

# Disaster and Response: Some Definitions and Distinctions

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# Categorizing Disaster, by source

- Natural
  - Climatological: hurricanes, tornadoes, heat wave, drought, floods
  - Geological/hydrological: earthquake, tsunami
- Man-made (intention or source)
  - Terrorism/war: CBRNE (chem, bio, rad, nuclear, explosive), cyberterrorism
  - Technological: accidental spills, chemical releases
- “Na-tech” - Natural + Technological agents interacting
  - Tohoku EQ/Fukushima meltdown
  - Katrina and the flooding of New Orleans
- Biological
  - Pandemic
  - Emerging / novel infectious disease

# The 20 most deadly disasters of the last 20 years (1996-2015)

- High income
- Upper middle income
- Lower middle income
- Low income



Source: Centre for Research on the Epidemiology of Disasters (CRED)

# Disaster formulations

- Consequential (response perspective): events that exceed the response capacity of local or regional systems
- Consequential (impact perspective): events that lead to massive death and/or destruction
- Complex systems: the cascading and inter-related failures, destruction or disruptions of multiple systems - physical environment, social, built environment
- Socially-constructed: events that build upon vulnerabilities and inequalities to strain or weaken the social and economic infrastructure

## Criteria for a Presidential disaster declaration of a “major disaster” :

1. “[T]he situation is of such severity and magnitude that effective response is beyond the capabilities of the State and affected local governments and that Federal assistance is necessary for the preservation of life and property.”
2. An estimate of the amount and severity of damages and losses stating the impact of the disaster on the public and private sector

44 CFR 206.34

## Criteria for classification of a Spill of National Significance (SONS) by USCG or EPA:

“A SONS is a spill that due to its severity, size, location, actual or potential impact on the public health and welfare of the environment, or the response effort, is so complex it requires extraordinary coordination of Federal, State, local, tribal, and responsible party (RP) resources to contain and clean up the discharge”

40 CFR 300

# The Objectives of Disaster Response

- Protect and preserve life and property
- Impose order among chaos
- Facilitate and accelerate recovery
  - Physical and psychological
  - Economic
  - Social and cultural

# Distinguishing Oil Spills from Natural Disasters: 5 Points (aka, NCP vs. NRF)

(1) All disasters are local

*... except for Spills of National Significance*

(2) In natural disasters, government is often the object of blame, the operational authority for recovery and response, and the deepest pocket

*... in Oil Spills it is the "Responsible Party" (the Spiller)*

(3) For natural disaster there is an emergency support infrastructure mirrored from local to state to fed

*... in Oil Spills there are national and regional teams with no local counterparts, few comparable capabilities*



# Distinguishing Oil Spills from Natural Disasters: 5 Points (aka, NCP vs. NRF)

(4) Natural disasters threaten the built environment, rebuilding is a matter of “time compression” (i.e., what took 50 years to develop and build will be re-developed and re-built within 5 years)

*... Oil Spills threaten ecosystems, regional economies, and ways of life, all of which may be difficult to rebuild*

(5) Disasters are not rare events

*... but Spills of National Significance are.*