What’s the Buzz? From Satellites to Your Cell Phone

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Abstract

NASA Earth observing data are used to help predict, monitor, and respond to vector-borne and water-related disease throughout the world. Learn how and why these data are used and find out how to help reduce the threat of mosquito-transmitted disease using a free app on your smart phone.

Introduction

Mosquitoes are the world’s most dangerous animal. NASA’s freely available Earth observation data are being used to help predict, monitor, and respond to mosquito-transmitted disease around the world. NASA also supports the GLOBE Observer app which has a tool called the “Mosquito Habitat Mapper”.

NASA’s GPM Mission

NASA’s Global Precipitation Measurement (GPM) mission is an international collaboration that measures precipitation as it falls from clouds to the ground. This data has a spatial resolution of 10 km with a 30-minute temporal resolution.

GPM’s Disease Initiative

GPM has several cross-cutting application areas which contribute to and enhance our understanding of the impact of precipitation from local to global scales. Precipitation extremes, from heavy rainfall to droughts, pose great risks to a country’s economic development and human health. To further explore the linkages and research/operational applications of NASA’s Earth observation data and disease; GPM launched the “Disease Initiative” which features case studies, archived workshops, virtual trainings, and other resources related to using NASA’s Earth observations to predict, monitor, and respond to vector-borne and water-related disease around the world.

GLOBE Observer App

GLOBE Observer is a citizen science app which allows volunteers in 126 GLOBE countries to take observations and contribute data to the larger community. The “Mosquito Habitat Mapper” makes it possible for citizen scientists to observe, record and share the locations where potential disease vectors are breeding. The data are important to scientists who are using satellite data and computer models to predict disease outbreaks and epidemics.