

[music] Anne Johnson: This is Global Environmental Health Chat, the podcast that explores environmental health issues that transcend national boundaries. I'm your host Anne Johnson, and this podcast is produced by the National Institute of Environmental Health Sciences.

In today's podcast, we're going on a journey to the world's second-most populous country, a land rich in history and culture and the home of an incredible range of landscapes from frozen mountains to lush rain forest to windblown desert. [music] If you haven't already guessed it, we're talking about India.

Our guest is Dr. Rao Ayagari. He spoke with us about efforts to build India's public health capacity as the country prepares for a host of climate-change related health impacts. Rao is a Senior Advisor for Research Development and Scientific Operations at the Public Health Foundation of India. He says his organization helps bring a unique perspective to India's public health challenges.

Ayagari: This is an organization which is fully devoted to the cause of public health—public health research, teaching, education, training, communication, advocacy, and policy matters. It is a very unique organization set up under a public-private partnership initiative.

Johnson: Rao started by describing some of the key public health issues India faces, things like sanitation and access to clean water, air pollution, infectious diseases, and malnourishment. Then he explained that each one of these challenges is actually a moving target for public health practitioners, in part because of climate change. As the climate becomes warmer and precipitation patterns change, it will have widespread impacts on factors that affect human health.

Ayagari: What's happened is that if you really have problems associated with reduced rainfall, it has an effect on areas of agriculture, on food. And that relates to nutrition, so these are the kind of climate impacts which are of concern.

Johnson: Reduced rainfall not only would impact agriculture and affect India's ability to feed its 1.2 billion people, it would also exacerbate the country's water and sanitation problems. Some places have too little water, or inadequate sanitation infrastructure. In other places, flooding is a constant danger, putting people and property at risk and increasing the spread of disease.

Ayagari: Floods is one huge area. Nobody has a perfect scientific model to predict when a flood will come, how it will come, what shape it will take. It's extremely difficult.

Johnson: Another difficult challenge is heat. Some areas of the country are already extremely hot. Increased heat could contribute to problems like heat stroke and even cardiovascular diseases. Combined with the country's existing air pollution problems, the impacts of climate change could increase rates of many chronic diseases, as well as infectious and vector-borne diseases. These challenges are complex, and the solutions will not be simple. But Rao says building public health capacity is a way to move forward.

Ayagari: You see, the lack of public health infrastructure is a key element. We are trying to build public health infrastructure, in terms of establishing the areas of priority, creating a huge cadre of professionals in the area of public health. We have a network of primary health care centers, community

health care centers. These centers need to be provided with adequate people, adequate infrastructure so that people can go there for immediate health needs. We need to create our own capacity building and training efforts so we have the right kind of people.

Johnson: But getting the right people focused on the right issues requires collaboration among people who may not ordinarily work together.

Ayagari: We have good expertise in the country for meteorology, climate change and climate modeling, those scientists. We also have very good public health professionals. The only part is you need to bring these two disciplines together, the people together. Interdisciplinarity and multidisciplinary is important. Otherwise, what happens is those scientists will tend to work in their own silos. You need to basically bring these people together and ensure that the public health specialists understand the issues of climate change and the environment, and the climate change and environment specialists understand issues of public health.

Johnson: Rao said facilitating that sort of interaction is one of his organization's top priorities. You can visit our podcast website for more information about capacity building and public health around the globe. I want to thank Dr. Rao Ayagari for speaking with us about the work of the Public Health Foundation of India. You've been listening to Global Environmental Health Chat, brought to you by the Global Environmental Health program of the National Institute of Environmental Health Sciences. Our website is niehs.nih.gov/podcasts. [music]