Connecting the Dots: Safety, Health, and Environmental Sustainability

Prepared for

L'ORÉAL

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Introduction

Sustainability is rooted in Environmental, Health, and Safety (EHS) origins, with time broadening the definition to cover a multitude of Environmental, Social, and Governance (ESG) topics. Throughout this evolution, Social topics, such as people and their health, safety, and wellbeing, have been deprioritized, as sustainability is now more commonly associated with Environmental impacts.

As we work to revive the "S" in ESG, our global priorities around ESG – including net zero carbon commitments, social justice, and the future of work – are priority focus areas for L'Oréal that are redefining the role of EHS and opening opportunities to highlight EHS contributions. These connections are becoming clearer and more critical to address holistically in today's world.

Increasingly, our EHS professionals are providing more value through business alignment with ESG efforts. L'Oréal was proud to host the first world summit on "Putting People Back into Sustainability" (April 2019) in collaboration with the Center for Safety & Health Sustainability. Additionally, we welcome a new decision by the ILO to make health and safety a basic fundamental right along with freedom of association, collective bargaining, elimination of forced labor, abolition of child labor, and elimination of discrimination.

To help visualize this shift, we have created the following model that emphasizes the interconnectivity and aims to show concrete links between people and their health, safety, and wellbeing with ESG issues, using the lens of climate change. We hope this model will help those working within health and safety and ESG to start to definitively "connect the dots" (as my good friend Kathy Seabrook always says!).

We understand that people contribute to the problem but that we are also connected to the solution. It's together that we will protect the planet and, at the same time, improve our health, safety, and wellbeing whilst creating sustainable businesses #bethehummingbird.

Malcolm Staves FIChemE
Global Vice President Health & Safety
Mob. +33 635 26 30 29

L'ORÉAL
1, Avenue Eugene Schueller
93601 Aulnay Sous Bois, France
www.loreal.com

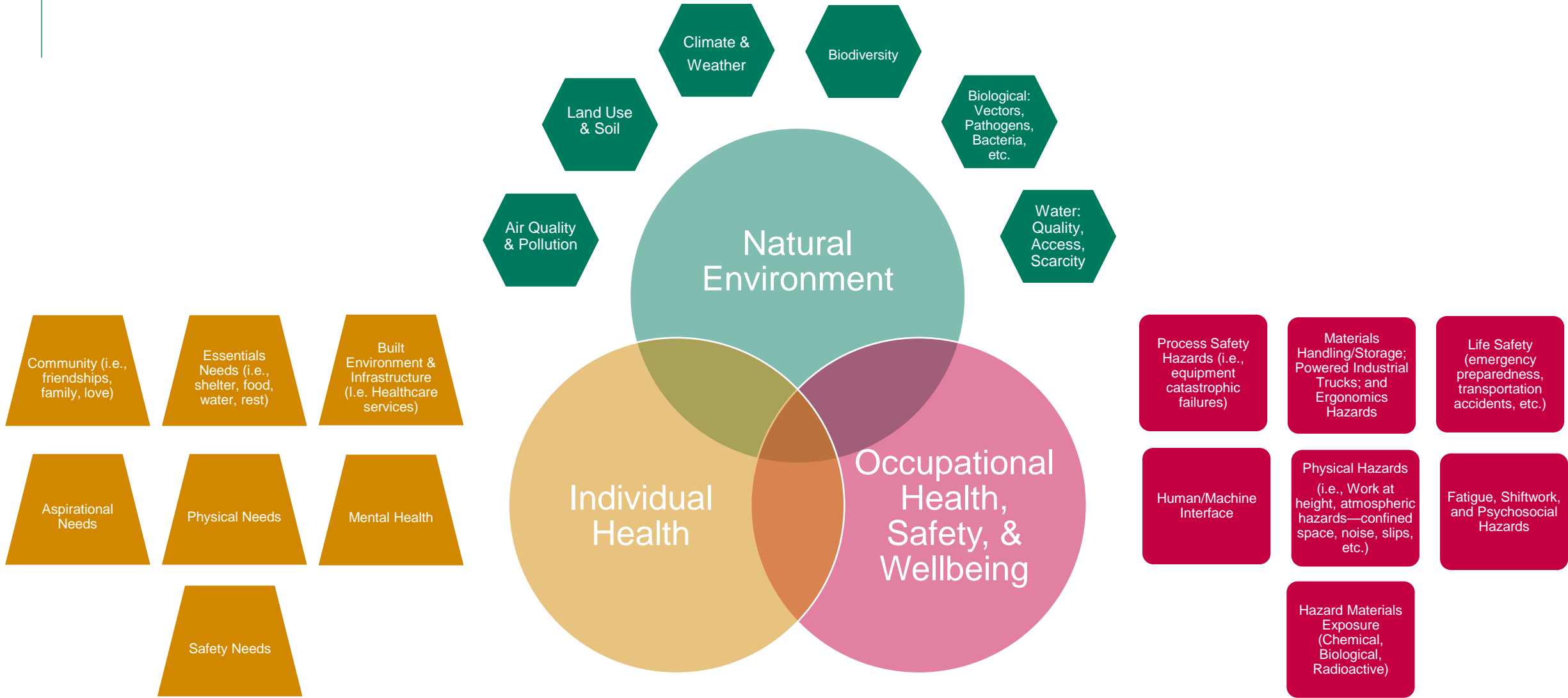SAFE@WORK
SAFE@HOME
spread the culture

Background

In daily life, we interact with multiple facets of health which have the potential to influence our mental and physical wellbeing, our environments, and our natural surroundings. These facets range from a number of psychosocial, physical, biological, socioeconomic, and environmental factors, among others, to culminate into a depiction of our "holistic health" and shape our qualities of life. Our moods, demeanors, physical capabilities, interactions with others, and emotions are all impacted by the layers of health. Health is delicate, yet resilient, as it ebbs and flows in tandem with its surroundings and consistently adjusts to stressors of our world.

For these reasons, our health demands as much attention as a social ("S") topic as environmental ("E") ones. In the ESG space "E" stressors are often emphasized with the most urgency for action due to the more obvious impacts, predictable risks, and measureable outcomes. Additionally, the "E" category has a powerful track record with an abundance of research and history to reference. The "S" and "G" topics of ESG are not as commonly monitored, and, thus, are not as commonly prioritized. Human health falls into the domain of human capital as a "S" topic and is often overshadowed by current "E" concerns in the world of sustainability.

As we move into an era projecting climate action failure, natural resource crises, extreme weather, and biodiversity loss*, our health stands at risk amongst these natural "E" concerns and displays prime opportunity to address health, safety, and environmental concerns simultaneously. The purpose of this work is to highlight the interdependencies that span both the ESG and human capital domains to showcase the interconnections between all realms of ESG and their impacts on our health.

*World Economic Forum's The Global Risks Report, 2022 denotes these as major environmental risks over the next 10 years.

Contents of Health

Climate & Weather

Biodiversity

Land Use & Soil

Biological: Vectors, Pathogens, Bacteria, etc.

Air Quality & Pollution

Water: Quality, Access, Scarcity

Natural Environment

Community (i.e., friendships, family, love)

Essentials Needs (i.e., shelter, food, water, rest)

Built Environment & Infrastructure (I.e. Healthcare services)

Aspirational Needs

Physical Needs

Mental Health

Safety Needs

Individual Health

Occupational Health, Safety, & Wellbeing

Process Safety Hazards (i.e., equipment catastrophic failures)

Materials Handling/Storage; Powered Industrial Trucks; and Ergonomics Hazards

Life Safety (emergency preparedness, transportation accidents, etc.)

Human/Machine Interface

Physical Hazards (i.e., Work at height, atmospheric hazards—confined space, noise, slips, etc.)

Fatigue, Shiftwork, and Psychosocial Hazards

Hazard Materials Exposure (Chemical, Biological, Radioactive)

L'Oreal | ESG & OSH Connections

C1 - Internal use

Contexts of Health

In discussing "health", we frame the word under three intersecting categories:

1. **Natural Environment,** which is representative of an individual's natural, physical surroundings—water, air, and land—at the community level and how these surroundings affect health and well-being where one lives and works.
2. **Occupational Health, Safety, and Well-being** to frame your health and wellbeing as it relates to the workplace.
3. **Individual Health**. These are items fulfill essential needs to survive, aspirational needs to thrive, and support an individual's development overall (such as how you show up in the workplace and as a member of the public health community).

This list is not extensive, but it creates a foundation to see health from interdependent perspectives from key aspects of one's life: an individual level, the work environment level, and the community level. The Venn Diagram illustrates how these three themes overlap in real world application.

By understanding the variations of health, one can amplify and prepare for these facets, resulting in greater attenuation and change management, as impacts occur.

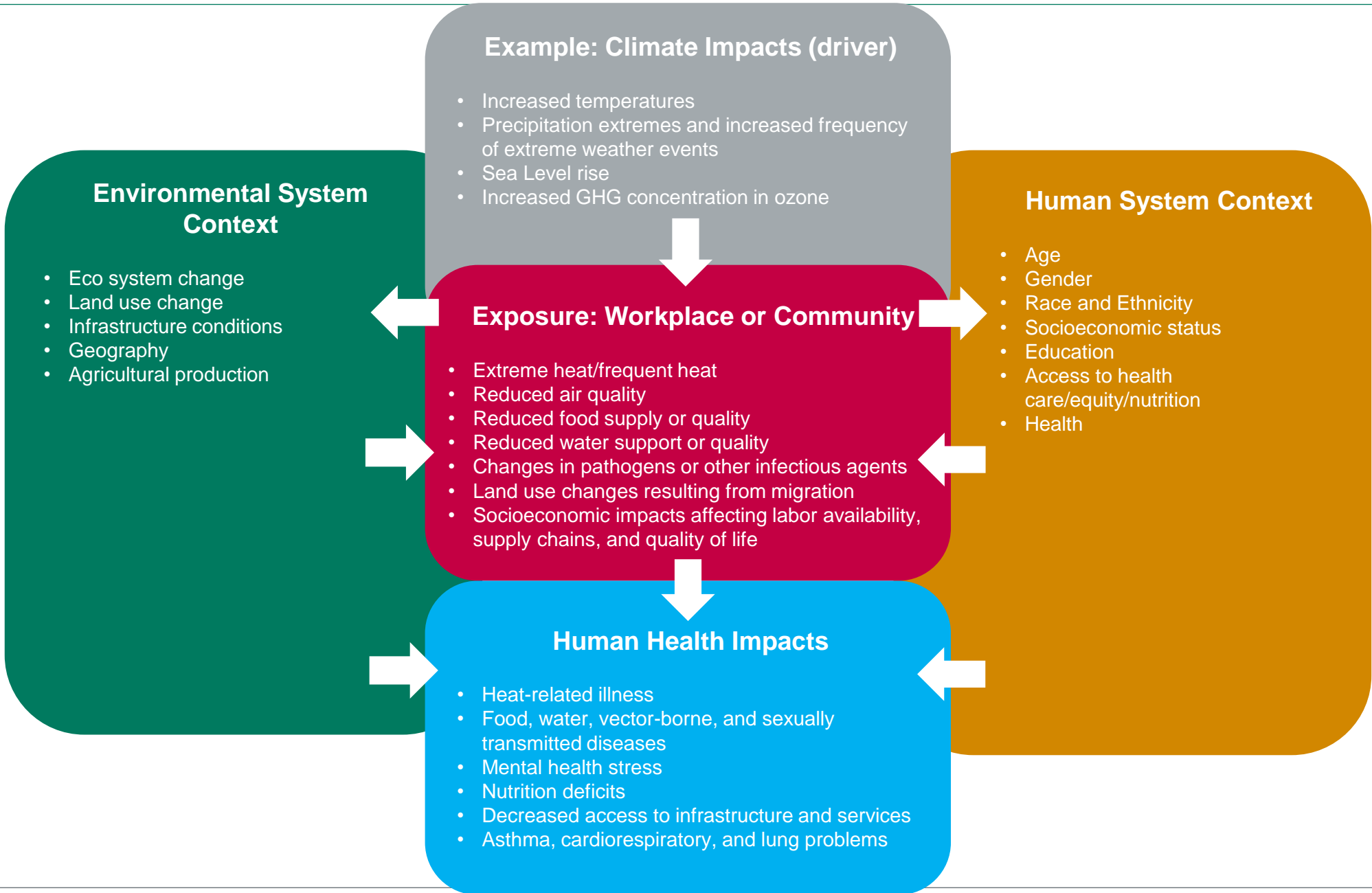# Connection Approach
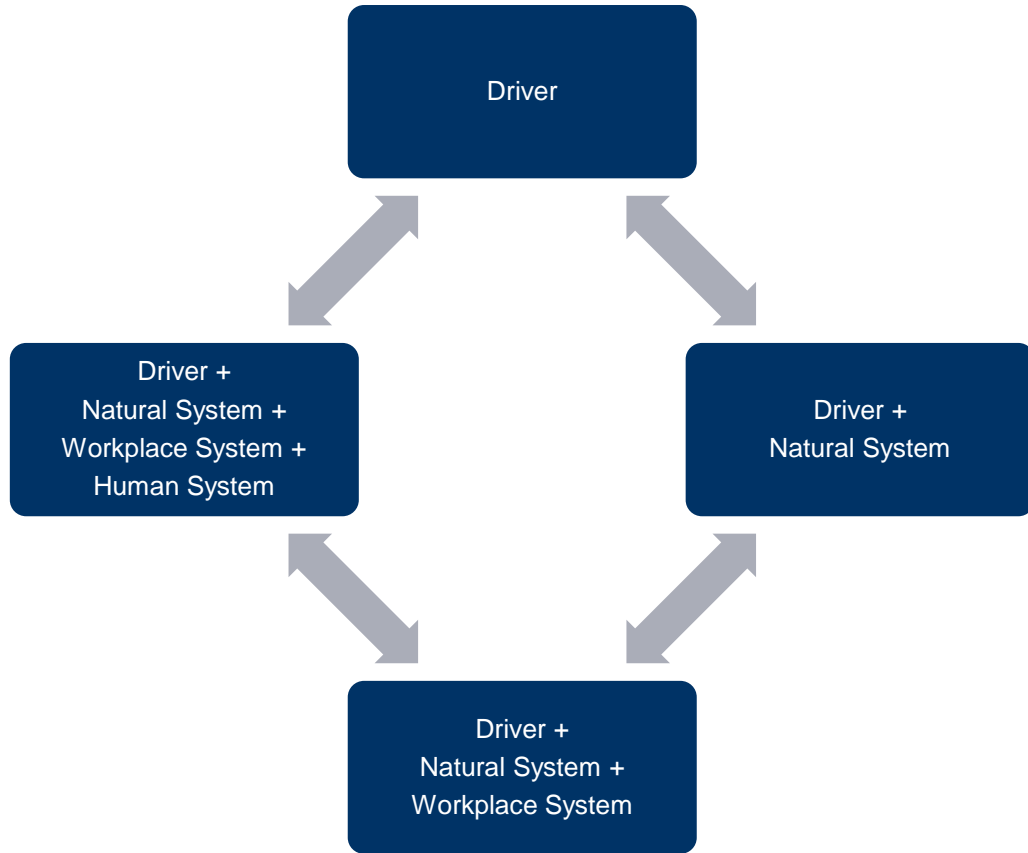
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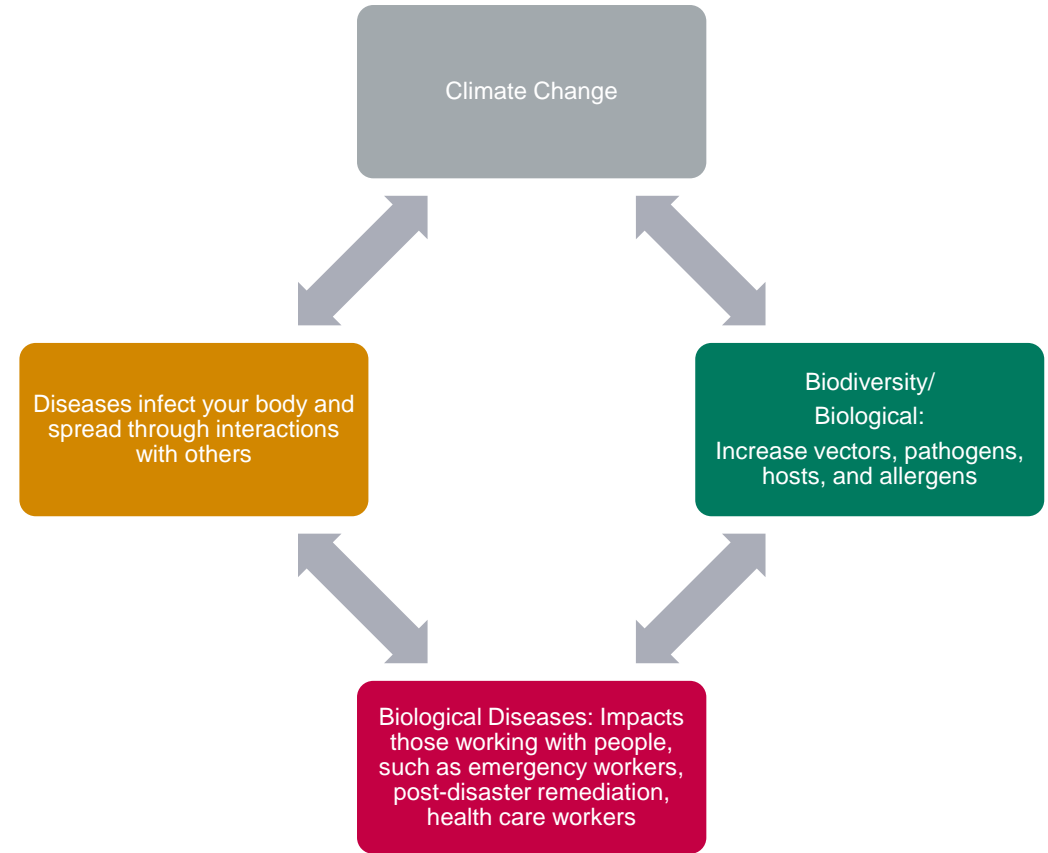
Example

Connection Approach

When thinking about the connection between the different contexts of health, we think about it in four systematic layers—the driver, the natural system, the workplace system, and the human system. The images denote the general approach on the left with an example of the approach in action on the right.

- **The Driver is a risk point that results in impact on a system.** The driver sparks change in one or multiple systems. For example, climate change derives risks such as increased temperatures or increased GHG concentrations in the ozone.
- **From there, layer on or factor in a system**. Our example starts with the natural system, or your environmental surroundings, as it is the most "macro" level of environment. This system includes items such as air pollution and quality; water access and quality; biodiversity; biological pathogens, vectors, and diseases; land use; and climate and weather. Within this system, the driver is altering the ambient environment. Continuing the climate change example, increased temperatures result in an increase in vectors, pathogens, as they thrive in warmer temperatures.
- **Next, add in the workplace layer.** This system comprises workplace health and safety hazards and contributes to exposure and interaction with hazards. These include topics such as worker safety; materials handling and storage; and fatigue from shift work. Per the example, your workplace could be an ambulance, working emergency responses. One's exposure to vectors, pathogens, and diseases increases as one interacts with those who are sick.
- **Lastly, add in the human system**, which is one's individual-level health or the yellow items. These include aspects such as fitness; nutrition; and sleep hygiene, and these consider health impacts on an individual basis, such as responses or adverse outcomes from exposure.

One can start from any point in the approach and work forwards or backwards in connecting the pieces. The takeaway is that this is not a linear connection; the systems are interwoven and are influenced by multiple factors.

Example: Climate Impacts (driver)

- Increased temperatures
- Precipitation extremes and increased frequency of extreme weather events
- Sea Level rise
- Increased GHG concentration in ozone

Environmental System Context

- Eco system change
- Land use change
- Infrastructure conditions
- Geography
- Agricultural production

Exposure: Workplace or Community

- Extreme heat/frequent heat
- Reduced air quality
- Reduced food supply or quality
- Reduced water support or quality
- Changes in pathogens or other infectious agents
- Land use changes resulting from migration
- Socioeconomic impacts affecting labor availability, supply chains, and quality of life

Human System Context

- Age
- Gender
- Race and Ethnicity
- Socioeconomic status
- Education
- Access to health care/equity/nutrition
- Health

Human Health Impacts

- Heat-related illness
- Food, water, vector-borne, and sexually transmitted diseases
- Mental health stress
- Nutrition deficits
- Decreased access to infrastructure and services
- Asthma, cardiorespiratory, and lung problems

These layers coincide into a peak question: How do these systems interact and impact each other using the four basic components? This slide expands the climate change example from the previous slide to show all of the systems working simultaneously.

A **driver, Climate change** in our example, disrupts your workplace, human health, and natural systems, and in turn, these systems, contribute to amplifying the impacts.
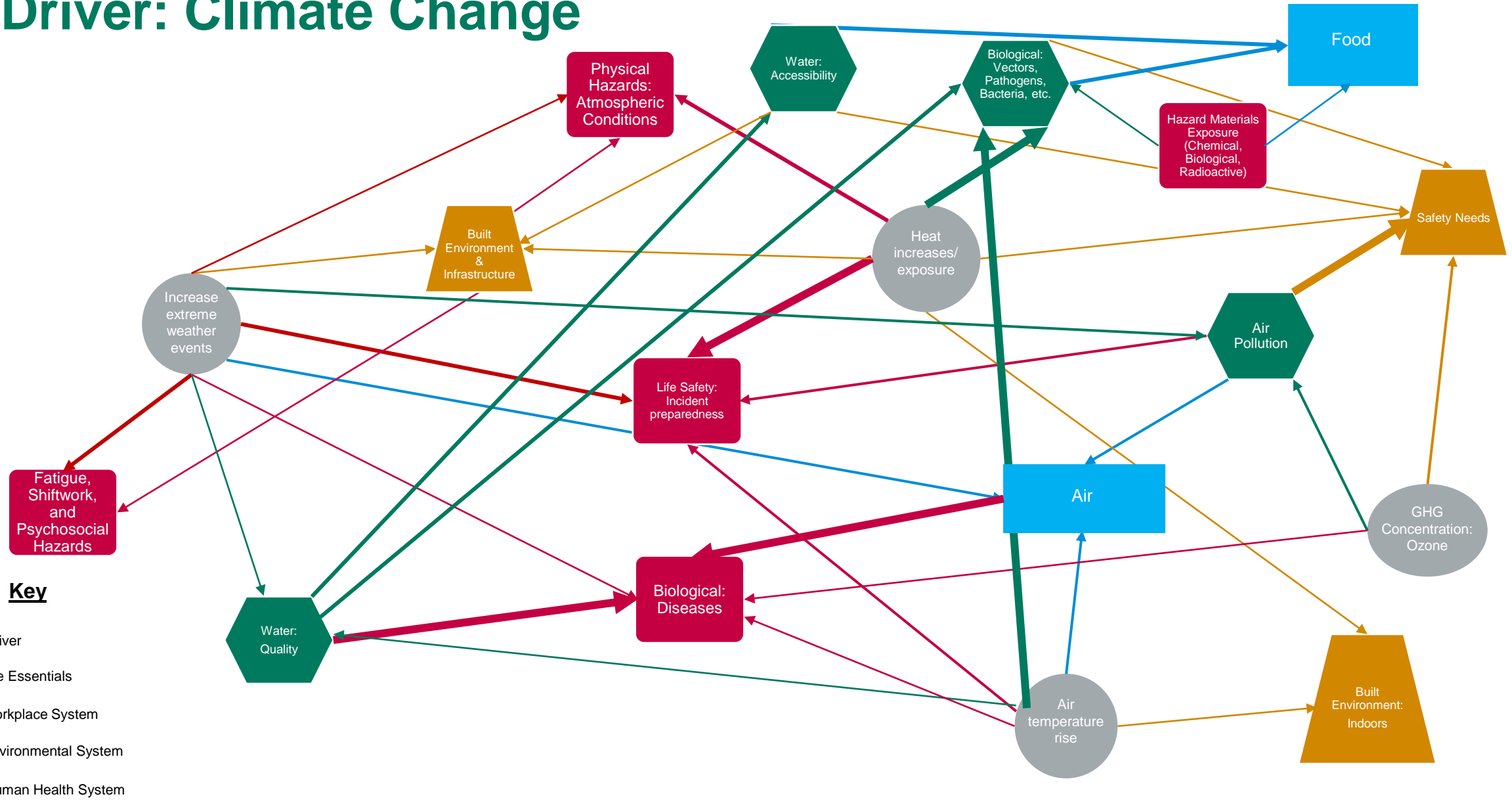
The **systems can impact outcomes for worse or better** – it's not guaranteed if the impacts will be positive or negative, as they all respond differently; They are simply multifaceted by nature.

As shown in this graphic, changes in climate system can cause human health impacts. Climate change drivers, such as air temperature rise; an increase in extreme heat; and sea level rise increase exposure to extreme heat, reduced air quality, changes in biological pathogens, and contribute to heat-related illnesses, vector-borne diseases, stress, and respiratory health concerns.

Alongside this are your environmental factors, shown in green, and your demographics, shown in yellow, amplifying the impacts based on natural and human systems.
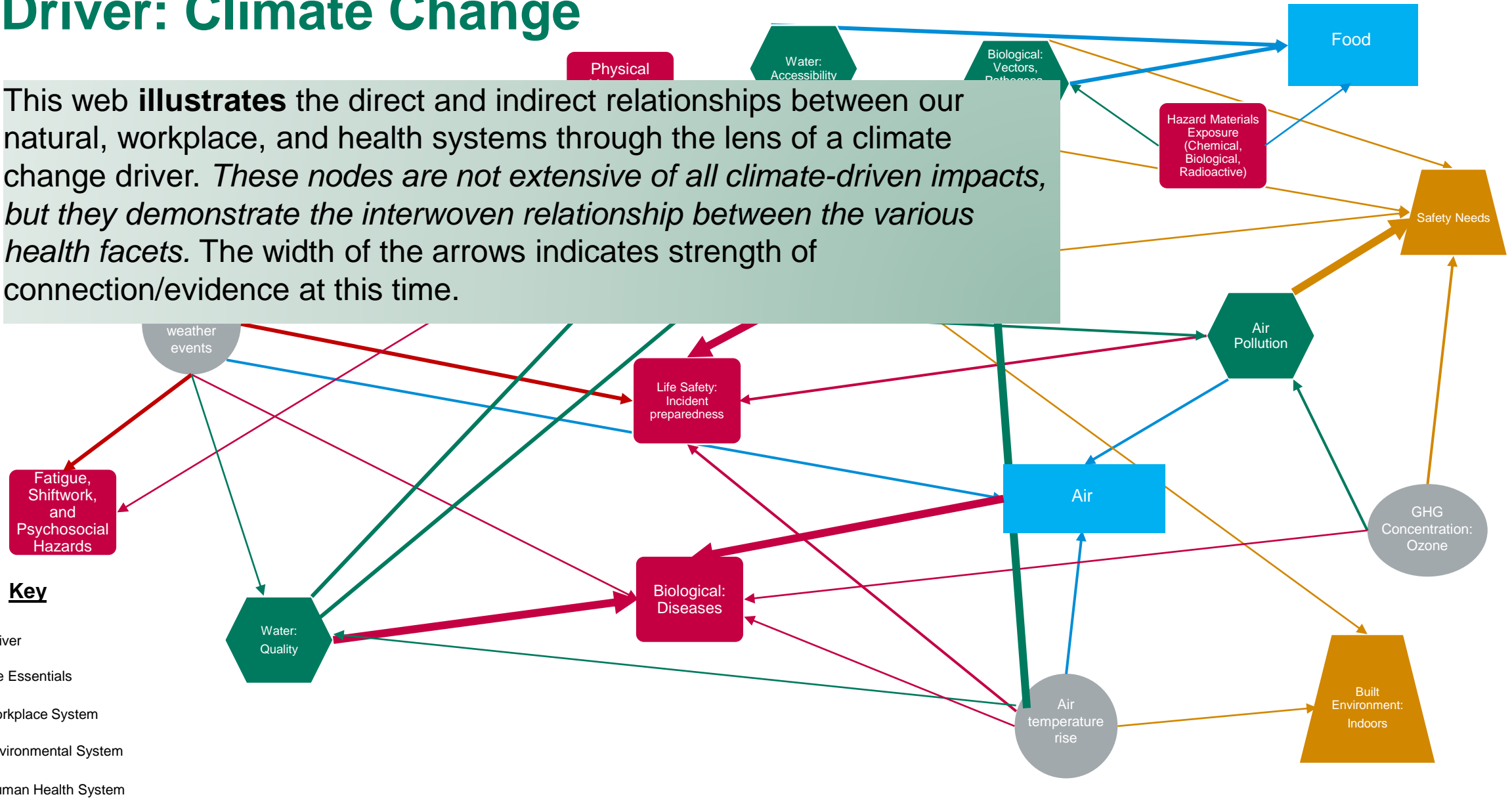
The main takeaway is that this connectivity is complex with many potential interdependencies.

C1 - Internal use

Driver: Climate Change

Key

- Driver (grey ellipse)
- Life Essentials (blue rectangle)
- Workplace System (red rounded rectangle)
- Environmental System (green hexagon)
- Human Health System (orange trapezoid)

Nodes shown:
- Physical Hazards: Atmospheric Conditions
- Water: Accessibility
- Biological: Vectors, Pathogens, Bacteria, etc.
- Food
- Hazard Materials Exposure (Chemical, Biological, Radioactive)
- Built Environment & Infrastructure
- Heat increases/exposure
- Safety Needs
- Increase extreme weather events
- Life Safety: Incident preparedness
- Air Pollution
- Fatigue, Shiftwork, and Psychosocial Hazards
- Air
- GHG Concentration: Ozone
- Water: Quality
- Biological: Diseases
- Air temperature rise
- Built Environment: Indoors

Driver: Climate Change

This web **illustrates** the direct and indirect relationships between our natural, workplace, and health systems through the lens of a climate change driver. *These nodes are not extensive of all climate-driven impacts, but they demonstrate the interwoven relationship between the various health facets.* The width of the arrows indicates strength of connection/evidence at this time.

Food

Water: Accessibility

Biological: Vectors, Pathogens

Physical Hazards

Hazard Materials Exposure (Chemical, Biological, Radioactive)

Safety Needs

Air Pollution

weather events

Life Safety: Incident preparedness

Air

GHG Concentration: Ozone

Fatigue, Shiftwork, and Psychosocial Hazards

Biological: Diseases

Water: Quality

Air temperature rise

Built Environment: Indoors

Key

Driver

Life Essentials

Workplace System

Environmental System

Human Health System

Sources

Resources

- [The Business Case for Safety and Health](#) (CDC)

- [Connecting the Dots: Occupational Safety and Health and Business Performance (ILO/Global Solutions, Inc,)](#)

- [8 Environmental Factors that Affect Health](#) (Regis College)

- [Environmental Health Healthy People 2030](#) (health.gov)

- [Making the Business Case for Total Worker Health](#) (NIOSH, CDC)

- [Climate and Health Reports](#) (BSR)

- [Dimensions of Wellness: Change your habits, change your life](#) (U.S. National Library of Medicine)

- [OHSA Health & Safety Topics Index](#) (OHSA)

- [What environmental factors affect health?](#) (US Davis)

- [Human Health and Exposure](#) (EPA)

- [The Global Risks Report 2022](#) (World Economic Forum)

- [The Built Environment and Its Relationship to the Public's Health: The Legal Framework](#) (nih.gov)

- [Intersections of Health and the Built Environment](#) (Urban Land Institute)

- [Climate Impacts on Human Health](#) (EPA)

- [Impact of Climate on Workers](#) (NIOSH, CDC)

- [Climate Effects on Health](#) (CDC)

- [Understanding the Connections Between Climate Change and Human Health](#) (EPA)

- [Addressing Climate Change and Its Effects on Human Health](#) (Academic Medicine Journal)

- [Climate Change and Human Health](#) (NIH.gov)

- [Visualizing the Interconnections Among Climate Risks](#) (researchgate.net)

Resources

- The Impact of Food Insecurity on Health and Well-Being: A Conversation with Heather Hartline-Grafton, Dr.PH., R.D. - Food Research & Action Center (frac.org)
- Food Insecurity | Healthy People 2020
- Effects of Hunger | Feeding America
- Nutrition Overview (worldbank.org)
- The Risks Of Poor Nutrition | SA Health
- Employee Nutrition - The Biting Impact on Your Bottom Line (corporatewellnessmagazine.com)
- Poor workplace nutrition hits workers' health and productivity, says new ILO report
- Climate Impacts on Transportation | Climate Change Impacts | US EPA
- Floods, Companies and Supply Chain Risk (columbia.edu)
- How Climate Change Is Disrupting the Global Supply Chain - Yale E360
- Experts fear Germany's deadly floods are glimpse into climate future (nationalgeographic.com)
- How countries can better cope with flood risk (unep.org)
- Rising Sea Levels Threaten Global Economy (bloomberg.com)
- Floods in 2022 to cost US businesses a collective 3.1 million days in operation, report shows – CNN
- 'It's happening now': how rising sea levels are causing a US migration crisis | Environment | The Guardian
- How many people will rising sea levels displace? | World Economic Forum (weforum.org)
- 2022 Sea Level Rise Technical Report (noaa.gov)
- Coastal Flooding, Climate Change, and Your Health: What You Can Do to Prepare (cdc.gov)
- Climate change could trigger migration of 216 million people, World Bank warns (nbcnews.com)

Additional Resources-Global Context

- [Water | Regional Office for Africa](#) (WHO)

- [Health Implications of Drought](#) (CDC)

- [Water Stress: A Global Problem That's Getting Worse](#) (Council on Foreign Relations)

- [Biodiversity and Health](#) (WHO-International)

- [Nature, biodiversity and health: an overview of interconnections](#) (WHO-Europe)

- [Poor mental health, an obstacle to development in Latin America](#) (World Bank)

- [Environmental Issues in the Latin American Region](#) (United Nations)

- [Health Impacts of Deforestation-Related Fires in the Brazilian Amazon](#) (Human Rights Watch)

- [A Chinese professor explains what air pollution does to your health](#) (World Economic Forum)

- [Mental health in the workplace](#) (WHO-International)

- [Climate Change and Malaria - A Complex Relationship](#) (United Nations)

- [IPCC 2022 Report](#) (United Nations)

- [How Can Climate Change Impact the Workplace and Worker Health](#) (Journal of Occupational Health and Environmental Medicine)

- [Urban green spaces and health - a review of evidence](#) (WHO-Europe)

- [Global Climate Change Impact on Crops Expected Within 10 Years](#) (NASA)

- [Climate-Smart Agriculture](#) (World Bank)

- [Scientists project increased risk to water supplies in South Africa this century](#) (Massachusetts Institute of Technology)

- [Environment and Health](#) (Human Rights Watch, multiple resources)

Thank you