Abstract

Slums in India (and elsewhere in the developing world) flood frequently, disrupting work and school, and spreading fecal contamination from pit latrines and open drains into people’s homes. Traditional storm drainage design is inappropriate where flooding is so frequent, resources are scarce, and both basic sanitation and rubbish collection are inadequate. An innovative "road as drain" approach to storm drainage was developed by the Indian engineer Himanshu Parikh and adopted in slum improvement projects in Indore, Madhya Pradesh during the 1990s. This lecture, based on my PhD research at the London School of Hygiene & Tropical Medicine, addresses the simple question: “how can you measure the performance of a drainage system?”; if we want to improve drainage performance, we first need to know how to measure it and model it to develop better designs. This talk describes the overall context of storm drainage in environmental health; the design, data collection and modeling of drainage systems in the study; and some interesting theoretical and practical questions and results from the work.