Sarah White, MEMA

https://resilientma.com/

Background and Framework

- Code of Federal Regulations – Title 44, Chapter 1, Part 201 (§201.4: State Hazard Mitigation Plans)
- Disaster Mitigation Act of 2000 (DMA2000) Implemented by 44 C.F.R Part 201
- Requirement for State's eligibility Public Assistance Permanent Work
  - Since 1991 ~$650 million in PA
- Mitigation Grants (three programs)
- State Hazard Mitigation Plan Review Guide (FEMA Publication 302-094-2, March 2016)
- Emergency Management Accreditation Program (EMAP) Standards
- Massachusetts Executive Order 569

Definition of Hazard Mitigation

Any sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects.

Natural Hazard Mitigation is:

- adaption to natural hazards.
- protects people and structures from future hazards.
- consistent with resiliency and sustainability principles.
- a way to minimize the costs of disaster response and recovery.

Description of planning process

- Variety of Stakeholders
- Accessible Process
- Adopted by the State

Risk Assessment

- Detailed Hazard Identification
- Assessment of State Owned and Leased Facilities
- Estimation of Losses
- Summary of Vulnerability by Jurisdiction (County)

Mitigation Strategy

- State Capabilities
- Local
- Goals
- Actions to Mitigate Hazards

Implementation Plan

- Rep Loss/NFIP Implementation

What is in the 2013 State Hazard Mitigation Plan?

Major Phases of the Plan Development

2017

- Formation of PMT
- Conduct Risk Assessment
- State Agency Vulnerability Assessments
- State Capability and Adaptive Capacity Analysis
- Hazard Mitigation and Climate Adaptation Strategy

2018

- Plan Maintenance/Implementation
- Compile and Finalize Plan

2018 State Hazard Mitigation & Climate Adaptation Plan

Conduct

Conduct a Risk Assessment

- Hazard Analysis and Characterization
- Exposure Analysis
- Climate Change Analysis
- Hazard Profiles

Assess

State Agency Vulnerability Assessments

- Develop Requirements for State Agency Vulnerability Assessment Survey Tool
- Create the State Agency Vulnerability Assessment Survey Tool
- Develop an Assessment Report Template

Analyze

State Capability and Adaptive Capacity Analysis

- Review and Assess Existing Inventory of Capabilities
- Identify New or Emerging Capabilities
- Complete Evaluation and Prioritization of Potential Enhancements
- State Capability and Adaptive Capacity Analysis Report

Develop

Develop a State Hazard Mitigation and Climate Adaptation Strategy

- Stakeholder Outreach and Coordination Workshops
- Hazard Mitigation and Climate Adaptation Strategy Document

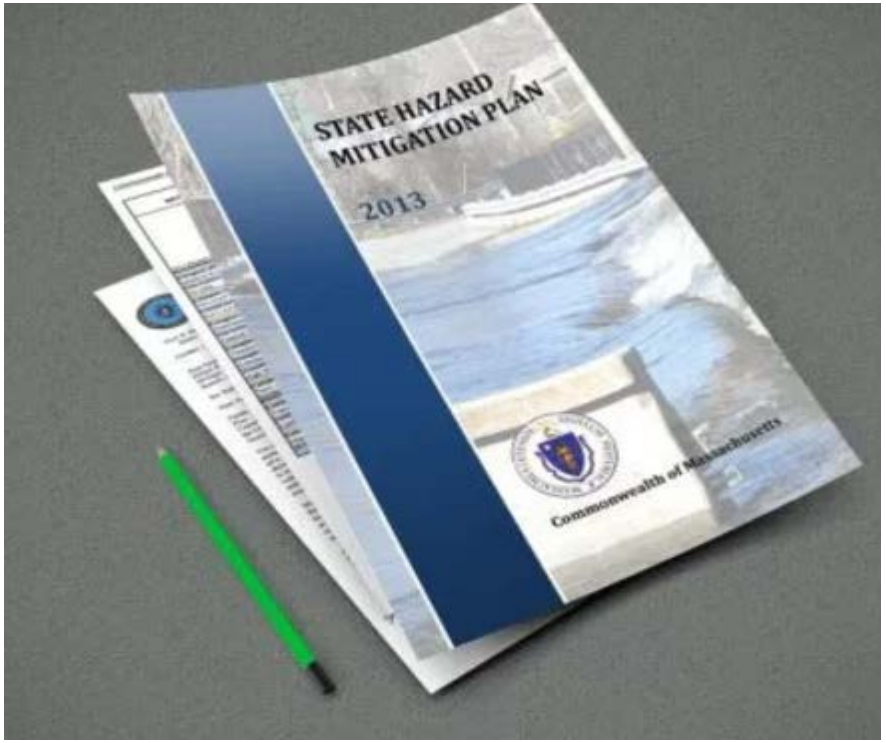
Document

Develop and Document the Process for Plan Maintenance, Review, Evaluation, and Implementation

- Conduct Plan Maintenance and Implementation Process Workshop
- Plan Maintenance Document

Hazards/ Stressors

- Hydrologic Hazards
- Atmospheric Hazards
- Geologic Hazards
- Other Hazards
- Man Made Hazards



Climate Risk Assessment

Risks are directly related to the specific climate hazard and our exposure to them.

- Known dose-response of climate-related hazards
- Estimate exposure
- Estimate risk based on:

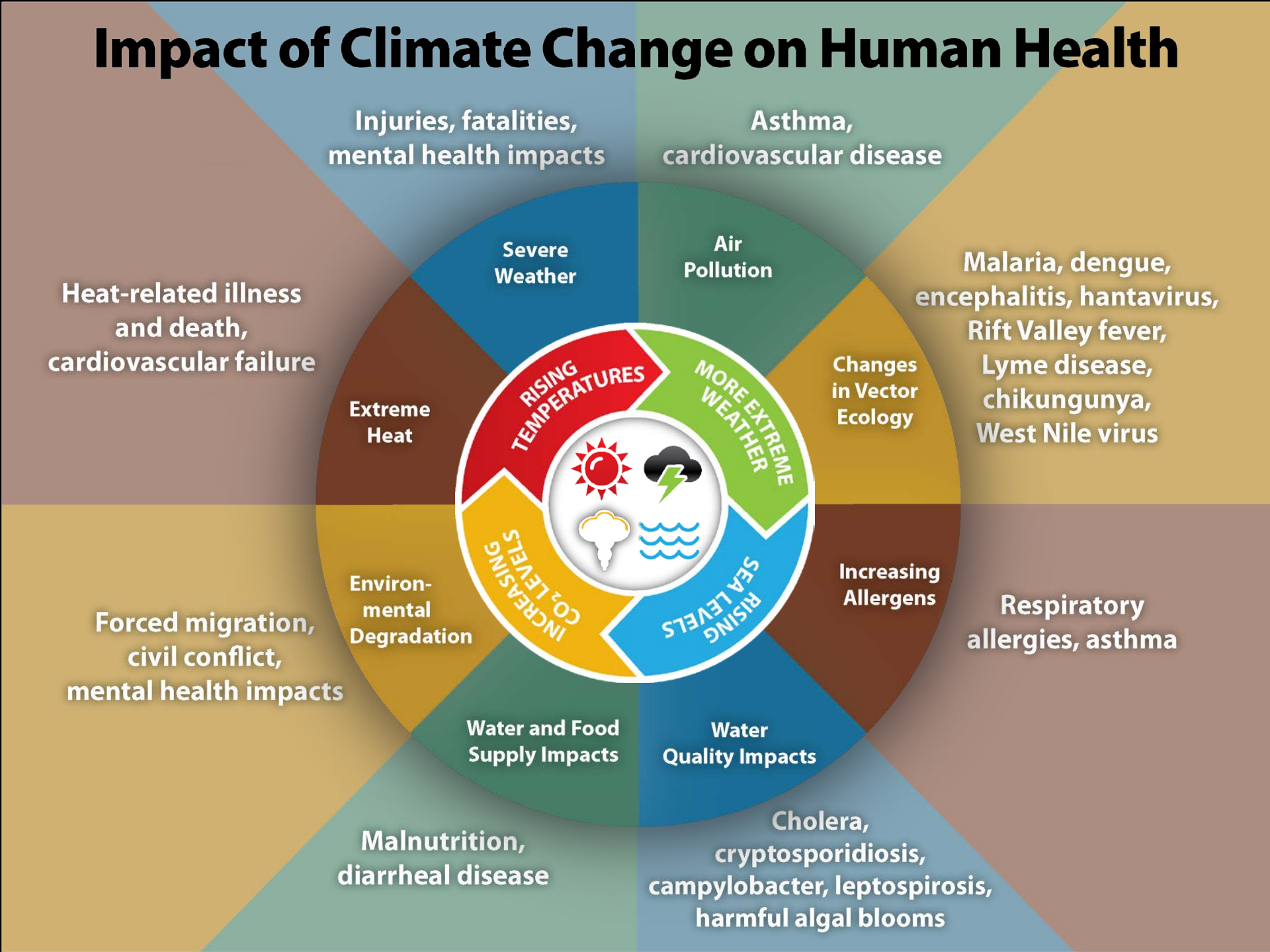
RISK = function of HAZARD & EXPOSURE

This framework allows us to manage risks of climate change in a similar to how we manage other risks

Exposure Analysis Focus Areas

1. **Natural Resources and Environment**
   - Habitat, plants and wildlife
2. **Economy**
   - Economic sector include economic losses or drivers, GDP.
3. **Vulnerable Populations**
   - Persons with access or functional needs, low income populations, and those who are transit dependent.
4. **Government**
   - Commonwealth Assets Transportation (roads, bridges, rail); Buildings, Land holdings and other critical infrastructure (non-buildings such as pumps, dams, data/cyber, etc
5. **The Built Environment (Non-government)**
   - The components of the Built Environment sector are non-governmental critical infrastructure that provide or link to key life-line services, social welfare, etc.

Impact of Climate Change on Human Health



How Adaptations and Interventions Work

CLIMATE HAZARD
More days with high heat and high ozone levels

EXPOSURE
Being outdoors or breathing outdoor air

RISK
Heat-Related Illness and Mortality

INTERVENTIONS and ADAPTATIONS:
Heat and Air Quality Warnings
Community Cooling Centers (with backup generators)
Eliminating “Heat Islands”
Reducing Emissions
Improving Health and Fitness

VULNERABILITY
Outdoor workers
People > age 65 or < age 5
Residents of Cities
Cardiovascular disease, kidney disease, asthma
Loss of Electricity/No AC

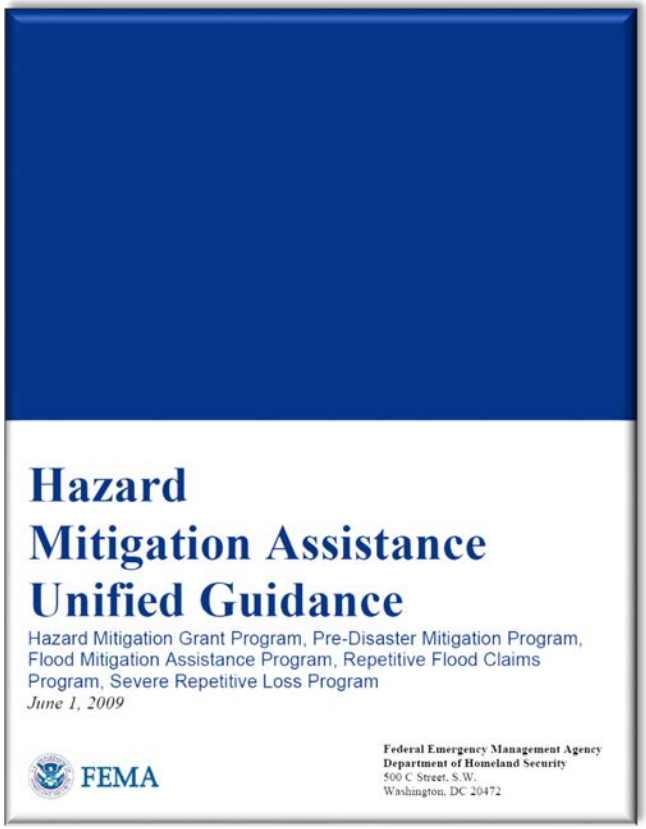
Heat and Air Quality Warnings
Improving Health and Fitness

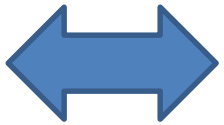
From planning to implementation…

Eligible FEMA Grant Project Activities

- Property Acquisition and Demolition (or relocation)
- Structure Elevation
- Dry Floodproofing
- Flood Reduction Projects
- Structural & Non-Structural Retrofitting of Existing Buildings
- Infrastructure Retrofit
- Generators
- Soil Stabilization
- Wildfire Mitigation
- Safe Room Construction

Unified HMA Programs





62 active FEMA mitigation grant funded projects underway = about $70M

Many successes…but much more to do!

…why hazard mitigation?

"As a local official, you have been given the responsibility and legal right to manage coastal and inland floodplains." – Stormsmart Coasts Fact Sheet 2

Moving in the right Direction