

## Message from the Regional Director on World Health Day 2014 on Vector-borne diseases



Since time immemorial, humankind has co-habited with innumerable other living forms. Some of these have been responsible for transmitting diseases to human beings. Malaria, dengue, and kala-azar are just a few examples of such diseases of public health importance to us, that are grouped under the broad-term of vector-borne diseases. Vectors are small organisms, such as mosquitoes, bugs, ticks and freshwater snails, that can

carry disease from person to person and from place to place.

Vector-borne diseases account for 17% of the estimated global burden of all infectious diseases. While diseases such as malaria have been with us for centuries, dengue has become the world's fastest spreading vector-borne disease, with a 30-fold increase in disease incidence over the past 50 years.

However, malaria is still endemic in 10 of the 11 Member States of South-East Asia Region where 40% of the global population at risk of malaria resides. Maldives is the only country that has remained free of malaria since 1984. Outbreaks of dengue fever – a disease that did not exist until the 1950s, have now been reported from all Member States with the solitary exception of Democratic People's Republic of Korea.

In spite of substantial progress made by Maldives, Sri Lanka and Thailand in reducing the disease burden due to lymphatic filariasis, the South-East Asia Region has 60 million infected people and 870 million people at risk of this infection in all countries except Bhutan and Democratic People's Republic of Korea. Kala-azar has been endemic in Bangladesh, India and Nepal with isolated cases reported from Bhutan and Thailand in the recent past. Japanese encephalitis has been killing people, especially young children, with alarming regularity in a few established foci. The extensive and rapid spread of chikungunya a few years back is still vivid in our memories and indicative of the ingenuity of vector-borne diseases to strike without warning.

Given the tropical nature of our Region, inefficient water management, rapid degradation of the environment, low priority for health impact in development activities, unplanned urbanization and widespread poverty, the developing countries suffer far more from these diseases than the developed countries. Vector-borne diseases have significant impact on socioeconomic status of communities, and they vigorously fuel the



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Chikungunya • Dengue • Japanese encephalitis • Kala-azar • Lymphatic filariasis • Malaria • Schistosomiasis

vicious circle of poverty. Elimination of vector-borne diseases will contribute to boosting the economy and facilitate bringing poor people into mainstream.

Social and environmental factors (including climate change) affect both the transmission and control of such diseases. In recent years, there has been growing recognition of the importance of these ecological factors in influencing vector-borne diseases. Optimizing or managing these risk factors lies at the heart of efforts to contain these diseases.

Vectors have, and shall always, continue to surprise us. The versatility of mosquitoes and other vectors to subvert the interventions developed by humankind is making difficult and complex the task of controlling these diseases. Acquisition of resistance to commonly used insecticides has been a frequent course adapted by these vectors.


Cost-effective technologies tools are now available. Mass drug administration as preventive chemotherapy has already yielded excellent results in several countries. These interventions need to be applied through community-based ecosystem management and environment-friendly vector-control interventions. Encouraged by the efficacy of these tools, the global community has already called for elimination of several vector-borne diseases during the coming decade. At the same time, research continues to develop better and more cost-effective interventions.

It is now well recognized that prevention and control of vector-borne diseases warrant a comprehensive, multisectoral and all-encompassing response. This requires developing and implementing strategies, interventions and technologies to modify these environmental risk factors to substantially prevent and reduce the disease burden. Integrated vector management (IVM) is one such approach. IVM is a rational decision making process for vector control. It advocates social mobilization, collaboration with other sectors, integration of non-chemical and chemical vector-control methods that are amalgamated into other disease-control programmes, and building national capacity to manage IVM programmes. IVM also stresses the importance of first understanding the local vector ecology and local patterns of disease transmission, and then choosing appropriate vector control tools.

Environment modification and its preservation should have a national approach that assures health is central to any developmental policy or plan. However, these remain outside of the traditional domain of the health sector. This objective can be attained only through healthy policies or the application of the concept of "Health in All Policies". Health, environment and development policies must be fully aligned.

Through the World Health Day 2014 campaign, WHO focuses on the public health importance of these vector-borne diseases as well as on promoting rational use of available interventions, pushing health higher on national development agendas and articulating greater engagement of empowered communities for their active participation in limiting proliferation of vectors. This will benefit everyone in society while addressing the needs of those most at risk.

Preventing and controlling vector-borne diseases is, and must be, the responsibility of everyone!



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