TOURISM AND SEAFOOD CONSUMPTION: PATHWAYS TO SUSTAINABLE FISHERIES IN COASTAL AND ISLAND STATES

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EXECUTIVE SUMMARY

This white paper presents the first global estimate of seafood consumption linked to the tourism sector across 175 coastal countries in 2022. We estimate that international and domestic tourists in coastal countries consumed 5.8 million t of seafood in 2022; tourism employees consumed a further 1.2 million t, bringing the total tourist sector consumption to 7.0 million t, or approximately 3.1% of total global fisheries and aquaculture production. Tourists in Asia accounted for 65% of global tourist seafood consumption, followed by Europe at 18%. China's tourism sector emerged as the largest consumer of seafood, accounting for 47% and half of tourists' and tourism employees' global consumption, respectively. Indonesia and Spain followed China to make up the top 3 countries in terms of tourists' seafood consumption.

While the tourism sector accounts for about 3.1% of global seafood production, its share is considerably higher in regions where fisheries are central to livelihoods, culture and food security, particularly in Small Island Developing States (SIDS). To illustrate, our analysis, based on 49 SIDS in our sample, suggests that the amount of seafood consumed by tourists may be equivalent to 31% of local artisanal fisheries catch from these same SIDS. While not all seafood consumed by tourists is sourced locally, this study shows that tourism demand can materially influence artisanal fisheries and coastal markets. Moreover, tourism not only concentrates seafood demand geographically but also amplifies it per person. In fact, our analysis suggests that international tourists consume seafood at a rate that is around five times their national consumption rates when travelling to coastal destinations.

Overall, our findings highlight that both tourists and tourism employees have a role to play in driving sustainability initiatives in the tourism sector. SIDS are a particularly important regional group to focus on, as this is where marine tourism and its associated environmental impacts are concentrated.

Noted limitations in our analysis include data gaps on the number of marine and domestic tourists, tourists' seafood consumption patterns, and the share of imports in tourist consumption. While these gaps highlight the need for further research, our study is nevertheless the first estimate of seafood consumed by the tourism sector globally. It highlights that, as a consumer of seafood, tourism has a key role to play in helping shift fisheries toward sustainability, resilience and equity in the very places where oceans matter most.

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01 INTRODUCTION

Tourism is one of the world's largest economic sectors and a critical pillar of many national economies. Before the COVID-19 pandemic, international arrivals reached 1.5 billion (2019), and activity has since rebounded toward (and in many regions surpassed) pre-pandemic levels (UNWTO 2019; UNWTO 2024). Coastal and marine tourism makes up at least 50% of global tourism, worth an estimated 4.6 trillion USD - over 5% of global GDP (Ocean Panel 2020). As one of the largest ocean-based industries (OECD 2016), the importance of tourism is amplified in Small Island Developing States (SIDS), where it routinely contributes 20–30% of GDP and can exceed 50% in some destinations, serving as a primary source of foreign exchange and employment (Ocean Panel 2020).

In these same places, fisheries are both livelihoods and identity. Fresh, locally sourced seafood is a cornerstone of coastal tourism, shaping perceptions of authenticity while underpinning incomes in small-scale fisheries (SSFs) (Rodrigues and Villasante 2016). Experiencing local food is in itself a tourist attraction (Pascoe et al. 2023). Indeed, many coastal tourists enjoy the taste of fresh seafood (Chang et al. 2008), and having locally caught seafood meals is an important part of the holiday experience (Voyer et al. 2017). For example, in a survey conducted in Fernando de Noronha, northeastern Brazil, 83% of surveyed tourists reported eating fish more than once during their visit (Lopes et al. 2017). In many localities, seafood tourism and pesca-tourism (i.e., tourism activities where visitors participate in or observe fishing practices) attest to the fact that tourists are looking for opportunities to become immersed in the ocean environment (Lai et al. 2016) and enjoy locally caught, fresh seafood when visiting coastal destinations (Bhoola and Singh 2018; Pizzichini et al. 2022; Ünal et al. 2022).

Tourists tend to engage in new behaviour in terms of choice of food and amount eaten while travelling (Wang 2023), with Santos et al. (2020) indicating that tourists eat significantly more seafood and fish on their holidays. Tourism demand for seafood has in fact driven increased fishing pressure in many localities, amplifying pressure on popular, often vulnerable species such as lobster, snapper, and grouper (Lopes et al. 2017; Rubio-Cisneros et al. 2019; Miller 2022). Broader stressors such as climate change, habitat degradation, and illegal, unreported, and unregulated fishing further exacerbate the impacts of tourism demand (IPCC 2019; Sumaila et al. 2019, 2020; FAO 2024).

Over the past two decades, market-based seafood initiatives such as eco-labels, buyer commitments, traceability schemes, and Fishery Improvement Projects (FIPs) have mobilized powerful levers

in retail-centric supply chains (Jacquet et al. 2010; Parkes et al. 2010; Bush et al. 2013; Monterey Bay Aquarium 2020). However, despite its substantial and place-based seafood footprint, the tourism sector remains under-represented in these frameworks. There is thus an opportunity for tourism to influence practices that are difficult to reach through conventional retail market channels if the sector is made visible and actionable within sustainability strategies.

A critical barrier is the evidence gap. To date, there is no comprehensive global estimate of seafood consumption attributable to the tourism industry. Fisheries statistics typically aggregate demand under household, retail, or generic food-service categories, while tourism statistics rarely quantify food consumption by category or species. As a result, tourism's seafood footprint is largely invisible in national accounts and global assessments, limiting the ability of governments, non-governmental organisations, and industry to design targeted interventions or to recognize tourism as a partner in sustainable fisheries and marine ecosystem conservation (Cisneros-Montemayor & Sumaila 2010; Teh et al. 2018; UNWTO 2019; FAO 2024).

This gap matters most where the stakes are highest. In SIDS and coastal developing states where small-scale fisheries supply a significant share of seafood for direct human consumption and where tourism is central to GDP, and where unmanaged tourist demand can outpace sustainable catches, reshape local markets, and raise equity concerns (Cinner et al. 2016; Wabnitz et al. 2018; FAO 2024). Conversely, when tourism supply chains are shortened and formalized through transparent procurement, species diversification, and stronger community linkages, benefits can be retained locally while improving fisheries outcomes (Wabnitz et al. 2019; Ocean Panel 2020).

This study addresses the evidence gap by presenting the first global estimate of seafood consumption associated with the tourism industry in coastal countries. We aim to answer: How much seafood do tourists and tourism employees consume in each coastal country? Our results provide an indication of tourism's impact on global fisheries production. In doing so, it sets the stage for tourism to become a market-based driver of fisheries sustainability through practical pathways such as local procurement, menu diversification, and direct partnerships with fishers.

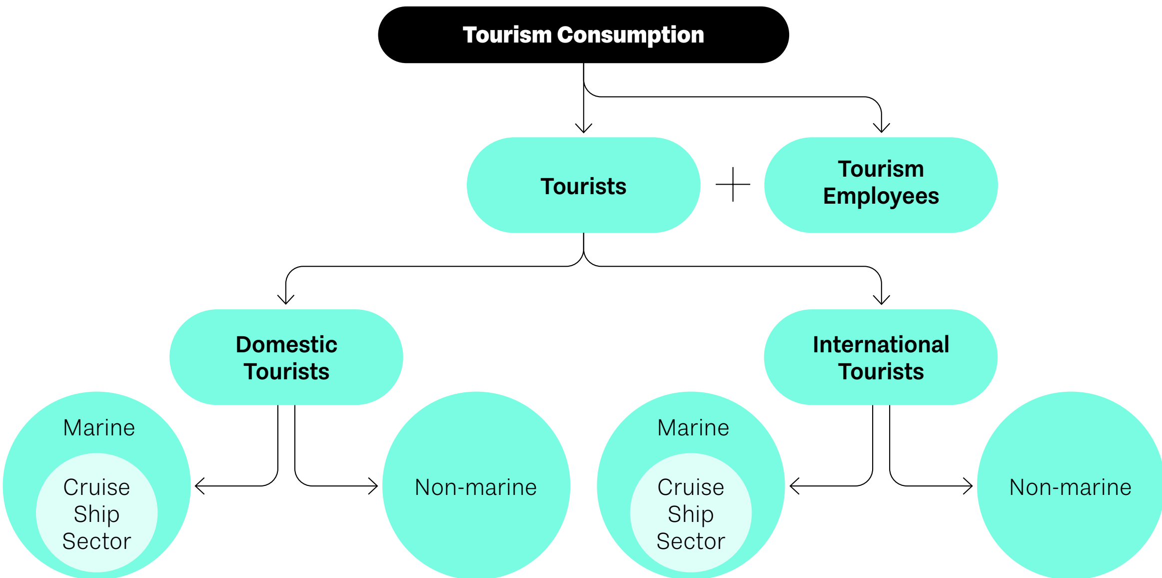
02 METHOD

2.1 STUDY FRAMEWORK

We aim to capture fish and seafood consumption by the tourism industry, inclusive of tourists and tourism sector employees (Figure 1). Total fish and seafood (abbreviated as 'seafood' hereafter) consumption is estimated as the sum of two segments: 1) tourists and 2) tourism employees. The tourist segment is further broken down into domestic and international tourists. All tourists are segregated into marine and non-marine tourists. In this study, we use marine tourism to encompass both coastal and marine tourism, i.e., tourism that is focused on 'sun and beach' activities and/or experiencing local coastal related culture.

Due to the prominence of food served aboard cruise ships, we also estimate the quantity of seafood consumed by the cruise ship sector. This sector is also singled out because of its ability to promote the serving of sustainable seafood aboard cruise ships (e.g., CLIA Alaska 2025; MSC 2025). We sum up the tourist and employee segments to obtain the total amount of seafood consumed by the tourism sector. Consumption by the cruise ship sector is reported separately because cruise ship passengers and crew are likely already accounted for in international tourist arrivals and tourism industry employee statistics.

Figure 1: Framework for estimating seafood consumption by the tourism sector.



It is estimated that around half of all international tourists travel to coastal areas (Ocean Panel 2022). Depending on the destination country, tourists may be entirely marine tourists, e.g., tourists to small island states. Since most countries do not report the percentage of marine tourists (out of total international tourist arrivals), we use a rule based approach to determine the number of marine tourists to each country (Section 2.2.1).

As local seafood consumption forms part of the tourist experience, a main premise of our analysis is that marine tourists consume more seafood than they would normally do at home (Santos et al. 2020). We express this through a 'seafood consumption factor' (f), which is supported with empirical data and findings from the literature (detailed in Annex 2).

Since our main goal is to highlight the interaction between tourism and marine fisheries, our analysis focuses on coastal countries, as this increases the likelihood that the fish consumed are marine fish. However, we acknowledge that this does not exclude the possibility that tourists and tourism employees in coastal countries may consume non-marine and/or cultured fish. This study covers 175 countries and territories for which tourism data can be obtained from the United Nations World Tourism Organization (UNWTO) (see Section 2.2). The analysis year is 2022, which is the most recent year for which UNWTO tourism data was available at the time of this study. Tourism in many countries was still recovering from the Covid-19 pandemic in 2022; thus, this study's results reflect tourism conditions that are at a juncture of the minimal travel during Covid-19, and recovery to pre-Covid levels. We present the main approach for estimating seafood consumption in the following sections. A detailed methodological description, including rationale for our assumptions and data sources, is provided in Annex 2.

2.1.1 International tourist seafood consumption

The amount of seafood consumed by international tourists is estimated by multiplying the number of international (marine + non-marine) arrivals to a country by the amount of seafood consumed during the tourists' stay at the destination country (Annex 2). Tourists' baseline seafood consumption is based on the national seafood consumption rate (FAO 2024, Annex 3 Table 1) of the tourist's country of origin (Wabnitz et al. 2018). To account for marine tourists' tendency to consume more seafood than they normally would at home (Santos et al. 2020), we increase marine tourists' national seafood consumption rate by a 'seafood consumption factor' (f) (Section 2.2). Conversely, non-marine tourists are assumed to consume the same quantity of fish that they normally would at their home country (i.e., their national rate of seafood consumption).

2.1.2 Domestic tourist seafood consumption

Seafood consumption by domestic tourists follows the same approach as for international tourists. An exception is made for small island nations. Due to their small size, it is likely that all residents already stay in coastal areas, and the national seafood consumption rate presumably already reflects high fish consumption. Consequently, for these small island states, we do not apply the 'seafood consumption factor' to domestic tourists' national seafood consumption rate (Annex 2).

2.1.3 Tourism employee seafood consumption

We account only for the seafood that is consumed by tourism employees while they are actively engaged in their tourism job. Therefore, the starting point of our analysis is the number of hours worked by tourism employees. Second, we account for seasonality in the tourism industry by indexing the number of months employees work to the monthly trend in international tourist arrivals. Finally, we multiply the seasonally adjusted number of days tourism employees are actively employed per year by the national seafood consumption rate and the total number of tourism employees per country to estimate the total amount of seafood consumed by tourism employees annually (Annex 2).

2.1.4 Cruise ship sector seafood consumption

Seafood consumption by the cruise ship sector is estimated for the sector as a whole instead of by country since cruise ships typically stop at more than one destination. Total consumption is estimated as the quantity of seafood consumed by cruise ship passengers and crew during cruise voyages in a given year (Annex 2).

2.2 MARINE TOURISM VARIABLES

While approximately half of all tourism is estimated to be marine or coastal in nature (Ocean Panel 2022), very few countries actually monitor statistics specific to marine tourism, including the number of marine tourists, and the amount of seafood consumed by tourists. To fill in these gaps, we had to make assumptions based on the best existing data, described below:

2.2.1 Marine tourist percentage (m)

Data for countries that report the number of coastal or marine tourists mainly refer to the percentage of tourists who visited the coast; this ranged from 10% up to 75% of total tourists (Annex 2 Table 1).

To estimate the number of marine tourists for all other countries, we assign m – the marine tourists percentage, to the number of international or domestic tourists as follows:

a) For small island nations where sun and beach tourism is the main attraction e.g., islands in the Caribbean and Oceania, we assume that m=100%.

b) For larger island countries (e.g., Australia, Indonesia, Japan etc.), we use Australia1 as the basis to assign m = 70%. In addition, all countries and territories with coral reefs are assigned a default of m=70%, unless it is a small island country/territory, in which case m=100%.

c) Coastal continental countries – We divided all other coastal countries into two groups:

i) High coastal tourism – regions well known for coastal/beach tourism are assigned m = 70%. This includes countries in the Mediterranean, Coral Triangle, Central America, and East Africa (Honey and Krantz 2007).

ii) All others – for all other countries not included in (i), we assume that m is not higher than the global average m of 50%. We assign m = 30%, which corresponds to the mid-point of the lowest reported m (10%) and 50% (see Annex 3 Table 2).

2.2.2 Tourism seafood consumption factor (ƒ)

We used two approaches to estimate the tourism seafood consumption factor. The first involved a desktop review of relevant literature, and the second made use of Iberostar Resorts' purchasing data, which covered 49 resorts in 7 countries (Annex 2).

1) Literature review: Four relevant studies (Felin and Noriega-Curtis 1989; Smith and Zeller 2016; Lopes et al. 2017; Monteiro and Ferro 2017) indicated that the quantity of fish and seafood eaten by tourists ranged from 0.33 to 0.49 kg per capita per day - this is equivalent to 5 to 19 times more fish compared to the tourists' average consumption in their home countries. All the case studies are conducted at island destinations, and it is reasonable to assume that the amount of fish consumed by tourists at non-island destinations may be lower. To account for this, we apply the lower range of the scale (5 times) to represent ƒ.

2) Iberostar Resorts data: There were two sets of data covering 49 Iberostar resorts across 7 countries (Brazil, Dominican Republic, Mexico, Spain, Morocco, Montenegro, Jamaica) for the time period 2020-2024: i) Purchasing data: This covered the quantity of fresh and frozen fish purchased by each resort, and also the number of guest stays and number of staff labour days. This dataset enabled us to estimate the daily seafood consumption rate by resort guests and staff. ii) Guest nationality data: This provided the percentage breakdown of guests' nationality at each resort. By linking guest's nationality to their national fish consumption rate, we calculated a weighted average national seafood consumption rate for each resort. This was then compared to the quantity of seafood consumed by guests at the resort level (derived from i above). The ratio of national to resort level seafood consumption rate gave the 'tourism seafood consumption factor (f), which came to 7.56 across all Iberostar resorts (Annex 2 Table 2). This value falls within the lower end of the 5 to 19 range found in the literature. To keep our estimate conservative, we apply a seafood consumption factor of 5 to estimate the seafood consumption by marine international tourists.

[1] According to Tourism Australia, 70% of international visitors to Australia participate in coastal and aquatic experiences (https://www.tourism.australia.com/en/resources/campaign-resources/past-campaigns/aquatic-and-coastal.html).

03 RESULTS

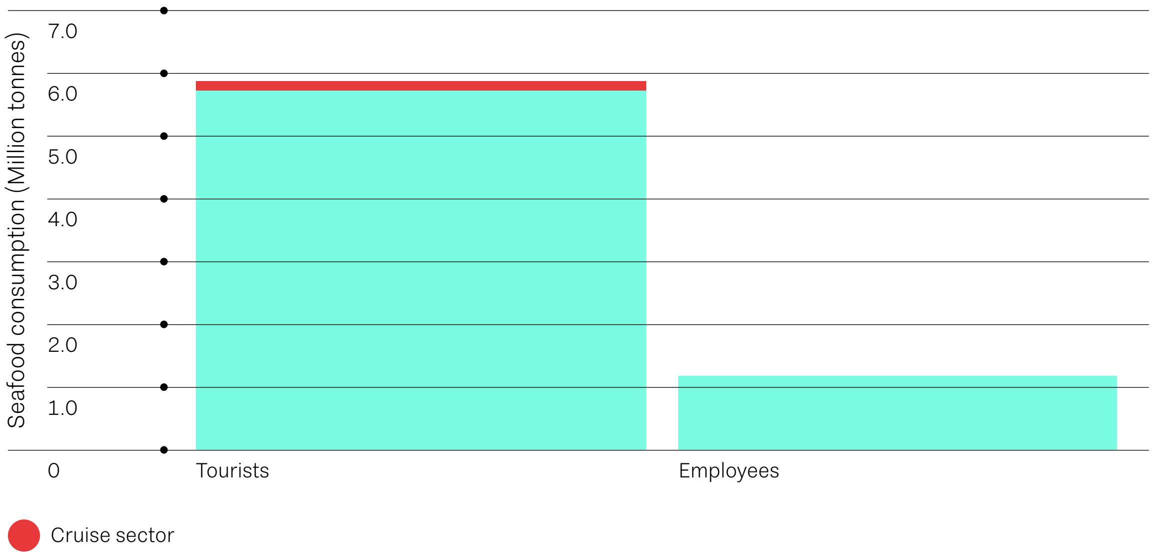
3.1 ESTIMATED SEAFOOD CONSUMPTION

Total consumption by tourism segment

Estimated seafood consumption by international and domestic tourists totalled 0.65 ± 0.01 million t and 5.19 ± 0.21 million t, respectively, for a total of 5.83 ± 0.21 million t. This was equivalent to an average of 0.11 kg and 0.13 kg of seafood consumed per person per day by international and domestic tourists, respectively, during their stay at the destination country. Marine tourists made up an estimated 57% of total international arrivals, but accounted for 90% of the 0.65 million t consumed by international tourists. On average, marine tourists consumed an estimated 0.17 kg of seafood per person per day, compared to 0.02 kg per person per day by non-marine tourists. Consumption by employees was 20% that of tourists, at an estimated 1.18 ± 0.05 million t.

Adding tourist and employee consumption provides a total of 7.01 ± 0.26 million t of seafood consumed by the tourism sector in 2022. As a component of the tourism sector, cruise ship passengers and crew consumed an estimated 61,187 t (Figure 2).

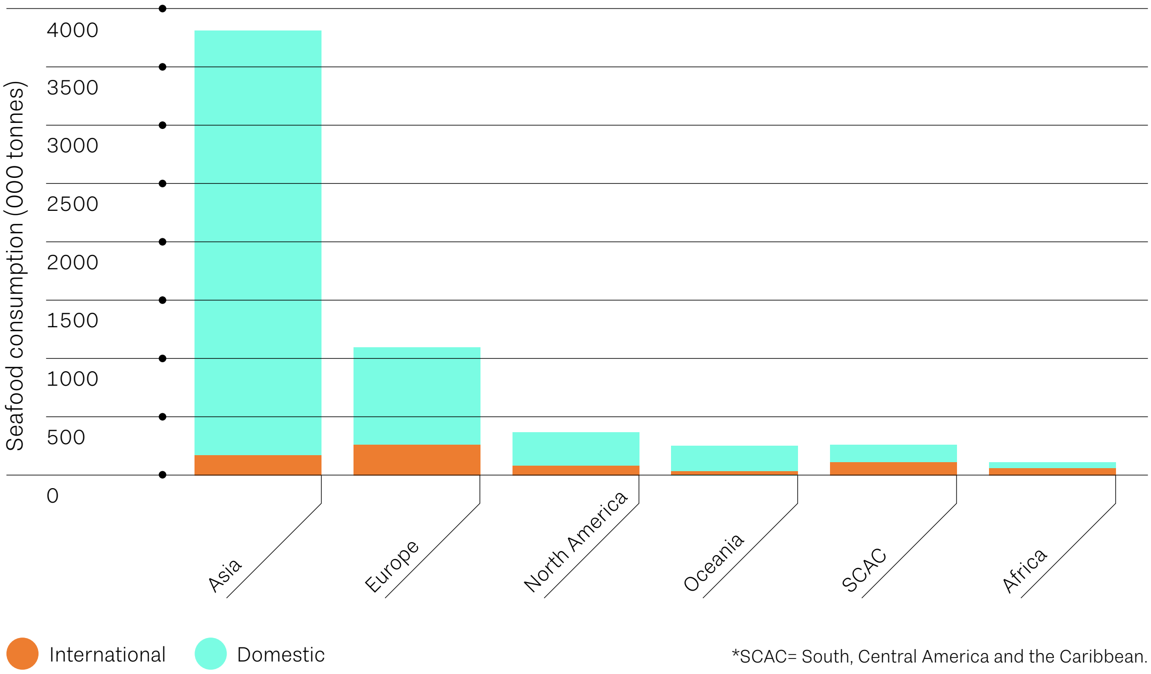
Figure 2: Estimated seafood consumption by tourists, tourism employees, and the cruise ship sector.



Tourist consumption

Regionally, tourists in Asia consumed almost two thirds (65%) of the estimated total seafood, while tourists in Europe, the second largest regional group, consumed 18% of the global total. Tourists in Africa consumed the least (2.1%). Consumption by international tourists was highest in Europe (36% of international total), whereas domestic tourist consumption was highest in Asia (69% of the domestic total) (Figure 3). The dominance of domestic tourist consumption in Oceania is driven by Australia and New Zealand.

Figure 3: Estimated seafood consumption by international and domestic tourists in 2022, grouped by region.



By country, China had by far the highest overall tourist consumption, accounting for almost half (47%) of the global total. This was followed by Indonesia and Spain, which each accounted for around 6% of the global total. Together, the top 10 countries in terms of estimated tourist consumption made up 80% of the global total (Figure 4).

A different picture emerges when we look at per capita consumption by international tourists. The top 10 destination countries where international tourists consumed the most seafood per capita were all SIDS. International tourists to Wallis and Futuna and Nauru consumed the most, at 0.56 kg/person/day. In comparison, international tourists to China, the country with highest tourist seafood consumption (Figure 4), consumed 0.4 kg/person/day.

Figure 4: Top 10 countries with highest estimated consumption of seafood by tourists in 2022.

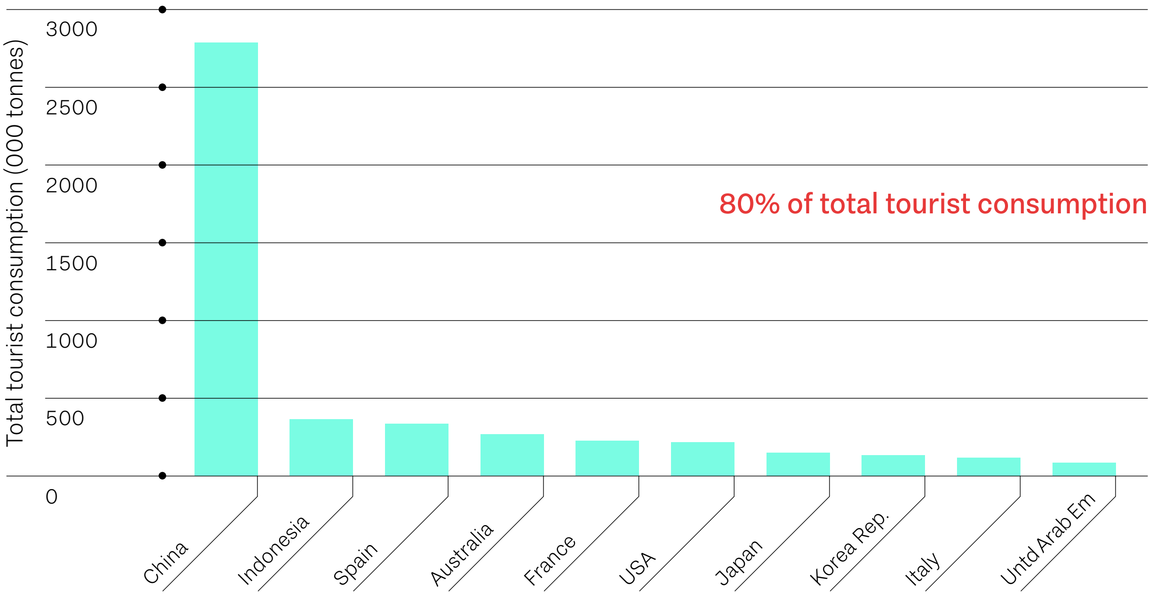
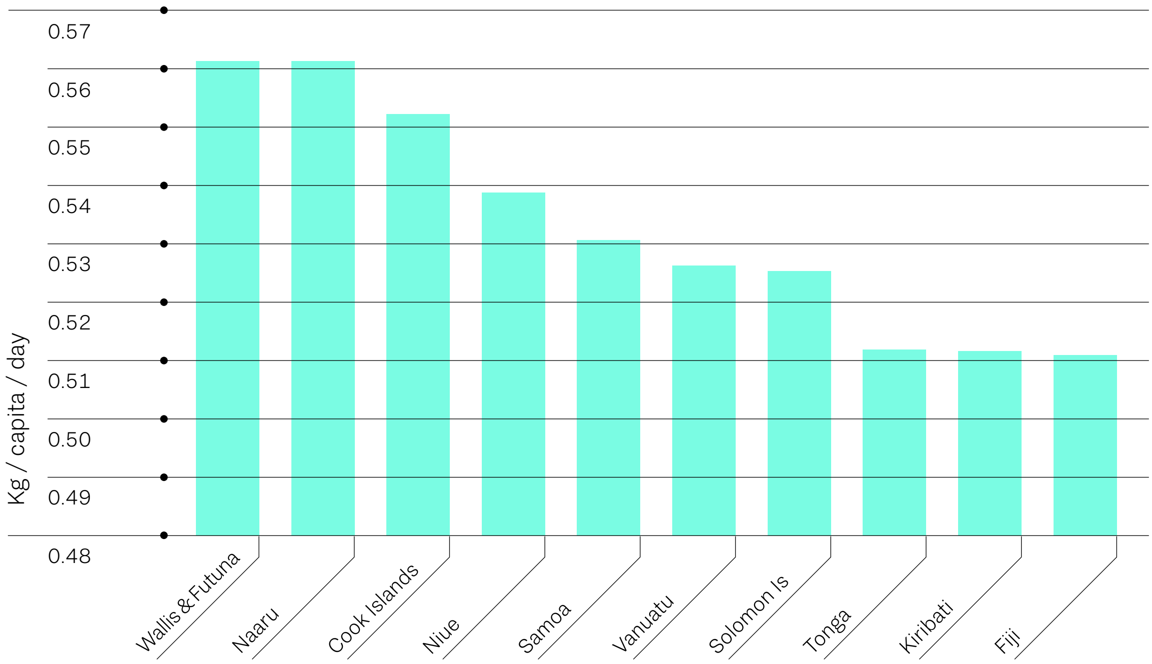


Figure 5: Top 10 countries with highest estimated per capita seafood consumption (kg/capita/day) by international tourists.



China's tourism employees accounted for half of the total estimated seafood consumed by tourism employees worldwide. All other countries consumed much less, with tourism employee consumption in Indonesia being only 17% that of China's. Altogether, the 10 countries with highest estimated consumption accounted for 82% of total global seafood consumed by employees. Notably, except for the USA, all other countries listed in Table 1 are in Asia.

Tourism employee consumption

Table 1: Top 10 countries with highest estimated tourism employee seafood consumption

Country	% Total
China	50
Indonesia	9
Japan	5
Vietnam	3
USA	3
Bangladesh	2
Korea	2
Philippines	2
Thailand	2
India	2

Cruise Ship sector

There were 20.4 million cruise passengers worldwide in 2022, with a collective estimated seafood consumption of 56,604 t. Estimated consumption by 300,000 cruise ship crew amounted to 4,584 t, for a total of 61,187 t of seafood consumed by cruise ship passengers and crew.

3.2 IMPACT OF INTERNATIONAL TOURISTS' SEAFOOD CONSUMPTION AT GLOBAL AND REGIONAL SCALE

In the global context, the estimated impact of tourism seafood consumption (~7.01 million t) on total fisheries and aquaculture production is minimal, equivalent to around 3.1% of global fisheries and aquaculture production of 223.3 million t in 2022 (FAO 2024). However, the impact of tourism consumption has a larger fisheries impact when assessed for a particular group – the Small Island Developing States (SIDS).

First, all international tourists to SIDS are considered to be marine tourists (Annex 3 Table 2), compared to 55% of international tourists to non-SIDS countries (Annex 4 Table 1). This localised concentration implies that tourists to SIDS have a relatively greater impact on the marine and coastal environment compared to non-SIDS. Seafood consumption by tourists in the 49 SIDS in this analysis totalled 50,508 t, which is equivalent to around 31% of the 162,815 t of artisanal catch by these SIDS in 2019 (Pauly et al. 2020) (Annex 4 Table 2). While not all the seafood consumed by tourists is necessarily caught by local artisanal fisheries, this result indicates the scale of impact that tourism may have on the sustainability of artisanal marine fisheries in SIDS. Moreover, international tourists to SIDS consume an estimated 0.25 kg of seafood per person per day (Annex 4 Table 3), which is more than a third higher than the 0.17 kg per person per day consumed by international tourists to non-SIDS countries (Annex 4 Table 4). The combination of higher marine tourism concentration and higher seafood consumption rates per tourist suggest that tourists' seafood demand puts disproportionately greater pressure on marine resources in SIDS.

[2] We use artisanal catch for comparison because artisanal fisheries are most likely to provide the locally caught fresh seafood sought by tourists.

3.3 SENSITIVITY ANALYSIS

The 'seafood consumption factor' (ƒ) has the largest effect on estimated tourism seafood consumption at lower ranges of ƒ. Over the assessed range of ƒ (5-19), the biggest difference in estimated tourism consumption occurs between ƒ = 4 and 5 (15% difference) (Table 2). This difference progressively decreases as ƒ increases. At ƒ=7.56, which is the ƒ calculated from Iberostar resort data (see Annex 2), estimated tourism consumption is 37% higher than the baseline ƒ of 5. At the highest ƒ (ƒ=19), total tourism seafood consumption is triple the value estimated at the ƒ = 5 baseline. Within a global context, the highest ƒ would mean that seafood consumption by the tourism industry is equivalent to around 10% of global fisheries and aquaculture production, compared to 3.2% at the baseline ƒ.

Table 2: Estimated seafood consumption by tourists and employees (tonnes) under a range of the 'seafood consumption factors', and the corresponding impact of tourism seafood consumption, measured as % of global fisheries and aquaculture production of 223 million tonnes in 2022 (FAO 2024).

Seafood consumption factor	Tourist (international + domestic) consumption (t)	Total tourism (Tourist + employee) consumption (t)	Estimated global impact (% of global fisheries & aquaculture production)
4	4,845,948	6,024,245	2.70
5	5,876,352	7,054,649	3.16
6	6,906,756	8,085,053	3.63
7	7,937,160	9,115,458	4.09
7.56	8,514,187	9,692,484	4.35
8	8,967,565	10,145,862	4.55
9	9,997,969	11,176,266	5.01
10	11,028,373	12,206,670	5.47
12	13,089,182	14,267,479	6.40
15	16,180,394	17,358,691	7.78
18	19,271,607	20,449,904	9.17
19	20,302,011	21,480,308	9.63

04 DISCUSSION

This analysis shows that while the tourism sector accounts for a relatively small share of total global fisheries and aquaculture production, its influence on seafood demand is highly concentrated and locally significant. In 2022, international and domestic tourists in coastal countries consumed an estimated 5.8 million t of seafood, while tourism employees consumed an additional 1.2 million t. Together, this represents roughly 7.0 million t of seafood, equivalent to about 3.1% of global fisheries and aquaculture production of 223 million t in 2022 (FAO 2024). While this comparison provides useful context, the estimate should be interpreted with caution as the lack of global data on many tourism-related parameters necessitated making numerous assumptions to fill in data gaps.

The estimated proportion of seafood consumed by tourism employees (~17% of total tourism consumption), while not exceedingly high, is still substantial enough to warrant their inclusion in dialogues about seafood sustainability in the tourism sector (e.g., Mahran et al. 2025) - this goes contrary to current tourist centered initiatives. This is particularly important for China, whose tourism employees alone are estimated to account for half of the global total. The high consumption by China is driven by the large number of employees, as well as an annual national per capita seafood consumption rate of 41.58 kg, which is more than double the global average of 20.24 kg (FAO 2024). However, as over 70% of China's fisheries production is derived from aquaculture (Crona et al. 2020), the demand for marine fisheries may not be as great as in other countries where marine fisheries are the primary source of seafood.

Within the tourist group, domestic tourists need special attention, as our results show that the amount of seafood they consume is eight times higher than

that consumed by international tourists. Yet, while domestic tourism worldwide is much larger than international tourism in terms of volume and expenditure (Seyfi et al. 2024; Tuft et al. 2024), the bulk of research and investment is placed on the international market (Adla et al. 2020; Seyfi et al. 2024). This study calls for a change to the prevailing mentality when considering tourism impact on seafood sustainability, and to ensure that sustainability campaigns target both foreign and domestic tourists.

Attempts to drive tourists' behavioural changes in seafood consumption require targeting messages for different geographies. Our results indicate that the highest seafood consumption by international tourists occurs in Europe, where the Mediterranean is a top destination (Eurostat 2025), whereas domestic tourism consumption is concentrated in Asia. China emerges as a major player in shaping tourism's seafood consumption worldwide, as it dominates global seafood consumption by domestic tourists and tourism employees (52% and 47% of global total, respectively). Notably, China is already one of the largest seafood consumers in the world, with domestic seafood consumption expected to surpass production by 2030 (Crona et al. 2020). Thus, understanding Chinese tourists' consumption patterns and preferences (Li and Chen 2025) is one key priority when considering strategies for sustainable seafood consumption by the tourism sector.

The impact of tourism's seafood consumption on fisheries grows when considering where and how it is consumed. Countries with high 'marine tourist percentage', such as small island states, Mediterranean countries, and countries with extensive coastlines and/or outlying islands are those where tourism is most concentrated on the coast. Thus, while the total seafood quantity consumed by tourists is not high, it has a significant impact in certain geographical areas and fisheries. Notably, tourism is a major driver of small-scale artisanal fisheries, particularly in many small island states (Rodrigues and Villasante 2016; Rubio-Cisneros et al. 2019; Miller 2022). Indeed, being close to the sea is the main reason for visits to small island states (Manning 2016). It is at these localities that tourism seafood demand is most likely to intersect with fisheries and marine ecosystems that are already under intense exploitation, thereby driving fishing pressure to even greater rates of unsustainability. Moreover, tourists eat more seafood when travelling to these coastal destinations than they do at home (Santos et al. 2020). This also applies to cruise passengers, who consume up to 1.5 times their normal consumption patterns on cruise voyages (Veronneau and Roy 2009).

In a wider context, the "tourism seafood consumption factor" shows that tourism not only concentrates demand geographically (e.g., Contu et al. 2024), but also amplifies it per capita. Our results indicate that marine international tourists account for 90% of total seafood consumed by international tourists, even though they make up only 57% of the group. Rising and uncontrolled seafood demand poses a large risk, as it could accelerate overfishing and biodiversity loss (Jacquet et al. 2010; Wabnitz 2018). Moreover, in regions where local communities rely on fish for subsistence, tourism can exacerbate food security concerns by diverting seafood away from domestic markets toward visitor consumption, sometimes pricing out local consumers (Cinner et al., 2016).

This dynamic is particularly visible in Small Island Developing States (SIDS), where tourism is both a cornerstone of national economies and a defining influence on seafood demand. Indeed, our results indicate that SIDS are where per capita seafood consumption by international tourists is the highest. Tourists in the 49 SIDS analyzed were estimated to consume ~50, 500 t of seafood annually, a figure comparable to around a third of artisanal marine catches in these same countries (~162,800 t in 2019). While a share of this demand is likely met through imports (e.g., 40% of fish consumed in Eastern Caribbean states is imported (FAO 2014)), the numbers

highlight that in some localities, tourism consumption is of a magnitude that can directly shape the trajectory of artisanal fisheries. These findings resonate with prior work showing that seafood is deeply embedded in the tourist experience, from luxury resorts in the Maldives to small restaurants in Palau (Wabnitz et al. 2018; 2019). Tourism growth, and the subsequent influx of new residents attracted by tourism opportunities, drive up the demand for seafood (Dorsett and Rubio-Cisneros 2019), and in some instances visitor demand for seafood exceeds local community consumption (Cisneros-Montemayor et al. 2013).

Tourism growth intensifies this dynamic. The Ocean Panel (2020) projects that international arrivals will continue rising, with coastal and marine tourism remaining among the fastest-growing subsectors. This also applies to the cruise ship sector; while only consuming an estimated 61,187 t, the rising popularity of cruising (CLIA 2025) suggests that seafood demand by this sector will also continue to grow. In SIDS, tourism already contributes more than 30% of GDP on average, and in some cases over 50% (UNWTO, 2019). Even modest increases in seafood demand under these conditions can significantly influence local fisheries. In addition, it is important to note that tourism in 2022, the year of analysis for this study, was still recovering from the covid pandemic. Since then, global tourism has continued to recover, with international arrivals reaching pre-pandemic levels in 2024 (UNWTO 2025), and the growing trend is expected to continue to 2025 (UNWTO 2025); thus, it is likely that future seafood consumption by the tourism industry will only grow.

The implications are twofold. On one side, growing seafood demand from tourism can intensify pressure on fragile coastal ecosystems, favoring high-value species that are already vulnerable to overfishing. On the other hand, this same demand represents a unique opportunity to turn tourism into a driver of sustainable practices (Iberostar Group 2020). Tourism is embedded in local economies in ways that global retail markets are not, creating opportunities for trust-based procurement relationships within local fishing communities (Toby 2022), development of alternative livelihoods, and the integration of sustainability into the visitor experience (Guedri and Chakour 2015; Lai et al. 2016; Pham 2020; Suradja et al. 2024;Waters et al. 2026), for instance, by promoting invasive species as a culinary experience (Seaman et al. 2022).

As an industry that contributed to 10% of the global economy in 2024 (WTTC 2025), tourism has immense market leverage to shift the balance of seafood demand (Cisneros-Montemayor and Sumaila, 2010) and act as an example for seafood consumption by the wider population. For instance, tourism stakeholders could fill a critical gap left by retailer-driven initiatives, ensuring that market-based solutions to fisheries sustainability also benefit small-scale fisheries and coastal communities (SmartFish 2019; Peralta-Milan et al. 2020; Iberostar Group 2021; Penca et al. 2021; Shorefast PLACE Case Study 2021). Through these actions, tourism can become a driver of more equitable, resilient, and sustainable seafood systems.

Given that this is, as far as we know, the first study to estimate global seafood consumption by the tourism sector, we had to make multiple informed assumptions about tourism and seafood consumption parameters to fill in data gaps (see details in Annex 1). We recognise that using regional averages and ratios is based on a small sample of case studies and/or country data points, thereby risks over-generalising consumption and tourism patterns across geographical regions. Nonetheless, this is necessary because of the global nature of this study. We note that the assumptions used in our analysis result in an estimated seafood consumption quantity that is likely on the conservative side. For instance, while we used a 'tourism seafood consumption factor' (f) of 5, Iberostar's procurement data suggests that f is around 7.6, which would equate tourism seafood consumption to around 4.3% of global fisheries and aquaculture production. Further, sensitivity analysis of f shows that at the maximum range, estimated tourism seafood consumption could potentially be triple the 7 million tonnes estimated in this study. Overall, this study highlights the need for further research in, and improved monitoring of domestic tourism, marine tourism, and seafood consumption patterns and preferences of participants in the tourism industry.

05
CONCLUSION

This study demonstrates that tourism-driven seafood consumption is highly relevant in coastal areas. The estimated 7 million t, while accounting for only around 3% of global fisheries and aquaculture production, is considerable given that tourism is not evenly spread across coastal countries, but concentrated in specific destinations. This concentration, combined with the tendency for marine tourists to eat more seafood while travelling than they do at home, makes tourism a significant and often under-recognized factor shaping fisheries demand, especially in SIDS.

While the tourism sector is mainly focused on servicing the international market, our findings highlight that domestic tourists cannot be ignored when it comes to seafood consumption - in fact, our analysis suggests that domestic tourists consume a staggering eight times more seafood than international tourists. While seafood sustainability initiatives generally tend to focus on tourists as the consumers, our analysis also suggests the need to actively involve tourism employees, who account for 17% of the tourism sector's total seafood consumption.

Recognizing tourism as a driver of sustainability reframes the sector as an essential partner in global fisheries and ocean governance. Realizing this potential will require collaboration across governments, the private sector, NGOs, and local communities. Tourism, situated at the heart of many coastal and island economies, has the opportunity to turn seafood consumption into a catalyst for conservation, resilience, and equitable development.

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References

Adla, R., Smith, S., Ragab, A.H. & Meis, S. (2020). Domestic tourism statistics: a comparative analysis of demand data coverage and method. Tourism Review International 24: 5-21. https://doi.org/10.3727/154427220X15791346544752

Alianca, K. (2021). Community-based fisheries and sustainable seafood supply chains in Bahia, Brazil. Salvador: Alianca Kirimure Cooperative.

Aburto-Oropeza, O., Erisman, B., Galland, G. R., Mascareñas-Osorio, I., Sala, E., & Ezcurra, E. (2011). Large recovery of fish biomass in a no-take marine reserve. PLoS ONE, 6(8), e23601. https://doi.org/10.1371/journal.pone.0023601

Bhoola, S. & Singh, A. (2018). Seafood, its appreciate and capacity to contribute towards the South African tourism industry: a case study of Chinese tourists in Durban, Kwa-Zulu Natal. African Journal of Hospitality, Tourism and Leisure 7 (3).

Blakeway, R.D., Jones, G.A. & Boekhoudt, B. (2020). Controlling lionfishes (Pterois spp.) with consumption: survey data from Aruba demonstrate acceptance. Fisheries Management and Ecology 27: 227-230.

Bush, S. R., Belton, B., Hall, D., Vandergeest, P., Murray, F. J., Ponte, S., ... & Kusumawati, R. (2013). Certify sustainable aquaculture? Science, 341(6150), 1067–1068. https://doi.org/10.1126/science.1237314

Chang, Y.C., Hong, F.W. & Lee, M.T. (2008). A system dynamic based DSS for sustainable coral reef management in Kenting coastal zone, Taiwan. Ecological Modelling 211: 153-168

Chronis, A. (2012). Between place and story: Gettysburg as tourism imaginary. Annals of Toursim Research 39: 1797-1816

CLIA (Cruise Lines International Association) (2022). State of the Cruise Industry Outlook 2022. https://cruising.org/resources/state-cruise-industry-outlook-2022

CLIA (Cruise Lines International Association) (2024). 2024 Global Market Report. https://cruising.org/resource-list

CLIA (Cruise Lines International Association) (2025). State of the Cruise Industry Report 2025. https://cruising.org/resources/state-cruise-industry-report-2025

CLIA Alaska (2025). Ships serve Alaska seafood by the ton. https://akcruise.org/sustainability/sourcing-sustainable-alaska-seafood/

Cinner JE, Huchery C, MacNeil MA, Graham NAJ, McClanahan TR et al. (2016). Bright spots among the world's coral reefs. Nature 535: 416-419.

Cisneros-Montemayor, A. M., & Sumaila, U. R. (2010). A global estimate of benefits from ecosystem-based marine recreation: potential impacts and implications for management. Journal of Bioeconomics.

Cisneros-Montemayor, A. M., Christensen, V., Arreguín-Sánchez, F., & Sumaila, U. R. (2013). The global potential for whale watching. Marine Policy, 38, 129–132. https://doi.org/10.1016/j.marpol.2012.05.023

Cisneros-Montemayor, AM, Barnes-Mauthe M, Al-Abdulrazzak D, Holm-Navarro E, Sumaila UR (2013). Global economic value of shark ecotourism: Implications for conservation. Oryx 47: 381-388.

Crona, B., Wassenius, E., Troell, M., Barclay, K., Mallory, T. et al. (2020) China at a crossroads: An analysis of China's changing seafood production and consumption. One Earth 3: 32-44

Contu, G., Dessi, C., Massidda, C. & Ortu, M. (2024). Online reviews explain difference in coastal and inland tourists' satisfaction. Scientific Reports, 14:23607 doi: 10.1038/s41598-024-74918-z

Cusack, C., Sethi, S.A., Rice, A.N., Warren, J.D., Fujita, R., Ingles, J., Flores, J., Garchitorena, E. & Mesa, S.V. (2021). Marine ecotourism for small pelagics as a source of alternative income generating activities to fisheries in a tropical community. Biological Conservation, 261: 109242 https://doi.org/10.1016/j.biocon.2021.109242

Dorsett, C. & Rubio-Cisneros, N.T. (2019). Many tourists, few fishes: Using tourists' and locals' knowledge to assess seafood consumption on vulnerable waters of the archipelago of Bocas del Toro, Panama. Tourism Management, 74: 290-296

Eurostat (2025). Tourism statistics. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Tourism_statistics

FAO (Food and Agriculture Organization of the United Nations) (2014). The sustainable intensification of Caribbean fisheries and aquaculture. https://openknowledge.fao.org/handle/20.500.14283/i3932e

FAO (2022). The State of World Fisheries and Aquaculture 2022. Towards Blue Transformation. Rome, FAO. https://doi.org/10.4060/cc0461en

FAO (2024). The State of World Fisheries and Aquaculture 2024: Blue Transformation in Action. Rome: FAO. https://doi.org/10.4060/cc9930en

Ferlin, P. & Noriega-Curtis, P. (1989). A regional survey of the aquaculture sector in the Caribbean. ADCP/REP/89/40 UNDP FAO, Rome https://www.fao.org/4/t8365e/t8365e00.htm#Contents

Gelcich, S., Amar, F., Valdebenito, A., Castilla, J. C., Fernandez, M., Godoy, C., et al. (2013). Financing marine protected areas through visitor fees: Insights from tourists willingness to pay in Chile. Ambio 42, 975–984. doi: 10.1007/s13280-013-0453-z

Guedri, S.E., & Chakour, S.C. (2015). Pescatourism contribution to sustainable development of artisanal fisheries in Algeria. Journal of Economics and Sustainable Development, 16: 113–123.

Hans, V. Basil, Thoughts On Tourism and Cultural Exchange (October 01, 2025). Available at SSRN: https://ssrn.com/abstract=5552059

Haro-Bilbao, H. & Salinas-de-Leon, P. (2014). Market study on the demand for fishery products from navigable cruise tourism vessels in Galapagos. Charles Darwin Foundation.

Honey, M. & Krantz, D. (2007). Global trends in coastal tourism. Center on Ecotourism and Sustainable Development. Prepared for WWF, Washington DC.

Iberostar Group. (2020). Wave of Change: Advancing ocean conservation through tourism. Palma de Mallorca: Iberostar Group.

Iberostar Group. (2021). Lifting Up Local initiative: Supporting small-scale fisheries through tourism supply chains. Palma de Mallorca: Iberostar Group.

IPCC (Intergovernmental Panel on Climate Change) (2019). Special Report on the Ocean and Cryosphere in a Changing Climate. Geneva: IPCC.

Jacquet, J., Pauly, D., Ainley, D., Holt, S., Dayton, P., & Jackson, J. (2010). Seafood stewardship in crisis. Nature, 467(7311), 28–29. https://doi.org/10.1038/467028a

Lai, M.B., Cicia, G. & Del Guidice, T. (2016). Pescatourism, a sustainable tourist experience. Journal of Cleaner Production, 133: 1034-1042

Li, K. & Chen, Z. (2025). From abroad to home: unveiling the surge in chinese domestic travel through the lens of affective economies. Journal of Tourism and Cultural Change, 23: 345-366 https://doi.org/10.1080/14766825.2025.2521303

Lopes PFM, Mendes L, Fonseca V, Villasante S (2017) Tourism as a driver of conflicts and changes in fisheries value chains in Marine Protected Areas. Journal of Environmental Management. 200: 123-134.

Mahran, K., Ibrahim, B.A., Albarrak, H. & Elamer, A.A. (2025). Green workforce in tourism and hospitality: a systematic review and future research agenda. International Journal of Hospitality Management, 131: 104325.

MSC (Marine Stewardship Council) (2025). Holland America Line becomes first global cruise line to receive international seafood certifications. https://www.msc.org/en-us/media-center/news-media/news/holland-america-line-becomes-first-global-cruise-line-to-receive-international-seafood-certifications

References

Manning, E.W. (2016). The challenge of tourism in small island developing states (SIDS). Report to UNEP Green Economy. https://canadiancor.com/challenge-sustainable-tourism-small-island-developing-states-sids/

Miller, K.M. (2022). Disentangling tourism impacts on small-scale fishing pressure. Marine Policy, 137: 104960

Monterey Bay Aquarium (2020). Seafood Watch program: Engaging consumers and businesses in sustainable seafood. Monterey, CA: Monterey Bay Aquarium.

Monteiro, A.A. & Ferro, O. (2017). Cabo Verde: Multi-sector market study focused on tourism value chain development. Netherlands Enterprise Agency.

OECD (Organisation for Economic Co-operation and Development) (2016). The Ocean Economy in 2030. Paris: OECD Publishing. https://doi.org/10.1787/9789264251724-en

Ocean Panel (2020). Transformations for a Sustainable Ocean Economy: A Vision for Protection, Production and Prosperity. High Level Panel for a Sustainable Ocean Economy. https://oceanpanel.org/ocean-action/transformations/

Ocean Panel (2022). Opportunities for transforming coastal and marine tourism. High Level Panel for a Sustainable Ocean Economy. https://oceanpanel.org/opportunity/sustainable-coastal-marine-tourism/

Pascoe, S., Paredes, S. & Coglan, L. (2023). The indirect economic contribution of fisheries to coastal communities through tourism. Fishes, 8(3): 138 https://doi.org/10.3390/fishes8030138

Parkes, G., Young, J. A., Walmsley, S. F., Abel, R., Harman, J., Horvat, P., ... & Nolan, C. (2010). Behind the signs—A global review of fish sustainability information schemes. Reviews in Fisheries Science, 18(4), 344–356. https://doi.org/10.1080/10641262.2010.516374

Pauly, D., Zeller, D. & Palomares, M.L.D. (Editors), (2020). Sea Around Us Concepts, Design and Data (seaaroundus.org).

Penca, J., Said, A., Cavalle, M., Pita, C. & Libralato, S. (2021). Sustainable small-scale fisheries markets in the Mediterranean: weaknesses and opportunities. Maritime Studies, 20: 141-155. 10.1007/s40152-021-00222-5

Pham, T.T.T. (2020). Tourism in marine protected areas: Can it be considered an alternative livelihood for communities? Marine Policy, 115: 103891 https://doi.org/10.1016/j.marpol.2020.103891

Pizzichini, L., Andersson, T.D. & Gregori, G.L. (2022). Seafood festivals for local development in Italy and Sweden. British Food Journal, 14 January 2022; 124 (2): 613–633. https://doi.org/10.1108/BFJ-04-2021-0397

Rodrigues, J.G. & Villasante, S. (2016). Disentangling seafood value chains: Tourism and the local market driving small-scale fisheries. Marine Policy, 74: 33-42

Rubio-Cisneros, N.T., Moreno-Baez. M., Glover, J., Rissolo, D., Saenz-Arroyo, A., et al. (2019). Poor fisheries data, many fishers, and increasing tourism development: Interdisciplinary views on past and current small-scale fisheries exploitation on Holbox Island. Marine Policy, 100: 8-20

Santos, J.A.C., Custodio, S. M. & Pereira, L.N. (2020). Local food and changes in tourist eating habits in a sun and sea destination: a segmentation approach. International Journal of Contemporary Hospitality Management, 32: 3501-3521.

Sampson, H., Acejo, I., Ellis, N. & Turgo, N. (2025). Seafarers' access to health care while working on cruise and cargo vessels. Seafarers International Research Centre, Cardiff University.

Seaman, A., Franzidis, A., Samuelson, H. & Ivy, S. (2022). Eating invasives: chefs as an avenue to control through consumption. Food, Culture & Society, 25: 108-125.

Seyfi, S., Hall, C. M., & Saarinen, J. (2024). Rethinking sustainable substitution between domestic and international tourism: a policy thought experiment. Journal of Policy Research in Tourism, Leisure and Events, 16: 560–574. https://doi.org/10.1080/19407963.2022.2100410

Shorefast PLACE Case Study (2021). Fogo Island Inn and Shorefast social enterprises. Memorial University Centre for Social Enterprise.

SmartFish (2019). Building sustainable seafood markets in Mexico: Annual impact report. La Paz, Mexico: SmartFish AC.

Smith, N. & Zeller, D. (2016). Unreported catch and tourist demand on local fisheries of small island states: the case of The Bahamas, 1950-2010. Fishery Bulletin, 114:117-131 DOI:10.7755/FB.114.1.10

Sumaila U. R., Tai, T. C., Lam, V. W., Cheung, W. W., Bailey, M., et al. (2019). Benefits of the Paris Agreement to ocean life, economies, and people. Science Advances 5(2), eaau3855.

Sumaila, U. R., Zeller, D., Hood, L., Palomares, M. D., Li, Y., & Pauly, D. (2020). Illicit trade in marine fish catch and its effects on ecosystems and people worldwide. Science advances, 6(9), eaaz3801.

Suradja, I., Asih, T.S., Basir, D.D.P., Lionata, H. et al. (2024) Alternating livelihoods and coping with shocks: an examination of coastal tourism in Indonesia amidst COVID-19. Marine Policy, 170: 106379

Teh, L.S.L., Teh, L.C.L. & Jolis, G. (2018). An economic approach to marine megafauna conservation in the coral triangle: Marine turtles in Sabah, Malaysia. Marine Policy, 89: 1-10. https://doi.org/10.1016/j.marpol.2017.12.004

Toby, J. (2022). Community regeneration on Fogo Island: Place-based tourism and sustainable heritage. Sustainable Heritage Case Studies.

Tuft, C., Constantin, M., Pacca, M., Mann, R., Gladstone, I., & Vries, j. (2024). The state of tourism and hospitality 2024, McKinsey & Company.

UNWTO (United Nations World Tourism Organization) (2015). International Tourism Highlights 2015 Edition. Madrid: UNWTO. https://www.e-unwto.org/doi/book/10.18111/9789284416899

UNWTO (United Nations World Tourism Organization) (2019). International Tourism Highlights 2019 Edition. Madrid: UNWTO. https://doi.org/10.18111/9789284421152

UNWTO (United Nations World Tourism Organization) (2020). World Tourism Barometer. Madrid: UNWTO.

UNWTO (United Nations World Tourism Organization) (2021). International Tourism Highlights 2020 Edition. Madrid: UNWTO. https://doi.org/10.18111/9789284422456

UNWTO (United Nations World Tourism Organization) (2024). World Tourism Barometer, Vol. 22, Issue 2, May 2024. Madrid: UNWTO. https://doi.org/10.18111/wtobarometereng

UNWTO (United Nations World Tourism Organization) (2025). World Tourism Barometer, Vol. 23, Issue 1, January 2025. Madrid: UNWTO.

Ünal, V., Ertör, I., Ertör-Akyazi, P., Tunca, S. (2022). Making Pescatourism Just for Small-Scale Fisheries: The Case of Turkey and Lessons for Others. In: Jentoft, S., Chuenpagdee, R., Bugeja Said, A., Isaacs, M. (eds) Blue Justice. MARE Publication Series, vol 26. Springer, Cham. https://doi.org/10.1007/978-3-030-89624-9_17

Veronneau, S. & Roy, J. (2009). Global service supply chains: An empirical study of current practices and challenges of a cruise line corporation. Tourism Management, 30: 128-139.

Voyer, M., Barclay, K., McIlgorm, A. & Mazur, N. (2017). Using a well-being approach to develop a framework for an integrated socio-economic evaluation of professional fishing, Fish and Fisheries, 2017, 18(6);1134-1149

Wabnitz, C. C. C., Lam, V. W. Y., Reygondeau, G., Teh, L. C. L., Al-Abdulrazzak, D., Khalfallah, M., & Cheung, W. W. L. (2018). Ecotourism, climate change and reef fish consumption in Palau: Benefits, trade-offs and adaptation strategies. Marine Policy, 88, 323–332. https://doi.org/10.1016/j.marpol.2017.08.027

Wabnitz, C. C. C., Lam, V. W. Y., Reygondeau, G., & Cheung, W. W. L. (2019). Adapting tourist seafood consumption to climate change in Palau. Nature Sustainability, 2, 494–503. https://doi.org/10.1038/s41893-019-0302-3

Wang, S. (2023). A conceptualization of tourists' food behavior from a habit perspective. Sustainability, 15: 2662 https://doi.org/10.3390/su15032662

Waters, Y.L., Buckwell, A., Coghlan, A. & Dean, A.J. (2026). Climate engagement for vulnerable marine ecosystems – Impact of marine tourism experiences on visitors. Marine Policy, 184: 106942. https://doi.org/10.1016/j.marpol.2025.106942

WWF (World Wide Fund for Nature) (2020). Sustainable fishing tourism: Creating alternative livelihoods in the Mediterranean. Gland, Switzerland: WWF.

World Bank (2025). Metadata Glossary – International tourism, number of arrivals. https://databank.worldbank.org/metadataglossary/world-development-indicators/series/ST.INT.ARVL

WTTC (World Travel & Tourism Council) (2025). Travel & Tourism Economic Impact Research. WTTC/Oxford Economics. https://wttc.org/research/economic-impact

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