Belize Barrier Reef Reserve System

2020 Conservation Outlook Assessment

SITE INFORMATION

Country: Belize
Inscribed in: 1996
Criteria: (vii) (ix) (x)

The coastal area of Belize is an outstanding natural system consisting of the largest barrier reef in the northern hemisphere, offshore atolls, several hundred sand cays, mangrove forests, coastal lagoons and estuaries. The system's seven sites illustrate the evolutionary history of reef development and are a significant habitat for threatened species, including marine turtles, manatees and the American marine crocodile. © UNESCO

SUMMARY

2020 Conservation Outlook

Finalised on 27 Jan 2021

SIGNIFICANT CONCERN

The Belize Barrier Reef Reserve System was removed from the List of World Heritage in Danger in 2018 as a result of sustained and laudable efforts on behalf of the State Party, working in coordination with civil society and other stakeholders, to address various threats to the values of the site, most notably potential oil exploration in the vicinity of the site which has now been placed under moratorium. While some concerns remain, some values of the site indicate improving trends in a number of indicators. The component level protection and management of this serial site has been mostly effective in addressing localised threats such as fishing and visitation. However systemic, wider scale issues such as coastal development, tourism growth, invasive species and the multiple impacts of climate change have undermined these efforts and impacted the integrity of the site and its values. Significant progress in developing the planning and regulatory basis for the conservation of the site through the Integrated Coastal Zone Management Plan as well as new mangrove and fisheries resources acts now provide an overarching framework for addressing these issues. If effectively implemented and enforced, these and other recently developed regulations can provide cause for optimism in successfully addressing the threats to the site and therefore enable the values previously affected by different factors to recover in the future. While the progress achieved should be celebrated, the conservation outlook for the site remains of significant concern until it can be demonstrated that the threats to the site's values can indeed be controlled in the longer term.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ Intact ecosystem gradient providing for ongoing ecological processes **Criterion:(ix)**

Illustrating a classic example of reef types, including fringing, barrier and atoll reef types, the site contains an intact ecosystem gradient ranging from the terrestrial to the deep ocean. Including littoral, wetland, and mangrove ecosystems, to seagrass beds interspersed with lagoonal reefs, to the outer barrier reef platform and oceanic atolls, this ecological gradient provides for a full complement of life-cycle needs, supporting critical spawning, nesting, foraging, and nursery ecosystem functions. Maintaining these ecological and biological processes ensures robust and resilient reefs (World Heritage Committee, 2014).

▶ One of the most pristine reef ecosystems in the Western Hemisphere **Criterion:(vii)**

The site was considered one of the most pristine reef ecosystems in the Western Hemisphere (IUCN Evaluation Report, 1996). As the longest barrier reef in the Northern and Western Hemispheres and distinctive on account of its size, array of reef types and the luxuriance of corals, it provides a classic example of the evolutionary history of reefs and reef systems. The rise and fall of sea level over the millennia, coupled with natural karst topography and clear waters, results in a diverse submarine seascape of patch reefs, fringing reefs, faros, pinnacle reefs, barrier reefs as well as off-shelf atolls, rare deep water coral reefs and other unique geological features such as the Blue Hole and Rocky Point where the barrier reef touches the shore. The spectacular picturesque natural setting of brilliant white sandy cayes and verdant green mangrove cayes is in dramatic contrast to the surrounding azure waters (World Heritage Committee, 2014).

▶ Diverse marine and littoral habitats **Criterion:(x)**

The Belize Barrier Reef Reserve System (BBRRS) is unique in the world for its array of reef types, making it an area with one of the highest levels of marine biodiversity in the Atlantic. (World Heritage Committee, 2014). The site provides an important habitat for a number of internationally threatened marine species. Remaining pristine areas of cayes (aka islands), with remnant stands of littoral and mangrove forest, also provide critical habitat for several endemic and migratory bird species (IUCN, 1996).

▶ Marine species **Criterion:(x)**

Numerous endangered species are protected within the boundaries of the BBRRS including the West Indian manatee, the American crocodile, three species of sea turtle and the great hammerheads of the Blue Hole Natural Monument. The property also provides valuable habitat for three species of groupers. A total of 246 taxa of marine flora have been described from the area as well as records of over 500 species of fish, 65 scleractinian corals, 45 hydroids, 350 molluscs, and tunicates and sponges (World Heritage Committee, 2014).

▶ Terrestrial flora and fauna **Criterion:(x)**

The site is home to a diverse array of top predators, on land and in the air; the jaguars of Bacalar Chico Forest and Marine Reserve and the ospreys of Glovers Reef Marine Reserve are a testament to the property’s importance and its ecological integrity. The property is also home to a total of 178 terrestrial

plants, as well as endemic species including several Yucatan birds and island lizards (World Heritage Committee, 2014).

Assessment information

Threats

Current Threats

High Threat

Coastal development, tourism growth, overfishing, invasive species and the multiple impacts of climate change (coral reef bleaching events, increased frequency and severity of storms; and sea level rise) are all very serious factors that negatively affect the overall integrity of the site.

▶ **Invasive Non-Native/ Alien Species**

(Invasive Lionfish)

Very High Threat
Inside site, widespread(15-50%)
Outside site

The invasion of Indo-Pacific lionfish would appear to be the most exigent threat posed by an invasive species to the Outstanding Universal Value of the property (UNESCO and IUCN, 2013). The State Party has been actively addressing the issue; however, the level of this threat remains very high. In 2016, a national initiative for the long-term control of the lionfish population commenced and the National Lionfish Management Strategy (2016-2021) was prepared (State Party of Belize, 2017). The Strategy has been revised for 2019-2023 (Belize Fisheries Department, 2018).

▶ **Temperature extremes, Storms/Flooding**

(Sea level rise)

Very High Threat
Inside site, throughout(>50%)
Outside site

Sea level rise is already occurring gradually as a result of climate change. The rising sea levels and the potential increase in significant hurricane events associated with the expected change in climate will severely impact the future of Belize. It is likely that all seven component sites that comprise the World Heritage site are facing a significant threat in the medium term (UNESCO and IUCN, 2009; 2013).

▶ **Ocean acidification, Temperature extremes**

(Acidification of the marine environment and increases in water temperatures resulting in coral reef bleaching events)

High Threat
Inside site, throughout(>50%)
Outside site

Large-scale mortality of coral cover occurs periodically, caused by rising sea temperatures and acidification of the marine environment, both of which are attributed to climate change (UNESCO and IUCN, 2009). No comprehensive recent information for the entire property is available. However, monitoring of coral bleaching has been undertaken in several locations. Some data indicate that in 2015 bleaching was limited to a small group of species which had been bleached in previous events and are species known for slow recovery (Belize Audubon Society, 2015). A recent study found that some coral species lack vertical connectivity, and that Belize's deeper reefs may be serving as refuges, but for distant shallow reefs rather than local shallow reefs (Eckert, et al., 2019). Nearshore coral growth is declining on the Mesoamerican Barrier Reef System, driven primarily by the combined effects of long-term ocean warming and increasing exposure to higher levels of land-based anthropogenic stressors (Baumann, et al. 2019). Stony coral tissue loss disease (SCTLD) was first reported in Belize in 2019 (Healthy Reefs for Healthy People, 2020).

▶ **Water Pollution**

(Pollution of near shore environments)

Low Threat
Inside site, localised(<5%)
Outside site

Near-shore environments are being polluted by runoff from construction sites, residential areas and tourism infrastructure, with inappropriate disposal of wastes. Improper handling of fuels and other toxic substances adds to the pollution (UNESCO and IUCN, 2009). National Mangrove Regulations were updated in 2018 (Government of Belize, 2018). Phase shifts are occurring on some reefs from a

domination by coral to fleshy macroalgae (seaweed) (Healthy Reefs for Healthy People, 2015).

▶ Tourism/ visitors/ recreation

Very High Threat

Inside site, localised(<5%)

(Sale and lease of lands for private developments)

Coastal development has been an ongoing issue for this property. Lands on islands and cayes within the property have been sold off and leased by government for the development of private homes and tourism infrastructure (UNESCO and IUCN, 2009; State Party of Belize, 2012; UNESCO and IUCN, 2013). The cartographic information on land tenure within the property recently compiled by the State Party shows a high proportion of private land or areas with unknown land tenure within the property. Only 28.2% or lands in the marine reserves is public (WWF, 2018). Therefore it will be crucial that strict and clear restrictions and regulations on development are established in order to ensure that no development can be allowed, which would result in negative impacts on the property. Approximately 1/3 non-compliance with coastal zone development guidelines has been reported (WWF, 2018). A permanent legal moratorium on the sale of the remaining nationally held lands, requested by the World Heritage Committee, remains to be established (UNESCO, 2017).
A recent assessment found that 89 ha of mangroves have been cleared in the BBRRS since inscription, entirely within the South Water Cay Marine Reserve. Overall mangrove cover in Belize declined 5.4% in 36 years to 2017 (Cherrington, et al., in press). Regulations prohibiting the alteration of mangroves without a permit became law in 2018 (Government of Belize, 2018).

▶ Fishing / Harvesting Aquatic Resources

High Threat

Inside site, widespread(15-50%)

(Illegal fishing and overfishing)

Illegal fishing by vessels from neighbouring countries, and overfishing of finfish, conch and lobster is prevalent and has resulted in the loss of fishing aggregations, low populations of key species and the proliferation of macroalgae covering the reefs (UNESCO and IUCN, 2009; State Party of Belize, 2012). The State Party has developed a number of measures to address the issue, including a newly established Managed Access programme, seasonal closures for primary species such as conch and lobster, protection for spawning aggregation sites, elimination of destructive fishing gear eg bottom trawling and the development of several legislative instruments (UNESCO and IUCN, 2013). The Managed Access programme is a rights-based approach to managing fisheries in Belize focused on ending open access fishing in Belizean waters and on empowering fishers (State Party of Belize, 2017). While a new Fisheries Resources Act of 2020 shifts the focus from fish stocks and harvests to ecosystem-based management (Government of Belize, 2020), the effectiveness of the measures with regards to reducing threats to the values of the World Heritage site specifically needs to be monitored and evaluated.

Potential Threats

Very Low Threat

The most serious potential threat to the values of the site is oil exploration and drilling. A moratorium on petroleum operations within the limits of the marine zone of Belize was enacted (State Party of Belize, 2018).

▶ Oil/ Gas exploration/development

Very Low Threat

Inside site, extent of threat not known
Outside site

(Potential for off-shore oil exploration and drilling)

A number of Petroleum Sharing Agreements (PSA) in the marine areas used to overlap or be adjacent to the property (UNESCO and IUCN, 2013). An indefinite moratorium on petroleum operations within the limits of the marine zone of Belize was enacted (State Party of Belize, 2018).

Overall assessment of threats

High Threat

Coastal development, tourism growth, overfishing, invasive species and the multiple impacts of climate change (coral reef bleaching events, increased frequency and severity of storms; and sea level rise) are all very serious factors that negatively affect the overall integrity of the site. The most

serious potential threat to the values of the site is oil exploration and drilling. A moratorium on petroleum operations within the limits of the marine zone of Belize was enacted (State Party of Belize, 2018).

Protection and management

Assessing Protection and Management

▶ **Management system** **Mostly Effective**

This is a serial World Heritage site composed of several protected areas. On the level of these component protected areas the existing management structures can considered be effective. There is no single management system or management plan to guide management of the site as a whole. However, the formation of the Ministry of Fisheries, Forestry and Sustainable Development has brought together Departments responsible for various aspects of protected areas management in Belize (UNESCO and IUCN, 2013), and the The Coastal Zone Management Authority and Institute (CZMAI) has continued to implmement the Integrated Coastal Zone Management Plan (ICZMP), including through the reactivation of Coastal Advisory Committees (CACs), which should serve to enhance the integrated management of the component protected areas, including defining appropriate types of development (State Party of Belize 2017; UNESCO, 2018).

▶ **Effectiveness of management system** **Some Concern**

Management of the individual component protected areas of the site may be assessed as mostly effective, even if sometimes constrained by low human and financial resources. However, certain issues, particularly land development, require cooperation across the whole site. While the main management agencies (Fisheries and Forestry Departments, Coastal Zone Management Authority, NGOs involved in co-management) are cooperative, permitting agencies do not always issue permits in accordance with the management plans of the component protected areas. It is, therefore, essential that the recently adopted Integrated Coastal Zone Management Plan as well as other relevant regulations are effectively implemented, and sufficiently financed, in order to provide clear guidance for any kind of development activities within the World Heritage site and its buffer zone (UNESCO, 2018).

▶ **Boundaries** **Mostly Effective**

The boundaries of the seven components comprising the World Heritage site are well defined. The State Party has also provided more precise descriptions and calculations of the area of each component through the process of boundaries clarification (World Heritage Committee, 2016).

▶ **Integration into regional and national planning systems** **Mostly Effective**

A number of legislative instruments are currently being developed or have been developed recently including, for example, the Integrated Coastal Zone Management Plan (ICZMP), the Land Use Policy Implementation Plan, the National Protected Areas Bill, the Fisheries Resources Bill (UNESCO and IUCN, 2013) and the Forests (Protection of Mangroves) Regulations (State Party of Belize, 2017), and their adoption and effective implementation are essential to ensure the long-term conservation of the property. Particularly, the finalisation and adoption of the ICZM Plan represents an important step in ensuring effective integration of the property into coastal zone management. It will be important that resources are available for its effective implementation in the long term (UNESCO, 2018; World Heritage Committee, 2017; 2018). Furthermore, Environmental Impact Assessment (EIA) Checklist regulations now include specific provisions for consideration of the site's OUV, representing a significant step forward in planning systems (World Heritage Committee, 2019). A National Replenishment Zone Expansion initiative seeks to increase no-take areas from the current 3.15% to 10% of the territorial seas of Belize (State Party of Belize, 2019).

▶ Relationships with local people

Mostly Effective

There has been little recognition and understanding of the World Heritage status of the site among local communities in the past (UNESCO and IUCN, 2009). However, relationships between the managers of individual component protected areas and local communities appear to be good, with a number of successful rights-based programmes developed for managing fisheries (State Party of Belize, 2017).

▶ Legal framework

Some Concern

There is no legal framework to the World Heritage status of the site. Rather, enforcement is based on the varying legal designations attached to each component of the site, and the governance arrangement in place for that component (UNESCO and IUCN, 2009). However, updated EIA regulations now include specific provisions for the OUV of the site in planning systems and national legislation such as the National Protected Areas Bill (UNESCO and IUCN, 2013), the Forests (Protection of Mangroves) Regulations 2018 (State Party of Belize, 2017), and the 2020 Fisheries Resources Act mitigate, to some extent, the lack of legal framework specifically relating to the site's World Heritage status.

▶ Law enforcement

Mostly Effective

Significant efforts have been undertaken over a number of years to improve fisheries management and address the issue of illegal fishing. The 2020 Fisheries Resources Act provides an ecosystem based approach to fisheries management, the enforcement of which is likely to be augmented through rights-based approaches to fisheries management as reported by the State Party of Belize (2017).

▶ Implementation of Committee decisions and recommendations

Mostly Effective

The State Party has made significant progress in addressing a number of the Committee’s requests and recommendations, and the site was removed from the List of World Heritage in Danger in 2018 (World Heritage Committee, 2017, 2018). The requested land tenure verification was reported in late 2018 to be due for completion in April 2019, allowing for a future designation of remaining public lands within the site as strict mangrove reserves (World Heritage Committee, 2019). EIA regulations have now been amended to incorporate provisions for the conservation of the site's OUV, and should be confirmed by the State Party (World Heritage Committee, 2019). Bilateral and multilateral programmes and funding initiatives towards the implementation of the Integrated Coastal Zone Management Plan will need to continue (World Heritage Committee, 2019).

▶ Sustainable use

Some Concern

Habitat modification on different cayes and islands for vacation homes and tourism infrastructure is clearly incompatible with the conservation of the values of the site and has been of concern for a long time. Recreational uses such as sailing and diving could potentially be carried out in sustainable ways, but would require rigorous management to define capacities, appropriate management and regular monitoring to detect impacts. Updated legislation, most notably the Integrated Coastal Zone Management Plan, in tandem with the updated EIA procedures, which now include specific elements relating to the site's OUV in the 'checklist', define appropriate types of development and ensure associated use of resources do not negatively impact the site's values (State Party of Belize, 2017; 2018). Adequate financing and enforcement of these legislative tools is essential in order to ensure the use of resources in the site is sustainable in the long term (UNESCO, 2018; 2019; World Heritage Committee, 2018; 2019).

▶ Sustainable finance

Some Concern

A protected areas fund, the Protected Areas Conservation Trust, has helped to increase the levels of funding available for protected areas. However, given low levels of government funding, the overall availability of finance for the management of the property is insufficient (UNESCO and IUCN, 2009; Belize Reef Scorecard, 2017). It will be important to secure sufficient resources for the implementation of the Integrated Coastal Zone Management Plan in the longer term (UNESCO, 2018).

▶ Staff capacity, training, and development

Data Deficient

No recent data available

▶ Education and interpretation programs

Mostly Effective

Some education and awareness raising activities have been undertaken recently within the framework of the "Highlighting 20 years of World Heritage Designation, BBRRS: Working Toward Better Monitoring, Management, Awareness" project, funded by the GEF and implemented by Belize Audubon Society and Belize Tourism Industry Association (Project Evaluation Report, 2019).

▶ Tourism and visitation management

Mostly Effective

The National Sustainable Tourism Master Plan for Belize 2030 recognises the importance of the World Heritage site and outlines a vision for future tourism development, which includes programs in governance, sustainability and quality assurance, infrastructure, marketing and product development (Belize Tourism Board, 2011).

▶ Monitoring

Mostly Effective

Monitoring is undertaken on the level of component protected areas by the respective management organisations, but also across the whole reef when it comes to broader issues, such as, the invasion of lionfish (UNESCO and IUCN, 2013) and every two years via Healthy Reefs Initiative which publishes a civil society prepared regional report card (eg. McField et al., 2020).

▶ Research

Mostly Effective

Various research programmes have been carried out by the management authorities and a number of NGOs and by independent researchers. There are four main research stations: University of Belize's station on Glovers Reef, Smithsonian Institute station on Carrie Bow Caye, Tobacco Caye Marine Station and Wildlife Conservation Society's station on Glover’s reef (IUCN Consultation, 2020).

Overall assessment of protection and management

Mostly Effective

The protection and management of the Belize Barrier Reef Reserve System has undergone significant improvements in recent years and can thus be assessed as mostly effective. Significant achievements, in particular the enactment of a moratorium on oil exploration and other petroleum operations within the entire maritime zone of Belize, as well as measures to address concerns regarding inappropriate land development within the site, have led to the removal of the site from the List of World Heritage in Danger. Challenges have also been addressed in the integrated management of the site, which comprises seven component protected areas. Systemic issues such as inappropriate land development and the sale and lease of lands within the World Heritage site, have previously undermined the otherwise effective component-level protection of the site. This has been addressed through development and enactment of the Integrated Coastal Zone Management Plan as well as other relevant national regulations and updated planning systems, such as the updated EIA checklist which now includes provisions for consideration of the site's Outstanding Universal Value, the 2018 Forests (Protection of Mangroves) Regulations and the 2020 Fisheries Resources Act which emphasizes ecosystem based fisheries management, all of which aim to harmonize legislation with the conservation of the site's OUV. It is essential that these new legislative instruments are effectively implemented and resourced in order to provide clear guidance for any kind of development activities that may impact the site.

▶ Assessment of the effectiveness of protection and management in addressing threats outside the site

Highly Effective

The most significant threat originating from outside the site is potential off-shore oil exploration and development. However, Belize instituted a moratorium on petroleum operations in its maritime

zone in 2018.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ **Intact ecosystem gradient providing for ongoing ecological processes**

High Concern
Trend:Stable

The property still provides an array of examples of the evolutionary history of reef development with fringing, barrier and atoll reef sites. However there are trends which indicate that an increased level of development both within and adjacent to the property on the coastal fringe has taken place and if not properly managed could lead to the decline of these reef sites. Of particular concern in the immediate term, the coastal fringing reefs could be considered the most vulnerable (UNESCO and IUCN, 2013). The 2012 Report Card for the Mesoamerican Barrier Reef indicates that in Belize 29% of the reefs were in critical condition, 44% of the reefs were in poor condition, 22% were in fair and 5% were in good condition (Healthy Reefs for Healthy People, 2012). However, these figures are for the whole part of the Mesoamerican Reef located in Belize and the condition of the reefs within the World Heritage site is expected to be better. In 2015, the state of reefs in Belize was assessed as 4% in good condition, 28% in fair condition, 47% in poor condition and 21% in critical condition (Healthy Reefs for Healthy People, 2015). In 2020, reef health in Belize improved slightly (the only improvement in the region), with coral cover increasing 16% to 17%; fleshy macroalgal cover decreasing 21% to 19%, and herbivorous fish biomass up 15% (McField et al., (Healthy Reefs for Healthy People), 2020).

▶ **One of the most pristine reef ecosystems in the Western Hemisphere**

High Concern
Trend:Stable

The values for which the property was inscribed on the World Heritage List under criterion (vii) are still clearly demonstrated in the property. The Belize Barrier Reef Reserve System remains a display of superlative natural phenomena and areas of exceptional natural beauty and aesthetic importance. It remains the longest barrier reef in the Northern and Western Hemispheres and is still considered unique in the world for its array of reef types contained in a relatively small area (UNESCO and IUCN, 2013). The pristine nature of the site is, however, being undermined by myriad factors, especially growth of tourism, real estate and tourism infrastructure development, overfishing, pollution of near-shore environments, multiple effects of climate change and invasive species (UNESCO and IUCN, 2009; 2013). Recent amendments to the EIA reuglations in Belize, which account for the site's OUV in planning, are likely to address the tourism and development related pressures, whilst integrated management initiatives such as the Integrated Coastal Zone Management Plan continues to be implemented through various activities, programmes and projects, as well as finalization and approval of the Fisheries Resources Bill, and the expansion of no-take zones to mitigate these threats across the entire system (State Party of Belize, 2017; 2018; UNESCO, 2018; 2019).

▶ **Diverse marine and littoral habitats**

Low Concern
Trend:Stable

There do not appear to be any identified total losses of habitats or species since inscription and recent management measures have attempted to address significant threats in this regard. There remains, however, significant concern for some unique habitats, notably in the highly diverse Pelican Cayes area where existing development proposals remain legally viable (UNESCO and IUCN, 2013). Also, the high private land ownership of cayes/islands within the site means continued land developments in the future are highly possible.

▶ Marine species

High Concern
Trend:Deteriorating

Belize's overall reef health has improved slightly in recent years, the only increase in the Mesoamerican Barrier Reef region, however marine species remain vulnerable. According to the most recent data, coral cover has increased from 16% to 17%, and fleshy macroalgal cover decreased, however biomass of commercial fish species declined (McField et al., 2020 (Healthy Reefs for Healthy People)). Since fully protected in 2009, parrotfish numbers have increased (IUCN Consultation, 2020). While data are for all of the reefs in Belize, species health within BBRRS may be expected to be slightly better. Stony coral tissue loss disease appeared in Belize for the first time in 2019. The disease removed over 30% cover of 22 affected species in Mexico in one year. Coral restoration has begun, including in two units of the serial property (State Party of Belize, 2019), but need massive scaling up in order to mitigate the threat.

▶ Terrestrial flora and fauna

Data Deficient
Trend:Data Deficient

With an emphasis on marine resources there is little data available on terrestrial flora and fauna in the property. However, the approval of the Forests (Mangrove Protection) Regulations in 2018, is a positive step towards conserving the terrestrial flora and fauna in the site.

Summary of the Values

▶ Assessment of the current state and trend of World Heritage values

High Concern
Trend: Stable

The values for which the site was inscribed on the World Heritage List are still clearly demonstrated and may even have indicated a modest improvement. The site remains the longest barrier reef in the Northern and Western Hemispheres and is still considered unique in the world for its array of reef types contained in a relatively small area. The 2020 Report Card for the Mesoamerican Barrier Reef indicated an improving trend for the status of the reef systems in Belize as a whole, with improving trends observed in coral cover, fleshy macroalgal cover and herbivorous fish biomass (McField et al., 2020). These figures are for the whole part of the Mesoamerican Reef located in Belize and the condition of the reefs within the World Heritage site is expected to be better. Despite these encouraging signs, the site remains affected by a number of threats, including coastal development, especially poorly regulated growth of tourism and associated development, agricultural runoff (including transnational), incomplete sewage treatment, illegal fishing, invasive species and climate change (McField et al., 2020, Sweetman et al., 2019; Root, 2018). Nonetheless, it is hoped that with the recent positive developments in the legislative framework, a number of threats can be addressed more efficiently, allowing for some values of the site to recover in the future.

Additional information

Benefits

Understanding Benefits

▶ Outdoor recreation and tourism

The site has become a major draw internationally because of the beauty of the islands, cayes, and reefs.

Factors negatively affecting provision of this benefit :
- Climate change : Impact level - High, Trend - Increasing
- Overexploitation : Impact level - Moderate, Trend - Continuing
- Habitat change : Impact level - High, Trend - Continuing

▶ **Food,**
Fishing areas and conservation of fish stocks

Provided that an effective no-take zones network is in place and is effectively enforced, the site would have a major impact on restoring fisheries in the whole area of the Barrier Reef.

Factors negatively affecting provision of this benefit :
- Climate change : Impact level - High, Trend - Increasing
- Overexploitation : Impact level - High, Trend - Continuing
- Invasive species : Impact level - High, Trend - Continuing

▶ **Importance for research**

The site could be used as a global center for reef research and education.

Summary of benefits

The site seeks to protect and manage some of the most extraordinary areas of the Mesoamerican Reef for conservation, tourism, fisheries, and research and education.

Projects

Compilation of active conservation projects

№	Organization	Brief description of Active Projects	Website
1	Oceana, WCS and other NGO partners	Fish Right, Eat Right initiative targeting fishers and restaurants to help with reduction in harvesting of vulnerable finfish species.	

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