

Asset
DescriptionHazard
DescriptionAsset & Hazard
ModelingResponse
EstimationDamage and
Loss EstimationRegional
Recovery
Simulation**describe the region**

specify characteristics of buildings and infrastructure in the region

describe the hazard

specify the regional distribution of ground shaking, wind, or water

for each random region-hazard sample:

propagate uncertain characteristics of the regional assets and the hazard

for each asset in the region:**describe the asset**

create stochastic models for response, damage, and loss estimation

describe the event at the site

specify hazard-consistent loads for response estimation

for each random asset-event sample:

propagate uncertainties in asset models and event description

estimate asset response to the event

describe the response with engineering demand parameters

estimate asset damage and its consequences

prepare a stochastic description of damage and loss for the asset

describe regional damage and direct losses

aggregate damages and losses in the region considering dependencies

estimate indirect regional consequences

describe regional consequences of infrastructure- and social disruption

simulate regional recovery

estimate the temporal and spatial variation in the recovery of communities

CWE

EE

UQ
FEM

PBE