

# Conference reports that vector-borne diseases threaten the world's people

by Rogelio A. Maduro and Charles B. Stevens

The world is facing the worst outbreaks of vector-borne diseases it has witnessed in the past century according to epidemiologists who addressed a conference in Baltimore Nov. 28-30. The conference, which was put together by the U.S. National Aeronautics and Space Administration (NASA) and the Third World Foundation, brought together the health ministers from more than 30 countries, as well as experts on remote sensing and public health.

Under the title of Remote Sensing and Vector-Borne Disease Monitoring and Control, the conference addressed the global threats represented by the reemergence of old vector-borne diseases as well as the emergence of new ones. At the same time, NASA experts discussed the latest remote sensing technologies to track the spread of vector-borne diseases. A vector-borne disease is one in which the disease is transmitted from one population to another through a carrier, such as mosquitoes, rodents, fleas, or ticks.

The early presentations at the conference demonstrated that vector-borne diseases, such as malaria and dengue, are spreading rapidly. In the case of dengue, yellow fever, or malaria, the mosquito is the vector. The destruction of mosquito control programs and the elimination of pesticides, such as DDT, as well as the proliferation of swamps (so-called wetlands) because of environmental regulation over the past 25 years, have provided the conditions for the rapid spread of disease.

Aggressive mosquito eradication programs, supported by the most advanced spaced-based tracking technologies, are absolutely required to even begin to address this world health threat.

The urgency for these programs was underscored by conference speakers. U.S. public health experts, led by Dr. Duane Gubler, the director of the Division of Vector-Borne Infectious Diseases of the National Center for Infectious Diseases, and Dr. Don Roberts, from the Department of Defense Tropical Public Health Division, gave rather frightening overviews of the reemergence of the most deadly vector-borne diseases over the past few years, as well as the emergence of many new ones.

The conference is one in a series where public health experts have warned of the dangerous rise in new and re-emerging diseases that threaten the very existence of the

human species (See *EIR*, Nov. 24, 1995). Underlying their warnings is the fact that these outbreaks have occurred as a result of the collapse of infrastructure and public health policies throughout the world. The collapse is the result of the imposition of International Monetary Fund and related "conditionalities" policies that force Third World countries to dismantle public health and hospital systems in order to free up the money to pay the foreign debt.

Countries represented in Baltimore included Malawi, Malaysia, China, Myanmar (Burma), Namibia, Zimbabwe, Nigeria, Rwanda, and Sri Lanka. To underscore the severity of the situation, Malawi's Health Minister, Hon. Sam Mpasu, told *EIR* that AIDS had affected Malawi's army so seriously, that it seemed as if they were at war. Mr. Mpasu, who was formerly the minister of education, added that in the universities, AIDS is not only killing the students, but also the professors.

## Return of the mosquito

The world is facing the most dangerous outbreaks of mosquito-borne diseases of the century, reported Dr. Duane J. Gubler, in his keynote. He began with an overview of the successful fight over the past century to reduce the toll from infectious diseases by eradicating mosquitoes. His maps demonstrated the effectiveness of the eradication campaigns, particularly with the use of DDT, by reducing mosquito populations, including *Aedes aegypti*, one of the main carriers of dengue, yellow fever, and malaria, from a presence around the world, to a few small pockets by 1970. Although Dr. Gubler did not explicitly state that the primary weapon against the mosquitoes, DDT, was banned in 1972 on false pretenses, he did elaborate on how mosquito eradication programs ended in the 1970s.

Dr. Gubler then presented a chart which showed that the mosquito populations have not only made a full recovery since then, but that, as he noted, the "density of mosquito populations are higher than ever before." He then presented maps of both past and present distribution of vector-borne diseases, including malaria, dengue, yellow fever, and bubonic plague. The first set of maps clearly correlate with the maps showing distribution of mosquito populations. Using the yellow fever map, Dr. Gubler pointed out that the Ameri-

can continent is now facing the highest level of threat of a yellow fever epidemic in this century.

With respect to the ongoing dengue epidemic in the Americas, Dr. Gubler pointed out that this dengue epidemic is much more serious than any other previous one. Dengue is an acute viral disease which often leads to deadly hemorrhagic fever. Dengue is an arbovirus (insect-borne) like St. Louis encephalitis. Dengue went from no cases in 1981 to outbreaks in 16 countries today. In addition to the return of dengue, Dr. Gubler pointed to a change in the nature of dengue epidemics in the past several years. There are four serotypes of dengue which are distinct enough that a person infected by one serotype will not develop immunity against the others. Historically, dengue epidemics occur in cycles in which only one serotype strikes any one geographical area at a time; but now, all four dengue serotypes are present across the Americas, and the disease is not going away, which makes this a very serious "hyper-endemic" outbreak. Furthermore, dengue is also a marker for the near future re-emergence of yellow fever.

He demonstrated the extent of the collapse of the worldwide disease surveillance network by presenting an account of last year's plague outbreak in India. Earlier this century, India faced an outbreak of plague that killed over 12 million people. In its wake, in the 1950s and 1960s, the Indian government conducted a very aggressive campaign to eradicate

the disease. With no cases of plague reported by the late 1960s, the government ceased all programs. The result was that when the plague outbreak began in Surat last year, there was not a single qualified medical expert on plague in the country.

When India issued an international plea for medical assistance, it was discovered that the last two remaining plague collaboration centers in the world had been shut down. The center in Russia had closed for lack of funds (Russia has been subjected to the same IMF "conditionalities" as the Third World), and the U.S. center had been taken down because plague was no longer considered a priority. The only place in the world that had maintained plague reagents (necessary to properly identify the strain and the correct medical treatment), was Dr. Gubler's lab in Fort Collins, Colorado. Dr. Gubler described the frantic 3:00 a.m. phone call requesting that reagents be sent immediately to India, and his efforts to put together a 15-man plague medical response team to help the Indian government with the outbreak. Dr. Gubler presented a chart showing how he had to scavenge medical personnel from several government agencies and laboratories in order to put this team together.

The Indian plague outbreak cost India and the world economy between \$4 and \$5 billion, he said, since all trade with India ceased during the outbreak. He laid out the lessons to be learned and actions required to deal with the worldwide

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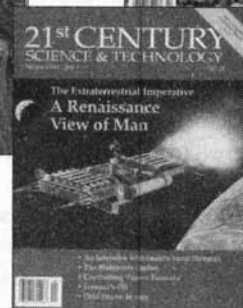
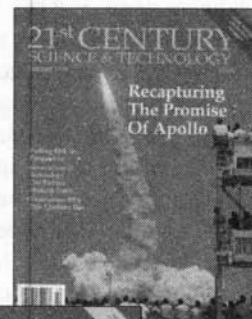
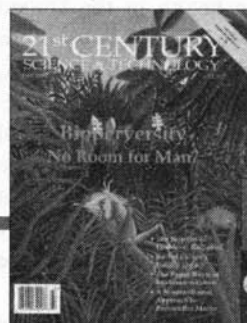
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outbreaks of vector-borne diseases. Dr. Gubler ended his discussion of the plague with a map showing the worldwide distribution of plague reservoirs around the world. The single largest reservoir for plague vectors, according to the map, is the western part of the United States.

### The world needs DDT

Dr. Don Roberts from U.S. Department of Defense Division of Tropical Public Health presented a detailed and hard-hitting documentation of why we must reverse the ban on the use of DDT. While Dr. Roberts has been extensively researching the tracking and eradication of malaria using remote sensing, most of his presentation centered on a fierce attack on the banning of DDT. With detailed maps and graphs, he demonstrated, conclusively, how DDT and mosquito control programs had all but wiped out malaria through most of the world, and how this success turned to defeat in the 1970s, when malaria infections went from nearly zero to an exponential growth. He used country case studies, Belize and Colombia, to make his point.

Dr. Roberts also demolished the myth that insects are resistant to DDT, pointing out that in places where DDT is still used for household spraying (he cited the case of southern Mexico), it is still very effective in preventing malaria, even in the face of resistant mosquitoes.

### Major U.S. health threat

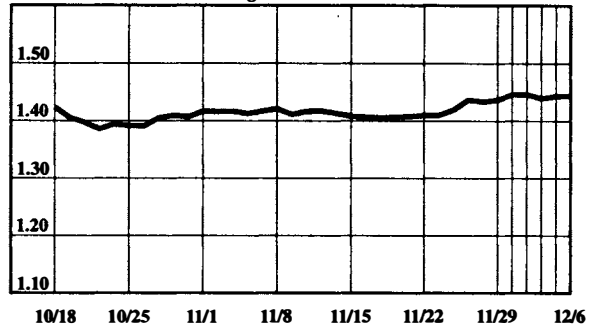
Newt Gingrich, the self-described Robespierre of the Conservative Revolution, is the most dangerous infectious disease threatening the U.S., according to one public health official participating at the conference. The official told *EIR* point-blank that the most serious infectious disease threat now facing the United States "is the Republican Congress." He clarified that Newt Gingrich and his budget-cutting policies were going to decimate public health in the United States. According to this individual, who used to work for the Centers for Disease Control (CDC) in Atlanta, Georgia, the CDC and the U.S. infectious disease surveillance network has been leveled by budget cuts over the past several years. After detailing the collapse of critical programs, he outlined how Gingrich's policies were going to wreck what was left. He added that that public health experts "are very scared" and that Americans had no idea of the severity of the threat they are facing.

In stark contrast to Gingrich's hatred for the poor and the downtrodden, many of the conference speakers discussed the uplifting story of Dr. Cyril Ponnampere, the Sri Lankan scientist who founded the Third World Foundation as a means to transmit advanced technologies to improve the health and standard of living of people in Third World nations. Dr. Ponnampere taught and researched at the University of Maryland for the past 20 years and came up with the idea for this conference before his untimely death last December.

## Currency Rates

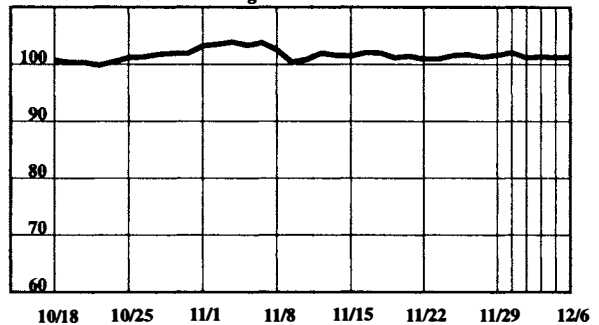
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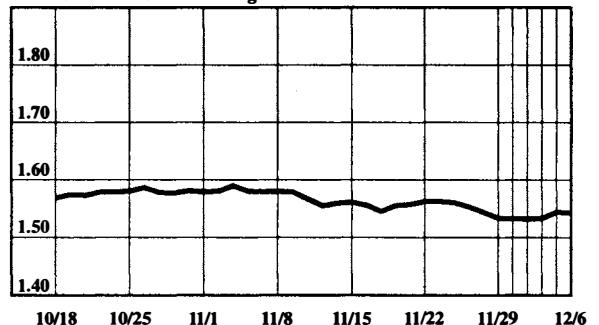
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