Planetary Health is Public Health

Communicating about environmental changes and their impact on human health

PUBLIC HEALTH COMMUNICATIONS COLLABORATIVE

Contents

What is Planetary Health?

Planetary health recognizes ways human-caused disruption to the environment affects human health and wellbeing. In other words, it explores the link between people and our planet. Similar to how we think about the human body, planetary health views the Earth as a "system of systems" where harm to one component affects the health of the whole. These effects on the environment are multilayered and influenced by human behavior, demographics, and other complex social and governmental systems. As such, planetary health aims to mobilize all sectors of society to safeguard human health on our rapidly changing planet.

Is Planetary Health the Same as Climate Change?

Planetary health encompasses the many ways our environment is changing—including our climate. Extreme weather patterns are one sign of an unhealthy planet, but so are outcomes like increased pollution, damage to water and soil, and the extinction of wildlife. While different people and places will experience different environmental impacts, planetary health considers all changes and impacts to be interconnected.

How is Planetary Health Connected to Public Health?

While human health has improved over the past century, the health of our planet has drastically deteriorated over that same time period. Our growing population and consumption habits have pushed Earth's natural systems to the breaking point. Without careful consideration for ecological determinants of health—life-sustaining resources such as water, air, and food—decades of progress in human health will backslide. Public health and planetary health are deeply connected, because people need a healthy planet to thrive.

Why Do Ecological Determinants of Health Matter?

Similar to disparities in social determinants of health—such as education, housing, and healthcare— marginalized communities experience disparities in ecological determinants of health. Groups that contribute least to environmental harm bear an inequitable burden of negative health impacts. Improving planetary health means working towards a more just and fair society.

Social Determinants of Health are nonmedical factors that influence health outcomes. These are the conditions in which people are born, grow, work, live, and age. Examples include:

- » Housing
- » Education
- » Economic security
- » Healthcare
- » Food access
- » Racial discrimination

Examples:

In 2023, 42.9% of the U.S. population identified as a racial or ethnic minority. Racial discrimination is associated with poor health outcomes such as higher infant mortality rates, higher blood pressure, and access to lower quality healthcare.

In 2021, more than 40 million households in the U.S. spent over 30% of their income on housing. Living in unaffordable housing is associated with an increased risk of diseases like hypertension and heart disease.

Ecological Determinants of Health are the life-sustaining resources—drawn from the planet—that influence health outcomes. These resources can affect our health through direct impacts, like pollution in the air we breathe, or through indirect impacts, like deteriorating food systems. Examples include:

- » Air quality
- » Water
- » Soil
- » Climate

Examples:

Air pollution reduces the global average life expectancy by 2.2 years.

On average, neighborhoods with a majority of people of color have 38% less tree cover than majority-white neighborhoods. Across the country, communities of color are almost 13 degrees hotter than white communities, contributing to increased heat-related illnesses and death.

Social and ecological determinants of health are often compounding. For example, a family may live next to a train line or factory because they are unable to afford housing in another location. As a result, they breathe unclean air and are more likely to develop respiratory conditions.

Environmental Changes and Health Impacts

There are many human-caused environmental changes that affect public health.

Air Pollution

Air pollution can come from natural sources and human activities.

Examples: Changes in climate can worsen air pollution from natural sources, like wildfire smoke. Human activities, like vehicle emissions and power plants, can also emit dangerous pollutants into the air.

Biodiversity Loss

The loss of plants, animals, and other living organisms has a sweeping impact on human health.

Example: Over 50% of modern medicines are derived from natural sources that are at risk of biodiversity loss, including fungi used in antibiotics and plant compounds used in pain medication.
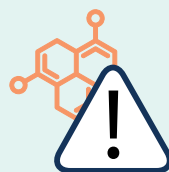
Chemical Pollution

Humans come in contact with synthetic chemicals through the air we breathe, the water we drink, and the food we eat.

Example: More than half of the cosmetics sold in the United States contain toxic chemicals.

Climate Change

Human-driven carbon dioxide, methane, nitrous oxide, and black carbon emissions are primarily responsible for our changing climate.

Example: Globally, nearly twice as many natural disasters occurred between 2000 and 2019 compared to the 20 years prior—including fires, droughts, and floods.

Land Use

Globally, natural land is being converted for agricultural and industrial uses.

Example: Deforestation can increase the risk and spread of infectious diseases, including COVID-19, Ebola, malaria, Lyme, and other zoonotic diseases transmitted from animals to humans.

Nutrient Overloading and Cycling

Imbalanced and excessive use of nutrients is affecting life throughout the air, water, and land.

Example: Synthetic fertilizers can deplete soil nutrients and pollute water systems—causing devastating effects on aquatic life and threatening food systems for humans.
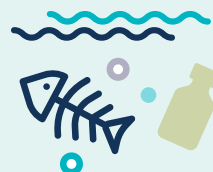
Ocean/Marine Degradation

Ocean temperatures and pollutants in the water are both increasing at a dangerous rate.

Example: Pollutants like microplastics are absorbed by marine life that humans rely on for food. Food security is also threatened by ocean water becoming more acidic.

Resource Scarcity

The limited availability of freshwater, rare earth metals, and quality soil is an enormous challenge in many parts of the world.

Example: At the current consumption rate, two-thirds of the world's population may face water shortages this year.

Factors that Influence Environmental Changes and Health Impacts

Behavioral and societal choices can contribute to environmental changes. These include culture and values; consumption patterns and resource use; population growth and shifts in demographics; and new and increasing use of technologies, such as agriculture and industrialization. Such underlying drivers occur on a large scale and have the power to transform our natural systems.

The health impacts of these environmental changes often depend on individual and systemic characteristics. For example, the way in which toxic exposures harm people may vary based on characteristics such as underlying health factors, ethnicity, gender, and age. Similarly, how people are affected by an extreme weather event will vary based on their economic security and the social system, governance policies, and infrastructure where they live.

Deteriorating planetary health affects everyone, but individual impacts vary greatly based on the circumstances in which people are born, grow, work, live, and age.

Health Impacts

As outlined in many of the examples, environmental changes can lead to an increased number of direct injuries, infectious diseases, noncommunicable diseases, and nutritional diseases.

Environmental degradation also negatively impacts mental health—leading to increased frequency and severity of anxiety, depression, substance abuse, PTSD, and suicide—while simultaneously reducing access to activities that promote well-being, such as spending time in undisrupted nature.
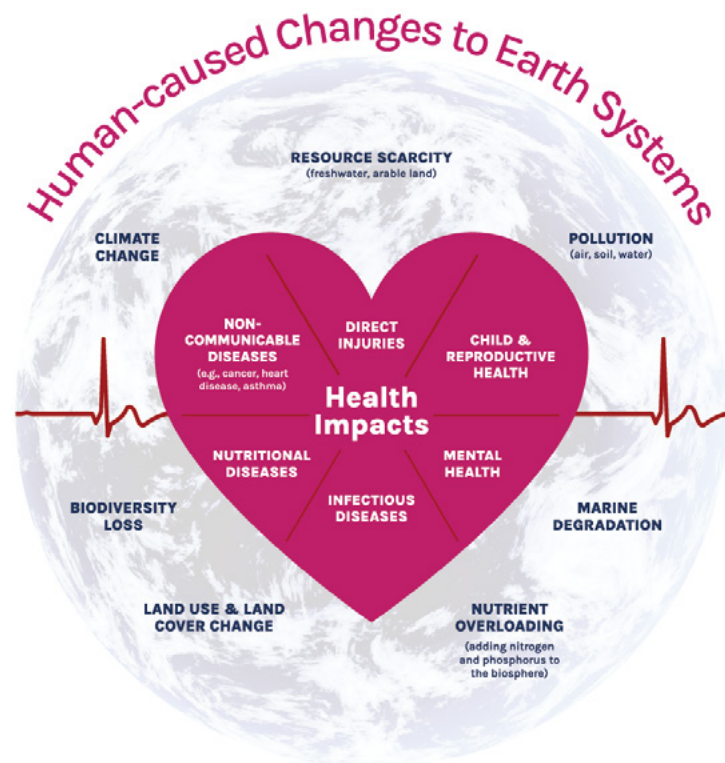
Pregnant people, children, and older adults are among the most vulnerable to negative health impacts. During pregnancy, factors such as extreme heat, air pollution, and water scarcity increase the likelihood of adverse outcomes, including preterm birth, low birth weight, and maternal complications. Children exposed to degraded environments face elevated risks of respiratory illnesses, malnutrition, and developmental delays due to poor air and water quality. Older adults are particularly vulnerable during environmental crises, as extreme weather events and resource shortages often worsen chronic health conditions and limit access to essential healthcare.

Ecological Determinants of Health

Human-caused Changes to Earth Systems

RESOURCE SCARCITY (freshwater, arable land)

CLIMATE CHANGE

POLLUTION (air, soil, water)

NON-COMMUNICABLE DISEASES (e.g., cancer, heart disease, asthma)

DIRECT INJURIES

CHILD & REPRODUCTIVE HEALTH

Health Impacts

NUTRITIONAL DISEASES

MENTAL HEALTH

INFECTIOUS DISEASES

BIODIVERSITY LOSS

MARINE DEGRADATION

LAND USE & LAND COVER CHANGE

NUTRIENT OVERLOADING (adding nitrogen and phosphorus to the biosphere)

Graphic Credit: Planetary Health Alliance

Tips for Public Health Communicators

This section shares common challenges and related tips public health communicators can use to raise awareness about planetary health and its connection to public health.

Challenge: For many people, the concept of planetary health feels abstract.

Approach: There are many types of environmental changes and various health impacts. Consider which changes are most likely to impact your audience and find ways to make your content feel real and relatable. Trusted messengers or local influencers can share first-person experiences and bring credibility to planetary health issues—for example, firefighters discussing the impacts of extreme heat. User-generated content—highlighting stories from your community—can also make planetary health feel less abstract.

Challenge: Improving or understanding planetary health can feel like an overwhelming task.

Approach: While the tone of your content does not need to be overly positive, consider balancing alarming facts and information with actionable steps for change. Emphasize that no one person bears the burden of improving planetary health alone, and that everyday actions can lead to significant impacts.

Challenge: Planetary health jargon can be complex and confusing.

Approach: Use plain language—not medical or scientific terms—to describe environmental changes and health impacts. When possible, swap jargon for descriptive language such as:

- Particulate Matter > Polluted air
- Zoonotic Diseases > Diseases spread through bugs or animals
- Climate-Induced Weather > Hurricanes, floods, or severe storms
- Food Insecurity > Lacking access to nutritious food
- Water Scarcity > Lacking access to clean water
- Arable Land > Healthy soil used to grow food

Challenge: Behavior changes that improve planetary health do not always have an immediate or visible payoff.

Approach: Improving planetary health requires both individual action and collective effort. Create public health initiatives that foster community and emphasize that no one person is alone in this effort: for example, a community clean-up day or neighborhood recycling campaign. Communicate that "small" wins can add up to big change.

Challenge: In some contexts, planetary health can be politically divisive.

Approach: Environmental changes and health impacts affect everyone, regardless of political affiliation. Develop public health communications that focus on the clear link between environmental changes and a person's health. Utilize trusted messengers in the community to help spread information and find ways to connect on shared values. Depending on your audience, consider swapping politically charged language like "climate change" for descriptive language like "protecting nature and wildlife."

Challenge: Misinformation about planetary health—particularly climate change—is rampant.

Approach: Learn how to identify false narratives and respond with clarity, accurate information, and accessible language. Tackling the growing threat of misinformation can build trust in public health and planetary health.

Challenge: The majority of people in the U.S. live in cities and may benefit from increased opportunities to engage with, appreciate, and understand the natural world.

Approach: Bring nature to life through your public health communications. Consider visual storytelling with attention-grabbing nature photos or informational videos about food production. Utilize art and music to evoke emotion and inspire action. These approaches go beyond messaging to help bridge cultural or political divides and connect with a wider audience.

Developing Culturally Driven Public Health Communications

Behavioral and societal choices directly influence planetary health, and public health impacts of environmental changes vary greatly depending on where people are born, their age, occupation, and where they live. Culturally driven public health communications incorporate the diversity of people's cultures, values, and beliefs to improve credibility and resonance. You can improve planetary health and public health by ensuring your target audience feels represented within your communications and can relate to your content.

Key Messages for Responding to Misconceptions

Misconception	Key Message
I don't see environmental changes where I live, so planetary health doesn't matter.	Environmental changes are happening all around us, even if you can't see or predict them. Extreme weather patterns, for example, may seem random, but are part of a larger pattern of environmental changes over the last century.
Public health and planetary health are not connected.	Natural resources, like clean air and water, are essential for a healthy society. On the flip side, unclean air and water make people sick. A healthy public cannot exist without a healthy planet.
Planetary health is another word for climate change, and climate change isn't real.	Planetary health encompasses all environmental change, including climate. Climate change is one sign of an unhealthy planet, but so are outcomes like increased pollution, degradation of water and soil, and loss of wildlife. While different people and places will experience different environmental impacts, planetary health affects everyone.
One person's actions can't improve planetary health.	Improving planetary health requires both individual action and collective effort. Even though improving planetary health may feel overwhelming at times, every community has things they can do and these actions add up. We all have the power to help respond.

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PLANETARY HEALTH ALLIANCE

This resource was developed in June 2025 by the Public Health Communications Collaborative and Planetary Health Alliance.

More Information

» The Promise of Planetary Health (PHA)

» Planetary Health Roadmap and Action Plan (PHAM 2024)

» How Climate Change Affects Your Health (APHA)

» Introduction to Planetary Health (PHA)

» Planetary Health is Public Health (APHA and PHA)