

FCT FACULDADE DE CIÊNCIAS E TECNOLOGIA UNIVERSIDADE NOVA DE LISBOA

CtS

Human Factors, Logistics & Sensor Technology in Emergency Management


Seminar US-Portugal
(Research Collaboration)

January 11, 2012 - FCT/UNL Library



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EMERGENCY MANAGEMENT

Overview and example of application of a fuzzy methodology

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Summary





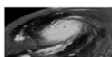









- Key issues on Emergency Management
- Some EM research fields
- EMS Fuzzy methodology proposal
- Final Considerations

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Types of Emergency

NATURAL DISASTERS





 Earthquakes >	 Extreme Heat >	 Fires >	 Floods >
 Hurricanes >	 Landslides & Debris Flow >	 Thunderstorms & Lightning >	 Tornadoes >
 Tsunamis >	 Volcanoes >	 Wildfires >	 Winter Storms & Extreme Cold >

Source: www.FEMA.gov /are you ready/


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Types of Emergency






TECHNOLOGICAL & ACCIDENTAL HAZARDS

 Biological Hazards >	 Hazardous Materials Incidents >	 Household Chemical Emergencies >	 Nuclear Power Plants >
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PANDEMICS



TERRORIST HAZARDS

 Biological Threats >	 Chemical Threats >	 Explosives >	 Nuclear Bomb >	 Radiological Dispersion Device (RDD) >
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Source: www.FEMA.gov /are you ready/

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Emergency Management

Definitions

the managerial function charged with creating the framework within which communities reduce vulnerability to hazards and cope with disasters.

a **complex process** that requires the **coordination of different actors**, with different cultures, aims and views of the world.

the generic name of an **interdisciplinary** field dealing with the **strategic organizational management processes** used to **protect critical assets** of an organization from hazard risks that can cause events like disasters or catastrophes and **to ensure the continuance** of the organization within their planned lifetime (Haddow & Bullock, 2003)

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Phases of Emergency Management

Source: www.FEMA.gov /are you ready/

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C2 Approaches - interaction maturity levels

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Stovepiped organizations

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Principles of Emergency Management

Coordinated – emergency managers synchronize the activities of all relevant stakeholders to achieve a common purpose

(FEMA, 2007)

The stovepipe approach is contrary to the above principles.

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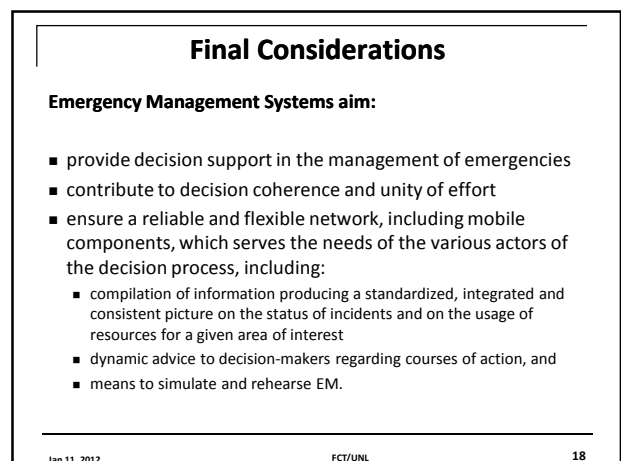
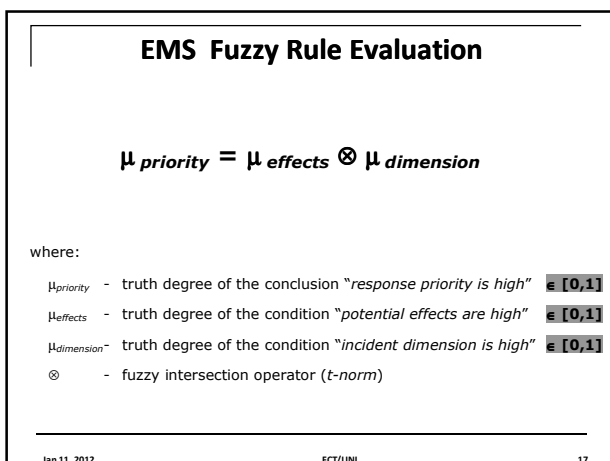
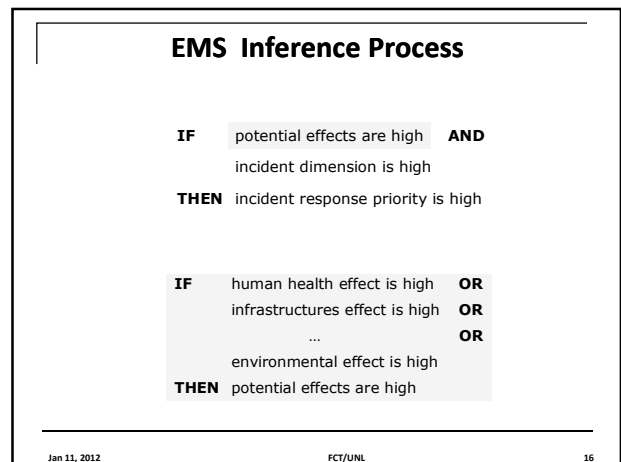
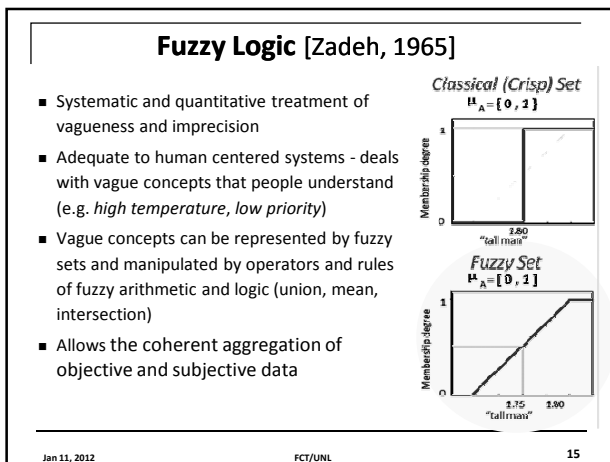
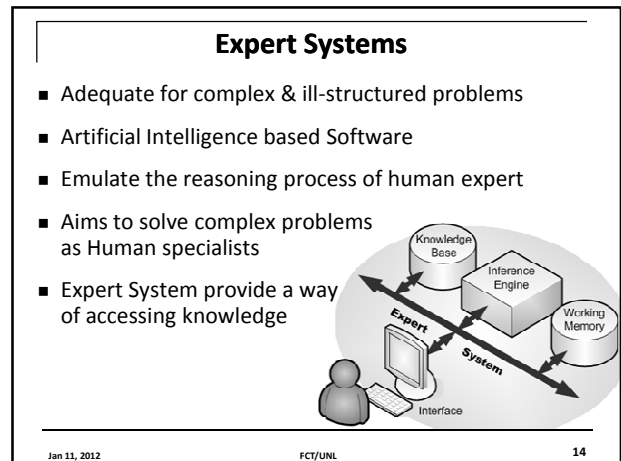
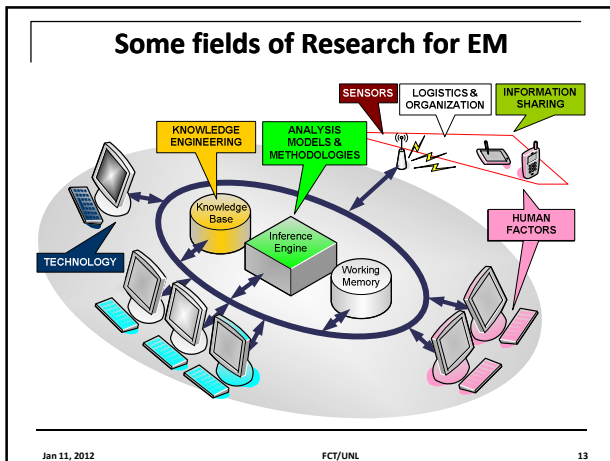
C2 Mature organizations


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EMS FDSS



What? Where? When? Who? Why? How? How Much?

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Thank you!

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