FREQUENTLY ASKED QUESTIONS

Q. WHAT IS ZERO BY 40?

A. ZERO by 40 is an initiative to help end malaria through vector control by the year 2040. Founded in 2018 by world-leading Crop Protection companies BASF, Bayer, Mitsui Chemicals, Sumitomo Chemical and Syngenta, in conjunction with the Bill & Melinda Gates Foundation and the Innovative Vector Control Consortium (IVCC), this initiative formalises the groundbreaking collaboration between innovators to work together toward continued progress in the fight to end malaria through the supply and delivery of innovative vector control tools.

Q. WHAT IS THE GOAL OF ZERO BY 40?

A. ZERO by 40 believes that eradication of malaria is possible. Because the participating companies, like the Bill & Melinda Gates Foundation, believe so strongly that the destination is achievable, they have set a goal to have zero global burden of malaria by the year 2040.

Q. WHY FOCUS ON MALARIA?

A. Malaria is preventable and treatable yet caused around 445,000 deaths in 2016 in over 90 countries, mostly in sub-Saharan Africa[1]. It is devastating to the economies and agriculture of many developing countries. Entire communities, villages and countries struggle to rise up out of poverty because so many people are sick and unable to work. Significant household income is lost due to spending on malaria treatment. Absenteeism increases due to illness and death as well as having to care for other affected family members. Productivity and efficiency are reduced due to fatigue. And an overall decline in farm output and income costs the local agriculture economy millions of dollars. Ending malaria will save millions of lives and give communities the opportunity to thrive for generations to come.

Q. WHY NOW?

A. Because tomorrow is too late. The 2017 World Malaria Report revealed a stall in progress toward malaria eradication, due in part to the resistance of mosquitoes to current vector control tools. New solutions are desperately needed today if we are ever to end malaria for good.

Q. WHAT IS VECTOR CONTROL?

A. Vector control focuses on limiting or eradicating the transmission of an illness or disease by a carrier, often a mosquito or other insect. Examples of vector control methods include sprays and bednets to keep mosquitoes away and protect from bites that transmit disease.

Q. HOW DOES VECTOR CONTROL FIT IN THE FIGHT TO END MALARIA?

A. Vector control is a method of preventing the transmission of malaria. It is not a treatment of the disease, but focuses on stopping the vectors or carriers of the disease so they don't have the opportunity to infect. Vector control interventions, like long-lasting insecticide-treated bednets (LLINs) and indoor residual spraying (IRS), have been responsible for 78% of the 663 million clinical cases of malaria[2] averted between 2000 and 2015.

1 World Malaria Report 2017. WHO. November 2017. http://apps.who.int/iris/bitstream/handle/10665/259492/9789241565523-eng.pdf;jsessionid=012CEC199141F0F1F1356859B5C47742?sequence=1

2 The effect of malaria control on *Plasmodium falciparum* in Africa between 2000 and 2015, S. Bhatt et al. *Nature* 526, pp.207-211. (08 October 2015)

Q: HOW HAS VECTOR CONTROL HELPED ADVANCE THE FIGHT TO END MALARIA SO FAR?

A: The collaborating Crop Protection companies have a history of success in delivering innovative vector control tools to help beat malaria, including Syngenta's Actellic®300CS, Sumitomo Chemical's SumiShield® 50WG, Bayer's Fludora™ Fusion, BASF's Interceptor® G2 and a number of unique-mode-of-action insecticides provided by Mitsui Chemicals.

Q. HOW IS INSECTICIDE RESISTANCE IMPACTING THE FIGHT TO END MALARIA?

A. Insecticide resistance—which decreases the effectiveness of vector control—is a key threat to the fight to end malaria. Since 2010, 60 countries have reported resistance of malaria mosquitoes to at least one insecticide class used in prevention[3]. ZERO by 40 is a collaborative effort to manage current resources and develop new ways of fighting malaria through vector control, including new tools and new chemistry.

Q. HOW IS ZERO BY 40 DIFFERENT THAN OTHER MALARIA ORGANISATIONS?

A. ZERO by 40 is focused on prevention of malaria through vector control, while other organisations are focused on the treatment of malaria. ZERO by 40 is also unique because of the groundbreaking partnership between the founding companies.

Q. WHEN WAS ZERO BY 40 ORGANISED?

A. ZERO by 40 was formally organised in April 2018 at the Malaria Summit held at the Commonwealth Heads of Government Meeting (CHOGM) in London. Many of the founding companies and organisations have been contributing individually to vector control since at least 2008.

Q. WHAT ARE THE COLLABORATING COMPANIES CONTRIBUTING TO ZERO BY 40?

A. The collaborating companies, including BASF, Bayer, Mitsui Chemicals, Sumitomo Chemical and Syngenta, are committing to sustain and extend programmes to continue progress toward eradicating malaria. The partners are working collaboratively to bring next-generation vector control interventions to market and find solutions to the great challenges that malaria eradication poses. Read the ZERO by 40 declaration for more information on the commitments these organisations have made to help achieve zero burden of malaria by the year 2040.

Q. WHAT HAS ALREADY BEEN DONE?

A. The global Crop Protection companies have been a major driving force behind the success of vector control in fighting malaria. Research, development and maintaining the supply of chemistries for use on bednets and indoor spraying has helped save millions of lives. However, resistance to many of these chemistries is at a tipping point. Without continued innovation and funding in vector control, resistance could pose a major threat to malaria eradication. This groundbreaking collaboration will foster increased and accelerated innovation in public health vector control and advance the mission of ending malaria by 2040.

3 Malaria prevention works – let's close the gap. WHO. April 2017