

Based on the butterfly effect, liquidating Zika virus, Ebola virus, yellow fever, and cholera is equivalent to biodiversity loss?

Yoshiyasu Takefuji

Seth Berkley introduced health security's blind spot (1). As long as a system isolated by walls is governed by thermodynamics, the system will reach to equilibriums. For example, the population explosion was avoided by demographic transition. Demographic transition is the transition from high birth and death rates to lower birth and death rates as a country or region develops from a pre-industrial to an industrialized economic system (2). Tom H. Oliver et al. stated that biodiversity loss declines resilience of ecosystem functions (3). We all know the butterfly effect in chaos theory. Liquidating Zika virus, Ebola virus, yellow fever, and cholera is equivalent to biodiversity loss? If so, we need a new policy such that researchers should focus on how to nullify dangerous diseases instead of liquidating them?

References:

1. Seth Berkley, " Health security's blind spot," Science 09 Mar 2018: Vol. 359, Issue 6380, pp. 1075
2. https://en.wikipedia.org/wiki/Demographic_transition
3. Tom H. Oliver et al., "Declining resilience of ecosystem functions under biodiversity loss," Nature Communications volume 6, Article number: 10122 (2015)