

Input parameters:  $\mathcal{N}$ ,  $S$ ,  $\mu$ ,  $c$ ,  $k$ ,  $\mathcal{M}$ ,  
 $\mathcal{N}_{max}$ ,  $\alpha$ ,  $\omega_1$ - $\omega_4$

Calculate the number of  
tourists  $\phi = \mathcal{N}/(\mathcal{N}+S) \times 100\%$

Calculate the total revenue  $\mathcal{W}$   
 $= \mathcal{N} \times 232 \times (1 + \mu)$

Derivation  $\mathcal{N} = S \times (1 / (1 - \phi) - 1)$

Optimization of Economic  
Revenue Model

Calculate  $\beta = \mu * c$

Calculate  $t =$   
 $\ln(1/1 - \beta)$

Additional Income  
Expenditure Impact  
Index

Calculate  
 $\mathcal{P}_1 = (k\mathcal{N} /$   
 $\mathcal{M}) \times 100\%$

$\mathcal{P}_1' = \mathcal{P}_1 / t_1$   
after  
intervention

Refinement of the  
Environmental  
Factor Model

Calculate  
 $\mathcal{P}_2 = (\mathcal{N}_2 /$   
 $\mathcal{N}_{2max}) \times$   
100%

$\mathcal{P}_2' = \mathcal{P}_2 /$   
 $(t_2 * t_2)$  after  
intervention

Improvement of  
the Infrastructure  
Pressure Model

Calculate  
 $\mathcal{P}_3 = 1 - \alpha$   
 $= \phi^{0.4}$

$\mathcal{P}_3' = t_3 * \phi^{0.4} + 1 - t_3$   
after  
intervention

Deepening of the  
Residents'  
Satisfaction Model

$\mathcal{P}_0 = \mathcal{N} * (1 + \mu) / (\mathcal{N}_{max} * (1 + \mu_{max}))$

Comprehensive evaluation index  $Z =$   
 $\omega_1 * \mathcal{P}_0 - \omega_2 * \mathcal{P}_1' - \omega_3 * \mathcal{P}_2' - \omega_4 * \mathcal{P}_3'$

The Genetic Algorithms for Screening Weights