




Snowmageddon in New England Threat/Risk Model Representation

Snowmageddon in New England

Object Diagram Snowmageddon in New England [ Snowmageddon in New England]

This example shows how a recent event would be represented in the threat/risk model

Major winter storms : Hazard

We will represent this storm as a "Hazard" and translate the various facts.

In January 2015 Massachusetts has been facing the **Hazard** of major winter storms across the region. Potential **Harm** from blizzards and winter storms includes negative economic impact, limited road accessibility, restricted emergency management, non-availability of utility, property damage, personal injury and death, and more. Important **Actors** include: State Governor, Massachusetts Emergency Management Agency (MEMA), Federal Emergency Management (FEMA), local and state highway departments, fire and local & state police departments, National Guard, neighboring state agencies, residents, etc.

The onset of a winter storm or blizzard may be a undesirable **Potential Situation** predicted by the National Weather Service (NWS). The **Risk** of a bad winter storm is determined by the **likelihood** of occurring, and the potential **Harm** it can cause to the people and their personal effects (**Assets**).

Risk Treatment Strategies at the government level may include:

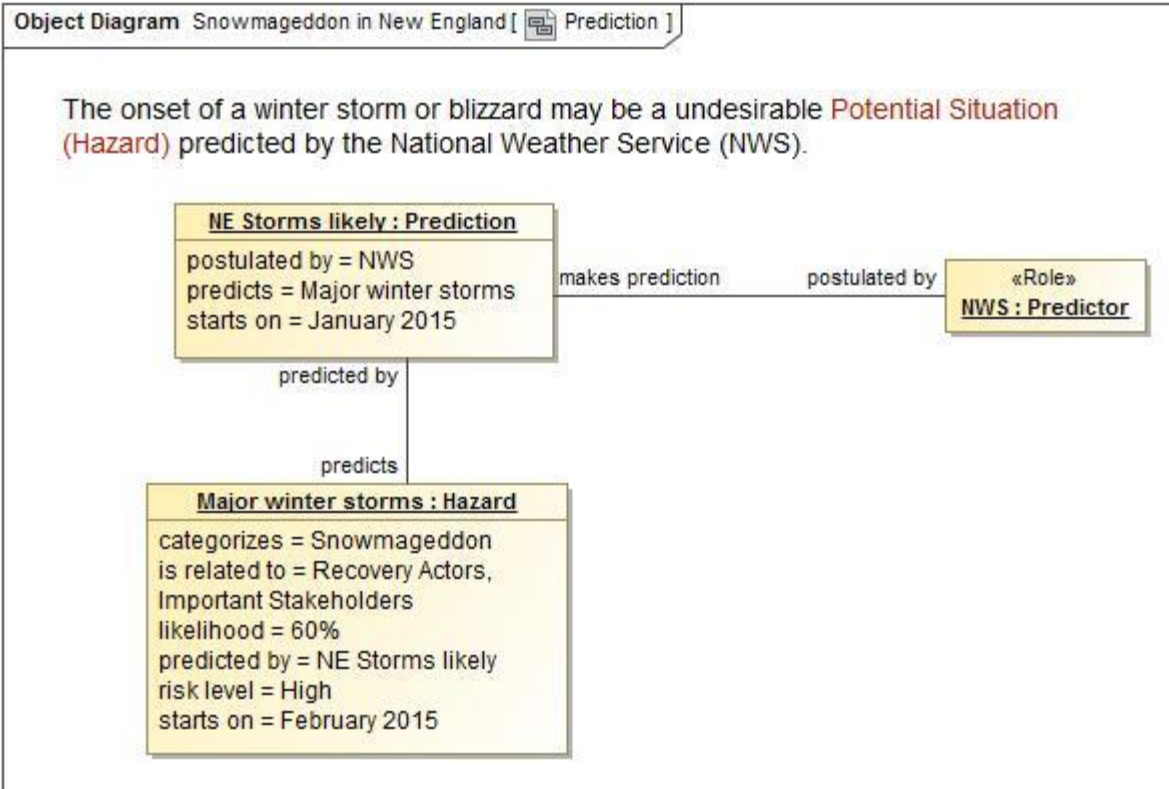
- (i) Closing of government services (impact mitigation)
- (ii) Activation of snow removal services (impact mitigation)
- (iii) Coordination with energy utilities and other critical infrastructure provider to prepare for damage (impact mitigation)
- (iv) Issuance of special orders (curfew/travel ban, airport shutdown, limited public transport, etc.) (impact mitigation)
- (v) Nothing (acceptance)

Private parties may prepare by:


- (i) Contracting of snow removal services (impact mitigation)
- (ii) Snow damage insurance (transfer)
- (iii) Move out of state (Avoidance)
- (iii) Nothing (acceptance)

After the storm we have a **Disaster** that matches the predicted Hazard, response **Capabilities** of MEMA and other state and local emergency responders are determined by available **Resources**. In severe cases, the Governor may act as **Facilitator** and issue a State of Emergency declaration (**Alter Capabilities Act**) to improve local and state emergency response **Capabilities**.

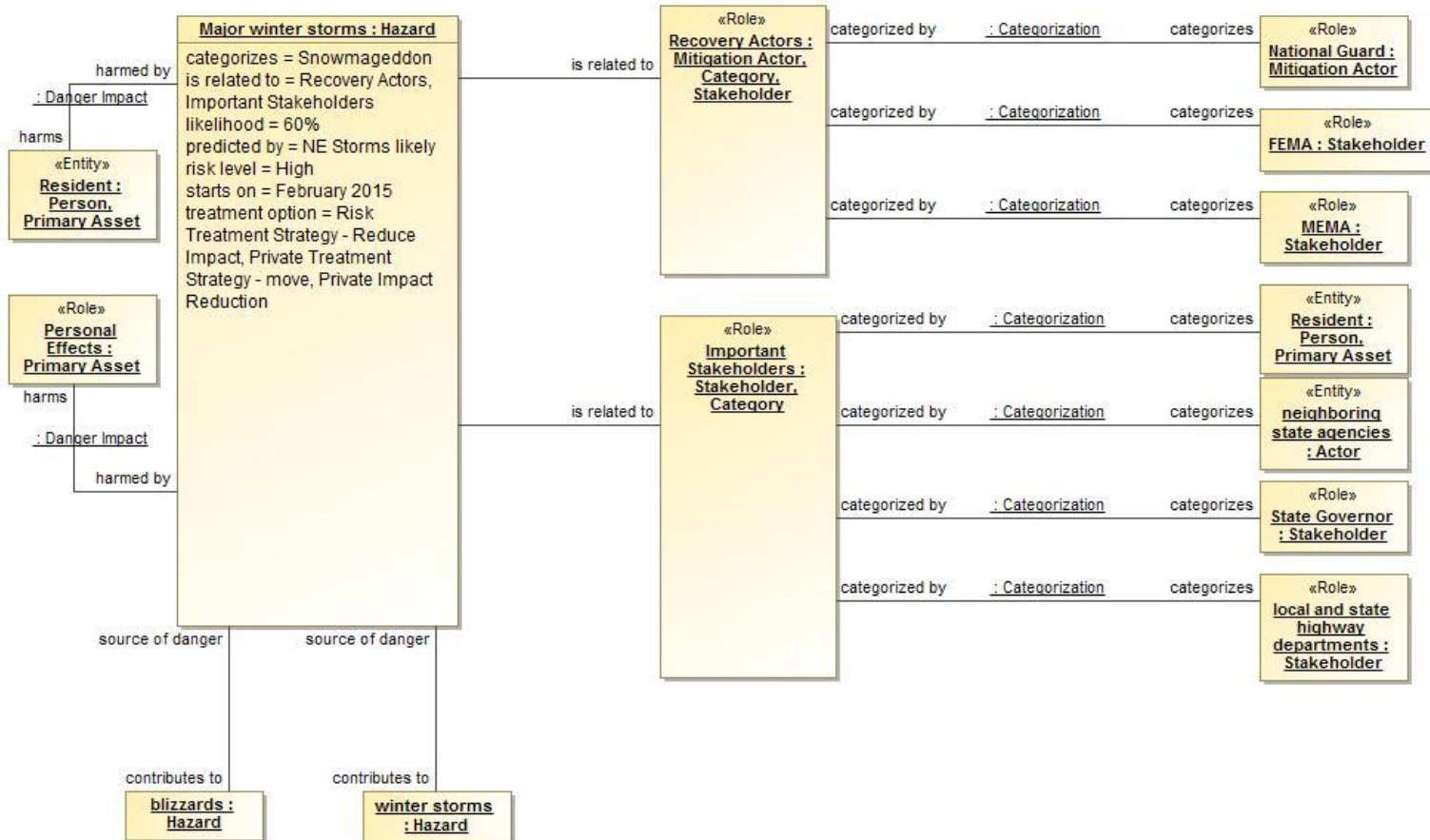
Prediction



Actors

Object Diagram Snowmageddon in New England [ Actors]

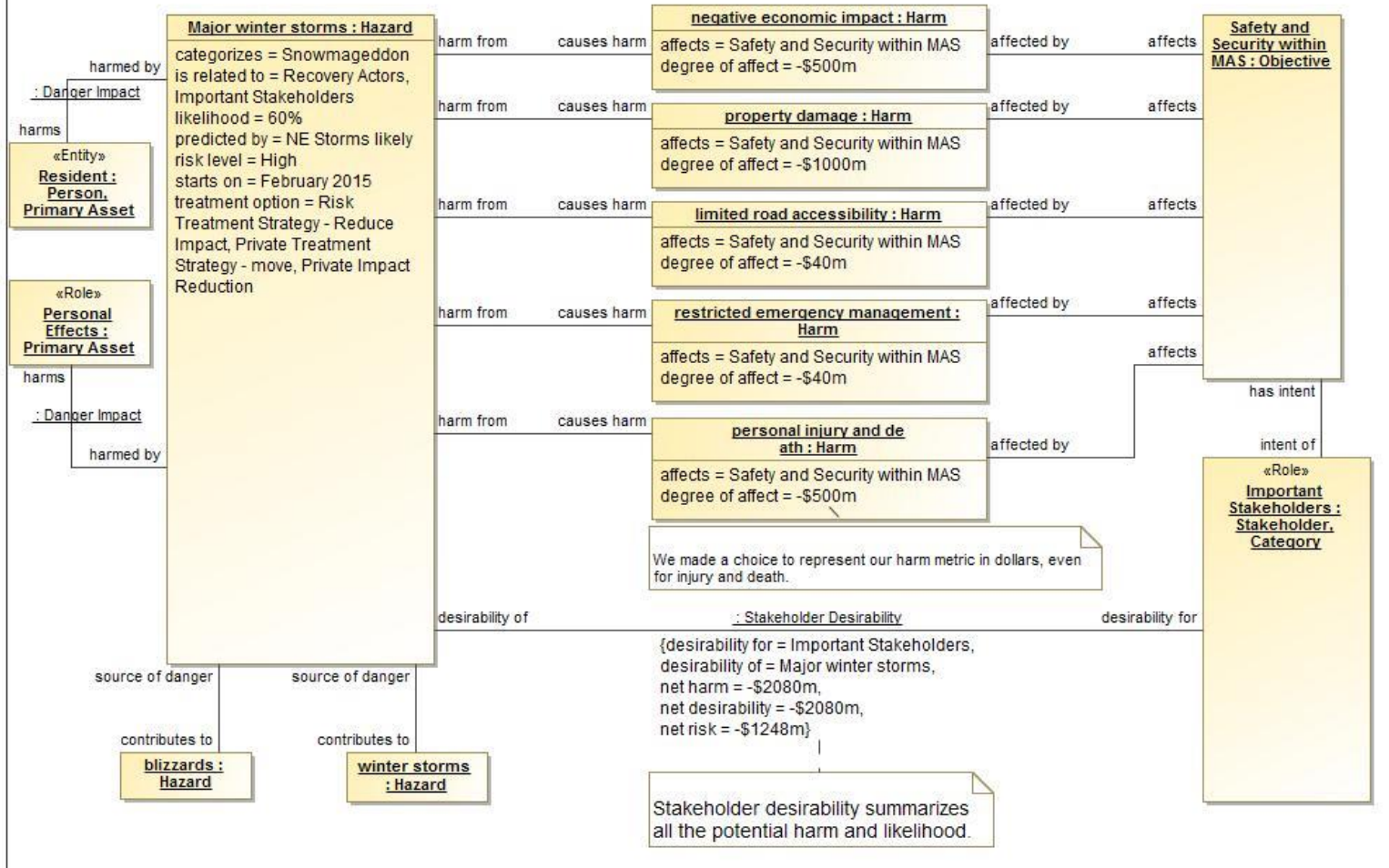
Actors include: State Governor, Massachusetts Emergency Management Agency (MEMA), Federal Emergency Management (FEMA), local and state highway departments, fire and local & state police departments, National Guard, neighboring state agencies, residents, etc.



Harm

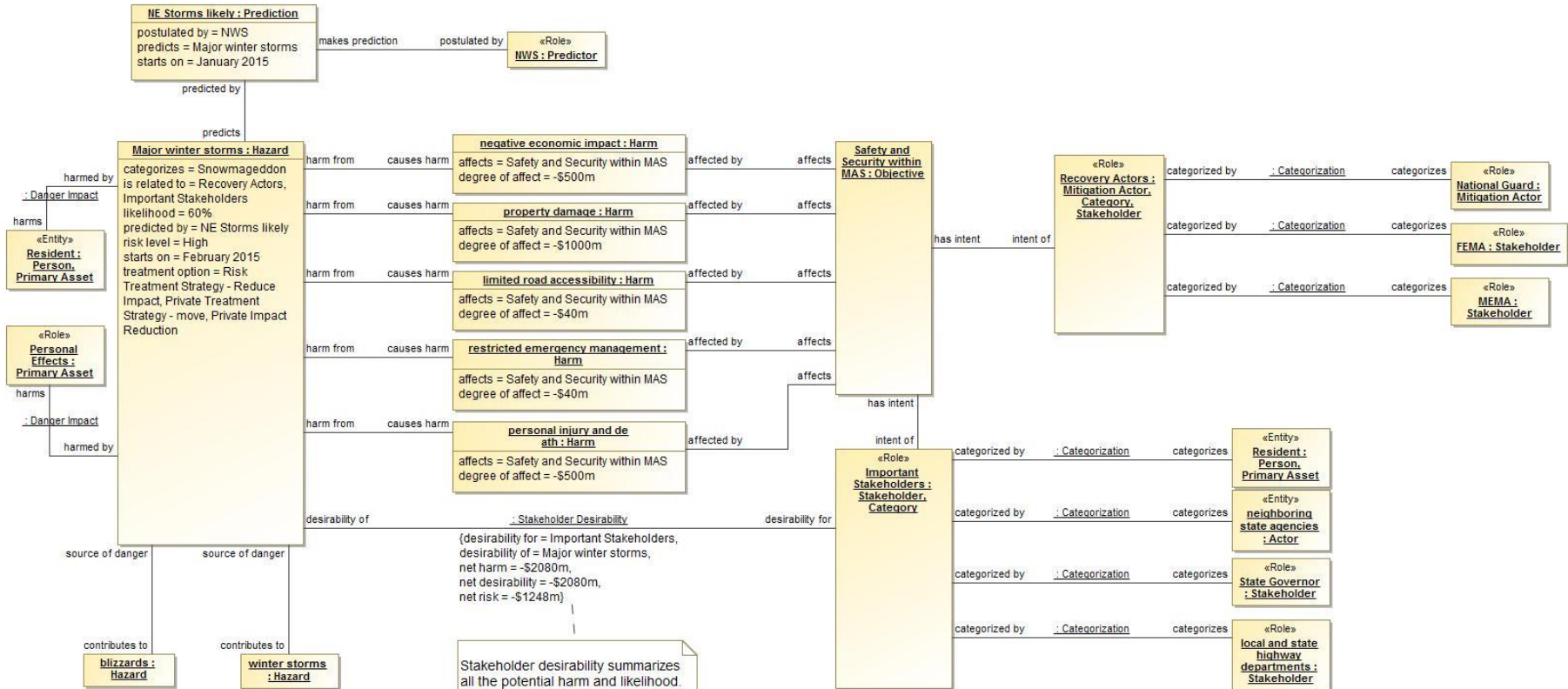
Object Diagram Snowmageddon in New England [Harm]

Potential **Harm** from blizzards and winter storms includes negative economic impact, limited road accessibility, restricted emergency management, non-availability of utility, property damage, personal injury and death, and more. The **Risk** of a bad winter storm is determined by the **likelihood** of occurring, and the potential **Harm** it can cause to the people and their personal effects (**Assets**).



Hazard and harm with stakeholders

Object Diagram Snowmageddon in New England [Hazard and harm with stakeholders]



Treatment

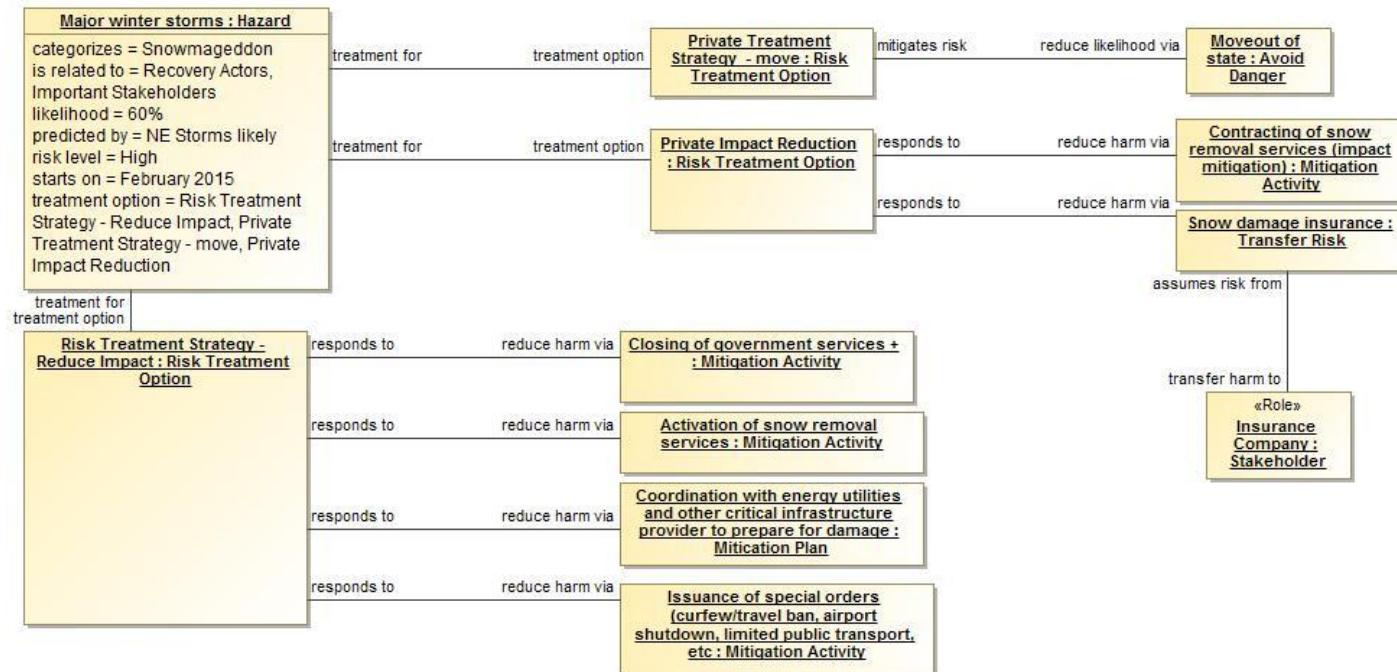
Object Diagram Snowmageddon in New England [ Treatment]

Risk Treatment Strategies at the government level may include:


- (i) Closing of government services (impact mitigation)
- (ii) Activation of snow removal services (impact mitigation)
- (iii) Coordination with energy utilities and other critical infrastructure provider to prepare for damage (impact mitigation)
- (iv) Issuance of special orders (curfew/travel ban, airport shutdown, limited public transport, etc.) impact mitigation)
- (v) Nothing (acceptance)

Private parties may prepare by:

- (i) Contracting of snow removal services (impact mitigation)
- (ii) Snow damage insurance (transfer)
- (iii) Move out of state (Avoidance)
- (iii) Nothing (acceptance)



Response

Object Diagram Snowmageddon in New England [ Response]

After the storm we have a **Disaster** that matches the predicted Hazard, response **Capabilities** of MEMA and other state and local emergency responders are determined by available **Resources**. such as snow removal and repairing damage In severe cases, the Governor acts as **Facilitator** and issue a State of Emergency declaration (**Alter Capabilities Act**) to improve local and state emergency response **Capabilities**.

