

Maximizing the sensitive density will be advantageous whenever the resistant density exceeds the balance threshold. During the management period the resistant density is less than the acceptable burden P_{max} . This means that maximising the sensitive density will be advantageous only when,

$$P_{max} > R(t) > R_{balance} = \frac{\epsilon(1 - \delta P_{max})}{(1 - c_I)(1 + c_C)\delta}.$$

In particular, this requires that the acceptable burden is greater than the balance threshold

$$P_{max} > R_{balance} = \frac{\epsilon(1 - \delta P_{max})}{(1 - c_I)(1 + c_C)\delta} \tag{S.1}$$

Rearranging Equation (S.1) we have that

$$P_{max} > \frac{\epsilon}{\delta(\epsilon + (1 - c_I)(1 + c_C))}.$$