

The Weekly

Information Resource Bulletin

Focus: Malaria

Climate change is one of the reasons malaria is on the rise in some parts of the world. A rapidly rising population is one of the factors leading to climate change and the impact of climate change is being particularly felt in developing countries -- including Malawi.

According to research findings by at the London School of Hygiene & Tropical Medicine, malaria as a disease could be especially sensitive to climate change, because both the Plasmodium parasites that cause it and the Anopheles mosquitoes that spreads it thrive as temperatures warm.

Malaria is endemic throughout Malawi and is a major public health problem. It's the leading cause of sickness and death in children under 5 and among pregnant women. It's estimated that Malawi has about 6 million cases of malaria annually (HMIS, 2011).

According to World Health Organization data, malaria infected some 219 million people in 2010, killing more than half of the people who got it. Most of the victims live in sub-Saharan Africa.

The goals of the Weekly Bulletin are:

- To discuss about the link between climate change and malaria.
- To clearly explain how climate change leads to the prevalence of malaria
- To encourage listeners to find solutions on how they can avoid malaria

The Problem: Malaria

Malaria, a parasitic disease spread to humans by mosquitos is common in Malawi where malaria transmissions occur throughout the year. Malaria transmission is largely determined by climatic factors, including temperature, humidity, and rainfall.

An increase in temperature raises the malaria parasite's (plasmodium) reproductive rate, thereby influencing the prevalence rate of malaria in the country.

In Malawi, transmission is higher in areas with high temperatures and during the rainy season (October through April), particularly along the lakeshore and lowland areas of the lower Shire Valley.

The development and survival of both the mosquito and the malaria parasite are highly sensitive to daily and seasonal temperature patterns. Malaria flourishes in warm, humid environments, so surface temperature and rainfall are the two most important natural factors that influence where it will strike and how quickly it is likely to spread.

The malaria parasites breed mainly in pools of water formed from rainfall.

It is believed that global warming can have several harmful effects on human health, both directly and indirectly. Since malaria is greatly influenced by climatic conditions because of its direct relationship with the mosquito population, it is widely assumed that its incidence is likely to increase in a future warmer world.

Activities for Journalists

Use your radio station to help your community understand the link between climate change and malaria. You can use the following points to help your listeners understand better how climate change can lead to a higher rate of malaria.

Research has shown that with increasing temperatures, the rate at which mosquitoes can digest human blood also increases. This means that with increasing temperature, mosquitoes will be able to consume more blood and therefore, bite and then infect a lot more people.

Both the malaria parasite (plasmodium) and the mosquito which carries malaria, thrive in warmer temperatures. So with the rising temperatures due to climate change, it makes it easier for the parasite and mosquito to survive.

An increase in rainfall levels will also have an impact in the breeding of mosquitoes. Mosquitoes usually breed in freshwater pools, rather than in flowing water.

Have a vox pop with people from your community and find out from them how they think climate change has led to the prevalence of malaria in the area.

Have an interview with a man and a woman who recently suffered from malaria. Ask them what contributed to them suffering from malaria (not using bed nets? stagnant water around the house?).

What are they doing to avoid contracting malaria again? (Sleeping under the net? Getting rid of pools of water created from rains?)

Interview the District Environmental officer from your district and ask him/her to clearly explain the link between climate change and malaria.

Talk to the district Health officer of your district and find out how many cases of malaria have been reported in the district since January this year. Also ask the DHO about the measures the office has put in place to minimize cases of malaria in the district.

Ask your listeners to call or sms their thoughts on what a community can be done to prevent malaria.

Useful Contacts

- PRB- Contact person; Sandra Mapemba: +265-99-921-9789
- John Zoya; National Malaria Control Program; +265-88-887-3131
- Chaves et al. Climate Change and Highland Malaria: Fresh Air for a Hot Debate. The Quarterly Review of Biology, 2010; 85 (1): 27 DOI: 10.1086/650284
- Ermert, V, Fink, et al. the impact of regional climate change on malaria risk due to greenhouse forcing and land use changes in tropical Africa. Environmental health perspectives.



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