Malaria & Public Health

What is malaria?
Malaria is a blood disease caused by a parasitic trypanosome that is transmitted by the bite of an infected mosquito.

Why does it matter?
1 Million People Matter
Severe infections can lead to organ failure and even death. Over 1 million people die of malaria each year, mostly children under age 5, and areas of endemic malaria suffer an enormous economic burden as a result of the disease.

What preventative measures are in place?
Despite preventive and treatment measures such as sprays, screens, bed nets, mosquito repellent, avoiding travel to certain areas, and taking prophylactic anti-malarial medications, approximately 300-600 million people still contract malaria annually.

Bridging the Gap

The use of gene drive mechanisms to suppress or replace vector mosquito populations to reduce the incidence of malaria is in the early stages of development.

For science to be usefully applied to inform policy, it is essential to bridge the space between the scientific and decision-making communities.

How ILSI RF Plays a Role
Expertise & Fostering Dialogue
ILSI Research Foundation is leveraging its technical expertise and international network of collaborating partners in:

- Environmental Risk Assessment
- Capacity Building
- Stakeholder Engagement & Facilitation

Partnerships

FNHI
NEPAD
NASEM

In 2015, an initial partnership was formed between ILSI Research Foundation and the Foundation for the National Institutes of Health (FNIH) to consider risk hypotheses and data needs for the environmental risk assessment of the use of gene drives in Anopheles gambiae mosquito for malaria control.

Between 2016 to 2017, ILSI Research Foundation, FNIH, and the New Partnership for African Development (NEPAD) co-organized regional consultations in Ghana, Kenya and Botswana that brought together scientists, policy- and decision-makers, and key stakeholders to consider the social and scientific complexities that might arise from putting a gene drive into practice in Sub-Saharan Africa.

In July 2017, ILSI Research Foundation and the US National Academy of Sciences, Engineering, and Medicine (NASEM) co-organized a symposium which explored how to frame and undertake environmental risk assessments of gene drive organisms in a way that will usefully inform decision-making related to their potential release.

Next Steps
Regional Consultations
Following workshops held in West, Southern and East Africa, ILSI Research Foundation is continuing to partner with FNIH and NEPAD to conduct a regional consultation in Central Africa in 2018. The combined results of all four Sub-Saharan regional consultations will be summarized in a publication that will help inform research programs and regional biosafety authorities as they prepare for future risk assessments of gene drive mosquitoes.

Mosquito Biology Documents
ILSI Research Foundation is part of the Organisation for Economic Co-operation and Development (OECD) drafting group for the OECD’s first insect biology document, dealing with the Aedes aegypti mosquito. The final document should be available to the public in 2018. A second insect biology document, on Anopheles gambiae, is in the early stages of development and the ILSI Research Foundation is co-leading that effort with NEPAD.