1. Overview

1.11. Hazard Classification
1.11. Hazard Classification

Overhead Transparencies

1.11.1. Disaster, Definition
1.11.2. Classification of hazards
1.11.3. Phases of Disasters
1.11.4., 1.11.5. Origins of Disasters, Natural
1.11.6. Origins of Disasters, Technological and Man-made
1.11.7. Relationship between Onset of disaster and its Effects on Health
1.11.8. Disaster Interface, Hazards and Vulnerability
1.11.  Hazard Classification

Trainers' Guide

Objective:
Short presentation to illustrate the classification of disasters. (Knowledge)

Key-message:
The 'Classification of Disasters' is in fact a classification of hazards.

1.11.1. Disaster, Definition
Present and discuss. This is one of the many definitions. Stress OCCURRENCE, DISRUPTION, and the NEED FOR EXTERNAL ASSISTANCE.

1.11.2. Classification of hazards
Present and discuss. Classification of Natural (or physical) and Man-made (or technological) Disasters.

1.11.3. Phases of Disasters
Present and discuss. Simple view by 'Before', 'During' and 'After'. It is now quite outmoded. It reflects a focus on the impact view rather than on prevention and emergency management. Ask the audience to compare this model with the Disaster-Development Continuum; ask which model is better to be used for emergency managers and health workers.

1.11.4., 1.11.5. Origins of Disasters, Natural
Present and discuss. List of natural (or 'physical') hazards.

1.11.6. Origins of Disasters, Technological and Man-made
Present and discuss. List of man-made or technological hazards.

1.11.7. Relationship between Onset of disaster and its Effects on Health
Present and discuss. Earthquakes have a sudden direct impact and health response has to be immediate; after one or two weeks the emergency has passed although indirect health effects may need to be addressed. On the contrary, Drought is an event that builds up slowly, with clear early warning signs: prevention and preparedness are easier, but the health effects of the impact take long to recover.
1.11.8. Disaster Interface, Hazards and Vulnerability

Present and discuss. *This is another way to present the causes of a disaster.* Disasters can be seen as occurring at the interface between hazards and vulnerable conditions. ‘Pressures’ add to the vulnerable conditions. The underlying causes or 'root causes' of vulnerability are shown in the last column.

Complementary to Disaster and Emergency Definitions (1.1.) and Risk Assessment (2.3.)

Essential Reading:
- UN-DMTP Training Modules, UN-DMTP, 1990
1.11.1. Disaster, Definition

DISASTER

ANY OCCURRENCE THAT CAUSES DAMAGE, ECOLOGICAL DISRUPTION, LOSS OF HUMAN LIFE, DETERIORATION OF HEALTH AND HEALTH SERVICES ON A SCALE SUFFICIENT TO WARRANT AN EXTRAORDINARY RESPONSE FROM OUTSIDE THE AFFECTED COMMUNITY
1.11.2. Classification

Classification of hazards
Sudden or slow onset

Natural (physical)

Weather related (meteorological
Earth movement
  1. External (topographical)
  2. Internal (tectonics & tellurics)

Natural (biological)
  1. Epidemics
  2. Infestations

Manmade/Technological

– Industrial disasters
– Nuclear accidents
– Chemical accidents
– Fires
– Wars, civil strife
– Structural failures
PHASES OF DISASTERS

1. THE PRE-DISASTER PHASE
2. THE DISASTER / IMPACT PHASE
3. THE POST-DISASTER AND RECONSTRUCTION PHASE
1.11.4. Origins of Disasters, Natural

**Origins of Disasters**

**Natural (1)**

1. Meteorological
   - Hurricanes, cyclones, tornadoes, typhoons
   - Heavy rains, thunderstorms, floods, snow-storms
   - Drought and famine
   - Heat waves, cold waves

2. Topographical
   - Landslides and avalanches
Origins of Disasters

(2)

3. Tectonics and tellurics
   – Earthquakes
   – Volcanic eruptions

4. Epidemics
   – Yellow fever
   – Cholera
   – Meningitis

5. Infestations
   – Locust invasions
   – Mealy bug infestation
Origins of disasters
Technical and man-made (3)

- Wars and Civil Strife
- Industrial disasters
- Large scale accidents, fires, explosions
- Environmental contamination
- Structural failures (dams, mines)
1.11.7. Relationship between Onset of disaster and its Effects on Health

Relationship between onset of disaster and its effects on health

Example: Earthquake

Sudden onset disaster
Immediate effect, wears off more quickly

Example: Drought & famine

Sudden onset disaster
Slow, but gradually increasing effect

The effects may be: Actual or potential
## DISASTER INTERFACE, HAZARDS AND VULNERABILITY

Disaster may be seen as the interface between (whether natural or man-made), and the

<table>
<thead>
<tr>
<th>HAZARDS&gt;</th>
<th>VULNERABLE CONDITIONS</th>
<th>RESULT</th>
<th>PRESSURES</th>
<th>ROOT CAUSES</th>
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<tbody>
<tr>
<td>NATURAL</td>
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<td>INTEGRITY</td>
<td>RAPID URBANISATION</td>
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<td>DEFORESTATION</td>
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<td>POPULATION PRESSURE</td>
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<td>UNSAFE SETTLEMENTS</td>
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<td>ILLITERACY</td>
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<td>TOPOGRAPHICAL/ EARTH MOVEMENTS</td>
<td>LACK OF OR INADEQUATE BASIC SERVICES</td>
<td>IMPACT</td>
<td>LITTLE OR UNWISE INVESTMENT</td>
<td>BAD</td>
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<td>LACK OF DISASTER PLANS AND AWARENESS</td>
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Adapted from reference: Ian Davis, safe shelter within unsafe cities; Disaster Vulnerability and Rapid Urbanisation Open House International, 1997:12(5); p