

Growing up and giving back in Mali

DigitalGlobe Satellite Imagery allowed Harvard School of Public Health graduate student Alyson Rose-Wood to map the trends in malaria morbidity among Malian children

Having grown up in sub-Saharan Africa, Alyson Rose-Wood was no stranger to the devastation of malaria. She lost a childhood friend and teacher to the disease and nearly died from it herself when living in Morocco due to lack of treatment access. Her personal connection with malaria compelled her to research the burden the disease was causing for the Malian children while studying at the Harvard School of Public Health. In Mali, malaria is the leading cause of death and the primary cause of doctor visits for children under the age of five. Rose-Wood chose to investigate the changing malaria burden for children from 1998 to 2006 in the towns of Mopti and Sévaré as they had a historically high mortality rate for children. Rose-Wood received five DigitalGlobe IKONOS satellite images at 1 meter resolution spanning a 500km area through the DigitalGlobe Foundation. This set of imagery included the two towns being studied as well as the whole flood basin during both the dry and wet seasons, which helped her study mosquito breeding grounds – the main carriers of malaria. The imagery also helped her account for the proximity of seven health centers to bodies of water.

“I needed an image that could tell me what was happening at large...I needed to, through that image, be able to locate the health center and then locate the nearest body of permanent water and measure it. And satellite images let me do that.” —ALYSON ROSE WOOD

She discovered that during the eight-year period studied, presumptive malaria in children was actually decreasing, significantly associated with the distribution of bed net treatment kits. In addition, children from the Fulani (Peuhl) ethnic group had significantly lower odds of contracting malaria when compared to other ethnicities. The DigitalGlobe Foundation imagery that Rose-Wood used in her research, along with her video case study, can now be viewed on Google Earth Builder.

The satellite imagery like the type used by Rose-Wood is helping researchers and decision-makers all over the world gain insight into situations that are informing critical decisions and helping save lives. “Without the key pieces of information the images helped give me I wouldn’t have been able to do the analyses appropriately – nobody would have taken what I concluded seriously. So it made my research happen,” said Rose-Wood.



Alyson Rose-Wood navigating the Omo River, Ethiopia



DigitalGlobe satellite image of Mopti, Mali