

Model Parameter	Symbol	Min. Value	Max. Value	Value
Diffusion Jumping Rate	μ	0.00	1.00	5.00
No of RESOURCES	S_R	0.00	100.00	1.00
External Immigration Rate (0)	$\lambda_0^{(R)}$	0.00	100.00	0.00
Decaying Rate (0)	$\delta_0^{(R)}$	0.01	10.00	1.50
Decaying Rate (1)	$\delta_1^{(R)}$	0.01	10.00	1.00
Patch Carrying Capacity	K_R	0.00	0.00	1.00
Resource Local Reproduction Rate	β_R	0.00	50.00	8.15
Consumer External Immigration Rate (0)	$\lambda_0^{(C)}$	0.00	10.00	0.00
Consumer Death Rate (0)	$\delta_0^{(C)}$	0.00	10.00	1.50
Consumer Death Rate (1)	$\delta_1^{(C)}$	0.00	2.00	1.00
Consumer Attack Rate (0)	$\alpha_0^{(C)}$	0.00	2.00	50.00
Nu = 1/Tau (One over the handling time)	$\nu_0^{(C)}$	0.00	100.00	2.00
Consumer Movement Rate (0)	$\mu^{(C)}$	0.00	1000.00	1.00
Establishment Rate	η_R	0.00	100.00	1.00

Table 1: Model Parameters for the AIDS-HIV transmission model. Model parameters boundary values defined in a boundary file.