ITALY

LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE
DATA SHEET 2025

Health and climate change in Italy

The Lancet Countdown on Health and Climate Change tracks the evolving relationship between climate and health through 50+ peer-reviewed indicators. Since 2016, it has provided peer-reviewed annual assessments, published in *The Lancet*. The 2025 report reveals the grave health toll of climate change inaction: fossil fuel dependence, rising emissions, and delayed adaptation are costing millions of lives. Recent climate policy rollbacks further threaten our ability to respond to the accelerating crisis, undermining progress towards a healthy future.

This document highlights key country-level findings from the 2025 Lancet Countdown report for Italy, showing that:

People in Italy are facing **escalating risks from extreme heat and drought**, which are straining health, water, and labour systems and endangering vulnerable populations.

Air pollution and wildfires continue to threaten health, with preventable deaths driven by persistent fossil fuel use and worsening climate-related hazards.

Despite progress in some areas, Italy's transition to a low-carbon and climate-resilient future remains misaligned, with **continued fossil-fuel dependence**, high healthcare emissions, and growing coastal vulnerabilities.

With the threats of climate change growing, protecting people's health and survival demands simultaneous and unprecedented efforts to advance adaptation and mitigation, and requires an "all hands on deck" approach.

Intensifying heat and drought impacts

Rising temperatures are amplifying Italy's exposure to dangerous heat and drought conditions, putting lives, livelihoods, and the economy at increasing risk. These climate extremes are becoming more frequent, intense, and prolonged, straining public health systems and infrastructure. Older adults, infants, and outdoor workers are particularly vulnerable, facing heightened risks of heat-related illnesses, dehydration, and reduced productivity.

ESCALATING DUAL THREATS

Southern Europe's 2023–2024 summers marked a turning point for Italy's climate resilience. Record heatwaves combined with prolonged drought left soils parched and reservoirs depleted, exacerbating agricultural stress and energy demand. The concurrent rise in both temperature- and drought-related indicators demonstrates how compounding extremes are reshaping everyday health and wellbeing across the country.

46

In 2024, people in Italy, people were exposed to 46 heatwave days each, on average. Of these, 33 (72%) would not have been expected to occur without climate change. (Indicator 1.1.1)

Compared to 1990-1999, in 2024, people were exposed on average to 434 more hours during which ambient heat would have posed a moderate or higher risk of heat stress if undertaking moderate outdoor physical activity. This was a record high. (Indicator 1.1.2)

In 2024, heat exposure resulted in a loss of 364 million potential labour hour, a record high 15h per person, and 181% more than in 1990-1999. The construction sector accounted for 40% of the losses in 2024. (Indicator 1.1.3)

Meanwhile, an average of 60.9% of Italy's land area experienced at least one month of extreme drought per year in 2020–2024, up from 13.1% in 1951–1960. (Indicator 1.2.2). This intensifying dryness compounds heat risks, threatens water availability, and increases fire susceptibility.

Air pollution and wildfire exposure

Air pollution continues to pose one of Italy's most severe health challenges, while climate change is driving longer and more intense wildfire seasons that further degrade air quality and threaten lives.

From 2019–2023, 98.45% of Italy's population was exposed to daily dust levels (PM10) exceeding the WHO guideline of 45 μg/m³, indicating pervasive air quality exceedances across much of the country (Indicator 1.2.4). Chronic exposure to such levels increases risks of respiratory and cardiovascular disease, particularly in urban areas.

Between 2020–2024, wildfire smoke pollution caused an estimated annual average of 1,100 deaths in Italy. People in Italy experienced an average of 9.9 high wildfire-risk days in 2024, a slight increase from 8.8 in 2003-2012. (Indicator 1.2.1). These exposures are concentrated in southern and central regions, where dry and windy summers create the conditions for rapid fire spread.

Fossil fuel dependence and decarbonisation challenges

Italy's reliance on fossil fuels continues to drive emissions and economic costs, slowing the transition toward a low-carbon, health-promoting energy system.

In 2022, CO_2 emissions from fossil fuel combustion reached 310,289 kilotonnes. As of 2022, coal makes up 5.2% of total energy and 8% of electricity energy. As of 2022, renewable energy made up 6.8% of total energy supply, slightly up from 6.1% in 2016, and 19% of total electricity, a slight increase from 16% in 2016. (Indicator 3.1.1). Despite increasing renewable capacity, fossil fuels remain dominant in Italy's energy mix, sustaining high levels of pollution and greenhouse gas emissions.

In 2023, Italy still subsidies fossil fuel, with a net total subsidy of US$30.2 billion, equivalent to 15.5% of its health expenditure. (Indicator 4.3.2). This imbalance underscores fiscal misalignment between public spending and climate-health objectives, diverting resources away from sustainable and equitable health system investments.

Coastal and ecosystem vulnerabilities

Italy's extensive coastline and diverse ecosystems are increasingly exposed to the combined pressures of rising seas, warming waters, and environmental degradation. These threats endanger livelihoods, infrastructure, and public health, particularly in low-lying coastal communities.

In 2024, 657,000 people in Italy lived less than one metre above sea level, making them highly vulnerable to coastal flooding and storm surges (Indicator 2.2.4). With large urban populations and critical infrastructure located along the coast, these risks carry both social and economic implications.

At the same time, average sea surface temperatures in Italy's coastal waters were 1.42 °C above the 1981–2010 average, accelerating ecosystem stress and threatening fisheries, biodiversity, and coastal tourism (Indicator 1.4).

RISING SEAS AND SHIFTING COASTLINES

Italy's coastal zones, from the Venetian Lagoon to the Po Delta and southern islands, are on the frontline of climate impacts. Warmer seas are reshaping marine ecosystems, while even modest sea-level rise increases flooding frequency in low-lying cities. As these changes interact with land subsidence and erosion, protecting coastal populations will require long-term planning that integrates ecosystem restoration, resilient infrastructure, and community adaptation.

Romanello M, Walawender M, Hsu S-C, et al. The 2025 report of the Lancet Countdown on health and climate change. Lancet 2025; published online Oct 29. https://doi.org/10.1016/S0140-6736(25)01919-1.

The Lancet Countdown was established in partnership with Wellcome.
For further information, visit lancetcountdown.org