Climate Understanding & Resilience in the River Valley

Goal

The overarching goal of the CURRV project is to build upon a regional commitment to understand and adapt to climate change. A vulnerability assessment will be conducted in the Tijuana River Valley (TRV), in the context of environmental and socioeconomic changes, to inform the development of climate adaptation strategies to increase the resiliency of the valley.

To achieve this goal, the following specific objectives are pursued [1, 2]

1. **Build partnerships.** Involve all relevant stakeholders in developing, reviewing, and refining adaptation strategies. Strengthen existing, and aim to establish new partnerships among both US and Mexican federal, state, regional, county, and local governments and public agencies, as well as with nonprofits and community organizations, recognizing that the majority of the Tijuana River Watershed is in Mexico.

2. **Enhance regional capacity.** Provide a forum for continued bidirectional information and science transfer where lessons learned from adaptation planning can be shared between regional and binational partners. Communication and coordination among collaborators will strengthen regional consistency.

3. **Analyze regional vulnerability to climate change.** Synthesize to the greatest extent possible the best available science in identifying climate change vulnerabilities focusing on flooding and inundation from sea level rise and riverine watershed inputs. Assess how changes in our climate will impact TRV's natural resources, human populations, and infrastructure.

4. **Identify sector-specific and cross-sectoral adaptation strategies that help reduce vulnerabilities and build climate resilience.** These strategies aim to avoid, prevent, or minimize negative climate change impacts to TRV's natural and cultural resources, and economic and social well-being, including public health, safety, and security. Using the precautionary approach to minimize risk, attention should be given to developing strategies that help:
    a. improve preparedness for climate change impacts, including daily conditions and extreme events;
    b. enhance TRV's response capacity in case of extremes, and facilitate recovery from extreme impacts in order to enhance TRV's resilience;
    c. protect, restore, and enhance the TRV's natural ecosystems- and the ecosystem services they provide- and cultural resources, while initiating and enhancing efforts that improve social and economic well-being;
    d. facilitate adaptation of existing communities, development, and critical infrastructure to reduce their vulnerability to climate change impacts over time, and guide the planning and design of new infrastructure for long-term sustainability in the face of climate change;

e. ensure public access to coastal and upland areas while protecting beaches, natural shoreline, and park and recreational resources; and
f. seek to modify and enhance existing policies where possible, minimizing the need to create solutions that require new policies, legislation, and staffing.

5. **Develop a framework for implementing adaptation strategies.** Create an adaptive decision-support framework for identified strategies, which recognizes co-benefits across sectors and includes information critical for implementation, such as:
   a. stakeholder input
   b. time horizons (immediate, near-term, long-term)
   c. potential lead agencies
   d. key barriers
   e. monitoring and evaluation criteria

6. **Provide specific recommendations for implementing immediate and near-term adaptation strategies.** This may include management actions and policy changes based on the information developed in other stated objectives.

7. **Specify future direction.** Indicate areas where further work will be required to increase the existing understanding of climate risks, environmental and societal vulnerabilities, and adaptation options and barriers. Establish feedback mechanisms that provide for the modification of strategies.

Bibliography

[1] “California Climate Adaptation Strategy,” California Natural Resources Agency, 2009.

[2] "Sea Level Rise Adaptation Strategy for San Diego Bay," ICLEI-Local Governments for Sustainability; The San Diego Foundation, 2012.