Health Effects of Climate Change

HealthPartners Perspective

February 13, 2020

HealthPartners

MINNESOTA

WISCONSIN

ST. CLOUD

AMERY

HUTCHINSON

MINNEAPOLIS

HUDSON

ST. PAUL

- HealthPartners Clinics
- Park Nicollet Clincs
- Hospitals
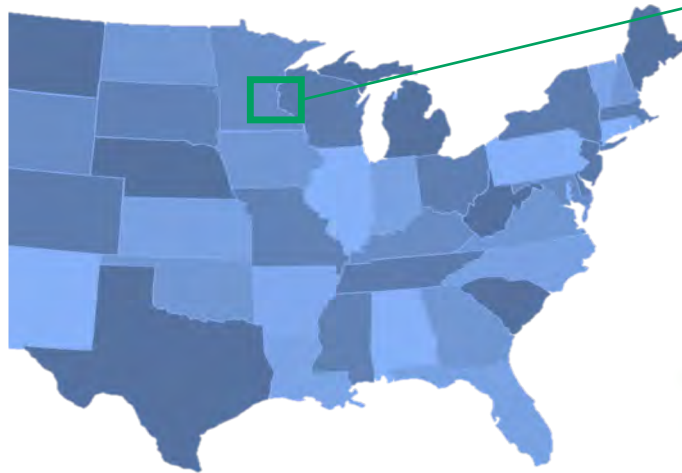
90+ clinics and hospitals

6 states where we offer health insurance

26,000 dedicated employees

1.2 million patients

1.8 million insured members

400+ research studies each year

HealthPartners®

Who we are: Head + Heart, Together

Mission
To improve health and well-being in partnership with our members, patients and community.

Vision
Health as it could be, affordability as it must be, through relationships built on trust.

Values

EXCELLENCE
We strive for the best results and always look for ways to improve.

COMPASSION
We care and show empathy and respect for each person.

PARTNERSHIP
We are strongest when we work together and with those we serve.

INTEGRITY
We are open and honest and we keep our commitments

3

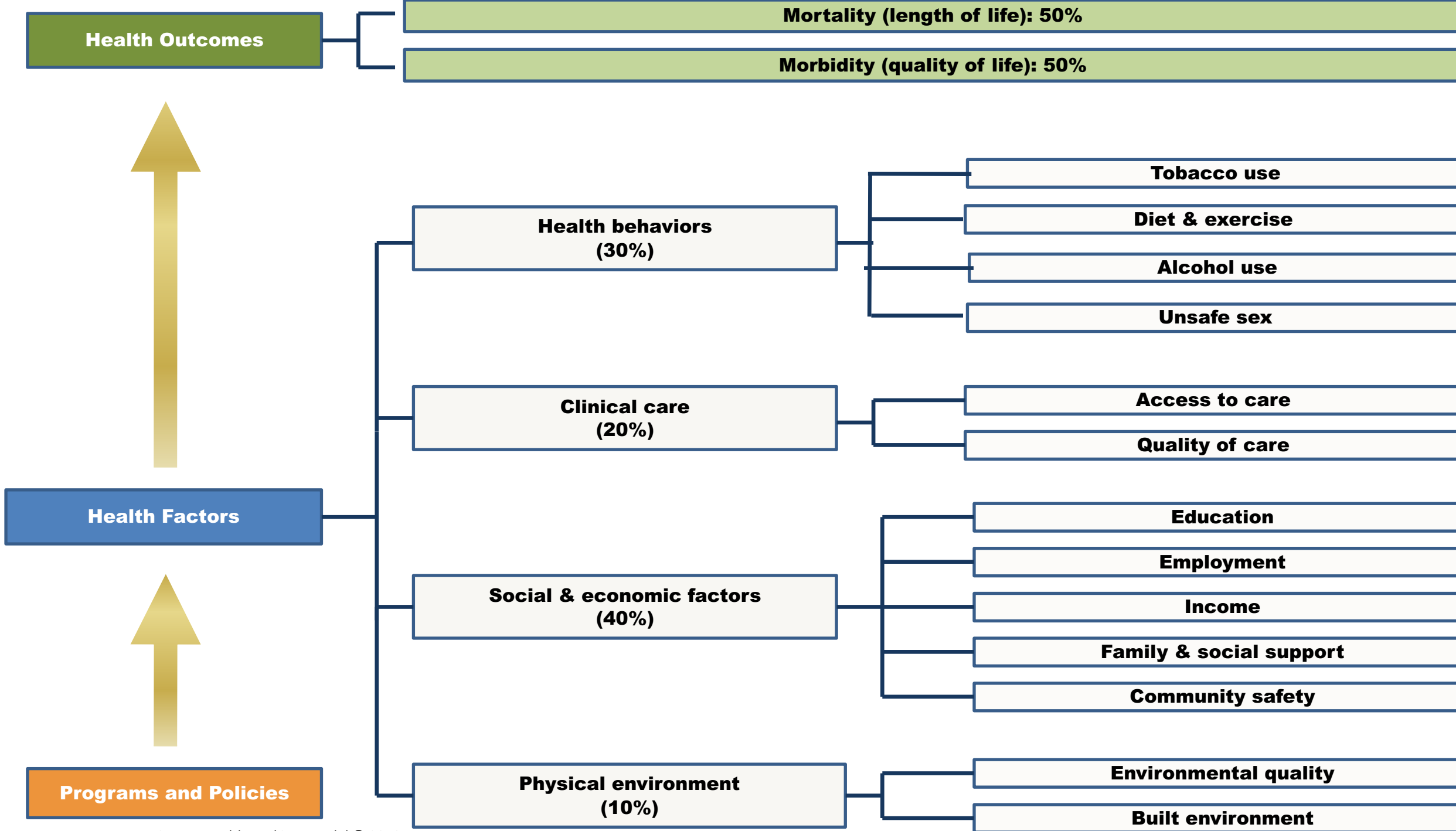# Our Sustainability Commitment

HealthPartners is committed to caring for the places where we live and work.

We want to provide a healthier, cleaner and more livable environment for our members, patients, colleagues and future generations.

We will:

1 Expand the use of **sustainable and earth-friendly practices** that help us work smarter, be healthier and save money

2 Encourage employees to **participate in, champion or support** sustainability practices, both at work and at home

3 Measure and monitor our progress toward our **sustainability goals**

4 Lead, advocate or implement initiatives that **improve the health and well-being** of the communities we serve

HealthPartners®

Approved by HealthPartners Board of Directors 9/20/2017

Health Outcomes

- Mortality (length of life): 50%
- Morbidity (quality of life): 50%

Health Factors

Health behaviors (30%)
- Tobacco use
- Diet & exercise
- Alcohol use
- Unsafe sex

Clinical care (20%)
- Access to care
- Quality of care

Social & economic factors (40%)
- Education
- Employment
- Income
- Family & social support
- Community safety

Physical environment (10%)
- Environmental quality
- Built environment

Programs and Policies

County Health Rankings model © 2010 UWPHI

We are now spewing 110 million tons of manmade global warming pollution into the thin shell of our atmosphere every 24 hours, as if it were an open sewer.
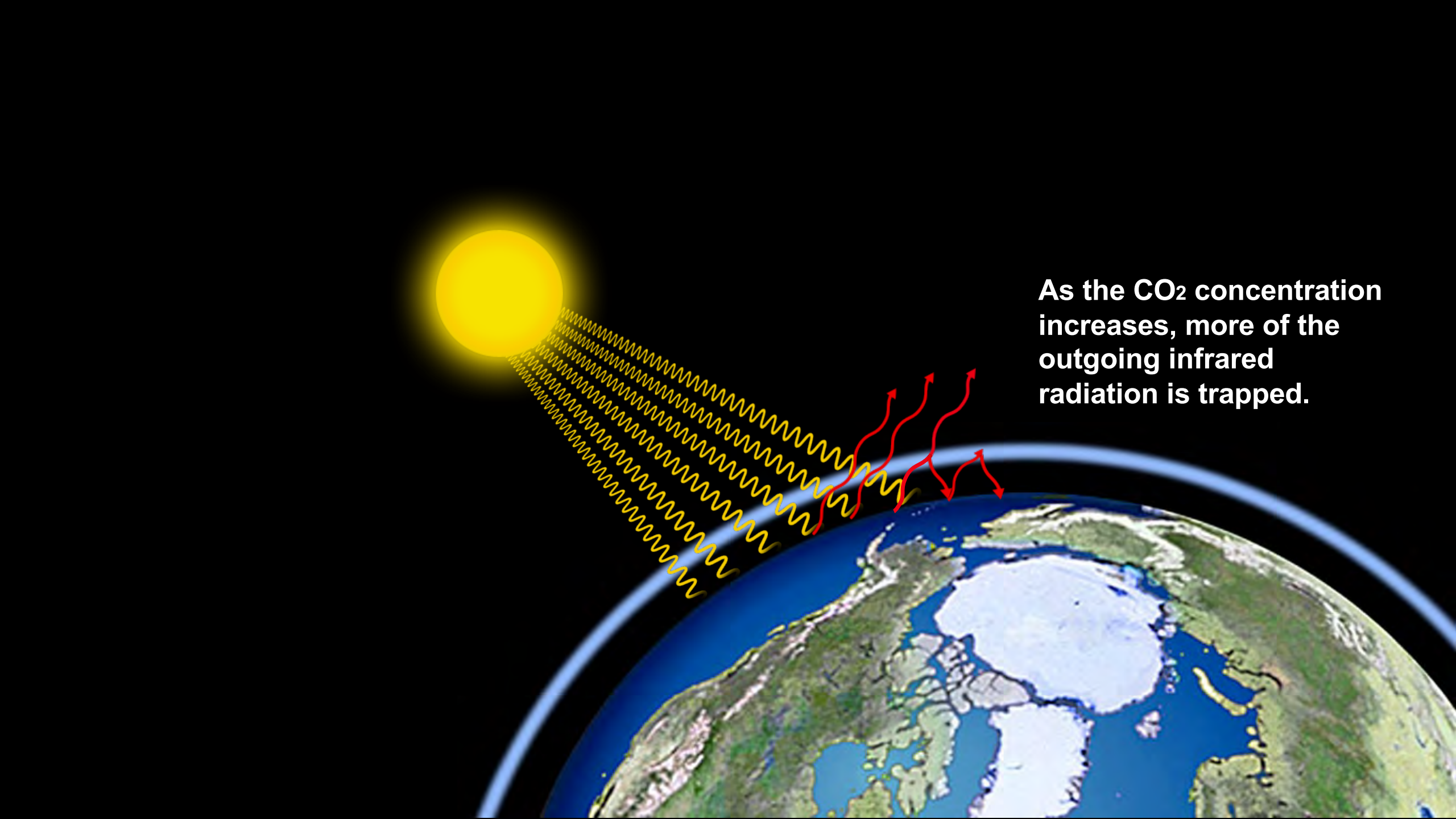
As the CO₂ concentration increases, more of the outgoing infrared radiation is trapped.

AIR TRANSPORT

THAWING PERMAFROST

COAL MINING

OIL PRODUCTION

COAL PLANTS

FERTILIZATION

INDUSTRIAL PROCESSES

LAND TRANSPORT

LANDFILLS

© 2017 Don Foley

People relate to climate change in three ways:

- Through the weather they experience
- Its' economic impact
- Their personal health impacts

Rhiana Gunn-Wright
Fresh Energy Benefit Breakfast, October 2, 2019

The average annual temperature in the Twin Cities warmed 3.2° F (1.8° C) between 1951 and 2012.

Average winter temperatures warmed 4.5° F (2.5° C) in the same period.

In the next 50 years, Minnesota is projected to experience 30 more days with temperatures above 90° F, and 30 fewer days with temperatures below freezing, on average.

The heat index at the Minneapolis-St. Paul International Airport reached 115° on July 19, 2019.

Karachi, Pakistan

June 23, 2015

Over 1,200 people died in the Pakistan heat wave.

© 2015 AP Photo/Shakil Adil

Karachi, Pakistan

May 20, 2016

© 2016 Screenocean/Reuters

Minneapolis, Minnesota
January 29, 2019

Temperatures in Minneapolis reached -28° F, with a wind chill of -53°.

© 2019 Brian Peterson/Star Tribune via AP

Tucson, Arizona
August 8, 2015

© 2015 Bryan Snider / Live Storms Media

Three locations in Minnesota set new statewide annual precipitation records in 2018. Harmony holds the new record at 60.21 inches.

St. Paul, Minnesota
March 27, 2019

Minneapolis, Minnesota

April 10, 2019

A "bomb cyclone" closed schools, roads, and caused at least 500 vehicle crashes across Minnesota.

Wrenshall, Minnesota

June 17, 2018

Flash flooding washed out roads and highways in northeastern Minnesota.

Photo © 2018 Chris Cheney/Minnesota Department of Transportation via AP

Minneapolis, Minnesota

July 6, 2015

Smoke from wildfires in Canada prompted a public health warning in the Twin Cities.

Photo © 2015 Jeff Wheeler/Star Tribune via AP

Average Winter Minimum Temperatures
Nine Year Moving Average – Minnesota
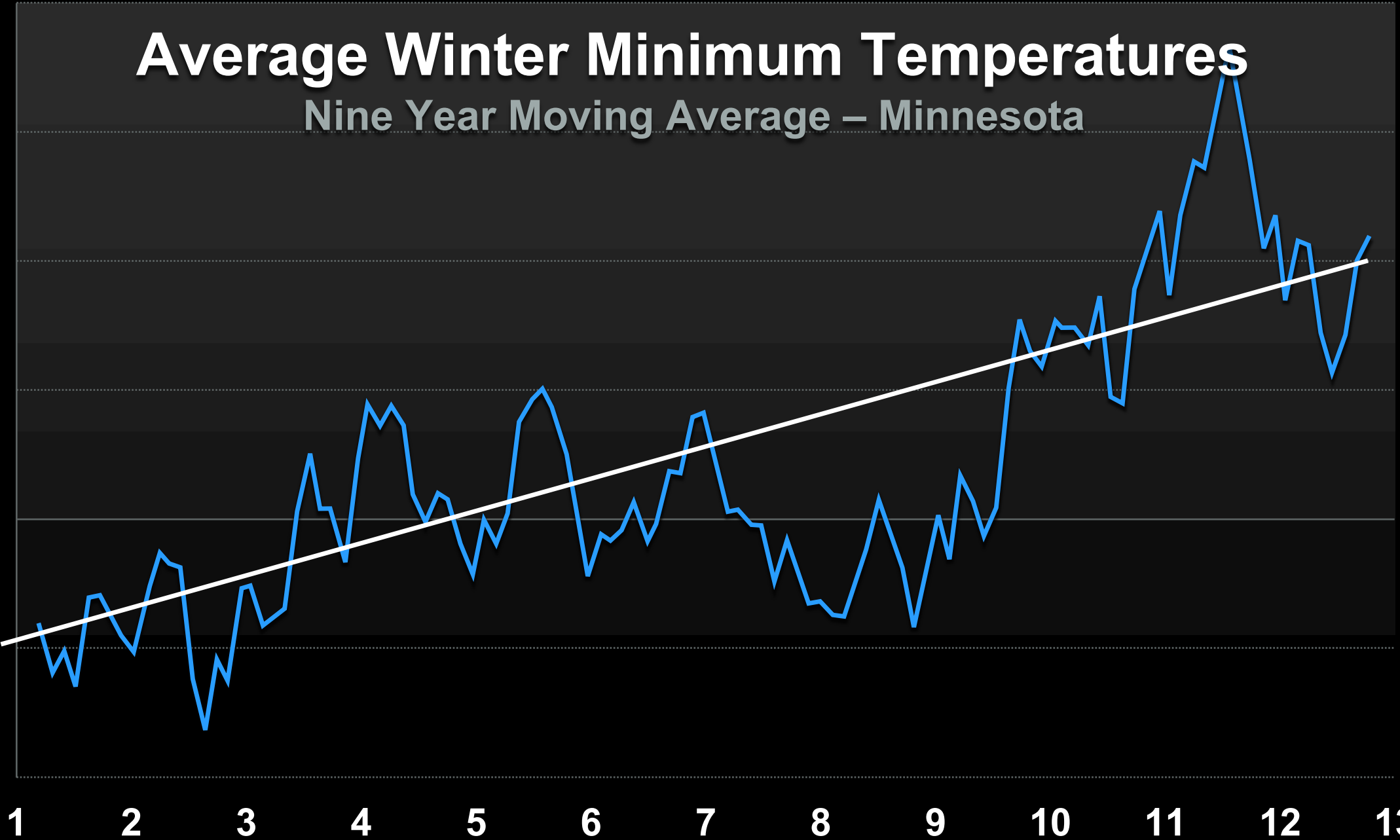
Data: Minnesota Department of Natural Resources

"The health, safety and well-being of millions of people in the U.S. have already been harmed by human-caused climate change, and health risks in the future are dire without urgent action."
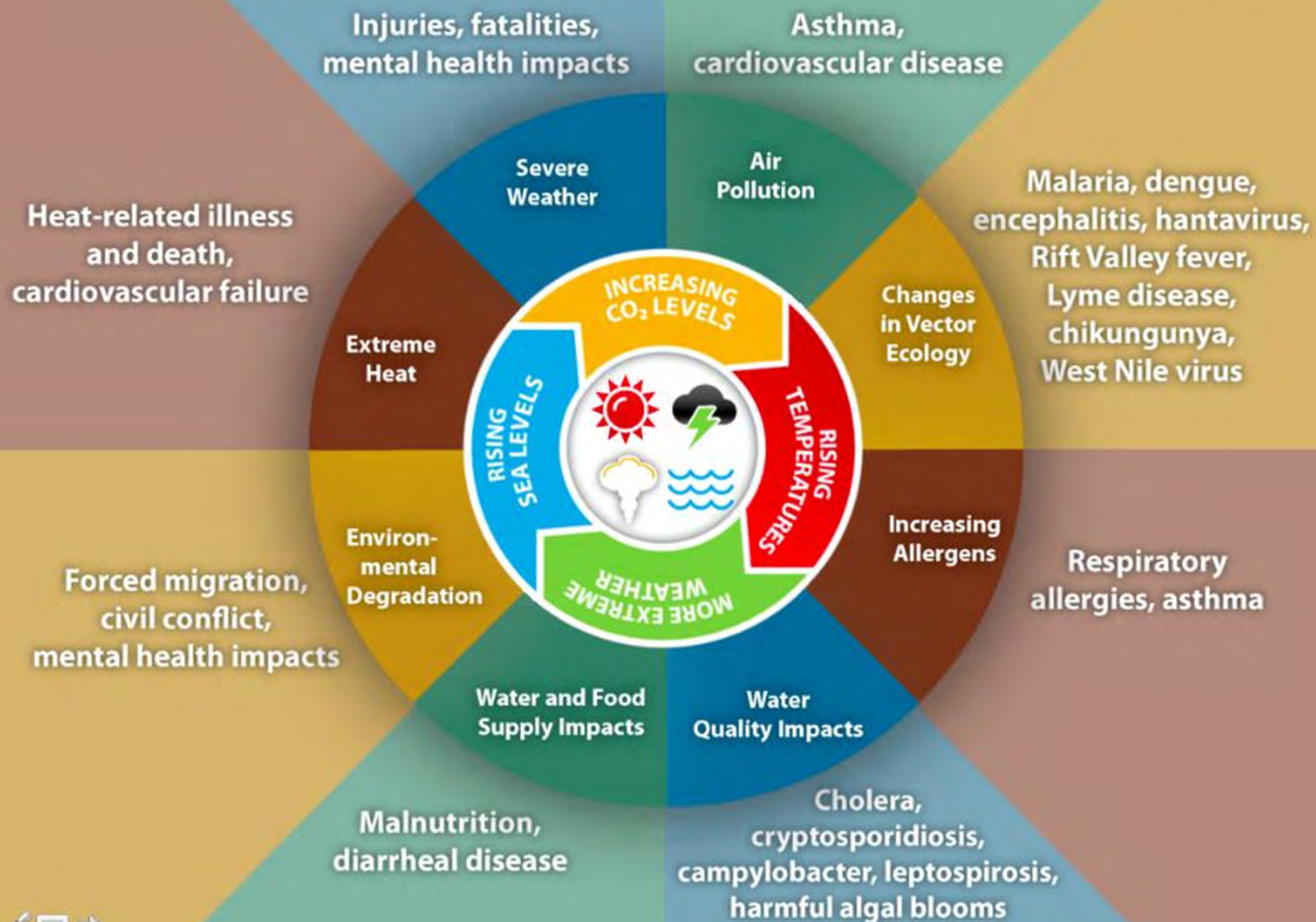
U.S. Call to Action on Climate, Health, and Equity
(A Coalition of 74 U.S. Medical Organizations)
June 2019

How Does Climate Change Affect Health?

Extreme Weather Events

Infectious Disease

Food

Water

Health

Air Pollution

Mental Health

Heat Stress

Allergens
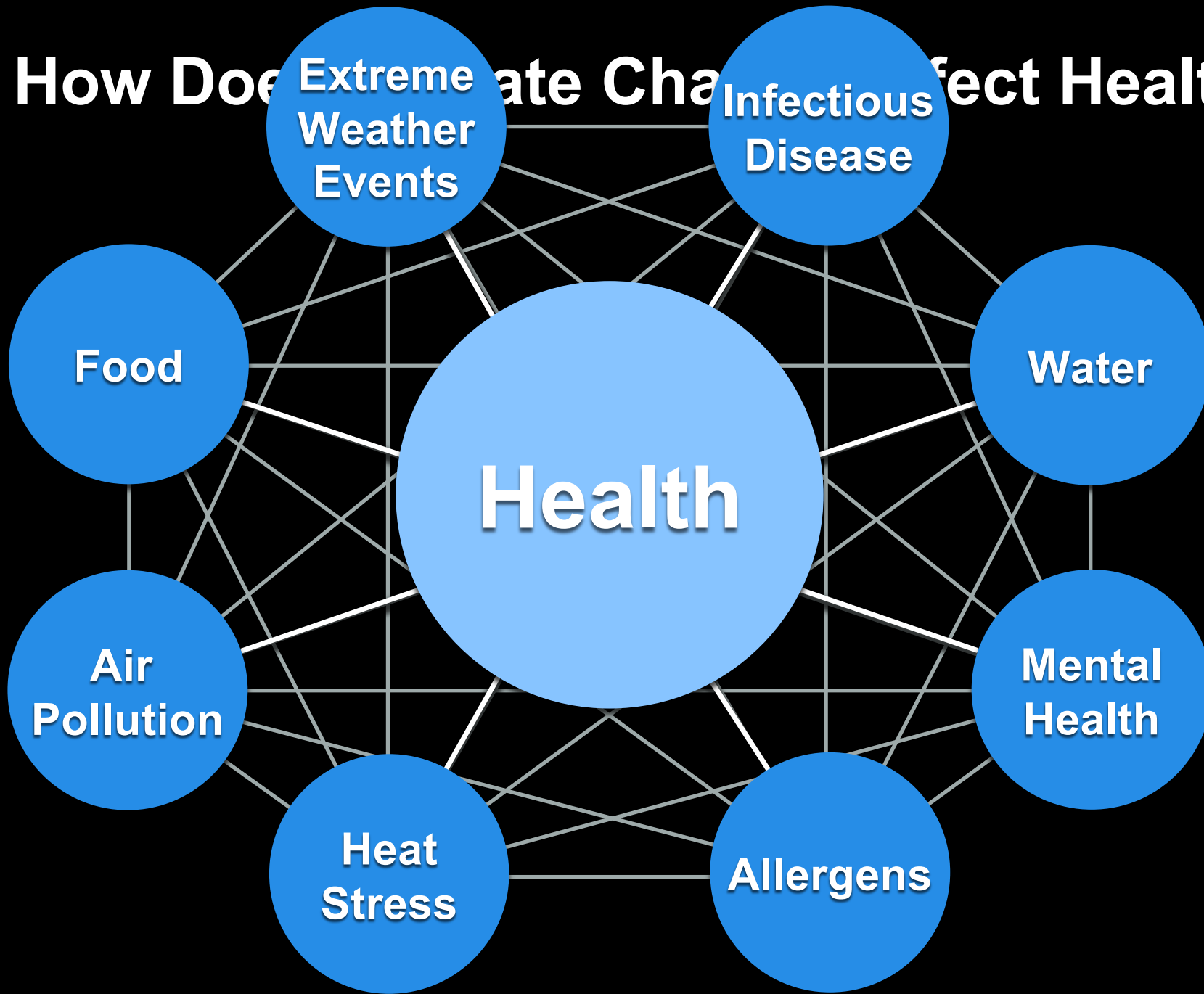
Impact of Climate Change on Human Health

Injuries, fatalities, mental health impacts — Severe Weather

Asthma, cardiovascular disease — Air Pollution

Heat-related illness and death, cardiovascular failure — Extreme Heat

Malaria, dengue, encephalitis, hantavirus, Rift Valley fever, Lyme disease, chikungunya, West Nile virus — Changes in Vector Ecology

Forced migration, civil conflict, mental health impacts — Environmental Degradation

Respiratory allergies, asthma — Increasing Allergens

Malnutrition, diarrheal disease — Water and Food Supply Impacts

Cholera, cryptosporidiosis, campylobacter, leptospirosis, harmful algal blooms — Water Quality Impacts

Central hub: INCREASING CO₂ LEVELS · RISING TEMPERATURES · MORE EXTREME WEATHER · RISING SEA LEVELS

welcome to
THE NURSES CLIMATE CHALLENGE

The nation's first campaign to engage 5,000 health professionals around climate change and health

A collaboration between Health Care Without Harm & Alliance of Nurses for Healthy Environments

The Nurses' Climate Challenge (NCC): Goals

- Educate 50,000 health professionals by 2022 on climate change and health

- Build a cohort of informed and more-engaged health professionals in care settings

- Launch a movement of health professionals committed to climate solutions at home and in care settings

TACKLING CLIMATE CHANGE COULD BE THE GREATEST GLOBAL HEALTH OPPORTUNITY OF THE 21ST CENTURY

The Lancet, June 2015
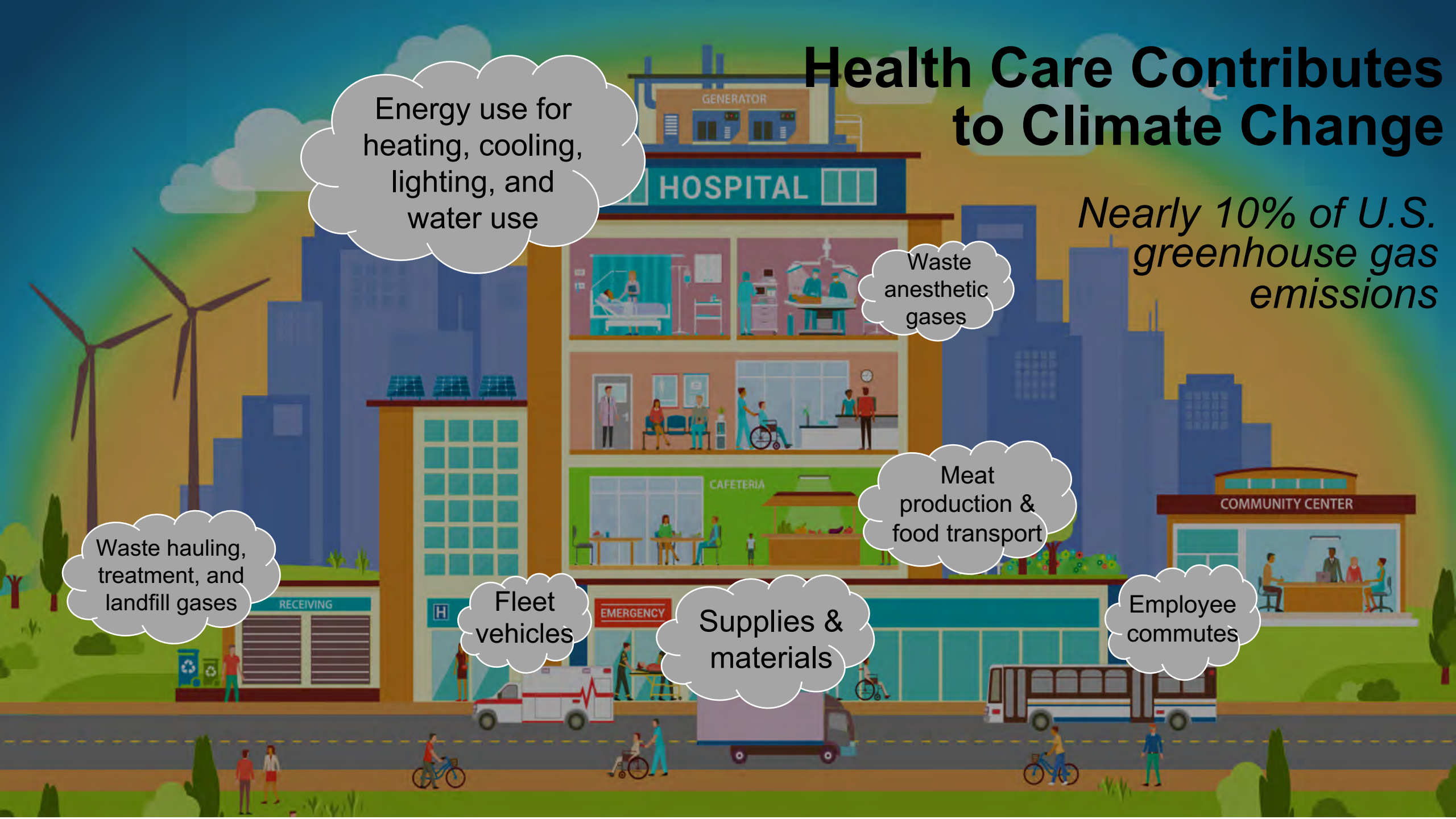
Tickborne Disease Risk in Minnesota

Blacklegged ticks only eat 2 or 3 times their **whole life.**
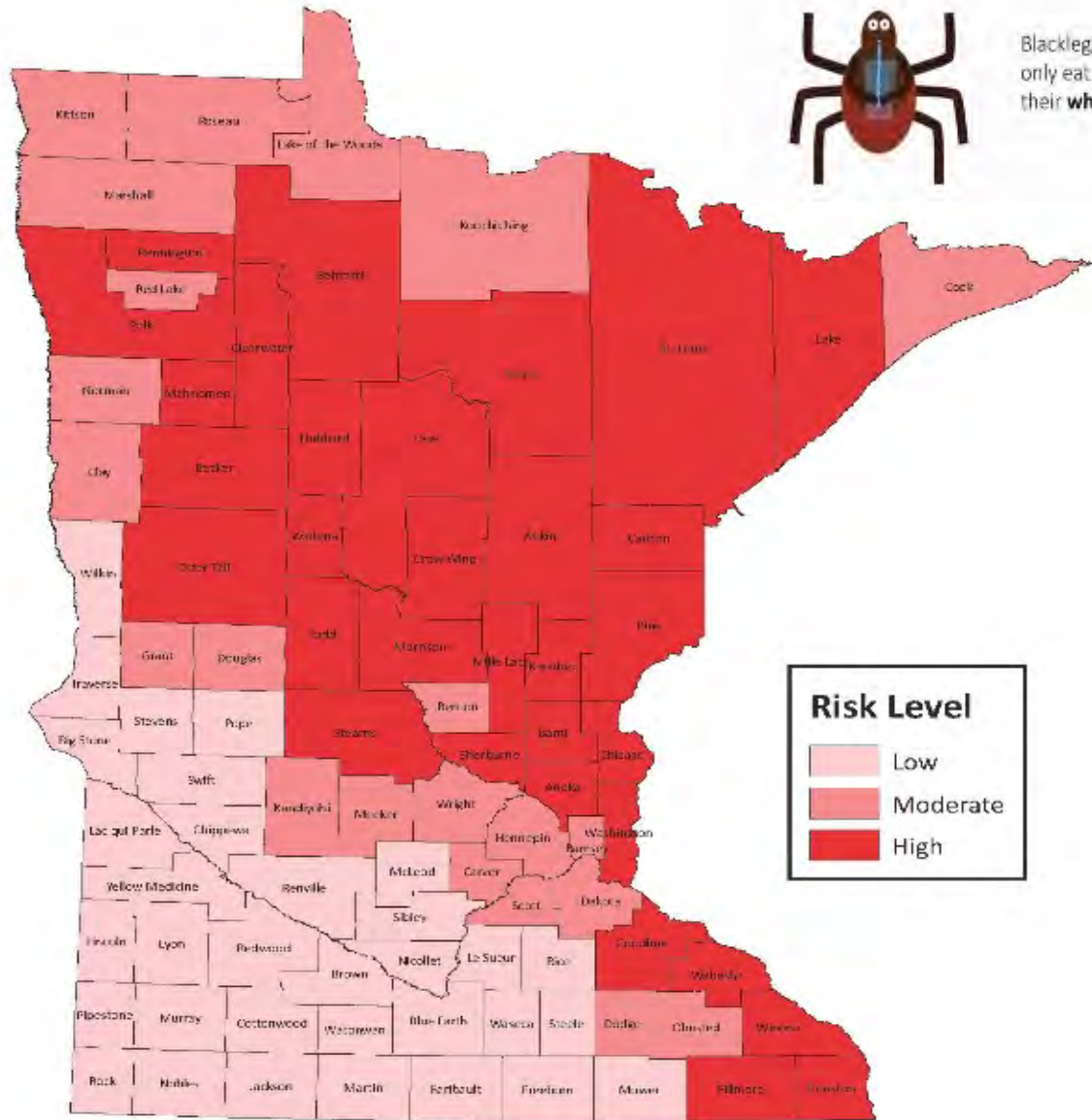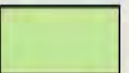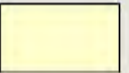
Tick-borne illnesses are on the increase in the United States and disease cases have doubled between 2004 and 2016, according to a new report released by the Centers for Disease Control and Prevention. Further, the report found that disease cases from infected mosquitoes, ticks and fleas have tripled in 13 years and since 2004, nine vector-borne diseases were discovered or introduced for the first time from the United States and its territories.

Risk Level

- Low
- Moderate
- High

Figure 1. Reported *I. scapularis*-borne Disease Cases in Minnesota, 2000-2016

- Lyme disease
- Human anaplasmosis
- Babesiosis

Number of Cases

Year of Report
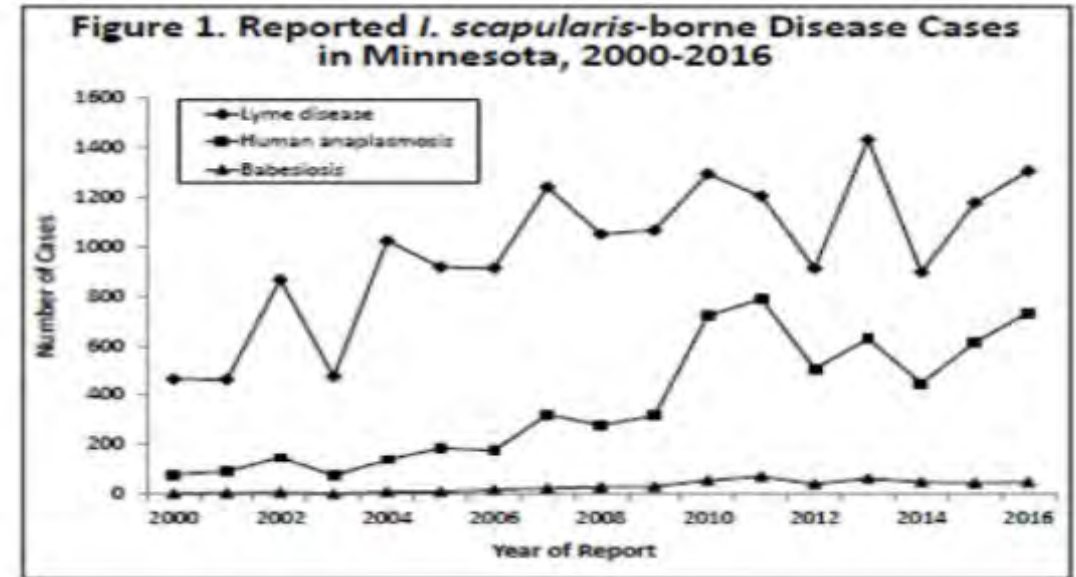
Average incidence of confirmed and probable Lyme disease cases by county of residence, 2007-2016

Risk Level

(Incidence per 100,000 population)

- **Highest:** ≥ 100 cases
- **High:** 50 to 99.9 cases
- **Moderate:** 10 to 49.9 cases
- **Low:** > 0 to 9.9 cases
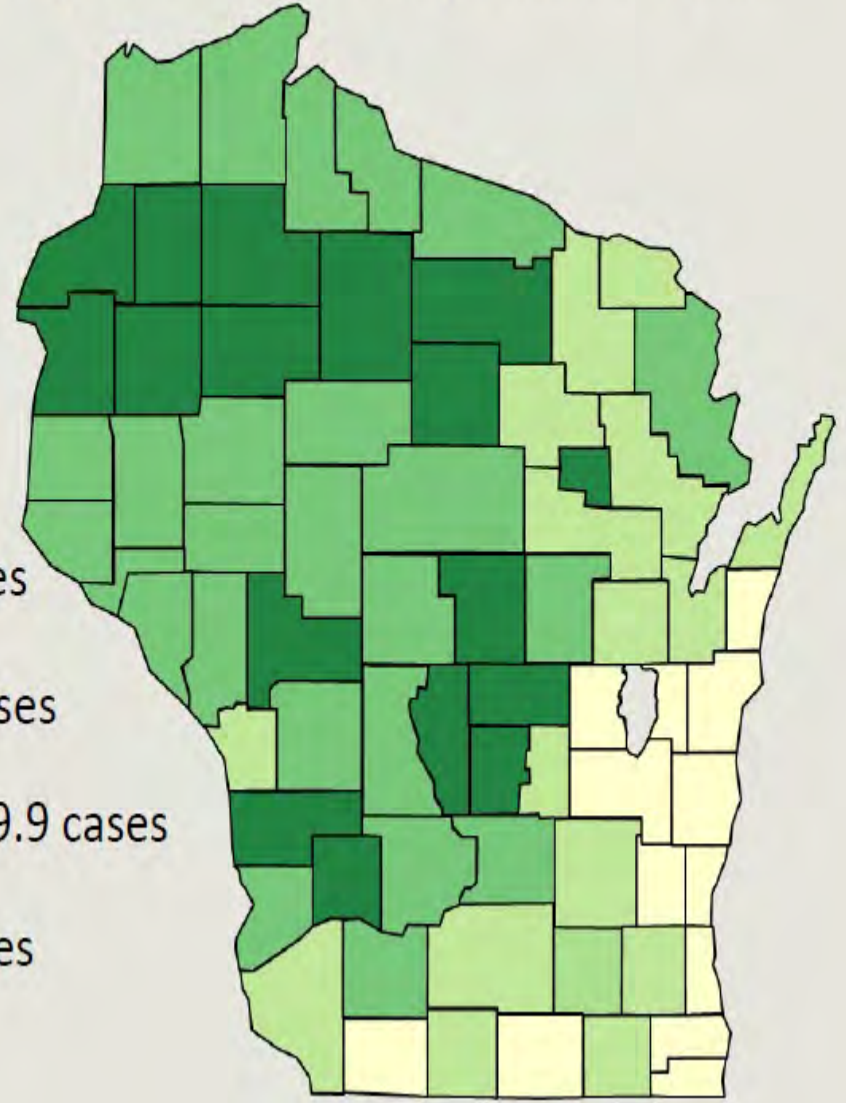
Blacklegged ticks only eat 2 or 3 times their **whole life.**

In Wisconsin, between 2004 and 2016, there were 33,255 tick-borne disease cases, according to CDC data. Wisconsin was in the top 20 percent of states for tick-borne diseases and had the second highest number of disease cases. Tick-borne diseases occur throughout the country but predominate in the eastern parts of the country and along the Pacific Coast.
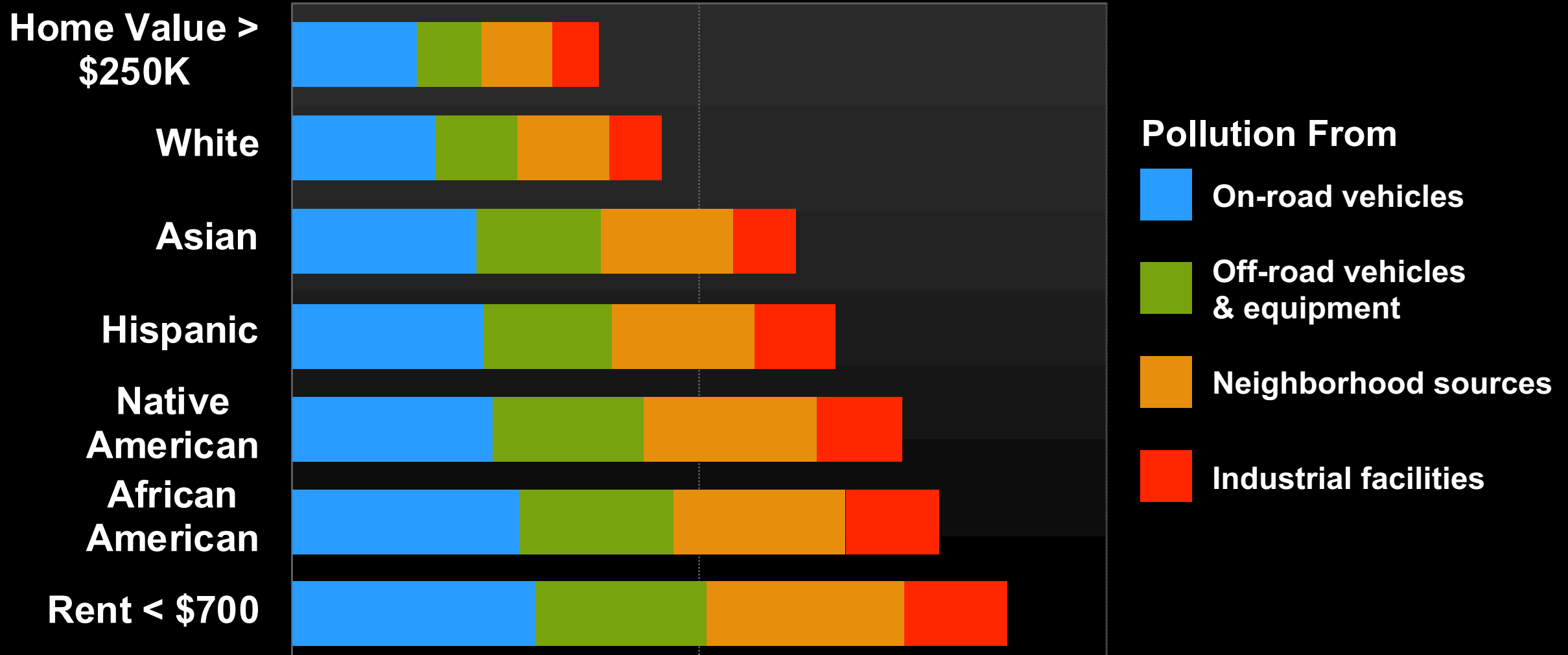
Thirty years ago the mosquito season in Minneapolis was 74 days long, on average.

Now it averages 108 days each year.

In Minnesota up to 4,000 deaths each year—10% of all deaths in the state—are linked to air pollution.

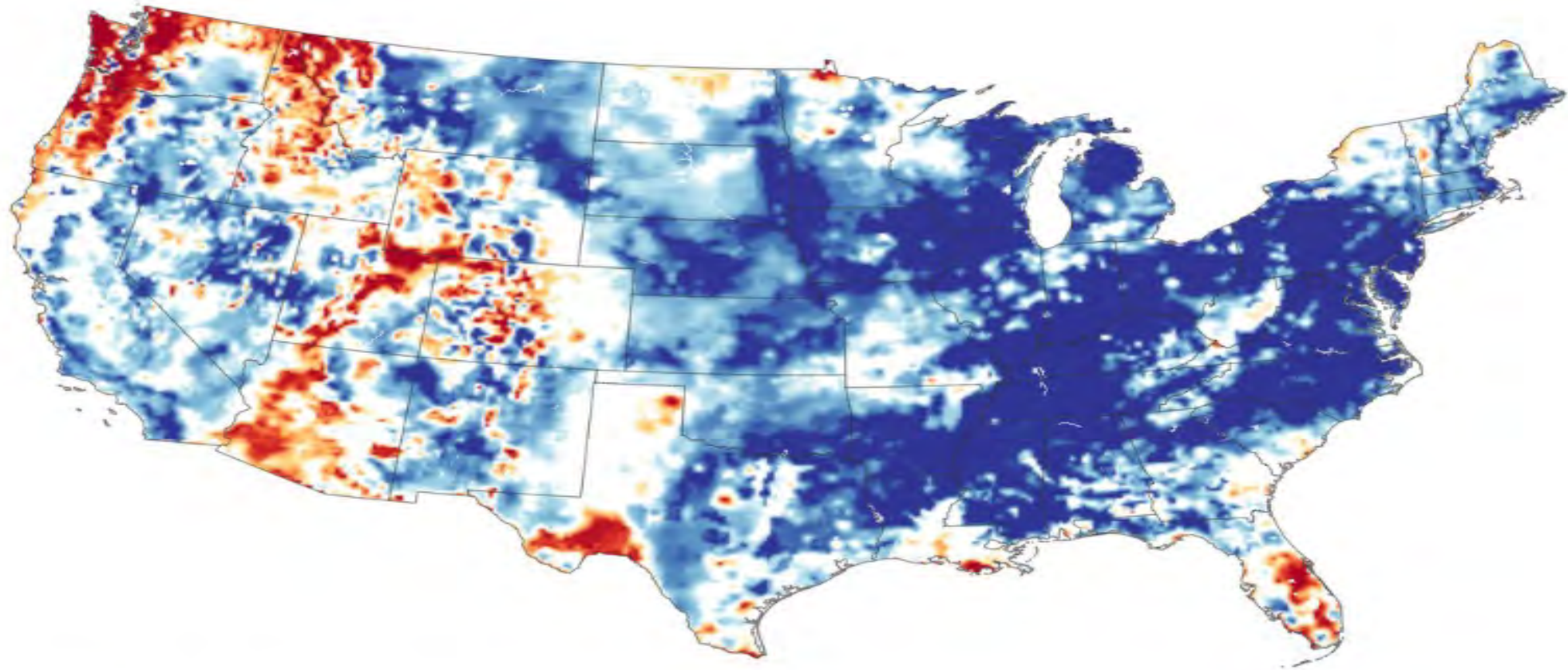# Relative Air Pollution Risks in the Twin Cities

Home Value > $250K

White

Asian

Hispanic

Native American

African American

Rent < $700

Pollution From

On-road vehicles

Off-road vehicles & equipment

Neighborhood sources

Industrial facilities

Small Towns Fear They Are Unprepared For Future Climate-Driven Flooding

REBECCA HERSHER

More precipitation fell in the continental U.S. in the 12 months ending in May 2019 than ever recorded. Records go back more than 120 years. Blue areas had more groundwater than usual for May. Orange and red areas had less.

NASA Earth Observatory

Xcel Energy plans to produce 30% of its electricity from carbon-free sources by 2020 and 100% by 2050.

It also aims to reduce emissions 80% by 2030.

Since 2006, Minneapolis' emissions have declined 20% while economic growth has increased 30%.

St. Paul and St. Louis Park, Minnesota have both committed to using 100% renewable electricity.

St. Paul, Minnesota
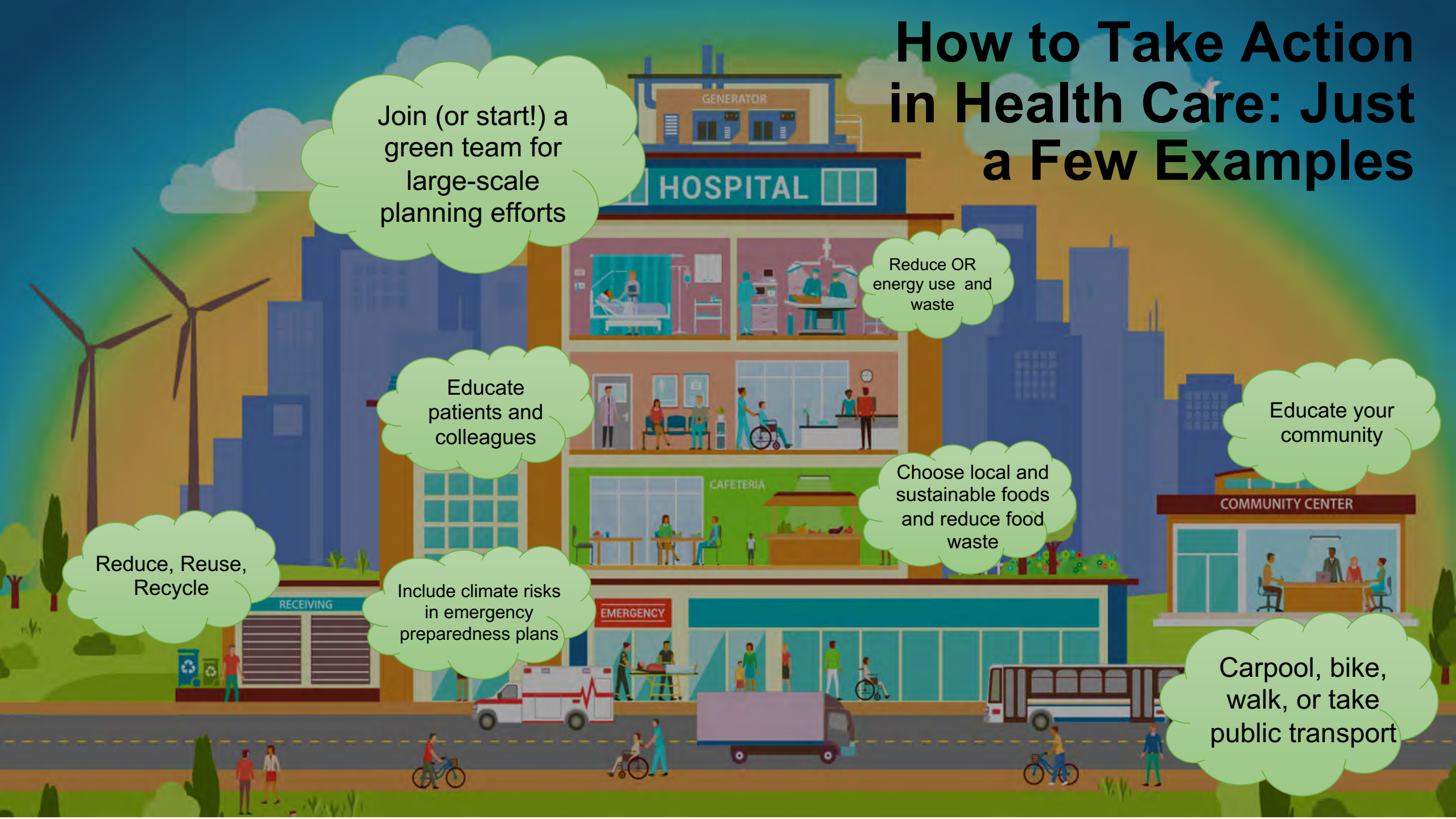
Climate Smart Health Care

- Focusing on energy efficiency first

- Incorporating renewable energy

- Purchased Four Electric Vehicles

- Advocating for clean air
  - Healthcare Climate Council
  - Clean Air MN
  - Nurses Climate Challenge
  - Signed We Are Still In
  - Health Care Climate Challenge
  - Climate Reality Trained

HealthPartners
Carbon Footprint

HealthPartners
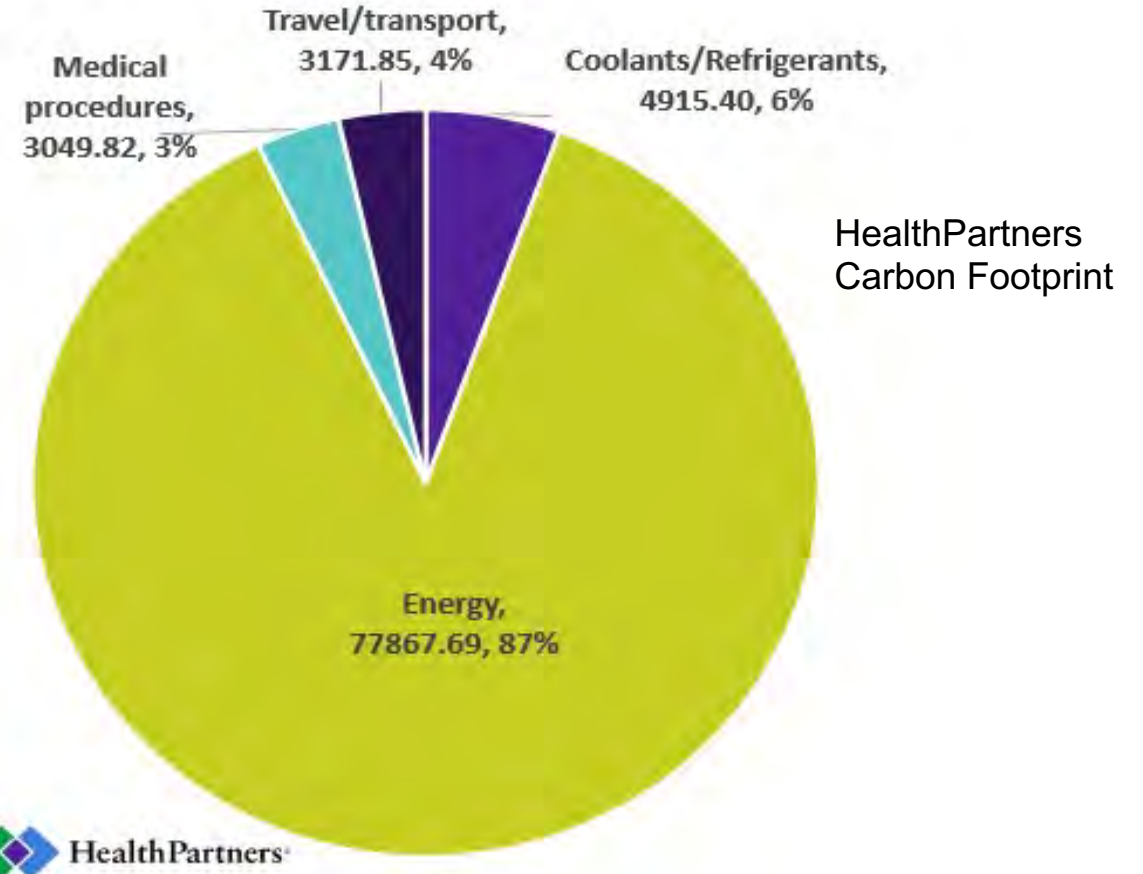
2018 Results

New Methodist Boilers

Neuroscience Building

- >$430K in Rebates
- >$380K ongoing **annual** savings
- >6,150 MWh solar production
  - Equivalent to 820 houses worth of energy/year
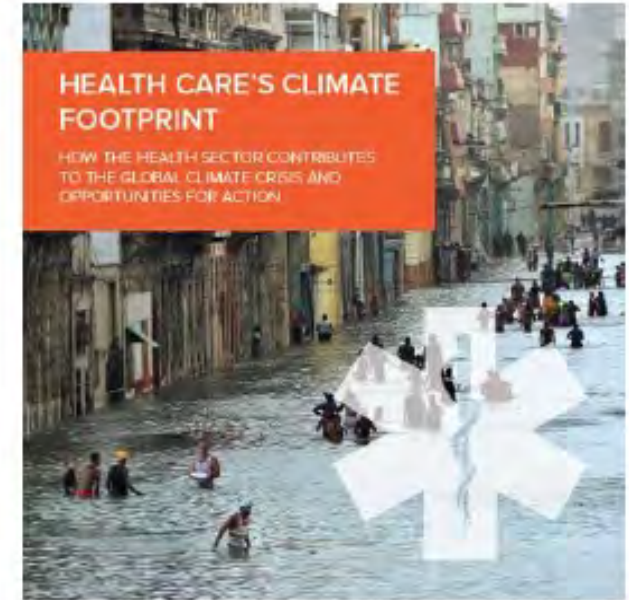- >$150K in Solar Savings & Rebates
- Sustainable Transportation investments

HealthPartners®

HEALTH CARE'S CLIMATE FOOTPRINT

HOW THE HEALTH SECTOR CONTRIBUTES TO THE GLOBAL CLIMATE CRISIS AND OPPORTUNITIES FOR ACTION

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ARUP

Health Care Without Harm
Climate-smart health care series
Green Paper Number One

Produced in collaboration with Arup
September 2019

THIS PAPER

- Establishes the first-ever global estimate of health care's climate footprint.

- Is based on full global coverage of spending data, together with detailed information from 43 countries.

- Identifies key sources of health care emissions while allowing for a comparison between nations and among many regions of the world.

- Makes a set of recommendations to align global health goals with global climate goals.

PRACTICE Greenhealth

Health Care Without Harm

"Health care's climate footprint is
equivalent to 4.4% of global net emissions"

Scopes Defined: 3

Scope 3:

- Fuel and energy-related activities (not in 1 or 2)
- Transportation and distribution of products
- **Purchased goods or services**
- Capital goods
- **Disposal of waste generated in operations**
- **Employee business travel**
- **Employee commute**
- Processing of sold products
- End of life treatment of sold products
- Leased Assets

Common greenhouse gas emission sources in health care
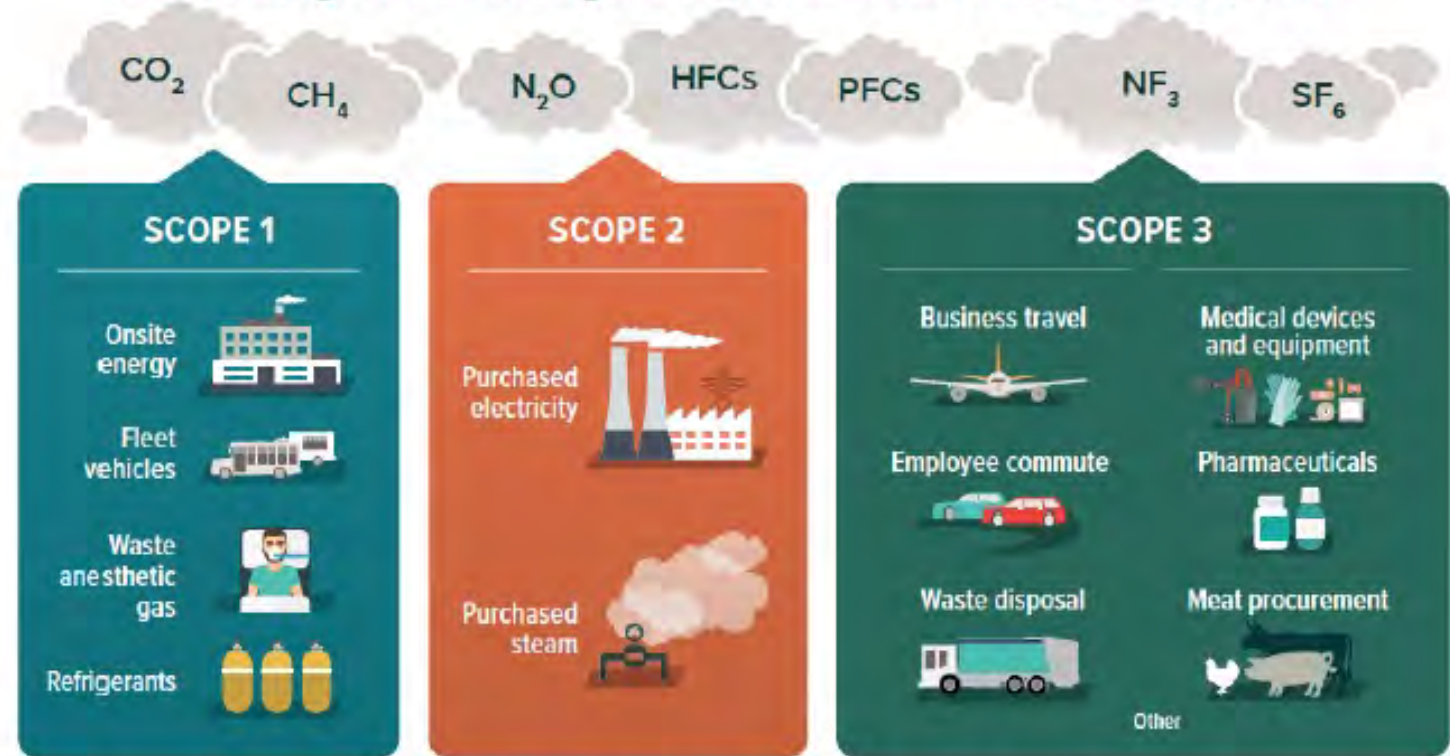
Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF_3), and sulphur hexafluoride (SF_6)

Scope 3 Other: These are the most common emissions for health care, but there are other relevant categories in Scope 3. To review all 15 categories covered in Scope 3, visit the GHG Protocol Scope 3 Guidance.

Source: Practice Greenhealth

FINDINGS: HEALTH CARE'S GLOBAL CLIMATE FOOTPRINT

4. Decarbonizing health care's supply chain is critical
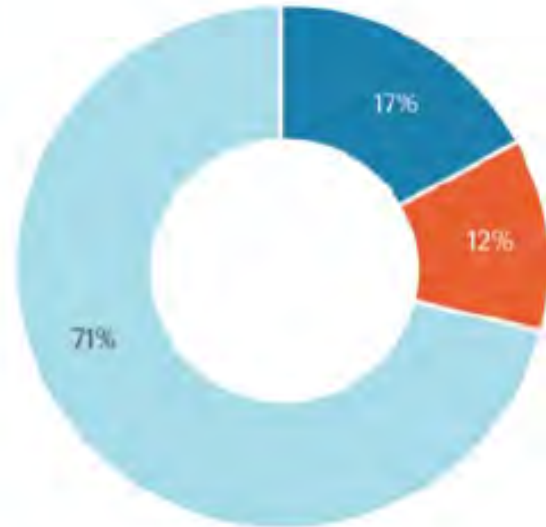
Figure 5: Global health care footprint split by GHGP Scopes

Scope 1 · Scope 2 · Scope 3

17% · 12% · 71%

Relationship of GHGP categories to WIOD emissions sources

GHGP SCOPE CATEGORIES — **WIOD CATEGORIES**

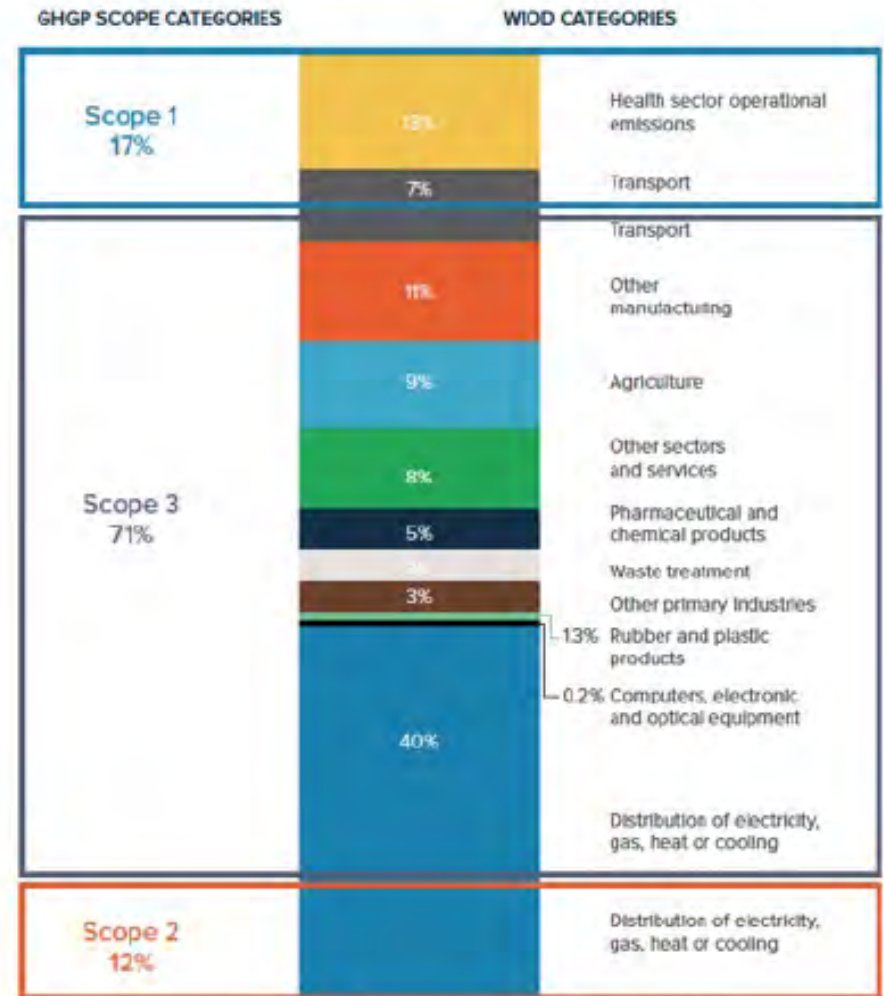| Scope	WIOD Category	%
Scope 1 (17%)	Health sector operational emissions	13%
	Transport	7%
Scope 3 (71%)	Transport	
	Other manufacturing	11%
	Agriculture	9%
	Other sectors and services	8%
	Pharmaceutical and chemical products	5%
	Waste treatment	
	Other primary industries	3%
	Rubber and plastic products	13%
	Computers, electronic and optical equipment	0.2%
	Distribution of electricity, gas, heat or cooling	40%
Scope 2 (12%)	Distribution of electricity, gas, heat or cooling	

Figure 6a shows the proportion of WIOD emissions sources attributable to GHGP Scopes 1, 2 and 3.

Use your choices

Take action now
Go to 24hoursofreality.org

Your world depends on it.