

Environmental Sustainability Guide

This resource aims to help raise awareness and highlight the connections between healthcare and climate change.

As a healthcare organization, Southcoast Health is dedicated to protecting and improving human health. But today, we face a growing challenge – the health of our environment directly impacts the health of our communities. Climate change contributes to respiratory diseases, heat-related illnesses, and other public health risks. That's why environmental sustainability is more than an ecological concern; it's a healthcare priority.

Environmental sustainability refers to using natural resources wisely to keep the planet healthy for current and future generations.

Natural resources are materials found in nature that humans use in daily life. They include water, air, soil, forests, sunlight, wind, and fossil fuels.

Fossil fuels are natural energy sources formed from the remains of ancient plants and animals over millions of years. They include **coal, oil, and natural gas**.

When burned, fossil fuels release carbon dioxide and other greenhouse gas emissions. They also cause air pollution.

Greenhouse gas (GHG) emissions are gases in Earth's atmosphere that trap heat, keeping the planet warm. While some are natural and necessary for life, human activities have increased their levels, leading to climate change.

GHG emissions can be divided into three categories:

Scope 1: Direct emissions from sources an organization owns or controls, such as:

- Burning natural gas for boilers,
- Gasoline-powered vehicles,
- Using diesel generators,
- Anesthesia,
- Metered-Dose Inhalers.

Scope 2: Indirect emissions from the energy an organization buys from utility companies. Electricity falls in this category.

Scope 3: Emissions from activities in the supply chain, such as:

- Purchased goods and services
- Waste disposal

GHGs include carbon dioxide (CO₂), methane, nitrous oxide, anesthetic gases, etc. **Carbon dioxide is the primary GHG emission, often referred to as a carbon emission.**

You have also probably heard the term **carbon footprint** used often. This is the total amount of GHGs that are emitted directly (Scope 1) or indirectly (Scope 2 & 3) by an organization. Some organizations, including

Southcoast Health, measure and report their carbon footprint in metric tons of CO₂.

GHG emissions, especially carbon emissions, contribute to climate change by trapping heat in the Earth's atmosphere, leading to global warming, extreme weather, and health risks like air pollution-related illnesses.

Global warming refers to the long-term increases in Earth's average surface temperature due to human activities, primarily the burning of fossil fuels like coal, oil and natural gas.

Climate change is the long-term shift in global temperatures and weather patterns. While climate changes naturally over time, recent rapid changes are due to increased GHG emissions from burning fossil fuels, deforestation, and industrial activities.

Effects of climate change include a higher frequency of heatwaves, hurricanes, floods, wildfires, droughts, as well as wildlife species loss.

Additionally, climate change affects **human health** in several ways, mainly due to rising temperatures, extreme weather events, and air pollution. Here's how:

Increased Heat-Related Illnesses

- Higher temperatures lead to more heatwaves, increasing the risk of heat exhaustion and heatstroke – both of which can be fatal if untreated.
- People with existing conditions, the elderly, and outdoor workers are especially vulnerable to heat-related illnesses.

Respiratory Diseases

- Air pollution from wildfires, vehicle emissions, and industrial activities worsen conditions like asthma, bronchitis, and chronic obstructive pulmonary diseases (COPD).
- Rising temperatures also increase smog, which irritates the lungs and reduces lung function.

Spread of Infectious Diseases

- Warmer temperatures create ideal conditions for mosquitoes and ticks, increasing the spread of diseases like Lyme disease, malaria, dengue fever, and Zika virus.

These health risks disproportionately affect vulnerable populations, including children, the elderly, low-income communities, and those with pre-existing health conditions. Preventing climate-related health issues requires reducing GHG emissions and increasing awareness of climate-related risks.

The healthcare industry accounts for approximately 8.5% of national GHG emissions. Southcoast Health remains committed to reducing our environmental impact and ensuring continued access to quality medical care for our communities, especially in the face of climate-related challenges.

For further reading, please visit:

[Learn About Sustainability - Environmental Protection Agency](#)

[Conserving Earth - National Geographic](#)

[Fossil Fuels - Environmental and Energy Study Institute](#)

[Greenhouse Effect 101 - Natural Resources Defense Council](#)

[Sources of Greenhouse Gas Emissions - Environmental Protection Agency](#)

[Global Warming 101 - Natural Resources Defense Council](#)

[What is Climate Change? - United Nations](#)

[Causes of Climate Change - Environmental Protection Agency](#)

[Heat and health - World Health Organization](#)

[Health and Climate Change - World Bank](#)

[Temperature-related Death and Illness - National Institute of Environmental Health Sciences](#)

[Climate Change and Social Vulnerability in the United States - Environmental Protection Agency](#)

[Climate change and global health: What actions are healthcare leaders taking?](#)