Coastal Resilience Glossary of Terms

(Adapted from NOAA's Digital Coast Inundation Glossary)

Adaptation

Adjustment in natural or human systems in response to current natural hazards and actual or expected climate change impacts. Actions taken to help communities and ecosystems moderate, cope with, or take advantage of actual or expected changes in weather and climate conditions. (Modified from IPCC, 2007)

Coastal erosion

The wearing away of land or the removal of beach or dune sediments by wave action, tidal currents, wave currents, or drainage. A combination of episodic inundation events and relative sea level rise will serve to accelerate coastal erosion.

Coastal hazard

A source of potential danger or adverse condition. Hazards include naturally occurring events that strike populated areas and have the potential to harm people or property. Examples of coastal hazards are shoreline erosion, storm surge, flooding, and inundation.

Global sea level rise

Caused by a change in the volume of the world's oceans due to temperature increase, deglaciation (uncovering of glaciated land because of melting of the glacier), and ice melt.

Inundation

Water covering normally dry land is a condition known as inundation.

Marsh migration

The movement of wetland plant communities into adjacent, higher elevation land. Marsh migration represents a natural response to sea level rise, where marsh plants gradually replace trees, lawns, and agricultural crops in wet soils.

Mitigation

Sustained actions taken to reduce, minimize or eliminate long-term risk and vulnerability from hazards and their effects.

Relative Sea Level Rise

Occurs where there is a local increase in the level of the ocean relative to the land, which might be due to ocean rise or land subsidence.

Resilience

The capacity of a system, community, or society potentially exposed to hazards to adapt, by resisting or changing, in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organizing itself to increase its capacity for learning from past disasters for better future protection and to improve risk reduction measures. (SDR, 2005)

Risk

The probability of harmful consequences or expected losses (death and injury, losses of property and livelihood, economic disruption, or environmental damage) resulting from interactions between natural or human-induced hazards and vulnerable conditions. (SDR, 2005)

Scenarios

The term "scenarios" describes qualitative and quantitative information about different aspects of future environmental change to investigate the potential consequences for society. Scenarios do not predict future changes, but describe future potential conditions in a manner that supports decision-making under conditions of uncertainty.

Shallow coastal flooding

The inundation of land areas along the coast caused by higher than average high tide and worsened by heavy rainfall and onshore winds (i.e., wind blowing landward from the ocean). Places like Charleston, South Carolina, and Savannah, Georgia, experience impacts from shallow coastal flooding several times a year because of coastal development and lower elevation.

Storm surge

Water that is pushed toward the shore by the force of the winds swirling around the storm. This advancing surge combines with the normal tides to create the hurricane storm tide, which can increase the mean water level 15 feet or more. (See www.nhc.noaa.gov/HAW2/english/storm_surge.shtml.)

Subsidence

Land subsidence is a gradual settling or sudden sinking of the Earth's surface owing to subsurface movement of earth materials.

Uncertainty

Scientists think of uncertainty as a specific, quantifiable measure of how well something is known. For example, uncertainty is used to define the range of probable sea level rise (SLR) outcomes. The predicted SLR values within the range of uncertainty are those scenarios most likely to occur. SLR values beyond the range of uncertainty are not as likely to happen.

Vulnerability

Susceptibility of people, property, and resources to negative impacts from hazard events.