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.

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.

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.
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: ROATAN

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.

Since the Honduran Government declared tourism to be a national priority, Honduras managed to increase its visitor numbers by 11.4% in 2014 and the number of cruise passengers by 31.1%, generating US$618 million in foreign currency, as well as 208,365 jobs. On a national scale, tourism represents 6% of Honduras’ GDP.

Honduras has a National Sustainable Tourism Strategy. One of the main areas of focus is to develop tourism in such a way that it is compatible with the conservation of its natural resources.

Honduras has developed a Future Tourism Model (FTM) strategy which it aims to roll out in 2021. This will include an assessment of the tourism sector and the development of proposals for an action plan based on a thorough analysis of the tourism sector as it stands today.

In 2006, the Bay Islands Tourism Free Zone Law (ZOLITUR, as per the Spanish language acronym) came into effect. The aim of this law is to create the required legal framework to establish a destination-specific Customs and Tax Regime as well as a Land Use Ordinance Plan and to support their implementation. This enables tourism activities to take place within a specific regulatory framework and within a context that closely aligns with socio-economic growth, the health and safety of people and property, sustainable development and environmental protection. It also helps ensure that such activities are carried out in-line with both the ecological CC and the tourism-based interests of the zone.

Within this context, an in-depth CC study was carried out in 2014 under ZOLITUR’s supervision. The results were duly validated with the community and the authorities are currently considering updating the study to re-calculate the Bay Islands’ CC. The absence of recent information on the quantity and quality of available freshwater limits the destination’s capacity to update this study, hence questions surrounding the issue of freshwater would need to be considered a priority that a new CC study would need to address.

LEGAL FRAMEWORK

In Roatan, the LAC method has been widely used as a management and monitoring tool for the country’s natural protected areas. It has been employed to determine the LAC for the most popular areas of the Bay Islands National Marine Park. Similarly, the concept of CCT has been applied to the planning of infrastructure for public use. This has been carried out in accordance with the General Regulations of the Law for Forests, Protected Areas and Wild Life which provides for the use of feasibility and carrying capacity studies, as is also the case with the National Ecotourism Policy.
**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.

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.

Roatan wishes to:

1. Collect data on the current availability of fresh water. Bring the CC values for the destination up to date, using the aforementioned freshwater data and information gathered from the 2014 study that related to tourism and urban development. Estimated cost: US$50,000.

2. Develop a tourist attraction visitor management plan (similar to that of Belize) for West Bay and West End. Estimated cost: US$20,000 per attraction.

Thanks to the presence of authorities who hold and are willing to share relevant information, such as the Quintana Roo University in Cozumel and ZOLITUR in Roatan, we believe that these CC studies could be undertaken within a 5 month timeframe, commencing in October 2019.

In the case of Honduras, the Bay Islands Land Use Ordinance Plan is a comprehensive document prepared by the Duty Free Tourist Zone department, (known as ZOLITUR, as per the Spanish language acronym). This document pinpoints the need to have specific CC studies in place, covering, in particular, the quality of life on the islands and identifying the areas that could potentially be developed for tourism. Results from earlier CC studies have been put into practice in the Copan and La Tigra arqueological zones in Tegucigalpa. Both of these studies applied the Cifuentes methodology.

As is the case of Cozumel, and based on the sustainability assessment that was carried out in 2019, it has been deemed necessary to update Roatan’s CC study to include the whole destination. The ZOLITUR study of 2014 may be used as a base line for comparison with the new study. Meetings will also need to be held with relevant stakeholders in advance of the study so as to incorporate their experience and knowledge from the outset.

**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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