Introduction
The E8 bulletin provides highlights on malaria transmission patterns in the E8 region. In each quarter, specific information regarding malaria incidence along E8 border districts, weather and climatic conditions are presented together with the regions epidemic monitoring, preparedness and response (EPR) plans.

Malaria incidence along E8 border districts

- In quarter two of 2020 (April – June), Eswatini and South Africa maintained malaria incidence of less than 1 case per 1000 population per month, as shown in Fig.1 below. Similar incidence was reported in border districts of Namibia (Outapi, Oshikuku, Engela; Eenhana) and in Angola (Namacunde).
- Malaria burden was high in border districts of Zambia followed by Zimbabwe and Mozambique. The impact of COVID-19 on malaria is not yet clearly understood, but current reports suggest that there is a reduction in passive case detection (hospital visits) in a majority of E8 countries. However, on the contrary, there are reports of increased community level case detection and care of uncomplicated malaria.
- There was a general reduction in malaria transmission in a majority of border districts, especially in Zimbabwe and Mozambique and most parts of Angola (Cuangar, Calai and Dirico).
- More local cases than imported cases were reported in frontline countries, possibly due to the closure of international borders as a result of the COVID-19 pandemic.
Figures 2 and 3 present specific frontline and second-line country border districts and their incidence rates. A further comparison between local versus total malaria incidence rates is shown for frontline countries.

Among front-line countries, Namibia continues to report high incidence rates of malaria as was the case in the previous quarter – January to March of 2020. Similarly, higher malaria mortality rates have also been reported in Namibia.

Among second line countries, Zambia reported the highest malaria incidence in border districts. It follows from the previous quarter where Zambia and Mozambique reported the highest burden of malaria. However, Mozambique has reported a reduction in transmission in some districts, i.e. Sussundenga district reported a 65% reduction in incidence compared to quarter one of 2020.

There are disparities in malaria related mortality rates for second line countries. Zimbabwe reported fewer cases in border districts yet presented with higher rates of mortality compared to other second line countries.

There was a welcomed reduction in transmission in border districts of Angola with all border districts reporting incidences of less than 50/1000 population.
Weather and Climate on Malaria

CLIMATE MONITORING

- Figure 4 presents 2 maps for 3-months seasonal precipitation anomalies and surface air temperature estimates in units of mm/season and degrees Celsius (°C) respectively, obtained from the weather and climate dataset-website; https://iridl.ldeo.columbia.edu/maproom/Global.
- Colors help determine below, or above normal average records and grey areas represent areas without data.
- Overall, the region experienced very low rainfall, with parts of northern Mozambique receiving substantial rainfall with slightly higher than normal air surface temperatures towards the west of the region.
- This may result in sustained malaria transmission over the winter months (June and July) of the region.

Figure 4: IRI seasonal precipitation anomaly and air surface temperature between April and June 2020
The maps in figure 5 indicate average seasonal forecasts in both precipitation and temperature for three months of quarter three (July to September) of 2020. They are generated by the International Research Institute (IRI) for Climate and Society as seen from the following link: https://iri.columbia.edu/our-expertise/climate/forecasts/seasonal-climate-forecasts.

Some parts in south-west of Namibia and Botswana are expected to have low rainfall below the average, as shown in figure 5.

Most parts of the region are expected to record below normal average rainfall (-40%) while parts of south western Mozambique is expected to have above-average rainfall (> 40%).

Surface air temperatures are expected to be normal with few areas reporting a 40% probability above normal.

In the coming season, most parts in the region are predicted to experience a reduction in malaria transmission due to a trend of lower than normal temperatures and precipitation estimates.

However, national malaria programmes are encouraged to be vigilant and proactive in deploying malaria interventions to stop malaria spread.

**CLIMATE SEASONAL FORECAST**

- The maps in figure 5 indicate average seasonal forecasts in both precipitation and temperature for three months of quarter three (July to September) of 2020. They are generated by the International Research Institute (IRI) for Climate and Society as seen from the following link: https://iri.columbia.edu/our-expertise/climate/forecasts/seasonal-climate-forecasts.
- Some parts in south-west of Namibia and Botswana are expected to have low rainfall below the average, as shown in figure 5.
- Most parts of the region are expected to record below normal average rainfall (-40%) while parts of south western Mozambique is expected to have above-average rainfall (> 40%).
- Surface air temperatures are expected to be normal with few areas reporting a 40% probability above normal.
- In the coming season, most parts in the region are predicted to experience a reduction in malaria transmission due to a trend of lower than normal temperatures and precipitation estimates.
- However, national malaria programmes are encouraged to be vigilant and proactive in deploying malaria interventions to stop malaria spread.

*Figure 5: seasonal climate forecast - precipitation anomaly and air surface temperature for July to September 2020*
# Regional Situation Room

The E8 regional malaria Situation Room has managed to convene 4 meetings over quarter two. Meetings were held in two-week intervals, a change from weekly meetings given the expected seasonal reduction in malaria transmission. Member countries provide general malaria information, i.e. malaria burden, country specific preparedness and response plans for the possibility of sustained winter transmission. The table below provides a summary for country preparedness plans and challenges in malaria programming over the period and for the new malaria season – 2020/2021.

<table>
<thead>
<tr>
<th>Country</th>
<th>Response measures employed to mitigate malaria increases</th>
<th>Challenges in responding to malaria increases</th>
</tr>
</thead>
</table>
| **Angola** | • Improving procurement processes for early arrival of malaria commodities.  
• IRS (Indoor Residual Spraying) program to take place as planned, with the lead implementer in the south of Angola being MENTOR INITIATIVE.  
• Delivery of LLINs for continuous distribution is expected to either in August or September  
• There has been an observed reduction in malaria outbreaks due to the deployment of outbreak response teams. | • Experience increases in Malaria cases, most from Luanda  
• COVID-19 has also negatively impacted malaria programming which has led to increase in malaria cases.  
• There is a shortage of malaria commodities at central and districts levels |
| **Botswana** | • Deployments of response teams to the most affected sites  
• Response meetings held with the objective of stratifying risk and recommending specific response programs for affected districts.  
• The mass distribution of LLINs (Long Lasting Insecticides Nets  
• Health promotion activities by surveillance team.  
• Response team to undertake In-depth analysis of the recorded morbidity and mortality of malaria | • Increase in Malaria cases by local transmission in some areas (Chobe, Okavango and Palapye) |
| **Eswatini** | • Partial restriction of population movement due to COVID-19 and the continuation of all malaria services.  
• Recruitment of IRS spray operators has begun.  
• Increase in funding allocation for IRS activities in the country.  
• Ensuring timely arrival of RDTs and other malaria commodities | • Shortage of malaria commodities at central medical stores (CMS) |
| **Mozambique** | • Plans to have early delivery of commodities  
• Despite COVID-19 conditions, malaria testing activities are still carried out. | • Delays in procurement processes and supply chain  
• COVID-19 has affected population movement and hospital visits for test and treat |
| **South Africa** | • Slight reduction of malaria cases attributed to programmatic influences and effort done by country, such as restriction in movements of people during COVID-19.  
• Maintaining and updating malaria commodities status  
• Community Health Workers (CHW) are still preforming their duties.  
• IRS implementation is planned for Limpopo and also the Waterberg district. | • Some areas like Vhembe had malaria increases in May.  
• Data capturing challenges in contracting personnel and further impacted by COVID-19 situation.  
• COVID-19 diagnosis might have led to missed malaria diagnosis  
• Case investigations activities affected by restrictions in movements.  
• There is a need to reopen Mobile clinics in boarder districts. |
| **Zambia** | • Strengthening of commodity distribution from central to low levels Facilities.  
• Complete the delivery of ACTs and other equipment by the mid-August.  
• Timely implementation of IRS program.  
• The mass distribution of LLINs and the strengthening of community engagements for intervention uptake. | • General increase in malaria cases compared to previous quarter (Q1)  
• Increased demand for RDTs to cover identified gap.  
• Interruptions in supply chain by COVID-19 restrictions. |

**ACKNOWLEDGEMENTS**

- NMCP Angola  
- NMCP Botswana  
- NMP Eswatini  
- NMCP Mozambique  
- NVDCP Namibia  
- NMCP South Africa  
- NMEC Zambia  
- NMCP Zimbabwe  
- International Research Institute for Climate and Society (RII)  
- Applied Center for Climate & Earth System Science (Access)

**E8 Situation Room Partners:**

[Logos of various organizations related to malaria control]