The initial concept was a little simplistic and was developed into the more detailed, complex model : below:-

ENVIRONMENTAL / ECOLOGICAL CARRYING CAPACITY

The level at which the local ecosystems begin to be damaged. Flora and fauna are endangered and soils are degraded.

SOCIAL / CULTURAL CARRYING CAPACITY

The level at which local culture begins to be affected. Local traditions and culture may be lost. Locals are negatively affected by the number of visitors. Index of Irritations, 4 stages : Euphoria, Apathy, Irritation, Antagonism.
Visitors themselves may experience negative impacts.

INFRASTRUCTURE CARRYING CAPACITY

The level of tourism at which the local road network is overwhelmed leading to congestion problems for tourists and locals.
Accommodation, water supplies and sewage services may also be overstretched.

PROBLEMS WITH THE CARRYING CAPACITY MODEL

The idea of a carrying capacity is fixed and assumes stability. Whereas the the system should be dynamic.

- May alter due to the changing actions and attitudes of tourists.
- The local political system may bring changes, unrest and conflict.
- Global economic changes, trade wars, conflicts and disagreements may impact.
- Global environmental changes, climate change / global warming may cause changes.
- Local management strategies such as promotion of ecotourism may have an impact.

CARRYING CAPACITY IN TOURISM

The maximum number of visitors a tourist destination can hold at one time (eg visitors per day)
Above this : OVERTOURISM / SATURATION

MANAGEMENT STRATEGIES

- Promote sustainable tourism such as Ecotourism, low impact tourism.
- Capacity control and limiting access.
- Dynamic pricing as a deterrent.
- Diversification, introducing alternative activities.
- Local community involvement and empowerment.
- Education, respect for environments and cultures.
- Flow management and small led tours.

THE MODEL MAY BE USEFUL AS A WAY OF ASSESSING THE SUSTAINABILITY OF TOURISM AND TOURIST DEVELOPMENTS.

The Cifuentes method was developed to assess carrying capacity with particular reference to National Parks, Protected Areas and Nature Reserves
This method looks at

1. PHYSICAL CARRYING CAPACITY
The maximum number of visitors that can physically fit in an area.
2. REAL CARRYING CAPACITY
A real estimate of the number of visitors that the area can take without environmental damage cush at trail / footpath erosion.
3. EFFECTIVE CARRYING CAPACITY
A final figure of visitors, the practical limit that can be managed properly with little or no negative impacts with the existing personnel and infrastructure.