

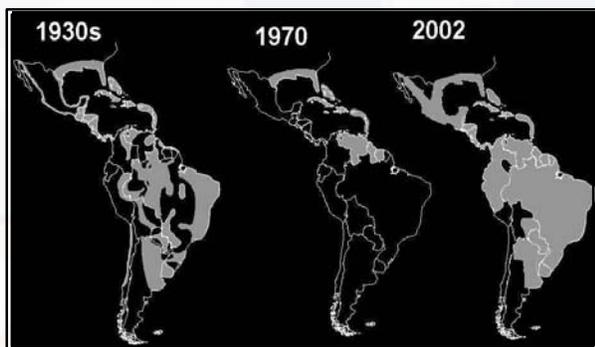


## Best Practices for Dengue Control in the Americas

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The global distribution of *Aedes aegypti*, the mosquito vector for the dengue viruses, is found in nearly 100 tropical countries, and an estimated 2.5 billion people live in areas at risk for epidemic transmission. As the number of cases of dengue fever (DF) and dengue hemorrhagic fever (DHF) continues to grow unabated in the region of the Americas, a renewed attention to integrated dengue prevention and control strategies is urgently needed. A record number of 968,723 cases of DF/DHF were reported in the region in 2002—with 17,386 confirmed cases of DHF and 234 confirmed DHF-related deaths.

Due to increased urbanization and the widespread use of non-biodegradable items with a concurrent lack of adequate trash disposal and sanitary landfill systems, larval habitats are increasing in urban areas at an alarming rate. This is compounded by the high costs of running vertical programs.



**Reinfestation of *Aedes aegypti* in the Americas**  
 (Source: PAHO, 2001)

Control of larval habitats relies heavily on community participation. Yet most dengue

control programs are unprepared to develop and manage sustained community participation strategies.

Continued epidemics of DF/DHF highlight the lack of impact of current dengue control program strategies on controlling the mosquito vector, and there is a critical need for a comprehensive, integrated dengue program.

### 10 Key Elements for a Comprehensive, Integrated Dengue Program

In 1994, the Pan American Health Organization (PAHO) proposed a conceptual framework for comprehensive, integrated dengue prevention and control. This framework is supported by the U.S. Centers for Disease Control and Prevention (CDC) Dengue Branch, and the World Health Organization (WHO). The 10 key elements that PAHO enumerated in its regional strategy, “the Decalogue” (2001), include:

1. Integrated epidemiological and entomological surveillance
2. Advocacy and implementation of intersectoral actions
3. Effective community participation
4. Environmental management and addressing basic services
5. Patient care within and outside of the health system
6. Case reporting



7. Incorporation of the subject of dengue/health into formal education
8. Critical analysis of the use and function of insecticides
9. Formal health training of professionals and workers both in the medical and social sciences
10. Emergency preparedness.

## Best Practices

At the request of USAID/LAC Bureau, EHP recently published a report, which includes 11 examples of practices currently in use in several countries—nine from the Americas, one from Southeast Asia, and one of global application. The documented examples correlate with the key elements of the PAHO Decalogue:

### *Surveillance:*

1. A global dengue surveillance system (WHO)
2. A weekly epidemiological report (Venezuela)
3. The dengue diagnostic laboratory (CDC Dengue Branch, Puerto Rico)

### *Community Participation:*

4. Social mobilization of city residents for dengue (Brazil)

### *Environmental Management:*

5. Key container and key premise indices for *Aedes aegypti* surveillance and control (Vietnam)
6. Management and control of tires (Mexico)

7. Management and control of water containers (Dominican Republic)

### *Patient Care:*

8. Case treatment and management (CDC Dengue Branch, Puerto Rico)

### *Case Reporting:*

9. Clinical case definitions for dengue fever, dengue hemorrhagic fever, and dengue shock syndrome (CDC Dengue Branch, Puerto Rico)

### *Incorporation of Dengue/Health into Formal Education System:*

10. Primary school curriculum for comprehensive vector control (English-speaking Caribbean)
11. Cross-training of Ministry of Health and municipal government staff (Honduras).

An example was selected as a “best practice” if the practice had been expanded beyond a pilot phase (with the exception of DengueNet) as a result of demonstrated effectiveness and had some reported level of sustainability.

The practices should not be viewed as a panacea for dengue prevention and control. Rather, they are examples of specific components of several programs, developed in many cases according to cultural and ecological circumstances.

For more information or to request a copy, please email: [info@ehproject.org](mailto:info@ehproject.org).

The full report can also be downloaded from the EHP website: <http://www.ehproject.org>.