

El Niño 2026–27: mosquito-borne disease risk across the Pacific

El Niño is a natural climate pattern in which the tropical Pacific Ocean becomes unusually warm and causes shifts in rainfall and weather patterns worldwide. A **strong El Niño** is under way and is forecast to become very strong, possibly the strongest on record. It is likely to bring drier conditions to the western and southwest Pacific area, but heavier rain to the central Equatorial Pacific area. Drought leads more people to store water and heavy rain can increase stagnant water. Both can support the proliferation of *Aedes* mosquitoes that can transmit dengue, chikungunya and Zika virus and *Anopheles* mosquitoes that can transmit malaria. Past El Niño events have been linked to outbreaks of dengue or malaria in the Pacific, though this varies by location.

Current outlook:

13 Pacific Island Countries with a current El Niño alert (as per OCHA dashboard)	75% chance of a historic El Niño in Oct 2026 – Dec 2026	~100% chance of El Niño conditions persisting in Dec 2026 – Feb 2027
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Different consequences for different areas of the Pacific

(Note that geographic divisions are indicative and this reflects the [Rainfall outlook, October–December 2026](#))

Drier: Western & southwest Pacific		Wetter: Central Equatorial Pacific
American Samoa · Cook Islands (southern) · Federated States of Micronesia (most) · Fiji · French Polynesia (Society, Austral, Tuamotu) · Guam · Marshall Islands (most) · New Caledonia · Niue · Northern Mariana Islands · Palau · PNG · Samoa · Solomon Islands · Tonga · Tuvalu (southern) · Vanuatu · Wallis & Futuna		Cook Islands (northern) · French Polynesia (Marquesas) · Kiribati · Naoero · Tokelau · Tuvalu (northern)
 Rainfall: Below-normal rainfall with high chance of extreme dryness. Drought likely.  Consequence: Increased water storage in unsealed containers increases habitats for dengue vectors. Lower river flow can leave stagnant pools and brackish marshes where malaria vectors (<i>Anopheles</i>) breed (PNG, Solomon Islands and Vanuatu).	Cyclone/typhoon formation shifts east, raising risk for Samoa, Niue, Cook Islands & Marshall Islands	 Rainfall: Above or well-above normal rainfall.  Consequence: Expanded natural and urban dengue vector habitats amplify mosquito numbers. Flooding and human displacement increase exposure to mosquito bites.

Mosquito surveillance priorities

1. Mosquito trapping:

- Survey water containers for larvae and pupae to identify which are likely to produce most adult mosquitoes
- Set adult traps at fixed urban and peri-urban sites and review data weekly for major changes
- Maintain port and airport surveillance for early detection of invasive mosquito species

2. Resistance monitoring.

Test if local mosquitoes are susceptible to insecticides in use or planned for use

3. Data use.

Bring together and analyse data from mosquito, human syndromic and hospital, and case surveillance to identify and prioritise action. Agree on alert thresholds and decide who will take what action.

Mosquito control priorities

- Manage larval sources.** Cover, seal and screen stored water. Remove, manage or treat other containers and mosquito habitats. Link with WASH activities where practical.
- Pre-position supplies.** Stock WHO pre-qualified and approved residual adulticides and spray equipment, larvicides, PPE and personal protection measures (bed nets, repellents). Check expiry dates.
- Respond rapidly.** Be ready to spray in the event of an outbreak. Couple with bednets and repellents for sick or infected people. Intensify larval control. Support with risk communications and community engagement.

Note. El Niño doesn't mean an outbreak of mosquito-borne disease will follow. Its effect on rainfall varies from place to place, and water storage practices, temperature, population immunity and other factors also affect transmission. Past events and current expert advice both show that El Niño is a clear signal to prepare now. Response actions should be guided by local mosquito surveillance and case data.