

# NO MORE SAILING IN THE DARK

Planet Tracker's new [Seafood Database](#) sheds light on the notoriously fragmented and hard to access ocean sustainability data. By examining the 50 indicators we compiled for 100 seafood-exposed corporates, users can identify companies which are most exposed to overfishing, illegal fishing and many other ocean sustainability risks (names revealed below), all in one place, and on an open access basis.

These risks are financially material since some positive correlation exists between fish stock health and company profitability. Yet disclosure is generally poor, and equally so for private and public companies, of all sizes. Alarming, only 8 out of 100 companies disclose the exact species for their entire portfolio. It is in the (financial) interests of both investors and corporates to improve transparency, including by [completing our database](#).

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# Introducing our Seafood Database – the home of fish finance data

There is no Bloomberg terminal for ocean sustainability data, which is notoriously fragmented and hard to access. And yet, that data is a **critical driver of the financial performance of ocean-dependent companies**.

## Take seafood for instance

When a company relies on natural capital (e.g. fish populations) to generate profit, any deterioration to that capital (via e.g. overfishing) is likely to impact that company's ability to generate profit. This is why the Japanese seafood industry – highly exposed to overfishing – experienced a deterioration in its financial health in the 2010s (see [Against the Tide](#)).

Ignoring overfishing risks at seafood companies is like ignoring existing smartphone penetration rates when forecasting smartphone sales at Apple or Samsung: it is ill-advised. Yet the data that allows such risk assessment (which species, harvested where, how, and in which quantity?) is hard to find, let alone consolidated in a single place.

To **empower everyone to assess overfishing risks and other ocean-related sustainability data at seafood-exposed companies**, we are today launching our Seafood Database.

This interactive database empowers users to filter through corporates within the **USD 1.8 trillion seafood supply chain** and to compare their exposure to overfishing, illegal fishing, and many other financially material ocean sustainability risks, all in one place, on an open access basis.

Browsing through the 50 indicators we compiled for our initial sample of 100 corporates, users can rank and benchmark companies, compare their financial health to their environmental sustainability, or find more information on the areas where they operate (through 136 country-level indicators), or the species they catch, farm, process or retail.

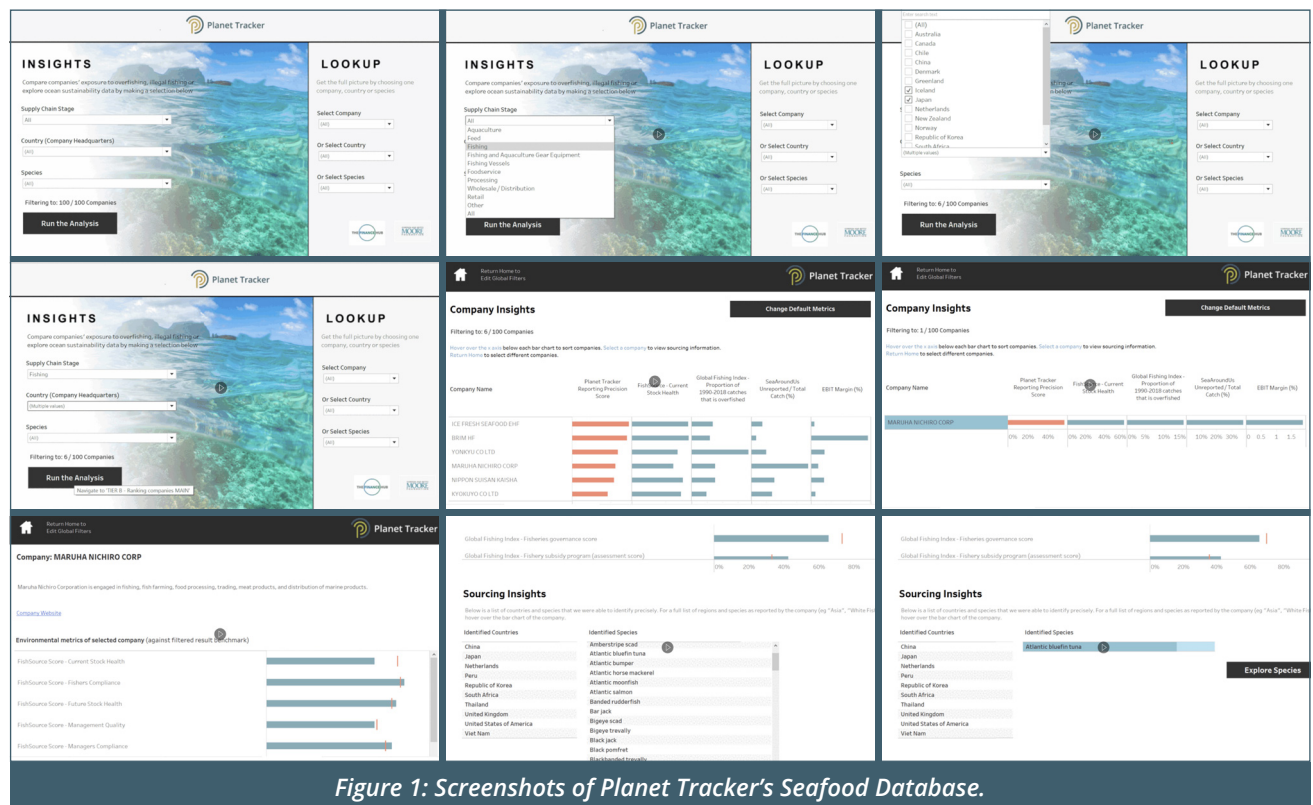


Figure 1: Screenshots of Planet Tracker's Seafood Database.



## Explore 100 seafood-exposed companies across the whole supply chain

Among a starting list of all companies with seafood exposure, we have included in our database **100 companies with a combination of high revenue** (from c. USD 200 million to c. USD 15 billion) **and high exposure to seafood**. More companies will be added in 2023. To be included in this database, at least 25% of their revenue is derived from seafood, but the majority of them has a high exposure (>50% of revenue), with 31 companies being pure players.

These companies are not only engaged in upstream (fishing or aquaculture), midstream (processing), or downstream activities (wholesale, retail), but also in auxiliary activities such as fish vaccination, construction of engines for fishing vessels, manufacture of fish processing machinery, etc. **On average, each company is engaged in three of these businesses**, with processing being the most popular.

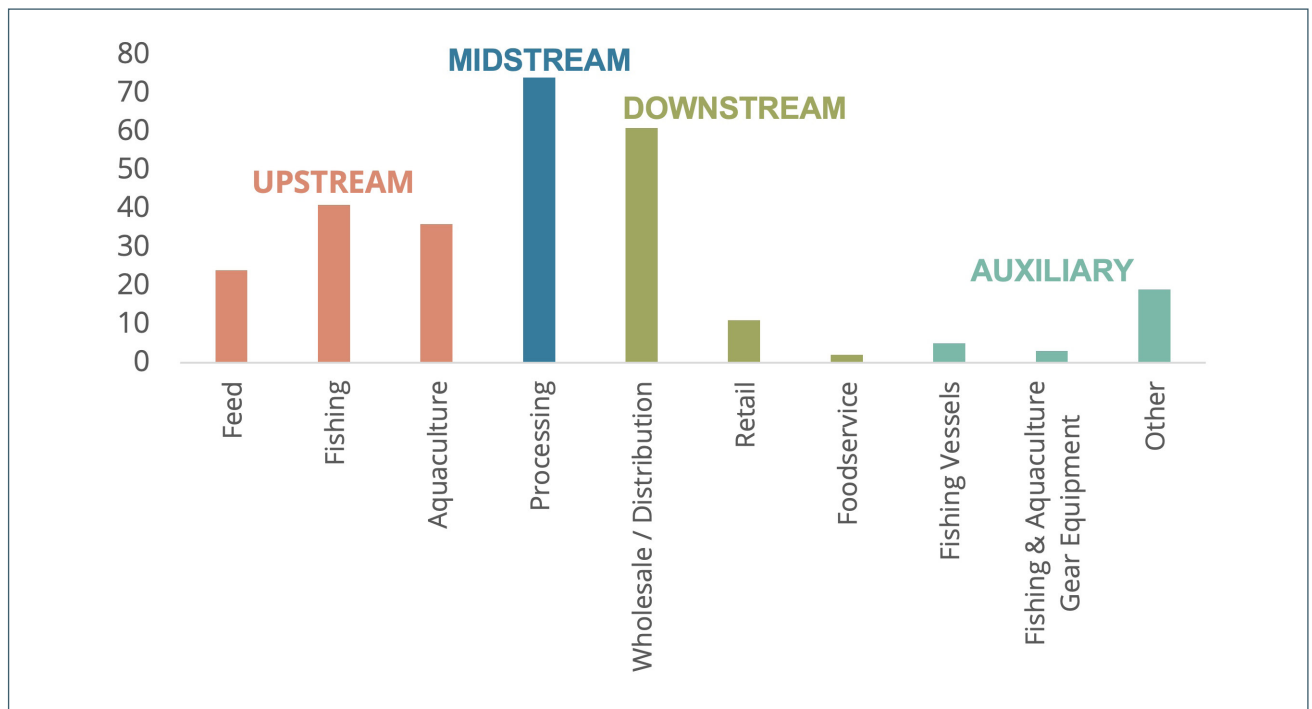


Figure 2: Number of companies (n = 100) engaged in each stage of the seafood supply chain. Source: Planet Tracker.

## A majority of listed companies, headquartered in rich countries

84% of these companies are headquartered in Europe or in Asia. Bar a few exceptions, they are heavily skewed to rich countries.





Table 1: Number of companies in our database by country of headquarters. Source: Planet Tracker.

Country of Headquarters	Number of Companies	Country of Headquarters	Number of Companies
Norway	20	Germany	2
Japan	17	United States	1
Denmark	8	Greenland	1
Chile	6	Faroe Islands	1
China	6	Ecuador	1
South Korea	5	India	1
Spain	5	Indonesia	1
United Kingdom	3	Russia	1
Vietnam	3	Australia	1
South Africa	3	Lithuania	1
Iceland	3	Italy	1
Netherlands	2	New Zealand	1
Thailand	2	Finland	1
Canada	2	Peru	1

43 companies in our list do not disclose their financials publicly. All the others are publicly-listed, mostly in Tokyo (Japan), Oslo (Norway), Santiago (Chile) or Seoul (South Korea).

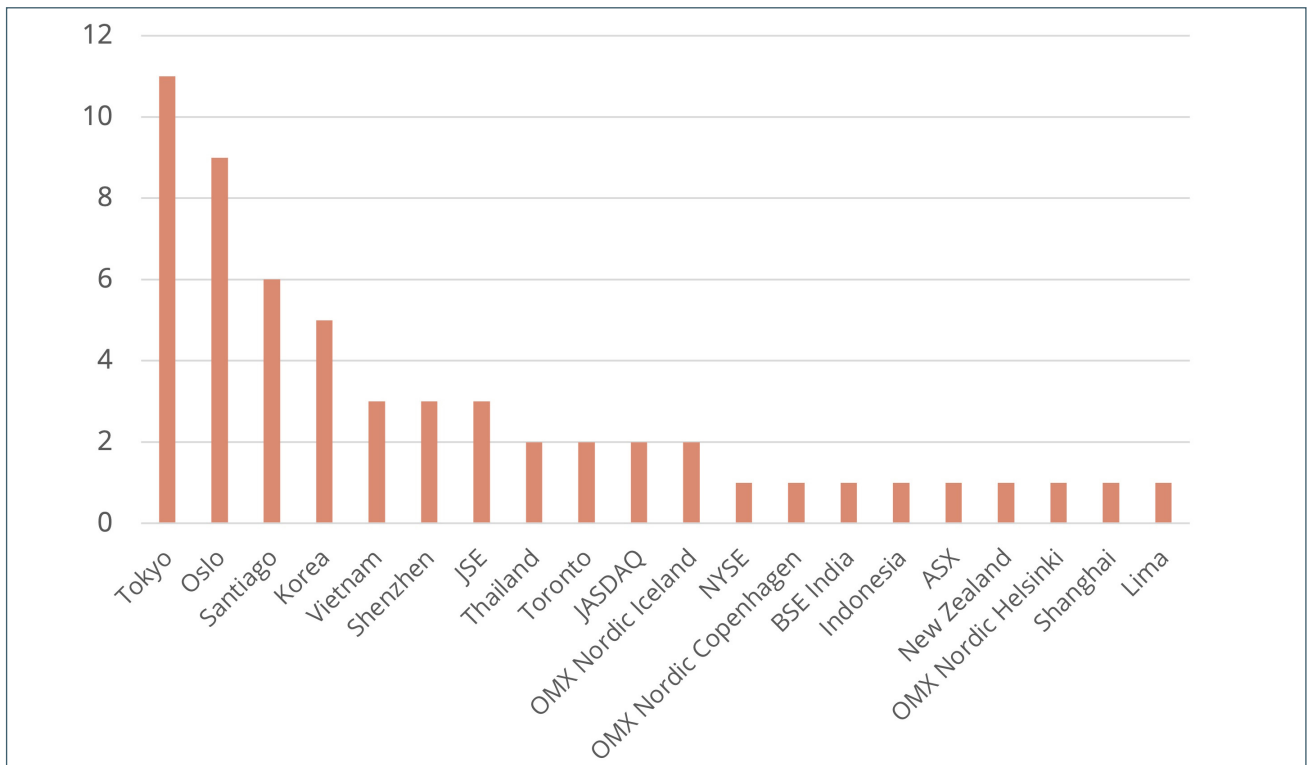


Figure 3: Number of publicly-listed companies in our database by stock exchange. Source: Planet Tracker.





# Sourcing disclosure is generally very poor

## Listed companies do not disclose more species information than private ones

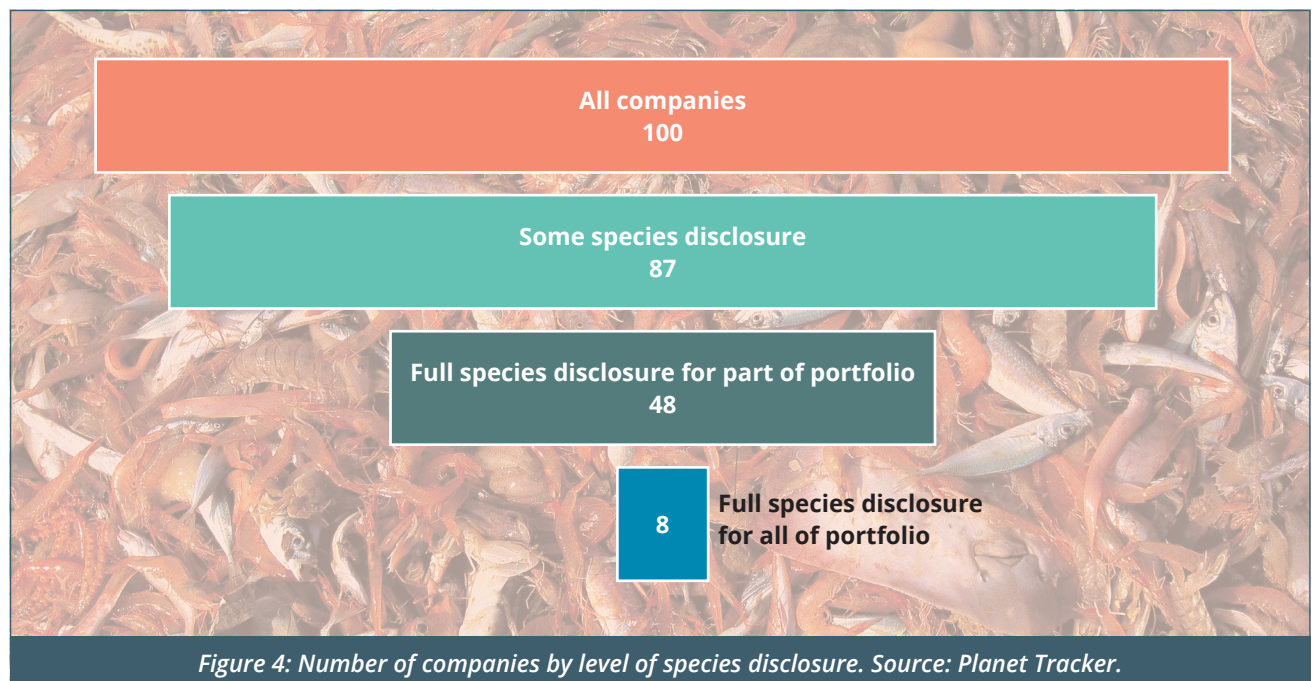
Within both private and public companies, the proportion of companies that do not disclose any information on the species of seafood they are exposed to is similar. This suggests that **being listed does not encourage companies to disclose more species information**, a surprising finding.

*Table 2: Species disclosure vs financial disclosure within the 100 companies in our database. Source: Planet Tracker.*

Disclosure of:	Financials	
	Yes	No
Species		
Yes	50	37
No	7	6
<i>% that discloses species information</i>	88%	86%

Within companies that disclose some information on species, the level of granularity is generally poor. **Only eight companies (8%) disclose information that allow to determine the exact species they handle for their entire portfolio.** Within the 41 companies engaged in fishing wild species, only four provide enough information allowing to identify the species they catch.

**This constitutes a major risk for investors and lenders, since this lack of transparency prevents to assess any risk and opportunities**





## How we attributed species to each company

Species disclosure is not consistent across companies. Some refer to 'tuna', some to 'skipjack', most use commercial names for fish rather than actual names, and many use other languages than English. Against that backdrop, to attribute correct and homogenous species information to each species with the most granularity possible, we have followed the steps below:

- Manual scan of company websites and annual reports.
- Listing of any indications on seafood species
- Creation of a tier-based classification of all seafood species, from the least granular (Category – e.g. Fish) to the most granular (Species, identified by their scientific name)
- Matching of each of the “species” listed on companies’ website to a specific tier level and the corresponding value (e.g. fish, finfish, tuna, bluefin tuna, Atlantic bluefin tuna).

Overall, we have been able to assign 96% of the ‘species’ reported by companies to at least a specific ISSCAAP division (e.g. ‘Molluscs’), 93% to an order (e.g. ‘Decapoda’), 81% to a family of species (e.g. ‘Mullidae’) and 55% to an actual species (e.g. ‘*Scomber japonicus*’).



## Sourcing by species: poor level of disclosure overall

To assess overfishing risk and other natural capital risks specific to seafood, species information needs to be coupled with geographic information. The same species can for instance be overfished in some areas, but not in others. That is why we have analysed where companies in our database source their seafood.

Encouragingly, **in 95% of the time, “species” disclosure comes with geographic disclosure** (e.g. Giant squid from Peru). However, the level of granularity for both is often very sub-optimal – for instance the geographic area is a whole continent, or a whole ocean, and the ‘species’ is a whole category of seafood, such as Tuna.

In Figure 5, we show that for the most frequently mentioned ‘species’ sourced by a company except Atlantic salmon, **the sourcing volumes are also disclosed in less than 10% of the times** – overall average: 1.5%. Within the most frequently sold species, crab is the type of seafood with the worst volume disclosure by companies in our database, and Atlantic salmon the best.



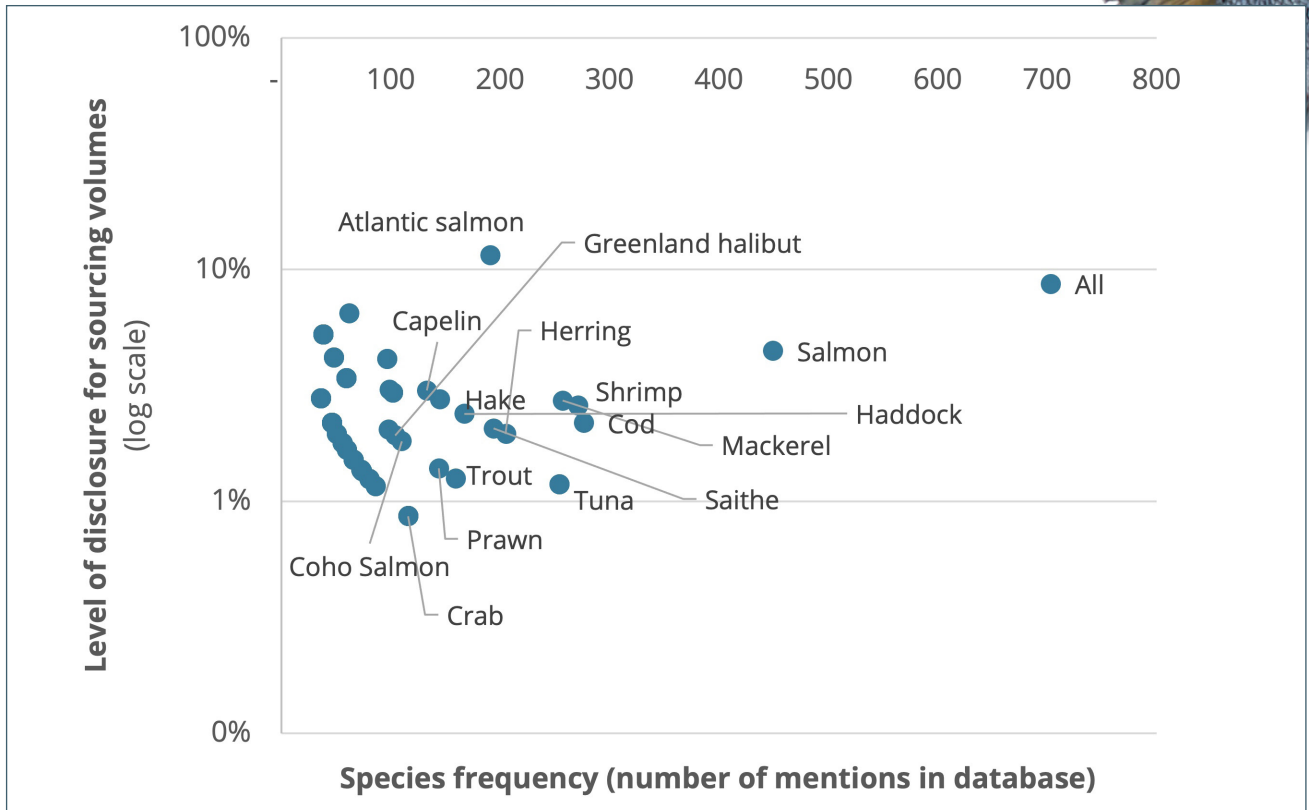
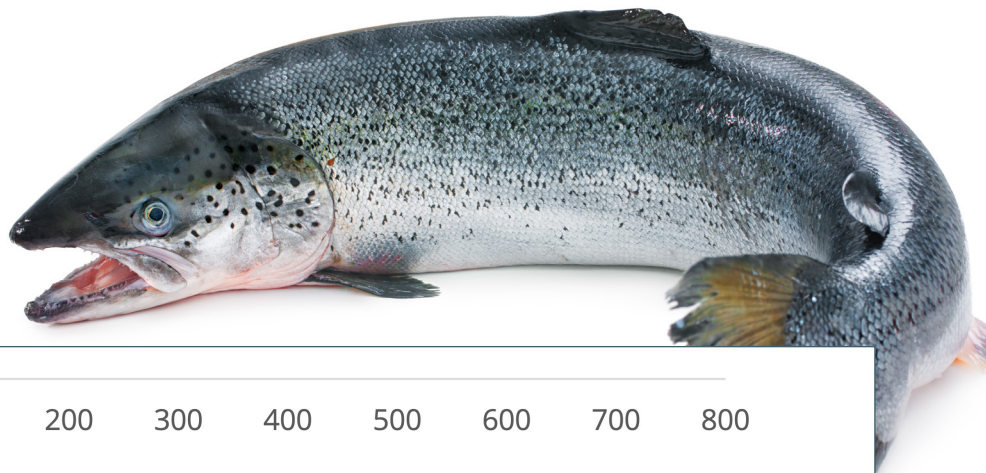


Figure 5: Species handled by companies in our database and degree of disclosure for sourcing volume. Source: Planet Tracker.

When looking at revenue by species and geography (rather than sourcing), the level of disclosure is similar. By geography, the most frequently mentioned countries from where seafood is sourced (ignoring mentions of continents) are Norway, Japan, Chile, China, the UK, Iceland, Canada, the US, Denmark, Spain and New Zealand. The Atlantic and Pacific oceans are the most frequently mentioned ones when looking only at oceans and seas where country identification was not possible.

### Few companies disclose the origin and species of their fish with a high granularity

To measure the granularity of disclosure by species and geographies at companies, we have created a reporting precision score, ranging from 0 to 1. The higher the score, the more granularity there is on the geographical origin or the exact species of the seafood sourced. A score of 1 (the maximum) indicates that the exact species and exact country is provided by the company for its entire portfolio. In our view, **every company should reach that score**. This is not the case though: only two companies out of hundred (Nova Seas and Sinkaberg-Hansen, both Norwegian and privately owned) do so.

Overleaf, we show that upstream companies (**aquaculture and fishing**) are the ones with the best reporting precision scores, which makes sense and is encouraging, since they are arguably the ones with the most impact on natural capital.





Table 3: Average reporting precision score by main supply chain stage.

Main supply chain stage	Average precision score	Company with best score
Aquaculture	71%	Bremnes Fryseri AS
Fishing	69%	Brim hf.
Processing	61%	Ichimasa Kamaboko Co., Ltd.
Integrated	60%	Nova Sea AS
Wholesale/Distribution	45%	Asian Sea Corp. Public Co. Ltd.
Feed	34%	FF Skagen A/S
Fishing and Aquaculture Gear and Equipment	0%	Not enough disclosure to compute a precision score
Fishing Vessels	0%	Not enough disclosure to compute a precision score
Other	0%	Not enough disclosure to compute a precision score
Retail	0%	Frozen Fish International GmbH

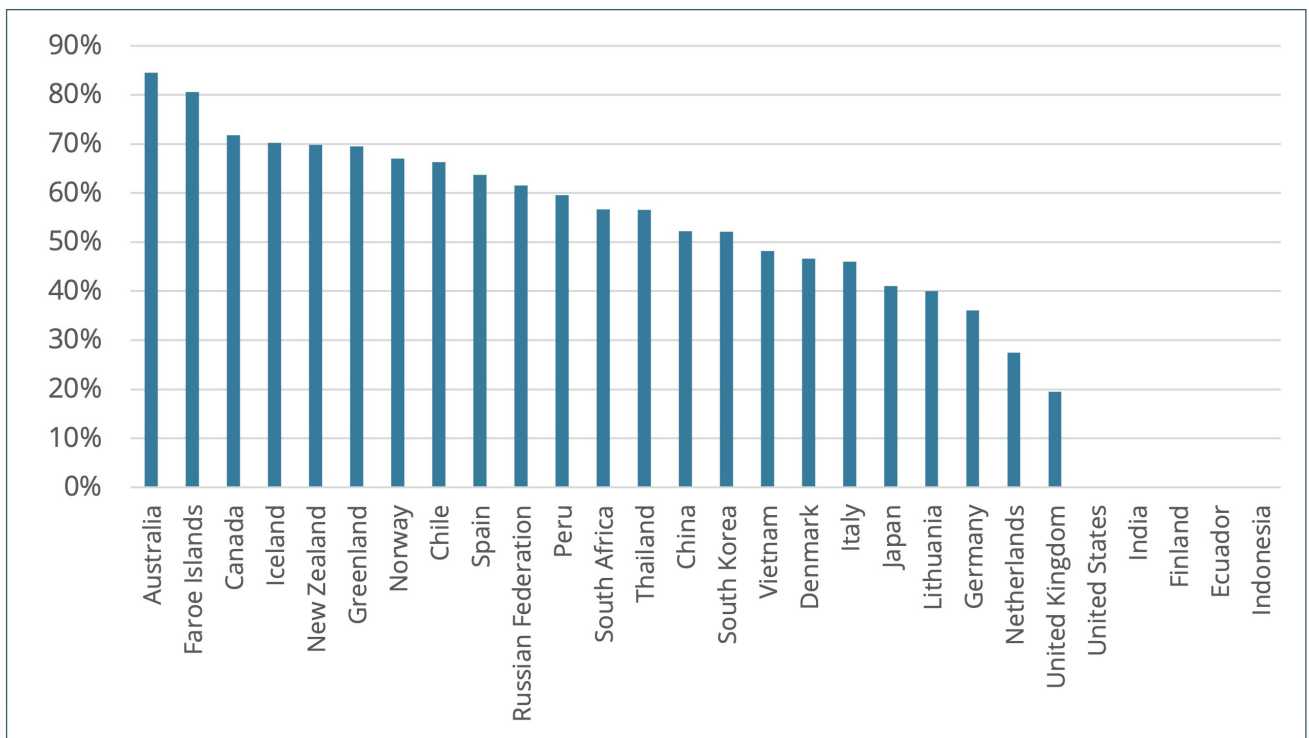


Figure 6: Average reporting precision score (best = 100%) by country of headquarters

Conversely, companies whose business is less directly connected to natural capital have poor precision scores, owing to poor disclosure.





## Species disclosure is needed even at companies that do not directly handle seafood

With one exception, none of the companies in our database that fails to disclose any species information is engaged in fishing, aquaculture, processing, wholesale, foodservice or retail of fish, but instead in feed, fishing or aquaculture equipment, fish vaccination, or fishing vessel manufacturing. This potentially shows that **companies that do not handle any seafood themselves, but still derive a high proportion of their revenue from seafood, think that species disclosure is unimportant. This is wrong** since:

- equipment, gear, fishing vessels, and feed are tailored to the species or family of species they are targetting;
- in case of natural capital event impacting the company, it is likely to affect one or multiple species in one or multiple geographies, not all of them. In this case, investors will want to know the revenue or ideally profit exposure of the company to the event;
- any exposure to a large number of species in a large number of geographies can be deemed safer, but there is a risk that many, most, or even all of the species are e.g. overfished, vulnerable to one common disease, or impacted by climate change. **Only species disclosure could reveal that possible risk.**





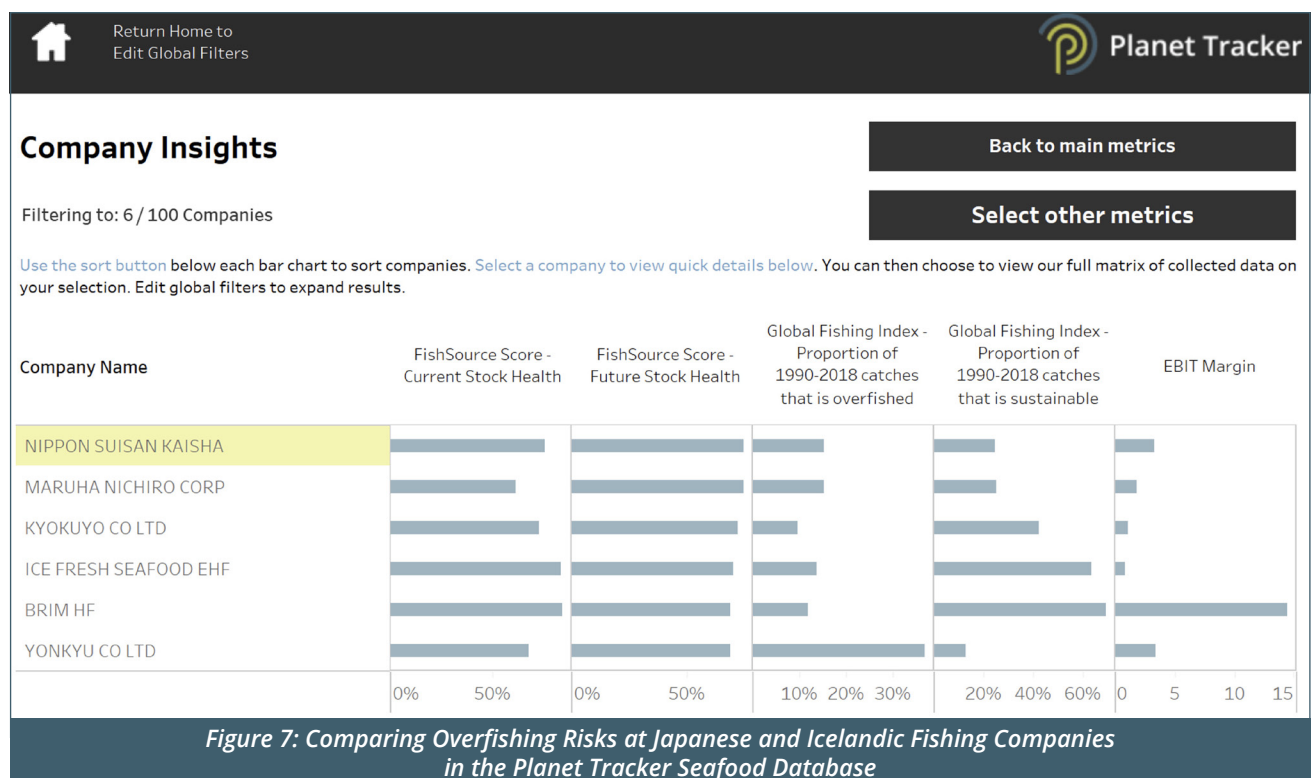
# Estimating and reducing overfishing and IUU fishing risks

We have estimated multiple natural capital risks associated to each company in our database, with a focus on overfishing and illegal fishing. To do so, we created company scores by pairing third-party data on fish stock or country (e.g. fish stock health, or share of unreported catches) with the estimated exposure of each company to this stock or country (estimated from the species and geographic origin disclosure described earlier). Given the low quality of disclosure, these estimates are not optimal, but the best we could compute at the moment. If a user has better data, please [submit this information to the Planet Tracker Seafood Database](#).

## How to assess overfishing risk

To estimate the overfishing risk at companies, we encourage users to look in particular at:

- the stages of the supply chain in which the company is engaged. A company can be indirectly exposed to overfishing in each of these stages (e.g. for aquaculture and feed companies, it is via the feed used), and directly responsible for overfishing if it is engaged in fishing.
- the 'FishSource – Current Stock Health' score: the simple average of the 0-10 scores provided by FishSource measuring the current health of fish stocks to which we estimate the company is exposed to, expressed as a percentage (where 100% is the healthiest), where 100% is the best possible state, and any number below or equal to 60% indicate the stock is overfished. The same indicator exists for future stock health.
- the 'Global Fishing Index – Proportion of 1990-2018 catches that is overfished' indicator: this is the simple average of the proportion of 1990–2018 catches that comes from fish stocks that are below a level of abundance that enables maximum sustainable yield in each country we estimate the company is exposed to, based on the [Global Fishing Index](#) data.





Companies engaged in fishing with the highest estimated overfishing risk in our database include Clearwater Seafoods, Grupo Profand, and Royal Greenland. Instead, Brim Hf, Sea Harvest Group and Aker BioMarine display a lower risk.

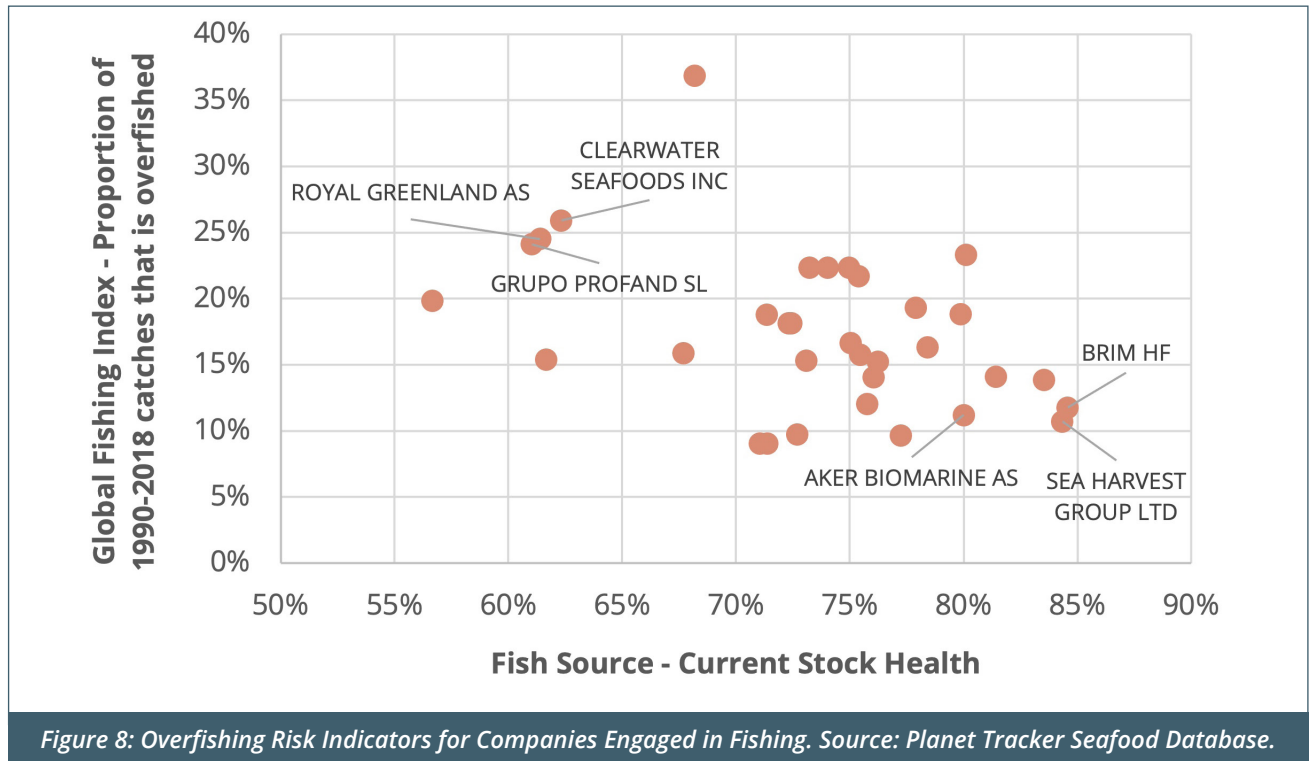


Figure 8: Overfishing Risk Indicators for Companies Engaged in Fishing. Source: Planet Tracker Seafood Database.

### How to assess IUU risk

To estimate the risk of illegal, unreported and unregulated (IUU) fishing, we encourage users to look at the estimated share of unreported catches at the company, built by combining the company's geographic and species exposure with the Sea Around Us estimates of unreported catches by region and species. Note: the source data was not constructed to measure IUU fishing risk, so users should not rely solely on this indicator.

A better assessment of IUU fishing exposure can be made via our [IUU Fishing Detection Toolkit](#).





## How to assess other risks and dependencies

There are many more company indicators in our database, which measure for instance:

- how well **ocean systems are sustainably providing people with the benefits and services they need and desire from marine systems**. In each country we estimate the company is exposed to, based on Ocean Health Index country data.

Within our 100 companies, Sanford Limited benefits from the best ocean health, while Avanti Feeds Limited suffers from the worst. Sea Harvest Group is seeing the fastest deterioration in the health of the ocean it relies on, while PT Central Proteina Prima TBK benefits from the largest improvement in ocean health.

- the simple average of the **proportion of catches harvested by bottom trawlers** in each country and for each species we estimate the company's exposure, based on Sea Around Us data.

Sea Harvest Group has the highest estimated proportion of catches harvested by bottom trawlers (86%).

- the simple average of the 0-10 scores provided by FishSource measuring **the extent to which fisheries' managers follow scientific advice** for each fish stock. We estimate company exposure, expressed as a percentage (where 100% indicates the highest compliance).

Aker BioMarine has the best estimated score, Royal Greenland the worst.





## Financial performance vs. seafood sustainability

In an [in-depth review of Carrefour](#), one of the ten largest food retailers in France, we showed that the company generates lower margins on the most overfished species it sells.

We also showed how the catch of the abundant and sustainably-managed Alaska pollock was [much more profitable](#) compared to other less abundant and less sustainably managed species. Does the same relationship hold when comparing companies?

To some extent, yes, although the correlation is not high (37%). See Figure 9, where we compare profitability and stock health at companies (one dot for each company) engaged in fishing.

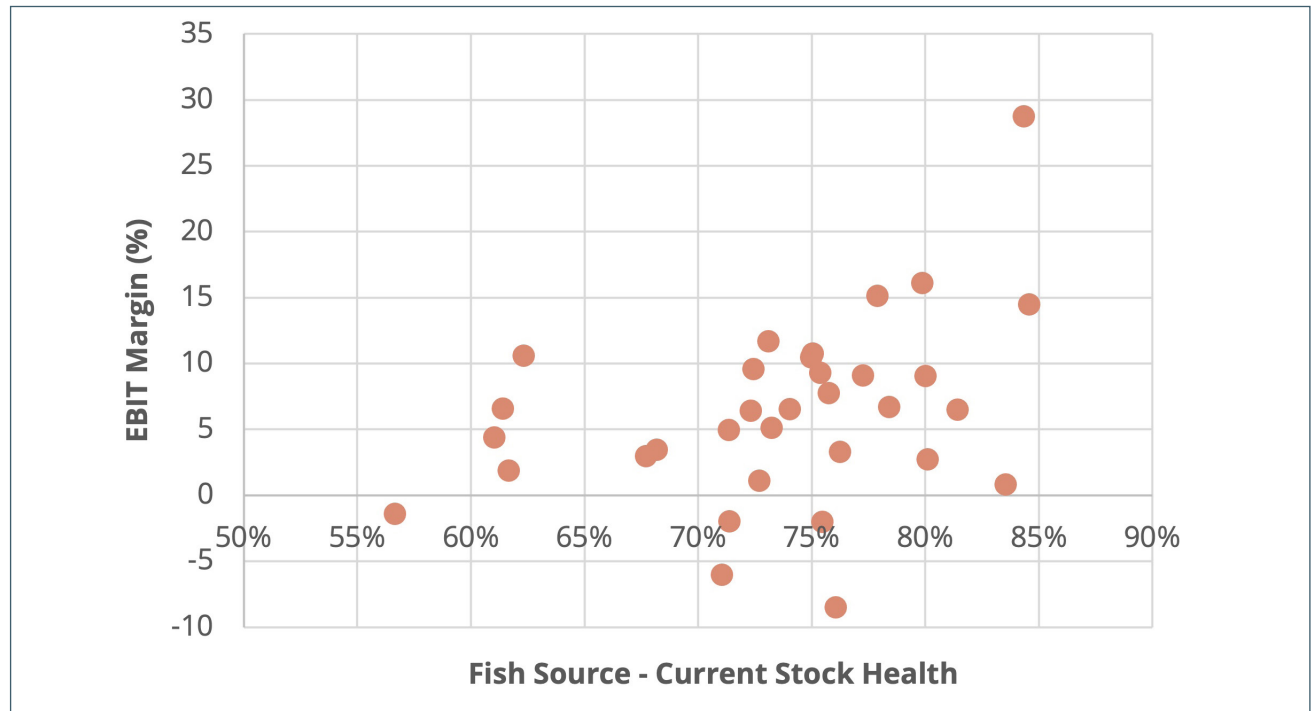


Figure 9: Profitability vs Stock Health at Companies Engaged in Fishing. Source: Planet Tracker Seafood Database.

This correlation is much higher than when comparing profitability with ocean health (no correlation at all), or with the number of distinct species caught. Digging further, we show that the overall margins by species (all stages of the supply chain included) vary considerably. For instance, on average, companies that are catch, process or sell pilchard generate the highest margins within our sample, while those that handle coho salmon generate the worst – see Figure 10.



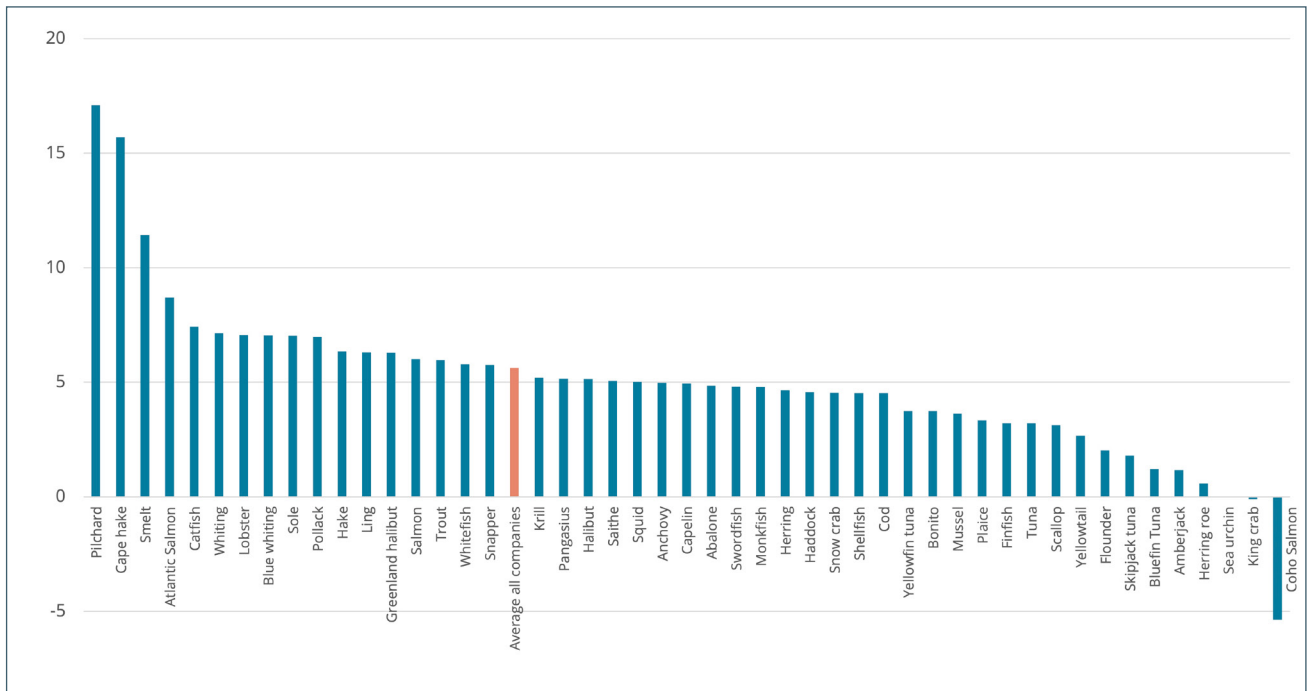


Figure 10: Average EBIT Margin by Species (Average Margin of Companies Exposed to each Species).  
Source: Planet Tracker Seafood Database.

This shows once again that **accurate species disclosure is key for investors**: companies alongside the Atlantic salmon (*Salmo salar*) supply chain have the second highest margin of all, while those in the Coho salmon (*Oncorhynchus kisutch*) the lowest. Simply mentioning 'salmon' is therefore not enough for investors and lenders.

More information on each species (e.g. consumption and production data, conservation data, harvest by gear, etc.) can be found by clicking on species names in our database.





# Call for action for investors and corporates

## Investors deserve better than sailing in the dark

For any assessment of seafood-related sustainability risks, knowing at least the species harvested or handled and their harvesting location is crucial. Unfortunately, this information is all too often unavailable – for instance, **in our database of 100 seafood-exposed companies, only eight provide enough information for us to estimate overfishing risks within an acceptable margin of error.**

Without it though, investors are sailing in the dark. In addition to being unable to estimate financially material risks, they are also unable to gauge key reputational risks, such as IUU fishing, or litigation risk. Lastly, companies that do not have granular data on species exposure and harvesting locations are unlikely to be aligned with the Taskforce on Nature-related Financial Disclosures (TNFD) framework (and in particular, its '[Locate](#)' component). Within our database, we estimate that at least 52 companies are unlikely to be TNFD-ready based on the origin of seafood and species information they (fail to) provide.

**Financial institutions should therefore demand greater supply chain transparency from seafood-exposed companies. In particular, this means asking corporates to disclose the 'what' (scientific names), 'where' (exact location of farming/capture), and 'how' (fishing gear or farming method) of their entire seafood portfolio.**

## It is in most companies' benefit to be more transparent about their seafood

A lack of disclosure means that companies do not have the necessary data, or that they have the data but do not want to share it.

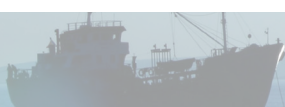
In both cases, **this shows them in a bad light**, and leaves them vulnerable to multiple costly risks, including supply issues (in the case of the collapse of a fish stock or sudden ban on fishing in a given area), or reputational risk (in case of association with illegal fishing or unsustainable practices)

The absence of data is often blamed on suppliers' inability to provide it, and the associated costs to retrieve it. We disagree and argue that instead, **there are financial benefits associated with increased disclosure.** For instance, going through information shared with us by Carrefour, we estimated that increased seafood supply chain disclosure (which species, which location, which harvesting method) would generate [net financial benefits equal to 3% of Carrefour's gross profit on seafood in France.](#)

The reluctance to share information about species and location is often attributed to competition and confidentiality issues. We disagree again: sharing the exact species, country of harvest and harvesting method on a regular basis at the end of each month or quarter is not going to alert competing fishing vessels about the exact location of a fish school on a live basis.

Therefore, for their entire seafood portfolio, seafood-exposed corporates must track internally the '*what*' (scientific names), '*where*' (exact location of farming/capture), '*how*' (fishing gear or farming method), '*when*' (date of harvesting), and '*how much*' (volumes). Our interactive and bespoke [Seafood Accounting Protocol](#) guides them in this process.

**Corporates then need to disclose at least the 'what', 'where', and 'how'. Such disclosure can be done via the [Ocean Disclosure Project](#), or directly [via our database](#).**





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Planet Tracker is a non-profit financial think tank producing analytics and reports to align capital markets with planetary boundaries. Our mission is to create significant and irreversible transformation of global financial activities by 2030. By informing, enabling and mobilising the transformative power of capital markets we aim to deliver a financial system that is fully aligned with a net-zero, nature-positive economy. Planet Tracker proactively engages with financial institutions to drive change in their investment strategies. We ensure they know exactly what risk is built into their investments and identify opportunities from funding the systems transformations we advocate.

## SEAFOOD TRACKER

Seafood Tracker investigates the impact that financial institutions can have on sustainable corporate practices through their funding of publicly listed wild-catch and aquaculture companies. Our aim is to align capital markets with the sustainable management of ocean and coastal marine resources.

Seafood Tracker is a part of the wider Planet Tracker Group of Initiatives.

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