

Study: Africans Near Dams 4 Times More Likely to Get Malaria

A new study found that people who live near large dams in sub-Saharan Africa are at least four times more likely than others to contract malaria.

The study also warned that with many new dams slated to be built in the region, malaria cases could rise by tens of thousands annually.

The study, published this month in the London-based *Malaria Journal*, mapped the locations of nearly 1,270 existing dams and compared them with the incidence of malaria. Researchers concluded that more than 1 million people in sub-Saharan Africa would contract malaria this year because they live near dams.

"We found that dams do have an impact on malaria because of the fact that they provide breeding habitat for mosquitoes and Anopheles mosquitoes, which are the ones that carry malaria and are the hosts for malaria in people," said researcher Matthew McCartney of the International Water Management Institute, a co-author of the report. "The reservoir shorelines provide breeding habitat, and that therefore increases the number of mosquitoes around many, many reservoirs. "

Dams create slowly moving or stagnant water, as well as shallow pools along shorelines.

The heightened malaria risk fell within five kilometers of a dam's perimeter, the study said. That's nearly the flying range of the mosquitoes carrying the *Plasmodium falciparum* parasites that cause malaria.

The biggest risk was in areas where malaria outbreaks coincide with rainy seasons.

More dams, more malaria

The study also considered the 78 major dams being planned across sub-Saharan Africa to advance economic development. If all are built, the study said, the number of new malaria cases could rise by 56,000 a year.

McCartney acknowledged that the amount was small compared with the estimated 145 million cases of malaria seen each year across sub-Saharan Africa. But malaria risks should be considered in development plans, he said.

"We would argue that dam managers and planners and water resource development, in general, need to consider the fact that the infrastructure that they build has these impacts on malaria," he said. "And they need to do much more to try to mitigate these impacts."

The study makes a number of recommendations, one being to supply people living near the dams with bed nets and indoor residual spraying to keep out mosquitoes.

"There are other things that can be done, such as modifying the water level within the reservoir where the mosquitoes breed," McCartney said. "Those areas dry out and the mosquito larvae die at certain times of year. Another possibility is actually to use fish. Particular fish will eat the larvae of mosquitoes."

McCartney described dams as "an important option for governments anxious to develop." However, he said, "it is unethical that people living close to them pay the price of that development through increased suffering ... and possibly loss of life due to disease."