



Local, multisectoral coordination

Dengue in Rio de Janeiro

Problem

Although Brazil has long been recognized as a leader in dengue management, the emergence of joint climate-health risks has highlighted the need for new forms of cross-sectoral partnerships to build coherent responses and increase urban resilience. A combination of factors has contributed to a marked increase in the number of dengue cases in Brazil, with a disproportionate burden in cities such as Rio de Janeiro, which reported 10,000 dengue cases in one month at the start of 2024.

Solution

Rio's Municipal Health Secretariat (SMS) worked alongside the Health Surveillance Superintendence (SVS) to set up the Dengue Emergency Operations Center (COE Dengue). The multidisciplinary team brought together experts in entomology, meteorology, geography, and urban planning to ensure a coordinated response that equipped all sectors with tailored dengue management capabilities.

The team identified breeding hotspots with city-wide epidemiological monitoring. SVS built health surveillance models to track dengue cases and georeferencing tools to determine when and where cases were spiking while an IT sub-unit provided programming support, maintaining the data infrastructure. Critical climate data, combined with health service data, was uploaded to a shared platform accessible to SVS, COR, and other local agencies, providing a four-week predictive window for planning and executing management strategies.

Impact

Bringing these actors together in a centralized Operations Center facilitated a coordinated, real-time response strengthened by transferring skills and knowledge across teams. In 2024, SVS was able to predict a spike in dengue cases two months earlier than forecasted by traditional epidemiological models, georeferencing 90% of new dengue cases within just a few days of their occurrence. Their model resulted in the inspection of over 2.8 million properties and the elimination of 447,000 breeding sites in the first three months of 2024.



Photo credit: Edu Kenna/ SMS-Rio