

November 10, 2015

Diseases to spread rapidly on insects

Experts point at climate change; call for readjusting time of anti-mosquito drive



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Diseases like dengue would see rapid rise in the coming years as a result of climate change and unplanned urbanisation, health and environmental experts said.

Diseases carried by insects were likely to burden the health systems immensely, they said in addition to the emerging challenges of non-communicable diseases, like cancer, diabetes and heart diseases.

Experts say dengue, malaria, chikangunya and Japanese encephalitis are all transmitted by mosquitoes.

Higher numbers of dengue cases in Bangladesh and its neighbouring countries this year, amid such climatic conditions, have become a concern for experts.

They say certain realities like climate change, urbanisation, and density of population cannot be altered, but control of mosquitoes and treatment of the infected patients were doable, and the focus should be on these aspects.

Rising temperatures and longer periods of rainfall are helping insects like mosquitoes and flies to breed. As it is not possible to do much about the rise in temperature and the longer periods of rainfall, experts suggest urban authorities focus on more effective mosquito control programmes.

“Mosquito larva should be destroyed in April-May before the monsoon starts so that its breeding is controlled early,” said Saif Ullah Munshi, associate professor of virology department at the Bangabandhu Sheikh Mujib Medical University.

He suggested that the city corporations act to face the growing challenge, and start year-round programme to control mosquitoes, especially around certain places like under-construction buildings, schools, hospitals and religious venues.

Until November 5, over 2,900 dengue cases in Bangladesh, mostly in Dhaka, were reported. At least four had died.

The figure of dengue cases reported was the highest in the last 10 years. In 2004, it was 3,434, and since then, the highest figure was 2,200 in 2006 and below 2,000 until last year.

Most other Asian countries, including Thailand, Indonesia, Malaysia, and the Philippines were seeing higher numbers of dengue cases this year.

According to the World Health Organisation (WHO), some 50-100 million cases of dengue were reported worldwide each year, and 75 percent of the cases were in the Asia-Pacific region.

The WHO said it was approximately 30 times more than that of 50 years ago.

Globally, a billion people were estimated to be infected from vector-borne diseases, like dengue, malaria, lymphatic filariasis and kala-azar, and over a million die from them each year, it said.

Bangladesh's leading environmental experts Ainun Nishat and Atiq Rahman said the rise in dengue cases and its spread from only a few countries in the 1950s to over 100 countries now have a direct link to global warming.

“Increase in temperature, rainfall and humidity accelerate breeding of vectors like mosquitoes,” said Atiq Rahman, executive director of Bangladesh Centre for Advanced Studies (BCAS).

Citing this year's intermittent rainfall and higher temperature, he said those were erratic behaviours of climate, which would continue in the coming decades.

Ainun Nishat, professor emeritus of Brac University termed the heavy rainfall even in October “very erratic.”

Apart from that, increased traveller traffic between countries, rural-urban migration and unplanned urbanisation were other factors that contribute to the spread of these diseases.

“A person may get infected, say in India, and visit Bangladesh. That person could be a source of transmission,” said Saif Ullah Munshi.

“Urbanisation in Bangladesh is growing rapidly and rural people are moving to the cities. Those who have been living in the cities may be immune, but those coming to the cities newly remain more at risks,” he said.

Besides, densely packed homes in Dhaka help such vector-borne diseases spread very quickly, Munshi said.

Prevention and control relies heavily on reducing the places where standing water supports mosquitoes breeding, according to WHO. But this needs actions of affected communities, it said.

During outbreaks, insecticides may be sprayed to kill flying mosquitoes, applied to surfaces in and around containers where the mosquitoes land, and used to treat water in containers to kill the immature larvae.

Prof Mahmudur Rahman, director at the Institute of Epidemiology, Disease Control and Research (IEDCR), said authorities should think of architectural designs so that buildings do not have any open spaces storing rain water.

Mushtuq Husain, principal scientific officer at the Institute of IEDCR, said doctors in Bangladesh were already well trained in treating dengue patients, which checked mortality from dengue significantly.

However, if more people were affected, they would surely affect the whole health system, causing financial burden, he added.

“For Bangladesh, non-communicable diseases (NCDs) are major health challenges. If vector-borne diseases go up, it would double the health care burden,” Husain said.

Husain suggested regional cooperation in tackling the vector-borne diseases by exchanging technical expertise and best practices.