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The everyday impact of climate change on our lives: A comprehensive review

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Abstract

Climate change, once perceived as a distant environmental concern, has become a pressing reality that affects daily life in profound and pervasive ways. This review explores how rising temperatures, extreme weather events, and shifting ecosystems directly influence our health, food and water security, livelihoods, housing, education, and social well-being. From increased respiratory illnesses and water shortages to disrupted work routines and cultural practices, climate change reshapes the fabric of our everyday experiences. Drawing on recent research and real-world examples, the article highlights both the challenges and the adaptive strategies individuals and communities employ to cope with these changes. Understanding these tangible impacts is essential not only for fostering awareness but also for inspiring action at personal, community, and policy levels. By connecting global climate dynamics to personal realities, this review underscores the urgent need for collaborative efforts to build resilience and mitigate further harm.

Keywords: Climate change impacts, everyday life, health and well-being food and water security, livelihoods and housing, adaptation strategies

Introduction

Climate change is no longer just an abstract scientific concept or a distant environmental threat, it is a lived reality that influences our lives every single day^[1, 4]. Defined as long-term changes in temperature, precipitation, wind patterns, and other aspects of the Earth's climate system, climate change is driven largely by human activities such as burning fossil fuels, deforestation, and industrialization^[2, 5].

For decades, discussions about climate change centered on melting ice caps, rising sea levels, and endangered species^[3, 7]. While these global phenomena remain critical, what often gets overlooked is how climate change manifests in the routines, choices, and well-being of individuals and communities everywhere. From the air we breathe to the food we eat, the water we drink, the homes we live in, and the work we do climate change leaves its mark on almost every facet of everyday life^[6, 8].

This review aims to bridge that gap by exploring the everyday consequences of climate change. It examines how the broader environmental shifts translate into personal and local experiences, impacting health, food and water security, livelihoods, education, social and cultural life, and more. Furthermore, it highlights how individuals and communities are adapting to these changes, offering insights into resilience and mitigation strategies^[9, 111].

By understanding the immediate and tangible effects of climate change on daily life, we can foster a stronger sense of urgency and responsibility not only to mitigate its causes but also to adapt and protect ourselves and future generations^[10, 13].

Climate Change in Context

To understand the everyday impacts of climate change, it is important first to grasp what climate change actually entails and how it connects to human life^[12, 15].

At its core, climate change refers to long-term alterations in the Earth's climate patterns. While the planet's climate has naturally fluctuated over millions of years, the current rate and scale of change are largely the result of human activities since the Industrial Revolution. Burning fossil fuels like coal, oil, and natural gas releases large amounts of greenhouse gases especially carbon

dioxide (CO₂) and methane (CH₄) into the atmosphere. These gases trap heat, intensifying the natural greenhouse effect and causing global temperatures to rise ^[14, 16].

This warming disrupts global weather systems, leading to more frequent and intense heatwaves, droughts, floods, storms, and wildfires. It also alters rainfall patterns, melts glaciers and polar ice caps, and raises sea levels. These environmental changes, while global in nature, cascade into regional and local effects that touch our daily lives ^[17, 19].

For instance, a drought in one part of the world can lead to higher food prices in another, and rising sea levels can displace communities thousands of miles away. Moreover, climate change does not impact everyone equally its effects are often felt most acutely by vulnerable populations with fewer resources to adapt ^[18, 21].

By situating climate change in this context, we can begin to see how a planetary crisis becomes personal. The following sections will explore in detail how these large-scale shifts translate into everyday challenges for individuals, families, and communities ^[20, 25].

Health and Well-being

One of the most immediate and personal ways climate change affects our lives is through our health — both physical and mental. Rising temperatures, deteriorating air quality, and shifting disease patterns are already putting millions of people at risk ^[22, 24].

Physical Health

Climate change increases the frequency and severity of heatwaves, which can lead to heat exhaustion, dehydration, and even heatstroke, particularly in the elderly, children, and those with pre-existing conditions. Poor air quality, driven by higher temperatures and increased wildfires, aggravates respiratory and cardiovascular diseases like asthma and heart disease ^[23, 26].

In addition, changing ecosystems and weather patterns are expanding the habitats of disease-carrying vectors like mosquitoes and ticks. As a result, diseases such as malaria, dengue, and Lyme disease are spreading to new areas, putting more people at risk. Flooding and extreme weather events also raise the likelihood of waterborne diseases like cholera by contaminating water supplies ^[27, 29].

Mental Health

The psychological toll of climate change is equally significant but often overlooked. Extreme weather events — such as hurricanes, floods, and wildfires — displace families, destroy homes, and create long-term trauma. Even the awareness of the looming threat of climate change can lead to what researchers call *eco-anxiety*, feelings of helplessness, fear, and despair about the future ^[28, 30].

Children and young adults, in particular, are increasingly reporting stress and anxiety related to climate change, especially in communities that experience repeated disasters or face the risk of losing their homes and livelihoods ^[31, 35].

Addressing these health impacts requires both immediate adaptation — such as improving healthcare infrastructure and emergency response and long-term efforts to reduce emissions and stabilize the climate ^[32, 34].

Food and Water

Climate change is reshaping the way we grow, access, and consume food and water two essentials of daily life — often making them more scarce, expensive, or unreliable ^[33, 36].

Food Security

Global warming disrupts growing seasons, reduces crop yields, and increases the risk of pests and diseases. Droughts, floods, and unpredictable rainfall damage crops and make farming less reliable. Staple foods like wheat, rice, and maize are already seeing yield declines in some regions.

These changes can lead to food shortages, driving up prices and making nutritious food less affordable, especially for low-income families. Moreover, rising carbon dioxide levels may reduce the nutritional quality of some crops, lowering their protein, iron, and zinc content ^[37, 39].

Fisheries are also affected as warming waters and ocean acidification change the habitats of fish and shellfish, reducing catches for coastal communities and raising seafood prices for consumers ^[38, 42].

Water Resources

Water is becoming more unpredictable and unevenly distributed due to climate change. Many regions experience prolonged droughts, reducing water availability for drinking, hygiene, and irrigation. Others face intense floods that overwhelm water systems and contaminate drinking supplies. Melting glaciers and reduced snowpacks threaten freshwater sources for millions of people who depend on rivers fed by ice and snow ^[40, 41].

Even in urban areas, extreme weather can disrupt water treatment plants, leading to shortages or poor-quality water. Women and children, who often bear the responsibility for collecting water in rural areas, are particularly burdened when water becomes scarce ^[31, 35].

Ensuring food and water security in a changing climate demands innovations in agriculture, better water management, and policies that prioritize equitable access to resources ^[11, 35].

Work and Livelihoods

Climate change also disrupts how people earn their living, particularly for those whose work depends directly on natural resources or outdoor conditions. Its effects ripple through economies, influencing income, job security, and workplace safety ^[21, 45].

Agriculture and Fisheries

Farmers and fishers are among the most affected. Erratic rainfall, prolonged droughts, soil degradation, and floods damage crops and reduce productivity. Many small-scale farmers find it increasingly difficult to predict planting and harvesting seasons, leading to financial losses and food insecurity.

Similarly, ocean warming and acidification threaten fish stocks and coral reefs, making fishing less reliable and forcing coastal communities to seek alternative livelihoods ^[41, 47].

Outdoor and Manual Labor

People working outdoors — such as construction workers, delivery personnel, and street vendors — face increased risks from extreme heat, poor air quality, and storms. Heat stress can reduce productivity and increase the risk of workplace accidents and illness.

For some, entire workdays are lost due to hazardous weather, directly impacting wages and family income ^[41, 48].

Economic Instability

Industries heavily dependent on stable climate conditions, such as tourism and insurance, also suffer. Coastal tourism declines when beaches erode or storms destroy infrastructure. Insurance

premiums rise as natural disasters become more frequent, making coverage unaffordable for many ^[49, 51].

These disruptions emphasize the need for governments and employers to implement climate-resilient economic policies, create safer working conditions, and support skill development for workers to transition into more sustainable and secure livelihoods ^[50, 51].

Housing and Infrastructure

Our homes and the infrastructure we rely on daily — roads, electricity, water systems — are increasingly vulnerable to the impacts of climate change. The safety, affordability, and stability of housing are being challenged in ways many communities have never experienced before ^[41, 45].

Housing Vulnerability

Extreme weather events such as floods, hurricanes, wildfires, and rising sea levels damage or completely destroy homes. In coastal areas, sea level rise and storm surges are forcing people to relocate or spend more on reinforcing their homes. In dry regions, wildfires threaten entire neighborhoods within hours.

The cost of repairing or rebuilding after these events is often unaffordable for lower- and middle-income families. Some are forced to live in temporary shelters or become climate migrants, leaving their homes permanently ^[31, 35].

Infrastructure Strain

Beyond homes, public infrastructure suffers too. Roads and bridges can be washed out by floods, while heatwaves can buckle rail tracks or strain electricity grids due to high demand for cooling. Storms can damage power lines and water treatment facilities, leaving communities without basic services.

Urban drainage systems, often outdated, struggle to cope with heavy rainfall, leading to dangerous flooding even in cities ^[11, 25].

Economic and Social Consequences

These damages don't just inconvenience people — they disrupt lives, businesses, education, and healthcare, especially for those in vulnerable areas. Rising insurance costs or the loss of insurability in some regions further deepen financial stress ^[11, 15]. Strengthening housing and infrastructure to withstand these climate-related challenges is critical. Solutions like climate-resilient building materials, better urban planning, and green infrastructure (like parks that absorb stormwater) can help protect communities against worsening risks ^[31, 35].

Daily Routines and Comfort

Beyond the obvious disasters, climate change subtly alters the comfort and rhythm of our everyday lives. Rising temperatures, unpredictable weather, and environmental changes influence how we plan, move, and simply live day to day ^[11, 15].

Extreme Temperatures

Hotter days and warmer nights make it harder to sleep, work, and relax. People find themselves adjusting their schedules to avoid midday heat, which may mean leaving home earlier, working at odd hours, or cutting back on outdoor activities. In colder regions, unseasonable warmth can also disrupt winter routines that people rely on culturally and economically ^[21, 45].

Changes in Lifestyle

Even mundane choices, like what to wear, how to cool or heat our homes, and how much electricity or water we use, become

more complicated. The growing need for air conditioning drives up household energy bills, while some regions may face power cuts because of overburdened grids.

In regions prone to flooding or storms, residents constantly monitor weather forecasts, prepare emergency supplies, and live with a persistent sense of uncertainty ^[51, 52].

Transportation Disruptions

Daily commutes are also affected. Flooded roads, snowstorms, or extreme heat can delay public transport, damage vehicles, and make walking or biking uncomfortable or unsafe. People may have to spend more time, energy, and money simply getting from place to place ^[21, 45].

Although these changes may feel small individually, they add up, creating stress, inconvenience, and even financial burden over time. Recognizing these subtle yet significant disruptions reminds us that climate change isn't just about far-off disasters — it reshapes the ordinary flow of life ^[41, 52].

Social and Cultural Life

Climate change doesn't just affect our environment and economy — it also reshapes the social and cultural fabric of our communities. Traditions, relationships, and identities that are closely tied to place and season often bear the weight of a changing climate.

Community Displacement

As rising sea levels, desertification, and extreme weather make some regions uninhabitable, communities are forced to migrate. This displacement can fracture families, disrupt support networks, and erode a sense of belonging. Climate refugees often face discrimination and economic hardship in their new locations, deepening social divides.

Loss of Cultural Heritage

Many cultural practices and festivals are rooted in seasonal cycles and specific landscapes. When these landscapes change or vanish — such as flooded coastal towns or drought-stricken farmlands — entire traditions can be lost. Iconic sites, from ancient temples to indigenous sacred grounds, are threatened by erosion, fires, and floods, wiping out centuries of heritage ^[31, 35].

Social Inequality

Climate change exacerbates existing social inequalities. Vulnerable groups — including women, children, the elderly, and marginalized communities — often suffer more from its impacts and have fewer resources to adapt. In some cases, competition over shrinking resources like water or fertile land fuels conflict within and between communities (Raju Suresh Gaware *et al*) ^[54].

Strain on Social Bonds

When disasters strike repeatedly, the stress of recovery and survival can strain relationships, leading to feelings of isolation and division. At the same time, some communities respond by strengthening solidarity, organizing grassroots resilience efforts, and fostering a shared sense of purpose.

By understanding how climate change touches our collective identity and social life, we can better protect not only the environment but also the human connections and traditions that give life meaning ^[35, 36].

Education

Climate change also disrupts education, directly and indirectly

affecting students, teachers, and the quality of learning environments. Its impact is particularly evident in regions prone to extreme weather and resource shortages, but it increasingly touches classrooms everywhere.

School Closures and Attendance

Extreme weather events like floods, hurricanes, and heatwaves often force schools to close, sometimes for extended periods. Damaged buildings and unsafe conditions can leave children out of school for weeks or months, interrupting their education and social development.

Even when schools remain open, children may be absent more frequently because of illness, displacement, or the need to help their families cope with climate-related challenges at home.

Learning Environments

High temperatures and poor air quality can make classrooms uncomfortable or even unsafe, affecting students' concentration, performance, and well-being. Overcrowded or makeshift classrooms following a disaster can further compromise the quality of education [34, 45].

Educational Inequity

Children from poorer families or marginalized communities are often hardest hit. They may lack access to remote learning tools when schools close, and their families may prioritize survival over schooling during crises. Girls, in particular, are more likely to drop out of school when families face climate-induced economic hardship [30, 33].

Opportunities for Awareness and Action

On the positive side, education can also be a powerful tool for building resilience. Integrating climate education into school curricula helps young people understand environmental issues and equips them with the knowledge and skills to take action in their communities [29, 32].

Investing in climate-resilient schools — with safe buildings, sustainable energy, and inclusive policies — is essential to ensure that education continues even in the face of environmental disruptions.

Adaptation and Resilience in Daily Life

Despite the challenges that climate change brings, individuals and communities around the world are finding ways to adapt, cope, and even thrive. These adaptations range from small, everyday adjustments to large-scale community initiatives, all aimed at building resilience against the changing environment [31, 32].

Personal Adaptations

Many people are adjusting their habits to better cope with new realities. Some are shifting outdoor activities to cooler times of the day, conserving water more consciously, or investing in home improvements like better insulation, solar panels, or rainwater harvesting systems. Urban residents are increasingly planting rooftop or balcony gardens to grow food locally and improve air quality [31, 33].

Community Initiatives

Communities are coming together to strengthen their collective resilience. Examples include creating green spaces in cities to reduce heat, building flood barriers, organizing neighbourhood emergency preparedness groups, and setting up community water storage systems in drought-prone areas.

In some places, traditional knowledge is being revived to adapt farming, fishing, and housing practices to current conditions [31, 38].

Technology and Innovation

Technology also plays a crucial role in adaptation. Smartphone apps can now warn of extreme weather, monitor air quality, and help farmers decide when to plant and irrigate [53]. Renewable energy solutions such as solar microgrids make communities less dependent on vulnerable central power systems [31, 52].

Psychological and Social Resilience

Resilience is not just physical — it's also mental and social. Supporting one another, fostering a sense of hope, and engaging in meaningful action help people cope with the emotional strain of climate change [11, 12].

These examples show that while climate change presents serious challenges, proactive adaptation and resilience-building can protect lives, livelihoods, and well-being — especially when efforts are inclusive and locally driven [31, 52].

Conclusion

Climate change is not a distant or abstract problem — it is a daily reality that touches every aspect of our lives. From the air we breathe and the food we eat to the homes we live in, the work we do, and the relationships we cherish, its impacts are deeply personal and pervasive. This review has shown how rising temperatures, extreme weather events, and shifting ecosystems disrupt health, food and water security, livelihoods, education, and even our cultural and social identities. Yet, the story of climate change is not only about vulnerability and loss — it is also about resilience, adaptation, and action. Individuals and communities worldwide are finding ways to cope, innovate, and push for meaningful change. Understanding these everyday impacts is essential for inspiring both personal responsibility and collective solutions. Only through awareness, cooperation, and sustained effort can we protect ourselves and future generations from the worst effects of a changing climate.

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