

Climate Change Planning and the Role of Emergency Management

A Discussion Paper for Community Resilience

June 2015

Brief: Emergency Management plays an essential role when planning for the impacts of climate change by identifying risks and reducing the vulnerabilities to those risks within a given jurisdiction by developing a mitigation, preparedness, and response and recovery framework. The mission is to safeguard life and property from all-hazards and to protect the environment and economy.



What is Emergency Management?

Emergency Management is a profession of public administration whose job is to facilitate the creation of a basic disaster policy framework and to coordinate the implementation of the policy during a disaster. It ties together the responders, decision makers, public and private agencies not normally associated with emergency response and an array of other elements of the local community before, during and after any disaster event. (Blanchard, B. W. 2007)

The Impact of Climate change:

Climate Change will impact the economic viability of every community, infrastructure, social situations and public health. Every imaginable stakeholder needs to be included in the planning process, including community and religious organizations.

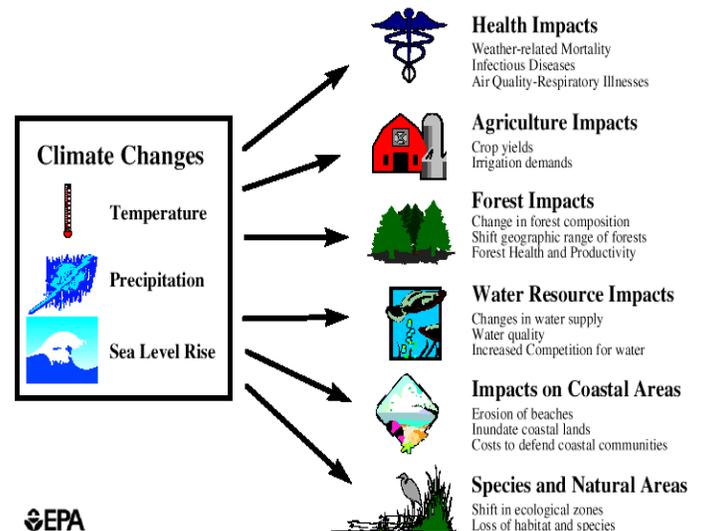
The Role of Emergency Management in Climate Change Planning:

“Planning for climate change is not popular and it tends to be outside many emergency managers’ comfort zones as it deals with long-term strategies and requires interaction with politicians, non-responder agencies, and the public. Yet our responsibility as all-hazards planners is to consider all the risks facing a community and contribute to their mitigation as much as we can.” (Canton, L. G. January 8, 2014)

Critical Challenges to Emergency Managers Related to Climate Change:

Emergency managers should consider the implications of climate change regardless of the cause. Several climate change-related trends may present critical challenges to emergency managers and warrant in-depth analysis.

Potential Climate Change Impacts



EPA

United States Environmental Protection Agency

“As emergency managers, we are not scientists or engineers and our experience lies more in reducing vulnerabilities than in altering the characteristics of the hazard.”

(Bob Freitag - Director of the Institute for Hazards Mitigation Planning and Research, University of Washington)

The Duties of Emergency Management:

Emergency preparedness is an integral part of emergency management that includes those activities and measures designed or undertaken in preparation for any hazard, including, but not limited to, natural disasters and hazards involving hazardous materials or radiological materials, and that will enhance the probability for preservation of life, property, and the environment

One key concept of emergency management is PPRR (prevention, preparedness, response and recovery) which describes a spectrum of activities:

Prevention/Mitigation:

This is about assessing and reducing disaster risks. Activities include researching natural and 'man-made' disasters, constructing physical mitigation works (such as levees and firebreaks), establishing warning systems, land use planning (e.g. stopping people from building on floodplains) and building codes (e.g. mandating fire-proof building materials).

Preparedness:

This is about getting the emergency services and the community ready for disasters. Activities include preparing emergency plans, training first responders, educating the community on how to prepare and what to do in a disaster.



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Response:

This includes actually responding to a disaster and ensuring that the emergency services have the right resources (equipment and people) to do their job. Emergency management professionals aren't usually in charge of responding to a disaster, but act as an executive officer, providing expert advice to someone with the decision making authority

Recovery:

This is about getting a community that has been impacted by a disaster 'back on its feet'. Activities include, collecting and distributing donations and goods, distributing government relief payments, assisting with reconstruction tasks and much more.

Socio-Economic Impacts:

The Socio-Economic impacts of climate change upon communities can grow exponentially without a framework for preparedness, response, mitigation and recovery.

Every aspect is dependent upon the level of support Emergency Management is provided, relating directly to the level and degree of success prior to, during and following any climate change impact upon a community.

- Climate Change impacts upon communities are usually long term incidents demanding specific response, economic support and continued monitoring, planning and evaluation for months and years.
- Failure to plan today could result in crippling economic impacts from which a community may never fully recover.



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Recommendations:

The Emergency Manager

- The Emergency Manager must be a leader, a visionary, technician, coordinator and manager. Someone with sufficient knowledge and experience to navigate the constraints of the various political, economic, social, bureaucratic and administrative contexts, which can hamper success and progress of any emergency management program and planning process.
- Adaptation planning to the effects of climate change will reduce the socio-economic impact upon communities.

Preparedness

- Review and update preparedness activities to account for changing risk profiles and their consequences.
- Encourage the inclusion of the emergency management community in regional, state, and local climate change adaptation planning processes and strategies. (Cna.org, 2010)

Response

- Develop models to estimate the financial impact of larger and more frequent response operations on local budgets.
- Anticipate command and control challenges, and develop new strategies to manage more frequent and complex disasters. (Cna.org, 2010)

Disaster Mitigation

- Coordinate with regional, state, and local climate change-adaption planning groups to support the Hazard Identification and Risk Assessment process and to develop regional disaster mitigation strategies
- Adapt current disaster mitigation strategies to the anticipated short, medium, and long term impacts of climate change.
- Engage with regional, state, and local climate research groups for data to support more accurate forecasts for the future occurrence of climate change hazards. (Cna.org, 2010).

Disaster Recovery

Disaster recovery is a set of loosely related activities that occur before, during, and after a disastrous event.

These activities can include:

- Warning and ongoing public information
- Evacuation and sheltering
- Search and rescue
- Damage assessments
- Debris clearance, removal and disposal
- Utilities and communications restoration
- Re-establishment of major transport linkages
- Temporary housing
- Financial management
- Economic impact analyses
- Detailed building inspections
- Redevelopment planning
- Environmental assessments
- Demolition
- Reconstruction
- Hazard mitigation and
- Preparation for the next disaster. (Cna.org, 2010)

Conclusion:

Emergency Management is an essential public administration profession which can proactively propel planning, programs and processes in an effort to identify and reduce risk and vulnerability for the whole of community against the effects of climate change.

Emergency Management must lead efforts to strengthen the adaptive capacity to climate change within local communities by identifying risk and vulnerabilities. Using an all hazards approach to pre-plan and coordinate for possible disaster events as well as predict and re-evaluate response and recovery abilities, the long term socio-economic effects upon people,

communities, government and infrastructure can be lessened. (FEMA.gov, 2011)

Additional Resources:

Blanchard, B.W. 2007. Background “Think Piece” For The Emergency Management Roundtable Meeting at EMI, March 5-6, 2007. *What is Emergency Management? And What Are The Principles of Emergency Management?* EMI, FEMA, Dept. of Homeland Security, Emmitsburg, MD

Canton, L. G. January 8, 2014, Emergency Management Magazine, Managing Crisis. *Climate Change: Does the Emergency Manager Have a Role?* Retrieved on May 05, 2015 from: <http://www.emergencymgmt.com/emergency-blogs/managing-crisis/>

Cna.org, 2010, *Why The Emergency Management Community Should Be Concerned About Climate Change*, Retrieved on May 5, 2015 from: <http://www.emergencymgmt.com/emergency-blogs/managing-crisis/Catastrophic-Planning--Often-Neglected-but-Vital.html>

FEMA. Gov, 2011, Strategic Foresight Initiative, *Climate Change, Long Term Trends and their Implications for Emergency Management*. Retrieved on May 08, 2015 from: http://www.fema.gov/pdf/about/programs/oppa/climate_change_paper.pdf

FEMA LLIS, 2014, retrieved on May 7, 2015 from <https://www.fema.gov/lessons-learned-information-sharing-program>

Wallace, C. & Inocencio, A., 2013, *Grays Harbor County Citizen Expectation Survey Preliminary Results*. Retrieved on May 02, 2015 from: <http://www.co.grays-harbor.wa.us/info/DEM/Index.asp>