

## [Discussion Brief: Classical Methods Against Malaria In Africa: A Conversation With Dr Bill Jobin](#)

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Over the last century, classical environmental interventions like improved housing, land reclamation, larviciding, and irrigation and hydroelectric systems have led to the eradication of malaria in the United States, Europe, the Mediterranean region, and parts of Southeast Asia. These classical methods are simple, economical, and durable. To many, they represent durable methods to fight malaria in Africa that should complement the use of insecticides, especially with the recurring development of insecticide resistance.

Dr. Bill Jobin joined us for an expert panel discussion on this topic the first week of April 2013. Jobin is a public health engineer with degrees from MIT in hydraulics and sanitary engineering and a doctorate in tropical public health from Harvard. He has worked for over 50 years, starting in Puerto Rico with the U.S. Centers for Disease Control and Prevention, with the World Health Organization on the Blue Nile Health Project, and continuing on various health impact assessments of large water and energy projects in the tropics for the World Bank and the U.S. government. He helped start the U.S. President's Malaria Initiative, and in 2009 published a report in the WHO Bulletin. He's authored two technical books, more than 50 articles, and more recently a series of technical monographs.

This discussion outlines some important steps in further promotion of classical malaria control methods involving physical, biological and community approaches. Although not everyone agreed on the value of the classical methods, participants were emphatic about the value of community participation as a basic requirement for success, no matter what control methods were involved.

### Key Points

1. Policy-makers and leaders in the UN, Geneva and Washington need to understand and recognize the value of classical environmental management methods in the fight against malaria. These include: the classical physical, biological and community methods of habitat modification, improving and screening of houses, direct attacks on larvae, and the clever manipulation of water in irrigation and hydroelectric systems. They have been successful on a broad scale in many countries since the first attacks on malaria at the beginning of the 20<sup>th</sup> century, and especially after the Second World War. Despite their proven effectiveness, they are not widely used in the current fight against malaria, nor is their value accepted by key stakeholders.
2. Major donor organizations should consider adapting and implementing the methods used by the Tennessee Valley Authority (TVA) of clever design and management of impounded waters to suppress malaria in water resource systems in Ethiopia and in other countries in Africa. The TVA experience was the basis for the formation by the CDC of their national program to Control Malaria in War-Related Areas in 1940, and for the successful elimination of malaria from the U.S. and from Puerto Rico before DDT and chloroquine were in general use. This is especially needed considering rapidly occurring water resource development in Africa.
3. Along with the growing group of experienced PMI country managers - both American and African - the CDC epidemiologists and entomologists who are working with PMI now constitute a valuable resource. PMI is arguably the best funded and most promising group involved in the fight against malaria in Africa. Still, additional funding should be sought for PMI, and other billion-dollar programs, to add classical methods and increase monitoring and evaluation activities.
4. There is a serious risk of collapse of the current efforts against malaria as donor fatigue and chemical resistance are coming into play. Strong and continuing support for bednets should not hinder the promotion and adoption of classical methods by actors in the fight against malaria.
5. Community-based groups like inter-faith and religious groups or the Peace Corps should be supported in expanding their outreach and in running community-wide trials of some of the classical methods.

### Key References

- WHO Offset Publications [1](#), [10](#) and [66](#).
- ["The Conquest of Malaria: Italy 1900-1962" by Frank Snowden, 2007](#)
- [Utzinger J, Tozan Y, Singer BH. Efficacy and cost-effectiveness of environmental management for malaria control. Trop Med Int Health. 2001 Sep;6\(9\):677-87.](#)
- ["Control of Malaria in Impounded Waters" published in 1947 by the US Public Health Service](#)
- ["Practical Malariology" by Russell, West, Maxwell and Macdonald, Oxford Univ Press, 1963.](#)