

Session No. 34

Course Title: Social Dimensions of Disaster, 2nd edition

Session 34: Disaster Mitigation Exercise

1 hr.

Objectives:

- 34.1 Discuss the similarities and differences in mitigation strategies for two hazards, e.g., floods versus wildfires
- 34.2 Identify four alternative general positions regarding the simulated mitigation policy proposal
- 34.3 Identify four reasons why the simulated mitigation policy proposal should be adopted
- 34.4 Identify four reasons why the simulated mitigation policy proposal should not be adopted.

Scope:

This session introduces students to the range of stakeholders and potentially conflicting priorities typically found in most communities. The session is comprised largely of a simulation exercise wherein students present brief persuasive speeches.

Readings:

Student Reading:

Burby, Raymond J. 2000. "Land-Use Planning for Flood Hazard Reduction." Pp. 6-18 in *Floods* (Vol. 2) edited by Dennis J. Parker. New York: Routledge.

Professor Readings:

Maclean, John N. 2003. *Fire and Ashes: On the Front Lines of American Wildfire*. New York: Henry Holt and Company (Chapter 4 entitled "A Short History of Wildland Fire," pp. 193-213).

Olson, Richard Stuart, Robert A. Olson and Vincent T. Gawronski. 1998. "Night and Day: Mitigation Policymaking in Oakland, California Before and After the Loma Prieta Disaster." *International Journal of Mass Emergencies and Disasters* 16:145-179.

Burby, Raymond J. 2001. "Involving Citizens in Hazard Mitigation Planning: Making the Right Choices." *Australian Journal of Emergency Management* 16 (Spring):45-51.

Background References:

Gess, Denise and William Lutz. 2002. *Firestorm at Peshtigo: A Town, Its People, and the Deadliest Fire in American History*. New York: Henry Holt and Company.

Arrowood, Janet C. 2003. *Living With Wildfires: Prevention, Preparation, and Recovery*. Denver, Colorado: Bradford Publishing Company.

Burby, Raymond J. (ed.). 1998. *Co-operating with Nature: Confronting Natural Hazards with Land Use Planning for Sustainable Communities*. Washington, D.C.: Joseph Henry/National Academy Press.

General Requirements:

Use Overhead (34-1 appended).

Student Handout (34-1).

See individual requirements for each objective.

Objective 34.1 Discuss the similarities and differences in mitigation strategies for two hazards, e.g., floods versus wildfires.

Requirements:

Use Overhead 34-1.

Remarks:

- I. Introduction.
 - A. **Ask students:** "What illustrations of the four strategies of government action did Burby (2000) identify for disaster mitigation?"
 - B. **Display** Overhead 34-1; "Strategies for Government Action."
 - C. **Review** Overhead and integrate with student generated examples (adapted from Burby, 2003, p. 12).

1. **Regulation.**

- a. Land use, e.g., prohibit development; limit density.
- b. Design of buildings, e.g., flood-proofing; elevation to or above base flood.

2. **Incentive.**

- a. Land use, e.g., preferential taxation.
- b. Design of buildings, e.g., availability of flood insurance; low-interest loans.

3. **Knowledge enhancement.**

- a. Land use, e.g., public awareness campaign.
- b. Design of buildings, e.g., workshops for architects and home builders; technical assistance publications.

4. **Public investment.**

- a. Land use, e.g., purchase property; locate public facilities outside floodplain.
- b. Design of buildings (none discussed by Burby).

D. **Ask students:** “Burby (2000) developed these and other examples of government action strategies for the flood hazard. What are parallels that reflect the wildfire hazard?”

E. **Review** Overhead 34-1; “Strategies for Government Action” and illustrate with examples for the fire hazard, e.g., land use, incentive, etc.

Supplemental Considerations:

The **key message** of this section is that there are parallels in mitigation strategies across hazards. Specific tactics vary of course, but there are many parallels which can be illustrated by the contrast between floods and wildfires. Some professors may wish to **expand** this section by more detailed review of the Burby chapter and extensive discussion of the wildfire hazard or other hazards such as hurricanes, tornadoes, etc. Sections of the book Burby edited (1998), especially Chapters 3 and 4, could be introduced as well. Review of the earthquake hazard, for example, could be introduced through summary of insights developed by Olson et al. 1998. As a device to “set the stage” for the simulation exercise, most will prefer to keep the section **brief**.

Objective 34.2 Identify four alternative general positions regarding the simulated mitigation policy proposal.

Objective 34.3 Identify four reasons why the simulated mitigation policy proposal should be adopted.

Objective 34.4 Identify four reasons why the simulated mitigation policy proposal should not be adopted.

Requirements:

Use Student Handout 34-1.

Remarks:

- I. Rationale.
 - A. All three objectives are related to the student exercise and will be accomplished through its implementation.
 - B. Discussion of recommended procedures apply to all three objectives.
- II. Recommended exercise procedures.
 - A. Introduce student study questions.
 1. **Explain:** “We will analyze the mitigation simulation during our next session. Our analysis will be enhanced if you take careful notes during the presentations. These will serve as reference points for you during the analysis.
 2. **Assignment:** As each presentation is made you should make relevant notes so as to be able to provide specific examples from the various speakers regarding three questions. Use the Student Handout as a note taking device.
 3. **Distribute** Student Handout 34-1; “Mitigation Exercise Worksheet.”
 - a. What general positions have been presented regarding the simulated mitigation policy proposal?
 - b. What reasons have been given as to why the simulated mitigation policy proposal should be adopted?

- c. What reasons have been given as to why the simulated mitigation policy proposal should **not** be adopted?

B. Introduce mitigation simulation exercise.

1. **Remind** students of exercise set-up materials. (Student Handouts from Session 33).
2. **Remind** students of speech length and timer.
3. **Remind** students of role playing expectation, e.g., “Remember, your task is to play your assigned role and really try to convince us that your point of view is the correct one.”

C. Start exercise.

- D. **Evaluations:** remind students that the evaluation of their speech will be distributed at the beginning of the next class session.

Supplemental Considerations:

Depending on the class enrollment, some professors will prefer to allocate more time for the assigned speeches. Also, more than one session may be required if the enrollment exceeds 20 students. To sharpen the focus of the exercise, some professors may wish to expand the introduction by brief review of wildfire policies covered in Maclean (2003) and Arrowood (2003). Alternatively, other professors may wish to review a case study and relate it to the scenario developed for the simulation. An analysis of the Peshtigo, Wisconsin fire in 1871 that destroyed more than 2,400 square miles and killed more than 2,200 people would be a useful contrast (e.g., Gess and Lutz 2002).

Course Developer References:

- I. Arrowood, Janet C. 2003. *Living With Wildfires: Prevention, Preparation, and Recovery*. Denver, Colorado: Bradford Publishing Company.
- II. Burby, Raymond J. (ed.). 1998. *Cooperating with Nature: Confronting Natural Hazards with Land Use Planning for Sustainable Communities*. Washington, D.C.: Joseph Henry/National Academy Press.
- III. Burby, Raymond J. 2000. “Land-Use Planning for Flood hazard Reduction.” Pp. 6-18 in *Floods* (Vol. 2) edited by Dennis J. Parker. New York: Routledge.
- IV. Burby, Raymond J. 2001. “Involving Citizens in Hazard Mitigation Planning: Making the Right Choices.” *Australian Journal of Emergency Management* 16 (Spring):45-51.

- V. Gess, Denise and William Lutz. 2002. *Firestorm at Peshtigo: A Town, Its People, and the Deadliest Fire in American History*. New York: Henry Holt and Company.
- VI. Maclean, John N. 2003. *Fire and Ashes: On the Front Lines of American Wildfire*. New York: Henry Holt and Company.
- VII. Olson, Richard Stuart, Robert A. Olson and Vincent T. Gawronski. 1998. "Night and Day: Mitigation Policymaking in Oakland, California Before and After the Loma Prieta Disaster." *International Journal of Mass Emergencies and Disasters* 16:145-179.