

Blue Natural Capital: Enhancing Business Outcomes and Sustainability of Coastal Tourism Markets

By Elizabeth M. White and Bilal Rahill

The COVID-19 pandemic hit the tourism industry particularly hard, affecting livelihoods and exacerbating some pressures on the natural capital resource base. Supporting the tourism sector recovery is an opportunity to Build Back Better,¹ ensuring that business investments lead to a sustainable and resilient shared-growth pathway that is good for tourism and the natural capital on which it depends. Further sustainable management of the Blue Economy could more than double its economic contribution to global GDP.² Therefore, the “new normal” must deepen the consideration of Blue Natural Capital and its dynamic relationship with economic sectors across coastal landscapes and markets. The experience of the State of Palawan in the Philippines is explored in this note. It serves as a useful model for weighing the opportunities and challenges typical of coastal tourism areas and exploring natural dependencies therein.

Societies and businesses derive value from the oceans and coastal areas. The Blue Economy, which is the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health,³ accounts for more than 3 percent of global GDP⁴ (with estimates as high as 7.5 percent). It covers several traditional sectors such as fisheries and aquaculture, maritime transport, tourism, and emerging sectors such as biopharmaceuticals and marine renewable energy. Of these, the World Bank estimates that coastal and marine tourism will represent 26 percent of the ocean economy by 2030, representing a large part of the value of the Blue Economy.⁵

Tourism and Blue Natural Capital—Building Back Better

Coastal areas are home to over 40 percent of the world’s population and are the primary livelihood source for millions of people. These areas also face social and environmental

challenges, including climate change, pollution, unsustainable coastal development, overfishing, and competing demands for resources. They are also vulnerable to shocks. In most situations, sustaining the flow of benefits to local communities and the economy depends heavily on the natural capital that draws visitors to these areas, protects coastlines from storms, and provides food, water, fiber, and other essential ecosystem resources.

Blue Natural Capital is an important driver of GDP growth for many countries, including small island states. It can also be a critical contributor to the total wealth of nations with productive coastal areas and active marine and ocean economies, including in rural areas where tourism is the predominant economic activity.⁶

Blue Natural Capital is a shared resource across economic sectors. In addition to its economic contribution through

About the Authors

Elizabeth M. White, Principal Strategist, Sector Economics and Development Impact, Economics and Private Sector Development, IFC. Her email is ewhite1@ifc.org.

Bilal Rahill, Senior Consultant, World Bank Group and Founder Sustainability Frameworks, LLC. His email is Bill@sustainabilityframeworks.com.

The authors wrote this Note in collaboration with James Spurgeon, Director, Sustain Value; Mark Gough, CEO, Capitals Coalition; Ryley Harris, Doctoral Researcher, Virginia Tech CNRE; and Natsuko Toba, Economist, Country Economics and Engagement, Economics and Private Sector Development, IFC.

This EM Compass Note builds on the concepts and discussion presented in White, Elizabeth M., Bilal Rahill, Mark Gough, and James Spurgeon, “How Natural Capital Approaches Can Support Sustainable Investments and Markets”, *EM Compass Note* 92, IFC, October 2020; and the report “Using Natural Capital Approaches to Manage Shared Dependencies – Delivering Sustainable Development and Enhanced Resilience” by Elizabeth M. White, Mark Gough, James Spurgeon, and Bilal Rahill, IFC et al., November 2020.

BOX 1 Definition of Terms

Natural Capital: The stock of renewable and non-renewable natural resources that combine to yield a flow of direct and indirect benefits to people.

Blue Natural Capital: That portion of natural capital that is found in coastal, marine, and ocean environments and which provides ecosystem services that yield a flow of benefits to people and sustain life on earth.

Blue Economy: A sustainable ocean economy, where the needs of dependent stakeholders and natural capital-bearing ecosystems are satisfied, allowing for the sustainable continuity of both environment and economy.

Natural capital as a shared dependency: Where natural capital is considered a resource that multiple stakeholders jointly depend on for a range of benefits.

tourism revenues, Blue Natural Capital supports other industries that draw on and impact many of the same natural assets (such as clean water resources) through their business activities. These include local farmers and fishers, small and medium enterprises, and many larger industries. Globally, numerous initiatives have focused on protecting the natural assets of coastal areas, mobilizing resources to conserve biodiversity and the natural environment, and instituting processes and requirements to mitigate the adverse effects of coastal and near-shore development.

There have been notable advances in mapping data and the development of natural capital accounts in coastal areas and, more recently, recognition of the significance of plastic-related pollution. Spatial data and technological advances of this nature can be usefully communicated to highlight the shared benefits of sustainable Blue Natural Capital management practices across economic sectors. These advances can also help identify priorities for investments in conservation as part of a sustainable and equitable pathway.

Management of a shared resource is inherently difficult but essential to a sustainable Blue Economy. Multiple stakeholders who depend upon the same Blue Natural Capital can overuse the resources, resulting in a decline in the quantity and quality of natural capital and ecosystem services. For example, a shared dependency on water by a broad spectrum of industries, farmers, households, and wildlife puts significant pressure on these water resources.

Fishers and tourism companies rely on coastal resources such as fish, coral reefs, and associated biodiversity and ecosystem services. If these dependencies are not recognized and managed responsibly and sustainably, overuse will eventually

lead to the permanent depletion of the underlying natural capital asset base and the decline of economic activities and benefits that flow to stakeholders. In this context, businesses and market participants more broadly need to understand the shared value of the natural resource and act in their collective interest to move to more sustainable pathways.

Blue Natural Capital faces different shocks and stresses over time that can affect its value to the Blue Economy.

Understanding how and why pressures on the natural resource base change over time is vital to investment decisions and business management. Developing this understanding enables stakeholders to define collective initiatives and prepare for shocks that might undermine the best conservation and risk management practices. The COVID-19 pandemic represents such a scenario for travel and tourism. Losses associated with the pandemic are estimated at \$3.8 trillion in global travel and tourism GDP, impacting about 142.6 million jobs.⁷

The spillover effects of these losses in local economies present risks to the preservation of Blue Natural Capital. For instance, the decline in tourism revenue hurts local livelihoods and may result in an increase in unsustainable fishing practices in search of food or additional income.⁸ It can also impact funding for fisheries management and marine conservation.⁹ For example, in the Philippines' Tubbataha Reefs Natural Park, tourism revenues make up over half of the conservation budget needed to protect areas from illegal fisheries.¹⁰

The post-pandemic recovery phase must include a redefinition of tourism strategies to enhance tourism's sustainability and resilience across all major risk factors, including Blue Natural Capital. Long-term resiliency and sustainability are built on local action. Leaders in a local market can catalyze changes in behavior and practices of competitors, suppliers, and businesses operating in the local economic ecosystem; they can influence government programs; and they can think about their shared dependencies in geospatial terms.

This way of thinking about the sustainability and resiliency of natural capital is critically important, given that climate change and other shocks may be formidable in the years ahead. Recent financial projections suggest that damage to the global economy from rising sea levels will amount to about seven times the cost of dealing with COVID-19.¹¹

This underscores the importance of Building Back Better in the Blue Economy by cultivating sustainable natural capital locally. The severity of the economic shock associated with COVID-19 is also a useful reminder of the importance of a diversified economic base. In this context, Building Back Better should also consider building back differently and in economic sectors not fully dependent on tourism, such as value-added agriculture, sustainable fisheries, and fish farming, among others.

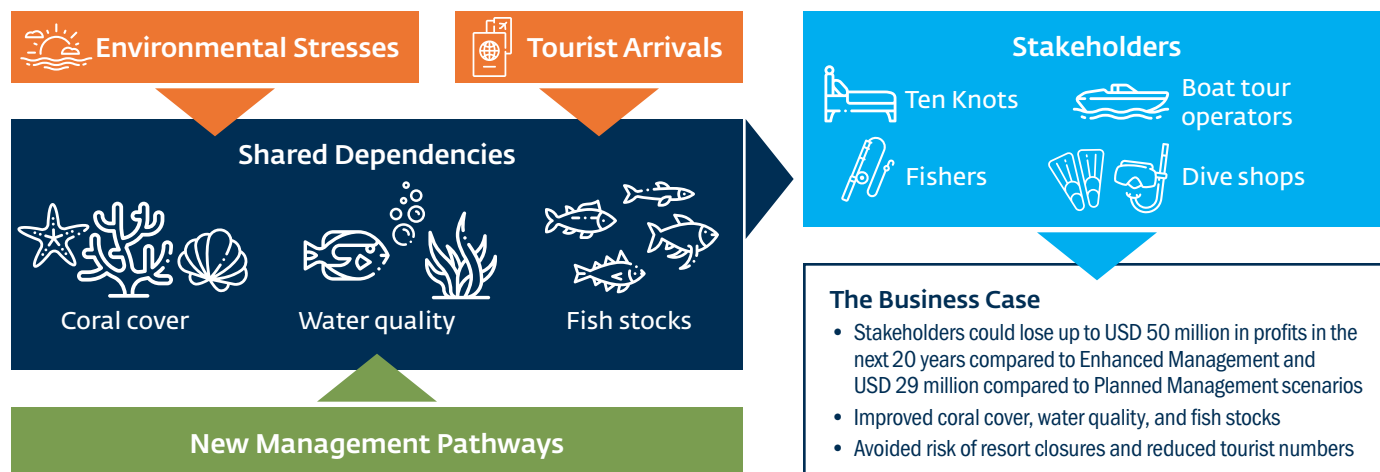


FIGURE 1 Protecting Natural Capital in El Nido

Source: IFC's Natural Capital Advisory Services Program—Ten Knots Assessment with Indufor and Sustain Value.

This recovery can also identify new opportunities to unlock the inherent value of nature. For instance, knowing and locking in the values of biodiversity and carbon sequestration within a seascape or landscape may help design innovative financial instruments that could, for instance, provide seed funding for circular economy business opportunities and support more inclusive management and governance models. For example, plastic recycling, seaweed farming, and renewable aquaculture could all be significant industries and could be established, seeded, or de-risked using sustainability finance instruments. Finding new revenue streams linked to key performance indicators could help catalyze new thinking and opportunities with landscapes and seascapes while building resilience, sustainability, and circularity.

Building Back Better in Palawan's Coastal Landscape

Example: El Nido Tourism and Blue Natural Capital

Businesses in coastal and marine landscapes have combined large and small measures to protect the Blue Natural Capital on which they depend. In El Nido, on the northern tip of the Philippine island of Palawan, a ridge-to-reef¹² natural capital approach with a leading resort operator showed that other resorts, boat tour operators, dive companies, and fishers have a direct shared dependency on the Blue Natural Capital of El Nido's Bacuit Bay, which contributes to the economic viability and vibrancy of the local area.

Tourists come to the area to experience the pristine environment of clean water, flourishing coral reefs, unobstructed expansive views, and unsullied places for hiking, rock climbing, scuba diving, swimming, snorkeling, and other activities. They expect access to clean water, high-quality produce, locally sourced fish and seafood, and other locally sourced inputs. These represent natural capital

dependencies for the tourism market, and their continued viability impacts long-term profitability and returns across multiple tourism companies.

El Nido is an exceptional and popular tourism destination threatened by multiple stresses on its Blue Natural Capital. Near Bacuit Bay is a world-class coral reef ecosystem and important area for local fishers. The El Nido-Taytay Managed Resource Protected Area was established in 1998 and is one of the largest marine sanctuaries in the Philippines, covering over 900 square kilometers. Before this, El Nido was protected as a turtle sanctuary. Despite these regulatory efforts for Blue Natural Capital preservation, coral reef ecosystems and fisheries' health are increasingly threatened by unsustainable tourism, illegal fishing, pollution, and climate change.

Easier access and affordable travel options led to dramatic increases in tourist arrivals in El Nido. A spike in tourism began in 2009 after a major upgrade of the road connecting Puerto Princesa, Palawan's capital, to El Nido, and the introduction of low-cost flights from Manila to Puerto Princesa and more recently from Manila directly to El Nido. With an estimated 30 percent year-on-year increase in the last ten years, tourism has proliferated in the area. The permanent population of the municipality has grown from 18,832 in 1990 to 41,606 in 2015. Total average monthly tourist arrivals reached close to 150,000 in 2017,¹³ including diver arrivals that exceeded the recommended carrying capacity of 5,000 divers per year.¹⁴

Pressure from tourism and local population growth affects natural capital in Bacuit Bay. The local nature-based tourism industry depends heavily on water quality, coral reefs, and terrestrial scenery. Businesses in the industry include tour operators, boat operators, dive shops, restaurants, accommodations, market vendors, and transport. Boat tour

Dependencies													Impacts																													
Consumptive					Non-consumptive								Inputs						Outputs																							
Energy	Charcoal	Water Quality	Fish (for eating)	Other food	Coast protection (mangroves/corals)	Beaches	Seawater quality	Coral Reefs	Fish (for looking at)	Geological formation (above seaview)	Other habitats and iconic species	Climate (rainfall, Temperature)	Activity	Coral Reef Use	Seawater Use	Fish (for eating)	Charcoal Use	Fecal Contaminants	Marine waste/ litter	Seawater and Sedimentation	Habitat enhancement	Habitat damage	GHG emissions	Non GHG air pollutants	Food Security	Income Security																
◐	◐	●	●	◐		◐	●	●	●	◐	◐	◐		Island resorts	●	●	●	◐		◐	●	●	◐	◐	◐	◐	◐															
◐	◐	●	●	◐		◐	●	●	●	◐	◐	◐		Island-hopping tours	●	●	●	◐	◐	◐	●		●	◐	◐		◐															
◐	◐	●	●	◐			●	●	●		◐	◐		Dive operations	●	●	●	◐	◐	◐	●		●	◐	◐		◐															
◐							●	●			◐	◐		Habitat protection and restoration	●	●						●		◐	◐		◐															
													◐	Directly Related				◐	Indirectly related				●	High Materiality to the activity				◐	Medium Materiality to the activity				◐	Low Materiality to the activity					Not Material			

TABLE 1 Materiality matrix for tourism activities in Bacuit Bay

Source: IFC's Natural Capital Advisory Services Program—Ten Knots Assessment with Indufor and Sustain Value.

operators depend primarily on revenues from island-hopping tours, whereas dive shops depend on dive expeditions and associated activities such as dive classes for revenue. Resorts rely on the same sites included on the island-hopping tours and dive sites and high-end tourists seeking pristine natural spaces and more exclusive access and privacy. The primary mass tourism in Bacuit Bay takes the form of one-day excursions by boat tour operators to visit various destinations on island-hopping tours.

Tourism closures in other areas of the Philippines, in particular Boracay, mirrored what could happen in El Nido.

The island of Boracay, another major tourist destination in the Philippines, was subjected to a six-month tourism closure in 2018, triggered by the government's response to the severe environmental degradation in the area. This closure led to significant lost tourism receipts and economic activity. What occurred in Boracay represented an entirely plausible outcome for El Nido, given that the area experienced some of the same stresses, including excess tourism pressure, inadequate waste and sewage treatment infrastructure, and poorly regulated fishing practices.

Together, these stresses fueled declines in water quality, coral reefs, fish populations, and marine ecosystems' overall quality. Even in the absence of significant closures, tourist arrivals could take a hit. This occurred in Puerto Galera on the Island of Mindoro, where tourist arrivals dropped by 60 percent due to poor water quality and lack of adequate waste management facilities.¹⁵

A natural capital assessment demonstrated that enhancing marine resources in Bacuit Bay through sustainable management would help the coastal Blue Economy thrive.

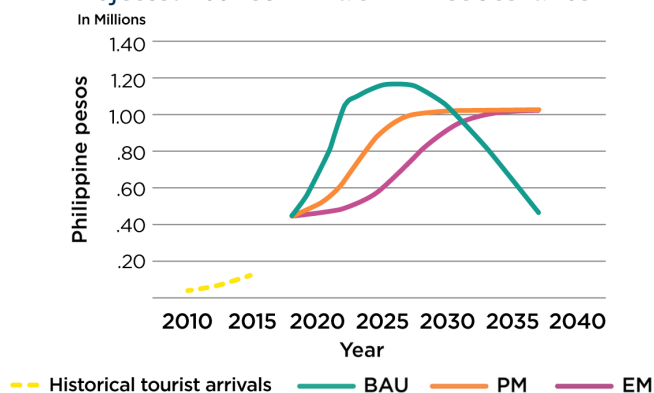
It showed how healthy coral reef ecosystems enhance societal resilience, buffer against pollution, and improve the resilience, stability, and long-term profits of local businesses (e.g, small and large resorts, dive shops, and boat tour operators).

When coupled with a diagnostic of the tourism market, the assessment helped tourism market participants identify and prioritize actions to build a sustainable and resilient local tourism market (Figure 1). This highlighted the importance of a landscape approach to understanding the dependencies, risks, and potential impacts associated with operating in sensitive environments; it highlighted the connectivity between core economic activities and their reliance on shared assets; and it showed opportunities that could be funded by sustainability financial instruments.

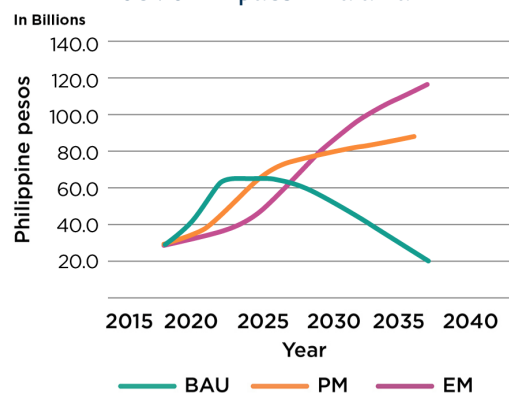
Material dependencies and impacts on natural capital in a “ridge-to-reef system” such as in Bacuit Bay can inform activities to build a sustainable tourism market. The Natural Capital Protocol provides a structured approach to undertaking this kind of analysis (Table 1). For example, in El Nido, a scenario of increased tourism arrivals and changes in ecosystem services' vitality was modeled on a similar experience in other locations.

The impact on the coastal economy was estimated based on three scenarios: business as usual (BAU), planned management (PM), and enhanced management (EM). The EM scenario put a firm cap on boat tours, required diversified tour offerings away from the most visited sites, increased tour prices, and added an environmental access fee and enhanced enforcement of management measures, such as a code of conduct for tour boat operators at key sites.

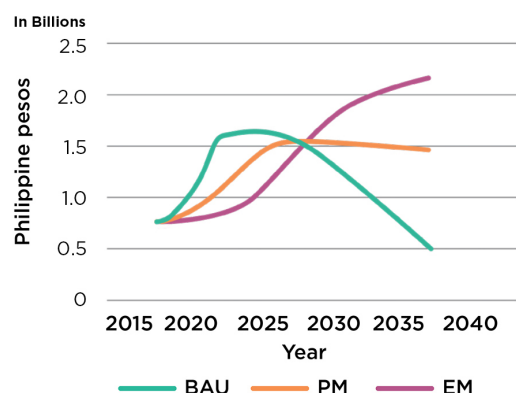
Projected Tourist Arrivals in Three Scenarios



Knock-on Impact in Palawan



Boat Tour Net Revenues



Net Present Value Comparison Between Stakeholders

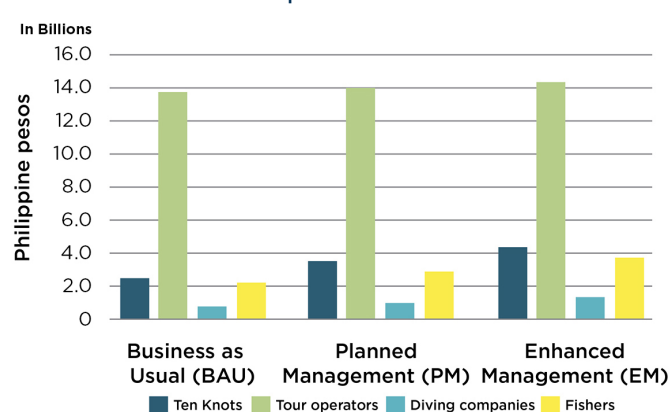


FIGURE 2 Tourist Arrivals, Knock-on Effects, Net Revenues, and NPVs under Three Scenarios

Source: IFC's Natural Capital Advisory Services Program—Ten Knots Assessment with Indufor and Sustain Value.

The analysis showed that a focus on increasing the number of tourists in the short term, under a BAU scenario, would lead to an eventual decline and possible collapse of overall tourist revenues and local economy effects due to accelerated and possibly irreversible environmental degradation.¹⁶ It also provided data to demonstrate how a managed increase in tourist arrivals, through tighter control of new accommodations and supported by municipal infrastructure and enforcement of existing and planned environmental regulations, would preserve the natural capital base, increase tourism revenues, and gradually accommodate 30 percent more visitors. The analysis also built in scenario models using different climate, environmental, and sector growth scenarios. With this information, industry participants and public sector authorities could see how changes in management practices could lead to the preservation of the assets on which they depend and an increase in values for the coastal landscape.

Enhanced management of Blue Natural Capital delivered the most value. The benefits under the enhanced management scenario far exceeded the other scenarios (Figure 2). Fishers, boat tour operators, and small and large tourist

accommodations all gain under EM of the Blue Natural Capital, with the smaller companies gaining the most in relative terms. While boat tour operators gain the least if current unsustainable BAU activities continued, EM of the Blue Natural Capital resulted in optimal long-term outcomes for tour operators. Significantly higher tourist revenues also were estimated.²

Driving to Shared Solutions for Sustainable and Resilient Tourism

Well-informed risk management regulations and practices are necessary but not sufficient for a sustainable and resilient tourism market. Even best-in-class resorts cannot eliminate the threats to their natural capital dependencies solely through individual sustainability practices. For example, a leading resort in El Nido is widely regarded as an exemplar of environmentally and socially responsible practices, with numerous awards from prestigious industry associations. While the resort mitigates its impact on natural capital and complies with local regulations, the impact of other actors on the assets in the landscape are beyond its control, as are potential shocks. The resort can influence shared action to protect the shared assets, but it cannot do it alone.

INDUSTRY DRIVERS

POLICY ENVIRONMENT

BUSINESS AND INSTITUTIONAL CAPACITY

STAKEHOLDERS AND NETWORKS

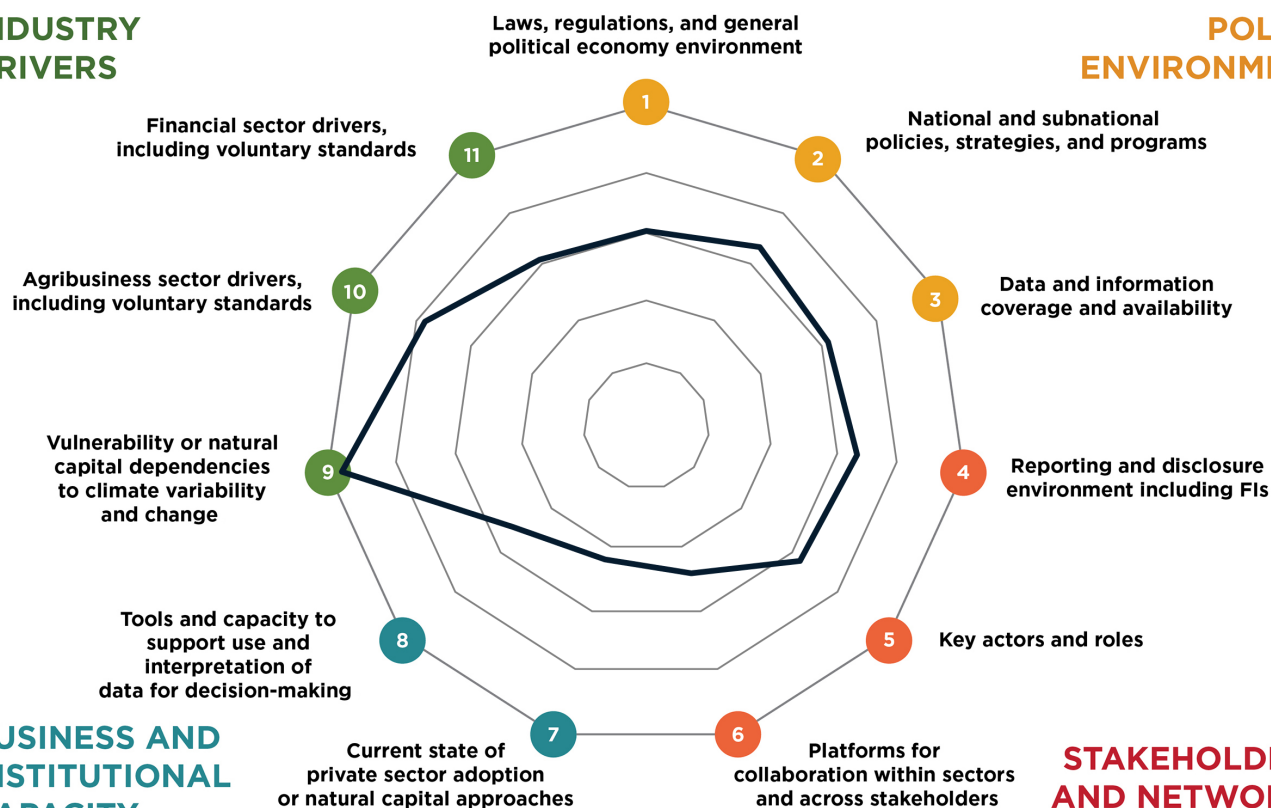


FIGURE 3 Diagnostic tool on the enabling environment for adoption of natural capital measurement and valuation in the tourism industry in Palawan.

Source: White, Elizabeth, Mark Gough, James Spurgeon, and Bilal Rabill. 2020. "Using Natural Capital Approaches to Manage Shared Dependencies – Delivering Sustainable Development and Enhanced Resilience."

Local market knowledge informed solutions to underpin tourism's continued success. In El Nido, businesses, local governments, and NGOs used a diagnostic tool¹⁷ to better understand the factors that might catalyze shared solutions around managing Blue Natural Capital and ensure its long-term viability. The diagnostic consists of four elements: (a) policy environment; (b) stakeholders and networks; (c) business and institutional capacity; and (d) industry drivers.

Stakeholders were able to recognize the real value of the natural capital base through the assessment and realize that business as usual was not a viable way forward.¹⁸ They could then identify measures to slow down the degradation or even reverse it. Figure 3 illustrates the strengths (shades of green) and areas of challenge (orange, yellow, and red) in the market. While the prevailing policy environment and general awareness of the risks to natural capital rated high, the overall readiness of the private sector proved to be a work in progress, with early signs of industry mobilizations and collaboration but no clear game plan to collaborate and act to preserve the natural capital on which the local market depends.

Enforcement and implementation of policies and regulations were mixed. Comprehensive policy governs the management

of environmental impacts both nationally and in Palawan, but a lack of enforcement capacity hinders effective implementation. Various Philippine government agencies collect data on natural capital. This data is relatively coarse, limited to a few sites, and challenging to deploy more broadly. This limits the information that the private sector can access and integrate into its analyses to better understand natural capital dependencies. Improved access to open-sourced, geospatial data from big data and remote sensing could be useful. Additional partnerships with the World Bank's Global Program on Sustainability, which encompasses the WAVES program, could also help to derive additional ecosystem services data in southern Palawan.

Progress hinges on improved private sector initiatives and practices and public sector support. Tour operators in El Nido noted the importance of collective action to reduce damage to the marine environment by less damaging boat anchoring and improved tourist education to reduce coral reef trampling.

Some solutions were challenging as they involved upfront actions at the market level that had short-term financial implications (for example, a reduction in the number of tourist arrivals). Other solutions required more robust public sector

support, including municipal wastewater treatment and solid waste management, more effective and transparent use of funding for low-impact mooring lines, and control of the number of boats accessing individual sites.

Action areas included capping the number of tour boats at sites and diversifying the offerings, increasing fees that could then be used for protective measures, and strengthening enforcement of regulations and capacity of the protected area's office. Improved access to liquidity for smaller companies during the transition period from BAU to EM was also identified as a priority to help with natural capital preservation. Innovative financial instruments such as Blue Bonds or Natural Capital Bonds present another opportunity to mobilize revenue streams at the landscape level to ensure natural capital preservation

Investment and Business Opportunities in Emerging Markets

Private sector opportunities in the blue economy abound, but long-term sustainability is at risk. The Blue Economy covers several traditional sectors which represent opportunities for the private sector. The environmental and social risks and challenges with many of these sectors are generally well understood and documented: much of capture fisheries are unsustainable; aquaculture can destroy mangroves and can be a source of marine pollution; plastic pollution in urban coastal areas leads to ocean pollution, etc.

Opportunities for private sector participation in the traditional areas of the Blue Economy may be increasingly constrained by the limited natural capital base that is degrading rapidly in many parts of the world. The private sector can be part of the solution and bring policies and practices that sustain or even rebuild the natural capital base to support sustainable, resilient growth of the Blue Economy. Opportunities include on-land plastics management, stronger circularity measures, and low-impact, nature-based tourism, among others. In many of these cases, understanding the health of the natural capital and vitality of ecosystem services will be critical to charting a path to a sustainable Blue Economy.

Nature-based tourism is driving the global tourism industry. The global tourism industry has been growing faster than the global economy. Nature-based tourism is the fastest-growing subsegment within the tourism sector³ and includes tourism that relies on experiences directly related to natural attractions. Furthermore, tourism activities not meeting the definition of nature-based tourism also rely heavily on natural capital for the ecosystem services they provide, directly and indirectly (e.g., water and food).

IFC's long-standing support to the tourism sector has demonstrated how tourism is a major contributor to

employment, foreign exchange earnings, and tax revenues for developing countries. Furthermore, and as confirmed through the El Nido case, tourism generates economic activity for small- and medium-sized businesses that supply goods and services both during construction and operations.

The Way Forward

A more resilient tourism market depends on natural capital.

The El Nido case provides useful insights into the types of measures and outcomes associated with enhanced management of the natural capital upon which the tourism market depends. El Nido's tourism future depends heavily on coral reefs and water quality, as does the future of hundreds of similar tourism destinations around the world. Healthy corals provide a naturally regenerating structure that helps to absorb wave energy, which is extremely important in reducing erosion and coastline flooding associated with major storms.

This, in turn, protects communities and ecosystems in places like Bacuit Bay and surrounding areas. Increased climate variability¹⁹ (including higher temperatures, changing rainfall patterns, and rising sea levels) is expected to have significant impacts on coastal and marine environments and, subsequently, on tourism. The risk of ocean warming, acidification, and poor water quality is greater in Bacuit Bay than elsewhere in the area because the prevailing currents do not flush the water as fully. When the resulting coral bleaching and loss of ecological functions are coupled with other stresses like unplanned development, the effects on coastal tourism markets and the economy can be acute.

Lower fishing yields affect coastal communities' livelihoods and businesses dependent on caught fish. Stakeholder data, literature, willingness to fund surveys, CCRES²⁰ data, and coral reef vulnerability models were all considered and integrated into the analysis to build a strong business case for an enhanced natural capital management strategy, and in turn create a resilient coastal tourism market in El Nido. The approach, tools, and methodology employed have significant potential for replication across the tourism sector. The experience in dealing with COVID-19 is also likely to provide important insights into how the economy of El Nido and its surrounding area can build resilience outside of the tourism sector. Understanding how the area adapted to a new reality will provide insights into the resilience aspects that should be further considered, as well as the policies and emergency management measures that should be implemented to prepare for future shocks.

The El Nido case demonstrates that enhancing the management of Blue Natural Capital can support a broader and more sustainable Blue Economy. Enhanced management of natural capital would protect Bacuit Bay from stresses such as poor water quality and coral trampling by tourists, and would increase business and

community support for coral restoration measures. The case demonstrates that enhanced coral resilience to environmental shocks through better management would improve the profitability and resilience of all economic actors in El Nido's tourism sector.

Additionally, enhanced coral reef quality should improve fish productivity, providing greater food security for local people in the future. The assessment proposed that the tourism market could increase profits and resilience by diversifying tourism offerings away from just a few fragile sites. This effort is a model that can be used in other coastal markets to understand shared dependencies and act to build a more sustainable and resilient market. In many cases, innovative financial instruments can help accelerate progress toward landscape goals and, in some cases, help offset short-term social costs associated with the transition to a more sustainable and resilient Blue Economy.

ACKNOWLEDGEMENTS

The authors would like to thank the following colleagues for their review and suggestions: Lorenzo Ciari, Manager, Sector Economics and Development Impact – Manufacturing,

Agribusiness, and Services, Economics and Private Sector Development, IFC; Shaun Mann, Senior Operations Officer, Africa Advisory Services – Tourism, Africa Region, IFC; Becky Last, Operations Officer, Advisory Services, East Asia and Pacific Region, IFC; and Thomas Rehmann, Senior Economist, Thought Leadership, Economics and Private Sector Development, IFC.

Please see the following additional reports and EM Compass Notes about responses to COVID-19 and about reaching unserved and underserved populations in emerging markets: *How Firms are Responding and Adapting During COVID-19 and Recovery – Opportunities for Accelerated Inclusion in Emerging Markets* (report, March 2021); *Using Blended Concessional Finance to Invest in Challenging Markets—Economic Considerations, Transparency, Governance, and Lessons of Experience* (report, February 2021); *Private Credit in Emerging Markets* (Note 98, March 2021); *How the Tourism Sector in Emerging Markets is Recovering from COVID-19* (Note 95, Dec 2021); *Using Natural Capital Approaches to Manage Shared Dependencies – Delivering Sustainable Development and Enhanced Resilience* (report, November 2021); *How Natural Capital Approaches Can Support Sustainable Investments and Markets* (Note 92, October 2021).

- ¹ World Bank. 2020. "Building Back Better: Pursuing a Greener, More Inclusive, and Resilient Recovery." November 27. <http://documents1.worldbank.org/curated/en/404661606955558548/pdf/Building-Back-Better-Pursuing-a-Greener-More-Inclusive-and-Resilient-Recovery.pdf>.
- ² OECD. 2016. "The Ocean Economy in 2030." <https://www.oecd.org/environment/the-ocean-economy-in-2030-9789264251724-en.htm>.
- ³ World Bank. 2017. "What is the Blue Economy." June 6, 2017. <https://www.worldbank.org/en/news/infographic/2017/06/06/blue-economy>
- ⁴ UNCTAD. 2020. "The Blue Economy and COVID-19 Pandemic – World Oceans Day." (Online Conference), June 10, 2020. <https://www.youtube.com/watch?v=sQV1s5IBVHY>.
- ⁵ Brumbaugh, Rob and Pawan Patil. 2017. "Sustainable Tourism Can Drive the blue economy: Investing in Ocean Health is Synonymous With Generating Ocean Wealth." Voices: Perspectives for Development (blog), May 22. https://blogs.worldbank.org/voices/Sustainable-Tourism-Can-Drive-the-Blue-Economy?fbclid=IwAR08a_zb64_gPW4VZOLykbvcgRbCK9eZHqMbKZmLFndx_Z6RiIMKfjJQ.
- ⁶ It is useful to think of GDP as a "return on wealth." GDP is calculated by looking back on the previous year's economic activity and is considered a "flow" measure. Wealth and its composition tell us if the portfolio of assets or "stocks"—produced, natural, human capital, social capital—are balanced to support GDP growth in the long term. Wealth provides information about the long-term health of an economy, its capacity to sustain growth, reflecting depreciation and depletion of assets, and whether investments and accumulation of assets are keeping pace with population growth. See <https://www.worldbank.org/en/news/feature/2018/01/30/the-changing-wealth-of-nations-2018>.
- ⁷ See the UNWTO Tourism Data Dashboard at <https://www.unwto.org/unwto-tourism-dashboard>.
- ⁸ Vyawahare, Malavika. 2020. "Evidence that fish flourish in a community-managed marine area offers hope." Mongabay, May 20. <https://news.mongabay.com/2020/05/evidence-that-fish-flourish-in-a-community-managed-marine-area-offers-hope/>. <https://news.mongabay.com/2020/05/evidence-that-fish-flourish-in-a-community-managed-marine-area-offers-hope/>.
- ⁹ Greenfield, Patrick, and Peter Muiruri. 2020. "Conservation in Crisis: Ecotourism Collapse Threatens Communities and Wildlife." The Guardian, May 5, 2020. <https://www.theguardian.com/environment/2020/may/05/conservation-in-crisis-covid-19-coronavirus-ecotourism-collapse-threatens-communities-and-wildlife-aoe>.
- ¹⁰ See UNESCO World Heritage Listing for Tubbataha Reefs Natural Park, Province of Palawan, The Philippines. <https://whc.unesco.org/en/list/653>.
- ¹¹ Mufson, Steven. 2018. "Moody's Analytics Says Climate Change Could Cost \$69 Trillion by 2100." The Washington Post, July 8, 2018. https://www.washingtonpost.com/climate-environment/moodys-analytics-says-climate-change-could-cost-69-trillion-by-2100/2019/07/02/f9fb94ac-99cb-11e9-916d-9c61607d8190_story.html.
- ¹² A "ridge-to-reef" system comprises the inland watershed, coastline, and offshore islands and coral reef.
- ¹³ See website of the El Nido Municipal Tourism Office. EL NIDO TOURISM: Travel guide to Palawan Island, Philippines. <https://www.elnidotourism.com/>.
- ¹⁴ Based on a carrying capacity study conducted in 2010
- ¹⁵ Formoso, Celeste Anna. 2018. "Getting Tourism Management Better in El Nido." Philippine News Agency, December 3, 2018. <https://www.pna.gov.ph/articles/1055539>.
- ¹⁶ In contrast, compared to a gradual increase to a longer-term plateau for nature and adventure-based tourism (Plumpton 2017).
- ¹⁷ White, Elizabeth M., Bilal Rahill, Mark Gough, and James Spurgeon. 2020. "Using Natural Capital Approaches to Manage Shared Dependencies – Delivering Sustainable Development and Enhanced Resilience." November 2020.
- ¹⁸ The landscape approach included both a watershed and coastal bay. By taking this joint landscape and seascape approach, the full range of relevant impacts and dependencies to each stakeholder group (accommodations and resorts, tour and dive operators, fishermen, wider economy, and government) could be accounted for when comparing the three management options. This broad assessment captured a range of impacts occurring as a result of tourist arrivals, dive and boat tour activities, sedimentation runoff, and sewage runoff (pollution).
- ¹⁹ Increased climate variability and climate change are already impacting the tourism industry and are likely to continue. "The projections for 2020 and 2050 are that annual mean temperature in the Philippines is expected to rise by 0.9°C to 1.1°C by 2020 and between 1.8°C and 2.2°C by 2050. Seasonal rainfall patterns will change substantially based on the 2020 and 2050 projections." (direct quote from <https://www1.pagasa.dost.gov.ph/index.php/93-cad1/472-climate-projections>).
- ²⁰ CCRES. No date. "Reef React: A Coral Reef Vulnerability Model. User Guide.