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.

North
- Peaks late February-March, around the 4th week of the rainy season

Central
- Peaks late March-April, around the 8th week of the rainy season

Coastal
- Peaks late February/early March and sometimes later in the year

South
- Incidence is consistent through the year but higher: 32 cases/100 people/week

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 1 mm 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

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.

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°-5ºC 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

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

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

1. 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

2. 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

3. 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

Based on a study by the USAID ATLAS activity. This document does not necessarily reflect the views of USAID or the US government. June 2017