Development of a Climate Change Research Agenda for the National Institute For Occupational Safety And Health

Joanna Watson, NIOSH Western States Division
Anchorage, Alaska

“The findings and conclusions in this report are those of the author(s) and do not necessarily represent the views of the National Institute for Occupational Safety and Health.”

Photo Credit: US Coastguard
Climate Change and Human Health

The Lancet Commissions

Health and climate change: policy responses to protect public health

EDITORIAL

Climate Change
A Continuing Threat to the Health of the World’s Population

Howard Bauchner, MD; Phil B. Fontanarosa, MD, MBA
Occupational Impacts

Environmental Change

Societal Response

- Sun
- Thermometer
- Flooded car
- Fire
- Recycling symbol
- Wind turbines
Types of Worker Hazard

- Amplification of existing hazards
- Known hazards in new situations
- New, unanticipated or unrecognized hazards
Why Workers are Important

Many of the population are workers

Workers face unique hazards

Intervention opportunities
NIOSH Activities

- **2009**: Developed a Conceptual Framework
- **2014**: Established Climate Change Workgroup
- **2015**: Established Climate Change Initiative
FIGURE 1. Conceptual framework of the relationship between climate change and occupational safety and health

FIGURE 1. Conceptual framework of the relationship between climate change and occupational safety and health

## Hazards / Exposures

### ENVIRONMENTAL CHANGE

- Increased ambient temperature
- Increased air pollution
- UV radiation
- Extreme weather
- Vector-borne diseases & expanded habitats

### SOCIETAL RESPONSE

- Industrial transitions & emerging industries
- Changes in the built environment
FIGURE 1. Conceptual framework of the relationship between climate change and occupational safety and health

FIGURE 1. Conceptual framework of the relationship between climate change and occupational safety and health

NIOSH Climate Change Workgroup

Aim

Ensure current, emerging, and anticipated worker safety and health issues associated with climate change are appropriately identified and prioritized, and to determine the most important actions.
There is strong evidence that climate change is and will present occupational safety and health hazards and numerous critical research questions need to be resolved regarding specific hazards, sentinel events, risk assessment and preventive actions.

- Establishment of a Climate Change Initiative
- Draft strategic research agenda
Mission: Protect workers from the adverse impacts of climate change

1. Increase awareness of occupational hazards resulting from climate change
2. Establish research priorities
3. Promote and support research
4. Use research findings to develop recommendations, guidance and policies
# Strategic Research Agenda

## Information Sources
- Conceptual framework
- Literature review
- Participation in federal interagency activities
- Consultation with stakeholders

## Findings
- Research is needed!
- Unclear definition of ‘climate change related’
- Some research is underway
- Limited data on burden
## Research Priorities

### Who is impacted? How are they impacted?
- Surveillance
- Targeted data collection

### Identify control measures
- Transfer/use existing knowledge
- Identify new interventions and controls

### Research to Practice
- Disseminating information
- Influencing policy making
Challenges

- Defining ‘climate change related’
- Estimating burden
- Identifying emerging hazards
- Communicating importance of workers
Conclusions

- Lots of research needs
- Limited information available
- Determining burden is a top priority
- Research priorities need regular reassessment

Call to Action

- Occupational safety and health should be a core component of climate change related public health
- Everyone has a role to play
- Need to just make a start!
THANK YOU!

Joanna Watson
NIOSH Western States Division
Email: wgq6@cdc.gov
Tel: 907-271-2388

http://www.cdc.gov/niosh/topics/climate/
http://blogs.cdc.gov/niosh-science-blog/category/green/

“The findings and conclusions in this report are those of the author(s) and do not necessarily represent the views of the National Institute for Occupational Safety and Health.”