



USAID
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Emerging Pandemic Threats Program Overview



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A man carries gueneon monkeys after a hunt. The multibillion dollar bushmeat industry is a key contributor to economies in the developing world but can expose humans to dangerous diseases originating in animals.

■ BACKGROUND

Nearly 75 percent of all new, emerging, or re-emerging diseases affecting humans at the beginning of the 21st century have originated in animals. Notable reminders of how vulnerable the increasingly interconnected world is to the global impact of new emergent diseases include HIV/AIDS, severe acute respiratory syndrome (SARS), H5N1 avian influenza, and the 2009 pandemic H1N1 influenza virus. The speed with which these diseases can emerge and spread presents serious public health, economic, and development concerns. It also underscores the need for the development of comprehensive disease detection and response capacities, particularly in geographic areas where disease threats are likely to emerge. Recognizing this need, the U.S. Agency for International Development (USAID) has launched an Emerging Pandemic Threats (EPT) program that seeks to aggressively pre-empt or combat diseases that could spark future pandemics.

■ STRATEGIC APPROACH

The EPT program emphasizes early identification of and response to dangerous pathogens in animals before they can become significant threats to human health. Using a

Five key areas of emphasis comprise the EPT program:

1. *Wildlife pathogen detection*: Identification of target pathogens in wildlife that threaten humans
2. *Risk determination*: Characterization of the potential risk and method of transmission for specific diseases of animal origin
3. *Institutionalization of a "one health" approach*: Integration of a multisector approach to public health objectives
4. *Outbreak response capacity*: Support for sustainable, country-level response
5. *Risk reduction*: Promotion of actions that minimize or eliminate the potential for the emergence and spread of new disease threats



YUVAL HAIMOVITS

Bats, rodents, and nonhuman primates are major sources of new zoonotic diseases, as they interact closely among humans and their domestic settlements.

risk-based approach, the EPT program builds on USAID's successes in disease surveillance, training, and outbreak response to focus on geographic areas where these threats are most likely to emerge. These efforts are critical to the sustainability of long-term pandemic prevention and preparedness. The EPT program draws on expertise from across the animal- and human-health sectors to build regional, national, and local capacities for early disease detection, laboratory-based disease diagnosis, rapid disease response and containment, and risk reduction.

These efforts target a limited number of geographic areas, known as "hot spots," where new disease threats have emerged in the past. The EPT program focuses on "hot spots" in the Congo Basin of East and Central Africa, the Mekong region and other "hot spots" in Southeast Asia, the Amazon region of South America, and the Gangetic Plain of South Asia.

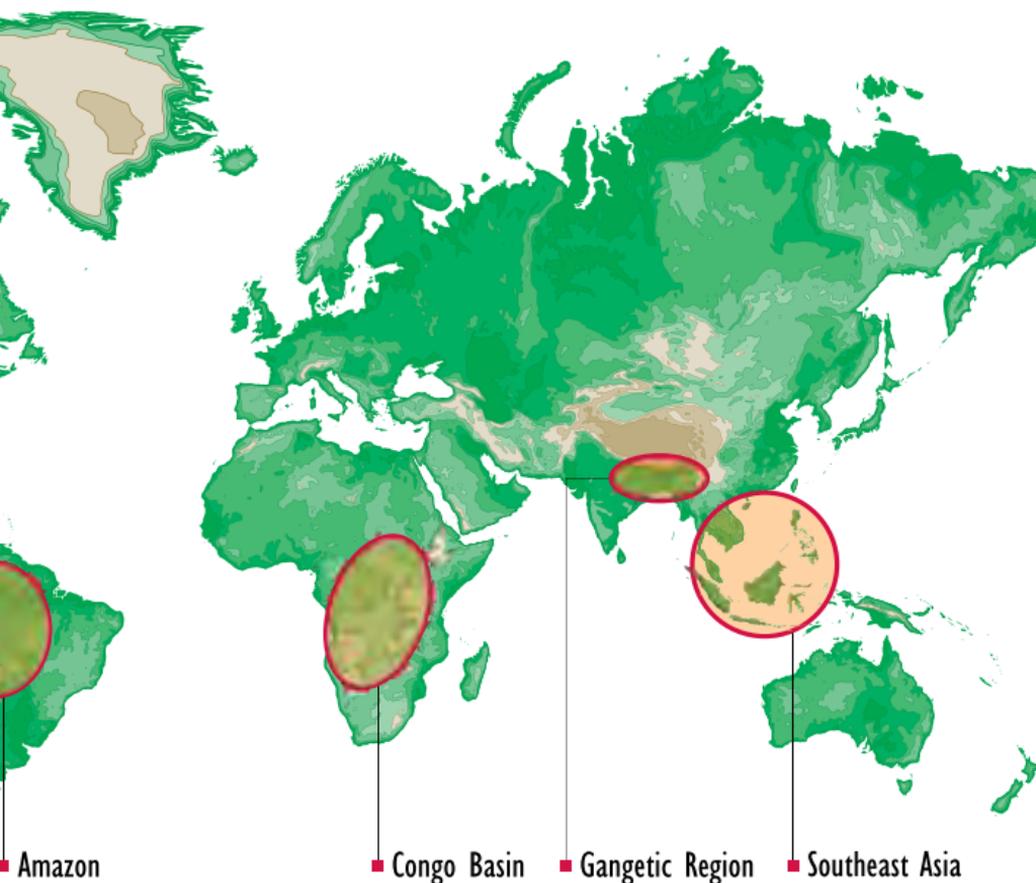


■ PARTNERSHIPS

USAID is implementing the EPT program with a coalition of partners to ensure a coordinated, comprehensive international effort to pre-empt the emergence of future pandemic diseases. These partners include organizations with specialized expertise in wildlife monitoring, field epidemiology and training, laboratory strengthening, and behavior change communications.

■ PROGRAM EXPECTATIONS

USAID anticipates that the EPT program will develop predictive models for early identification of viral and other biological threats in “hot spot” regions, and that it will enhance regional, national, and local capacities for surveillance, laboratory diagnosis, and field epidemiology in both the animal- and human-health sectors in these areas. These efforts will ultimately minimize the risk for the emergence and spread of new pandemic disease threats. The most immediate benefit of the EPT program’s investments in disease detection and response, however, will be reflected in their routine application in the management of more normative diseases in these areas, such as malaria, cholera, and meningitis. These contributions more broadly support the tenets outlined in the World Health Organization’s (WHO’s) International Health Regulations and equivalent international health standards of the World Organization for Animal Health (OIE).





USAID is partnering with WHO, FAO, and OIE to strengthen animal and human laboratory diagnostic capacity to enable rapid, targeted responses to emerging zoonotic disease threats in “hot spot” regions.

The EPT program consists of four projects known as **PREDICT, RESPOND, IDENTIFY, and PREVENT.**

Through **PREDICT**, USAID and partners monitor and increase local capacities in geographic “hot spots” to identify the emergence of new infectious diseases in high-risk wildlife, such as bats, rodents, and nonhuman primates, that could pose a major threat to human health. These activities build on USAID-supported surveillance of wild birds for H5N1 avian influenza and address more broadly the role of wildlife in facilitating the emergence and spread of new disease threats. PREDICT partners include the University of California Davis School of Veterinary Medicine, Wildlife Conservation Society, Wildlife Trust, The Smithsonian Institute, and Global Viral Forecasting, Inc.

RESPOND is a project that twins schools of public health and veterinary medicine in the “hot spot” regions with U.S. counterpart institutions to strengthen their capacities to provide long- and short-course trainings for cadres of animal- and human-health professionals in field epidemiology to identify and respond to disease outbreaks in a timely and sustainable manner. RESPOND partners include Development Alternatives, Inc., the University of Minnesota, Tufts University, Training and Resources Group, and Ecology and Environment, Inc.

The **IDENTIFY** project represents a USAID partnership with WHO, the U.N. Food and Agriculture Organization (FAO), and OIE. The project aims to help develop laboratory networks and strengthen diagnostic capacities in geographic “hot spots” for new emergent diseases.

The **PREVENT** project builds upon USAID’s ongoing H5N1 avian influenza efforts to develop effective behavior change communication responses to diseases of animal origin. It also supports efforts to characterize behaviors that increase the potential for new disease threats from wildlife or wildlife products to spread, and formulates strategies for behavior change and/or communication approaches that meet the challenges posed by emerging pandemic disease threats. PREVENT partners include the Academy for Educational Development and Global Viral Forecasting, Inc.

In implementing this program, USAID is also partnering with the U.S. Centers for Disease Control and Prevention and the U.S. Department of Agriculture to work with EPT partners to build robust, coordinated outbreak surveillance and response capacities in geographic “hot spots.” This includes enhancing existing partnerships to support field epidemiology and training programs and laboratory strengthening for long-term sustainability of pandemic preparedness and response measures.

USAID’s existing **DELIVER** project supports the EPT program by providing commodity procurement and logistics assistance for preparedness and response to emerging pandemic threats. Partners include John Snow, Inc., PATH, UPS Supply Chain Solutions, Crown Agents Consultancy, and Fuel Logistics Group.

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