

Glossary, Bibliography, and Photo Credits



Glossary and Acronyms

Adaptation: Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

Adaptive capacity: The ability of a system or species to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.

Adaptive management: A systematic approach for improving resource management by learning from management outcomes. Adaptive management is an iterative approach in which managers, scientists, and stakeholders work together to evaluate a problem, select and implement strategies, monitor conditions, evaluate the effectiveness of the strategies, and adjust future actions accordingly.

Armored (or hardened) shorelines: Many shorelines have been hardened with concrete, steel, gabions, or armor stone to prevent erosion. Such reinforcement usually results in the elimination of shoreline vegetation and cover that is important to fish and other wildlife.

Biodiversity: The range of organisms present in a particular ecological community or system. It can be measured by the numbers and types of different species, or the genetic variations within and between species.

Combined sewer overflow (CSO): An overflow of stormwater, untreated waste, toxic material, and debris from a combined sewer system that collects sewage and stormwater runoff in a single pipe system. During periods of heavy rainfall or snowmelt, the wastewater volume in a combined sewer system can exceed the capacity of the sewer system or treatment plant. For this reason, combined sewer systems are designed to overflow occasionally and discharge excess wastewater directly to nearby streams, rivers, or other water bodies.

Dike: An embankment for controlling or holding back water.

Ecosystem: A biological environment consisting of all the living organisms or biotic component, in a particular area, and the nonliving, or abiotic component, with which the organisms interact, such as air, soil, water and sunlight.

Estuary: A partly enclosed coastal body of water with one or more rivers or streams flowing into it, and with a free connection to the open sea.

Green infrastructure: Encompasses the preservation and restoration of natural landscape features, such as forests, wetlands, floodplains, and natural drainage features. At the site scale, it involves low-impact development (LID) and sustainable building features, such as rain gardens, green roofs, permeable pavement, rainwater harvesting, urban forestry, and preservation of green open spaces such as parks and wetlands.

Hardened (or armored) shorelines: Many shorelines have been hardened with concrete, steel, gabions, or armor stone to prevent erosion. Such reinforcement usually results in the elimination of shoreline vegetation and cover that is important to fish and other wildlife.

Hypoxia: Low oxygen concentration; used in this context regarding oxygen concentrations in waters such as Puget Sound.

Low-impact development: A planning and design approach to help manage stormwater using on-site natural features to manage rainfall and infiltrate, filter, store, evaporate, and detain runoff close to its source.

Maladaptation: When the negatives of an adaptation action or strategy outweigh the benefits, it becomes a maladaptation. Maladaptation may include strategies that benefit one sector or community at the expense of others; strategies that decrease near-term harm but increase long-term vulnerability; strategies that result in increased greenhouse gas emissions or otherwise increase the rate or extent of global or regional change; economic actions or strategies that reduce incentives to adapt or set paths that limit choices available to future generations.

Managed retreat: The deliberate process of altering barriers or other defenses to allow flooding of a presently defended area. Managing this flooding process helps to reduce risk and negative impacts.

Mitigation banking: The restoration, creation, enhancement, or preservation of a wetland, stream, or habitat conservation area, for the purpose of providing compensation for unavoidable impacts to ecosystem resources that a proposed project would adversely affect.

Phenology: Study of periodic biological phenomena, such as breeding, flowering, and migration, especially as related to climate.

Refugia (or climate refugia): Areas where climate change is likely to occur more slowly or to a lesser extent than other areas, due to physical landscape features, such as north-facing slopes, valleys or other low areas that act as sinks for cold air, or streams fed by deep coldwater springs. These areas provide refuge to species under stress from climate change.

Resilience: The ability of a population or system to bounce back to a condition similar to its previous state following disturbance or change, with core functions and processes intact.

Riparian zone (or riparian area): The interface between land and a river or stream.

Risk: A combination of the magnitude of potential consequences of climate change impacts and the likelihood that the consequences will occur.

Scenario planning: A method used to create and evaluate alternate futures, and to make decisions that are effective and robust across a range of possible futures.

Stormwater runoff: Stormwater is rain and snow melt that runs off surfaces such as rooftops, paved streets, highways, and parking lots. As water runs off these surfaces, it can pick up pollution such as: oil, fertilizers, pesticides, soil, trash, and animal waste. From here, the water might flow directly into a local stream, bay, or lake. Or, it may go into a storm drain and continue through storm pipes until it is released untreated into a local waterway.

Sustainability: The conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations. Sustainability is important to making sure that we have and will continue to have the water, materials, and resources to protect human health and our environment.

Transfer of development rights (TDR): A mechanism that allows owners of property zoned for low-density development or conservation use to sell development rights to other property owners located in “receiving” zones, such as designated urban areas, that can accept additional density.

Urban heat island: Developed areas that are hotter than nearby rural areas. Buildings, roads, and other infrastructure change the landscape and replace open land and vegetation with impermeable dry surfaces. These changes cause urban regions to become warmer than their rural surroundings, forming an “island” of higher temperatures in the landscape. Heat islands can affect communities by increasing summertime peak energy demand, air conditioning costs, air pollution and greenhouse gas emissions, heat-related illness and mortality, and water quality.

Vulnerability: The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variations to which a system is exposed, its sensitivity, and its adaptive capacity. Vulnerability to climate change can be exacerbated by the presence of other stresses.

Zoonotic disease: A disease that can be transmitted from animals to people or, more specifically, a disease that normally exists in animals but that can infect humans.

Acronyms

BLM	Bureau of Land Management
BPA	Bonneville Power Administration
CAKE	Climate Adaptation Knowledge Exchange
CDC	Centers for Disease Control and Prevention
CIG	Climate Impacts Group at the University of Washington
CIRC	Climate Impacts Research Consortium
CREAT	Climate Resilience and Assessment Tool
CRN	Climate Response Network
CSC	Climate Science Center
CZM	Coastal Zone Management
DNR	Washington Department of Natural Resources
ESRL	Earth System Research Laboratory
EQIP	Environmental Quality Incentives Program
FEMA	Federal Emergency Management Agency
FLP	Forest Legacy Program
GHG	Greenhouse Gas
GMA	Growth Management Act
IPCC	Intergovernmental Panel on Climate Change
IWRM	Integrated Water Resources Management
LCC	Landscape Conservation Cooperative
LID	Low-impact development
LWCF	Land and Water Conservation Fund

NFIP	National Flood Insurance Program
NGO	Nongovernmental organization
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NW	Northwest
NWS	National Weather Service
OA	Ocean acidification
PSU	Portland State University
RCW	Revised Code of Washington
RISA	Regional Integrated Sciences and Assessments
Risk MAP	Risk Mapping, Assessment, and Planning (a FEMA program)
SLR	Sea level rise
TDR	Transfer of development rights
USBR	United States Bureau of Reclamation
USDA	United States Department of Agriculture
USFS	United States Forest Service
USGS	United States Geological Survey
UW	University of Washington
WACCIA	Washington Climate Change Impacts Assessment
WSDA	Washington State Department of Agriculture
WSU	Washington State University

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