

Session No. 2

Course Title: Social Dimensions of Disaster, 2nd edition

Session 2: What is a disaster?

Time: 1 hr.

Objectives:

- 2.1 Define disaster and disaster behavior
- 2.2 Differentiate among related terms, i.e., accidents, emergency, mass emergency, disasters, catastrophes, and calamity
- 2.3 Define hazard and disaster agent
- 2.4 Discuss different types of disasters
- 2.5 Define the phases in the disaster life cycle
- 2.6 Summarize at least three themes of dissensus among researchers regarding the conceptualization of disaster
- 2.7 Identify three social factors that are contributing to the increase in number and severity of disasters.

Scope:

In this session students will be introduced to the concepts of disaster and disaster behavior. A student workshop exercise will stimulate interest and bring a real world example to these terms and related issues. Other terms such as emergencies and calamities will be contrasted as will areas of dissensus among scholars regarding these definitions. Types of disasters and the phases that comprise the disaster life cycle will be illustrated as will selected social factors that are contributing to the increase in number and severity of disasters.

Readings:

Student Reading:

Adler, Jerry. 2002. "Five Who Survived." *Newsweek* (September 9):20-29.

Professor Reading:

Kreps, Gary and Thomas E. Drabek. 1996. "Disasters Are Nonroutine Social Problems." *International Journal of Mass Emergencies and Disasters* 14:129-153.

Background References:

Aust, Stefan, Cordt Schnibben, et al. 2002. *Inside 9-11: What Really Happened*. Translated from the German by Paul DeAngelis and Elisabeth Kaestner. New York: St. Martin's Press.

Quarantelli, E.L. (ed.). 1998. *What Is A Disaster?: Perspectives on the Question*. London: Routledge.

Neal, David. 1997. "Reconsidering the Phases of Disasters." *International Journal of Mass Emergencies and Disasters* 15:239-264.

General Requirements:

Student Handouts (2-1 through 2-3 appended)

Overheads (2-1 through 2-6 appended).

See individual requirements for each objective.

Objective 2.1 Define disaster and disaster behavior.

Requirements:

Start this session with student exercise and proceed with lecture material specified below.

Overheads 2-1, 2-2, and 2-3, if desired.

Student Handout 2-1.

Remarks:

I. Introduction.

A. **Display** Overhead 2-1; "The 9-11 Attacks".

1. Review the **sequence** of events, i.e., 8:45 a.m. American Flight 11 crashed into the North Tower of the WTC.

2. Highlight the **losses**.
 - a. Display Overhead 2-2; “Losses From the 9-11 Attacks”.
 - b. Death toll: approximately 3,000.
 - c. Financial: \$83 billion (WTC only, direct and indirect).
3. Relate to assigned student reading.

B. Exercise.

1. **Remind** students of exercise procedures.
 - a. Divide class into four groups.
 - b. Appoint student roles for each group.
 - 1) Chair.
 - 2) Reporter.
 - 3) Timer.
 - c. Announce time limit: 5 minutes.
2. **Display** Overhead 2-3; “Workshop Tasks”.
 - a. Group 1: “What key decisions were made by ‘the five who survived’ the WTC attacks?” (select 3)
 - b. Group 2: “What types of help were given by the WTC victims to others?” (identify 4 examples)
 - c. Group 3: “In what ways do disasters differ?” (identify 5 criteria)
 - d. Group 4: “Why are the number of disasters increasing?” (identify 4 social factors)
3. **Start** discussion.
4. **Stop** discussion.
5. **Student reports** from Groups 1 and 2.

II. **Disasters.**

A. Distribute Student Handout 2-1; “Key Definitions”.

B. Refer students to the definition of **disaster** and highlight five components.

1. An **event**.
2. **Severe danger** is incurred or threatened.
3. **Losses** to persons and/or property.
4. Available community **resources** are **severely taxed**.

C. Ask students: “Does the World Trade Center attack meet these four criteria?”

III. **Disaster Behavior.**

A. Refer students to the **definition** of **disaster behavior** on Student Handout 2-1 and highlight three points.

1. **Behavioral act** (not what someone is **supposed** to do, or what somebody **thinks** they **will do**).
2. Behavior is induced by **actual** or **threatened** disaster.
3. The persons – actual or potential.
 - a. Victims.
 - b. Helpers.
 - c. Governmental and non-governmental agencies.
 - d. Private sector organizations.

B. Disaster **decision examples**.

1. Group 1 report (2 minutes).
2. **Elaborate** as necessary with such examples as these from the assigned reading.
 - a. Judy Wein: decision to **search for escape route** despite her own injury and confronting many dead bodies, debris, and visible flames (Adler 2002, p. 24).

- b. Richard Fern: decision **to go down** stairway A despite encountering numerous blockages (Adler 2002, p. 27).
- c. Brian Clark: decision to **leave companions** who insisted on going up toward roof, rather than down (Adler 2002, p. 28).
- d. Stanley Parimnath: decision to ask Clark **to pray** with him briefly (Adler 2002, p. 28).

C. Disaster **helping behavior** examples.

- 1. Group 2 report (2 minutes).
- 2. **Elaborate** as necessary with such examples as these from the assigned reading.
 - a. Bobby Coll, Kevin York and David Vera: seen by Brian Clark to be **calming** a woman and helping her more away from flames (Adler 2002, p. 28).
 - b. Brian Clark: **rescued** Stanley Praitmuth who saw his flashlight and then got help getting over a piece of wallboard – 8 ft. high (Adler 2002, p. 28).
 - c. Wells Crowther: man with red bandanna who **led** several **survivors to safety**; they had planned to wait for firemen to arrive (Adler 2002, p. 29).

Supplemental Considerations:

Too often the presentation of definitions is very boring to students. By using the student exercise strategy they begin to build a realization that **disasters involve real people** who often experience some terrible sights, sounds, smells, and fears. Emphasize that they now have another case example to add to their list of disaster events.

Objective 2.2 Differentiate among related terms, i.e., accidents, emergency, mass emergency, disasters, catastrophes, and calamity.

Requirements:

The definitions should be reviewed and examples of each provided as a lecture.

Student Handout 2-1.

Remarks:

I. Accident.

A. **Refer** students to definition on Handout 2-1.

B. **Example:** automobile wreck, lightning strike at one house.

II. Emergency.

A. **Refer** students to definition on Handout 2-1.

B. Example:

1. Ask students: “If the 9-11 attack had been limited to just United Flight 93 that crashed in a field near Shanksville, Pennsylvania, would we define it as a disaster?” (example of an emergency)

2. Explain “Levels of Emergency”.

a. Used in most communities.

b. Varies in specifics.

c. **Level 1:** resources of one department.

d. **Level 2:** two or more city departments.

e. **Level 3:** all or most city departments and some external resources.

III. Mass Emergency.

A. **Refer** students to definition on Handout 2-1.

B. **Example:** similar to a Level 3 emergency; fewer resources required than for a disaster; small flood or tornado with limited impact area.

IV. Catastrophes.

A. **Refer** students to definition on Handout 2-1.

1. Entire society affected.

2. Assistance from other nations required.

B. Examples: Mexico earthquakes.

1. Date: September 19, 1985.
2. Location: Mexico City and throughout other states, especially Guerrero and Jalisco.
3. Death toll: estimates vary from 4,200 to 10,000.
4. Property damage: 100,000 building units.
5. Reconstruction costs: estimates vary from \$5 to \$10 billion.
6. External aid: over sixty donor nations coordinated by the League of Red Cross and Red Crescent Societies.
7. Source: Dynes et al. 1990.

C. Near catastrophic disasters.

1. Hurricane Andrew.

- a. Date: August 24-26, 1992.
- b. Location: South Florida and Louisiana.
- c. Deaths: 15.
- d. Property damage: \$30 billion.
- e. Source: Drabek 1996, pp. 46-47.

2. Northridge earthquake.

- a. Date: January 17, 1994.
- b. Location: Los Angeles metropolitan area.
- c. Deaths: 57.
- d. Property damage: \$20 billion.
- e. Source: Drabek 1996, pp. 55-56.

3. Terrorist attacks.

- a. Date: September 11, 2001.
- b. Locations: World Trade Center, New York City; Pentagon, Washington, D.C., and Stony Creek Township, Pennsylvania.
- c. Deaths: approximately 3,000.
- d. Financial loss: \$83 billion.
- e. Sources: *Rocky Mountain News*, September 11, 2002, p. 45; *Natural Hazards Observer*, 2002. 27 (September), p. 7.

V. **Calamity.**

A. **Refer** students to definition on Handout 2-1.

- 1. Massive event.
- 2. Extends over time.

B. **Examples:**

1. **The Black Death.**

- a. Date: 1346 to 1350.
- b. Location: throughout Europe.
- c. Deaths: 2 ½ million in England alone. “From the beginning of 1346, rumors reached Europe of a strange and deadly plague that was killing thousands upon thousands in the East.” (p. 68). “By 1350, somewhere between a quarter and a third of Europe’s population had fallen victim to the Black Death.” (p. 69).
- d. Cause: a plague spread by rat fleas.
- e. Source: Robins 1990, pp. 68-69.

2. **Irish Potato Famine.**

- a. Date: 1846-1849.
- b. Location: Ireland.
- c. Deaths: estimate of 1 million; 17,000 died en route to North America.

d. Cause: parasitic fungus caused potato crop failure.

e. Source: Robins 1990, pp. 70-71.

Supplemental Considerations:

Through use of the Student Handout, these definitions can be covered quickly with emphasis only on the key distinctions among the concepts and examples. Students should be urged to use this handout in subsequent course papers.

Objective 2.3 Define hazard and disaster agent.

Requirements:

The definitions should be reviewed and examples of each provided as a lecture.

Student Handout 2-1.

Remarks:

I. Hazard.

A. **Refer** students to definition on Handout 2-1.

1. Hazard is the potential, **not** an actual event.
2. Classes of hazards vary in scope.

B. Examples:

1. The earthquake hazard.
2. The hurricane hazard.
3. Natural hazards (broader scope).

II. Disaster Agent.

A. **Refer** students to definition on Handout 2-1.

1. A class or category.
2. Agents are the cause.

3. Some researchers use “disaster agent” interchangeably with “hazard”. More and more, however, a distinction is made.

B. Examples:

1. Hurricane Andrew, Andrew was a **disaster** (specific event); hurricane is the **disaster agent**.
2. Northridge earthquake, Northridge was a **disaster** (specific event); earthquake is the **disaster agent**.

Supplemental Considerations:

These two definitions should be used to introduce some of the inconsistencies in terminology reflected in the field of disaster studies. Students should be alerted that they will encounter these inconsistencies which often reflects differences in theoretical orientations among researchers. Consequently, there are areas of dissensus regarding answers to the question, “What is a disaster?” This theme will be explored in a later section of this session.

Objective 2.4 Discuss different types of disasters.

Requirements:

Lecture material should integrate student group report.

Overhead 2-4.

Student Handout 2-2.

Remarks:

I. Types of Disasters.

A. **Display** Overhead 2-4; “Three Types of Disasters”.

1. Classification reflects differences in disaster agent or hazard type.
2. Ask students to provide an example of each of the three.
3. **Ask** students: “When might a flood really be a conflict disaster?” (e.g., terrorists bomb a dam)
4. Typology is useful, but has limitations.

5. Comparative **research requires** additional criteria.
- B. Group 3 report (2 minutes).
- C. **Distribute** Student Handout 2-2.
1. **Highlight** similarities to group 3 report.
 2. Note **similarities** between characteristics: Dynes vs. Drabek.
 - a. Length of forewarning (both).
 - b. Scope of impact (both).
 3. Note **differences**: Dynes vs. Drabek.
 - a. Predictability vs. uncertainty of forewarning.
 - b. Accessibility of escape routes.
 4. Dynes's criteria set is **general**, but not inclusive.
 5. Drabek's criteria set was **used** for a **comparative study** of disaster **evacuations**.
 6. **Additional** comparative criteria will be encountered.

Supplemental Considerations:

Aside from introducing the widely used three-fold disaster typology, the purpose of this section is to stimulate thinking about how disaster events might be **compared**, classified, and viewed as being different. It also sets the stage for the upcoming section on themes of dissensus. There is no “right” or “wrong” list of criteria that differentiate among disaster events. Rather each comparative researcher **must select those criteria** that reflect the research questions being studied. Hence, Drabek's (1999) research introduced additional criteria like “accessibility of escape routes” and “uncertainty of forewarning” because these **social dimensions** proved to be relevant to the **variations** in the **evacuations** caused by various events. A single hurricane like Andrew actually produced highly variable warning situations among the large number of communities impacted.

Objective 2.5 Define the phases in the disaster life cycle.

Requirements:

Lecture will illustrate each of the four disaster phases.

Student Handout 2-3.

Remarks:

- I. The Disaster Life Cycle.
 - A. **Distribute** Student Handout 2-3; “Disaster Life Cycle”.
 - B. Four **phases**.
 1. Temporal quality.
 2. Define different activities.
 3. A continuous cycle.
- II. Preparedness.
 - A. Actions **before** impact.
 - B. Examples:
 1. Ask students: “What would be some examples of preparedness activities?”
 2. Additional:
 - a. Stock pile water and food.
 - b. Make a disaster plan.
 - c. Design a warning system.
- III. Response.
 - A. Actions **during** impact.
 - B. Examples:
 1. Ask students: “What examples of response activities were reflected in the assigned reading?”
 2. Additional:
 - a. Helping behavior among victims.

b. Arrival of fire personnel.

IV. Recovery.

A. Actions **after** impact.

B. Examples:

1. Ask students: “What recovery activities have you heard about following the 9-11 attacks?”
2. Additional:
 - a. Crisis counseling – victims; emergency personnel.
 - b. Grieving process.
 - c. Donation events.

V. Mitigation.

A. Actions to **prevent** future impacts.

B. Examples:

1. Ask students: “What mitigation activities have occurred following the 9-11 attacks?”
2. Additional:
 - a. Enhanced airport security inspections.
 - b. Sky marshals.
 - c. Secure cockpits.

Supplemental Considerations:

If time permits, the professor may wish to review the four phases with one or two other hazards or specific disaster events. Contrasts to a timely hurricane, flood, or tornado would reinforce the generality of the disaster life cycle as an analytic tool. If this session is expanded into two hours for delivery, criticisms and observations of the disaster phase concept also might be introduced. For example, Neal (1997) has argued that the boundaries and distinctions among the phases are so vague as to render the concept useless. He cites criticisms from both academics, including Carr (1932) who first

introduced the concept and practitioners. He proposes that **researchers** using this concept **should recognize** that disaster phases are: 1) **mutually inclusive**; 2) **multidimensional**; 3) reflective of **social** not objective **time**; 4) reflective of **other's perceptions** (not the researchers); and 5) **variable** across cultures. Explanation and illustration of these and other concerns would enhance the level of student understanding.

Objective 2.6 Summarize at least three themes of dissensus among researchers regarding the conceptualization of disaster.

Requirements:

Lecture will summarize three themes of dissensus.

Overhead 2-5.

Remarks:

- I. Event qualities vs. resource shortfalls.
 - A. **Display** Overhead 2-5; “Themes in Definitional Dissensus”.
 - B. Direct students to the definition of disaster (Student Handout 2-1).
 - C. **Read** Kreps’s definition: “Disasters are: nonroutine events in societies or their larger subsystems (e.g., regions, communities) that involve **conjunctions** of historical conditions and social definitions of physical harm and social disruption. Among the key defining properties of such events are length of forewarning, magnitude of impact, scope of impact, and duration of impact (Kreps 1989, p. 219).” (As cited in Kreps and Drabek 1996, p. 133).
 - D. **Used** by many researchers.
 - E. Key distinctions:
 1. **Excludes** resource shortfalls.
 2. **Highlights** historical conditions as context.
 3. **Emphasizes** social definitions.
 - F. Most **practitioners** use the definition on Student Handout 2-1.
 - G. Most researchers define the **event** as the **object of study**; resources used remains problematic, i.e., an object of study.

H. Researcher (behavioral) vs. Practitioner (normative).

II. Alternative Classification Criteria.

A. **Impact Ratios.**

1. Should **size** of community define disaster?
2. Example:
 - a. Event – a school bus accident with 80 injured.
 - b. Community A, population 800,000, routine accident.
 - c. Community B, population 8,000, mass emergency or disaster.

B. **Consensus vs. Conflict Events.**

1. Ask students: “Should civil wars, riots and other forms of social unrest be included in the concept ‘disaster’?”
2. Read E.L. Quarantelli’s position:
 - a. “Disasters are consensus occasions while riots are conflict situations.” (Quarantelli 1998, p. 241)
 - b. Justification:
 - 1) Marked behavioral differences.
 - 2) Theory development enhanced by separation of field.

C. **Agent Toxicity.**

1. Ask students: “Are events involving toxic agents qualitatively different from other disasters?”
2. Explain Erikson’s position (1994).
 - a. **Types** of toxicity.
 - 1) Nuclear exposure, e.g., power plant, bomb, waste storage.
 - 2) Chemical, e.g., Love Canal.

3) Emotional, e.g., avoidance of homeless people.

b. **Emotional trauma** is qualitatively different in toxic events than in a tornado, flood, etc. (according to Erikson).

D. **External validity.**

1. Explain concept: answers the question, “to what can we generalize?”
2. **Some researchers** propose that the selection of criteria should be determined empirically.
3. Comparative research is needed wherein **alternative sets of criteria** are used in research designs.
4. Drabek (1970) and others adopt this view with pleas for more comparative research.

III. Social Problem Perspective.

- A. Kreps and Drabek (1996) **advocate** this view.
- B. Disasters are **nonroutine** social problems.
- C. The **origins** of disaster events are subjects of study, not just response and recovery.
- D. **Differential distributions** of risk are studied.
- E. **Social inequalities** in recovery processes are studied.
- F. The **political process** by which only certain events become collectively defined as “disasters” are studied.
- G. The “**use**” of a disaster to further **political objectives** may be studied.

Supplemental Considerations:

Depending on the class composition and preferences of the professor, this section could be brief or lengthened considerably. The key point is to assist students in understanding that there is **dissensus** in the field currently. The level of depth to which alternative points of view are examined will vary, but all students should be introduced to the **reality of dissensus** and the legitimate theoretical alternatives it reflects. Emphasize that when Erikson (1994) refers to “toxicity” as a definitional criterion, he means more than a physical trait as revealed in statements like these. “Persons who survive severe disasters, as I noted earlier, often come to feel estranged from the rest of humanity and gather into

groups with others of like mind, drawn together by a shared set of perspectives and rhythms and moods that derive from the sense of being apart.” (p. 240) Thus, such victims “. . . have experienced not only (a) a *changed sense of self* and (b) a *changed way of relating to others* but (c) a *changed world view altogether*.” (p. 241) (*italics in original*).

Objective 2.7 Identify three social factors that are contributing to the increase in number and severity of disasters.

Requirements:

Start this section with a brief report from Group 4.

Display Overhead 2-6.

Remarks:

- I. Group 4 report (2 minutes).
- II. **Display** Overhead 2-6; “Social Factors Related to Increases in Disaster Frequency and Severity”.
- III. **Elaborate** as necessary to illustrate these social factors.
 - A. **Population** density.
 - B. **Settlement** in high risk areas.
 - C. **Technological** risks.
 - D. **Political** instability.

Supplemental Considerations:

This section is designed to enhance student understanding of the linkages among broader social trends and disaster phenomena. **Additional factors** might be included, e.g., aging populations, more single parent households, increased immigration from non-English speaking nations, religious extremism, increased use of **terrorism as military strategy** ranging from the Irish Republican Army (IRA), to Basques in Spain, to suicide bombings in Israel.

Course Developer References.

- I. Adler, Jerry. 2002. “Five Who Survived.” *Newsweek* (September 9):20-29.

- II. Aust, Stefan, Cordt Schnibben, et al. 2002. *Inside 9-11: What Really Happened*. Translated from the German by Paul DeAngelis and Elisabeth Kaestner. New York: St. Martin's Press.
- III. Carr, Lowell. 1932. "Disaster and the Sequence – Pattern Concept of Social Change." *American Journal of Sociology* 38:207-218.
- IV. Drabek, Thomas E. 1999. *Disaster-Induced Employee Evacuation*. Boulder, Colorado: Institute of Behavioral Science, University of Colorado.
- V. Drabek, Thomas E. 1970. "Methodology of Studing Disasters: Past Patterns and Future Possibilities." *American Behavioral Scientist* 13:331-343.
- VI. Dynes, Russell R. 1970. *Organized Behavior in Disaster*. Lexington, Massachusetts: Heath Lexington Books.
- VII. Erikson, Kai. 1994. *A New Species of Trouble: Explorations in Disaster, Trauma, and Community*. New York: W.W. Norton and Company.
- VIII. Kreps, Gary A. and Thomas E. Drabek. 1996. "Disasters Are Nonroutine Social Problems." *International Journal of Mass Emergencies and Disasters* 14:129-153.
- IX. *Natural Hazards Observer*. 2002. 27 (September):7.
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- XI. Quarantelli, E.L. (ed.). 1998. *What Is a Disaster?: Perspectives on the Question*. London: Routledge.
- XII. *Rocky Mountain News*, September 11, 2002, p. 45; 13A.