



YUROK TRIBE CLIMATE CHANGE ADAPTATION PLAN FOR WATER AND AQUATIC RESOURCES

All sub-populations have an increased risk
of illness from **waterborne pathogens**.

WATERBORNE PATHOGENS



TRIBAL POPULATION GROUPS

Infants and
Children



Pregnant
Women



Adults



Elders



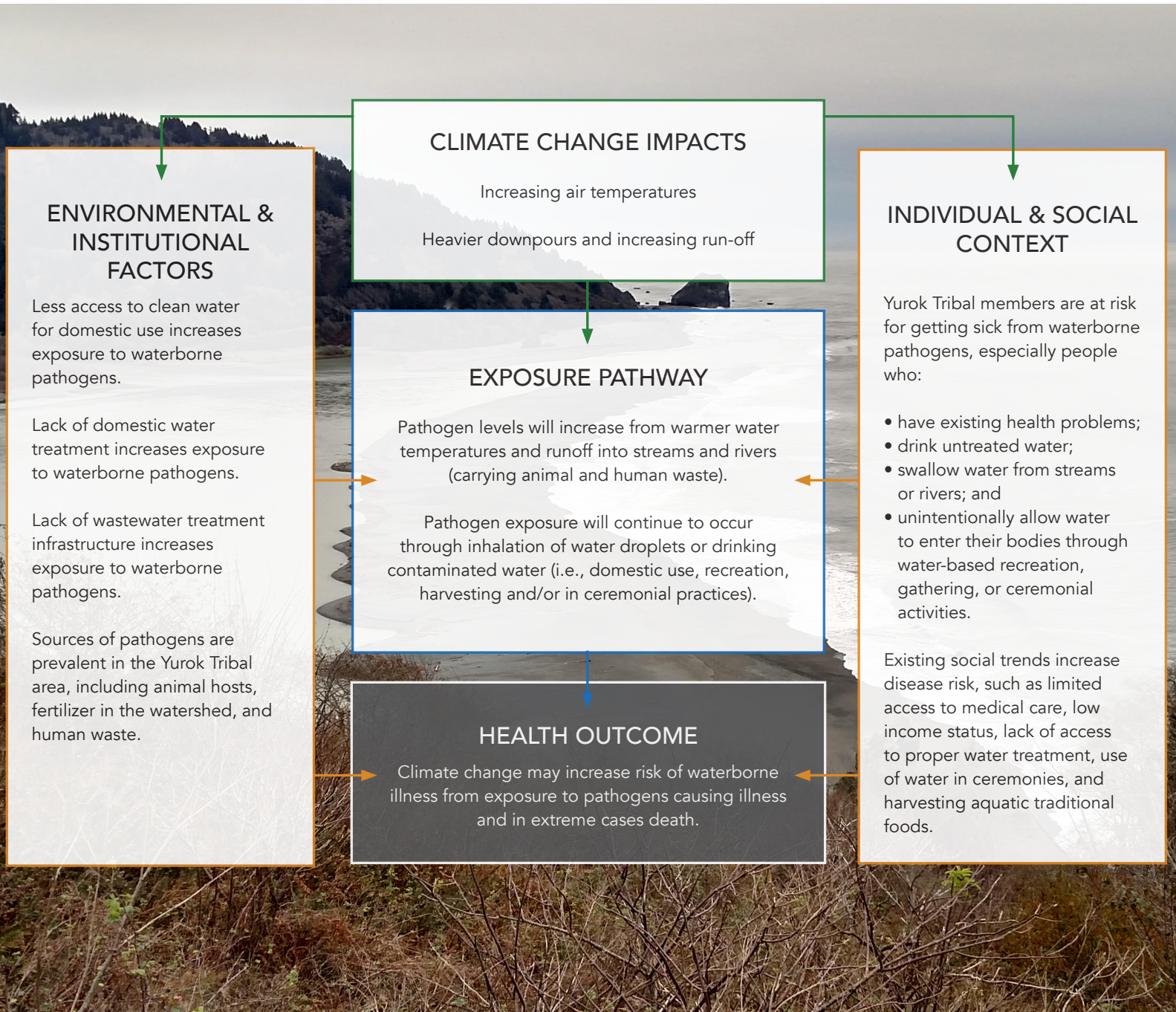
Subsistence /
Commercial
Fishers



Gatherers



Ceremonial
Participants





WATERBORNE PATHOGENS

E.Coli, *Giardia*, and *Cryptosporidium* are pathogens that cause illness when people are exposed to them, including diarrhea, abdominal pain, nausea, dehydration, urinary tract infections, and, in extreme cases, death. Recent testing of domestic tap water found *E.Coli* present in more than 45% of the Yurok homes tested.



ADAPTATION STRATEGIES

Listed below are strategies that can be implemented to reduce the risk of waterborne disease among Tribal members.

Institutional

- Continue work to identify sources of drinking water contamination.
- Explore funding opportunities to continue regular monitoring of springs, creeks, and domestic water (point of entry in the home).
- Enhance communication efforts between YTEP and the Tribe health clinics on waterborne illness reporting, education, and treatment.
- Expand opportunities for Tribal members to report illness from waterborne pathogens to the Tribal health clinics to better understand the problem.
- Continue and expand outreach and education about the health risks of drinking water contaminated with *E.Coli*, *Giardia* and *Cryptosporidium* to spur action within the Tribal community.
- Increase enforcement of Environmental Protection Ordinance and other existing ordinances on the sources of these contaminants (e.g., leaking septic systems, pit toilets, among other human sources were identified as the predominant problem).
- Expand interdepartmental communication and coordination to enhance Tribal health services and increase resiliency.

Individual

- If possible, consider connecting to the public water system. Think through the cost and level of effort it takes to maintain your own private system and the associated risk of increased health problems, in contrast to the cost of a monthly bill for safe, clean, and treated water.
- Consider installing low cost or alternative filtering systems, including redeveloping springs box systems to move away from creeks as a primary water source.
- Maintain and/or expand existing filtering systems; consider adding in line filters, roughing filters, or a second sand filter.
- Seek medical care when you have medical issues you suspect are related to waterborne pathogen exposure and ask the medical staff to test for *E.Coli* related problems.
- Store treated/clean water in dedicated, pre-cleaned or sterile containers for drinking and other uses such as tooth brushing.
- Follow sanitary construction, maintenance, and use of septic systems, out-houses, or pit toilets to keep human feces a minimum of 100 feet away from water and off steep or easily erodible areas.

"I contracted 'Erythema nodosum' in 2001, a waterborne illness. I believe I contracted it from the upper Klamath River. This condition is usually found in third world countries with slow, stagnant water."
— Yurok female born 1977