COLLABORATING ON CLIMATE

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Outline

• Collaboration overview
• Types of university support
• Advice from local government
Collaborative Approach

A collaborative planning process is informed by science and led through a participatory stakeholder process.
### Stakeholder Engagement Process

- Study Newsletter/Website
- Forums (2)
- Adaptation Work Groups (4)
- Community Meetings (3-4)
- Regional Symposium
- Advisory Committee
- Study Evaluation

<table>
<thead>
<tr>
<th>Municipal Officials</th>
<th>City Staff</th>
<th>Regional Agencies</th>
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</thead>
<tbody>
<tr>
<td>State agencies</td>
<td>Federal Agencies</td>
<td>Non-Profits</td>
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<tr>
<td>Homeowner Assoc.</td>
<td>Lake Associations</td>
<td>Academia</td>
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<td>Builders</td>
<td>Developers</td>
<td>Landowners</td>
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<td>Insurance</td>
<td>Utilities</td>
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Why involve stakeholders that include the public?

- What are the goals of public participation and involvement?
Goals of Public Participation

• Key Concepts from the National Research Council (NRC) 2008 Report:

“Public Participation in Environmental Assessment and Decision Making”
Goals of participation

• Improve quality
• Improve legitimacy
• Improve capacity of environmental assessment and decisions
Improve Quality

• Drawing on local knowledge to improve decision making.
• By a public process that...
  • Identifies values, interests, and concerns of all who are interested in or might be affected by the process or decisions
  • Uses the best available knowledge
  • Incorporates new information, methods, and concerns
Improve Legitimacy

• By fostering legitimate and equitable decision making by…
  • A process that is seen by the interested and affected parties as fair and competent
  • A process that follows the governing laws and regulations
Improve Capacity

- By increasing resilience, adaptive capacity, and social capital by...
  - Engaging the public with vetted data on severe weather trends and best available climate change science
  - Fostering inter-town/region/watershed wide understanding, trust, and collaboration to increase resilience to stormwater risks
  - Developing widely shared understanding of the issues and decision challenges
But How?

- National Climate Assessment Report Model
- National Research Council Model
- One model that I have used…
Model: National Climate Assessment Report 2013:

Adaptation Process

- Identifying risks and vulnerabilities
- Planning, assessing and selecting options
- Revise strategy and research; share lessons learned
- Monitor and evaluate
- Implementation

Stakeholder Engagement
Model: NRC 2010 Report “Adapting to the Impacts of Climate Change”

1. Identify current and future climate changes relevant to the system
2. Assess the vulnerabilities and risk to the system
3. Develop an adaptation strategy using risk-based prioritization schemes
4. Identify opportunities for co-benefits and synergies across sectors
5. Implement adaptation options
6. Monitor and reevaluate implemented adaptation options
1. Agenda Setting

2. Convening & Assessing

3. Visioning and Objectives

4. I.D. Barriers

5. Strategies

6. Partners & Resources

7. Action Plan

8. Leadership Team

9. Actions

10. Feedback & Base of Support

Our Model: Collaborative Planning Approach
For Climate Change Adaptation

Benchmarks for Success...Key Inputs

To Achieve these Outputs

J. Gruber 2013
Tale of Two Regional Climate Change Adaptation Projects (NH and MN)

- Project Approach:
  - long-term environmental, economic, and social sustainability can only be reached by empowering individuals and communities to understand the root causes of local problems and to participate in creating solutions.
Two Climate Change Adaptation Engaged Scholarship Projects

Minneapolis Region, MN

Lake Sunapee Region, NH
Involving all stakeholders in data gathering, assessing findings, and policy development
1. Agenda Setting

Commonly…Natural disaster

There are Opportunities …

- Raise awareness
- Engage local community members of policy makers
- Form a leadership team of key community leaders
- Communicate urgency
Example of communicating urgency: Heavy Precipitation Trends

Percentage increase in very heavy precipitation (heaviest of 1% of all events) from 1958-2011

Karl et al. 2011
2. Convene community leaders and a broad list of stakeholders and assessing the situation

Convened a broad cross-section of stakeholders that included representatives of:

- Education/Academic Organizations
- Local Officials
- Federal Government
- Municipal Employees
- NGO/Conservation Orgs.
- Private Citizens/ Public
- Regional official
- State Agencies Staff
- State Officials
- Students
2. Convening and Assessing the situation and affiliated problems

Assessment is through research by a science/technical team and the presentations and discussions during the stakeholder session(s). It seeks to:

- Collect and analyze essential data – Science/technical team
- Document current conditions – Science/technical team and stakeholders
- Include diverse views and perspectives in small and large group discussions
- Provide an opportunity to reflect on the situation
- Help participants understand the underlying causes or problems
For Example: Guiding Questions…

- In what ways have you observed or heard about land-use/development and changing weather patterns impacting this region?

- Do you think some of these impacts might reoccur?

- What are the underlying causes and/or problems?

- Top reasons why these impact might reoccur?

  - Participants then voted (with dots) on the top reasons. Results were then grouped into categories for future Working Groups.
3. Visioning opportunities and articulate overall objectives

From the previous assessment process…
1. An Overall Vision and Objectives are Developed
2. Work Groups are typically formed, each with 3 to 5 Objectives identifying “What could be done.”

Example of Work Groups:
A. Education, Outreach, and Stakeholder Engagement
B. Land Use Planning and Policy
C. Stormwater Infrastructure (Green/Grey) and LID
D. Sustainable Funding: Stormwater Infrastructure
Barriers/challenges are...financial, political, social, cultural, logistical, and/or philosophical difficulties...that get in the way of accomplishing the objective.
5. Identification of strategies that recognize barriers and overall objectives

- Prioritizing strategies and tools for implementation
- Assessing impact vs. feasibility of each alternative
### Impact Vs. Feasibility Grid

<table>
<thead>
<tr>
<th>FEASIBILITY</th>
<th>IMPACT</th>
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<tbody>
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<tr>
<td>low</td>
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6. Identification and engagement of potential partners and types of resources required
7. Formulating action plan based on data and social values

Benchmarks for Success…Key Inputs

7. Action Plan

To Achieve these Outputs

“How to Proceed”

• Action Steps,
• Responsibilities,
• Timeline, and
• Resources Required
8. Formalizing inclusive implementation leadership team

Benchmarks for Success…Key Inputs

8. Leadership Team

To Achieve these Outputs
9. Initiating actions based on priorities, balancing highest return with ease of achieving results

Benchmarks for Success...Key Inputs

9. Actions

To Achieve these Outputs
10. Embracing open and dynamic feedback on process and actions taken. Continue to build broad base of support.

Benchmarks for Success…Key Inputs

10. Feedback and Base of Support

To Achieve these Outputs
Types of University Support

- Doctoral Research
- Doctoral Service
- Master’s Thesis & Projects
- Class Projects
- Collaborative Service Initiatives
- Masters Internships
- Collaborative Grant Funded Projects
Doctoral Research

- Community-based adaptation planning
Doctoral Service

• Climate communication
Master’s Thesis & Projects

- Facilitated Community of Practice

Photo: NASA
Class Projects

- Vulnerability assessments

Photo: Charlie Boswell
Collaborative Service Initiatives

Sebago Lake Watershed
Climate Change Adaptation Planning Assessment

An assessment of municipal ordinance and community capacity to address climate change in four communities of Maine’s Sebago Lake watershed

Manomet Adaptation Project
Masters Internships

• GHG inventory in Keene
Collaborative Grant Funded Projects
Rain-garden: Green Infrastructure For Sustainable Coastal Communities
(Under UNH, Antioch, & Rockingham Regional Planning Project working with local government)
Exeter, NH Green Infrastructure – UNH Stormwater Center
Making the most of working with universities