

# CARRYING CAPACITY POLICY BRIEF

## COZUMEL

### WHAT IS CARRYING CAPACITY?

Carrying capacity (CC) provides valuable information about a destination which may be used to inform decisions in relation to the sustainable development of a destination. As a tool, it can be applied to the tourism activity planning process, particularly in the case of sensitive destinations such as those bordering the Meso American Reef. It also allows destination managers to better manage their visitors, both on a destination level as well as by better managing the tourist attractions their visitors enjoy.

### WHY IS CALCULATING CARRYING CAPACITY NECESSARY?

The results from the sustainability assessments recently undertaken at the three MAR destinations, based on GSTC criteria, reveal that it is vital for all three members of the Network to define this parameter and to apply it accordingly to their own destinations.

The concept of CC continues to be used to design public policy. It helps to enhance the visitor experience whilst encouraging greater sustainability with regard the use of natural and cultural resources and, at the same time, balancing the use of resources with social and economic development. CC may be associated with the concept of Limit of Acceptable Change (LAC), applied at the three destinations. LAC is used to determine the intensity of the use of natural resources over a given area, resulting in a tolerable level of change with regard to conservation objectives and the use and enjoyment of the area. Both of these tools are useful in the development of strategies to define visitor management systems.

### CONTEXT

Tourism is the principal economic activity in the MAR region generating a regional income of over US\$667.5 billion in 2018 (BREA-FCCA 2018). For Honduras tourism represents 6% of its gross domestic product (GDP), for Mexico 8.6%, and a sizable 38% of GDP for Belize.

The proximity of the MAR destinations to the United States, together with the region's mild winter climate, have been important factors for the growth of the cruise industry in the region. Although the principal source of cruise passengers to the Caribbean is from the United States (76%), the region is highly attractive to cruise passengers from all around the world. It is important to highlight that the cruise tourism sector shows considerable potential for growth.

### HOW IS CARRYING CAPACITY MEASURED?

In the absence of any legal guidelines, the scientific literature provides options for CC. The most accepted calculation method is that of Miguel Cifuentes, published in 1992. This has been the most widely applied method, given it takes into consideration a wide range of factors and indicators.

The CC calculation is based on a complex process whereby a series of ecological, physical, social, economic and cultural indicators are taken into account. That said, although the theory is sound, the difficult part is figuring out exactly which indicators to use in order to calculate the maximum and optimum CC for a given destination. Thus, indicators need to be duly defined for each individual tourist destination.

As such, it is important to realize that the information obtained from CC calculations will be considered as a point of reference, to be used in conjunction with other data. This is due to the fact that each destination has varying visitor management capabilities.

## BENEFITS

Understanding the CC of a tourist destination in relation to its tourist activities, accommodation, transport, waste management capabilities, etc. will no doubt translate into a better travel experience for visitors. Based on this calculation, destination managers will be able to create destination management systems helping their location to remain viable, diversified and current as an attractive tourism destination.

The tourism industry, as well as local residents, will both benefit from the knowledge of how many visitors the destination can adequately accommodate without compromising the natural and cultural assets. This way, visitors, i.e. the cruise passengers, will benefit from a more enjoyable travel experience when visiting the Network partners' destinations.

## CURRENT SITUATION: COZUMEL

Network destination partners differ from each other in a number of ways: Belize is a country, Roatan an island with two municipalities and Cozumel is a single island- municipality. This explains why each has a different level of governance, diverse budgets and why each has made a different amount of progress along the path towards destination management.

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Cozumel is an island and a municipality in its own right. It is part of the Mexican state of Quintana Roo.

It is a consolidated destination and a regional leader with regard to the number of cruise arrivals and cruise passengers. In 2018 Cozumel received 4,296,187 cruise passengers. In 2017, 739,518 overnight visitors spent an average of three nights on the island, over 65 hotels which, together, provide a total of 4,687 hotel rooms.

Cozumel has five natural protected areas, with different levels of protection. Of these, the National Coral Reef Park of Cozumel (Parque Nacional Arrecifes de Cozumel) is the most important and the area where most diving and snorkeling activities take place.

Cozumel's destination management is geared towards attracting more affluent visitors year on year, seeking to increase capital income, a strategy which is encouraged by the authorities as well as other economic stakeholders. In 2011 Cozumel recorded US\$511.53 million in revenue. Six years later that figure had increased to US\$762.63 million, showing that, over a period of six years only, tourism activity had increased by 49%. Other economic activities simply cannot compare with tourism.

A number of partial studies have been carried out on Cozumel in relation to CC. Of note are those undertaken within the protected areas, in the national park and the state park. Implementing the concept of CC in the national park has not been successful due to the fact that the park has limited capacity for patrolling and surveillance. As a consequence, as of September 2019, the southern end of the national park has been closed down. This was a difficult decision for the authorities to make, yet a necessary step in support of protecting the health of the reef.

The general paucity of data, or, in some areas, the lack of current data, clearly justifies the need to undertake a destination-wide CC study for the island of Cozumel, as per the recommendation of the sustainability assessment carried out by the Center for Responsible Travel (CREST) in 2018.

## LEGAL FRAMEWORK

In Mexico, both the General Law of Ecological Balance and Environmental Protection (LGEEPA, as per its Spanish language acronym), as well as its associated regulations, cover sustainable land use, which guarantees the human right to a healthy environment. This provides the opportunity to measure results based on the concepts of Limit of Acceptable Change and Carrying Capacity for Tourism purposes (CCT). Both of the aforementioned legal provisions allow for these

studies to be carried out, using whichever methodology is deemed appropriate. This would enable the creation of a feedback loop with which to design public policies that would satisfy the need for a healthy environment whilst, at the same time, provide greater opportunities for sustainable tourism experiences with respect to the use of natural and cultural resources. This would allow the use of such resources to be balanced with social and economic development.

## COURSE OF ACTION

The MAR Network's final goals are about building visitor satisfaction rates, visitor safety and improving efficiencies in travel to our destinations. As a first component of a program to improve and strengthen visitor management, it is vital that CC studies are undertaken within the destinations and at the attraction level, considering local residents' satisfaction as well. This phase shall consider discussion with cruise lines to

guarantee that industry trends are taken into account. Based on this, the Network hereby proposes that, as a first step, each of the three destinations proceed to undertake their own CC studies. Each should define its scope based its particular environmental and political conditions. The proposed time frame for these studies to be completed is between October 2019 and February 2020.

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There have been several efforts to measure CC in Cozumel, with studies having been undertaken in discrete areas, not on a destination level. One study that stands out is that of the National Coral Reef Park of Cozumel carried out in 2014. This study concluded that the park was able to accommodate 2,545 people at one time.

One of the recommendations from the sustainability assessment carried out in 2018 was that a destination-wide CC study was required. Input data for the study should include such factors as the amount of available drinking water, visits and basic infrastructure, amongst others.

The Municipality of Cozumel is considering following up on hydro-geological study outcomes to determine a freshwater usage plan for the entire island that secures visitor and resident needs. The results would then be used as part of its decision-making process with respect to visitor management, destination and urban development.

Meetings have confirmed stakeholder interest in undertaking a CC study, starting with the most popular attractions (e.g. beaches, reefs, the town centre, the eastern coast of the island) then scaling up these results to obtain an estimate of the overall CC for the island.

## RECOMMENDATIONS & BUDGET

The Network recommends carrying out and updating the CC studies at each destination as a first step towards developing and implementing visitor management programs. These will serve to improve the visitor experience and, at the same time, will help each destination to develop its own set of sustainable tourism strategies. This will help each location remain viable and attractive as a cruise destination whilst supporting the health of the Meso American Reef.

We recommend taking into account the experience and knowledge of local, regional and international stakeholders where such stakeholders' interests bear relation to the terms of reference of the study. The aim is to achieve more uniform results and for the Network to go on to propose a regional ethical code of practice for the Meso American Reef region, serving as a standard for cruise line visitor management in the future.

As such, we recommend that the terms of reference for the CC studies include a range of topics, including those relating to the physical aspects of vessel and visitor management, fresh water management, waste management, transport and logistics, number and size of beaches, as other critical areas identified in the respective GSTC assessments, as recommended in the Cifuentes methodology.

**Therefore, a Road Map for all three destinations should lead to developing a standardized Visitor Management Program in the MAR region. This should include guidelines and best practices for visitor management activities at the attraction level and have the following objectives: improve visitor experience, improve visitor safety, improve visitation efficiency, and empower responsible visitor behavior to safeguard future economic viability of destinations and their attractions.**

Cozumel wishes to:

1. Determine the CC for its main attractions (beach-clubs, town centre, transport ) in relation to available space and current infrastructure. Estimated cost: US\$10,000 per attraction, considering local residents and visitors' levels of satisfaction.
2. Start work on defining the CC for the overall destination, using information available on the condition of basic urban infrastructure that is shared by local residents and visitors (e.g. consider the use and processing of fresh water, waste management, logistics and transport) as well as information pertaining to cruiseship arrivals. Estimated cost: US\$50,000.

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