**Table S1: Description of parameters**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Description** | **Value** | **Dim.** | **Source** |
| δ | proportion of exposure experienced away from home patch | 0.4 | d-1 | - |
| a | inverse of gonotrophic cycle duration | 0.5 | d-1 | - |
| b | probability of a host becoming infected upon receiving an infectious bite | 0.35 | - | [1] |
| c | probability of a vector becoming infected upon biting an infective host | 0.31 | - | [1] |
| τh | inverse of human latent period | 1/5.8 | d-1 | [2] |
| γ | inverse of human infectious period | 1/5.8 | d-1 | [2] |
| τv | inverse of extrinsic incubation period | 1/9.1 | d-1 | [2] |
| µ1 | adult mosquito death rate | 1/13 | d-1 | [3] |
| µ2 | base immature mosquito death rate | 0.05 | d-1 | - |
| µ3 | density-dependent modifier of immature mortality | 0.0000005-0.00000003 | d-1 | varied |
| φ | fecundity | 10 | d-1 | [4] |
| η | rate of larval development | 1/7 | d-1 | [5] |

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