

CLIMATE CHANGE EFFECTS IN CALIFORNIA TRIBAL COMMUNITIES

WHAT ARE THE EXPECTED IMPACTS FROM THESE CHANGES?

Climate change is having a profound effect on California's landscape and resources as evidenced by changes in snowpack, variable fire regimes, and sea level rise. Scientific studies show that these changes have and will increase stress on the natural resources that tribal communities depend on.

This diagram was developed to assist tribal communities in identifying areas where they may be vulnerable to the anticipated impacts of climate change on a general scale. These impacts are projected to gradually increase during this century and beyond. Tribes can refer to the tribal matrices to identify vulnerabilities and adaptation strategies to the following impacts*.

Increased temperatures and extreme weather events can create a change in prevalence and spread of disease, as these environments may allow for mosquitoes and other insects to thrive thereby increasing chronic and infectious diseases.



HEALTH

Extreme weather events and rising sea level threatens community health through increased displacement which disrupts vital resource availability, local economy, personal income, social networks, and increases in mortality rates.



WATER SUPPLY & QUALITY



Changes in amount and timing of flow impacts water supply and conveyance, degrades water quality, contributes to habitat disturbance/loss, and disrupts fisheries.

A shift to more rain and less snow, associated with higher air temperatures, may reduce water supply reliability, and hurts spawning and recruitment success of native fishes.



Forests, important contributors to subsistence activities and traditional and sacred practices, may be more vulnerable to pests, diseases, changes in species composition, and fire.



ECOSYSTEM

TEMPERATURE

HYDROLOGY

Increased temperatures and changes in precipitation may lead to longer, more intense droughts, reducing productivity, further stress traditional fish, plant, and animal species, and cause damage or exposure of cultural resources.



Ocean acidification may result in ocean food web changes and the shift or loss in traditional aquatic species, such as shellfish which could impact coastal subsistence activities and traditional practices.



COASTAL AND DELTA

SEA LEVEL RISE

FLOODING AND DROUGHT

Increased flooding can damage sacred sites and impede access to them, damage artifacts and remains, and impact traditional plant and animal species.



Higher water temperatures and changes in salinity may make the Delta intolerable to some native fish species and result in estuarine food web changes.



Sea level rise threatens coastal and Sacramento — San Joaquin Delta communities, infrastructure, and tidal wetlands along with the possible inundation or loss of access to sacred sites.



*Tribal matrices <http://www.water.ca.gov/climatechange/>

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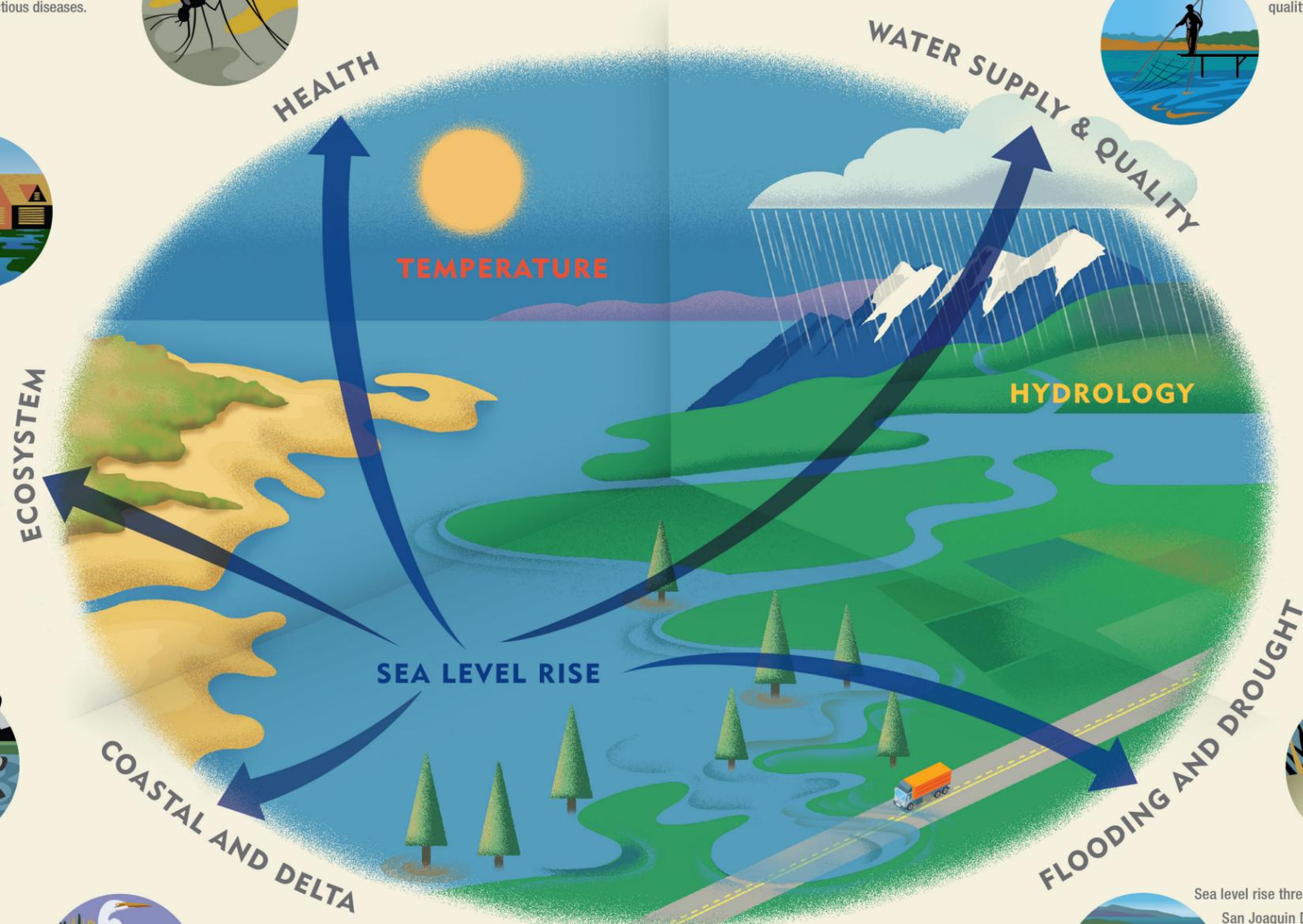
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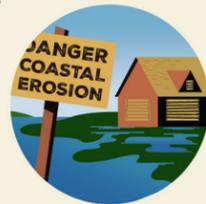
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