What Drives the Agenda in Earthquake Policy?

Tom Birkland

NC State University

11th National Conference on Earthquake Engineering

Los Angeles, California

June 2018
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What is public policy?

• What governments choose to do...or not to do.
• Problem-driven
“Textbook” Policy Process

Issue Emergence → Agenda Setting → Alternative Selection

Evaluation → Implementation → Enactment

Feedback

https://www.cnn.com/2013/01/14/politics/schoolhouse-rock-40/index.html
Laying the foundation for the earthquake policy community

• 1906: Earthquake
  • 1906: The Seismological Association of America founded
  • 1949: EERI founded
  • 1957: IGY and Vela Uniform
  • 1960s: Interdisciplinary disaster science
  • 1960s: The policy sciences

• 1964 Alaska Earthquake and the NAS reports
  • 1970: EERI becomes a professional society

• 1971 Sylmar Earthquake
  • 1974: Merger of NOAA and USGS earthquake program to Menlo Park

• 1977: NEHRA and the NEHRP
The Earthquake Policy Community
Contact T. Birkland for image sources
<table>
<thead>
<tr>
<th></th>
<th>Testimony on a Specific Event</th>
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<td>Earthquake Program/NEHRP</td>
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Events are not enough!

• Pre-1964 efforts to develop an earthquake program

• **The 1964 Alaska Earthquake**
  • The NAS reports
  • Alaska Reconstruction and Recovery Commission

• **The 1971 earthquake**
  • The earthquake research center at Menlo Park
  • State-level policy change in California: Alfred E. Alquist Hospital Seismic Safety
  • Act; Alquist Priolo Act
  • Refinement of the national program
  • Engagement of policy champions
What has pushed earthquakes lower on the agenda?
New York Times, May 24, 2018 – Losses in each zip code from major natural disasters, 2002-17
Does this mean that *no* progress has been made?
Major accomplishments

• Improved earthquake characterization
• Full-time monitoring
• Advanced National Seismic System (ANSS)
• NEES → Natural Hazards Engineering Research Infrastructure (NHERI).
• Instrumentation and the Center for Engineering Strong Motion Data
• Improved building codes and practices through the National Seismic Hazard Model
• Model building codes (FEMA, NIST, USGS)
• HAZUS
• Support for drills and scenarios
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<table>
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The NEHRP is a **mature program**

- Institutionalized in federal law
- Continuing appropriations
- A record of accomplishments
- Changes to policy are incremental rather than significant
- Policy changes are “trailing indicators”
NEHRP Reauthorization: Key provisions of S.1768

• Early warning
• ANSS Management Plan
• Resilience and of post-earthquake functionality
• Mapping
• Interagency Coordinating Committee: MOUs with other federal agencies
• A report from the Comptroller General on seismic hazards
Will another earthquake drive this forward on the agenda?

• Spur public interest?
• Hasten the enactment of this bill?
• Hasten changes to federal disaster policy?
• The implementation challenges will remain
To *elevate* the issue

- Mobilize the community
- *Expand* the earthquake community
- Highlight successes
- Illustrate shortcomings in existing policy
- Attention *and* support for implementation
Successful implementation

- *Clear messages*
  - sent by
    - *credible officials* and
      - *received by receptive implementers* who have/are
        - given sufficient resources and
          - who implement policies supported by affected groups
            - lead to implementation success
Clear messages from credible officials

• Model building codes and standards – FEMA, ATC
• Tools and guidance
• Partnerships
• Drills and scenarios
Sufficient resources?

Figure is in 2010 dollars
Receptive implementers

• State and local government
• The private sector
• Individuals and households
The implementation challenges

• Lack of a broad public constituency
• Intergovernmental constraints
• Incentives and tools
Increased interest and attention will elevate the earthquake hazard on the agenda and will contribute to implementation success.