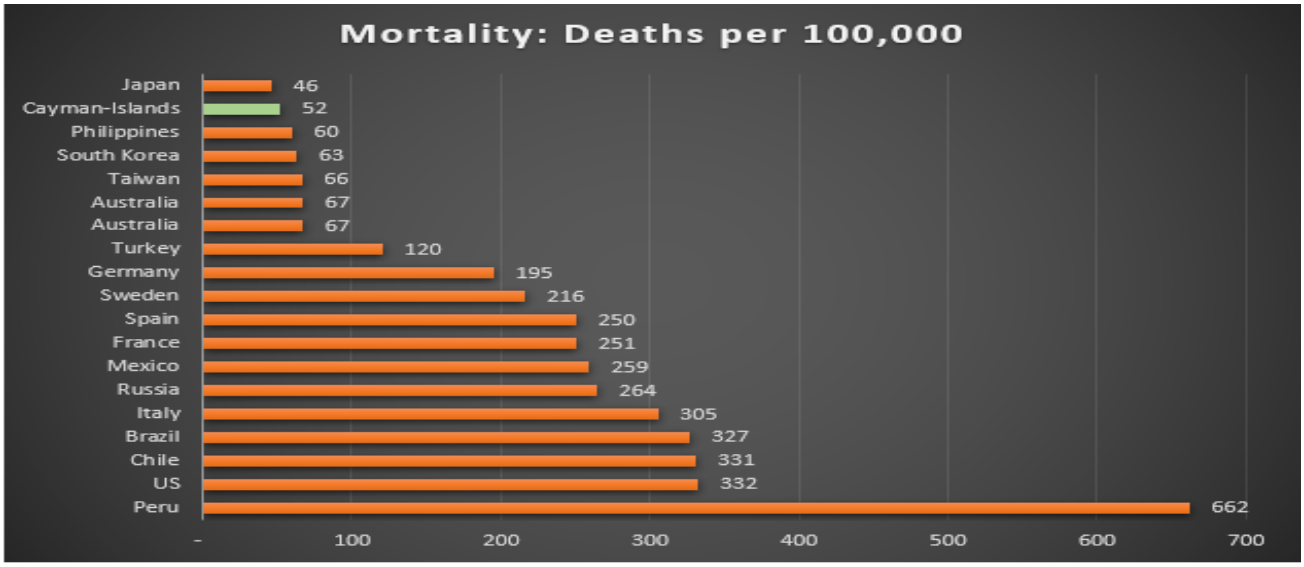
There are no data available on the economic impact of the damage caused by these events.

83. The National Hazard Management Council, the National Emergency Operations Centre and HMCI played a major part in coordinating responses to all of these incidents.

84. In March 2020, the first COVID-19 case was reported in the Cayman Islands. The Government had, at the beginning of the month, activated the National Emergency Operations Centre in response to the pandemic. Consecutive governments successfully undertook a range of measures to mitigate the impact of the COVID-19 pandemic on the country. We reported separately on the actions taken and costs of responding to the pandemic in July 2020 and May 2022.[30] As at 3 January 2023, the Ministry of Health & Wellness had reported 37 COVID-19-related deaths. Based on the population data in the 2021 Census, this translates to about 52 deaths per 100,000 population. Exhibit 11 shows that the Cayman Islands' COVID-19-related mortality rate compares very well with that of other countries globally.

[30] *Overview of the Government's Costs in Relation to COVID-19*, (July 2020), and *The impact of the COVID-19 Pandemic on Government Finances: Update to March 2022* (May 2022), Office of the Auditor General Cayman Islands.

Exhibit 11 – COVID-19-related mortality rate for selected countries



Source: Johns Hopkins University & Medicine: Coronavirus Resource Centre, 3 January 2023 and OAG analysis based on Cayman Islands data.

THE CAYMAN ISLANDS DOES NOT HAVE AN UP-TO-DATE NATIONAL DEVELOPMENT PLAN

Target 11a	**Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.**
Progress against the target is measured by:	Number of countries that have national urban policies or regional development plans that respond to population dynamics; ensure balanced territorial development; and increase local fiscal space.

85. Limited progress has been made against this target. The *Development and Planning Act (2021 Revision)* requires the Government to update the development plan every five years. In 2015, the OAG recommended that the National Development Plan for the Cayman Islands, adopted in 1997, should be comprehensively updated.[31] MCPI (now known as MPAHI) planned to start consultations on a new National Development Plan in the third quarter of 2018. The Ministry planned to review

[31] *National Land Management and Government Real Property*, Office of the Auditor General Cayman Islands, June 2015.

the plan in November 2018 but would not fully adopt it until 2022. The Ministry also committed to introducing a development plan for the Sister Islands.[32] None of these plans has been implemented.

86. In November 2018, the Central Planning Authority drafted a National Planning Framework as part of a comprehensive policy for land use in Grand Cayman. The framework is the first stage in the development plan's review. We understand that a final draft version of the framework is currently being considered for adoption. The 2022–2024 SPS included a specific outcome to review and revise the National Development Plan.

THE CAYMAN ISLANDS PLANS TO IMPLEMENT SENDAI FRAMEWORK-RELATED POLICIES

Target 11.b	**By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels.**
Progress against the target is measured by:	• Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030. • Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies.

87. This target was not met. Based on information gathered from HMCI, the Cayman Islands has not been using the Sendai Framework as a guide for improving disaster risk reduction, nor has it been providing regular input, insight or local progress updates to the framework. The Cayman Islands has not used the framework as a blueprint for disaster risk management at all levels. However, HMCI has been working to implement integrated policies and plans towards inclusion, resource efficiency, mitigation and resilience to disasters that are in line with the Sendai Framework. These policies and plans contribute to disaster risk management and risk reduction strategies more generally.

88. The Cayman Islands only has one tier of government and no local government. Therefore, we did not assess progress against the proportion of local governments that adopt and implement disaster risk reduction strategies in line with national disaster risk reduction strategies.

[32] *Follow up on Past PAC Recommendations,* Office of the Auditor General Cayman Islands, October 2018.

SDG 12: SUSTAINABLE CONSUMPTION AND PRODUCTION

89. SDG 12 aims to ensure sustainable consumption and production patterns. SDG 12 has 11 targets. For the purposes of this report, we have determined that seven targets directly relate to the environment. Of these, we were unable to measure progress against targets 12.2 and 12.3 because there are no publicly available data.

90. SDG target 12.2 is, by 2030, achieve the sustainable management and efficient use of natural resources. It is measured by the material footprint, material footprint per capita, and material footprint per GDP and domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP. There are no data to measure progress against this target.

91. SDG target 12.3 is, by 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses. It is measured by the food loss and food waste indices. The Cayman Islands Government's Economics and Statistics Office publishes data on waste, but the data do not include information about food waste.

THE CAYMAN ISLANDS NEEDS TO DO MORE TO PROMOTE SUSTAINABLE CONSUMPTION AND PRODUCTION

Target 12.1	**Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries.**
Progress against the target is measured by:	Number of countries developing, adopting or implementing policy instruments aimed at supporting the shift to sustainable consumption and production.

92. The United Nations included five programmes in the 10-year framework: (1) sustainable public procurement, (2) providing consumers with sustainability information about market suppliers, (3) sustainable tourism, including ecotourism, (4) sustainable lifestyles and education and (5) sustainable building and construction.[33] Some progress has been made on this target.

[33] *The 10 Year Framework of Programmes on Sustainable Consumptions and Production Patterns (10YFP*), High-level Political Forum on Sustainable Development.

93. The Government is committed to promoting sustainable development and environmental considerations in its procurement strategy. The Central Procurement Office has stated that the objective, where feasible, is to integrate environmental specifications into the requirement by applying the "4Rs methodology", i.e. reduce, reuse, recycle and recover. Public officials engaged in procurement are encouraged to buy goods and services that are better for the environment than other products with similar performance. The Central Procurement Office recommends the following environmental considerations:

    - Considering whether the purchase can be satisfied in-house rather than initiating a procurement.
    - Identifying in the specifications where less materials or packaging may be specified or if more suitable packing materials could be used, e.g. recyclable packaging material over polystyrene.
    - Specifying eco-labelling, a method of environmental performance certification practised around the world.
    - Reviewing the needs for consumables, spares and maintenance.
    - Mapping the delivery distance to reduce fuel used.
    - Assessing the re-usability of the product.
    - Considering disposal or removal when finished.

94. The Cayman Islands National Tourism Plan 2019–2023 acknowledges that climate change is likely to cause considerable impacts on tourism. This could be due to increased risk to tourism facilities from rising sea levels, stronger hurricanes, storm surges and flooding. More extensive coastal erosion leading to degraded beach amenities and coral bleaching events could also reduce the attractiveness of the Cayman Islands as a tourist destination. In the plan, the MTT (then known as the Ministry of District Administration, Tourism and Transport) and the Department of Tourism stated that, in its pursuit of sustainable tourism development, it would employ two specific sustainable tourism tools:

    - Travelife – an internationally recognised sustainability certification programme that can be used to improve the environmental, social and economic impacts of tourism. Travelife also has a travel trade membership programme that helps tour operators improve supply chain sustainability and identify sustainable accommodation options.
    - Blue Flag – one of the world's most recognised voluntary eco-labels awarded to beaches, marinas and sustainable boating tourism operators. To qualify for the Blue Flag, a series of stringent environmental, educational, safety and accessibility criteria must be met and maintained.

95. It is unclear if the Cayman Islands has adopted policies aimed at supporting sustainable consumption and production. For example, the country does not have an up-to-date National Development Plan, and it is not clear to what extent recent tourism promotion efforts consider sustainability.

Target 12.4	**By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimise their adverse impacts on human health and the environment**.
Progress against the target is measured by:	• The number of parties to international multilateral environmental agreements on hazardous waste, and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement. • Hazardous waste generated per capita; and the proportion of hazardous waste treated, by type of treatment.

96. In a Cayman Islands' context, the second indicator is more relevant. However, it is unclear if the Cayman Islands achieved the target by 2020, and we have therefore assessed the target as not met.

97. By 2020, hazardous waste generated per capita was 85 pounds, significantly higher than the previous two years. However, in 2021, hazardous waste generated per capita reduced to slightly over 40 pounds. This is significantly lower than the quantities generated in the previous three years. Exhibit 12 shows that the quantity of hazardous waste generated has varied over the four years from 2018 to 2021.

Exhibit 12 – Hazardous waste generated per capita, 2018–2021

	2018	2019	2020	2021
Shipments of hazardous waste products (gallons)	11,400	22,300	5,400	5,300
Hazardous waste generated per capita (lbs)	60.6	63.3	85.0	41.3

Source: OAG analysis of data from The Cayman Islands' Compendium of Statistics 2021, Economics and Statistics Office, 2022

98. Data on the type of treatment for hazardous waste are not publicly available. However, the Department of Environmental Health told us that 38 per cent of the hazardous waste generated in 2020 was incinerated and the remainder was packaged and shipped off the island for recycling.

WASTE GENERATED PER CAPITA IS VERY HIGH, AND RECYCLING RATES ARE VERY LOW

Target 12.5	**By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.**
Progress against the target is measured by:	• National recycling rate, tons of material recycled. *The national recycling rate is the quantity of material recycled in the country plus quantities exported for recycling out of total waste generated in the country, minus material imported intended for recycling.*

99. Globally, waste generation rates are rising. The World Bank estimates that about 2.5 billion tons of solid waste were generated in 2020, amounting to a footprint of about two pounds (one kilogram) per person per day.[34]

100. The Cayman Islands has made no progress against this target. There are no data for 2015, when the SDG target was set. We are aware from our work on the Integrated Solid Waste Management System (ISWMS) project that data before 2017 are inaccurate, as waste tonnage was not measured properly. Because of this, we have used baseline data from 2017 on waste tonnage and recycling rates.

101. Waste tonnage per person per day in the Cayman Islands increased between 2017 and 2021 (Exhibit 13). The exhibit shows that about 11 pounds (five kilograms) of waste per person per day were generated in the Cayman Islands in 2020, more than five times the global average. In 2021, on average, each person in the Cayman Islands generated about 3,600 pounds of waste.

Exhibit 13 – Waste generated in the Cayman Islands, total and per capita, 2017–2021

	2017	2018	2019	2020	2021
Total waste managed at the landfills (tons)	106,054	106,673	133,379	133,399	128,078
Waste generated per capita (lbs)	3,345	3,242	3,816	4,065	3,603
Waste generated per capita per day (lbs)	9.2	8.9	10.5	11.1	9.9

Source: OAG analysis of data from The Cayman Islands' Compendium of Statistics 2021, Economics and Statistics Office, 2022

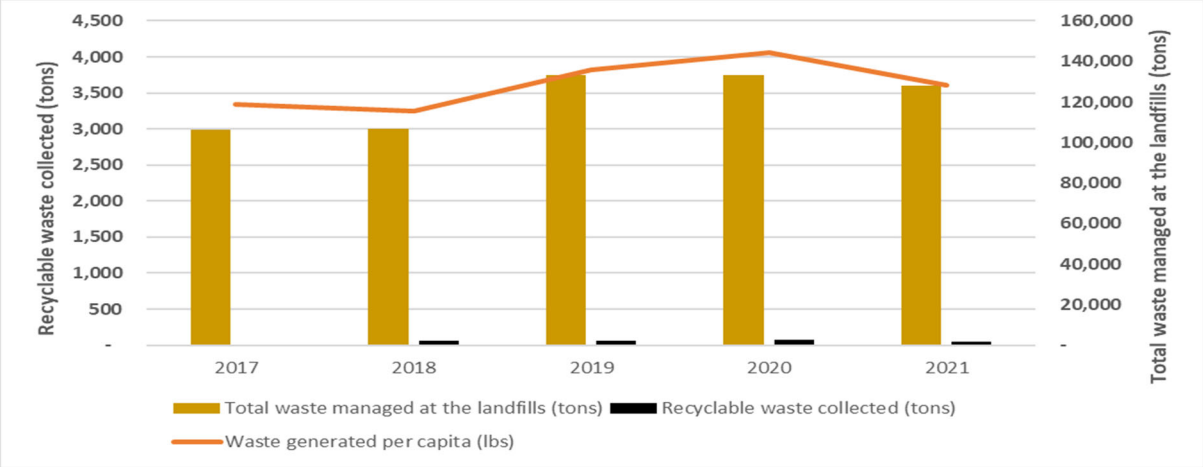
102. The Cayman Islands has a small population relative to the number of tourists that come to the islands. Therefore, the waste generated per capita may be skewed by these numbers. However, there is no clear link. For example, in 2019, the islands' population was about 70,000 and there were

[34] *Solid Waste Management,* World Bank, February 2022.

around 2.3 million tourists - 1.8 million by cruise ship and half a million by air. Exhibit 13 shows that the total waste generated in 2019 was 133,379 tons. By comparison, in 2020, the number of tourists reduced significantly to around two-thirds of a million - 538,000 by cruise ship and 122,000 by air because of actions taken in response to the COVID-19 pandemic. The islands' population in 2020 was about 66,000. Despite, this reduction, exhibit 13 shows that that total waste generated remained relatively stable.

103. Exhibit 14 shows that the total waste managed at Cayman Islands landfills increased significantly between 2018 and 2019, remained relatively consistent in 2020 and slightly decreased in 2021. The waste generated per capita has followed the same trends. The amount of waste recycled is negligible.

Exhibit 14 – Waste generated and recycled, 2017–2021



Source: OAG analysis of data from The Cayman Islands' Compendium of Statistics 2021, Economics and Statistics Office, 2022

104. Less than 3 per cent of waste generated in the Cayman Islands between 2017 and 2021 was recycled. Exhibit 15 shows the tons of recycled waste collected and the percentage recycled between 2017 and 2021. Although there has been a small improvement in recycling rates since 2017, this fell in 2021.

Exhibit 15 – Recyclable waste collected and recycled, by weight and percentage, 2017–2021

	2017	2018	2019	2020	2021
Tons of recyclable waste collected	139	1,994	2,212	2,797	1,467
Percentage of waste recycled	0.13%	1.87%	1.66%	2.10%	1.15%

Source: OAG analysis of data from The Cayman Islands' Compendium of Statistics 2021, Economics and Statistics Office, 2022

105. The recycling rate in the Cayman Islands is significantly lower than that in the leading global economies. For example, in 2020, Germany, the global leader, had a recycling rate of 67 per cent.[35] However, recycling rates in Latin America and the Caribbean are still low (between 1 and 20 per cent), meaning that approximately 90 per cent of waste ends up in landfills.[36] Countries with high recycling rates generally have government policies that encourage recycling, such as making it easy for households to recycle waste, good funding for recycling and financial incentives. These countries also set clear performance targets and policy objectives for recycling.[37] The extent to which these conditions exist in the Cayman Islands is unclear.

106. In March 2021, the Government signed a project agreement with Waste Solutions Cayman Ltd for an integrated solid waste management system (ISWMS), known as the ReGen project. The project is a public–private partnership. Under the terms of the agreement, Waste Solutions Cayman Ltd will design, finance, build, operate and maintain the ISWMS, in return for monthly payments from the Government. Negotiations to reach financial close are ongoing and are expected to be concluded in May 2023. It is not clear when the facility will become operational, but recent press reports suggest that it will not be until late 2026 at the earliest.

107. In November 2022, the Department of Environmental Health announced that glass would no longer be accepted at recycling depots. The announcement was made because of problems with the equipment crushing glass. Removing the ability to recycle glass will have a negative impact on the already low recycling rates.

SUSTAINABILITY REPORTING IS VERY LIMITED

Target 12.6	**Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.**
Progress against the target is measured by:	• Number of companies publishing sustainability reports.

[35] *Municipal Solid Waste Material Recovery Rates Worldwide in 2020, By Select Country,* Statista, 2022.
[36] *In Depth: The Waste Management Outlook for Latin America and the Caribbean*, Atilio Savino, 2019.

[37] *Recycling – Who Really Leads the World? Identifying the World's Best Municipal Waste Recyclers,* Eunomia, 2019.

108. There is no progress on this target. We know only one company, Caribbean Utilities Company, Ltd., that publishes sustainability reports.

THE EXTENT OF SUSTAINABLE PROCUREMENT PRACTICES IS NOT CLEAR

Target 12.7	**Promote public procurement practices that are sustainable, in accordance with national policies and priorities.**
Progress against the target is measured by:	• Number of countries implementing sustainable public procurement policies and action plans.

109. We have assessed that there has been some progress with this target. The *Procurement Act, 2016* outlines the principles of procurement underpinning the acquisition of goods and services by public sector entities. Item 5 in Schedule 1 of the Act states that procurement processes should be carried out to achieve the most advantageous combination of cost, quality and sustainability over the life cycle of the project. However, in practice, the extent to which sustainability is considered in public sector procurements is not clear. The Central Procurement Office told us that the Government is committed to promoting sustainable development and environmental considerations in its procurement strategy. The extent of sustainable procurement in the private sector is not clear.

SDG 13: CLIMATE ACTION

110. SDG 13 aims to take urgent action to combat climate change and its impact. SDG 13 has five targets, all of which are directly related to the environment. Of these, we determined that four are relevant to the Cayman Islands. We have not assessed progress against target 13.a. The target is to implement the commitment undertaken by developed country parties to the United Nations Framework Convention on Climate Change to a goal of mobilising jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalise the Green Climate Fund through its capitalisation as soon as possible. As a United Kingdom Overseas Territory, the Cayman Islands is not a full member of the United Nations, and therefore does not contribute to the Green Climate Fund.

111. We were unable to assess progress against target 13.3 because there are no publicly available data for this target. It aims to improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warnings. Progress against the target is measured by the extent to which global citizenship education and education for sustainable development are mainstreamed in national education policies, curricula, teacher education and student assessment.

THE CAYMAN ISLANDS IS WELL PREPARED FOR CLIMATE-RELATED HAZARDS AND NATURAL DISASTERS

Target 13.1	Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.
Progress against the target is measured by:	• Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population. • Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030. • Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies.

112. In some respect, the Cayman Islands is well prepared for climate-related hazards and natural disasters. However, its geographical location on the path of tropical storms and the extremely low elevation of most land areas creates high levels of vulnerability. We were told by HMCI that it is currently completing the following activities to further strengthen resilience and capacity:

- Developing flood maps relating to storm surges, intense rainfall events, tsunami waves and storm-driven waves. HMCI intends to publish these maps so that residents are better informed and can make better development decisions about where and how to limit their exposure. The maps may also lead to reduced siting of structures in locations where there is a high probability that they will be damaged in storms, hurricanes, earthquakes and tsunamis.
- Capturing baseline data, such as inshore bathymetric lidar mapping, which will result in improved forecasting and risk and vulnerability analysis relating to the storm surge threat. Bathymetric lidar is a technique of capturing coastline and underwater data using laser light to penetrate water.
- Installing a network of flood sensors across the Cayman Islands. Given that rising sea levels are expected to increase the height of the water table inland, these sensors will provide greater understanding of the frequency and probability of inland flooding. The data from the sensors can also be used to determine appropriate development decisions such as increasing the elevation of roads and properties and enhancing drainage solutions. The data can also inform the planning and development process, i.e. the National Development Plan will more accurately anticipate the impact of rising sea level.

113. As stated previously, no casualties or missing persons were noted in the recent tropical storms that have affected the Islands. The public has also been given adequate notice of incoming storm threats, and hurricane shelters have been established for use by the public.

GREENHOUSE GAS EMISSIONS ARE MORE THAN THREE TIMES THE GLOBAL AVERAGE

Target 13.2	Integrate climate change measures into national policies, strategies and planning.
Progress against the target is measured by:	• Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change. • Total greenhouse gas emissions per year.

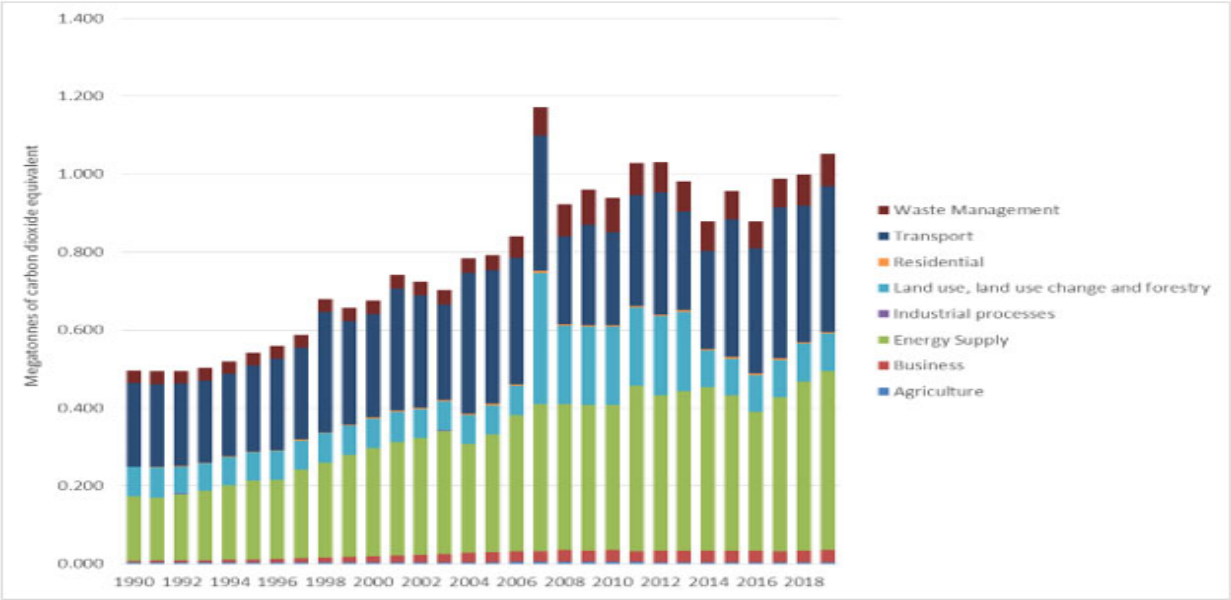
114. No progress has been made against this target. The Government drafted a Climate Change Policy in 2011. The policy outlined the proposed interventions to address the adverse impacts of climate change. The policy contained measures to curb greenhouse gas emissions from activities that contribute to the problem of climate change. The policy recognised that adapting to the inevitable impact of climate change and reducing further contributions to climate change are cost-effective and are urgently needed. However, the draft policy was never formally adopted.

115. MSCR is preparing a new climate change policy. We understand that the draft policy is nearing completion.

116. In 2019, the Cayman Islands emitted an estimated 15.1 metric tonnes of carbon dioxide per capita.[38] Based on data from the World Bank, this is more than three times the average global carbon dioxide emissions of 4.5 metric tonnes per capita in the same year. Exhibit 16 shows that the transport and energy sectors consistently accounted for most greenhouse gas emissions in the Cayman Islands between 1990 and 2018. This is primarily due to the islands' reliance on diesel for electricity generation and on private motor vehicles for transport.

[38] *National Energy Policy 2017–2037; 2021 Progress Report*, Ministry of Sustainability and Climate Resiliency, November 2021.

Exhibit 16 – Greenhouse gas emissions by sector in the Cayman Islands, 1990–2018



Source: Department of Environment

117. In 2021, the European Union set a target to reduce greenhouse gas emissions by at least 55 per cent compared with 1990 levels by 2030.[39] The Cayman Islands' NEP 2017–2037 aims to reduce greenhouse gas emissions to 4.8 metric tonnes per capita by 2030, a 68 per cent reduction based on 2019 levels. However, the greenhouse gas emissions in the Cayman Islands have remained relatively consistent over the last decade. Therefore, more needs to be done to achieve the NEP target set for 2030.

THE CAYMAN ISLANDS DOES NOT HAVE A CLIMATE CHANGE ADAPTATION PLAN

Target 13.b	**Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalised communities.**
Progress against the target is measured by:	• Number of least developed countries and small island developing States with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change.

[39] *2030 Climate Target Plan*, European Commission.

118. There is no progress against this target. The Cayman Islands does not have a long-term or climate change adaptation plan. The Department of Environment told us that the draft version of the new climate change policy includes measures to adapt to climate change.

SDG 14: LIFE BELOW WATER

119. SDG 14 aims to conserve and sustainably use oceans, seas and marine resources for sustainable development to take urgent action to combat climate change and its impact. SDG 14 has ten targets. For the purposes of this report, we determined that they are all directly related to the environment. We have not been able to assess progress against targets 14.1, 14.3, 14.a or 14.c because there are no publicly available data. We have not assessed progress against target 14.7 because it is not relevant for the Cayman Islands.

120. Target 14.1 is, by 2025, aim to prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution. Progress against the target is measured by the index of coastal eutrophication and plastic debris density. There are no data to measure this target.

121. Target 14.3 is to minimise and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels. It is measured by the average marine acidity (pH) measured at agreed suite of representative sampling stations. There are no publicly available data.

122. Target 14.7 is, by 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism. Progress against the target is measured by sustainable fisheries as a proportion of GDP in small island developing States, least developed countries and all countries. Fishing in the Cayman Islands is small scale, recreational and artisanal. Therefore, it does not significantly contribute to the economy.[40] In addition, Cayman Islands is not a developing State. Accordingly, we have determined that this target is not applicable to the Cayman Islands.

123. Targets 14.a is to increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance

[40] *Fishery and Aquaculture Country Profiles*, Cayman Islands, 2018.

the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries.

124. Target 14.c is to enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of "The future we want."[41] It is measured by the number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nations Convention on the Law of the Sea, for the conservation and sustainable use of the oceans and their resources.

THERE ARE SOME PROTECTIONS FOR MARINE AND COASTAL ECOSYSTEMS

125. We have combined targets 14.2 and 14.5 to assess progress in managing and protecting marine and coastal ecosystems and areas.

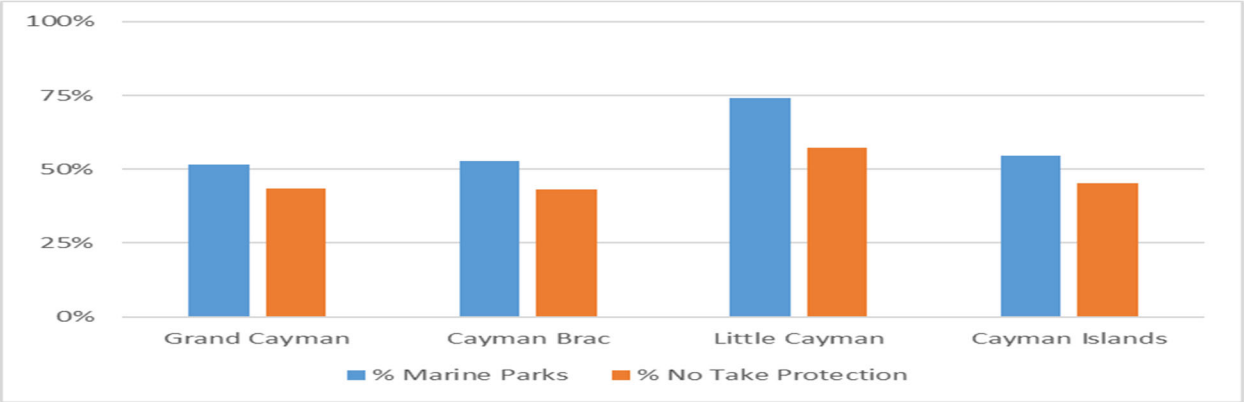
Target 14.2	**By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.**
Progress against the target is measured by:	Number of countries using ecosystem-based approaches to managing marine areas.
Target 14.5	**By 2020, conserve at least ten per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.**
Progress against the target is measured by:	Coverage of protected areas in relation to marine areas.

126. The date for achieving both targets has passed. Using the data available, we have determined that target 14.2 was met but target 14.5 was not met.

[41] "The future we want" is the outcome document of the United Nations Conference on Sustainable Development held in Rio de Janeiro, Brazil, in 2012.

127. The Cayman Islands has about 55 per cent of near-shore waters under some form of area-based management.[42] Exhibit 17 shows the percentage of near-shore waters under some form of area-based management as at July 2021.

Exhibit 17 – Near-shore waters under some form of area-based management, July 2021



Source: Department of Environment

128. Based on discussions with the Department of Environment, we understand that the Cayman Islands marine protected areas (i.e. marine parks) were updated in March 2021. This increased the percentage of near-shore waters under area-based no-take protection to 45 per cent. No-take protections means that extraction or significant destruction of natural or cultural resources is totally prohibited. Therefore, target 14.2 was met for all three islands and for the country as a whole.

129. According to the World Bank, marine protected areas accounted for 0.1 per cent of Cayman Islands' territorial waters as of 2020. This is below than the SDG target of 10 per cent.

MEASURES ARE IN PLACE TO PREVENT OVERFISHING

130. Targets 14.4, 14.6 and 14.b relate to overfishing. We have assessed targets 14.4 and 14.b together.

[42] The Department of Environment defines near-shore waters as areas 150 feet or shallower adjacent to the shoreline.

Target 14.4	**By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.**
Progress against the target is measured by:	Proportion of fish stocks within biologically sustainable levels.
Target 14.b	**Provide access for small-scale artisanal fishers to marine resources and markets.**
Progress against the target is measured by:	Degree of application of a legal/regulatory/policy/institutional framework which recognises and protects access rights for small-scale fisheries.

131. There are no publicly available data showing the Cayman Islands' progress against these targets. However, based on available information, we have assessed these targets as met. The Department of Environment told us the following:

- The proportion of fish stocks in the Cayman Islands is within biologically sustainable levels. However, there is no legal local commercial fishing (excluding artisanal fishing) and so catch data are not routinely collected.
- The Cayman Islands has 45 per cent of its coastal shelf in no-take protection, as previously stated.
- Monitoring of reef fish biomass does not currently suggest that any species numbers are actively declining.
- Nassau grouper numbers are heavily monitored and managed, and evidence suggests that the species' numbers are beginning to recover.
- The Government has set a closed season and legal catch limit for conch. The closed season runs from 1 May to 31 October each year. The open season catch limit is five per person or ten per boat per day, whichever is less. It is hoped that this increased protection will stabilise and eventually increase conch populations around the Cayman Islands. The Department of Environment monitors shallow water conch populations so that any changes can be factored into future management plans.

132. The *National Conservation Act, 2013* prohibits fishing for lobster within marine protected areas, and only spiny lobsters may be taken. Any lobster taken must have a minimum tail length of six inches. The Act also imposes a limit of three spiny lobsters per person per day, or six spiny lobsters

per boat per day – whichever is less – during the open season. The open season for lobster spans the three months between 1 December and 28 February.

Target 14.6	By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognising that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.
Progress against the target is measured by:	Degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing.

133. The implementation date for this target was 2020, but there was no progress at that time. In December 2022, the Government indicated its intention to sign up for the United Kingdom's Blue Belt programme. The Blue Belt is the United Kingdom Government's flagship international marine conservation programme. It supports United Kingdom Overseas Territories with the protection and sustainable management of their marine environments. However, Cayman Islands does not provide any fishery subsidies.

SDG 15: LIFE ON LAND

134. SDG 15 aims to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss. SDG 15 has 12 targets. For the purposes of this report, we determined that six targets are directly related to the environment and are applicable to the Cayman Islands.

135. We have been unable to assess progress against target 15.3 because there are no publicly available data. The target is, by 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world. As noted at paragraph 112, HMCI is currently collecting information on flooding.

ONLY 10 PER CENT OF DRY FOREST AREAS ARE PROTECTED

Target 15.1	**By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.**
Progress against the target is measured by:	• Forest area as a proportion of total land area. • Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type.

136. It is unclear if the target was met by 2020, and therefore we have assessed it as not met. The most recent data on forest area are from 2013, which pre-dates the setting of the SDGs. In 2013, dry forest accounted for around 7,000 acres or about 10 per cent of the Cayman Islands' total land area. However, this varies across the three islands. Combined, Grand Cayman and Cayman Brac account for 96 per cent of the Cayman Islands' dry forest area. However, just 10 per cent of the dry forest acreage was protected in 2013. Exhibit 18 shows the Cayman Islands' land cover, forest and protected forest across each of the three islands in 2013.

Exhibit 18 – Cayman Islands' land cover, forest area and protected forest, 2013

Region	**Total land cover (acres)**	**Total dry forest area (acres)**	**Percentage dry forest**	**Dry forest protected area (acres)**	**Percentage dry forest protected area**
Grand Cayman	49,311	3,505	7%	463	13%
Cayman Brac	9,507	3,007	42%	217	7%
Little Cayman	7,130	288	3%	16	6%
Total	**65,948**	**6,800**	**10%**	**696**	**10%**

Source: OAG analysis of data from the Department of Environment

137. Terrestrial protected areas are totally or partially protected areas of at least 1,000 hectares that are designated by national authorities as scientific reserves with limited public access, national parks, natural monuments, nature reserves or wildlife sanctuaries, protected landscapes and areas managed mainly for sustainable use.[43] However, an area of 1,000 hectares is not reasonable for a small island. Therefore, the Department of Environment follows the International Union for

[43] The definition of terrestrial protected areas is from the *Metadata Glossary*, World Bank.

Conservation of Nature ("IUCN") categorisation of protected areas. The IUCN defines a protected area as "a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values."[44] Exhibit 19 shows that only 10 per cent of the land area in the Cayman Islands was protected as at May 2021.

138. **Exhibit 19 – Terrestrial protected areas, May 2021**

Protected area	Percentage of land area			
	Grand Cayman	Little Cayman	Cayman Brac	Total
National Trust-owned or -managed land	5.79%	6.25%	3.53%	5.51%
National Conservation Act-protected areas	5.38	7.72%	2.40%	5.20%
Total	11.17%	13.97%	5.93%	10.71%
All areas including overlap	**10.86%**	**11.29%**	**5.93%**	**10.19%**

Source: Department of Environment

SOME PROGRAMMES ARE IN PLACE TO PROTECT ENDANGERED SPECIES

Target 15.5	**Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.**
Progress against the target is measured by:	• International Union for Conservation of Nature's (IUCN) "Red List Index."[45] *The Red List Index shows trends in overall extinction risk for species and is used by governments to track their progress towards targets for reducing biodiversity loss.*

139. The *National Conservation Act, 2013* designates a number of plants and animals as "protected species", including sea turtles, lobsters, corals, conchs, orchids and blue iguanas. In addition, there are several species conservation plans. For example:

[44] *Guidelines for Applying Protected Area Management Categories*, International Union for Conservation of Nature, 2008.

[45] The Red List Index, drawing on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species, tracks the rate of extinction for marine and terrestrial species groups in the near future (i.e. 10–50 years) in the absence of any conservation action. A downward trend in the index implies that the risk of a species' extinction is rising.

- Species Conservation Plan for Mangroves.
- Interim Directive for the designation of Critical Habitat of Green turtles.
- Species Conservation Plan for Sybil's Crownbeard.
- Protected Area Management Plan Meagre Bay Pond, Grand Cayman.

140. The Royal Botanical Gardens, Kew, performed a Red List assessment of plant species in the Cayman Islands in 2008. However, the Cayman Islands does not maintain a Red List Index. In addition, there are no data about the Government's progress in safeguarding some protected species. Therefore, we have assessed this target as not met.

141. The Government developed a National Biodiversity Action Plan in 2009. This committed the Government, under the Cayman Islands Environment Charter, to draft new legislation, provide a framework for the conservation of the national biodiversity and implement multilateral environmental agreements, such as the Ramsar Convention, Cartagena Convention Protocol for Specially Protected Areas and Wildlife and Convention on Biological Diversity.[46] However, it is unclear what action was taken to implement the National Biodiversity Action Plan and if it is still relevant.

142. Some action has been taken to conserve and restore a number of threatened species in the Cayman Islands. For example, the National Trust for the Cayman Islands and the Cayman Turtle Centre (CTC) have programmes to prevent the extinction of blue iguanas and green sea turtles, respectively.

143. The blue iguana population has declined significantly. The number of blue iguanas in the Cayman Islands was previously in the tens of thousands but has been decimated by development, wild animals, road traffic and humans. By 2001, fewer than 30 blue iguanas were estimated to remain in the wild and the species was listed as critically endangered by the International Union for the Conservation of Nature (IUCN). To save the species, the National Trust for the Cayman Islands partnered with other Government entities, zoos in the United States and donors such as the International Reptile Conservation Foundation to form the Blue Iguana Recovery Programme. As a result of the programme, blue iguanas were downgraded from the IUCN Red List to endangered in 2012. By 2018, the blue iguana population had risen to 1,000. The programme was rebranded as the Blue Iguana Conservation Programme in 2019.

[46] The Cayman Islands is a signatory to Multilateral Environment Agreements. Multilateral Environmental Agreements are international agreements that are intended to promote international cooperation to address global environmental challenges that the world is facing today, such as climate change, biodiversity loss and pollution and waste.

144. According to the CTC, the Cayman Islands was once home to over two million sea turtles, one of the world's largest breeding colonies of green sea turtles. By the early 1900s, they had been hunted to the brink of extinction in the Cayman Islands, and today they remain at risk worldwide. Turtles are threatened by climate change, ocean and plastic pollution and the loss of beach habitats where they breed. Overharvesting of eggs and indiscriminate commercial fishing are also significant threats. CTC's conservation efforts include releasing sea turtles into the ocean and ensuring the well-being of the turtles in its care. CTC also practises sustainable husbandry and conservation education and advocacy so that residents and visitors alike can be part of the conservation effort.

145. The Department of Environment monitors sea turtle nests in the Cayman Islands. In a 2021 report, the Department of Environment stated that sea turtle nests had increased significantly over a 21-year period of nest monitoring. According to the report, surveys were carried out in Grand Cayman only in 1999, and 23 nests were located. Using the same standardised sampling methodology, a total of 675 nests were recorded across the three islands in 2019.[47] MSCR's draft 2022 annual report states that the Department of Environment recorded 858 nests in 2022.

MEASURES ARE IN PLACE TO REDUCE THE IMPACT OF INVASIVE ALIEN SPECIES

Target 15.8	**By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species.**
Progress against the target is measured by:	• Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species. *An alien species is an animal or plant that has been taken by humans and introduced into an ecosystem where it is not naturally present. An alien species becomes classified as an invasive species when it can reproduce and proliferate in the ecosystem, causing negative changes. This is different from a native species that normally lives and thrives in a particular ecosystem, having evolved there over many millennia.*

146. It is unclear if this target was achieved by the 2020 deadline because no data are available for that year. The Government has introduced several measures to prevent the impact of invasive species. However, the Department of Environment told us that it needs more resources to adequately

[47] *Cayman Islands Sea Turtle Nesting Population Increases Over 22 Years of Monitoring,* Blumenthal, J.M. et al., 2021.

control the impact of invasive species. It also needs more resources to prevent their introduction into, and movement between, the islands.

147. The most notable invasive species in the Cayman Islands are the green iguanas, feral cats, brown rats and lionfish. The Government has taken the following actions to reduce the impact of these invasive species:

- The Department of Environment has a contract with a third-party vendor to cull green iguanas. The contract was first signed in October 2018. At the time, there were an estimated 1.1 million green iguanas in Grand Cayman. By December 2022, 1.4 million green iguanas had been culled, at a cost of about $8.7 million. However, the rates of capture have continued to decline and the Department of Environment's annual survey showed that the green iguana population was rising in 2020. This suggests that the current approach to controlling the iguana population may no longer be effective, and thus new approaches may be needed in future.[48]
- Globally, feral cats have contributed to the extinction of 33 species and continue to threaten other critically endangered species on islands where they have been introduced, including the Cayman Islands.[49] The Department of Environment and the Department of Agriculture have coordinated an invasive species plan for feral cats. The Department of Environment told us that plans to cull feral cats in Little Cayman were put on hold from 2018 to 2022 after animal welfare charities applied for a judicial review of the programme. The culling resumed in June 2022 after the judicial review was finalised.
- The Department of Environmental Health offers free rat baiting services to the public as a way of controlling the rodent population.
- The Department of Environment told us that lionfish are considered a major threat to coral reefs because they are ravenous predators that eat huge quantities of juvenile fish and crustaceans and have no natural predators. They can spawn up to three times a month and can produce as many as 30,000 eggs per spawn. They are able to begin reproducing when they are younger than one year old. The Department of Environment has a lionfish culling programme. However, it is not clear what impact the programme has had because there are no publicly available data on it.

148. In November 2022, the Cabinet approved new regulations on prohibited species. The National Conservation (Alien Species) Regulations introduced a prohibited species list, outlined the distinctions between domestic and feral animals, and defined permitted procedures and actions to

[48] National Conservation Council, Annual Report 2021.
[49] *The Impact of Free-Ranging Domestic Cats on Wildlife of the United States*, Nature Communications, January 2013.

control feral animals and other alien species, reducing the threat to local flora and fauna. Certain portions of the regulations will come into effect three to six months after publication.

ENVIRONMENTAL-ECONOMIC ACCOUNTING STARTED IN JULY 2021

Target 15.9	**By 2020, to integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts.**
Progress against the target is measured by:	• Number of countries that have established national targets in accordance with or similar to Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011–2020 in their national biodiversity strategy and action plans and the progress reported towards these targets. • Integration of biodiversity into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting.

149. As stated previously, the Government developed a National Biodiversity Action Plan in 2019. However, the status and relevance of the plan is unclear. We have assessed the target as not met by 2020.

150. The Cayman Islands' *Development and Planning Regulations (2022 Revision)* provide for the preservation of trees, woodlands and mangroves. The *National Conservation Act, 2013* also integrates ecosystem and biodiversity values. The National Conservation Council has powers to issue or refuse permits or licenses for the taking of species or for the activities that are likely to have a negative impact on the species or its critical habitat, unless the Council has determined that the activity will not have any adverse impact on the ecosystem. For example, a number of development projects have had to undertake an environmental impact assessment before implementation. These include the construction of the East–West Arterial Road extension by the National Roads Authority, the proposed cruise berthing facility and the ReGen project.

151. A project, funded by the United Kingdom's Darwin Initiative, is being carried out on behalf of five of the United Kingdom Caribbean Overseas Territories, including the Cayman Islands. The Darwin Initiative is a United Kingdom Government grants scheme for biodiversity conservation activities in eligible low- and middle-income countries. According to information obtained from the Darwin Initiative, the "Caribbean Overseas Territories Regional Natural Capital Accounting Programme" will establish a system of accounting for the benefits that the environment provides within five United Kingdom Caribbean Overseas Territories. It will enhance other national statistics, providing robust evidence for environmental and economic management. The project includes capacity-building with relevant government departments, supported by a regional practitioner's network with a dedicated

coordinator. The work will act as a good practice example of the revised United Nations guidance on environmental accounting in the region.

152. Under this project, the Government started environmental-economic accounting in July 2021. That is, the environmental accounts for 2019 and 2020 were completed in July 2021 and February 2022, respectively. According to the two reports, the environment contributed at least $110 million and $62 million in value to the Cayman Islands in 2019 and 2020, respectively. In March 2023, the Department of Environment told us it was reviewing the draft environmental-economic accounts for 2021.

THERE IS A FUND FOR CONSERVING BIODIVERSITY AND ECOSYSTEMS

Target 15.a	**Mobilise and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems.**
Progress against the target is measured by:	• (a) Official development assistance on conservation and sustainable use of biodiversity; and (b) Revenue generated and finance mobilised from biodiversity-relevant economic instruments.

153. We have determined that there has been some progress against this target. As previously stated, the Government has an Environmental Protection Fund that is financed by departure fees levied on travellers leaving the Cayman Islands via the airport or cruise ship terminal. Between 2015 and 2020, the fund balance varied between $54 million and $58 million.

154. At the end of December 2021, the fund balance was $48 million. Each year, fees are paid into and monies disbursed from the fund. During 2020 and 2021, the money paid into the fund would have been less than that in previous years. This is because the borders were closed in response to the COVID-19 pandemic, which reduced the ability to earn departure fees.

155. The *National Conservation Act, 2013* included provisions to ensure that the fund could only be used to acquire and manage protected areas and for measures to protect and conserve protected species and their critical habitats. However, more than eight years later, these provisions have yet to be brought into force.

156. In December 2019, the Parliament's Finance Committee approved the use of $22.3 million from the fund for the two financial years 2020 and 2021. This included remediation works for the ISWMS project, the reclamation and remediation of public beaches, programmes to protect the environment and the purchase of land for conservation purposes.

APPENDIX 1 – SUMMARY OF PROGRESS AGAINST THE SUSTAINABLE DEVELOPMENT GOALS FOCUSED ON THE ENVIRONMENT

Sustainable Development Goal		Target number	Target description	Target met?
3	Good health and well-being	3.6	By 2020, halve the number of global deaths and injuries from road traffic accidents.	No.
		3.9	By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.	No data.
6	Clean water and sanitation	6.1	By 2030, achieve universal and equitable access to safe and affordable drinking water for all.	On track.
		6.2	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.	No data.
		6.3	By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.	No data.
		6.4	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.	No data.
		6.6	By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.	No.
7	Affordable and clean energy	7.1	By 2030, ensure universal access to affordable, reliable and modern energy services.	Some progress.
		7.2	By 2030, increase substantially the share of renewable energy in the global energy mix.	Limited progress.
		7.3	By 2030, double the global rate of improvement in energy efficiency.	Limited progress.
11	Sustainable cities and communities	11.1	By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.	Limited progress.
		11.2	By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of	Limited progress.

Sustainable Development Goal		Target number	Target description	Target met?
			those in vulnerable situations, women, children, persons with disabilities and older persons.	
		11.3	By 2030, enhance inclusive and sustainable urbanisation and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.	No data.
		11.4	Strengthen efforts to protect and safeguard the world's cultural and natural heritage.	Some progress.
		11.5	By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.	On track.
		11.6	By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.	No data.
		11.7	By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.	No data.
		11.a	Support positive economic, social and environmental links between urban, per-urban and rural areas by strengthening national and regional development planning.	Limited Progress.
		11.b	By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels.	No.
12	Responsible consumption and communities	12.1	Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries.	Some progress.
		12.2	By 2030, achieve the sustainable management and efficient use of natural resources.	No data.
		12.3	By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.	No data.

Sustainable Development Goal		Target number	Target description	Target met?
		12.4	By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimise their adverse impacts on human health and the environment.	No.
		12.5	By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.	No progress.
		12.6	Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.	No progress.
		12.7	Promote public procurement practices that are sustainable, in accordance with national policies and priorities.	Some progress.
13	Climate action	13.1	Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.	Yes.
		13.2	Integrate climate change measures into national policies, strategies and planning.	No progress.
		13.3	Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.	No data.
		13.a	Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilising jointly $100 million annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency in implementation and fully operationalise the Green Climate Fund through its capitalisation as soon as possible.	N/A.
		13.b	Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalised communities.	No progress.
14	Life below water	14.1	By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.	No data.

Sustainable Development Goal		Target number	Target description	Target met?
		14.2	By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.	Yes.
		14.3	Minimise and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.	No data.
		14.4	By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.	Yes.
		14.5	By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.	No.
		14.6	By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognising that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.	No.
		14.7	By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.	N/A.
		14.a	Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries.	No data.
		14.b	Provide access for small-scale artisanal fishers to marine resources and markets.	Yes.
		14.c	Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and	No data.

Sustainable Development Goal		Target number	Target description	Target met?
			their resources, as recalled in paragraph 158 of "The future we want."	
15	Life on land	15.1	By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.	No.
		15.3	By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.	No data.
		15.5	Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.	No.
		15.8	By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species.	No data.
		15.9	By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts.	No.
		15.a	Mobilise and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems.	Some progress.

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