State of the Environment 2020

Contents

Produced by the Falkland Islands Government Environment Unit · 2020

Foreword by Hon Leona Roberts MLA

The value of nature can be difficult to quantify but what is certain is that the health of the natural environment of the Falkland Islands is intrinsically linked with the wellbeing of our community, our quality of life and our economy. Furthermore, as Islanders, our surroundings – the ocean, the countryside and wildlife – are vital to our sense of identity.

It is of utmost importance that we recognise our obligations towards the environment and to ensure that as we progress and develop, so we continue to respect the globally significant biodiversity which is so precious to us.

This government is committed to working with the community, with industry and with stakeholders to better manage, protect and conserve our unique and fragile environment, safeguarding it for future generations.

This State of the Environment report goes a long way towards providing a baseline which sets out the status and condition of our major environmental resources, providing a snapshot of where the Falkland Islands are now.

In the years to come, these reports will allow us to track changes in our environment and to assess how our policies are working - providing fact-based evidence for future decisions.

There is a great deal to do, but I am proud that this government has already taken significant steps to ensure that our environment is sustainably managed, as is highlighted in this report. As we approach the opportunities and challenges ahead, so we will continue to work towards meeting our responsibilities and our ambitions for the Falkland Islands.

Overview

The Falkland Islands are a British Overseas Territory in the South Atlantic, lying approximately 300 nautical miles from the South American mainland and over 8,000 miles from the United Kingdom.

An archipelago comprising of over **700 islands** with two main larger islands: East and West Falkland; our Islands are **1.2 million hectares** of rugged natural beauty.

This report establishes a baseline of our natural environment - home to **5 breeding species of penguins**, over **70% of the world's black-browed albatross** and **175 native and endemic species of plants**: a haven for biodiversity.

We are proud of our unique environment and it is our responsibility to sustainably manage and conserve this for future generations.

Not only is this baseline important for our **3,400 residents**, but also for our international partners, as we operate in a globalised world whilst upholding our international commitments.

The information herein is evidence of the amazing achievements we have made as a community towards developing a sustainable future in line with the United Nations (UN) Sustainable Development Goals.

01

Life in our Oceans

UN Sustainable Development Goal 14

Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

UN Sustainable Development Goal (SDG) 14 highlights the importance of global marine resources and includes 10 targets and associated indicators.

Three of these targets and indicators are of specific relevance to the Falkland Islands.

Oceans are an important lifeline for islands, and the Falkland Islands are no exception. Ensuring that our oceans are conserved and sustainably used is important for both our biodiversity and our economy.

Sustainable Fisheries

UN SDG 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.

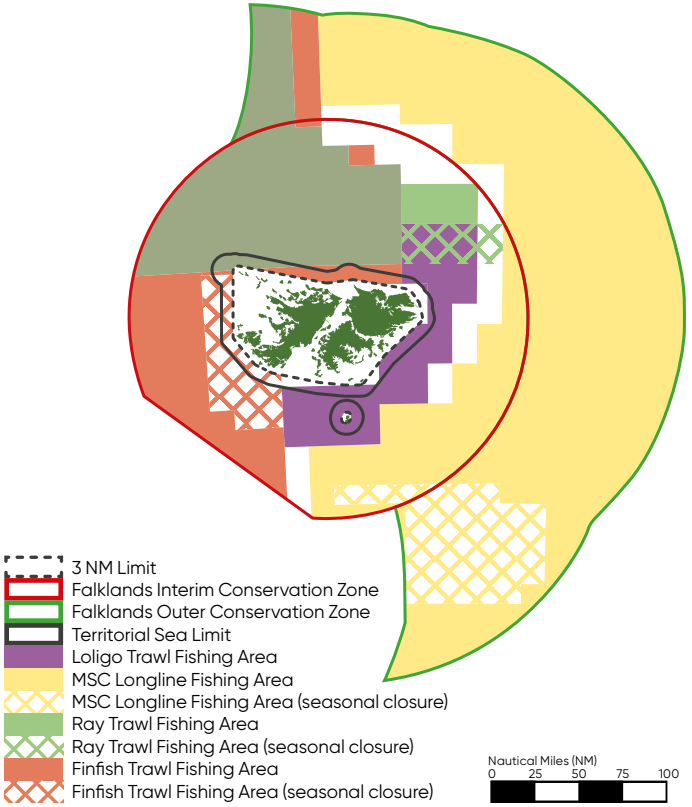
UN SDG Indicator 14.2.1: Proportion of national exclusive economic zones (EEZ) managed using ecosystem-based approaches.

Fishing activity within the Falkland Islands EEZ is carefully managed. There are areas in which no fishing is allowed and others are seasonally closed to protect nursery and spawning grounds. Vessels are not permitted to operate within three miles of the coast.

Inside this three mile zone there has only been some sporadic and low intensity crab fishing by a single vessel. Consequently the entire coastal fringe of the Falkland Islands, where biodiversity is likely to be greatest, has no fishing activity.

Data: FIG Department of Natural Resources - Fisheries

Map of the Falkland Islands fishing areas



Sustainable Fisheries

UN SDG 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.

Fishing contributes between 35-60% of the Falkland Islands Gross Domestic Product (depending on the year) and more than 90% of all exports. Regulating and controlling both legal and illegal activities in our waters is therefore extremely important to our continued economic prosperity.

The Falkland Islands uses a number of methods to detect and deter Illegal Unreported and Unlicensed fishery activity, including a dedicated fishery protection vessel, aerial surveillance, and satellite monitoring.

UN SDG Indicator 14.4.1: Proportion of fish stocks within biologically sustainable levels.

Licence conditions of all our commercial fisheries are reviewed annually to incorporate the most up-to-date scientific knowledge about the status of fish stocks:

- FIG and the local fishing industry work closely together through research and monitoring to achieve the highest possible standard of fisheries management
- In 2014 our toothfish longline fishery was granted Marine Stewardship Council Certification

Fisheries stock health

Species	Stock status*
Rock Cod	Overexploited
Kingclip	Overexploited
Red Cod	Recovering
Toothfish	Healthy - Fully or under-exploited
Grenadier	Data deficient
Illex	Healthy - Fully or under-exploited
Loligo	Healthy - Fully or under-exploited
Hake	Under assessment
Hoki	Under assessment

* Stock status as defined by the UN Food and Agricultural Organisation
Data: FIG Department of Natural Resources - Fisheries

Falkland Islands Objective: Mitigate impacts of fishing activities on other species.

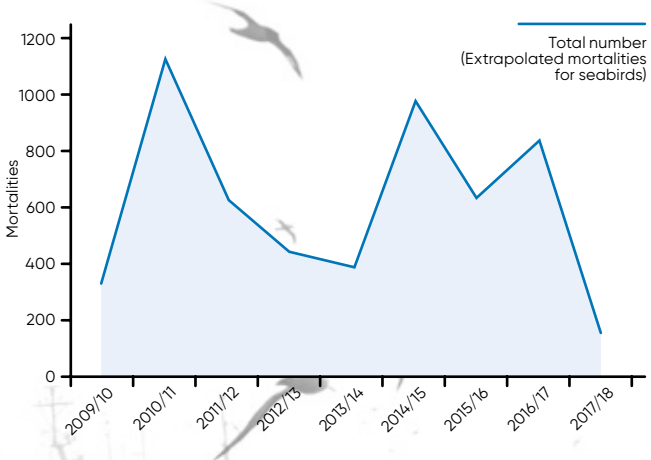
By-catch mitigation is an important component of ensuring our fisheries remain sustainable. Our collaborations with the fishing industry help us achieve our target of mitigating impacts on wildlife.

Falkland Islands Indicator: Number of seabird and marine mammal mortalities

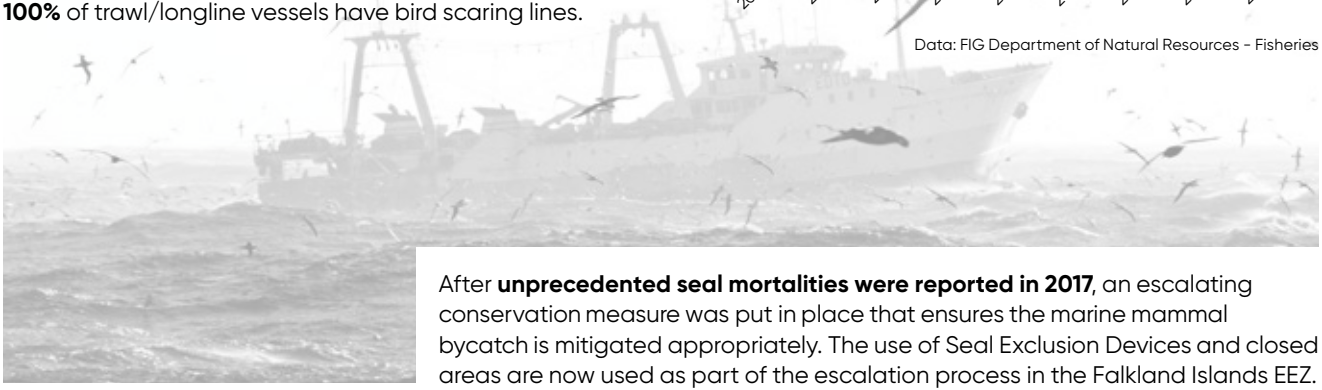
12 out of 34 fishing trawlers currently have discard management tanks – discard management tanks help to ensure that seabirds are not attracted to vessels.

100% of trawl/longline vessels have bird scaring lines.

Seabird mortalities



Data: FIG Department of Natural Resources - Fisheries



After **unprecedented seal mortalities were reported in 2017**, an escalating conservation measure was put in place that ensures the marine mammal bycatch is mitigated appropriately. The use of Seal Exclusion Devices and closed areas are now used as part of the escalation process in the Falkland Islands EEZ.

Marine Waste

UN SDG Target 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds.

UN SDG Indicator 14.1.1: Index of coastal eutrophication and floating plastic debris density.

Marine waste is a serious issue in the Falkland Islands and we work together with non-governmental organisations (NGOs) and the public to educate about and mitigate this problem.

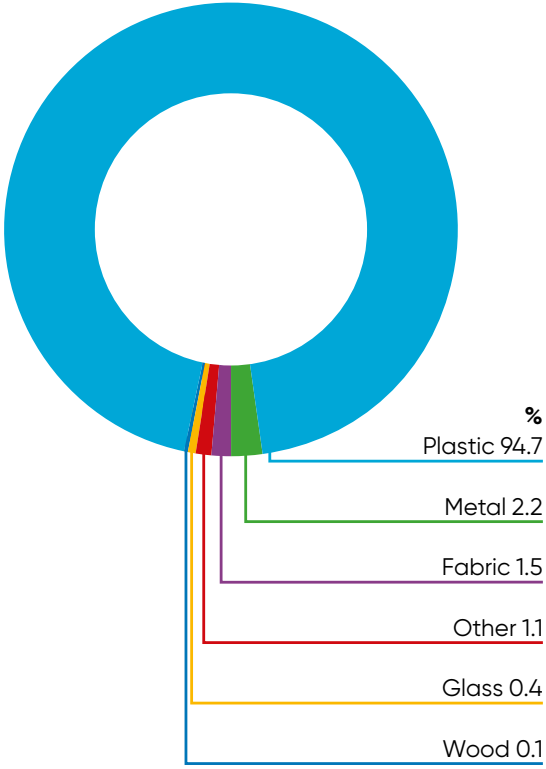
Research carried out by Falklands Conservation highlights the scale of this problem:

283 items of rubbish were found per km of coastline surveyed following a 2013/14 survey

70% of rubbish on our beaches did likely not originate from the Falkland Islands based on its packaging.

The majority of this waste is plastic.

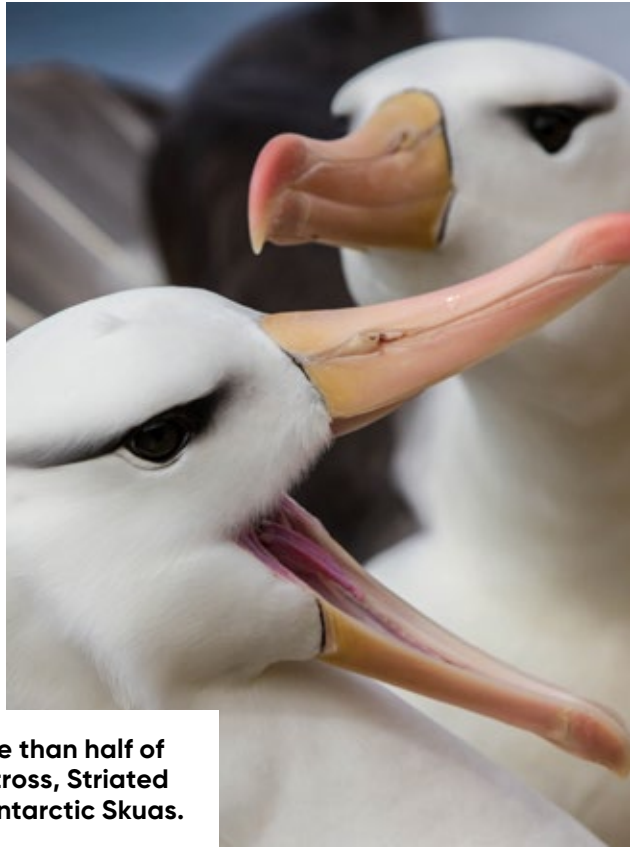
Types of rubbish on Falklands beaches



Data: Falklands Conservation

02

Life on our Islands



UN Sustainable Development Goal 15

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Our unique biodiversity underpins what makes the Falkland Islands so special. We recognise our global responsibility for the protection and wellbeing of all our species and habitats. We share our Islands with an abundant and unique range of plants and wildlife.

With 59 breeding species of birds, we are home to more than half of the world's Ruddy-headed Geese, Black-browed Albatross, Striated Caracara, Dolphin Gulls, Southern Giant Petrels and Antarctic Skuas.

Biodiversity

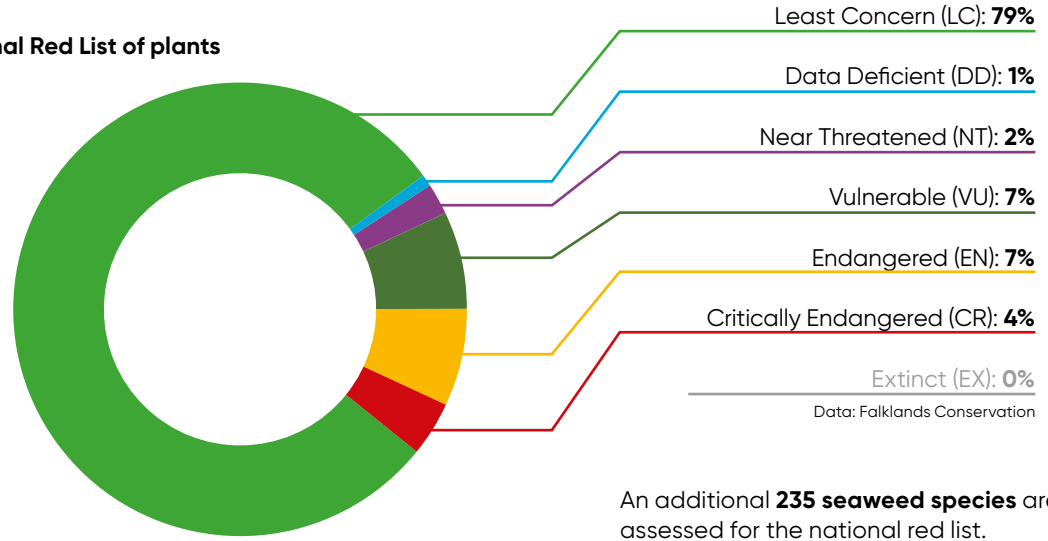
UN SDG Target 15.5: Take urgent and significant action to reduce degradation of natural habitats, halt the loss of biodiversity and by 2020, protect and prevent the extinction of threatened species.

UN SDG Indicator 15.5.1: Red List Index

There are 181 different species of native plants in the Falklands, of which 14 are endemic.

In 2011, **175 native** plants, including our **14 endemic plants**, were assessed for our national red list. Our plant national red list index is currently **0.89** which is above the global average of 0.73. The higher the red list index, the better the conservation status.

National Red List of plants



Data: Falklands Conservation

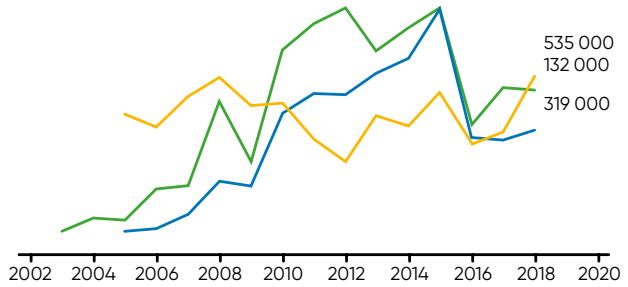
An additional **235 seaweed species** are currently being assessed for the national red list.

Biodiversity

Falkland Islands Indicator: Number of breeding pairs of seabirds at monitoring locations.

Our seabird populations are either stable (e.g. Albatross) or increasing (e.g. Gentoo and Southern Rockhopper penguins). A result of their enhanced protection and science-based management.

Breeding pairs of seabirds



To protect our unique biodiversity, our legislation currently protects: 19 species of plants, all wild birds, butterflies, marine mammals and the native zebra trout. Our legislation protects against the killing, injury, capture and disturbance of wild animals and birds. It also prevents the destruction of protected plants.

Falkland Islands Target: Monitoring and maintaining our terrestrial natural habitats

78.4% of our land is covered by native vegetation.

92.3% of our total land (in 2018) is used for agriculture, primarily sheep farming (0.42 sheep per hectare).

Falkland Islands Target: Protection of key biodiversity areas.

Our National Nature Reserves are a statutory protection that is aimed at conserving biodiversity. National Nature Reserves are not only found on public land but also on private land, where we work together with landowners to sustainably manage them.

Protected and biodiversity land areas

34,325ha	covered by National Nature Reserves
143,177ha	key biodiversity areas have been defined
21,008ha	key biodiversity areas are protected (14.7%)

In 2016, the UN Convention on Biological Diversity was extended to the Falkland Islands.

The Falkland Islands Biodiversity Framework 2016 - 2030 which highlights our vision for the protection and enhancement of biodiversity in the Falkland Islands was subsequently implemented.

UN SDG Target 15.7: take urgent action to end poaching and trafficking of protected species of flora and address both demand and supply of illegal wildlife products.

UN SDG Indicator 15.7.1: Proportion of traded wildlife that was poached or illicitly trafficked.

The Convention on International Trade of Endangered Species (CITES) is fully implemented in the Falkland Islands. In 2018/19, six CITES permits were issued to ensure that priority research and conservation on protected species can benefit through international collaboration.

Zero infringements against our CITES legislation were observed in the same time period.

Biosecurity and Invasive Species

UN SDG 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.

Good biosecurity and the control of invasive species is important in maintaining public health and ensuring that our biodiversity and economy thrive.

We have on-going programmes to control rodents, thistles and calafate, which are our top invasives.

As of 2019, 70 islands (equating to 6,615 ha) have been certified as rodent-free.

Our top 10 invasive species as of 2016

Invasive Species	Biodiversity	Public Health	Economic*
Black/Ship Rat (Rattus rattus)	●	●	
Calafate (Berberis buxifolia)	●		●
Brown/Norway Rat (Rattus norvegicus)	●	●	
Darwin's barberry (Berberis darwinii)	●		●
European ragwort (Senecio jacobea)	●		
Oxford ragwort (Senecio squalidus)	●		
House Mouse (Mus musculus)	●	●	
Patagonian fox (Lycalopex griseus)	●		●
Feral Goat (Capra hircus)	●		
Spear/Scotch Thistle (Cirsium vulgare)	●		●

*Agriculture

We also run a proactive biosecurity programme to control the arrivals of new invasive species.

Biosecurity activities

Actively inspected 2018/2019	23% of incoming flights
	100% of incoming vehicles
	100% of high risk containers
In 2018	45 restricted items confiscated
	42 different instances of bugs intercepted

Clean Water

UN Sustainable Development Goal 6

Ensure availability and sustainable management of water and sanitation for all.

Clean water is a cornerstone of life in the Falkland Islands, for biodiversity and humans alike. Ensuring that freshwater resources are preserved amongst a growing population and industrial development is vital.

UN SDG Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all.

UN SDG Indicator 6.1.1: Proportion of population using safely managed drinking water services.

100% of our population has access to clean water for drinking and bathing.

In rural areas (known locally as Camp) water is sourced from individual springs or wells, whereas in Stanley a water delivery system is in place. Stanley's water sources are tested every 6 months. All tests (100%) successfully meet UK criteria for safe drinking water.

Falkland Islands Indicator: All beaches and shorelines meet Blue Flag standards.

Two at risk sites from pollution in the Stanley area where the majority of the population live, are monitored and tested regularly throughout the year against Blue Flag standards for Coliforms. This helps to ensure that our beaches continue to meet these standards.

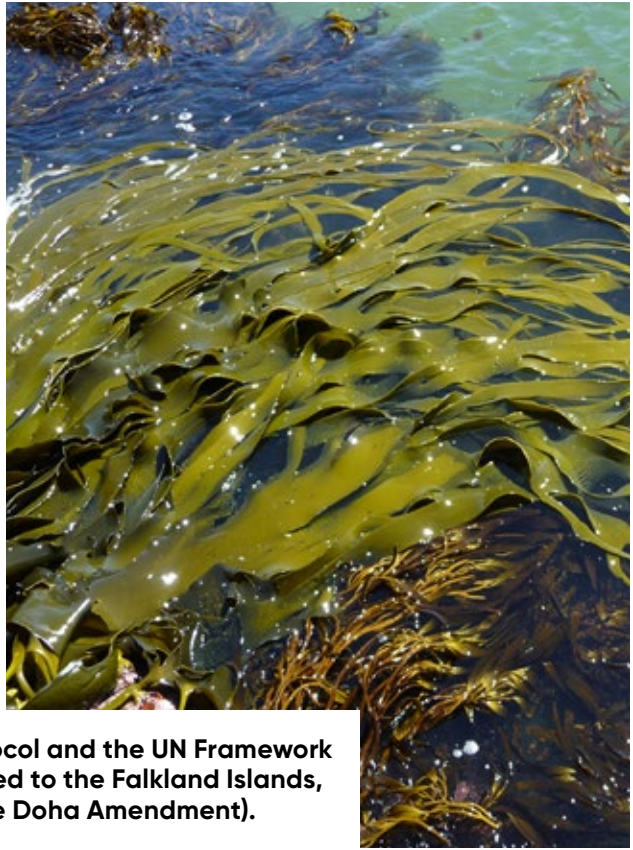
Beach testing results

	E. coli	Intestinal Enterococci
Max. last 12 months	**2 cfu/ml**	**78 cfu/ml**
Min. last 12 months	**Not detected**	**8 cfu/ml**
Blue Flag recommended max. safe levels	**250 cfu/ml**	**100 cfu/ml**

Sewage in the Falkland Islands is filtered through a bio-disc prior to its passage into the ocean. At risk beaches are closest to where sewage effluents are located.

03

Combatting Climate Change



UN Sustainable Development Goal 13

Take urgent action to combat climate change and its impacts.

Climate Change is a global issue expected to affect the Falkland Islands.

In 2005, the first commitment period of the Kyoto Protocol and the UN Framework Convention on Climate Change (UNFCCC) was extended to the Falkland Islands, followed by the second commitment period in 2012 (the Doha Amendment).

UN SDG Target 13.2: Integrate climate change measures into national policies, strategies and planning.

Our resilience and ability to adapt to future impacts of Climate Change is dependent on understanding how Climate Change might impact the Falkland Islands and our ability to appropriately monitor the impacts.

In 2016, a European Union BEST funded project, supported by FIG, assessed the risks associated with a 1.5°C increase in temperature on our Islands due to Climate Change as predicted by the Inter-Governmental Panel on Climate Change.

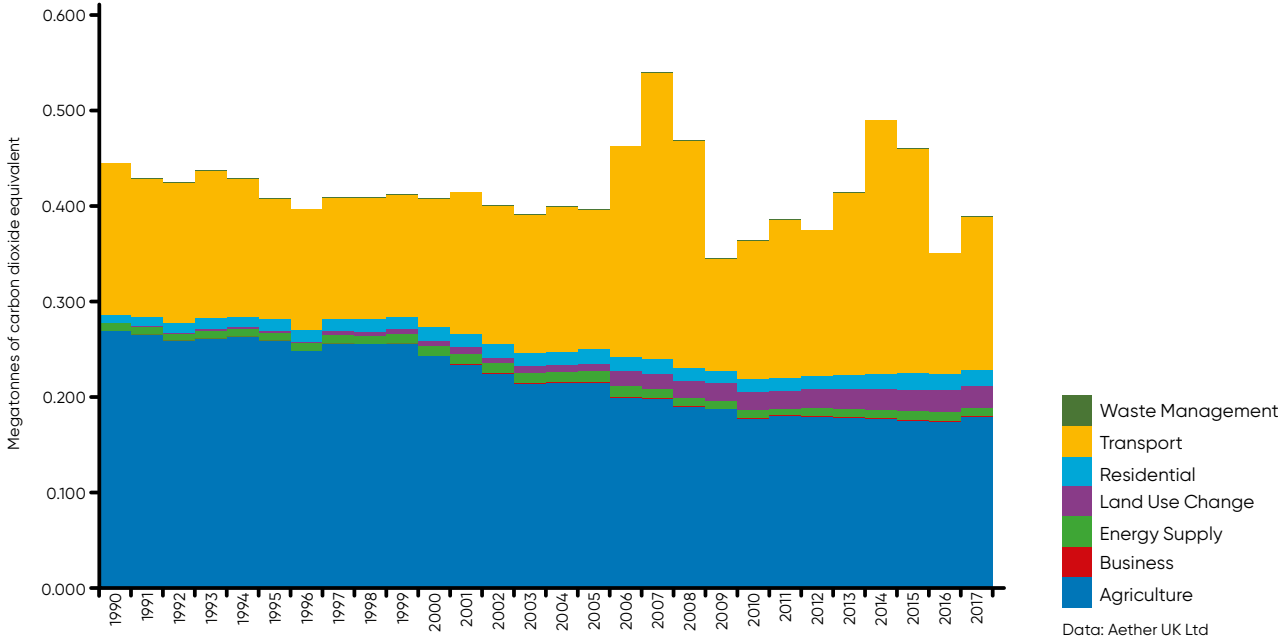
Our key risks are:

- **Drier conditions with drying soils**
- **Increased risk from invasive plant species, pests and diseases**
- **Loss of native plants as these may be unable to adapt**
- **Increased fire risk**

Kyoto Protocol and Doha Amendment Actions:
Decrease greenhouse gas emissions.

Our carbon emissions are decreasing in line with our goals under the UNFCCC Kyoto Protocol and Doha Amendment.

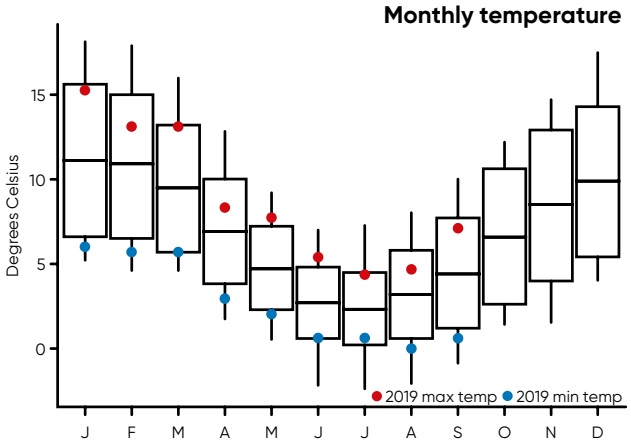
Falkland Islands' carbon emissions



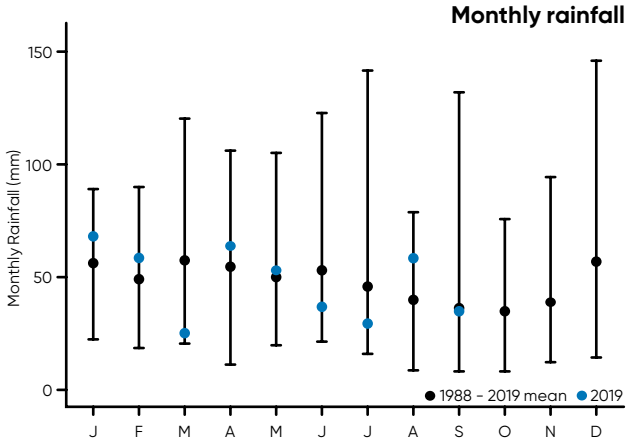
Data: Aether UK Ltd

Weather is a key indicator of Climate Change effects and weather recording for the Falkland Islands dates back to the 1900s with stations in Stanley. The UK Met Office has been taking recordings at Mount Pleasant Airport since 1986.

Weather statistics for 2019 are compared to the average of weather recordings since 1988.



Data: © Crown Copyright, UK Met Office, 2019

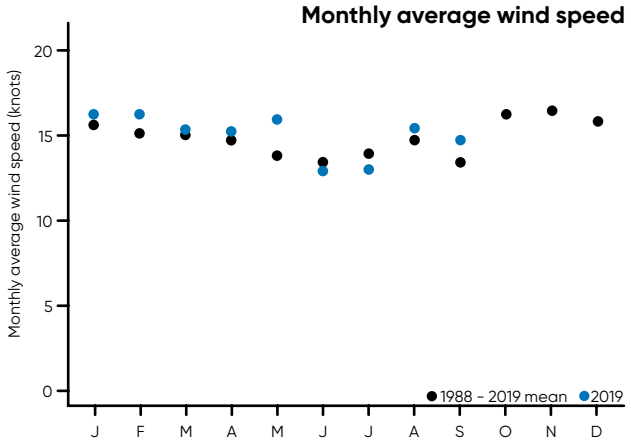


Data: © Crown Copyright, UK Met Office, 2019

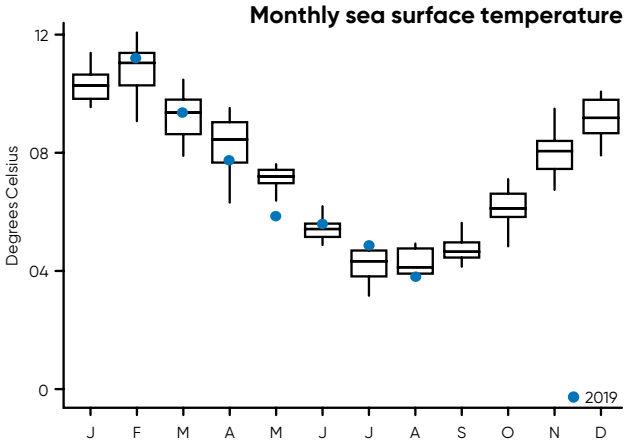
The weather for 2019 was consistent with the average over the last 30 years. Although not indicative of Climate Change at present, it is expected that changes will start being observed in the future.

FIG's Department of Natural Resource - Fisheries has collected sea water temperatures at 15 sites off the Falkland Islands for the last 20 years. Sea surface temperatures in 2019 were consistent with the average over the last 20 years.

Under future Climate Change scenarios, ocean temperatures are likely to change.



Data: © Crown Copyright, UK Met Office, 2019



Data: FIG Department of Natural Resources - Fisheries

Sustainable Energy Use

UN Sustainable Development Goal 7

Ensure access to affordable, reliable, sustainable and modern energy for all.

Ensuring that there is not only an adequate supply of energy but a sustainable and green supply of energy is important to both the people and for the natural environment of the Falkland Islands.

UN SDG 7 sets out some global targets and expectations for the adoption of renewable energy and for improving energy efficiency.

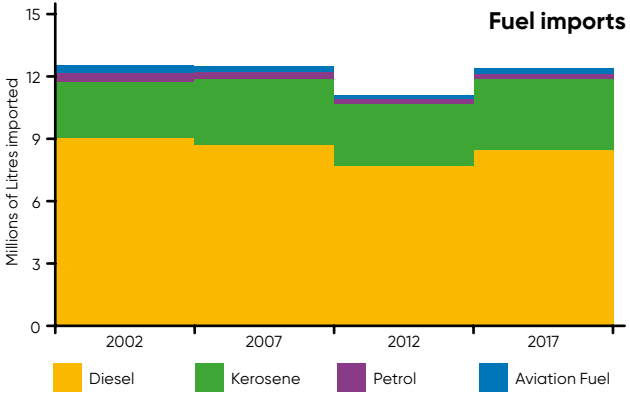
Recognising that the combustion of fossil fuels is a lead contributor to climate change, the Falkland Islands is committed to using clean, renewable sources of energy wherever feasible.

UN SDG Target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix.

UN SDG Indicator 7.2.1: Renewable energy share in the total final energy consumption.

100% of households in the Falkland Islands benefit from a supply of electricity, however, while fossil fuels still remain the dominant source of energy on the Islands, **our consumption per capita has decreased.**

Over the last 15 years, fossil fuel imports have remained constant, despite a population increase of 9.9% since 2001.

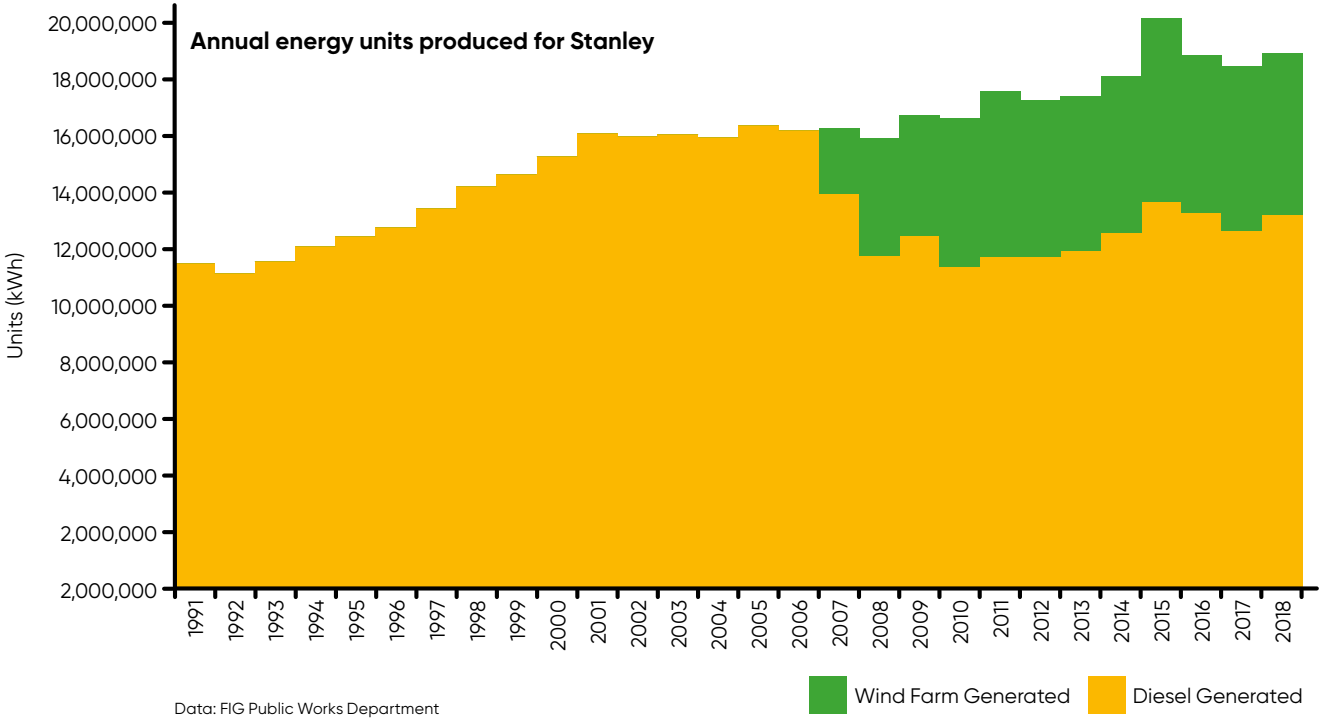


Data: Stanley Services Ltd

Renewable energy sources are a significant proportion of our total energy needs in Stanley.

90% of households in Camp use renewable energy derived from wind or solar to complement their energy needs.

Over 35% of Stanley's electricity is derived from wind power.



Data: FIG Public Works Department

04

Responsible Consumption and Waste Management

UN Sustainable Development Goal 12

Ensure sustainable consumption and production patterns.

As our economy and population grows, so does the amount of waste we generate.

Government, consumers and businesses need to work together to reduce unnecessary consumption and waste, find and implement solutions to recover materials that can be reused or recycled and develop mainstream sustainability practices.

In **May 2018** the Falkland Islands Government adopted a Waste Management Strategy and followed this with a **£4 million** commitment in **June 2019** to implement the strategy and develop new waste handling facilities.

The new facilities will be a result of collaboration, forming a joint solution for the British Forces South Atlantic Islands at Mount Pleasant and the residents of the Falkland Islands.

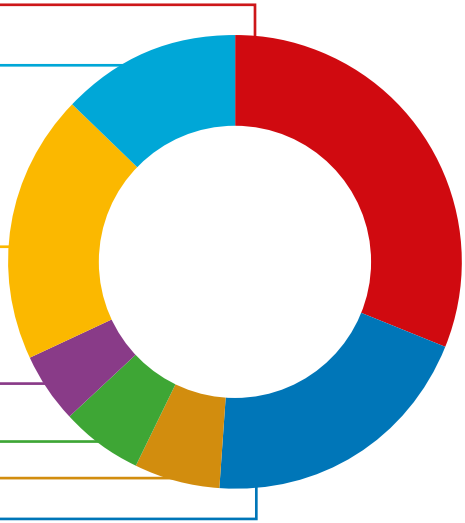
The first step has been the implementation of an improved glass recycling programme which will result in the collected glass being crushed and used as an aggregate. Since April 2019, **28.24 tonnes** of glass has been recycled.

Reducing our environmental footprint through reducing the amount of waste produced on our Islands is crucial and several business and community led initiatives have helped pave the way.

Types of household waste

	%
Plastic	31
Other	13
Foodwaste	20
Glass	5
Aluminium	6
Tins	6
Cardboard and Paper	19

Data: FIG Environment Unit



Types of waste produced by the households during the 2017 Household Survey indicate that plastic is the largest component of household waste.

From awareness raising events to the elimination of plastic shopping bags, we are striving towards responsible consumption and waste management.

05

Research and Data

FIG proactively commissions and supports research which provides baseline data and ongoing monitoring of our marine and terrestrial environment.

This evidence forms the basis of our decision making with respect to the sustainable management of these irreplaceable resources.

Further research and data are important in ensuring that we are able to achieve the best possible management outcomes for our natural environment.

Data Management

The Falkland Islands Information Management and Geographic Information System Data Centre was established in 2016 to help manage the ever-increasing volume of marine and terrestrial environmental data being generated.

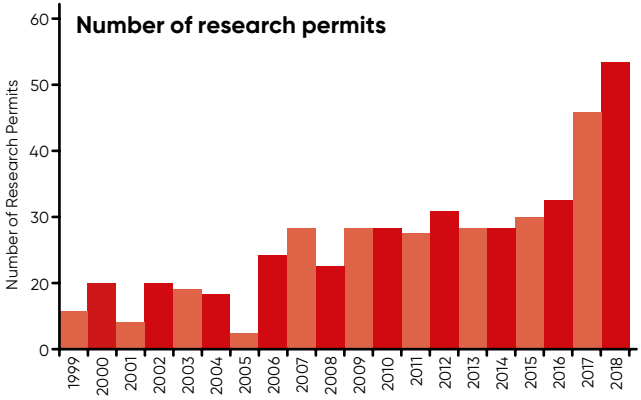
The Centre now hosts the metadata for all environmental data collected in the Falkland Islands, providing assistance with data services and vital training in Geographic Information Systems. It is a hub and central focus point for environmental science in the Falkland Islands.

Since its inauguration the Centre has contributed to:

- **targeting knowledge gaps**
- **providing evidence bases**
- **ensuring no duplication of research efforts.**

The Centre works in close collaboration with the Falkland Islands Government to ensure that all research in the islands is conducted with a valid permit, to ensure all data produced is captured.

Since 2013, the Falkland Islands Government has issued 417 research permits, with research being conducted by researchers and research bodies from 20 different countries.



Research by Falkland Islands Government

Undertaking scientific research within the Falkland Islands Government is vital for informing our decisions and ensuring that appropriate management practices are in place.

Research is central to the Department of Natural Resources' operations. Its research focuses on improving agricultural practices, informing fisheries management and helping to ensure that the most up-to-date scientific knowledge is incorporated into our decision making.

Recent projects include:

- **Toothfish tagging programme to support the Marine Stewardship Council certified toothfish fishery**
- **Research on hydatid disease to show how the disease is transmitted and reshape our knowledge and actions.**

Research Support to NGOs

The Falkland Islands Government works to support the research and work of locally-based environmentally-focused NGOs active in the Falkland Islands.

Two of these NGOs, Falklands Conservation and the South Atlantic Environmental Research Institute (SAERI), are charitable NGOs working independently.

Falklands Conservation is supported by the government and carry out a number of vital projects which help in the monitoring and understanding of our natural environment.

Their work includes:

- The Seabird Monitoring Programme which helps to monitor our globally important seabird populations
- Developing novel techniques using drones to map breeding seabird colonies
- Undertaking research on our rare and protected plants.

Their work is community-focused and a key component of the work involves educating and providing information on our environment to our community and the next generation through initiatives such as the *Watch Group*, a youth conservation group.

Since 2012, SAERI has delivered and facilitated research that helps us to better understand our natural environments and ecosystems.

Formed originally as a department of the government, SAERI became a charitable institution in 2016. Leading on research projects and collaborating with institutions around the world, their work includes:

- Marine Spatial Planning and fine-scaling Marine Management Areas in the Falkland Islands
- Developing habitat maps for the Falkland Islands.

International Agreements and the Falkland Islands

The following international agreements have been extended to the Falkland Islands and form part of our international commitments to the natural environment (and the year in which extended).

International Convention for the Prevention of Pollution from Ships – MARPOL (1995):
- Protocol Relating to the International Convention for the Prevention of Pollution from Ships - Annexes I, II, III and V (1995).

Convention on Fishing and Conservation of the Living Resources of the High Seas (1960)

International Convention on the Regulation of Whaling (1946)

Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter – London Convention (1975):
- 1996 Protocol to the Convention on the Prevention by Dumping of Waste and Other Matter, 1972 (1998)

International Convention relating to Intervention on High Seas in cases of Oil Pollution Casualties (1982):
- Protocol relating to Intervention on the High Seas in cases of Oil Pollution by Substances other than Oil (1983)

International Convention on Civil Liability for Oil Pollution Damage – CLC Convention (1976-1996):
- Protocol to the International Convention on Civil Liability for Pollution Damage of 29 November 1969 (1980-1996)
- Protocol to Amend the International Convention on Civil Liability for Oil Pollution Damage of 29 November 1969 (1996)

International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (1978 - 1998):
- Protocol to the International convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage of 18 December 1971 (1980 - 1998)
- Protocol to Amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage of 18 December 1971 (1998)

International Convention on International Trade in Endangered Species of Wild Fauna and Flora – CITES (1976)

Convention for the Protection of World Cultural and Natural Heritage (1984)

Convention on the Conservation of Migratory Species of Wild Animals - Bonn Convention or CMS (1985):
- Agreement on the Conservation of Albatross and Petrels - ACAP (2004)
- Memorandum of Understanding on Sharks (2012)

Vienna Convention for the Protection of the Ozone Layer (1987):
- Montreal Protocol on Substances that Deplete the Ozone Layer (1988)

Protocol on Environmental Protection to the Antarctic Treaty – Antarctic Environment Protocol or Madrid Protocol (1995)

Agreement on the Importation of Educational, Scientific and Cultural Materials – Florence Agreement (1954):
- Protocol to the Agreement of 22 November 1950 on the Importation of Educational, Scientific and Cultural Materials – Nairobi Protocol (1989)

United Nations Convention on the Law of the Sea (1997):
- Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea (1997)
- Agreement for the implementation of the provision of the Convention of 10 December 1982 relating to the conservation and management of straddling fish stocks and highly migratory fish stocks (2001)

The Convention on the Conservation of Antarctic Marine Living Resources – CCAMLR (1982)

The Convention for the Conservation of Antarctic Seals (1974)

Protocol on Environmental Protection to the Antarctic Treaty – Antarctic Environment Protocol or Madrid Protocol (1995)

United Nations Framework Convention on Climate Change (2007):
- Kyoto Protocol to the United Nations Framework Convention on Climate Change (2007)
- Doha Amendment to the Kyoto Protocol (2018)
- Paris Agreement under the United Nations Framework Convention on Climate Change (extension requested)

Constitution on the Food and Agricultural Organisation (1945)

Convention on Wetlands of International Importance, especially as Waterfowl Habitat - Ramsar Convention (1976):
- Protocol to amend the Convention on Wetlands of International Importance of 2 February 1971 as Waterfowl Habitat (1984)
- Amendments to Articles 6 and 7 of the Convention on Wetlands of International Importance (of 2 February 1971) especially as waterfowl habitat (1990)

Convention on Biological Diversity – CBD (2016)

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