Glossary

Central Valley Landscape Conservation Project

Adaptation (Climate Change): adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

Adaptation (Biological): the process or the product of natural selection that changes an organism's behavior, physiological function, or anatomical structure, so that it is better suited to its environment.

Adaptive capacity: The ability of a Priority Natural Resource to accommodate or cope with climate change impacts with minimal disruption.

Climate change: a significant and lasting change in the statistical distribution of weather patterns over periods ranging from decades to millions of years. It may be a change in average weather conditions or the distribution of events around that average (e.g., more or fewer extreme weather events).

Climate factor: A characteristic of the landscape related to climate change e.g., air temperature. Changes in a climate factor can lead to benefits or stressors for Priority Natural Resources. Example: "Precipitation (amount)" can change (i.e., decreased precipitation) and result in a pressure - reduced water allocations- for permanent wetlands. Synonymous with *root cause* and *driver*.

Climate-smart conservation: The intentional and deliberate consideration of climate change in natural resource management, realized through forward-looking goals and explicitly linking strategies to key climate impacts and vulnerabilities.

Conservation: Preservation, protection, or restoration of the natural environment, natural ecosystems, vegetation, and wildlife.

Conservation action: Interventions designed to reach conservation goals. Actions may take the form of restoration, acquisition, law and policy, research and analysis, and others.

Conservation goal: A statement detailing a desired conservation outcome, such as the desired future condition of an ecosystem. Goals are typically broader, directional, and/or longer term statements. The term "goal" and "objective" are often used synonymously. Goals and objectives are the "what," whereas strategies are the "how."

Conservation objective: A statement detailing a desired *specific, measurable* conservation outcome, such as reducing a critical threat or improving a specific attribute of an ecosystem's health. A good objective meets the "SMART" criteria of being: specific, measureable, achievable, results oriented, and time based.

Cross-sectoral: CA LCC is defining this in the broadest sense as working across numerous groups, agencies, disciplines and areas.

Disturbance regime: The pattern of changes that shape an ecosystem over a long time scale, including a spatial disturbance pattern, a frequency and intensity of disturbances, and a resulting ecological pattern over space and time. The specific natural disturbance regime is closely associated with the natural community in which it occurs.

Ecologically connected landscape: Landscapes with sufficient variety and amount of habitat for maintaining a well-connected network of conservation areas to allow the movement of species, habitats, and ecosystems in response to climate change and other stressors.

Ecosystem: a biological environment consisting of all the organisms living in a particular area, as well as all the nonliving (abiotic), physical components of the environment with which the organisms interact, such as air, soil, water, and sunlight.

Expert: Vulnerability assessment workshop participants that self-identified as knowledgeable in issues affecting a Priority Natural Resource.

Exposure: Measure of the character, magnitude, and rate of change a Priority Natural Resource may experience.

Ecosystem function: the physical, chemical, and biological processes or attributes that contribute to the self-maintenance of the ecosystem, such as decomposition, nutrient cycling, pollination, and seed dispersal.

Ecosystem service: Any positive benefit that ecosystems provide to society.

Habitat: an ecological or environmental area that is inhabited by a particular species of animal, plant, or other type of organism. It is the natural environment in which an organism lives, or the physical environment that surrounds (influences and is utilized by) a population.

Key ecological attribute (KEA): Aspects of a Priority Natural Resource's biology or ecology that if present define a healthy resource and if degraded by a stressor would lead to loss of that resource over time. Example: "habitat connectivity". Attributes of a KEA can be monitored to track the health of a resource and the consequences of conservation action.

Landscape: a terrestrial, aquatic, or marine area sufficient in size, composition, and configuration to support at least one ecologically functional population of all conservation features for the long term.

Landscape permeability: The degree of freedom with which animals can move through a landscape.

Natural resources: materials and components that can be found within the environment. A natural resource may exist as a separate entity, such as fresh water and air, as well as a living organism, such as a fish, or it may exist in an alternate form which must be processed to obtain the resource, such as metal ores, oil, and most forms of energy.

Non-climate factor: A characteristic of the landscape which is not related to climate change, (e.g., urban growth, invasive species) that contributes to pressures and stresses for Priority Natural Resources. Example: "Urban growth" can change (i.e., increased urban growth) and result in a stressor, habitat fragmentation, for oak woodlands. Synonymous with *root cause* and *driver*.

Non-climate stressors: In the context of climate adaptation, non-climate stressors refer to those current or future pressures and impacts threatening species and natural systems that do not stem from climate, such as habitat fragmentation, invasive species, pollution and contamination, disease, and over exploitation.

On-the-ground: In a place where real, practical work is done.

Pressure: A change in conditions, or a process, that contributes directly or indirectly to a Stress. These may be specific to a Priority Natural Resource (e.g. unsustainable fishing or logging), or can be higher-level drivers contributing to pressures and stresses for multiple Priority Natural Resources (e.g. decreased precipitation). Synonymous with *threat, impact,* and *driver,* depending on its position in the sequence of changes that can ultimately degrade Priority Natural Resources. Adopted from Salafsky et. al., 2008.

Priority Natural Resource (PNR): Biological, ecological, and cultural features and processes that have been identified as priorities for conservation within the Central Valley geographic area as part of the Central Valley Landscape Conservation Project (CVLCP). For the project's list of PNRs, please see the website at http://climate.calcommons.org/cvlcp.

Refugia: Pockets of habitat within a landscape that have or are expected in the future to experience a slower rate of climatic or non-climatic change than similar habitats.

Resilience: (Current ecological Usage) - the capacity of an ecosystem to return to its original state following a perturbation, including maintaining its essential characteristics of taxonomic composition, structure, ecosystem functions, and process rates. (emerging Climate Change Usage)—in the emerging context of climate change, resilience might best be thought of as the ability of an ecosystem to recover from or adjust easily to change, measured more in terms of overall ecosystem structure, function, and rates and less in terms of taxonomic composition

Restoration: (Current ecological Usage) - the process of repairing damage to the diversity and dynamics of native ecosystems, which can include promoting or mimicking natural disturbance regimes; managing issues like in-stream flows, water withdrawals, and storm water run-off; and addressing poorly sited infrastructure. (Emerging Climate Change Usage) - in the emerging

context of climate change, restoration might best be thought of as focusing on repairing damage to such structural or functional aspects of the ecosystem as listed above, as opposed to attempting to restore the original or historic composition of an ecosystem.

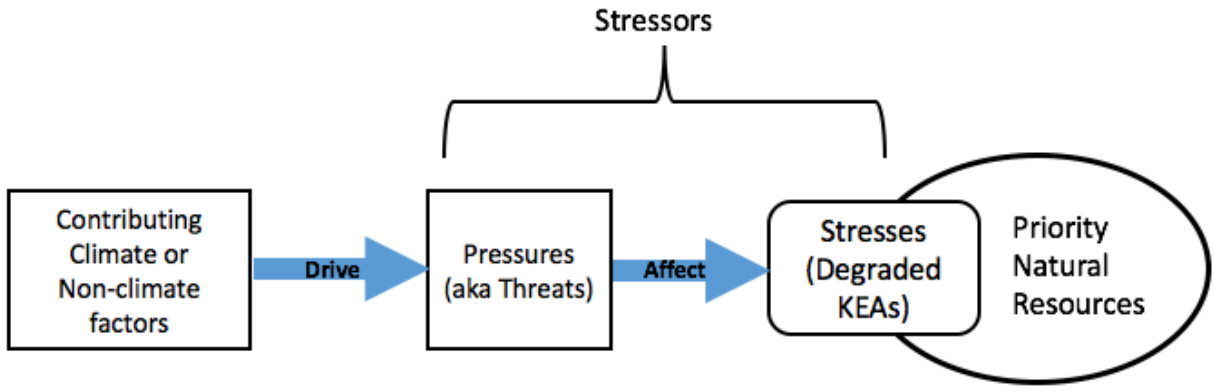
Sensitivity – The degree to which a PNR is or is likely to be affected by or responsive to climate or non-climate factors, changes, and resulting pressures.

Species group: An assemblage of species that have similar or related survival requirements and were identified as a Priority Natural Resource to be the focus of vulnerability assessment and conservation strategies and actions.

Strategy: A high-level, necessary strategic action to achieve a conservation objective (more than one strategy may be required to do so – e.g. *prevent, contain,* and *eradicate* invasive weeds). Strategies typically include one or more activities or action steps. Strategies are designed to achieve specific objectives. Strategies are the "how" or the *means* to the end.

Stress: An attribute of a conservation target's ecology that is impaired directly or indirectly by climate and non-climate stressors/pressures/threats (e.g., reduced population size or habitat fragmentation). A stress is not a threat in and of itself, but rather a degraded condition or "symptom" of the target that results from a direct threat. Stresses is synonymous with *degraded key attributes* and *impacts*. A stress is usually specific to a given Priority Natural Resource. Adopted from Salafsky et. al., 2008.

Stressor - Our general term for any pressure or stress that threatens to negatively impact a Priority Natural Resource. Stressors can result from climate or non-climate factors.



Above: Diagram of concepts used in the CVLCP, derived from *Salafsky et. al., 2008. A Standard Lexicon for Biodiversity Conservation: Unified Classifications of Threats and Actions.*

Vulnerability: The extent to which a species, habitat, or ecosystem is susceptible to harm from climate and non-climate change changes and resulting pressures. Vulnerability is a function of the sensitivity of a particular system to climate changes, its exposure to those changes, and its capacity to adapt to those changes (From Glick, et. al., 2011 Scanning the Conservation Horizon: A Guide to Climate Change Vulnerability Assessment).