Introduction

The E8 bulletin provides highlights on malaria transmission patterns in the E8 region. Also, it provides quarterly specific information regarding malaria situation in E8 border districts, weather and climate conditions and regional epidemic monitoring, preparedness, and response plans (EPR) activities in each country. This bulletin presents malaria cases in the region for the first quarter of 2021 and the malaria EPR status by respective country.

Malaria burden in the E8 region

MALARIA CASES IN E8 COUNTRIES

- Using routinely shared data during the E8 Situation Room meetings for quarter one (January-March 2021), the total cases are presented in figure 1. Figure 1A represents front-line country cases, Botswana (523), Eswatini (187), Namibia (no report) and South Africa (1670), while figure 1B demonstrates total cases in second line countries, Angola (2,261,895), Mozambique (1,945,336), Zambia (2,079,713), and Zimbabwe (74,760).
- Front-line countries continue to report low malaria cases compared to second line countries. Among front-line countries, South Africa recorded highest confirmed malaria cases (1622), with an importation rate of 55% for the period. Botswana reported a high number of local-malaria cases (520) with only three cases classified as imported.

Figure 1. Total malaria cases by front line and second line countries in quarter 1, 2021
MALARIA CASES IN E8 BORDER DISTRICTS

- Border district malaria data is shared with the E8 Secretariat each month, generated from a total of 86 border districts of the sub-region. Namibia experienced a high number of cases in their border districts because of a reported outbreak in the Zambezi region.
- Local cases in the four frontline countries are almost comparable to confirmed cases save for the situation in South Africa, which showed a high number of imported cases for the period. A majority of second line countries do not classify their cases between local and imported as they report a higher number of cases along their border districts.

**Figure 2.** Malaria cases by front line and second line countries in quarter one, 2021

**COMPARISON OF 2020 VERSUS 2021 QUARTER ONE MALARIA INCIDENCES IN E8 BORDER DISTRICTS**

- There was a general increase in malaria in the E8 subregion in quarter 1 of 2021 compared to the same quarter in 2020 (Figure 3). In 2021, the malaria burden was higher in border districts of Mozambique and Zambia with some districts recording incidence rates of 200 cases per 1000 person years.
- Districts in Zambezi (Namibia) incidence rates were particularly higher in 2021 given the recorded outbreak mentioned earlier.

**Figure 3.** Malaria incidence in E8 border districts quarter 1, 2020 and 2021
Weather and Climates on Malaria

CLIMATE MONITORING

- The maps below in figure 4 shows 3-months seasonal precipitation anomalies and surface temperature estimates in units of mm/season and 0C respectively, obtained from the weather and climate dataset-website: https://iridl.ldeo.columbia.edu/maproom/Global.
- In both maps, colors are classified based on below & above the average normal status.
- Seasonal precipitation anomaly indicates that most parts of the region experienced above normal rainfall patterns save for central Angola, central Zambia, and North-Eastern Mozambique.

CLIMATE SEASONAL FORECAST

- The maps in Figure 5 indicate the average seasonal forecasts in both precipitation and temperature for three months of quarter 2 of 2021. 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 Africa, Zambia, Mozambique, and South-West of Angola are expected to have below average rainfall (-40%), as shown in figure 5.
- Most parts of the region are not expected to have major precipitation changes, with a range of -20% to 20% expected from the average. Most central parts of Zimbabwe, Zambia, Botswana, and Zambezi region of Namibia are expected to experience below average temperatures (-40% to -60%).
- Given the expected low rainfall and temperature conditions, most parts in the region can possibly be expected to have a slight reduction in malaria transmission in the coming quarter.
Malaria epidemics among border districts

The first quarter of each year falls in the malaria season for southern African countries which spans between August to May, usually characterized by sudden increases in malaria which may lead to outbreaks. The table below summarizes areas in the region that were identified to have exceeded country malaria epidemic thresholds and the challenges each country was facing.

<table>
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<tr>
<th>Country</th>
<th>Border place reported with malaria outbreaks in quarter 1</th>
<th>Key challenges</th>
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| Angola        | • Calai district; Tombwa district; Rivungo district; Dirico district; Cuangar district; Curoca district; Namacunde district; Cuanhama district | • Inadequate resources to conduct extensive test and treat for malaria in most affected districts.  
• Low routine distribution of nets as a result COVID-19 restrictions.  
• LLIs distribution to school children affected by a shortened school term due to COVID-19. |
| Mozambique    | • Some areas in Sofala province; Maputo province                                                                           | • Shortage of malaria commodities such as RDTs and ACTs.                                                                                         |
| Zambia        | • Kalabo district (January); Kazungula district; Seshete district                                                         | • Poor uptake and use of LLINs in communities.  
• Scale up of rectal artesunate used for pre-referral treatment for severe malaria cases at community level. |
| Zimbabwe      |                                                                                                                            | • Conducting the early diagnosis and treatment  
• Ensure stock availability of anti-malarial commodities at Health facilities.  
• Strengthening of Village Health Workers (VHW)s program.  
• Strengthening of support visits and mentorship support in hard-to-reach areas |
| Namibia       | • Zambezi district (Contribute to 80% outbreaks to the entire country)                                                        | • Community refusals to undertake malaria interventions.  
• Some interventions are being reported expensive and difficult to be afforded by the country.  
• Inadequate supply of transport facilitation for surveillance EPR team to the outbreak sites.  
• Challenges on response operational mechanisms |
| South Africa  | • Nkomazi (MP); Umhlab'uyalingana (KZN); Bushbuckridge (MP); Thulamela; Collins Chabane                                       | • Shortage of car fuel to support transport for surveillance teams to the outbreak areas.  
• There is adequate resource to respond on malaria outbreak.  
• Late health seeking behaviour |
| Botswana      | • Palapye (Central district); Okavango region                                                                               | • Real time reporting challenges that affect promptness of response activities in the country.  
• Competing recourses and personnel with COVID-19  
• Provide capacity building to the monitoring and evaluations of malaria surveillance focal persons. |
| Eswatini      | • Hhohho region; Bulandzeni district; Nkomanzi district; Ndzingeni district; Madlangampisi district; Lubombo region; KaNgcampalala; Ndzingeni; Madlangampisi | • Fuel shortage for IRS and Surveillance teams.  
• Late health seeking behaviour  
• Inaccessible villages |

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- NMCP South Africa  
- NMEC Zambia  
- NMCP Zimbabwe  

- International Research Institute for Climate and Society (IRI)  
- Applied Center for Climate & Earth System Science (Access)  

**E8 Situation Room Partners:**

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