

$$\left\{ \begin{array}{l} \frac{dN(t)}{dt} = N(t) \left(K \frac{T(t)}{T_0} \right) p \left(1 - \frac{N(t) + r \int_0^t N(t') dt'}{C(t)} \right) - N(t)r \\ \frac{dC(t)}{dt} = \left(\frac{dN(t)}{dt} + N(t)r \right) \left(K \frac{T(t)}{T_0} \right) \left(1 - \frac{C(t)}{T(t)} \right) \\ \frac{dT(t)}{dt} = -N(t)rm \end{array} \right.$$