TOURISM IN ACTION

INCREASING CARRYING CAPACITY

As part of the effort to develop tourism and benefit from the economic contribution of tourist spending, Macao has engaged in infrastructure and superstructure development to increase its carrying capacity. Macao, a city of approximately 11.7 square miles with 646,800 residents in 2015 (which represents a 46% increase from 2002), has progressively conducted land reclamation projects. It also has a light rail project planned. The construction for the Hong Kong–Zhuhai–Macao Bridge, a "Y" shape, 18.5-mile bridge connecting Macao with its two main tourist origin markets, Hong Kong and Mainland China, has started. Ferry terminals and airports also have plans for expansion. The immigration counters at major border crossings have also extended their opening hours, some with 24-hour around the clock service, to facilitate tourist movements.

Since the liberalization of casino gaming in 2002, the number of hotel rooms increased from just under 9,000 to over 32,000 in 2015 in response to the tremendous growth in tourist arrivals, from 11.5 million in 2002 to over 30 million in 2015. Large casino resorts offer 40- to 50-seat shuttle buses every ten minutes or so to and from all major ports (e.g., ferry terminals, airport, and land border crossings) as well as between sister properties to transport the mass number of guests. This significantly reduces the demand burden on local public transport such as taxis and buses and the traffic that could be caused by using smaller vehicles or private transportation.

While the government's tax receipts and tourism-related employees' salaries increased dramatically, housing prices skyrocketed due to influx of expatriates and foreign professionals as well as the shortage of land. This presents economic hardship for small business owners who have to pay higher salary to retain their employees and higher rent for their offices and shops. Many of the "mom and pop" stores that are part of the Macao culture for generations have since closed. Many young people, instead of going to college, are drawn to the casino and tourism-related jobs due to attractive pay. Macao is now more modern, with numerous international branded retail operations dotting the landscape.

Sources: Based on Tourism Statistics (http://www.dsec.gov.mo/Statistic.aspx?lang=en-US&NodeGuid=7b23463a-d253-4750-bd12-958030df5ccb), MACAO GOVERNMENT TOURISM OFFICE (http://industry.macaotourism.gov.mo/en/Statistics_and_Studies/list_statistics.php?id=29&page_id=10).

While determining ideal carrying capacities is an ideal goal, it is important to remember that there is no universal definition of carrying capacity.³ Carrying capacity is more like an ideal concept. The conditions needed to establish a carrying capacity is rarely achieved in the real world. Instead of determining the limit, it is more important to answer "what are the appropriate or acceptable conditions?" What becomes apparent in all of these capacity descriptions is that there can and should be limits to tourism activities. Too much of anything is not good, and there is no exception for tourism. There are limits to where benefits can be gained and problems of degradation begin. Basically, these limits are reached when crowding, either real or perceived, occurs and damage begins. The bad news is that all of these definitions point to the conclusion that there are limits to the number of tourists that can be accommodated in any one location or area.

The good news is that with planning and management the integrity and benefits of tourism can be maintained and achieved. By determining carrying capacities, which we will examine in the next section, optimum tourism numbers can be identified and controlled. In addition where planning and investment have been employed, capacities can be increased and growth can be accommodated.⁵ For example, through planning, tourism-generated proceeds have come to represent a significant revenue source, increasing employment, household income, and government income for South Korea.⁶

Determining Carrying Capacities

As you can see from the previous definitions, preserving the physical and natural features that attracts visitors requires managing the carrying capacity of a location. As places become discovered or grow in popularity, more and more people will come. It might be tempting to "shut the door" or take down the "welcome" sign and hope