Climate Change

A Practical Guide for You

Why should you care about climate change?

Although climate change is about changes in the environment, it is not just an environmental issue. Its impacts affect all aspects of our lives and could radically alter our quality of life in the future.

- Longer periods of drought in the Mediterranean mean water shortages and lower crop yields.
- In the Caribbean, where more than half the population live within 1.5 km of the coastal zone, very intense hurricanes often translate into millions of dollars of damage to homes, businesses, schools, hospitals, roads, bridges and other infrastructure.
- Rising sea levels and coastal erosion in some Pacific islands mean loss of important mangrove and coastal ecosystems that protect the shoreline and support fisheries. In some cases, it even means less living space and croplands.
- A decline in migratory tuna and marlin would affect the sport fishing industry in St. Helena in the South Atlantic.
- Rising sea levels could increase the risk of salt water intrusion into the ground water in Anguilla.

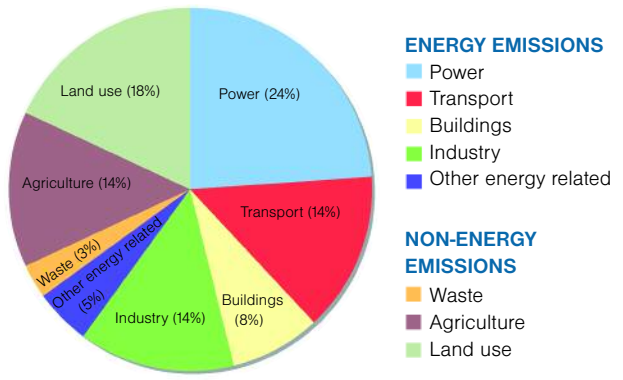


Figure 1. Greenhouse-gas emissions in 2000, by source. *Source: Prepared by Stern Review, from data drawn from World Resources Institute Climate Analysis Indicators Tool (CAIT) on-line database version 3.0.*

Box 1. Climate change is happening

- Global average surface temperature increased by about 0.6°C during the 20th century.
- The 1990s were the hottest decade and 1998 the hottest year on record, since temperature recording began some 150 years ago.
- Since 1970, there has been more intense tropical storm activity, marked by a 75% increase in the number of category 4 and 5 hurricanes.
- Global average sea level has risen at an average rate of 1.8 mm per year since 1961. Since 1993, the average rate of increase has been 3.1 mm per year.
- 80 per cent of live coral to a depth of 30 m succumbed to bleaching in the Chagos Archipelago in 1998 after sea surface temperatures rose to almost 30°C.

Why is urgent action required?

Human activity and how we use the planet have contributed to the steady increase in the concentration of carbon dioxide and other gases in the atmosphere that keep the Earth warm. High levels of greenhouse gas emissions from energy and non-energy sources are having adverse effects on nature and society (Figure 1). If this does not change, global warming will continue unabated.

Warmer surface and sea temperatures affect rainfall and other forms of precipitation, storm intensity, sea ice and glaciers, and sea level. Each of these in turn affects the environment and human well-being. No country has the luxury of waiting to see how the climate change challenge will play out, least of all the UK Overseas Territories. Many of our ecosystems — mangroves and coral reefs in the Caribbean and Pacific, sea ice biomes in the Antarctic, and Mediterranean-type ecosystems – are among those that have been identified as most vulnerable to climate change. They have already begun to experience the

adverse effects of an unstable climate. For most of us, what is at stake is a way of life and many of the natural and cultural features that are so much a part of our identity.

Box 2. Climate change is expected to continue

The Intergovernmental Panel on Climate Change (IPCC) has warned that average global surface temperatures could increase between 1.4°C and 5.8°C by the end of this century. This projection is significantly higher than the Panel's 1996 prediction that temperatures could increase between 1°C and 3.5°C by 2100. This warming, the IPCC projects, could lead to a rise in the global mean sea level of between 9 cm and 88 cm between 1990 and 2100.

The parrotfish, a favourite on Caribbean tables that keeps coral reefs healthy by eating potentially smothering algae, would not survive a 1°C increase in the temperature of the Caribbean Sea.

What can you do about climate change?

It is true that there is little you can do about the frequency of drought, increasing hurricane intensity or rising sea level. But this does not mean you cannot take measures to deal with climate change and make a difference. By making changes - some of them quite small - to your lifestyle and habits, you can ensure that you, your home and business are better able to withstand the inevitable impacts of climate change. You can even help reduce greenhouse gas emissions. Every contribution to this global problem, no matter how small it may seem, will make a difference when it is added to other seemingly small contributions.

1. Reduce your personal vulnerability

You can take proactive measures to reduce the vulnerability of your home, community and business to natural hazards.

In cyclone-prone regions, you can ensure that homes and buildings are hurricane-ready by taking the following steps:

- ☐ Have a plan in place to secure property, including a system for protecting windows and glass doors. This could be permanent storm shutters or having on hand marine plywood (minimum thickness 16 mm) cut to fit and ready to install.
- ☐ Install straps or additional clips to securely fasten roofs to buildings' frame structure.
- ☐ Regularly prune trees and shrubs around buildings.
- ☐ Keep up with routine maintenance and keep rain gutters and downspouts clear of debris.
- ☐ Identify where and how boats will be secured.

In regions prone to drought or periods of water shortage:

- ☐ Plant drought-tolerant plants in gardens and practice water conservation techniques such as the use of mulch to reduce evaporation.
- ☐ Reduce domestic water consumption, for example, through the installation of water-saving devices.
- ☐ Create a soakaway system and introduce grey water recycling and rainwater harvesting.

2. Reduce your energy use

You can take several simple steps to reduce transport and residential energy consumption.

Transport

- ☐ Drive less and drive more slowly. Cars pollute more when they travel over 90 km/hr.
- ☐ Do not idle car engines for longer than 10 seconds; idling for longer periods uses more fuel than shutting off and restarting the car.
- ☐ Car-pool or use public transport.
- ☐ Purchase energy-efficient vehicles when replacing existing models.

Household

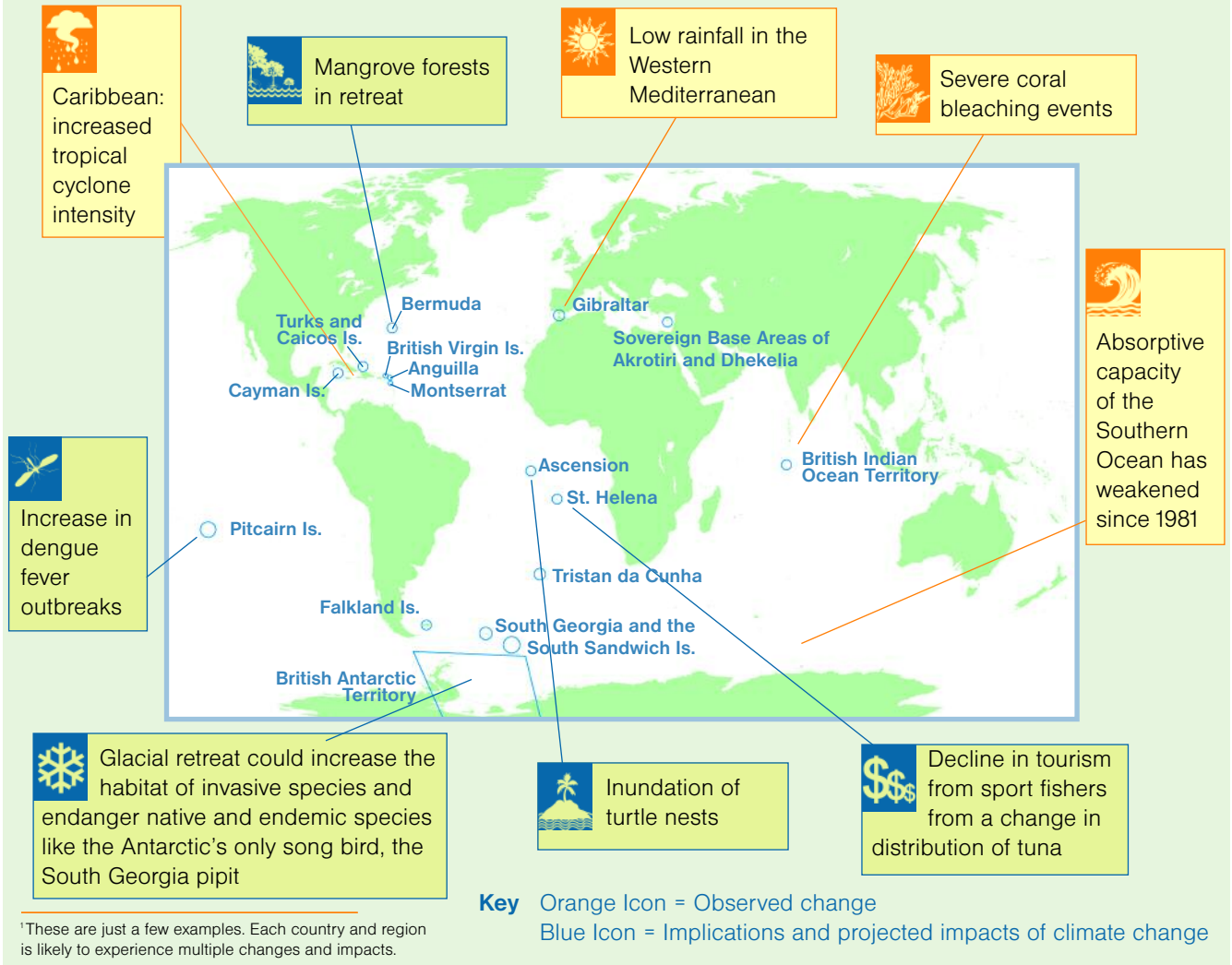
- ☐ Turn off and unplug appliances when not in use. It is not enough to simply hit the off switch on appliances as some continue to draw energy even when not in use.
- ☐ Improve heating and cooling energy efficiency. Reduce home heating in temperate climates and cool less in tropical climates. Use double-glazed windows to improve insulation in temperate climates and construct buildings in the tropics to take advantage of air flows.
- ☐ Use energy-efficient appliances. New refrigerators, for example, use 40 per cent less energy than models made just 10 years ago.
- ☐ Replace incandescent light bulbs with efficiency-rated fluorescent ones. Energy-efficient light bulbs use 75 per cent less energy and last 10 times longer than conventional ones.

3. Practice good environmental habits

Look after the environment and it will look after you. The damage to the environment caused by human activity makes UKOTs more vulnerable to the negative effects of climate change.

- ☐ Keep rivers and watercourses free of garbage, debris and effluent to help maintain the health of wetlands and reefs so that they can play their role in protecting the coastline from storm surges and wave action.

Selected global warming changes and impacts in UK Overseas Territories[1]



Key Orange Icon = Observed change
Blue Icon = Implications and projected impacts of climate change

[1]These are just a few examples. Each country and region is likely to experience multiple changes and impacts.

- ☐ Maintain and protect mangroves. Keeping mangrove forests intact allows them to maintain their living barrier function. Converting mangroves for human use like construction of roads, homes or businesses, dumping garbage in mangroves, or cutting them down for fuel wood or agricultural stakes are all activities that compromise the health of mangrove forests. Their ability to support marine and bird life is affected and they are less able to filter land-based run-off and debris that enter the seas. They are also less effective in protecting the coastal zone from storm surges and wave action.
- ☐ Maintain and protect coral reefs. Pollution from activities on land – improper waste disposal and run-off from farming and industry – affects the health of coral reefs, as do activities in the sea. In addition to reducing the land-based sources of reef stress, it is important to

Variations in precipitation due to climate change are likely to accelerate erosion on the eastern side of St. Helena.
Credit: Vince Thompson, St. Helena National Trust

ensure that commercial (fishing) and recreational (scuba diving, snorkelling and swimming) activities do not damage reefs.

- ☐ Avoid unsustainable farming practices. The misuse and over use of pesticides and fertilizers, over-cultivation on marginal lands, and inappropriate farming techniques on hillsides, all contribute to soil erosion and soil loss. Some of this soil ends up in inland water bodies (rivers, lakes and ponds); some makes its way to the marine environment. Pollution of water sources reduces the amount of fresh water that is available for domestic and commercial use.

4. Lessen your impact on the environment: reduce, reuse and recycle

In making choices about what and how you consume, you affect the environment.

- ☐ Use organic waste from your kitchen as compost for your garden.
- ☐ When you shop, choose items with less packaging.
- ☐ Take your own reusable shopping bag to the market or supermarket instead of packing your groceries in plastic bags.
- ☐ Where recycling facilities are available, use them.

5. Get involved in community action

Together with others in your community, you can work towards strengthening your local area's ability to deal with extreme weather and climate shocks. Healthy ecosystems are buffers to natural hazards and are more resilient to climate change. Therefore, anything you do to look after ecosystems, such as coral reefs, mangroves and forests, and protect biodiversity will strengthen the natural environment's ability to withstand climate shocks. Local disaster preparedness activities similarly contribute to building community resilience to climate change impacts and initiatives that work on recycling, waste management and alternative energy contribute to mitigation, or reduction of the human contribution to greenhouse gas emissions.

The Sandwatch Project is an example of an initiative that is working at community level, including through schools, to modify lifestyle habits and develop an awareness of the "fragile nature of the marine and coastal environment and the need to use it wisely." Because of the relationship between a healthy marine and coastal environment and climate change resilience, Sandwatchers are encouraged to address climate change issues in their coastal communities and as part of their daily lives. There are Sandwatchers in the British Virgin Islands, Montserrat and the Turks and Caicos Islands. For more information go to http://www.sandwatch.ca.

Box 3. Think global, act local

If you or your community organisation are interested in contributing to building local resilience to climate change but do not know where to start, contact your national Department of the Environment for information and assistance.

A useful starting point could be to document local impacts of climate change and then come up with appropriate adaptation measures that community members can implement. World Wildlife Fund's South Pacific Programme has developed a toolkit to help communities do just this. You can download copies of the Climate Witness Toolkit from http://www.wwfpacific.org.fj/publications/climate.cfm

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Documents in this JNCC series:

Climate Change in the UK Overseas Territories : An Overview of the Science, Policy and You - A look at climate science and policy and how global warming affects UK Overseas Territories.

Climate Change in the UK Overseas Territories : A Brief Overview of the Science, Policy and You - Executive summary of the document above.

Climate Change: An Overview for Politicians and Senior Decision Makers - Key issues for policy and decision makers to take into account in climate-proofing national policies and programmes.

Climate Change: A Practical Guide for Your Organisation - How businesses can reduce their carbon footprint.

Climate change in the UK Overseas Territories (DVDs): Part 1: Impacts and Part 2: Adaptation and mitigation - Short videos on climate science and policy and how global warming affects UK Overseas Territories.

Climate Change: A Practical Guide for You – Simple things individuals can do to reduce their climate impact.

Guidance for Biodiversity Conservation and Management in a Changing Climate in the UK Overseas Territories – Practical guidance for the practitioners who must plan and manage biodiversity in the face of climate change.

Copies available on the internet at http://www.jncc.gov.uk/page-4362

Paper copies can be requested from:
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