

Analysis of historical data shows that rainfall and temperature influence diarrheal disease and malaria, which account for about 10 percent of deaths in Mozambique each year. Understanding these links is key to preparing for and responding to the future burden of disease.

The climate is already changing...



Up 1.5°–2°C across the country, 1961–2010

Projected climate changes



Up 1°C by 2037; Up 3°–5°C by 2100

More days with temperatures above 35°C

Fewer nights below 25°C



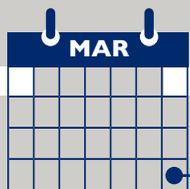
Increased variability, with wetter and dryer years



More cyclones, flooding and drought

Diarrheal Disease Patterns Now

When the hottest day of the week increases by 1°C.... diarrheal diseases increase by 1.13% that week.



When there is at least 1mm of rainfall on any given day of the week...

4 weeks later

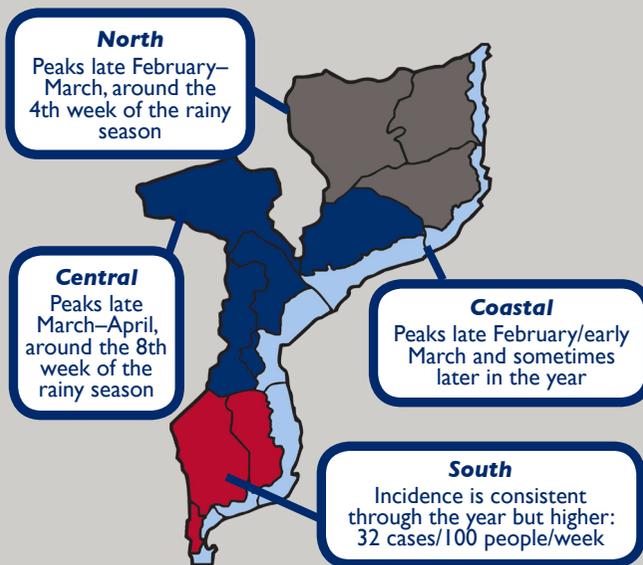
Diarrheal disease increases by 1.04%

What does this mean for the future?

Increases in minimum temperatures and more wet days leads to increase in diarrheal disease

Diarrheal Disease and the Rainy Season

Historically, reported cases peak in the rainy season, with 15–20 cases/per 100 people/week, except in the South, where incidence is higher. Incidence is lowest in the cool, dry months of June, July and August.



How Climate Affects Malaria



With warmer days and nights, malaria likely to increase in previously unsuitable highland areas.



Despite variability from year to year, rainfall plays a major role in malaria incidence across the country.

What does this mean for the future?

- Malaria likely to occur in higher elevations of Tete and Niassa provinces.
- The combination of variable rainfall and complex temperature changes will make transmission more unpredictable.

WHAT'S AT STAKE

- 17,400 people died of malaria in 2012; more than USD 40 million in aid was dedicated to malaria in 2015
- 15,000 (including 11,000 children) died from diarrheal disease in 2012; USD 79 million in economic activity is lost each year

Sources: World Health Organization, World Bank, 2012

WHAT WE CAN DO

Prevent future climate-driven cases of diarrheal disease and malaria by strengthening health systems



Information Systems

- Continue research on past trends and future projections on climate and health
- Use data collection technologies, such as SMS, to improve epidemic detection and response
- Deploy early warning systems linking weather forecasts to planning for health interventions
- Build public and policymaker awareness on climate risks



Leadership and Governance Foundations

- Enhance cross-sectoral collaboration on epidemic detection and early warning systems
- Expand health system capacity by reducing doctor and staff shortages, improving productivity, increasing knowledge on climate and disease
- Strengthen decision-making through accessible, actionable information on climate and health



Risk Management

- Include climate impacts in health surveillance systems and speed up reporting
- Integrate information on climate and disease in resource and supply chain management
- Upgrade hospitals, clinics and health storage facility infrastructure
- Develop contingency plans for managing staff and supplies during disease outbreaks