



Module 2: Legal and financial implications of climate change

REGULATORY AND FINANCIAL DRIVERS, BARRIERS, AND STRATEGIES

Overview

1. Drivers & barriers
2. Policy and Regulation
3. Financial issues
4. Liability and Insurance: Rising Issues



Adaptation Drivers & Barriers

WHAT FORCES ADVANCE AND SLOW OUR PATH TOWARDS RESILIENCY?

Adaptation drivers & barriers

DRIVERS

- **Recent or projected costs of extreme weather on municipal budgets**
- **Standards and regulatory requirements**
- **Liability concerns**
- Increasing recognition of credibility of climate science and the advance of climate change
- Advocacy by NGOs
- Peer competition and image: what other communities are doing

BARRIERS

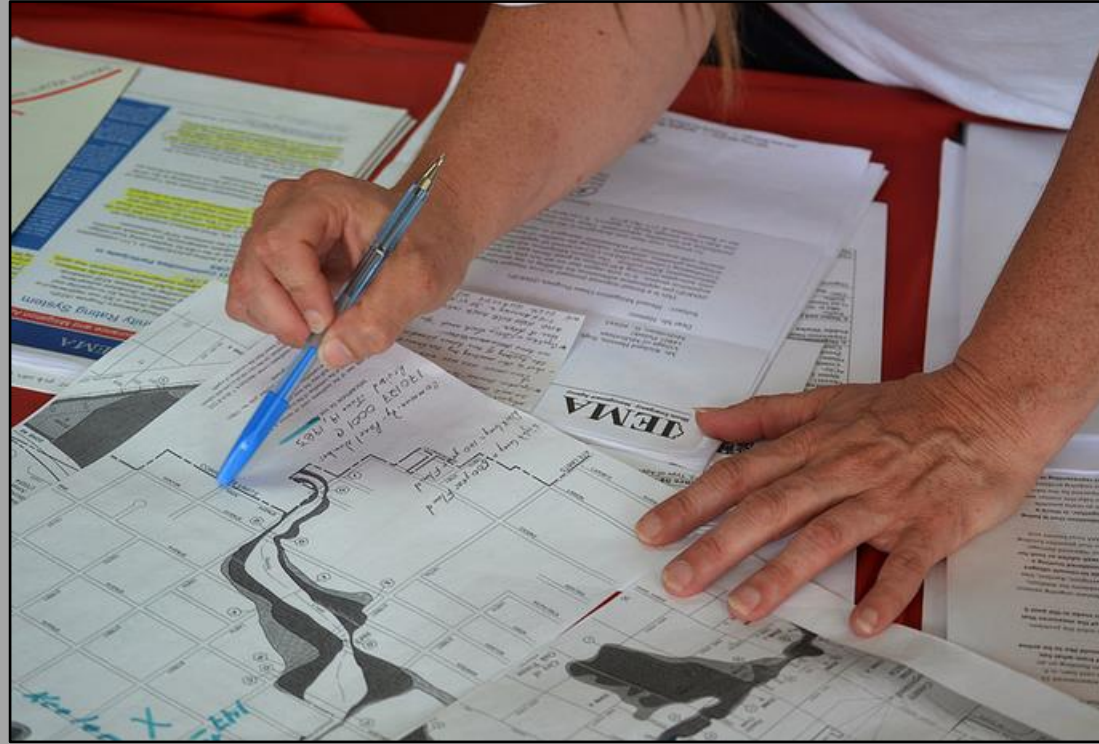
- **Lack of resources (human and financial)**
- **Existing (often long-standing) government priorities and policies**
- **Lack of economic justification**
- **Difficulty bringing stakeholders to the table**
- **Short terms for political leaders**
- Limited understanding of climate risks and vulnerabilities
- Uncertainty

Adaptation drivers & barriers

Facilitating factors

- Leadership by an elected or senior adaptation champion
- In-house or external expertise
- Willingness to allocate resources
- Suitable timing
- Interdepartmental cooperation
- **Compatibility with other policies (sustainability, green development, energy conservation)**





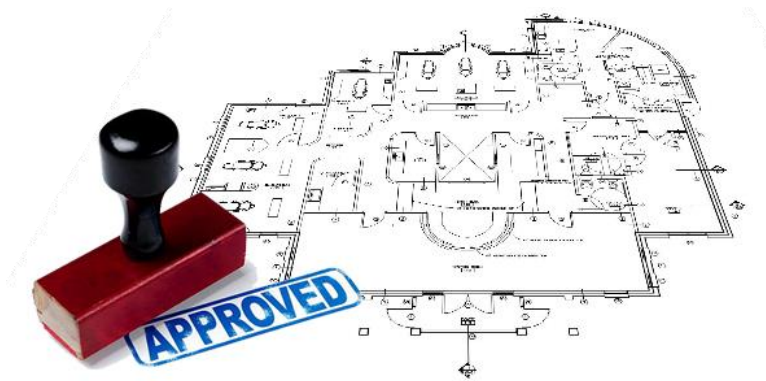
Policy and Regulation

Policy and Regulation

Standards & regulatory adaptation incentives

Municipal regulations can be important drivers of local adaptation to climate change by:

- Enforcing and strengthening policies that are already in motion to restore and protect ecosystem resiliency (e.g. watershed conservation)
- Shifting away from policies that reduce adaptive capacity (e.g. development incentives in flood plains)
- Integrate climate change explicitly into policies and planning processes (e.g. climate vulnerability assessment in development review)
- Update building, energy, and landscaping codes and encourage “above-code” programs (e.g. cool roof codes, tree-planting requirements in paved areas, etc)



Policy and Regulation

Federal Policy Initiatives

- White House: Executive Order 13653 Climate Preparedness
Directs federal agencies to support local adaptation efforts and integrate adaptation into their own plans and facilities
- FEMA: Climate Change Adaptation Policy Statement
Agency-wide directive to integrate adaptation planning into programs, policies, and investments.
- Crosscutting national adaptation strategies on integrating efforts
National Action Plan: Freshwater Resources; National Fish, Wildlife, and Plants Adaptation Strategy; National Ocean Policy Implementation



Additional Resources

- [Climate Regulation Tracker](#)

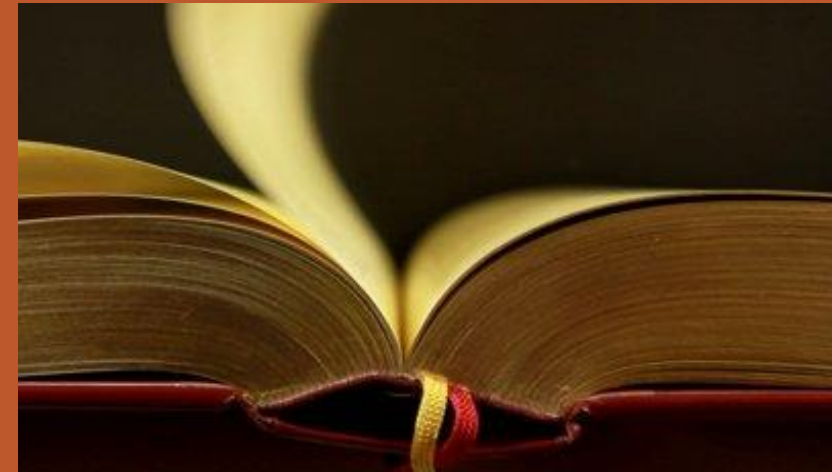
Comprehensive summaries and links to recent climate change policies and litigation in US from Columbia Law School.

- [US Climate Action](#)

World Resources Institute's analysis of US Climate Action Plan, and related publications and news.

- [US News & World Report on Climate Change](#)

The latest news on climate change that may guide future policy and regulation direction.





Financial Issues

BARRIERS, DRIVERS, AND FINANCING STRATEGIES

Financial issues

Fiscal barriers to adaptation

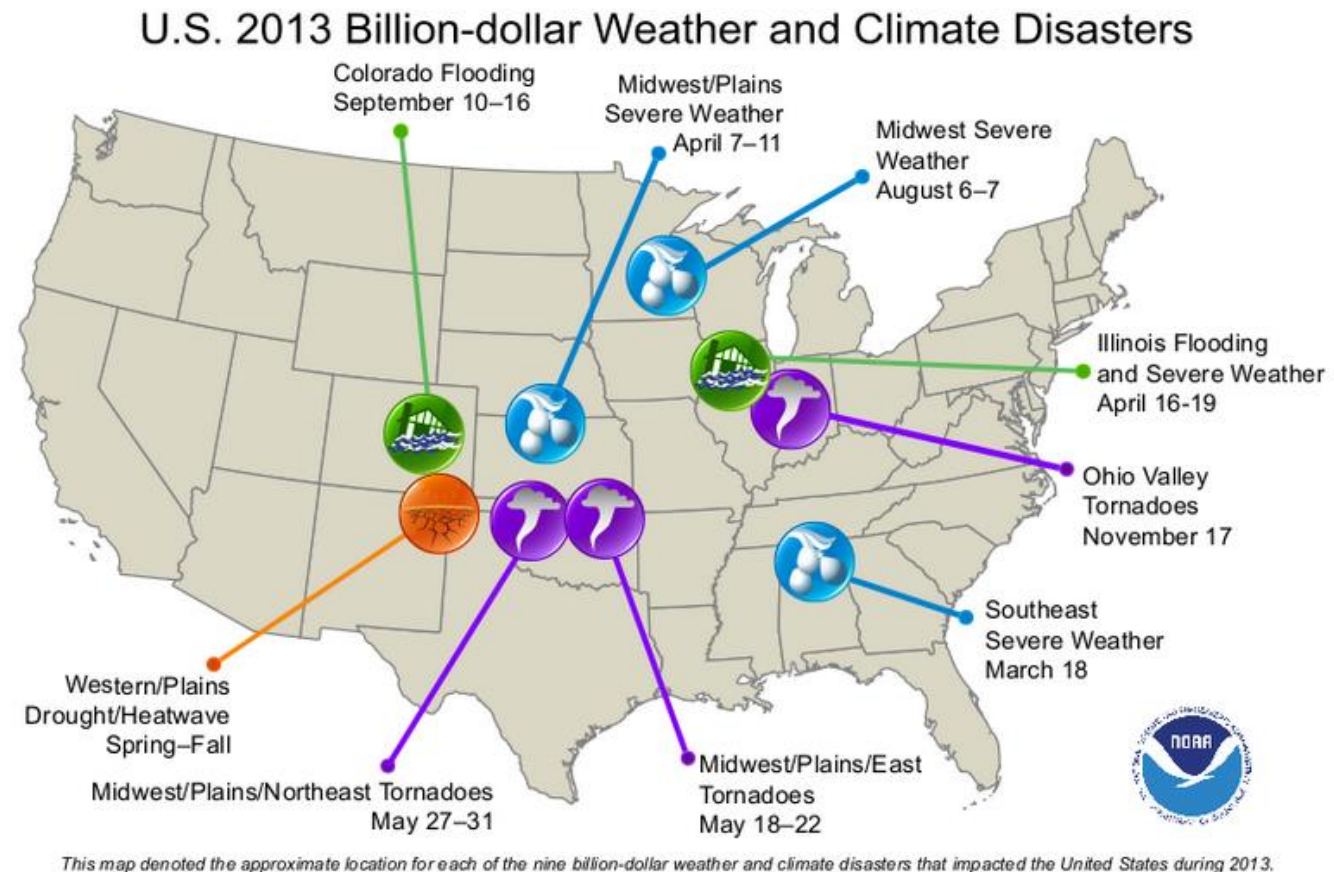
1. Reactive approaches that result in one-time influx of funding
2. No dedicated funds for adaptation
3. The cost of adaptation measures is unclear
4. Taxation powers are limited by popular support
5. Popular support for “environmental issues” fluctuates

Financial issues

Adaptation driver: Cost avoidance

Building municipal and public awareness of current and future costs related to climate change is an important adaptation driver. Focus on communicating current and future:

- Energy expenditures
- Impacts on annual departmental budgets for unexpected weather events
- Weather-related disruptions of business and productivity
- Transportation costs



Financial issues

Financing strategies: Preparation is a must

POTENTIAL FUNDING STRATEGIES

- External grants (federal, state, foundations)
- Private public partnerships
- Share costs by integrating adaptation into existing operating budgets
- Ratepayer fees (e.g. water, stormwater, sewer, etc)
- Loans (State Revolving Fund Loans)
- Tax levy (property tax, sales tax, TIF, etc)

HELPFUL INFO FOR SECURING FUNDS:

1. Costs of various adaptation approaches to be considered;
2. Probabilities of inundation events that can be expected;
3. Costs to infrastructure, real estate, local economic activity, and natural system function that may result from inaction

Use tools and reports to gather this data and run a thorough vulnerability assessment

Financial issues

Federal and foundations grants

SOME SOURCES:

- EPA Environmental Finance
- FEMA Hazard Mitigation Assistance
- DOT/EPA Sustainable Communities Partnership
- HUD HOME Investment Partnership Programs

SECURING FEDERAL GRANTS:

- Work with town staff to assess costs of various adaptation approaches
- Keep up with latest peer-reviewed climate findings to determine probability levels (NOAA, NCA, IPCC)
- Estimate costs to infrastructure, real estate, local economic activity, and natural system function from inaction
- Demonstrate ongoing commitment to adaptation that also meets GHG reduction goals
- Adopt planning process that institutionalizes climate considerations across government programs

Financial issues

Partnering with the private sector and home owners

MUNICIPALITIES NEED PARTNERS

- Much of the necessary investments in infrastructure fall on privately owned land. **Incentivizing home owners** to engage in best management practices is important.
- **Cost sharing with private sector** entities represents another opportunity for financing.

CASE: HURON RIVER WATERSHED COUNCIL

HRWC works with municipalities, business, and homeowners to



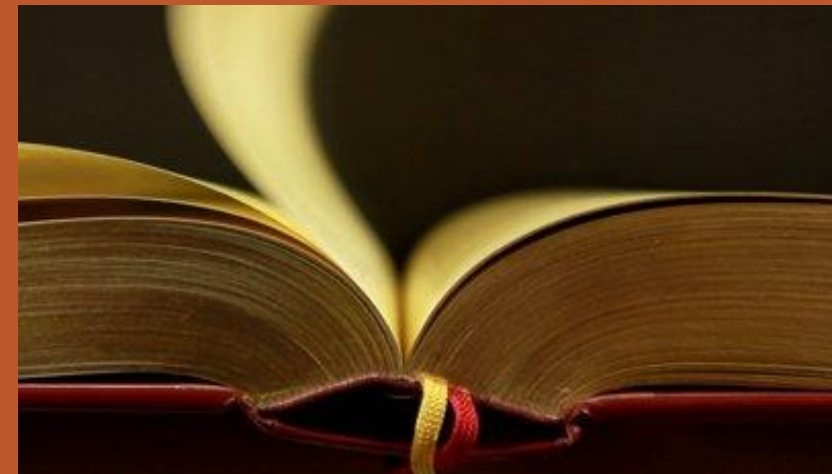
Additional Resources

- [Climate Funding Opportunities](#)

A snapshot of what national and international funding opportunities are currently available (as of July 8, 2014) from federal government and agencies, environmental organizations and foundations.

- [EPA Environmental Finance](#)

Financial tools and funding sources for environmental programs from EPA, including water, brownfields, green building, international development, state and local government, and tribal.





Liability and Insurance: A rising issue

Liability: A rising issue

Farmers Insurance Lawsuit

2014: FARMERS INSURANCE VS LOCALITIES IN CHICAGO

April 2014: Farmers Insurance filed 9 class-action lawsuits against local governments in the Chicago area.

Suits allege localities did not do enough to prepare sewers and storm drains for increasing downpour.

June 2014: Lawsuits withdrawn

“We believe our lawsuit brought important issues to the attention of the respective cities and counties”

LONG-TERM IMPLICATIONS

- More cases likely that will address how city and local governments should manage budgets to prepare for intensified climate
- Insurance companies becoming increasingly vocal about rising costs of climate change
- Insurance sector is a key sector for the economy—threats to the sector threaten the economy and taxpayers as well

Liability: A rising issue

Cost avoidance: Insurance

May 2014 Lloyd's report called for insurance industry to consider catastrophe modeling after Superstorm Sandy

- damage and weather-related losses around the world have increased from an annual average of \$50bn in the 1980s to close to \$200bn over the last 10 years
- Insurance might need to hold more capital to protect against increased risk

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