ENVIRONMENTAL SCIENCE & PUBLIC HEALTH

Malaria and forest clearance*Proc. Natl Acad. Sci. USA* <https://doi.org/10.1073/pnas.1905315116>

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Rapid deforestation has occurred in parallel with increased malaria burden in the Amazon basin. Yet the relationship between this major environmental crisis and significant public health problems has not been clearly understood.

Andrew MacDonald and Erin Mordecai from Stanford University analyse a longitudinal geospatial dataset to examine evidence for a causal relationship. They show that deforestation leads to an increased malaria burden, with each 10% increase in deforestation leading to a 3.3% increase in malaria incidence. Yet they also find that higher malaria incidence in turn reduces forest clearance: for every 1% increase in malaria incidence, forest clearance then

drops by 1.4%. This feedback cycle is diminished in areas of more intense land use.

This paper combines sociological, health and environmental data to better understand the complex interplay between environmental change and human health, and it will be important for policymakers assessing trade-offs between conservation, economic development and health in the Amazon basin, an area where all three are threatened.

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