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Push to fund DDT in fight against malaria in Africa

President Bush signed a \$15-billion package Tuesday that includes assistance for antimalaria programs.

By Nicole Itano | Special to The Christian Science Monitor

JOHANNESBURG, SOUTH AFRICA - In the battle against one of Africa's deadliest diseases, some countries are fighting without their most potent weapon.

That's because the weapon, DDT, or dichloro-diphenyl-trichloromethylmethane, is also one of the most controversial. Western donors, the United Nations, and environmental groups acknowledge the pesticide's effectiveness in combating mosquito-borne diseases - it has been shown to reduce malaria by up to 90 percent. But they are wary of the chemical, whose widespread use was once said to cause cancer and blamed for environmental damage, such as the thinning of eggshells of the California condor.

Now, even as wealthy nations approve aid for Africa to fight malaria, critics say that by not explicitly authorizing the use of DDT, Western environmental standards are being applied to the developing world, where long-term, often unproven, risks take precedence over immediate needs - at a cost of thousands of lives.

"It's ecoimperialism," says Richard Tren, head of Africa Fighting Malaria, an independent organization which advocates the use of DDT. "DDT is not permitted in Sweden. Well, that's well and good. But you're not going to die of malaria in Sweden."

While the world has focused on Africa's AIDS problem, the ongoing crisis of malaria has largely faded into the background. The UN's new Global Fund to Fight AIDS, Tuberculosis, and Malaria, and America's \$15 billion pledge to fight infectious diseases, which was signed on Tuesday by President Bush, are intended to help poor nations combat malaria as well as AIDS.

But because most of the countries fighting malaria are among the world's poorest, campaigners like Mr. Tren say little progress will be made against the disease until rich countries start funding DDT spraying programs.

Malaria is the single biggest cause of death among children worldwide, and the United Nations estimates that at least 1 million people die of the disease each year, 90 percent of them in sub-Saharan Africa. The disease places an enormous burden on the healthcare systems of poor countries and is considered a major factor in their slow economic development.

From miracle to poison

After its invention in 1937, DDT was considered a miracle chemical and garnered its developer, Swiss chemist Paul Hermann Müller, the Nobel Prize. Praised for its effectiveness and longevity, the insecticide was widely used in agriculture and for mosquito control, and is credited with helping eradicate malaria in Western Europe and the North America.

But the publication of Rachel Carson's book "Silent Spring" in 1962 changed the image of DDT from miracle into poison. In the years that followed, DDT was banned in most developed nations and production was largely halted.

Ceding to pressure from donor nations and international organizations, many developing countries, which had long used DDT to control malaria, eventually stopped. Here in South Africa, the effects were deadly.

In 1995, the last year South Africa had a comprehensive DDT program, there were only 6,000 malaria cases in the country. According to South Africa's Department of Health, by 2000, resistance had developed to the compound that had replaced DDT and that number had risen to 60,000. Worried by these figures, South Africa again began using DDT in 2001. By 2002, cases had again fallen to 15,000. In Zambia, spraying by mining companies has been even more successful, reducing malaria cases by as much as 90 percent.

"We're looking at all available tools to combat malaria, like bed nets, like environmental management," says Philip Kruger, program manager for malaria control in South Africa's Limpopo Province. "But even using all the tools available in South Africa, and with a well-funded program, we still couldn't get rid of malaria without DDT. At this stage there's no other chemical available."

Each spring, Mr. Kruger and his teams spray the insides of about 800,000 houses. The amounts are small, usually about 2 grams per square meter, or a total of 18,000 kilograms for the entire province, far less than the tons of pesticide that were dumped into the environment when DDT was a popular agricultural pesticide. But the effects, says Kruger, are dramatic.

No consensus

Not everyone agrees, however, that the experience of South Africa means other countries should restart their DDT programs.

Dr. Gerhard Verdoorn, conservation director of the Endangered Wildlife Trust in South Africa, supported South Africa's restarting DDT spraying, but only because one of the country's malaria carrying mosquitoes had developed a resistance to pyrethroids, which were used to replace DDT.

"Even now, you will find levels of DDT that are unacceptable, and that's 30 years after it was used for agricultural purposes...." he says. "The problem is it's such a persistent organic pollutant."

That persistence - DDT can stay in the environment for as long as 90 years - is one reason the chemical has been targeted by environmental groups. Scientists are still divided on the actual harm the chemical can do, but even many anti-DDT campaigners like Dr. Verdoorn say the health consequences were exaggerated, and there is no evidence that it causes

cancer.

In 2000, pro-DDT forces won a major victory when they convinced negotiators of the Stockholm Convention on Persistent Organic Pollutants to recognize the effectiveness of DDT in fighting malaria. The treaty, which is still awaiting ratification by at least 20 more countries before it comes into effect, calls for the ultimate elimination of 12 chemicals and compounds believed to be particularly harmful to the environment because they are slow to break down. But the treaty allows countries to apply for a special exemption to use DDT.

Despite this success, the international community has been slow to embrace DDT and remains largely unwilling to fund DDT spraying programs. Officially, the policy of the UN is that DDT is effective and should be used until it can be replaced with less harmful chemicals. But in practice, the chemical is hardly mentioned and almost never funded (DDT was not mentioned in Tuesday's US bill). Instead, the UN advocates the use of insecticide-treated bed nets, which most malaria experts say are far less effective.

In the first two rounds of the Global Fund aid distribution, for example, not a single country received money for DDT spraying, although several projects to distribute insecticide-treated nets were approved. The US has not yet said how their new money will be spent, but few expect DDT spraying to be funded.

One of only 22 countries using DDT

Today, South Africa is one of only 22 countries around the world still using DDT for malaria control and only one of eight African countries that have officially requested permission from the United Nations to use the chemical for mosquito control.

DDT advocates say far more would probably return to spraying if the international community supported them in doing so.

"A lot of [donors] will say their official policy is that DDT can be used as a malaria solution, but they don't fund it," says Tren. "But how bad does it have to get before it's an emergency?"

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