

Extended Abstract

English: Improving marine protected area management through concrete strategies for sustainable finance.

Español: Mejorando la gestión de áreas protegidas marinas mediante estrategias concretas de financiamiento sustentable.

French: Amélioration de la gestion des aires marines protégées au moyen de stratégies concrètes pour un financement durable.

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Introduction

The Turks & Caicos Islands (TCI), a British Overseas Territory in the Caribbean, is well known for its beautiful beaches and coral reefs. The 8 main islands and more than 299 smaller islands host a total of 35 protected areas that attract many tourists. Although figures for TCI are scarce, research in other Caribbean overseas territories demonstrates that the economic contribution of natural resources to tourism is significant. For example, in the British Virgin Islands and Saba 61% and 74% respectively of the total added value of the tourism sector derives from nature (Sipos *et al.*, 2014; van de Kerkhof *et al.*, 2014). In these islands, a healthy tourism industry consequently depends on a healthy environment, and conserving natural capital means conserving jobs and income.

Whilst the environment of the TCI underpins the tourism industry, it also faces serious threats, such as the impacts of coastal development, ship groundings, inappropriate waste disposal, lack of legal enforcement, illegal fishing, beach erosion, invasive species, and climate change. Despite the importance of protecting the marine environment for the economy of the TCI, financial resources for effective MPA management are scarce. As in other locations in the Caribbean, annual funds for the Department of Environment and Coastal Resources (DECR) of TCI are insufficient to cover infrastructure, staff positions and the most essential activities to ensure the protection of natural resources.

The Turks & Caicos Islands (TCI) is one of ten countries and territories that took part in a regional assessment of marine protected area (MPA) management capacity in the Caribbean supported by NOAA's Coral Reef Conservation Program (CRCP) in 2011. Some thirty participating MPA managers across the region identified the development and implementation of sustainable finance strategies for their MPAs as the top priority management capacity building need. In order to establish or optimize sustainable finance mechanisms for nature conservation, this study supports DECR in the evaluation of potential and existing funding streams and the possible allocation of these funds to MPA management in TCI.

Methods

In this study, we use an innovative sustainable financing framework to develop strategies for protected area management. The analysis follows "The Economics of Ecosystems and Biodiversity" (TEEB) approach (Millennium Ecosystem Assessment, 2005) and covers the ecological, socio-economic and governance contexts, thereby also creating insights into the feasibility of the identified financing mechanisms.

The sustainable financing framework of this study follows 10 steps, which are summarized below in two phases, namely: scoping and analysis phases (Luján, 2015). This methodology is based on the premise that a successful sustainable financing strategy needs to identify context-specific obstacles for financing instruments and generate solutions on that basis.

The scoping phase is conducted through the following steps: (1) identify relevant ecosystems in relevant MPAs; (2) assess the services delivered by these ecosystems; (3) identify the beneficiaries of ecosystem services; (4) evaluate existing and potential financing streams; (5) identify influential people and decision makers; and (6) identify MPA managers.

The analysis phase focuses on priority finance streams, and hence, on a limited number of relevant beneficiaries. This phase includes the following steps: (7) determine flows of financial resources from beneficiaries to MPA managers; (8) identify obstacles; (9) analyse possible solutions; and (10) identify next steps.

The sustainable financing framework described above is applied to the TCI in two stages. The first stage consisted of a workshop organized by GCFI and Wolfs Company, and face-to-face meetings with key representatives of the government and stakeholders in the TCI during June 2015. The second stage focused on the next steps that were previously identified as a priority. For the specific case of TCI, the second stage included the development of a financial plan, the estimation of the economic value of nature for tourism and the analysis of the legal framework for sustainable finance.

The financial plan focuses on the current and future management of protected areas based on data provided by DECR representatives through a collaborative consultation process and compiled in a financial model developed by Wolfs Company. The analysis includes the current budget and two alternative management scenarios for the period between 2015 and 2021. The basic management scenario describes the budget requirements that would enable DECR to implement key MPA management programs. The optimal management scenario focuses on the necessary budget to enable DECR to operate all programs required for achieving short-, medium-, and long-term goals in MPAs.

The contribution of the natural environment to tourism is economically valued as the addition of the consumer surplus (willingness to pay for additional conservation) and the producer surplus (added value of nature for the tourism sector). The consumer surplus is transferred from data on tourists with similar characteristics as those visiting TCI from studies conducted by Wolfs Company in other Caribbean Islands and the survey of departing visitors conducted by the Department of Economic Planning and Statistics of TCI in 2015. The estimation of the added value of nature for the tourism industry (producer surplus) is based on 2014/2015 tourism figures and related expenditure from the survey of departing visitors from 2015.

Finally, the analysis of the legal framework focuses on regulations that create taxes, fees and other forms of revenue from natural resources, or otherwise related to tourism.

Results

Within the ecological context, stakeholders and government representatives of the TCI identified approximately nine relevant ecosystem types in MPAs and over 10 different events, activities or specific conditions with potential to pose a threat on MPAs. In the socioeconomic context, tourists, residents and the private sector benefit from services delivered by the MPA ecosystems. These services include fisheries, opportunities for recreation, coastal protection and aesthetic value, amongst others. Existing and potential financing streams for MPA management identified during the consultation include user fees (e.g. entry fees), license fees, fishing fees and others, such as accommodation taxes, donations and grants. The governance context to enable these financing streams to support MPA management involves at least a dozen relevant government, private and civil-society institutions. MPA management, however, is limited to the DECR, the Turks and Caicos Reef Fund (TCRF), the Turks and Caicos National Trust (TCNT) and indirectly to the tourism industry.

Obstacles such as lack of enforcement, awareness and resources, have negative effects on the flow of financial resources from beneficiaries to MPA managers. During the analysis phase, stakeholders identified the need for increased and ring-fenced government budget from existing tourism related revenues. In order to tackle this issue, next steps included: (1) developing a financial plan to identify financial needs and gaps for MPA management; (2) demonstrating the importance of financing for MPA management to the TCI's natural capital for tourism industry and economy; and (3) analysing the legal framework for sustainable financing.

The average budget of DECR for nature conservation is estimated at approximately US\$1.5 million during the period between 2015 and 2021. The analysis of alternative management scenarios included in the financial plan shows that the basic management can be achieved with approximately US\$0.4 million on top of the current annual budget. The optimal MPA management, however, requires an additional budget of around US\$1.1 million per year.

Based on previously collected data from visitors to the Cayman Islands, the US Virgin Islands and Bermuda, the total tourists' willingness to pay for more nature conservation in the TCI is estimated within the range between US\$8 million and US\$9 million per year. Furthermore, the added value of nature to the tourism industry is

calculated at approximately US\$37 million per year. Thus, the total value of nature for tourism in the TCI results in around US\$45.5 million per year.

The legal framework analysis shows that approximately 0.6% and 1.8% of the tourism taxes and fees collected in the TCI would be sufficient for DECR to cover the financing gap for the basic and optimal management conditions, respectively. Based on these and the previous results for the financial year 2015/2016, Figure 1 depicts the current budget of DECR for MPA management in comparison with the benefits the tourism economy obtains from nature in the TCI.

Conclusions

Given the several threats faced by local ecosystems and the dependence that important economic sectors, such as tourism, have on nature, it is imperative to establish and optimize sustainable financing mechanisms for MPAs in the TCI. Although several sustainable financing streams already exist, not all funds from these streams are currently reaching DECR or other MPA managers. The benefits nature creates for the tourism industry alone are approximately 25 times as high as the current budget allocated to DECR for MPA management. Similarly, the financing gap for DECR to achieve a basic and an optimal management represents only 0.6% and 1.8%, respectively, of the fees and taxes collected from tourism. These striking results highlight the importance of nature management for the TCI economy and suggest a significant potential to reallocate existing tourism revenues from tax and fee collection in order to bridge the financing gap for effective MPA management.

References

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