

# Marine Protected Areas: benefits to people and nature

## Human well-being Benefits

MPAs are widely recognized for their ecological benefits, but their far-reaching contributions to supporting human well-being deserve equal attention. Despite this, insights into the societal impacts of MPAs remain limited, particularly for groups outside of fishers. Greater research on individual and community-level impacts is needed to ensure social dimensions are fully integrated into the design of future MPAs.

Different aspects of society can be advantaged or disadvantaged by MPAs<sup>1,2</sup>, with impacts strongly linked to MPA design and establishment processes. However, a recent review by Ban et al. highlights that positive outcomes (51%) of MPAs for human well-being outweighed negative implications (31%), with benefits crossing aspects such as enhanced community involvement, increases in income, and increased catch per unit effort<sup>1</sup>.

Marine ecosystems provide invaluable ecosystem services both directly and indirectly support human well-being on an individual and community level<sup>3</sup> (Table 1). However, the absence of quantifying the “hidden” value of these marine ecosystem services can result in these benefits easily taken for granted. MPAs are essential for maintaining the health and function of ecosystems, which is critical for their ability to continue to provide ecosystem services.

**Table 1.** Examples of marine ecosystem services

Provisioning	Regulating	Supporting	Cultural
Fish and shellfish harvest	Climate regulation	Biodiversity	Recreation
Genetic resources	Carbon storage	Gene pool	Education and research
Minerals	Storm protection	Nutrient cycling	Spiritual heritage and identity
	Oxygen production	Sediment transport	Tourism

Overexploitation of fish stocks and mismanagement of marine resources threaten not only ecological sustainability, but also food security, sovereignty and social justice. Across British Columbia, food security is deeply interconnected with coastal communities, particularly Indigenous communities reliant on culturally important marine species. MPAs and Indigenous Protected and Conserved Areas (IPCAs) that uphold Indigenous governance can play a crucial role in protecting traditional food systems and harvesting. Moreover, emerging research on the non-material aspects of nature also suggests that the marine environment provides a therapeutic and restorative place for humans to visit and provide mental health benefits<sup>4</sup>. For many communities the ocean is not merely a source of food and income, but an invaluable place for spiritual, cultural, and relational value. MPAs can help protect culturally significant sites, species, and traditional harvesting practices central to many coastal communities.

Another key indirect benefit of MPAs is supporting the livelihoods and resilience of coastal communities through job creation, stewardship, and research opportunities. Research suggests that community-based or co-governed MPAs are linked to the most equitable benefits to human well-being and livelihoods<sup>5,6</sup>. In British Columbia, for instance, the Great Bear Sea MPA Network illustrates how co-developed conservation initiatives can create new pathways for economic development and stewardship opportunities through Indigenous Guardian programs, intergenerational knowledge transfer, and youth engagement initiatives<sup>7</sup>. MPAs designed and governed with active involvement of local communities and Indigenous peoples are best positioned to uplift social and community values.

## Citations

- <sup>1</sup> Ban, N. C., Gurney, G. G., Marshall, N. A., Whitney, C. K., Mills, M., Gelcich, S., ... & Breslow, S. J. (2019). Well-being outcomes of marine protected areas. *Nature sustainability*, 2(6), 524-532.
- <sup>2</sup> Mascia, M. B., Claus, C. A., & Naidoo, R. (2010). Impacts of marine protected areas on fishing communities. *Conservation Biology*, 24(5), 1424-1429.
- <sup>3</sup> Barbier, E. B. (2017). Marine ecosystem services. *Current Biology*, 27(11), R507-R510.
- <sup>4</sup> Garcia Rodrigues, J., Villasante, S., & Sousa Pinto, I. (2022). Non-material nature's contributions to people from a marine protected area support multiple dimensions of human well-being. *Sustainability Science*, 17(3), 793-808.
- <sup>5</sup> Álvarez-Fernández, I., Fernández, N., Sánchez-Carnero, N., & Freire, J. (2017). The management performance of marine protected areas in the North-east Atlantic Ocean. *Marine Policy*, 76, 159-168.
- <sup>6</sup> Bennett, N. J., Morgera, E., & Boyd, D. (2024). The human right to a clean, healthy and sustainable ocean. *Npj Ocean Sustainability*, 3(1), 19.
- <sup>7</sup> Beaty, F., Brown, K. H. T., Braun, J., Diggon, S., Hartley, E., Heidt, A., ... & Worsley, K. (2024). From design to implementation: Lessons from planning the first marine protected area network in Canada. *Marine Policy*, 170, 106360.