



TOURISM IN MARINE PROTECTED AREAS

Opportunities, Risks and Benefits of Sustainable Tourism in Marine Protected Areas and Best Practice Overview

APRIL 1, 2023

Tourism in Marine and Coastal Protected Areas: **A Sea of Opportunities**

Canada has the unique distinction of having the world's largest coastline - 243,042 kilometres of astonishing cultural, biological and geographical diversity. Whether the stark and dazzling North, the lush and mountainous Pacific or the wind-swept, rockbound Atlantic, the lives and livelihoods of a distinct proportion of the population are intrinsically tied to our ocean.

In 2019, Canada's federal government committed to protecting 25 percent of marine and coastal waters by 2025¹ and signed on to the global pact to protect 30 percent by 2030². Numerous provinces have also expressed their support for protected area targets. As the number of protected areas on the coast and in the ocean increases, so too will opportunities for sustainable tourism within these areas. Regions that already have an active marine tourism industry will stand to benefit particularly from these developments.



¹https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-environment-and-climate-change-mandate-letter

² https://www.canada.ca/en/environment-climate-change/news/2020/09/canada-joins-the-high-ambition-coalition-for-nature-and-people.html

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In Canada, there are four main distinctions:

National Marine Protected Area (NMCA) and National Marine Protected Area **Reserve (NMCAR):** Areas that are designated and under the purview of Parks Canada. NMCAs are protected from such activities as ocean dumping, undersea mining, and oil and gas exploration and development. Traditional fishing activities would be permitted but managed with the conservation of the ecosystem as the main goal. A National Marine Conservation Area Reserve is an NMCA that is within an area subject to one or more Indigenous land claim(s) accepted for negotiation by the Government of Canada. An NMCA Reserve is established and managed in the same manner as an NMCA, but the status of the area is subject to the final resolution of Indigenous claims.45

Marine Protected Area (MPA): MPAs are designated and under the purview of Fisheries and Oceans Canada (DFO). MPAs are parts of the ocean that legally protect a range of species, habitats and features from the impacts of a variety of activities, including fishing. The new protection standard for MPAs prohibit four key industrial activities in all new federal MPAs: oil and gas activities; mining; dumping; and bottom trawling.⁶

³https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/info-eng.html ⁴https://www.pc.gc.ca/en/amnc-nmca/plan ⁵https://www.pc.gc.ca/en/amnc-nmca ⁶https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/standards-normes-eng.html ⁷https://conservation-reconciliation.ca/about-ipcas

⁸ https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/conserved-areas.html

A Marine Protected Area - or MPA - is defined by the Department of Fisheries and Oceans (DFO) as "a part of the ocean that is legally protected and managed to achieve the long-term conservation of nature"³.

While MPAs are highly regulated, activities that do not threaten the conservation objectives of a specific protected space are permitted, creating a significant opportunity for sustainable tourism industries. While there are many activities that are aligned with and even supportive of the conservation objectives of a Marine Protected Area, it should be noted that some protected areas are not suitable for tourist activities simply because the values they protect are undermined by the presence of humans.

While, for the purposes of this guide, MPA is often used as a blanket term for protected areas in the marine environment, there are a number of differing distinctions between protected areas. While addressing activities in protected areas in general terms within the guide, this summary describes the differences between these areas.

Indigenous Protected and Conserved Areas (IPCAs)⁷: IPCAs are lands and waters where Indigenous governments have the primary role in protecting and conserving ecosystems through Indigenous laws, governance and knowledge systems. IPCAs vary in terms of their governance and management objectives. They are led by Indigenous peoples, represent a multi-generational commitment to conservation and elevate Indigenous rights and responsibilities.

Other Effective Area-Based

Conservation Measures: Other Effective **Area-Based Conservation Measures** (OECMs) are areas that do not meet the formal definition of a protected area but are managed in a way that conserves biodiversity over the long term. These include fishing closures, locallymanaged marine areas, and other areas that are managed to meet conservation objectives.8

People in Canada and around the world have developed, through the experience of the COVID-19 pandemic, a newly discovered appreciation of the natural world, and a refreshed understanding of how time spent outdoors can benefit physical and mental health.⁹

While nature-based tourism has a longer history for land-based protected areas such as Banff National Park (Alberta), Algonquin Provincial Park (Ontario), and Kejimkujik National Park (Nova Scotia), tourism is much less developed in relation to Marine Protected Areas. However, the principles of sustainable tourism applied in terrestrial protected areas are easily transferable to MPAs and, managed well, marine tourism could deliver the same benefits to conservation and local economies.¹⁰ As such, it is important to understand the opportunities and risks associated with tourism in Marine Protected Areas, and to determine best practices for future tourist activities in these remarkable places.

Sustainable Tourism

Contrary to popular belief, protected areas do not necessarily prohibit commercial use of natural resources. Whereas some activities may be considered unsustainable (e.g. mining), the protection of marine areas can open up opportunities for other industries, such as tourism, which capitalize on the pristineness and natural beauty of an area.¹¹

Sustainable tourism is defined as "any form of tourism development, management or activity which ensures the long-term protection and preservation of natural, cultural, and social resources and contributes in a positive and equitable manner to the economic development and well-being of individuals living, working, or staying in protected areas."¹²

⁹ https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8983608/

¹¹ Angulo-Valdés, J. A., & Hatcher, B. G. (2010). A new typology of benefits derived from marine protected areas. Marine Policy, 34(3), 635-644.
¹² EUROPARC Federation (2015). Sustainable Tourism in Protected Areas: Good for Parks, Good for People. Retrieved from http://www.

¹² EUROPARC Federation (2015). Sustainable Tourism in F europarc.org/wp-content/uploads/2015/12/ECST_2015.pdf



Basic Principles of Sustainable Tourism:

Safeguard the qualities of the area that attract tourists, including natural heritage, biodiversity, and cultural, spiritual and aesthetic qualities.

Respect the rights of Indigenous Peoples and local communities, including their cultural heritage and traditional values, and contribute to intercultural understanding, respect and tolerance.

Ensure viable, long-term economic operations that support fairly distributed socioeconomic benefits to all rights-holders and stakeholders affected by tourism. Benefits can include stable employment, income-earning opportunities, and social services to host communities, contributing to poverty reduction.

Provide appropriate opportunities to facilitate meaningful and highquality visitor experiences that will contribute to an increased sense of stewardship for nature and protected areas.

A recent global report by the High Level Panel for a Sustainable Ocean Economy has underscored the opportunities of a shift towards sustainable, regenerative and resilient tourism in the coastal and marine sector.

A recent global report by the High Level Panel for a Sustainable Ocean Economy¹³ has underscored the opportunities of a shift towards sustainable, regenerative and resilient tourism in the coastal and marine sector. The report found that the coastal and marine tourist industry generates significant economic impacts for small islands and coastal communities and is estimated as comprising approximately 50 percent of all global tourism and 5.2 percent of global GDP¹⁴, and that the aftermath of the COVID-19 pandemic offers an opportunity to reassess the economic viability of traditional, consumptionbased tourism. The study proposes a framework that can aid the transformation of tourism practices to ones that stimulate local economies while adhering to sustainable, regenerative and resilient principles. The framework suggested by the High Level Panel includes three pillars that are echoed in this guide:

- 1. Reducing negative impacts on the local environment, economy and community
- 2. Regenerating ecosystems, local markets and communities
- 3. Building resilience to threats, future shocks and crises

In 2021 Statistics Canada¹⁵ reported that tourism and recreation accounted for 21.3 percent of employment and 29.1 percent of GDP generated within the marine sector. Given Canada's expansive coastline and coastal populations - estimated at 4.8 million as of 2016 - a shift to sustainable, equitable and resilient tourism practices along coastal areas could generate significant positive benefits for the lives and livelihoods of Inuit, First Nations and Canadian peoples. With the Government of Canada currently committed to protecting 25 percent of Canada's marine environment and committing to 30 percent protection by 2030, coastal sites will have to exist with offshore sites to ensure holistic protection in line with these goals.

This guide recommends key principles for pursuing tourism in Canadian Marine Protected Areas that may assist in the transformation to a more sustainable and resilient industry for coastal communities. The guide also outlines risks to consider and highlights best practice examples from which to draw.

¹³ Northrop et. al (2022). Opportunities for Transforming Coastal and Marine Tourism: Towards Sustainability, Regeneration and Resilience. Commissioned by the High Level Panel for A Sustainable Ocean Economy.

¹⁴ Ibid, pg. 14

¹⁵ Ganter, Crawford et. al. (2021). Canada's oceans and the economic contribution of marine sectors. EnviroStats. Government of Canada.

PHOTO BY OCEANS NORTH

Risks and Benefits of Tourism in Marine Protected Areas

Tourists are increasingly seeking out ethical travel experiences, and are increasingly willing to invest their vacation budgets to support the unique communities and places that they are visiting.¹⁶ Consequently, sustainable tourism has the potential to bring in more revenue per capita than other types of tourism, both in terms of how much is spent per visitor and how much of that money stays in the local community.¹⁷ Tourism in protected areas can also generate marketing opportunities and raise the profile of the region, further spurring increased visitation.

¹⁶ Spenceley, A., Snyman, S., & Eagles, P. (2017). Guidelines for Tourism Partnerships and Concessions for Protected Areas: Generating Sustainable Revenues for Conservation and Development. In Report to the Secretariat of the Convention on Biological Diversity and IUCN (p. 59).

¹⁷ ICF Consulting Services Ltd., IEEP and PML (2018). Study on the Economic Benefits of MPAs Final Report. European Commission. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/dbe3d250-b0b5-11e8-99ee-01aa75ed71a Ibid



Economic Benefits

- MPAs help to attract a new market of environmentally conscious tourists, even to well-established marine destinations.
- Sustainable tourism, when compared to conventional tourism, has been shown to have a higher local retention of revenues, with local communities enjoying increased financial benefits.¹⁸
- The creation of MPAs in previously unprotected areas has increased the number of visitors to these areas, resulting in longer visitor stays,¹⁹ and in turn generating more opportunities for other local businesses, leading to higher revenues, increased jobs and other financial spin-offs.
- In areas that previously offered tourism experiences, MPA creation has lengthened the tourism season and increased tourism activity outside of the peak summer season.20
- Tourism in MPAs allows communities to financially benefit from environmental protection which can, in turn, strengthen commitments to further conserve nature.²¹

18 Ibid

¹⁹ Ibid

²⁰ ICF Consulting Services Ltd., IEEP and PML (2018). Study on the Economic Benefits of MPAs Final Report. European Commission. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/dbe3d250-b0b5-11e8-99ee-01aa75ed71a1

²¹ Leung, Y., Spenceley, A., Hvenegaard, G., and Buckley, R. (eds.) (2018). Tourism and visitor management in protected areas: Guidelines for sustainability. Best Practice Protected Area Guidelines Series No. 27, Gland, Switzerland: IUCN. xii + 120 pp.

²² EUROPARC Federation (2015). Sustainable Tourism in Protected Areas: Good for Parks, Good for People. Retrieved from http://www.europarc.org/wp-content/uploads/2015/12/ECST_2015.pdf

²³ ICF Consulting Services Ltd., IEEP and PML (2018). Study on the Economic Benefits of MPAs Final Report. European Commission. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/dbe3d250-b0b5-11e8-99ee-01aa75ed71a1

²⁴ Roncin, N., Alban, F., Charbonnel, E., Crechriou, R., de la Cruz Modino, R., Culioli, J.M., Dimech, M., Gong, R., Guala, I., Higgins, R., Lavisse, E., Le Direach, L., Luna, B., Marcos, C., Maynou, F., Pascual, J., Person, J., Smith, P., Stobart, B., Szelianszky, E. Vallek, K., Vasellio, S. and Boncoeur, J. (2008) Uses of ecosystem services provided by MPAs: How much do they impact the local economy? A southern Europe perspective. Journal for Nature Conservation No 16 (4), 256-270.

- Tourism can encourage local populations not directly involved in a tourism business to expand the production and sale of local goods and services, including traditional economic activities such as the fishery, local harvesting, and artistry.²²
- MPAs enable tourism organizations to credibly demonstrate and market the environmental quality and beauty of an area, which is a major draw for tourists interested in pristine natural experiences.
 - The benefits of a well-marketed MPA can extend beyond a specific locality, spilling over to a much broader region. For example, surveys of tourists in Europe indicate that MPAs have a strong influence on their choice of where to visit, especially to recreational scuba divers and anglers.²³ More than half of the scuba divers polled in six European MPAs reported that the protected status of the area influenced their choice of dive sites.²⁴



Tourist Experiences in an MPA

Seeking immersive experiences, tourists seek out locally sourced food, including sustainable seafood, which can increase the price of locally harvested products within and around the MPA.²⁵

In Sweden's Kosterhavet Marine National Park, tourists can take courses in outdoor survival or seafood foraging, and seaweed harvesters in the Marine National Park have partnered with local businesses to produce algae beer and ice cream.²⁶

Some Italian MPAs in the Ligurian Sea have developed a program where fishers host paying tourists so that they may observe a typical day of commercial fishing. This experience includes a meal or take-home fish product for the tourist.²⁷

Local cooperatives have marketed lower-value fish species to tourists using a branded traditional recipe, dramatically raising the price of the fish from under \$1 Euro per kilogram market value to \$40 Euros per kilogram when served in restaurants.²⁸

99ee-01aa75ed71a1

²⁷ Duros, W.J. (2005). The Italian System of Marine Protected Areas. Retrieved from https://nmsmontereybay.blob.core.windows.net/montereybay-prod/ media/international/pdf/050429italy_finalreport.pdf

²⁸ Gomei M. & Bellia R. (2019). WWF Principles for Sustainable Fishing Tourism. WWF Mediterranean Marine Initiative, Rome, Italy. 20 pp.

²⁵ Viana, D. F., Halpern, B. S., & Gaines, S. D. (2017). Accounting for tourism benefits in marine reserve design. PloS one, 12(12), e0190187.

²⁶ ICF Consulting Services Ltd., IEEP and PML (2018). Study on the Economic Benefits of MPAs Final Report. European Commission. Retrieved fromhttps://op.europa.eu/en/publication-detail/-/publication/dbe3d250-b0b5-11e8-

Economic Benefits of Tourism in MPAs -**International Examples**

1 Communities surrounding the Saguenay-St. Lawrence Marine Park in Quebec have reported significant economic benefits from marine-based tourism. In 2009, the Park brought in \$160 million CAD from tourismrelated activities. Tourists noted their main motivations for visiting the Park are related to the area's natural beauty and wildlife viewing opportunities.^{29 30}

2 Marine heritage and water-based activities are the tourism anchors for the Fathom Five National Marine Park in Tobermory, Ontario. Scuba diving on shipwrecks brings in over 3,500 divers annually, in addition to over 40,000 visitors to Flowerpot Island.³¹

(3) Kosterhavet Marine National Park in Sweden was a popular tourism destination before the area was protected, but the designation has significantly increased tourism in the region from 90,000 visitors per year pre-MPA to more than 500.000 visitors in 2015. Tourism operators also noted significantly increased business outside the peak summer months after the MPA was put in place.³²

Tourism in the Great Barrier Reef Marine Park accounts for the majority of the income and employment generated by the MPA, estimated to generate 36 times more than commercial fishing within the same area.³³

Tourist visits to the national park of the Cabrera Archipelago in Spain have increased by over 400 percent since its designation, with tourism revenues exceeding \$5.2 million CAD in 2015. 34

Three years after the designation of the Lyme Bay MPA in the United Kingdom, income generated through tourism increased by \$3.9 million Canadian dollars, including increases in recreational fishing charters and scuba diving excursions. ³⁵ Both tourists and tourism operators surveyed indicated that the creation of the MPA influenced where they went within Lyme Bay, as not all of the area is protected.³⁶

The Cape Rodney Okakari Point Marine Reserve is a small (5.56 km2) MPA in New Zealand that brings several million dollars per year to the local economy from activities related to tourism, science and education.³⁷ Fifty-four percent of day visitors surveyed said it is unlikely that they would have visited the area had it not been designated as an MPA.³⁸

³⁰ Parks Canada (2010). Saguney-St. Lawrence Marine Park Managemet Plan 2010. Retrieved from: https://www.pc.gc.ca/en/amnc-nmca/qc/

³¹ Parks Canada (2010). Fathom Five National Marine Park State of the Park Report, 2010. Retrieved from https://www.pc.gc.ca/en/amno

³³ Velando, A., & Munilla, I. (2011). Disturbance to a foraging seabird by sea-based tourism: Implications for reserve management in marine reas. Biological Conservation, 144(3), 1167-1174.

³⁵ ICF Consulting Services Ltd., IEEP and PML (2018). Study on the Economic Benefits of MPAs Final Report. European Co /on europa.eu/en/nublication-detail/-/publication/dbe3d250-b0b5-11e8-99ee-01aa75ed71a1

³⁶ Rees, S. E., Mangi, S. C., Hattam, C., Gall, S. C., Rodwell, L. D., Peckett, F. J., & Attrill, M. J. (2015). The socio-ec Protected Area on the ecosystem service of leisure and recreation. Marine Policy, 62, 144-152.

³⁵ Ballantine, B. (2014). Fifty years on: lessons from marine reserves in New Zealand and principles for a wor Conservation, 176, 297-307.

³⁶ ICF Consulting Services Ltd., IEEP and PML (2018). Study on the Economic Benefits of MPAs Final Report. European Con fromhttps://op.europa.eu/en/publication-detail/-/publication/dbe3d250-b0b5-11e8-99ee-01aa75ed71a1

²⁹ The Outspan Group Inc. (2011). Economic Impact of Parks Canada. Gatineau, QC. Retrieved from https://www.pc.gc.ca/en/agence-agency/

bib-lib/rapports-reports/econo20



Economic Risks

- summer.
- mobility.⁴⁰

⁴⁰ Ibid

• Tourism tends to be seasonal, which can cause economic difficulties for local communities and seasonal workers during the low season.³⁹ However, this seasonality is common in resource dependent areas, and tourism may be complementary to existing activities. For example, some lobster fishers in Atlantic Canada who fish during the winter months convert their boats to offer whale-watching cruises in

Tourism related employment opportunities may vary from other economic activities/sectors and may include lower skilled roles and lower wages. Programs for skills training and career advancement can improve opportunities for economic growth and

In some cases, emerging tourism industries are dominated by tourism operators from outside the community, an issue that can be problematic to locals.^{41,42} Additionally, skilled workers can also be imported, instead of creating jobs for local communities. Conversely, adequately supporting tourism development can promote owner-operatorbased businesses that build community capacity and ensure that benefits from tourism go to local community members.

Tourists can also be put off by destinations that have too many visitors, as it can decrease the quality of their experience and may cause them to travel elsewhere.43

- ⁴¹ Bennett, N. J., & Dearden, P. (2014). Why local people do not support conservation: Community perceptions of marine protected area livelihood impacts, governance and management in Thailand. Marine Policy, 44, 107-116.
- ⁴² Oberholzer, S., Saayman, M., Saayman, A., & Slabbert, E. (2010). The socio-economic impact of Africa's oldest marine park. Koedoe, 52(1), 1-9.
- ⁴³ Gonson, C., Pelletier, D., & Alban, F. (2018). Social carrying capacity assessment from questionnaire and counts survey. Insights for recreational settings management in coastal areas. Marine Policy, 98, 146-157.

³⁹ Leung, Y., Spenceley, A., Hvenegaard, G., and Buckley, R. (eds.) (2018). Tourism and visitor management in protected areas: Guidelines for sustainability. Best Practice Protected Area Guidelines Series No. 27, Gland, Switzerland: IUCN. xii + 120 pp.

Economic Benefits

- Effectively managed MPAs enable ecosystems to recover from negative human impacts while allowing sustainable uses to continue.
- MPAs provide resilience to ecosystems from future human-made and natural changes beyond their boundaries, and in some MPAs, restoration of previously degraded ecosystems may occur.
- MPAs can help fish stocks to recover, which can have a positive effect on the local economy as well as on biodiversity.44,45
- Tourism revenue collected through entrance fees, or facility usage fees at MPAs, can be used to help fund conservation projects.46,47

- The regular presence of tourists can help with monitoring and enforcement of protected areas, as it can discourage poachers and may help detect illegal activities.48
- Sustainable tourism operators and MPA staff can provide education on conservation issues to both tourists and the local community. fostering awareness of environmental issues, local threats and the value of protecting nature.⁴⁹
- MPAs can provide an opportunity for tourists to get involved in conservation through citizen science.⁵⁰ Tourism operators can diversify the types of experiences they offer by providing tourists with unique and rewarding experiences that support the environment through conservation activities.

⁴⁴ Duraiappah, A. K., Naeem, S., Agardy, T., Ash, N. J., Cooper, H. D., Diaz, S., Faith., D.P., Mace, G., McNeely, J.A., Mooney, H.A., Oteng-yeboah, A.A., Pereira, H.M., Polasky, S., Prip, C., Reid, W.V., Samper, C., Schei, P.J., Scholes, R., Schutyser, F., & Van Jaarsveld, A. (2005). Ecosystems and human well-being: biodiversity synthesis; a report of the Millennium Ecosystem Assessment. World Resources Institute.

⁴⁵ Lucrezi, S., Milanese, M., Markantonatou, V., Cerrano, C., Sarà, A., Palma, M., & Saayman, M. (2017). Scuba diving tourism systems and sustainability: Perceptions by the scuba diving industry in two Marine Protected Areas. Tourism management, 59, 385-403.

⁴⁶ Ibid

⁴⁷ Secretariat of the Convention on Biological Diversity (2004). Guidelines on Biodiversity and Tourism Development: International guidelines for activities related to sustainable tourism development in vulnerable terrestrial, marine and coastal ecosystems and habitats of major importance for biological diversity and protected areas, including fragile riparian and mountain ecosystems. (CBD Guidelines) Montreal: Secretariat of the Convention on Biological Diversity, 29 p.

⁴⁸ Viana, D. F., Halpern, B. S., & Gaines, S. D. (2017). Accounting for tourism benefits in marine reserve design. PloS one, 12(12), e0190187.

⁴⁹ Leung, Y., Spenceley, A., Hvenegaard, G., and Buckley, R. (eds.) (2018). Tourism and visitor management in protected areas: Guidelines for sustainability. Best Practice Protected Area Guidelines Series No. 27, Gland, Switzerland: IUCN. xii + 120 pp.



Tourist Activities with Environmental Benefits

Volunteer scuba divers assist with the monitoring of California's network of MPAs through the Reef Check Program.⁵³

Tourist divers and snorkelers help with the Mediterranean Underwater Biodiversity Project, which helps map the location of marine species such as seahorses, lobster and coral.⁵⁴

Tourists in Costa Rica pay to help monitor sea turtle beaches with tourist dollars spent on conservation projects and supporting the local community. ^{55,56}

⁵³ Freiwald, J., Meyer, R., Caselle, J. E., Blanchette, C. A., Hovel, K., Neilson, D., Dugan, J., Altstatt, J., Nielsen, K & Bursek, J. (2018). Citizen science monitoring of marine protected areas: case studies and recommendations for integration into monitoring programs. Marine Ecology, 39, e12470.

⁵⁴ Goffredo, S., Pensa, F., Neri, P., Orlandi, A., Gagliardi, M. S., Velardi, A., Piccinetti, C., & Zaccanti, F. (2010). Unite research with what citizens do for fun:"recreational monitoring" of marine biodiversity. Ecological Applications, 20(8), 2170-2187.

⁵⁵ Hunt, C. A., & Vargas, E. (2018). Turtles, Ticos, and Tourists: Protected Areas and Marine Turtle Conservation in Costa Rica. Journal of Park and Recreation Administration,36(3).

⁵⁶ La Tortuga Feliz (2018). Affordable volunteer turtle conservation program in Costa Rica run by volunteers for volunteers. https://www.latortugafeliz.com/

Environmental Risks

Tourism can negatively impact the quality of the environment and can disturb wildlife through the following:^{57,58}

- Resuspension of bottom sediments and damage to coral caused by snorkelers and divers when kicking the bottom with their fins.⁵⁹
- Habituation of animals to the presence and actions of people (e.g. feeding of fish by divers).⁶⁰
- Avoidance by wildlife of humans, which can have an impact on animals accessing local breeding and foraging sites.⁶¹
- Increased risk of poaching and an unsustainable collection of native plants and animals for souvenirs and trophies through increased visitor numbers.^{62,63}
- Disturbance to seagrass beds, coral reefs, and other sensitive sea bottom features by boat anchoring or through accidental contact.
- Disturbance caused to animals through increased boat traffic.
- The construction of tourism infrastructure can have environmental impacts including land-use that damages or causes destruction to important ecosystems or habitats.⁶⁴
- Improper management of sewage and other waste can increase local pollution, and more people coming into the area can increase the potential for the introduction of invasive species.^{65,66}
- Tourism infrastructure can increase demand for freshwater and can increase noise and light pollution.

⁶⁶ Buckley, R. (2002). Surf tourism and sustainable development in Indo-Pacific Islands. I. The industry and the islands. Journal of sustainable tourism, 10(5), 405-424.



⁵⁷ Monti, F., Duriez, O., Dominici, J. M., Sforzi, A., Robert, A., Fusani, L., & Grémillet, D. (2018). The price of success: integrative long term study reveals ecotourism impacts on a flagship species at a UNESCO site. Animal Conservation, 21(6), 448-458.

⁵⁸ Wu, C. C., & Tsai, H. M. (2016). Capacity building for tourism development in a nested social-ecological system-A case study of the South Penghu Archipelago Marine National Park, Taiwan. Ocean & coastal management, 123, 66-73.

⁵⁹ Bennett, N. J., & Dearden, P. (2014). Why local people do not support conservation: Community perceptions of marine protected area livelihood impacts, governance and management in Thailand. Marine Policy, 44, 107-116.

⁶⁰ Ballantine, B. (2014). Fifty years on: lessons from marine reserves in New Zealand and principles for a worldwide network. Biological Conservation, 176, 297-307.

⁶¹ Gill, J. A., Norris, K., & Sutherland, W. J. (2001). Why behavioural responses may not reflect the population consequences of human disturbance. Biological Conservation, 97(2), 265-268.

⁶² Buckley, R. (2002). Surf tourism and sustainable development in Indo-Pacific Islands. I. The industry and the islands. Journal of sustainable tourism, 10(5), 405-424.

⁶³ Secretariat of the Convention on Biological Diversity (2004). Guidelines on Biodiversity and Tourism Development: International guidelines for activities related to sustainable tourism development in vulnerable terrestrial, marine and coastal ecosystems and habitats of major importance for biological diversity and protected areas, including fragile riparian and mountain ecosystems. (CBD Guidelines) Montreal: Secretariat of the Convention on Biological Diversity, 29 p.

⁶⁴ Secretariat of the Convention on Biological Diversity (2004). Guidelines on Biodiversity and Tourism Development: International guidelines for activities related to sustainable tourism development in vulnerable terrestrial, marine and coastal ecosystems and habitats of major importance for biological diversity and protected areas, including fragile riparian and mountain ecosystems. (CBD Guidelines) Montreal: Secretariat of the Convention on Biological Diversity, 29 p.

⁵ Ibid

Tourist Activities with Environmental Risks

European shags, a type of seabird, drastically reduced how much food they were gathering when avoiding approaching boats in the Spanish National Park of the Atlantic Islands of Galicia. 67

In the Scandola MPA in Corsica, ospreys had less breeding success when boats came too close to their cliffside breeding sites. 68

Boat noise interferes with the ability of some species to communicate, notably marine mammals such as porpoises, dolphins and whales.⁶⁹

In the Saguenay-St. Lawrence Marine Park in Quebec, the at-risk beluga whale has been threatened by increasing tourism pressures and new closures needed to be implemented to protect critical habitat.⁷⁰

21(6), 448-458.

69 Inman, A., Brooker, E., Dolman, S., McCann, R., & Wilson, A. M. W. (2016). The use of marine wildlife-watching codes and their role in managing activities within marine protected areas in Scotland. Ocean & coastal management, 132, 132-142.

⁷⁰ Parks Canada (2018). Beluga Protection Measures at Baie Sainte-Marguerite. Retrieved from http://parcmarin.qc.ca/wp-content/uploads/2018/06/ fiche_infoBSM_En_VF-1.pdf

⁶⁷ Velando, A., & Munilla, I. (2011). Disturbance to a foraging seabird by sea-based tourism: Implications for reserve management in marine protected areas. Biological Conservation, 144(3), 1167-1174.

⁶⁸ Monti, F., Duriez, O., Dominici, J. M., Sforzi, A., Robert, A., Fusani, L., & Grémillet, D. (2018). The price of success: integrative long term study reveals ecotourism impacts on a flagship species at a UNESCO site. Animal Conservation,

Social Benefits

- Tourism can generate new services and outdoor recreational opportunities within communities, as well as infrastructure improvements such as better roads which benefit both residents and visitors.^{71,72}
- Tourism that creates additional and accessible opportunities to experience and learn about the natural environment, cultural heritage, and arts and traditions, can benefit tourists and locals.

⁷¹ Saveriades, A. (2000). Establishing the social touri the Republic of Cyprus. Tourism management, 21(2), 147-156.

⁷² Leung, Y., Spenceley, A., Hvenegaard, G., and Buckley, R. (eds.) (2018). Tourism and visitor management in protected areas: Guidelines for sustainability. Best Practice Protected Area Guidelines Series No. 27, Gland, Switzerland: IUCN. xii + 120 pp.

73 Ibid

⁷⁴ Agardy, M. T. (1993). Accommodating ecotourism in multiple use planning of coastal and marine protected areas. Ocean & Coastal Management, 20(3), 219-239.

⁷⁵ EUROPARC Federation (2015). Sustainable Tourism in Protected Areas: Good for Parks, Good for People. Retrieved from http://www.europarc.org/wp-content/uploads/2015/12/ECST_2015.pdf

- Having well-managed protected areas that tourists enjoy visiting can be a source of pride for communities situated near MPAs and can also foster a sense of stewardship for the local community. ^{73,74} This may increase involvement in conservation activities and help to demonstrate that local natural resources can be valuable when intact and used sustainably.
- Tourism provides an opportunity to learn new skills and build capacity within the local community.⁷⁵

⁷¹ Saveriades, A. (2000). Establishing the social tourism carrying capacity for the tourist resorts of the east coast of

Shark Tourism

Shark tourism has demonstrated that protection rather than traditional harvesting can bring economic benefits to communities. A 2013 analysis showed that 590,000 people experienced shark watching annually, spending \$314 million USD and directly supporting 10,000 jobs.⁷⁶ Shark tourism is projected to more than double within 20 years, potentially generating more than \$780 USD million in yearly tourism revenues. This offers an opportunity to increase protection of the shark species and the areas where they gather, creating new opportunities for the tourism industry.

⁷⁶ Cisneros-Montemayor, Andrés M., Michele Barnes-Mauthe, Dalal Al-Abdulrazzak, Estrella Navarro-Holm, and U. Rashid Sumaila. "Global economic value of shark ecotourism: implications for conservation." Oryx 47, no. 3 (2013): 381-388.

Sustainable Fishing Tourism

An increasingly popular activity is sustainable fishing tourism, where tourists pay professional fish harvesters to demonstrate what life is like at sea.⁷⁷ This generally involves tourists going out to sea with small-scale fishers, experiencing a day in their lives, and gaining additional knowledge about the ocean. Tourists may be given the chance to handle gear themselves and it may include a meal prepared on board or back on land, using what they or other local harvesters have caught. In some communities, fishers also offer tourist accommodations. Sustainable fishing tourism has the potential to help fish stocks and the marine environment, promote local marine heritage, and provide an alternative or supplement income for fishers.

Nova Scotia, a province known for its locally caught seafood, offers a number of activities as part of its "Sea & Do" Lobster Road Trip.⁷⁸ Tourists can participate in a number of activities, including going out with lobster fishers to haul traps, measure and band lobster, and enjoy freshly harvested lobster. These experiences can include wildlife viewing, the sharing of local folklore and cultural stories, and live onboard entertainment.

⁷⁸ Tourism Nova Scotia (2019). "Sea & Do" Lobster road-trips/lobster-road-trip



⁷⁷ Gomei M. & Bellia R. (2019). WWF Principles for Sustainable Fishing Tourism. WWF Mediterranean Marine

⁷⁷ Gomei M. & Bellia R. (2019). WWF Principles for s Initiative, Rome, Italy. 20 pp.

Social Risks

- Not all locals will enjoy an influx of visitors to their community, especially if it does not bring them direct economic benefits.
- Community members may feel as though they are losing access and control of their local area that is now open to tourists, especially if restrictions are placed on some activities (e.g. bottom trawl fishing) while others (e.g. lobster fishing, tourism) continue.
- Resentment may also form if tourism leads to a perceived decrease in the tranquility of a site, especially in areas where residents have a strong attachment to the land.
- Tourism can impact local cultural practices and ways of life, especially if local arts, crafts, style of dress, and festivals are adapted to meet tourist demands.

- In some regions, tourism has led to an increase in crime, gambling, panhandling, and higher rates of alcohol and drug use.
- Tourism may lead to the inflation of local land and housing prices, increasing the cost of living.
- Local people may be denied opportunities to participate in tourism, with tourists being transported to the area by an external agency's packaged bus and/or boat tours with accommodations located outside of the community.
- Crowding may cause conflicts between tourists and local users, which could lead to a lack of support for tourism.
- Lack of support for MPA-related tourism could lead to a lack of support for conservation in general, should the community perceive that the costs are outweighing the benefits.

⁸² Ahn, B., Lee, B., & Shafer, C. S. (2002). Operationalizing sustainability in regional tourism planning: an application of the limits of acceptable change framework. Tourism Management, 23(1), 1-15.

⁸³ Leung, Y., Spenceley, A., Hvenegaard, G., and Buckley, R. (eds.) (2018). Tourism and visitor management in protected areas: Guidelines for sustainability. Best Practice Protected Area Guidelines Series No. 27, Gland, Switzerland: IUCN. xii + 120 pp.

- ⁸⁴ Saveriades, A. (2000). Establishing the social tourism carrying capacity for the tourist resorts of the east coast of the Republic of Cyprus. Tourism management, 21(2), 147-156.
- ⁸⁵ Goodwin, H. (2002). Local community involvement in tourism around national parks: opportunities and constraints. Current Issues in tourism, 5(3-4), 338-360.

⁸⁶ Diedrich, A. (2007). The impacts of tourism on coral reef conservation awareness and support in coastal communities in Belize. Coral Reefs, 26(4), 985.



PHOTO BY NICK HAWKINS

⁷⁹ Bennett, N. J., & Dearden, P. (2014). Why local people do not support conservation: Community perceptions of marine protected area livelihood impacts, governance and management in Thailand. Marine Policy, 44, 107-116.

⁸⁰ ICF Consulting Services Ltd., IEEP and PML (2018). Study on the Economic Benefits of MPAs Final Report. European Commission. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/dbe3d250-b0b5-11e8-99ee-01aa75ed71a1

⁸¹ Badalamenti, F., Ramos, A. A., Voultsiadou, E., Lizaso, J. S., D'nna, G., Pipitone, C., Mas, J., Ruiz Fernandez, J.A., Whitemarsh, D. & Riggio, S. (2000). Cultural and socio-economic impacts of Mediterranean marine protected areas. Environmental conservation, 27(2), 110-125.

Best Practices

Well-managed sustainable tourism that is associated with MPAs can result in significant benefits to communities and the environment, where risks are considered and mitigated. However, should these risks be ignored, the tourism destination may no longer retain the qualities that made it popular in the first place.⁸⁷ The goal is always to ensure that the host community experiences, and is aware of, clear economic and social benefits, while preserving conditions for nature to thrive.

While management decisions must be site-specific to be effective, a set of best practices to manage the impacts of tourism within MPAs is possible to identify. The following information section reviews "triple bottom line" best management practices, designed to ensure tourist activities are beneficial for the economy, the environment, and the local community.88

Tip #1: Develop a Plan

Certification Programs to Boost Sustainability

Certification schemes demonstrate to visitors that a destination is legitimately working within a sustainable tourism framework, therefore helping protected areas or tourism providers to brand, market and promote the region in an easily recognized way. For instance, The European Charter for Sustainable Tourism in Protected Areas requires tourism businesses and protected area managers to develop and implement a sustainable tourism strategy based on special ecological and cultural features while ensuring that the environment, local residents, local businesses and visitors are considered.⁸⁹

⁸⁹ EUROPARC Federation (2015). Sustainable Tourism in Protected Areas: Good for Parks, Good for People. Retrieved from http://www.europarc.org/wp-content/uploads/2015/12/ECST_2015.pdf

88 Bennett, N. J., & Dearden, P. (2014). Why local people do not support conservation: Community perceptions of marine protected area livelihood impacts, governance and management in Thailand. Marine Policy, 44, 107-116.html



Tip #2: Ensure the Plan is Working

Indigenous Guardianship

Indigenous guardians manage protected areas, restore biodiversity, test water quality and monitor development projects while welcoming visitors to traditional territories and maintaining cultural sites.⁹² Indigenous guardians employ both Indigenous and western scientific practices to ensure that protected areas remain pristine and are able to rebound. Rights holders are highly effective site monitors given their expertise and familiarity with the land.

92 https://landneedsguardians.ca/what-guardians-do

Once conservation objectives have been identified, it is easier to determine which tourism activities are going to work well with and around the MPA, and which may not be compatible.⁹⁰ Decisions relating to those activities need to be informed by science, as well as Indigenous and traditional local knowledge, and decisionmaking should be shared with rights holders and stakeholders to minimize potential conflicts.⁹¹

In the best-case scenario, tourism development plans and MPAs would be developed simultaneously with collaboration from all decision makers, rights holders and stakeholders, including tourism operators. While the first objective for protected areas is environmental protection, it may also be possible to create a shared vision for tourism.

Though planning is best done in the early stages of tourism development, it is never too late to make a plan. Managing the fast-paced development of tourism may be a challenge, but planning can help local communities to take control of the process.

^{a1} Plummer, R., & Fennell, D. A. (2009). Managing protected areas for sustainable tourism: prospects for adaptive co-management. Journal of Sustainable Tourism, 17(2), 149-168.

⁹⁰ Leung, Y., Spenceley, A., Hvenegaard, G., and Buckley, R. (eds.) (2018). Tourism and visitor management in protected areas: Guidelines for sustainability. Best Practice Protected Area Guidelines Series No. 27, Gland, Switzerland: IUCN. xii + 120 pp.

Having a tourism development plan in place is a positive starting point. Measures must be taken however to ensure that the plan is a living document that is adjusted as the health of the MPA is monitored, and that ensures tourism activities are not producing negative impacts. Common tools for monitoring include visitor surveys, interviews with local rights holders and stakeholders, and the collection of ecological data. Indigenous peoples, coastal community members and other members of the public could be engaged to assist with monitoring, whether it be through citizen science or building capacity with groups of local people to collect scientific information.93 When MPA management decisions need to be made or adjusted, it is important to have open and honest communication so that all parties understand why changes are necessary. 94

93 Lauterio-Martínez, C. L., Hernández-Trejo, V. Á., Ortega-Rubio, A., Olmos-Martínez, E., Ibáñez-Pérez, R. M., & Bobadilla Jiménez, M. (2018). The Value of Ecotourism and Ecosystem Services in Espiritu Santo Island National Park, Mexico. In Mexican Natural Resources Management and Biodiversity Conservation (pp. 431-453). Springer, Cham.

⁹⁴ Leung, Y., Spenceley, A., Hvenegaard, G., and Buckley, R. (eds.) (2018). Tourism and visitor management in protected areas: Guidelines for sustainability. Best Practice Protected Area Guidelines Series No. 27, Gland, Switzerland: IUCN. xii + 120 pp.

Bottom-up Community Management

The Mamalilikula First Nation self-declared the Gwaxdlala/Nalaxdlala Indigenous Protected and Conserved Area (IPCA) in November 2021. With this declaration, the Nation will take a primary role in the planning, use, management and restoration of the land and water. Among other activities, the Mamlilkula First Nation will create economic enterprises for the Nation, including wildlife-viewing tourism.95

protected-area-in-canada/

Tip #3: Take a Community-based Approach

⁹⁵ https://news.mongabay.com/2022/06/first-nation-reclaims-territory-by-declaring-indigenous-



Respecting the host community and its cultural and traditional values is of key importance. Allowing Indigenous and coastal communities to co-design tourism planning, management and monitoring will help ensure benefits flow to these communities and reduce negative impacts on those living in the area.⁹⁷ Today's tourists look for authenticity, and so development that incorporates and promotes local transportation, accommodations, art, craft and cuisine is what best serves both the local community and helps draw visitors. Consideration of local uses of the MPA during any infrastructure development can also provide an opportunity to maximize benefits, while reducing conflict between tourism-oriented uses and traditional uses of local areas.

Building skills and abilities within the local community will help to ensure that community members can participate more fully in tourism activities, especially with local entrepreneurship and small business development. This could include training in business and management skills, and startup grants for local tourism endeavors.^{98,99} Specific to MPA management, training related to education and monitoring programs can also be instrumental in driving the success of MPA-related tourism.

⁹⁷ Masud, M. M., Aldakhil, A. M., Nassani, A. A., & Azam, M. N. (2017). Community-based ecotourism management for sustainable development of marine protected areas in Malaysia. Ocean & coastal management, 136, 104-112.

⁹⁸ Jamal, T., & Stronza, A. (2009). Collaboration theory and tourism practice in protected areas: Stakeholders, structuring and sustainability. Journal of Sustainable tourism, 17(2), 169-189.

⁹⁹ Wu, C. C., & Tsai, H. M. (2016). Capacity building for tourism development in a nested social-ecological system-A case study of the South Penghu Archipelago Marine National Park, Taiwan. Ocean & coastal management, 123, 66-73.

Tip #4: Scale Tourism Activities Appropriately

Determining the limits of social and ecological populations within MPAs is important to their long-term conservation success. Too many visitors in one location can degrade the environment, making it a less desirable destination.¹⁰⁰

A well-considered tourism plan can help to determine ways to limit visitation numbers to what is manageable. Controlled access to parks, limited licenses to charter operators or accommodations providers, guided access requirements and area entrance fees can all contribute to a suite of tools to manage tourism levels. However, complete control over tourism levels is impossible, making the monitoring of impacts extremely important.

¹⁰⁰ Saveriades, A. (2000). Establishing the social tourism carrying capacity for the tourist resorts of the east coast of the Republic of Cyprus. Tourism management, 21(2), 147-156.



Tourism Monitoring Considerations

- People are more likely to feel crowded when they see negative human impacts such as littering or trampling (on land and in the water).
- The balance between built facilities (which may reduce the impact of tourism) and the perceived "wildness" of an area must be considered.

Tip #5: Prioritizing Education and Outreach

Educating Divers to Reduce Coral Damage

Divers caused less damage to coral reefs when they had a pre-dive briefing on specific regulations and acceptable and prohibited behaviours (e.g., no take, no touching). Other regulations can have positive impacts such as prohibiting gloves and mucks sticks on dives which tend to encourage divers to touch sensitive organisms. Restricting the number of divers or time spent in sensitive areas can also limit ecological impacts. Divers also need to be informed that touching is prohibited and that they must alert managers if their equipment makes contact with bottom habitats.^{102,103}

- Locals may be attached to the natural qualities of an area and may be concerned about the impacts of tourists.
- The limits for populations within a certain ecosystem are not a fixed quantity.
 - » Facilities can boost the capacity of an area to host more inhabitants.
 - » Host communities may become more tolerant over time and more willing to accept elevated tourism.
 - » The quantity of tourists accepted by the destination's residents is subjective; people's views of what is acceptable may be different, with some wanting more solitude (they may have a lower threshold for the number of people they want to see when visiting a place) while others accept increased levels of tourism.
- The types of activities occurring in a region will affect people's perceptions of acceptability (e.g., motorized sports next to people snorkeling or using a beach). ¹⁰¹

¹⁰² Barker, N. H., & Roberts, C. M. (2004). Scuba diver behaviour and the management of diving impacts on coral reefs. Biological Conservation, 120(4), 481-489.

¹³ Roche, R. C., Harvey, C. V., Harvey, J. J., Kavanagh, A. P., McDonald, M., Stein-Rostaing, V. R., & Turner, J. R. (2016). Recreational diving impacts on coral reefs and the adoption of environmentally responsible practices within the SCUBA diving industry. Environmental management, 58(1), 107-116.

¹⁰¹ Gonson, C., Pelletier, D., & Alban, F. (2018). Social carrying capacity assessment from guestionnaire and counts survey. Insights for recreational settings management in coastal areas. Marine Policy, 98, 146-157.



Educated local rights holders and stakeholders are key supporters for education and outreach. When the St. Anns Bank Marine Protected Area was being established, feedback from communities was resoundingly negative. This turned out to be based on the false perception that there would be a blanket ban on all activities, including fishing. Once the news spread that some fishing would still be permitted in certain zones and that Food, Social and Ceremonial Fishing (FSC) would be permitted throughout, Indigenous communitizes and local stakeholders became key allies in the MPA process.

Recent polling suggests that while support for marine protection is near unanimous, knowledge about what MPAs are and how they function continues to be low.¹⁰⁴ Integrating tourism with education and interpretation programs can help to improve public knowledge about marine protection, ensure that tourists are aware of important species and habitats, and inform tourists of the rules that are in place to protect them.

Educated visitors not only demonstrate a lower environmental impact, but they are also better advocates for the natural area. Fully informed tourists better understand the requirements of sensitive habitats, leading to a greater appreciation of such habitats.

Interpretive signage is a popular and affordable way to provide passive education to visitors, however this may not always be feasible for special marine environments. Guided experiences delivered by well-trained guides can provide an immersive encounter for tourists. Regardless of the education outreach style, it is important to consider the benefits of educational opportunities in the tourism planning phase, both on a largescale (e.g., regional) and experiential scale (e.g., education on boat tours or whale watching adventures).

"Friends of" groups, often made up of interested local stakeholders or legally constituted charities that operate within protected areas, are often used to assist with the management of protected areas.¹⁰⁵ Such groups can help to provide guiding, interpretation and environmental education programs to visitors, can assist with the monitoring of protected areas, and can also raise funds to aid management activities. The Friends of Taylor Head Park, a volunteer-run group located in Spry Bay, Nova Scotia, helps to deliver programs and events in Taylor Head Provincial Park.¹⁰⁶ Programming includes guided hikes, birding, and park clean-ups. "Friends of" groups are under-utilized in Canada in comparison with other jurisdictions such as Australia, although they are commonly used within the terrestrial protected area system in Ontario.^{107,108}

¹⁰⁴ Environics Research (2019). Public Opinions on Marine Protected Areas. Retrieved from http://assets.wwf.ca/downloads/public_opinion_on_marine_protected_areas_environics.pdf?_ ga=2.212268948.1838911436.1569238877-1585508673.1524156024

¹⁰⁵ Spenceley, A., Snyman, S., & Eagles, P. (2017). Guidelines for Tourism Partnerships and Concessions for Protected Areas: Generating Sustainable Revenues for Conservation and Development. In Report to the Secretariat of the Convention on Biological Diversity and IUCN (p. 59).

¹⁰⁶ Friends of Taylor Head (2019). Friends of Taylor Head Park. Retrieved from http://www. friendsoftaylorhead.com/

Case Study: Networks Matter

Developing Marine Tourism in the Mediterranean

Destimed, a project funded in part by the European Union, brings together protected areas across the Mediterranean Basin to collectively develop, manage and promote sustainable tourism.¹⁰⁹ Tourism is an important income source in the Mediterranean, however increased development is adding pressure on the natural environment, and local culture and traditions. The goal of Destimed is to sustainably grow marine and coastal tourism without negatively impacting natural or cultural heritage through innovative pilot projects that promote fishing and culinary-based tourism, as well as novel concepts such as underwater museums and diving parks.

Destimed builds from the success of the Mediterranean Experience of Ecotourism Network, which is an association of Mediterranean protected areas that are developing high-quality tourism products that benefit conservation. This program, designed to improve the sustainability of the tourism sector in the Mediterranean region, brought local communities and park managers together with the tourism industry and others to develop experiential tourism packages focused around iconic parks and protected areas and their surrounding communities.¹¹⁰ These hands-on nature, culture and adventure experiences directly support conservation and feature 100 percent locally based tourism operators, accommodations, activity providers and guides.

As Canada's network of MPAs continues to grow, there may be valuable opportunities to develop similar collaborative programs that seek to boost and support tourism initiatives in coastal communities. In order to do this effectively, however, it is important to first evaluate both the benefits and risks of enhanced coastal tourism associated with MPAs.



Modifying Practices to Avoid Environmental Damage

Snorkelers can damage seagrass beds, which are sensitive to disturbance, by kicking up sediment and seagrass, or by intentionally ripping out leaves. In some areas, tourists are asked to not wear fins or made to wear life jackets so that they can float on the surface and not come into contact with the bottom.¹¹¹ This is best implemented in conjunction with education programs relating to the sensitivity of seagrass areas.

Mexican Caribbean, Aquatic Ecology, 44(1), 23-31



Tip #6: Minimizing Environmental Impacts

¹⁰⁹ Interreg Mediterranean (2019). DestiMED. Retrieved from https://destimed. interrea-med.eu/

¹¹⁰ Mediterranean Experience of Ecotourism (n.d.). MEET Network. Retrieved from https://www.meetnetwork.org/

¹Herrera-Silveira, J. A., Cebrian, J., Hauxwell, J., Ramirez-Ramirez, J., & Ralph, P. (2010). Evidence of negative impacts of ecological tourism on turtlegrass (Thalassia testudinum) beds in a marine protected area of the



The most common tools for managing tourismrelated environmental impacts are zoning, rationing, and the enforcement of rules and regulations.¹¹² MPAs can be zoned to keep tourists away from especially sensitive ecological areas. Sub-zones can also be created to allow for different types of tourism activities while reducing conflicts between competing uses (e.g., separation of motorized water sports and snorkeling and scuba diving). Rationing however only permits a certain number of people on site through reservation systems, first come first-served policies, lotteries and auctions for access permits. Rules and regulations may also be implemented to discourage certain types of

Minimizing impacts on the environment can also be achieved through direct or indirect management. Direct management emphasizes regulating behaviour and restricting individual choices whereas indirect management emphasizes influencing or modifying people's behaviour through other means.^{113, 114,115,116,117,118}

¹¹² Leung, Y., Spenceley, A., Hvenegaard, G., and Buckley, R. (eds.) (2018). Tourism and visitor management in protected areas: Guidelines for sustainability. Best Practice Protected Area Guidelines Series No. 27, Gland, Switzerland: IUCN. xii + 120 pp.

¹¹³ Ibid

¹¹⁴ Barker, N. H., & Roberts, C. M. (2004). Scuba diver behaviour and the management of diving impacts on coral reefs. Biological Conservation, 120(4), 481-489.

¹¹⁵ Bell, C. M., Needham, M. D., & Szuster, B. W. (2011). Congruence among encounters, norms, crowding, and management in a marine protected area. Environmental Management, 48(3), 499-513.

¹¹⁶ Gonson, C., Pelletier, D., & Alban, F. (2018). Social carrying capacity assessment from guestionnaire and counts survey. Insights for recreational settings management in coastal areas. Marine Policy,

¹¹⁷ Inman, A., Brooker, E., Dolman, S., McCann, R., & Wilson, A. M. W. (2016). The use of marine wildlife-watching codes and their role in managing activities within marine protected areas in Scotland. Ocean & coastal management, 132, 132-142.

¹¹⁸ Velando, A., & Munilla, I. (2011). Disturbance to a foraging seabird by sea-based tourism: Implications for reserve management in marine protected areas. Biological Conservation, 144(3), 1167-1174.

DIRECT

RESTRICT VISITATION:

- Limit the number of tourists to natural areas (e.g., cap entrance numbers through first come-firstserve policies, tickets, lotteries, etc.).
- Limit the number of boats allowed in a specific area (e.g., install mooring buoys and prohibit boats from anchoring in inappropriate places).

CONTROL ACTIVITIES:

- > Establish rules, regulations and a code of conduct when visiting.
- Strategically build or avoid infrastructure to manage where people can go (e.g., create camping facilities in less sensitive areas, create walkways over wetland areas).
- Limit or prohibit access during important times/seasons (e.g., breeding seasons for nesting birds).
- Establish buffer zones around sensitive ecological areas to minimize disturbance from human activity.
- Restrict activities to reduce impacts (e.g., no anchoring in seagrass areas, no motorboats near nesting bird sites).

INDIRECT

EDUCATE VISITORS TO REDUCE IMPACTS:

- Post interpretive signage in highly visited areas describing the natural environment, to communicate existing regulations and to provide practical information about how users can reduce their impact.
- Encourage visitors to respect the environment and make them aware of what the environmental impacts of their actions could be.
- > Establish codes of conduct.

Tip #7: Focus on the Visitor Experience

In today's era of online reviews and ratings it is important to create experiences that tourists will recommend to others. Not surprisingly, negative experiences will stop visitors returning to an area, and research has shown that once there is a decline in visitation to a tourism destination, it is difficult to draw tourists back.¹¹⁹

When visitors are educated about how and why conservation is taking place, they are more likely to have a positive experience while maintaining the integrity of the site. This underscores the importance of monitoring through visitor surveys and direct contact (e.g., interviews).

Tourism operators are valuable assets in determining the visitor experience, often receiving instant feedback on experiences both good and bad. Especially in the growth phase of a local tourism industry, providing a positive experience to visitors is crucial to success.

¹¹⁹ Diedrich, A. (2007). The impacts of tourism on coral reef conservation awareness and support in coastal communities in Belize. Coral Reefs, 26(4), 985.





MPA-related Tourism in Canada

Saguenay-St. Lawrence Marine Park, Quebec

FAST FACTS:

- Year Established: 1998
- Size: 1,245 km²
- Management: Co-managed by Parks Canada and the Quebec provincial government department Sépaq, in conjunction with a coordinating committee consisting of representatives from various sectors

CONSERVATION HIGHLIGHTS:

- Ecologically important area where the Saguenay River meets the St. Lawrence Estuary
- Critical habitat during summer months for the endangered St. Lawrence beluga
- Summer feeding grounds for other iconic marine mammals including blue and minke whales
- High biological and habitat diversity

The Saguenay-St. Lawrence Marine Park is one of Parks Canada's National Marine Conservation Areas, with tourism activities related to the Marine Park bringing in \$160 million CAD in 2009.¹²⁰ Close to Montreal and other popular tourism destinations, this site offers whale watching, pleasure boating, sea kayaking, scuba diving and fishing.¹²¹

One of the main draws to the Marine Park is its endangered beluga whale population.¹²² While population numbers were historically depleted by commercial whaling, current threats include disturbance by humans and the destruction of their habitat. To reduce these impacts, the Eco-Whale Alliance, comprised of representatives from government, the tourism industry and the Group for Research and Education on Marine Mammals, formed to develop best practices for whale watching. In addition, the Alliance offers training courses for boat captains and naturalists, creates interpretive tools for outreach and education, and closely monitors conservation progress. ¹²³



Other efforts are underway to minimize disturbance to belugas within the Marine Park, including the creation of a terrestrial network of observation areas offering monitoring and research opportunities without the need to be on the water. In addition, Sainte Marguerite Bay within the Park is closed to tourism activities during those critical times for belugas in order to reduce tourism and other human impacts on the whales.¹²⁴

¹²⁰ The Outspan Group Inc. (2011). Economic Impact of Parks Canada. Gatineau, QC. Retrieved from https://www.pc.gc.ca/en/agence-agency/ b-lib/rapports-reports/econo2011

¹²¹ Parks Canada (2017). Saguenay-St. Lawrence Marine Park. Retrieved from https://www.pc.gc.ca/en/amnc-nmca/qc/saguenay.

¹²² Fisheries and Oceans Canada (2016). St. Lawrence Estuary Beluga A science based review of recovery actions for three at-risk whale populations. Retrieved from https://waves-vagues.dfo-mpo.gc.ca/Library/40680113.pdf

e/

¹²⁴ Parks Canada (2018). Beluga Protection Measures at Baie Sainte-Marguerite. Retrieved from http://parcmarin.qc.ca/wp-content/ uploads/2018/06/fiche_infoBSM_En_VF-1.pdf

Whales Online. 2019. Eco-Whale Alliance. Retrieved from https://baleinesendirect.org/en/whales-at-risk/actions-for-the-future/eco-whale-



MPA-related Tourism in Canada Musquash Estuary Marine Protected Area, New Brunswick

FAST FACTS:

- Year Established: 2006
- Size: 7 km²
- Management: Fisheries and Oceans Canada

The Musquash Estuary is a coastal MPA located on the New Brunswick coast of the Bay of Fundy. Tourism within Musquash Estuary MPA is limited, with its main tourism activities being coastal hiking and local beach visitation. Land adjacent to the MPA has been set aside for conservation by the Nature Conservancy of Canada (NCC), with a series of coastal trails developed for use by hikers that lead to a series of beaches.¹²⁵ Additionally, the annual Musquash Paddle is a draw for many canoe and kayakers. Launched by the Conservation Council of New Brunswick in 1998 as a way to gather support for the protection of the area, this paddle celebrates the Musquash Estuary and serves as a public education and fundraising event.126

CONSERVATION HIGHLIGHTS:

- Largest ecologically intact estuary in the Bay of Fundy
- Extensive tidal salt marshes
- Important for migratory shorebirds

Tourism development for the Musquash Estuary MPA has challenges, including few rental offerings for recreational equipment such as kayaks, limited space for buses, lack of visitor amenities (e.g., washrooms), and minimal boat launch infrastructure. Also, on-the-water activities must be timed to coincide with the tides. That said, there could be opportunities to develop the area further in a way that respects ecological interests. The NCC has been engaging with the local community and other interested stakeholders to explore how the area may be used for future tourism initiatives.



ncil for the 2018 Musquash Paddle! Retrieved from https://



MPA-related Tourism in Canada

Tarium Niryutait Marine **Protected Area, Northwest Territories**

FAST FACTS:

- Year Established: 2010
- Size: 1,750 km²
- Management: Shared management between Fisheries and Oceans Canada and the Fisheries Joint Management Committee

CONSERVATION HIGHLIGHTS:

- Includes some of the only known summer concentration areas for the eastern Beaufort Sea beluga population
- Important for Inuvialuit harvesting traditions in the Inuvialuit Settlement Region

* *

Tarium Niryutait Marine Protected Area is located within the Mackenzie River Delta and estuary in the Beaufort Sea, within the Inuvialuit Settlement Region and part of Inuit Nunangat.¹²⁷ Management of the protected area was developed by a Fisheries Joint Management Committee in partnership with the Hunters and Trappers Committees of surrounding communities, and Fisheries and Oceans Canada. Their goals are to protect beluga, maintain sustainable harvest of beluga by the Inuvialuit, and to create economic opportunities for the Inuvialuit through non-disruptive activities.¹²⁸

Sustainable tourism is the third largest economic driver in the Northwest Territories and represents a significant economic development opportunity for the adjacent Inuvialuit Settlement Region.¹²⁹ Popular tourist activities include wildlife observation, sport hunting and fishing, and hiking. To reduce the potential for conflict between the traditional harvest of belugas and whale watching activities within the MPA, and to reduce the impacts of tourism activities on belugas, draft tourism guidelines were created. This includes creating zones for whale watching and other forms of tourism, and specifies the need for tourism operators to engage with local communities and Hunters and Trappers Committees prior to applying for permits to conduct operations within the MPA, in order to ensure activities are appropriate and will not negatively impact traditional use.





MPA-related Tourism in Canada

Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve, and Haida Heritage Site, British Columbia

FAST FACTS:

- Year Established: 2010
- Size: 1,470 km²
- Management: Managed by the Archipelago Management Board, a cooperative management partnership between the Haida Nation and the Government of Canada (Parks Canada and Fisheries and Oceans Canada)

CONSERVATION HIGHLIGHTS:

- Culturally important to Haida
- Biologically diverse ecosystems, containing over 20 species of marine mammals including Stellar sea lions, northern fur seals, and numerous types of whales.
- Significant feeding, breeding, resting, and nesting area for over 200 bird species.

The Gwaii Haanas National Park Reserve on land, National Marine Conservation Area Reserve in the water, and Haida Heritage Site protects both the land and sea of South Moresby Island, part of Haida Gwaii. These protected areas form a UNESCO World Heritage site – the only place in the world having continuous protection from mountaintop to seafloor.¹³⁰ Due to its remote nature, Gwaii Haanas is only accessible by boat or aircraft. Despite this, it still is an attraction for kayakers, boaters, divers and hikers, with visitation growing by 94 percent between 2011 and 2018.¹³¹

Gwaii Haanas has taken steps to ensure that the level of tourism remains manageable for the local community, including having limited licenses for operators and a quota system for its number of visitors.^{132,133} There is also a code of ethics for visitors, and educational campaigns about waste management and low-impact tourism. Tourism is limited to specific zones within the protected areas to limit impacts on the environment and traditional use.¹³⁴ Additionally, tourism operators participate in ecological monitoring programs such as collecting wildlife sightings to help assist with knowledge gathering within the Park.¹³⁵

Research conducted within Gwaii Haanas indicates that tourism is positively contributing to economic, social, cultural and scientific aspects of life on Haida Gwaii and is supporting the co-management agreement that governs Gwaii Haanas.¹³⁶ An integral part of tourism within Gwaii Haanas is the Haida Watchmen Program. Initially conceived to protect important cultural sites, this program employs Haida men and women to provide education and to share Haida stories and its traditional ways of life with visitors.137,138 Nature-based and cultural tourism in Gwaii Haanas is growing and will be seen as a positive as long as it "grows within the means of the local communities." ¹³⁹

¹³³ Archipelago Management Board (2018). The Waadluxan KilGuhlGa Land-Sea-People Management Plan. Retrieved from https:// www.pc.gc.ca/en/pn-np/bc/gwaiihaanas/info/consultations/gestionmanagement-2018

¹³⁴ Parks Canada (2018). Gwaii Haanas 2018 Trip Planner. Retrieved from https://www.pc.gc.ca/en/pn-np/bc/gwaiihaanas/visit.

¹³⁵ Parks Canada (2017). Code of ethics for travelers. Retrieved from https://www.pc.gc.ca/en/pn-np/bc/gwaiihaanas/visit/ guides/ethique-ethics.

¹³⁶ Elliot, R. (2017). Tourism in Gwaii Haanas: Contributions to Haida Gwaii communities and co-management. Retrieved from http://summit.sfu.ca/item/17231

¹³⁷ Coastal First Nations (2017). Coastal Guardian Watchmen Support. Retrieved from https://coastalfirstnations.ca/ourenvironment/programs/coastal-guardian-watchmen-support/Re

¹³⁸ Parks Canada (2018). Haida Watchmen. Retrieved from https://www.pc.gc.ca/en/pn-np/bc/gwaiihaanas/culture/gardienswatchmen.

¹³⁹ Elliot, R. (2017). Tourism in Gwaii Haanas: Contributions to Haida Gwaii communities and co-management. Retrieved from http://summit.sfu.ca/item/17231



¹³⁰ Archipelago Management Board (2018). The Waadluxan KilGuhlGa Land-Sea-People Management Plan. Retrieved from https://www.pc.gc.ca/ en/pn-np/bc/gwaiihaanas/info/consultations/gestion-management-2018

¹³¹ Statitsta (2019). Number of Visitors to Gwaii Haanas National Park and Haida Heritage Site in Canada from 2011 to 2018 (in Thousands). Retrieved from https://www.statista.com/statistics/501631/visitors-to-gwaii-haanas-national-park/

¹³² Parks Canada (2019). Tour Operators. Retrieved from https://www.pc.gc.ca/en/pn-np/bc/gwaiihaanas/visit/guides/ vovagistes-operators.

Recommendations

- areas.

• Involve communities early and often.

· Promote education and awareness about the potential of protected areas to the tourism and recreation sector and counter the perception that protected areas automatically prohibit most activities.

Better promote areas that are already protected and include targets for tourism in MPA management.

Be proactive in incorporating tourism at the design stages of MPAs so that opportunities and challenges are addressed at the outset of protected area identification and establishment. This should be consistent regardless of who is creating the protected

Ensure that independent tourism operators are engaged in protected area processes to ensure that their interests and concerns are understood and that they are engaged in the overall management and monitoring of coastal protected areas.

Provincial and territorial governments should integrate the benefits of coastal protected areas within tourism strategies and policies.

Municipalities should engage in protected area processes with a view towards the economic benefits of tourism. Government funded programs should work to better understand the benefits of protected areas in building low impact tourism opportunities.

Where appropriate, Indigenous communities that are actively designating protected areas and examining economic opportunities for these areas must be highlighted and supported. It is essential to focus on culture, Indigenous knowledge and community needs while engaging in meaningful and equal partnerships.

