
Integrating Climate Change into Decision Making

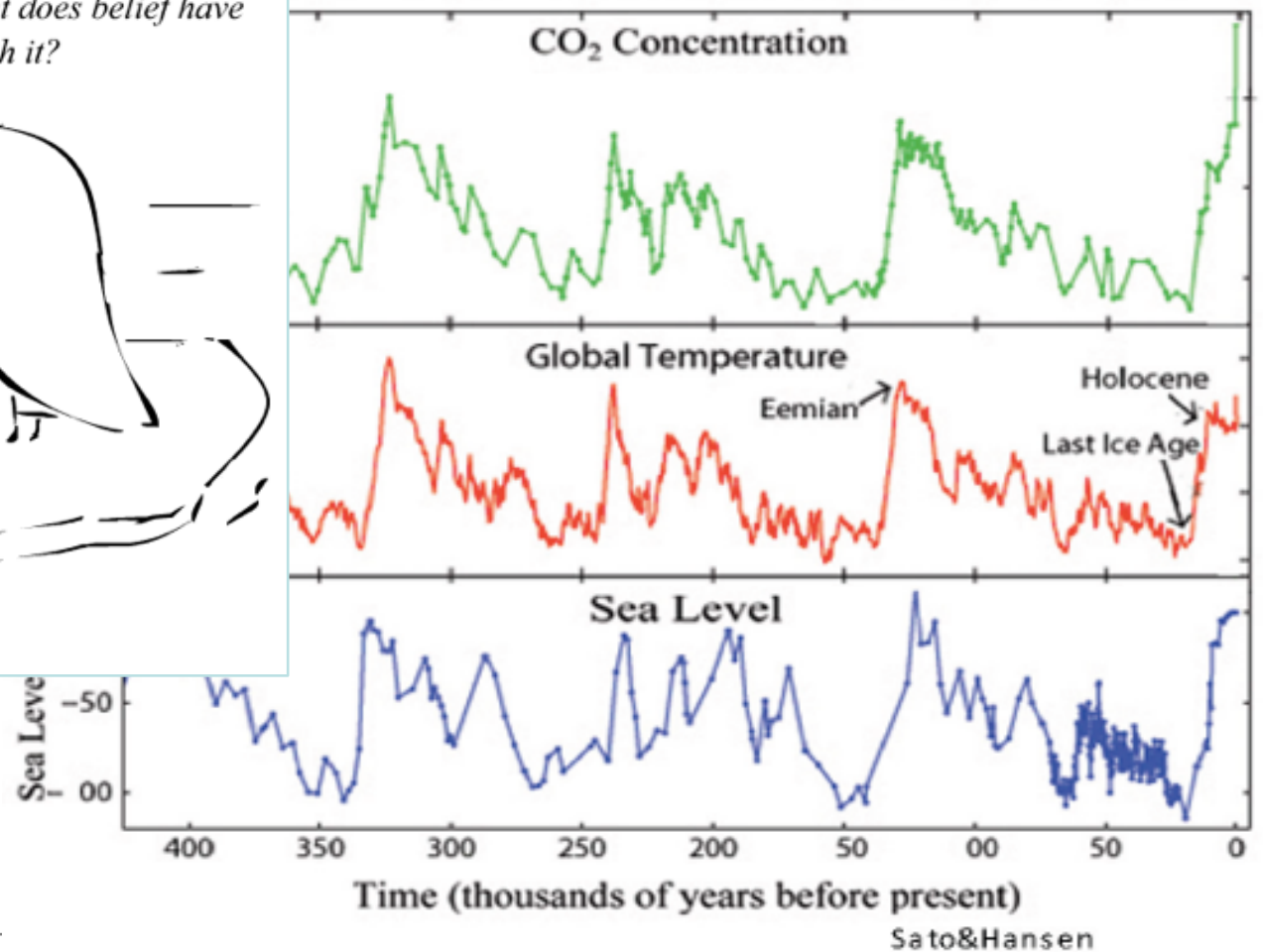


Daniel Kreeger
Executive Director
Association of Climate Change Officers
www.ACCOonline.org

Basic assumptions about thriving societies ...

- Economic engines driving a community need to be resilient to episodic activity and adaptive to changes in environment, marketplace, culture and population
- But you also need ...
 - Dependable and safe infrastructure
 - Ability to commute and transport
 - Access to food, goods and natural resources
 - Good public health
 - Job opportunity, security and upward mobility
 - Security
 - Prosperous businesses (that don't undermine public good)
 - Well informed public decision makers and elected officials

What the #*\$@% is going on?

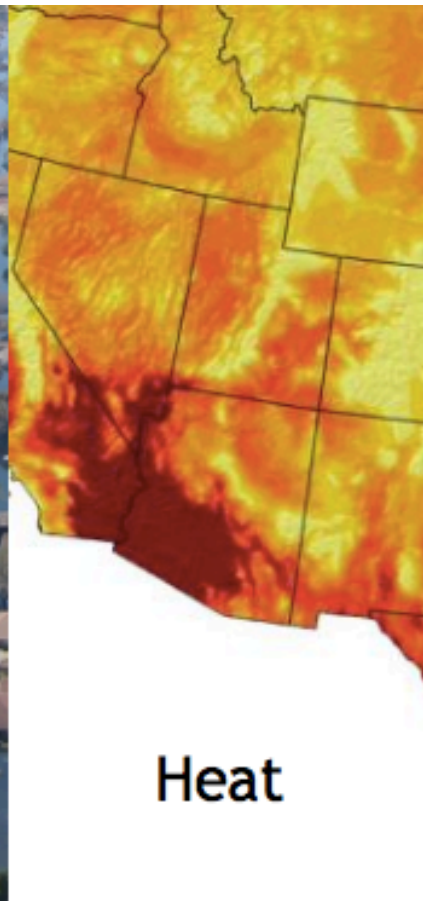


Cool Tools for a Warming World Symposium

University of British Columbia

October 13, 2016

And this means what?



Cool Tools for a Warming World Symposium

University of British Columbia

October 13, 2016

This just in ... or keeps coming in ...

International Business Times

Climate Change Could Seriously Affect
National Security, U.S. Intelligence Report Says

BusinessGreen

US Millennials Could Lose Trillions in Earnings
Due to Climate Change, Report Argues

The Guardian

NASA: Earth is Warming at a Pace
'Unprecedented in 1,000 Years'

The New York Times

Climate Change Threatens World's
Coffee Supply, Report Says

City Lab

Climate Change Is Likely to Cause
Allergy Misery for Millions

GreenBiz

Water pipes, infrastructure could buckle
under climate change

Climate Central

Scientists Tease Out Climate Change's
Role in Zika Spread

Bloomberg

Bloomberg: Rising Sea Levels Could Cost
U.S. Homeowners Close to \$1 Trillion

The Washington Post

Wheat, One of the World's Most Important Crops,
is Being Threatened by Climate Change

Undercurrent News

New Report Projects Fall in Global Fisheries
Revenues Under Climate Change

Cool Tools for a Warming World Symposium

University of British Columbia

October 13, 2016

ACCO
ASSOCIATION OF CLIMATE CHANGE OFFICERS

Climate Change & Decision Making: Mobilizing an Army of Skilled Assets

Cool Tools for a Warming World Symposium

University of British Columbia

October 13, 2016



Yeah yeah yeah, but why does this affect 'me'

- Obvious changes in climate systems including more frequent/significant extreme events, changing climate systems (wet gets wetter, dry gets dryer, sea level rise, higher temperatures)
- Impacts on vulnerable populations (geographic, underserved, social)
- Ability to cope (financial, behavioral, cultural)
- Cultural identity is on the line
- Substantial impacts on real estate and infrastructure
- Longer-term plans are dramatically intersecting with a changing climate

Why is this so challenging?

- How to balance today's needs with longer-term considerations when the economics in play are so enormous and the systems implications so broad?
- Human nature is to focus on episodic (e.g. storm event)
- Decision-makers are in their roles for a period of time that isn't long enough to envision the decadal climate change implications
 - While longevity of city manager profession increased to more than 10 years in 2006, the average tenure actually declined slightly in 2012 to 7.3 (from 7.38 in 2009)
 - Approximately 87% of mayoral terms are 2-4 years according to National League of Cities
- Most of the workforce wasn't trained to address climate change and related considerations in their professional capacity (nor do most job descriptions meaningfully account for the requirements to do so)

Impacts Lead to Decision Making Considerations

Physical impacts

- Heat
- Storms
- Fire
- Floods
- Sea level rise
- Acidification
- Crops shifting
- Pest migration

Economic, natural & social impacts

- Cost increases
- Lower productivity
- Disease & other health impacts
- Habitat loss
- Species loss
- Human migration
- Food insecurity

Policy interventions

- Emission controls
- Energy mandates
- Fuel standards
- Water restrictions
- Reporting/disclosure
- Species protection
- Adaptation planning

Risk and Policy leads to change

Policy

- Emission controls
- Energy mandates
- Fuel standards
- Water restrictions
- Disclosure
- Species protections
- Adaptation planning

Economic & social response

- Rising operating costs
- New products & business models
- Different food sources
- Data dependence
- Stakeholder demands
- Winners & losers

Altered conditions

- Changing markets
- License to operate
- Living standards
- Population patterns
- Types of collaborations

Assess Impacts Across Value Chains

Upstream	Operations	Downstream
Energy Water Raw materials Labor Equipment Buildings Capital Infrastructure	Physical Impacts Operations energy efficiency/ carbon intensity Supply chain logistics Changing cost structures such as energy costs Labor pool effects	Customer demands Customer loss of operation Energy cost flow through to products Adaptation needs Population shifts

Practices for effective local govt. leadership

2. POLICY FACILITATION

Helping elected officials and other community actors identify, work toward, and achieve common goals and objectives. Practices that contribute to this core content area are:

- **Facilitative Leadership:** Building cooperation and consensus among and within diverse groups, helping them identify common goals and act effectively to achieve them; recognizing interdependent relationships and **multiple causes of community issues and anticipating the consequences of policy decisions** (requires knowledge of community actors and their interrelationships)
- **Facilitating Council Effectiveness:** Helping elected officials develop a policy agenda that can be implemented effectively and that serves the **best interests of the community** (requires knowledge of role/authority relationships between elected and appointed officials; skill in responsibly following the lead of others when appropriate; **ability to communicate sound information and recommendations**)

Practices for effective local govt. leadership *(cont'd)*

3. FUNCTIONAL AND OPERATIONAL EXPERTISE AND PLANNING

A component of Service Delivery Management. Practices that contribute to this core content area are:

- **Systems Planning:** Understanding the processes by which functional and operational systems can impact the ability to grow jobs and improve the economy, to control cost of government, and to improve quality of life; recognizing that the **various systems are interrelated and interdependent and must work in a coordinated fashion in order to maintain long-term community vitality**
- **Functional/Operational Expertise:** Understanding the basic principles of service delivery in functional areas--e.g., public safety, community and economic development, human and social services, administrative services, public works (requires knowledge of service areas and delivery options)
- **Operational Planning:** **Anticipating future needs**, organizing work operations, and establishing timetables for work units or projects (requires **knowledge of technological advances and changing standards**; skill in identifying and understanding trends; skill in **predicting the impact of service delivery decisions**)

Practices for effective local govt. leadership *(cont'd)*

10. BUDGETING

Preparing and administering the budget; implementing **long-term financial planning that integrates strategic planning** and is reflective of a community's values and priorities

11. FINANCIAL ANALYSIS

Interpreting financial information to **assess the short-term and long-term fiscal condition of the community, determine the cost-effectiveness of programs**, and compare alternative strategies

12. HUMAN RESOURCES MANAGEMENT

Ensuring that the policies and procedures for employee hiring, promotion, performance appraisal, and discipline are equitable, legal, and current; **ensuring that human resources are adequate to accomplish programmatic objectives**

13. STRATEGIC PLANNING

Positioning the organization and the community for events and circumstances that are anticipated in the future. Developing a strategic plan which identifies all possible stakeholders, including those from traditionally underrepresented groups, and incorporates their input, defines mechanisms for informing the public and gaining public support, details specific goals, and specifies work processes to accomplish those goals

Practices for effective local govt. leadership *(cont'd)*

8. DEMOCRATIC ADVOCACY AND PUBLIC ENGAGEMENT

Demonstrating a commitment to democratic principles by respecting elected officials, community interest groups, and the decision making process; educating citizens about local government; and acquiring knowledge of the social, economic, and political history of the community

Practices that contribute to this core content area are:

- **Democratic Advocacy:** Fostering the values and integrity of representative government and local democracy through action and example; ensuring the effective participation of local government in the intergovernmental system (requires knowledge and skill in intergovernmental relations)
- **Public Engagement:** **Committing to inform and involve the community in decisions that may affect them;** dedicating resources and efforts to find meaningful ways to interact with communities so as to reflect collaboration, diversity of thought, and incorporation of public input into the decision-making process

ICMA sample job description excerpt

City of Pomona
City Manager (Continued)

Ability to:

Evaluate and develop improvements in operations, procedures, policies, or methods.

Prepare clear and concise reports and develop appropriate recommendations.

Communicate clearly and concisely, both orally and in writing.

There's a lot to consider ...

Infrastructure

- Assessing risk and applying implications to city systems and populace
- Contemplating tomorrow's infrastructure & a dynamically changing world
- Making all capital improvement programs a step toward future needs

Real estate

- Acquisitions & buyout programs
- Transferable development credits
- Real estate disclosures
- Conservation easements
- Rolling conservation easements

Establishing Tax Rates & Zones

- Market incentives

Prioritizing Funding

- Where? (select projects)
- When? (set priorities, financing)
- How much?

Funding Sources

- Grants
- Dedicated tax revenues
- Assessments & impact fees
- Impacts on tax base

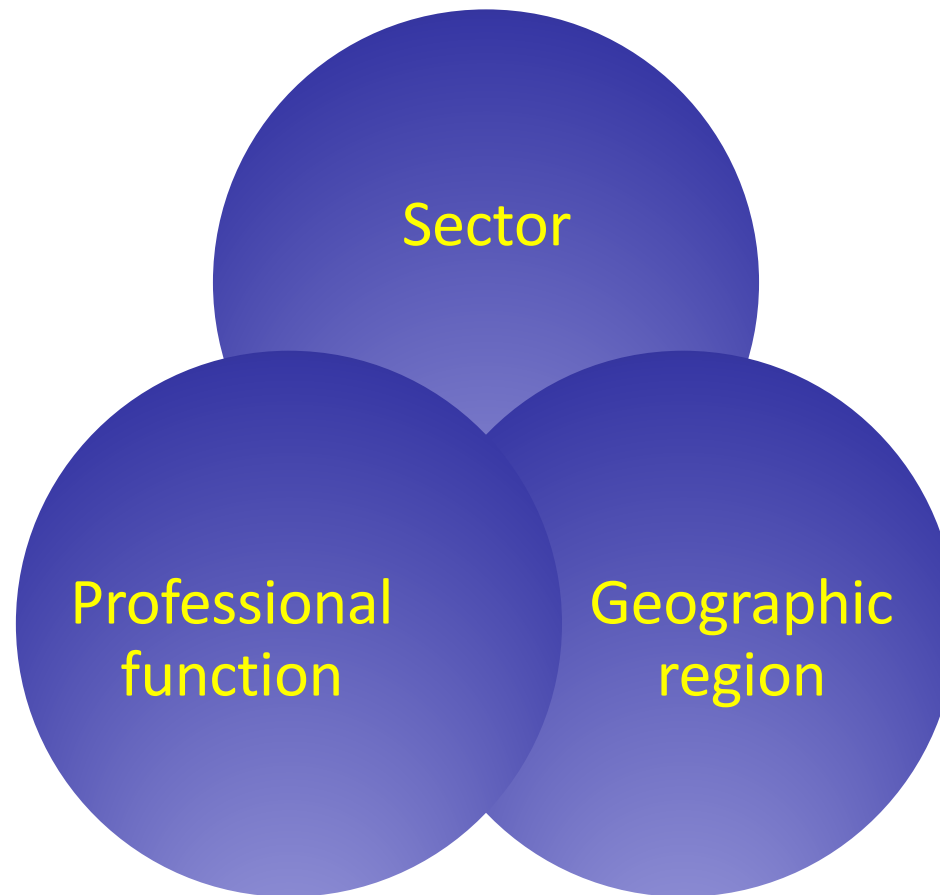
Relocation/retreat

- What can be protected?
- How long do you “fight” before retreating?

And a lot of people who play crucial roles

- Public health
- Emergency preparedness
- Economic development
- Energy & facilities management
- Resource management
- Historic preservation
- Planners & civil engineers
- Architects
- Procurement
- Human resources
- Transportation
- Civil works & infrastructure
- Fleet management
- Legal & compliance
- Public engagement
- Elected officials

Tailoring education and training



Key elements to successful climate action



Thinking about human resources

- **Foundational knowledge and skills**
 - Science Literacy
 - Environmental and Economic Literacy
 - Understanding of the Policy Landscape
 - Management Acumen
- **Organizational knowledge and experience**
 - Strategic Planning
 - Decision-Making
 - Compliance and Enterprise Risk Management
 - Asset Management
 - Value and Supply Chains
 - Communications and Social Responsibility
 - Governance
- **Strategic execution competencies**
 - Enterprise Risk Mitigation
 - Supporting Change Within the Organization
 - Stakeholder Engagement
 - Reaching Beyond the Organization



Cool Tools for a Warming World Symposium

University of British Columbia

October 13, 2016



Some other ideas to execute ...

- **Job Expectations:**
 - Develop climate related **guidelines or requirements** for key decision making roles and programmatic activities
- **Process:**
 - Establish a **checklist of requirements** for project management
- **Tools:**
 - Leverage and position **resources and tools** to simplify decision making and establish a dashboard measuring progress
- **Alignment:**
 - Examine the **key challenges and priorities** for your city and their relationships with climate change
- **Governance:**
 - Consider the interdisciplinary nature of climate implications and initiatives and **establish a governance structure** that facilitates top-down, bottom-up and collaboration across departments/units
- **Leadership:**
 - Climate change requires **forward-thinking actions**

The buck stops with public will











Cool Tools for a Warming World Symposium

University of British Columbia

October 13, 2016

ACCO
ASSOCIATION OF CLIMATE CHANGE OFFICERS

Legend: 100-level = Beginner; 200-level = Intermediate; 300-level = Advanced Application; 500 - Sector Specific

Climate Science, Risk & Adaptation Planning	GHG Management, Reporting & Reduction Strategies	Energy Strategies	Commodities & Markets	Supply Chain Management	Governance, Engagement & Behavior Change	Project Finance & Economic Analysis	Enterprise Strategy
Climate-101:  Understanding Climate Science & the Latest Projections	GHG-101:  Basics of GHG Accounting, Reporting & Disclosing GHG Emissions	Energy-101: Creating a Comprehensive Energy Efficiency Management Program	Commodities-101: Understanding & Leveraging RECs	SupplyChain-101: Introduction to Assessing Climate Related Risks in the Supply Chain	Governance-  101: Engaging Stakeholders & Establishing Strategies for Leading Organizational Change	Economics-101: The Economics of Climate Change	Enterprise-201:  Analyzing & Quantifying Climate Risk, Assessing Materiality and Disclosing Climate Risk
Climate-102: Understanding Climate Variability, Extreme Events & Long-Term Climate Change	GHG-102:  Fundamentals of the Energy, Water & Food Nexus	Energy-102: Energy Markets and Regulation and Other Issues Affecting Energy Costs	Commodities-102: Offsets, Markets & Driving Offset Projects	SupplyChain-201: Getting Actionable Supply Chain Data and Engaging Suppliers	Governance-  102: The Legal/Policy Landscape of Climate Change & Related Implications	Economics-201: Putting a Price on GHG Emissions	Enterprise-301: Prioritizing and Funding Climate Initiatives (2016-17)
Climate-103: The Basics of Sea Level Rise and Impacts on Coastal Assets & Infrastructure	GHG-201: Establishing GHG Reduction Goals & GHG Management Structures	Energy-103: LEED Core Concepts (2016-17)	Commodities-201: Procuring REC and Offset Projects with Tangible Benefits	SupplyChain-202: Prioritizing Supply Chain Initiatives and Strategies for Implementation	Governance-201: Building, Maintaining and Benchmarking a Stakeholder Engagement Program	Economics-301: Quantifying Climate Risks (2016-17)	
Climate-201:  Identifying Climate Hazards & Conducting Vulnerability Assessments	GHG-301: Developing and Managing and Internal Carbon Fee (2016-17)	Energy-201: Developing & Enhancing Your Renewable Energy Strategy		SupplyChain-203: Activating Your Supply Chain (2016-17)	Governance-202: Engaging the C-Suite on Climate Change (2016-17)		
Climate-202:  Leveraging Climate Data & Tools		Energy-202: Price Stabilization and Renewables Procurement through Power Purchase Agreements		SupplyChain-301: Mitigating Climate Related Risks in the Supply Chain (2016-17)	Governance-301: Advanced Strategies and Tactics for Leading Organizational Change (2016-17)		
Climate-203: Developing an Adaptation Plan for Your Organization		Energy-203: Assessing P3 Opportunities and Establishing a Strong Partnership Project (2016-17)					
Climate-204: Engaging in Regional Adaptation Initiatives (2016-17)		Energy-204: Leveraging Microgrids to Reduce Risk & Footprint (2016-17)					
Climate-205: The Role of Natural Infrastructure in Resilience (2016-17)		Energy-501: Navigating Long-Term Defense Energy Challenges: Efficiency Measures, Renewables & PPAs					
Climate-501: Climate Risk as an Encroachment Factor on Defense/National Security Installations							

Cool Tools for a Warming World Symposium

University of British Columbia

October 13, 2016

Daniel Kreeger
Executive Director
Association of Climate Change Officers
dkreeger@ACCOonline.org
202-496-7390