



Climate Change and IRWM – Definitions and Framework

February 6, 2018

Defining Climate Change

Preparing for and responding to climate change will require an integrated approach to resource management, which makes the IRWM program uniquely suited to take action. A key benefit of the San Diego IRWM program is that all Plan Objectives either directly or indirectly support building climate *resilience* through *adaptation* and *mitigation*. We conceptualize climate resilience, adaptation, and mitigation as related concepts and for the purposes of the IRWM Plan, these terms are defined as:

Climate Resilience: Resilience is the capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience (Safeguarding California Plan, Appendix C, 2017).

Climate Adaptation: Adjustment in natural or human systems to a new or changing environment. Adaptation to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (United State Environmental Protection Agency, 2013).

Mitigation (climate): A human intervention to reduce the human impact on the climate system; it includes strategies to reduce greenhouse gas sources and emissions and enhancing greenhouse gas sinks (e.g., carbon storage) (United State Environmental Protection Agency, 2013).

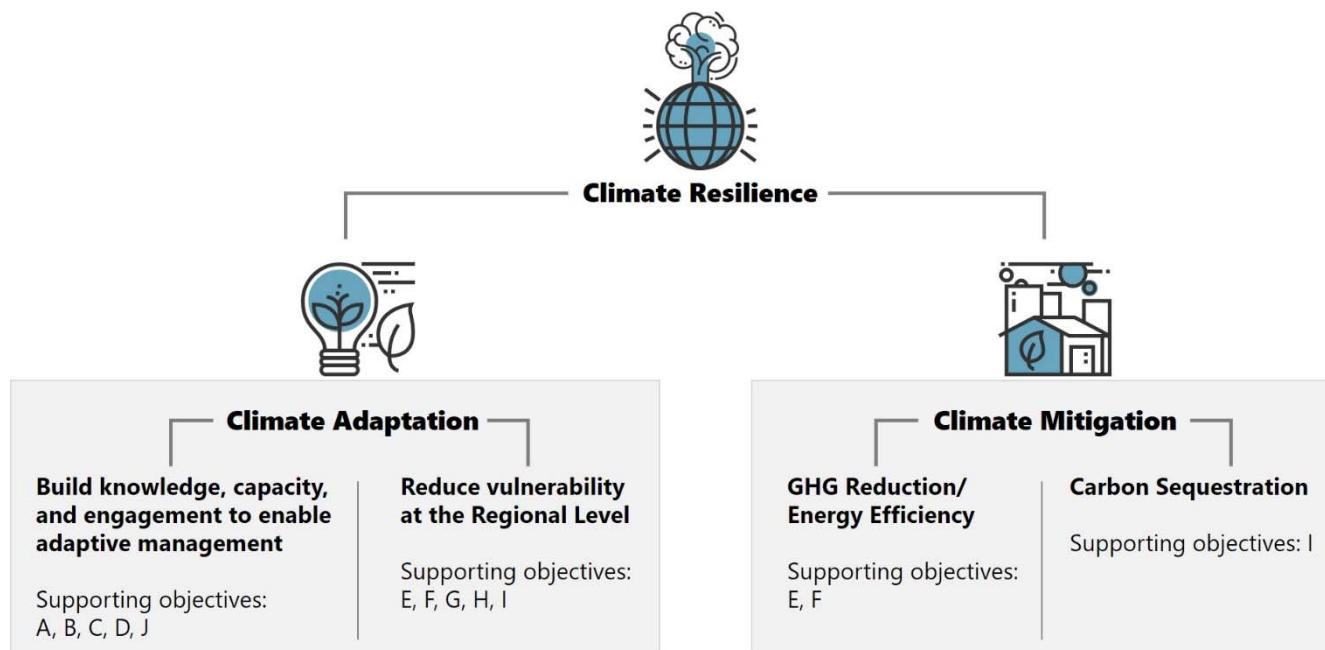
Mitigation (of disaster risk and disaster): The lessening of the potential adverse impacts of physical hazards (including those that are human-induced) through actions that reduce hazard, exposure, and vulnerability (International Panel on Climate Change, 2014).

Vulnerability: In the most general sense, a susceptibility to harm or change. More specifically, the degree to which a system is exposed to, susceptible to, and unable to cope with, the adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, as well as of non-climatic characteristics of the system, including its sensitivity, and its coping and adaptive capacity.

Definitions of resilience, adaptation, mitigation, and vulnerability used in the San Diego IRWM Plan were adapted from Appendix C of the 2017 Safeguarding California Plan, available:

<http://resources.ca.gov/wp-content/uploads/2017/05/DRAFT-Safeguarding-California-Plan-Appendix-C.pdf>

Climate Change Framework for IRWM



2013 IRWM Plan Objectives:

- Obj. A - Encourage integrated solutions to water management issues and conflicts
- Obj. B - Maximize stakeholder and community involvement and stewardship
- Obj. C - Effectively obtain, manage, and assess water resources data and information
- Obj. D - Further the scientific and technical foundation of water management
- Obj. E - Develop and maintain a diverse mix of water resources
- Obj. F - Construct, operate, and maintain a reliable infrastructure system
- Obj. G - Enhance natural hydrologic processes to reduce the negative effects of hydromodification and flooding
- Obj. H - Effectively reduce sources of pollutants and environmental stressors
- Obj. I - Protect, restore, and maintain habitat and open space
- Obj. J - Optimize water-based recreational opportunities