Chapter Objectives

1) Define preparedness & understand its relationship to the broader life cycle of emergency management
2) Identify various types of preparedness activities that can be undertaken at the individual, household, organizational, & community levels
3) Describe levels of disaster preparedness among individuals & households, organizations, & communities, & identify factors that influence preparedness levels

Chapter Objectives (cont.)

4) Identify particular groups that remain at risk due to lack of preparedness & list suggestions for enhancing their readiness
5) Provide examples of preparedness initiatives at the state, national, & international levels
6) Outline steps in conducting a hazard identification & risk analysis as the first critical step in preparedness & planning efforts
7) Identify potential places to work & volunteer in the field of preparedness
Key Points

- Overall preparedness levels are alarmingly low
  - Competing priorities
  - Financial constraints
  - Disasters are low-probability events (but high-consequence)
  - Fatalistic cultural beliefs & lack of collective efficacy
- Some households, organizations, & communities are more prepared than others
- Preparedness is both a personal & shared responsibility

Defining Preparedness

- **Preparedness**
  - Commonly refers to activities undertaken prior to the onset of a disaster to enhance the response capacities of individuals & households, organizations, communities, states, & nations
- **Enhanced response capacity**
  - Refers to the ability of social units to:
    - Accurately assess a hazard
    - Realistically anticipate likely problems in the event of an actual disaster
    - Appropriately take precautionary measures to reduce impacts & ensure an efficient & effective response

Important Points

- Preparedness can be viewed & measured at different *levels of analysis*
  - Individuals
  - Nations
- There are varying *degrees of preparedness*
  - Not an “either or” proposition
  - It is a matter of degree
  - Varies over time & location
Important Points (cont.)

- We lack a standardized measure of disaster preparedness at the community, state, national, & international levels of analysis
- Checklists can be used at the individual, organizational, & business levels
- More difficult at the community, state, & nation levels
  - Must consider such things as:
    - Strength & legitimacy of political institutions
    - Intergovernmental relationships
    - Locations & priorities of EM functions
    - Social & financial capital

Important Points (cont.)

- We must consider disaster preparedness in a cultural context
  - Central feature of every society
  - Exerts a powerful influence over individual behavior
- Material culture
  - Clothes
  - Houses/buildings
- Non-material culture
  - Shared values
  - Moral beliefs
  - Norms & rules

Important Points – Cultural Context (cont.)

- Culture shapes thinking about preparation & mitigation
  - Apathy
  - Fatalism
  - Risks are underestimated or ignored
- Cultural beliefs can be very difficult to change
  - Often resistant to outside influence
Important Points (cont.)

- Preparedness is best approached from the all-hazards approach to emergency management
- Preparedness activities typically apply to all kinds of disasters

Types of Preparedness Activities for Individuals & Households

- Obtaining disaster-related information
- Attending meetings to learn about disaster preparedness
- Purchasing food & water
- Storing a flashlight, radio, batteries & a first aid kit
- Learning first aid
- Developing & practicing a family emergency plan
- Bracing furniture (in earthquake-prone areas)
- Installing shutters (in hurricane-prone areas) or a safe room or storm cellar (in tornado-prone areas)
- Purchasing hazard-specific insurance

FEMA Recommendations for Disaster Supply Kits

- Water, one gallon of water per person per day for at least three days, for drinking & sanitation
- Food, at least a three-day supply of non-perishable food
- Battery-powered or hand crank radio & a NOAA Weather Radio with tone alert & extra batteries for both
- Flashlight & extra batteries
- First aid kit
- Whistle to signal for help
- Dust mask, to help filter contaminated air & plastic sheeting & duct tape to shelter-in-place
- Moist towelettes, garbage bags & plastic ties for personal sanitation
FEMA Recommendations for Disaster Supply Kits (cont.)

- Wrench or pliers to turn off utilities
- Can opener for food (if kit contains canned food)
- Local maps
- Cell phone with chargers
- Prescription medications & glasses
- Infant formula & diapers
- Pet food & extra water for your pet
- Important family documents such as copies of insurance policies, identification & bank account records in a waterproof, portable container
- Cash or traveler's checks & change

FEMA Recommendations for Disaster Supply Kits (cont.)

- Emergency reference material such as a first aid book or information from www.ready.gov
- Sleeping bag or warm blanket for each person
  - Consider additional bedding if you live in a cold-weather climate
- Complete change of clothing including a long sleeved shirt, long pants & sturdy shoes
  - Consider additional clothing if you live in a cold-weather climate

FEMA Recommendations for Disaster Supply Kits (cont.)

- Household chlorine bleach & medicine dropper
  - When diluted nine parts water to one part bleach, bleach can be used as a disinfectant
  - Can be used to treat water by using 16 drops of regular household liquid bleach per gallon of water
  - Do not use scented, color safe or bleaches with added cleaners
- Fire extinguisher
- Matches in a waterproof container
- Feminine supplies & personal hygiene items
- Mess kits, paper cups, plates & plastic utensils, paper towels
- Paper & pencil
- Books, games, puzzles or other activities for children
Types of Preparedness Activities for Organizations

- Talking to employees about disaster preparedness
- Conducting drills & exercises
- Receiving specialized training
- Developing relocation plans
- Obtaining an emergency generator
- Purchasing business interruption insurance

Preparedness Cycle
(Source: adapted from www.fema.gov/prepared)

Types of Preparedness Activities for Communities

- Testing sirens, the Emergency Alert System, & other warning systems
- Conducting educational programs & distributing disaster-related information
- Conducting multi-organizational drills & exercises
- Establishing mutual aid agreements with surrounding communities
- Maintaining an Emergency Operations Center
- Conducting a Hazard Identification & Risk Analysis
Characteristics of Effective Disaster Drills & Exercises

- Realistic scenarios, including accurate assumptions about:
  - Disaster-induced demands
  - Resource shortages
  - Communication difficulties
  - How people & organizations actually respond to disasters, rather than myths of disaster
- Meaningful involvement from those involved, rather than ritualistic, symbolic, or mandated participation

Characteristics of Effective Disaster Drills & Exercises (cont.)

- Integration of multiple organizations & levels of government, along with citizen participants, & encourage coordination between them;
- A recognition that things will not always go exactly as planned & require participants to think creatively & improvise in order to solve unanticipated problems

Dimensions of Preparedness

1) Primary objective
   - Life safety
   - Protecting property
   - Knowledge acquisition & dissemination
   - Continuity of operations
2) Degree of coordination
   - Most households & organizations prepare in isolation from others
3) Financial Cost
   - Inexpensive measures (e.g., having a first-aid kit) are more common than more costly activities (e.g., installing a tornado shelter)
Preparedness & the Life Cycle of Emergency Management

- Effective preparedness should lead to a more effective response
- Recovery is also facilitated when plans are developed & challenges are anticipated during the preparedness phase
- Key difference between preparedness & mitigation:
  - Preparedness assumes disasters will happen
  - Mitigation attempts to prevent them from happening
  - Both lessen the need for response

Levels of Preparedness - Household

- Surveys using checklists of activities reveal alarmingly low rates of preparedness
- Preparedness levels are low even in disaster-prone areas
- Study of Florida households, Kapucu (2008)
  - Found that only 8% of respondents reported having a disaster supply kit stocked with enough basic provisions to shelter in place for three days (which FEMA recommends)

Levels of Preparedness - Organizational

- Public sector tends to be better prepared than the private sector
  - Preparation levels vary between & within sectors
- EM agencies in the US have improved their levels of preparedness over the past several years
- Police, fire, & EMS tend to prepare internally in isolation from other community organizations
- Private sector has done very little to prepare for disasters
Levels of Preparedness - Community

- It is important for households & organizations to prepare themselves
  - However, they must also work together
- It is difficult to compare communities in terms of their levels of preparedness
  - Lack a standardized measure
- Simpson (2008) has proposed a comprehensive community disaster preparedness index

Elements of a Comprehensive Community Disaster Preparedness Index (Simpson 2008)

- Fire protection
- Emergency Medical Services
- Public Safety/Police
- Planning & Zoning
- Emergency Management Office
- Other emergency functions (e.g., local emergency planning committees)
- Additional community measures (e.g., voluntary organizations)
- Hazard exposure
- Evacuation plans & warning systems
- Community resiliency & recovery potential (e.g., financial resources)

Factors Affecting Levels of Preparedness

- Individual & Household Characteristics
  - Higher income, higher levels of education, & presence of children are associated with higher levels of preparedness
- Previous Disaster Experience
  - Disaster subcultures form in hazard-prone areas in which people are knowledgeable about what to do (e.g., Tornado Alley & earthquake country).
  - However, successful past experiences can also lead to complacency & arrogance (e.g., hurricane parties)
- Risk Perception
  - Those who perceive a threat as more likely in the short term are most likely to prepare
  - Effective risk communication (e.g., public education campaigns) can shape people’s risk perception & thus improve their preparedness
Figure 6.2 Factors Affecting Household Preparedness
(Source: Tierney et al. 2001)

Populations at Risk

- Racial & ethnic minorities
  - May not have the resources to evacuate
  - More likely to live near hazardous materials sites
  - May lack the resources to prepare adequately
  - More likely to live in multi-generational situations
    - May not evacuate until all family members gathered/accounted for
  - May live in more vulnerable structures

Populations at Risk (cont.)

- Senior citizens
  - Often live at low income levels
    - Lack finances to adequately prepare
  - Chronic medical problems may make evacuation difficult
  - May be isolated, especially men
Populations at Risk

- People with disabilities
  - Tend to have lower incomes
  - May have mobility issues
  - Emergency planners need to take into account functional needs
    - Language
    - Speaking ability
    - Comprehension
    - Supervisory (dementia)
    - Transportation
    - Medical

Populations at Risk

- Children
  - Schools often have drills
  - Day-care centers & recreational facilities not adequately prepared
  - Very receptive to training
  - Psychological trauma

Populations at Risk

- Gender
  - Women have been historically excluded from EM
  - Gender & income often connected
  - Female-owned businesses tend to be less prepared
  - May have unique needs
    - Pregnancies
    - Privacy
Populations at Risk

- Language
  - Must be considered in preparedness & planning efforts
  - Common language
  - Hard of hearing/deaf
  - Literacy
  - Comprehension levels

- Pre-disaster homeless
  - There are several categories of homelessness
    - Homeless every day
    - Marginally housed
    - People who go back & forth between the two groups
  - Many outreach groups exist that can be used to be able to prepare the homeless

- Pets
  - Often considered important members of a family
  - Preparations include:
    - Rescue alert stickers
    - Animal training classes
    - Safe haven arrangements with others or a shelter
    - Pet preparedness kit
  - Pets are considerations for evacuations & shelters
Examples of State, National, & International Preparedness Initiatives


Hazard Identification & Risk Analysis
(Source: FEMA IS#1; Thomas et al. 2010)

Hazard Identification:
- Natural, Technological, Terrorist Threats
- Past History
- New & Emerging Hazards

Risk Analysis:
- Location of utilities, infrastructure, health care facilities & other areas
- Areas of weakened structures that increase risk (pipes, levees)
- People, concentrated populations, vulnerable populations
- Economic analysis & ability to absorb hazard & rebound
- Environmental analysis of areas subject to negative impact in the ecosystem

Working & Volunteering in Preparedness

Volunteering:
- U.S. Citizen Corps (www.citizencorps.gov)
- Community Emergency Response Team (CERT)
- Volunteers in Police Service
- Fire Corps
- Medical Reserve Corps
- Neighborhood Watch

Working:
- Preparedness coordinators for local emergency management agencies, hospitals, schools, & in private sector firms