

MAUI COUNTY CLIMATE CHANGE VULNERABILITY ASSESSMENT

Climate Change Vulnerabilities Across Maui County

(in community prioritized order)

‘āina (land), wai (fresh water), kai (ocean waters), and lewa (air)

- ▶ Loss of coral reefs due to warming waters, acidification, siltation, pollution, and invasive species
- ▶ Declines in native forest and alpine habitats due to warming temperatures, changes in precipitation, invasive species, drought, and wildfire
- ▶ Harm to shoreline habitats due to sea level rise and coastal flooding, inundation, and erosion
- ▶ Harm to watersheds due to invasive species, pathogens, and erosion
- ▶ Impacts to groundwater, seeps, springs, and freshwater wetlands due to larger storms and drought
- ▶ Threats to native and endangered species, especially keystone species, due to all climate change-driven hazards
- ▶ Harm to muliwai (estuaries) and tidal wetlands due to inundation
- ▶ Increase in landslides and erosion along steep slopes due to larger storms, drought, wildfire, and invasive species
- ▶ Impacts to anchialine pools (enclosed water bodies with an underground connection to the ocean) due to sea level rise and invasive species
- ▶ Impacts to seabirds and their habitats due to warming temperatures, invasive species, and climate change-driven habitat disruption

Cultural

- ▶ Loss of Native Hawaiian cultural practices, culture, and spirituality due to all climate change-driven hazards
- ▶ Loss of culturally important sites and customs due to sea level rise, coastal flooding, and severe storms
- ▶ Risks to food gathering and food production due to all climate change-driven hazards
- ▶ Subsistence fishing at risk due to acidification, sedimentation, and warming water
- ▶ Displacement of Kānaka Maoli (Native Hawaiian) and destruction of resources leading to possible loss of identity due to all climate change-driven hazards
- ▶ Out migration displacing kama'āina and breaking family bonds due to all climate change-driven hazards
- ▶ In-migration due to climate-driven disruptions in other geographies furthers cultural divide
- ▶ Inundation of historical coastal graveyards and potential exposure of iwi kupuna (ancestral remains)
- ▶ Loss of easy-going, outdoor oriented, island way of life due to warming temperatures and economic burdens
- ▶ Loss of housing for multi-generational families and low-wage workers due to climate induced impacts.

Human Health

- ▶ Decrease in food access and food security due to drought, wildfires, and invasive species
- ▶ Increase in the overall cost of living due to all climate change-driven hazards
- ▶ Loss of power, water, and communication services during emergencies due to all climate change-driven hazards
- ▶ Negative health impacts due to extreme heat, changes in trade winds, and wildfire
- ▶ Negative mental health impacts due to all climate change-driven hazards
- ▶ Public safety and evacuation challenges due to larger storms, coastal flooding, wildfire, landslides, and extreme heat
- ▶ Increasing pests and diseases due to warming temperatures and larger storms
- ▶ Social service providers and emergency response overwhelmed due to all climate change-driven hazards
- ▶ Greater difficulty recruiting health care workers due to all climate change-driven hazards

Infrastructure

- ▶ Damage to coastal roads due to larger storms, coastal flooding, erosion, and sea level rise
- ▶ Damage to drainage, reservoir, and other infrastructure due to inadequate stormwater systems in the event of larger storms
- ▶ Increased disruption of critical supply chains, including delayed barge shipments, increased fuel costs, and potential harbor damage due to all climate change-driven hazards
- ▶ Negative impacts to water supply and water infrastructure due to drought, wildfire, and larger storms
- ▶ Reduction in or damage to groundwater supply due to drought and larger storms
- ▶ Increased risk of electrical service disruption in isolated communities due to larger storms, flooding, landslides
- ▶ Buildings at risk due to all climate change-driven hazards
- ▶ Damage to park facilities and restricted beach access due to sea level rise, coastal erosion, and larger storms
- ▶ Increased damage to infrastructure due to wildfire
- ▶ Increased damage to large and small harbors due to sea level rise and larger storms
- ▶ Increased damage to utilities due to larger storms with higher winds
- ▶ Increased risk of brownouts due to higher temperatures and extreme heat
- ▶ Increased damage to electric, water, and wastewater infrastructure due to larger storms and inland flooding

Economy

- ▶ Increased risks to agriculture due to drought, increasing salinity, warmer temperatures, invasive species, and larger storms
- ▶ Government budgets stressed from cost of climate adaptation and responding to more frequent and severe disruptions due to all climate change-driven hazards
- ▶ Household and individual economics harmed by loss of subsistence lifestyles and resources due to all climate change-driven hazards
- ▶ Financial strain to service workers, especially in tourism, from employment interruptions due to all climate change-driven hazards
- ▶ Freshwater supply challenges due to less precipitation, larger storms, and higher temperatures
- ▶ Coastal businesses and resorts threatened by sea level rise and flooding
- ▶ Economic harm due to loss of coral reefs and other marine life
- ▶ Commercial operations at risk of economic shocks due to larger storms, floods, wildfires, and landslides
- ▶ Economic harm to agriculture, tourism, and businesses due to wildfire
- ▶ Goals of creating walkable, economically vibrant places increasingly difficult to meet due to all climate change-driven hazards
- ▶ Harm to local fisheries due to warming water and acidification

Pau

