



**Figure S9. Sensitivity analysis:** if  $h = 25$  then  $R_0 < 1$ . A, B: Decrease in abundance of non-vector mosquito species can increase risk of malaria transmission ( $R_0 > 1$ ) in The Guarani Mbya village and Marujá, respectively; C, D: Decrease in abundance of non-host vertebrate species does not increase risk of malaria transmission ( $R_0 < 1$ ) in The Guarani Mbya village and Marujá, respectively. The parameter  $\alpha$  is 4.7 in The Guarani Mbya village and 2.8 in Marujá.